

Exhibit No.: 100
Issues: Overview of Application
Witness: Craig D. Nelson
Type of Exhibit: Direct Testimony
Sponsoring Party: Union Electric Company
d/b/a AmerenUE
Case No.: EA-2005-0180
Date Testimony Prepared: December 21, 2004

MISSOURI PUBLIC SERVICE COMMISSION

Case No. EA-2005-0180

DIRECT TESTIMONY

OF

CRAIG D. NELSON

ON BEHALF OF

**UNION ELECTRIC COMPANY,
d/b/a AmerenUE**

FILED

MAR 02 2005

**Missouri Public
Service Commission**

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

**St. Louis, Missouri
December, 2004**

Exhibit No. 100
Case No(s). EA-2005-0180
Date 2-22-05 Rptr KF

NP

Application of Union Electric Company)
for a Certificate of Public Convenience and)
Necessity authorizing it to construct, install,) Case No. EA-2005-0180
own, operate, control, manage and maintain)
electric plant, as defined in § 386.020(14), RSMo.)
to provide electric service in a portion of)
New Madrid, County, Missouri, as an)
extension of its existing certificated area)

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

1. My name is Craig D. Nelson. I work in St. Louis, Missouri, and I am employed by Ameren Services Company as Vice President – Strategic Initiatives.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

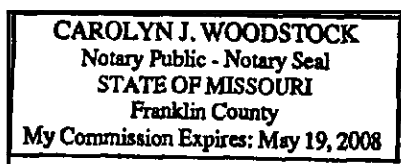
Craig D. Nelson

Subscribed and sworn to before me this 21st day of December, 2004.

Carolyn J. Woodstock
Notary Public

Notary Public

My commission expires: May 19, 2008



1 **DIRECT TESTIMONY**

2 **OF**

3 **CRAIG D. NELSON**

4 **CASE NO. EA-2005-0180**

5 **I. INTRODUCTION**

6 **Q. Please state your name and business address.**

7 **A.** My name is Craig D. Nelson. My business address is One Ameren Plaza, 1901 Chouteau
8 Avenue, St. Louis, Missouri 63103.

9 **Q. What is your job title and duties or responsibilities?**

10 **A.** I am Vice President – Strategic Initiatives of Ameren Services Company (“Ameren
11 Services”). I became Vice President - Strategic Initiatives on October 15, 2004. Prior to
12 that time I was Vice-President – Corporate Planning of Ameren Services and led the
13 Corporate Planning Department which provides various corporate, administrative and
14 technical support services for Ameren Corporation (“Ameren”) and its affiliates,
15 including Union Electric Company d/b/a AmerenUE (referred to herein as "Company" or
16 "AmerenUE"). Additional information regarding my educational and employment
17 history is contained in Appendix A.

18 **Q. What are your responsibilities regarding AmerenUE’s proposed service to Noranda
19 Aluminum, Inc. (“Noranda”)?**

20 **A.** While Vice President – Corporate Planning I became responsible for overseeing the
21 process necessary to enable Noranda to become a regulated customer of AmerenUE and
22 have continuing responsibility with regard to the Noranda matter.

23 **Q. What is the purpose of your testimony?**

1 **A.** The purpose of my testimony is to give an overview to this proceeding from AmerenUE's
2 perspective. I will explain the relevant facts and circumstances surrounding AmerenUE's
3 willingness to provide electric service to Noranda as a regulated customer, and the
4 conditions related to that service. I will also introduce other AmerenUE witnesses who
5 are sponsoring testimony in this proceeding.

6 **Q.** **Please identify the AmerenUE's witnesses in this proceeding and summarize their**
7 **testimony.**

8 **A.** Mr. Wilbon L. Cooper, who is the Manager of Rate Engineering for Ameren Services and
9 who has primary responsibility for providing rate engineering and analysis support for
10 AmerenUE, will describe certain of the terms and conditions and rate components
11 associated with the proposed Large Transmission Service tariff ("LTS") that is included
12 as part of AmerenUE's filing in this case and under which Noranda would take service
13 (The LTS tariff is attached as an exhibit to the Agreement between AmerenUE and
14 Noranda, the Agreement is attached hereto as Schedule CDN-1, and the form of LTS
15 tariff is also attached to the Company's Application as Exhibit D thereto). As Mr.
16 Cooper's testimony indicates, the LTS tariff was designed to treat Noranda or any other
17 customers qualifying for the LTS tariff substantially the same as other large industrial
18 customers of the Company, but with two exceptions, as follows: (a) the LTS tariff takes
19 into account the fact that energy line losses are different for an LTS customer and (b) the
20 LTS tariff recognizes that LTS customers do not use any AmerenUE-supplied
21 distribution. Mr. Richard Voytas, who is the Manager of Corporate Analysis for Ameren
22 Services and who provides, among other services, resource planning support for
23 AmerenUE, will address revenue requirement analyses that have been prepared relating

1 to serving Noranda. Mr. Voytas also addresses from an integrated resource planning
2 perspective the capacity needs associated with serving Noranda. As Mr. Voytas's
3 testimony indicates, analysis shows that from the perspective of native load customers,
4 AmerenUE's production costs per megawatt hour ("MWh") are on average less with
5 Noranda than without Noranda by between \$2 and \$3 per MWh over a 20-year planning
6 horizon. Mr. Edward Pfeiffer, who is the Manager of Electric Planning for Ameren
7 Services, and who in that capacity has responsibility for providing a variety of services to
8 AmerenUE relating to the operation of AmerenUE's transmission system, provides
9 testimony with respect to transmission related issues. In short, Mr. Pfeiffer's testimony
10 indicates that there is no transmission-related impacts associated with adding the Noranda
11 load. I note as well, that Noranda will be sponsoring witnesses who testify about the
12 need for AmerenUE to be its long-term electricity supplier, and will discuss the criticality
13 of electric service at reasonable rates to Noranda's electricity-intensive operations, and
14 the economic and other benefits associated with Noranda's continued presence as a major
15 employer and economic factor in Missouri, particularly in southeast Missouri.

16 **Q. Please briefly describe your understanding of Noranda's operations and its need for**
17 **electricity.**

18 **A.** Noranda owns and operates a large aluminum smelting facility located on the banks of
19 the Mississippi River just outside New Madrid, Missouri. Noranda employs over 1,100,
20 including over 800 union employees who are members of the International Brotherhood
21 of Steel Workers, and is the region's largest employer. Aluminum smelting is an energy-
22 intensive operation. Noranda requires a very large quantity of electric energy nearly
23 100% of the time (Noranda's load factor is 98%, meaning that Noranda uses and

1 consumes the maximum energy it might need 98% of the hours in a year). Noranda is the
2 single largest consumer of electricity in the state of Missouri. As one might imagine,
3 electricity is Noranda's single largest expense. In summary, both operationally, due to
4 Noranda's need for a large quantity of reliable electric power, and economically, due to
5 the impact of electricity costs on Noranda's overall cost of producing aluminum,
6 electricity is a key component of Noranda's operations.

7 I would note that the Missouri legislature has recognized the importance of aluminum
8 smelters such as Noranda by giving them the right to choose the electric supplier from
9 whom they desire to obtain electric power. That right was granted by enactment (with
10 unanimous approval in both the Missouri House and the Missouri Senate) of H.B. 208
11 (merged with S.B. 555, and codified as Section 91.026, RSMo.), which was signed by
12 Governor Holden on May 22, 2003. As discussed below, Noranda has selected
13 AmerenUE as that electric supplier.

14 I would also note that Noranda is a good fit for AmerenUE because Noranda is a high
15 load factor customer and AmerenUE is an electric utility with a large proportion of base
16 load generation. As Mr. Voytas discusses in more detail in his testimony, this allows
17 AmerenUE to more effectively operate its base load and peaking generation and to spread
18 the fixed costs associated with it over more megawatt hours. Noranda's load is roughly
19 equivalent to the Metro East service territory's load, but Noranda has a much higher load
20 factor (98% versus 79%) which means that Noranda allows AmerenUE to more
21 efficiently use its base load generation.

22 **Q. Please provide the background which led to AmerenUE's willingness to serve**
23 **Noranda as a regulated customer.**

1 **A.** It is my understanding that Noranda's current power contract expires on May 31, 2005
2 and will not be renewed. As a consequence, Noranda representatives approached
3 AmerenUE about it being a possible supplier to the Noranda facility. After initial
4 discussions a letter of intent was executed between AmerenUE and Noranda. The letter
5 of intent was a non-binding agreement but set forth the mutual interest of the parties in
6 outlining the terms and conditions by which AmerenUE would be willing to provide
7 electric service to Noranda as a regulated customer. The letter of intent was superseded
8 by a subsequent Agreement reached between the parties (Schedule CDN-1). In the
9 Agreement, AmerenUE and Noranda agreed to the terms and conditions by which
10 AmerenUE would be Noranda's regulated supplier of electricity, which includes approval
11 of the LTS tariff by the Missouri Public Service Commission ("MPSC" or
12 "Commission") as part of this Application.

13 **Q.** **Where did Noranda receive power before it entered into its current contract that**
14 **expires on May 31, 2005?**

15 **A.** Until a few years ago Noranda had a 30-year contract with Associated Electric
16 Cooperative, Inc. ("AECI") and the City of New Madrid but currently obtains its power
17 under a purchased power contract. AECI is not interested in serving Noranda because
18 AECI needs the capacity that it would take for it to serve Noranda to meet its own
19 growing cooperative system needs.

20 **Q.** **Are there any conditions precedent that are required in order for AmerenUE to**
21 **provide service to Noranda?**

1 A. Yes. AmerenUE's commitment to being Noranda's electric supplier is conditioned upon
2 AmerenUE completing the transfer of the Metro East service area to AmerenCIPS by
3 June 1, 2005, and completing the transfers of the Kinmundy and Pinckneyville
4 combustion turbine generators ("CTGs") from Ameren Energy Generating Company to
5 AmerenUE by June 1, 2005, as AmerenUE determines to be to its satisfaction and sole
6 discretion. AmerenUE also requires an order from the MPSC granting AmerenUE a
7 Certificate of Public Convenience and Necessity extending its Missouri service area to
8 incorporate the premises which includes Noranda's New Madrid aluminum smelter.

9 Q. Can you explain why AmerenUE requires these conditions to be met as a condition
10 to it serving Noranda?

11 A. Yes. With respect to the Metro East service area and Kinmundy and Pinckneyville CTG
12 transfers, they are required in order that AmerenUE have sufficient capacity to serve the
13 Noranda load in the near term. As I mentioned earlier, the Noranda load is extremely
14 large, especially in comparison to other AmerenUE customers. Taking into consideration
15 the Noranda load, plus accounting for line losses and a short-term 15% reserve margin,
16 AmerenUE will need to have total capacity of ** _____ ** in order to serve the
17 Noranda load. Using an appropriate long-term 17% reserve margin for integrated
18 resource planning, AmerenUE will need a total of ** _____ ** of capacity to serve this
19 load. Short or long-term, AmerenUE does not have sufficient capacity to serve Noranda
20 without first completing both the Metro East and Kinmundy and Pinckneyville CTG
21 transfers. Mr. Voytas elaborates further on this particular issue of AmerenUE's capacity
22 needs.

1 **Q. You state that the subject transfers would need to be satisfactory as determined in**
2 **the sole discretion of AmerenUE. Can you elaborate?**

3 **A.** Yes. As the Commission is aware, AmerenUE has filed an Application for Rehearing
4 with regard to the Metro East service area transfer. Though the Commission approved
5 the transfer, there were a number of conditions attached. While I am not here to debate
6 the merits of AmerenUE's Application for Rehearing or the Commission's order in the
7 Metro East case, it suffices to say that the Metro East order as it now stands is an
8 impediment to AmerenUE's ability to serve Noranda. In order for AmerenUE to proceed
9 further with serving Noranda as a regulated customer, there needs to be a satisfactory
10 resolution of the Metro East case, and then AmerenUE will be able to acquire the
11 capacity it needs by, in effect, shedding the Metro East load which makes the generation
12 currently serving Metro East available to AmerenUE and thus available to serve Noranda.
13 That, in turn, allows the Pinckneyville and Kinmundy CTG transfers to occur which,
14 together with shedding the Metro East load, provides AmerenUE with sufficient capacity
15 to serve Noranda.

16 **Q. You also indicated that AmerenUE must receive an order to its satisfaction from the**
17 **Commission granting AmerenUE a Certificate of Public Convenience and Necessity.**
18 **Why does AmerenUE require the order to be to its satisfaction?**

19 **A.** AmerenUE is desirous of protecting itself and its ratepayers from any undue harm or
20 detriment that may result from serving the Noranda load. For example, both AmerenUE
21 and Noranda are requesting the Commission to approve the LTS tariff in its current form.
22 In its current form the LTS tariff calls for certain credit requirements and provisions
23 regarding transmission service that are not ordinarily included in regulated tariffs or rates.

1 Nonetheless, given the size of the Noranda load and its location, AmerenUE believes it is
2 critical that the credit requirement terms be part of the tariff, and that Noranda have
3 responsibility for the costs of transmission service outside the AmerenUE footprint as a
4 condition to AmerenUE providing service. Therefore, a Commission order that affirms
5 the form of the LTS tariff as we propose is a critical condition to this transaction.

6 **Q. Does this mean that the Commission would be forbidden from changing the LTS**
7 **tariff at a later point in time and face the consequence of AmerenUE deciding not to**
8 **serve Noranda?**

9 **A.** No. AmerenUE recognizes that the Commission will have continuing authority over
10 tariffs and rates over which it has jurisdiction. It is conceivable that in a later rate case
11 the Commission would approve changes to the LTS tariff terms and conditions, or find
12 that Noranda should be served on a different rate. At bottom, the Commission will have
13 the continuing authority when any future rate proceedings respecting AmerenUE's rates
14 occur, to determine the just and reasonable tariff and tariff terms and rates under which
15 Noranda will be served. I am not advocating that any changes to the LTS tariff would
16 necessarily occur but undoubtedly the rate components in that tariff and AmerenUE's
17 tariffs in general would undergo scrutiny and review in subsequent rate proceedings and
18 conceivably certain aspects of the tariff may change. Having said this, there is merit to
19 Noranda being served under a tariff and rate different than the Large Primary Service
20 ("LPS") rate (which, absent the new LTS tariff, would have applied to service to
21 Noranda). AmerenUE would expect that the MPSC would take those merits into account
22 in future proceedings. The reason it makes sense for Noranda (or any other customer with
23 Noranda's characteristics) to take service under the new LTS rate is because Noranda is

1 unique from other customers in terms of the size of its load, because no AmerenUE
2 distribution is required to serve Noranda, and because of the credit and transmission
3 service requirements that apply to Noranda, but which typically do not apply to an LPS
4 customer.

5 **Q. Are there other terms and conditions either in the agreement or LTS tariff that you**
6 **would like to address?**

7 **A.** Yes. Both the Agreement (Schedule CDN-1) and the LTS tariff call for a minimum 15-
8 year term for service from AmerenUE. A five-year notice of intent to terminate service
9 under the LTS tariff is also required meaning, for example, that if a customer desires
10 service to terminate at the end of year 15, notice must be given to AmerenUE in year 10.
11 The five-year notice is required in order to ensure a smooth transition in terms of
12 matching capacity with system growth. Stated differently, if Noranda provides notice of
13 its intent not to take service under the rates at a later point in time, AmerenUE's annual
14 load growth will, over that five-year period of time, help to ensure better synchronization
15 of AmerenUE's capacity and system needs.

16 **Q. Are there other aspects of the tariff that are unique?**

17 **A.** Yes. AmerenUE's rates ordinarily do not contain specified credit requirements. The
18 credit requirements are provided for in the tariff terms and conditions. However, given
19 the size of the customer and load and consequently, the potential exposure or risk to
20 AmerenUE, certain credit requirements were determined to be appropriate and are a part
21 of the tariff. These credit requirements, in addition to credit requirements already
22 existent, provide AmerenUE additional protection should certain of the triggering events
23 take place.

1 Another unique feature of the LTS tariff is the transmission service requirements. There
2 are two components of the transmission service requirements provisions in the tariff.
3 First, approval must be received from the appropriate regional transmission organization
4 ("RTO") to incorporate the customer's load within AmerenUE's network integration
5 transmission service agreement without the obligation or requirement that AmerenUE
6 construct, upgrade or improve any existing or new transmission plant or facilities. In this
7 respect, AmerenUE has been apprised that the Midwest Independent Transmission
8 System Operator, Inc., which is the RTO of which AmerenUE is a part, will not require
9 AmerenUE to construct, upgrade, or improve any existing or new transmission plant or
10 facilities to serve the Noranda load. I should note that Noranda will receive transmission
11 service using the same AECI transmission lines that today are used to deliver power to
12 Noranda, hence this is not a case where a new load is coming onto the transmission
13 system which might require transmission upgrades. Rather, the existing transmission
14 system, as it does today, can handle Noranda's needs. Second, the LTS tariff makes clear
15 that the customer, in this case Noranda, is responsible, at the customer's cost, for securing
16 any necessary firm transmission service throughout the term outside of AmerenUE's
17 currently existing control area at no cost or charge to AmerenUE, except for energy line
18 losses. This would apply if AmerenUE were for some reason not able to utilize its
19 Interchange Agreement with AECI to serve Noranda. The tariff goes on to state that the
20 customer agrees to indemnify and hold AmerenUE harmless from all such costs and
21 charges imposed or billed, in that the customer is responsible for all costs and charges
22 imposed or billed to AmerenUE from an RTO that are based on the fact that Noranda's
23 load is not directly connected to AmerenUE's system. Again, these provisions protect

1 AmerenUE from any additional costs or charges that would not otherwise be incurred but
2 for the fact it is serving this particular load outside of its control area. Mr. Pfeiffer
3 addresses these issues in more detail in his testimony.

4 **Q. Is AmerenUE required to construct any distribution or transmission**
5 **facilities in order to serve Noranda?**

6 **A.** No. Noranda has its own distribution facilities that connect to AECI's transmission
7 facilities and thus AmerenUE will not need to construct or supply any distribution or
8 transmission facilities or services to serve the Noranda load. As noted earlier, this is an
9 important reason for developing the new LTS tariff.

10 **Q. Does this conclude your testimony?**

11 **A.** Yes, it does.

QUALIFICATIONS OF CRAIG D. NELSON

My name is Craig D. Nelson. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

I am Vice President – Strategic Initiatives of Ameren Services Company (“Ameren Services”) and Vice President of Central Illinois Public Service Company d/b/a AmerenCIPS (“AmerenCIPS”).

I earned a Bachelor’s Degree in Accounting in 1977, graduating with highest honors, and a Master’s in Business Administration in 1984. Both degrees were awarded by Southern Illinois University.

I worked for Arthur Andersen & Co. from 1977 to 1979, when I joined Central Illinois Public Service Company as a Tax Accountant. In 1979, I was promoted to Income Tax Supervisor. I served in various tax and accounting positions until 1985 when I was appointed Assistant Treasurer. In 1989, I became Treasurer and Assistant Secretary, a position I held for seven years. In 1996, I was elected Vice President of Corporate Services. After Union Electric and CIPSCO Incorporated merged, I was named Vice President, Merger Coordination for Ameren Services effective December 31, 1997. In 1998, I assumed the additional responsibility of Vice President of Regulatory Planning. On June 1, 1999, I was appointed Vice President - Corporate Planning. Effective October 15, 2004, I was appointed Vice President - Strategic Initiatives.

My duties and responsibilities include Ameren Corporation’s business and corporate services initiative, Post-2006 initiative, and power supply acquisition for Ameren’s load-serving companies.

AGREEMENT

THIS AGREEMENT by and between Union Electric Company d/b/a AmerenUE ("AmerenUE") and Noranda Aluminum, Inc. ("Noranda"), individually a "Party" or collectively the "Parties", is entered into this 14th day of December, 2004.

WHEREAS, Noranda operates an aluminum smelter near or about New Madrid, Missouri, and in operating said facility requires electricity and related services; and,

WHEREAS, AmerenUE is a public utility selling and delivering electricity and related services in a service territory in the State of Missouri; and,

WHEREAS, Noranda is desirous of purchasing electricity and related services from AmerenUE, subject to certain terms and conditions as expressed below; and,

WHEREAS, AmerenUE is willing to sell and deliver electricity and related services to Noranda, subject to certain terms and conditions as expressed below; and

WHEREAS, AmerenUE and Noranda entered into a Letter of Intent on October 14, 2004, expressing their intent and desire to reach this Agreement; and to have this Agreement be the full and complete understanding of the Parties, and

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged by each of the Parties, the Parties agree as follows:

1. LTS Tariff And Electric Service Agreement.

- A. Noranda agrees to take capacity and energy from AmerenUE under the rates, terms and conditions of a proposed Missouri Large Transmission Service ("LTS") tariff and in accord with the accompanying Electric Service Agreement ("ESA"), as set forth in Exhibit A attached hereto and incorporated by reference. Regulatory approval of the LTS tariff as described in Exhibit A is a condition precedent to AmerenUE providing service to Noranda.
- B. Exhibit A shall not be modified, amended, or waived in full or in part in any manner unless agreed to by the Parties, and any such agreement shall be in writing.
- C. Noranda and AmerenUE agree to cooperate and in good faith seek regulatory approval of the LTS tariff.

2. Metro East Transfer And CTG Acquisitions. AmerenUE's obligation to initiate service hereunder is conditioned upon (i) receipt of all regulatory approvals with respect to the Metro East Service area transfer pending before the Missouri Public Service Commission ("MoPSC") in Case No. EO-2004-0108 and acquisitions of the Kinmundy and Pinckneyville CTGs, to AmerenUE's satisfaction in its sole discretion, and (ii) AmerenUE completing the transfer of its Metro East Service area to

AmerenCIPS by June 1, 2005, and completing the purchase of the Kinmundy and Pinckneyville CTGs from Ameren Energy Generating Company by June 1, 2005.

3. **MoPSC Approval To Extend AmerenUE Service Territory And Additional Regulatory Assurances.** AmerenUE's obligations hereunder, including without limitation its obligations as provided for by Exhibit A, are conditioned upon AmerenUE receiving an order satisfactory to AmerenUE in its sole discretion, from the MoPSC, granting AmerenUE a certificate of public convenience and necessity extending its Missouri service area to incorporate Noranda's New Madrid premises, such that AmerenUE has the obligation to provide electric service under Missouri law to Noranda under the LTS tariff. AmerenUE and Noranda shall endeavor to obtain such an order not later than March 15, 2005.
4. **Exclusive Supplier.** In the event that all regulatory approvals are received and all conditions as otherwise required are met and the MoPSC issues an order as provided in Paragraphs 2 and 3 above, and, on or before April 22, 2005, AmerenUE notifies Noranda pursuant to Paragraph 6 below that all necessary regulatory assurances and approvals referred to therein are sufficient, Noranda commits to purchase all of the electrical requirements for its aforementioned aluminum smelter near New Madrid, Missouri, including energy losses incurred in order to deliver such electricity from AmerenUE, for the entirety of the Term regardless of the rate or tariff under which Noranda is taking service from AmerenUE. Noranda further agrees, subject to the above conditions, to relinquish whatever rights or entitlement it has under law (including but not limited to Section. 91.026 RSMo as now in effect or as may be amended from time to time), rule, regulation, or tariff, to purchase, acquire or take delivery of power and energy from other electrical providers during the Term. If AmerenUE does not timely give Noranda the notice provided for above, this Agreement shall be void, and the parties shall have no further obligations hereunder.
5. **Term.** Noranda agrees to take service from AmerenUE initially pursuant to the terms and conditions of the LTS tariff in Exhibit A, and then pursuant to the LTS tariff or another applicable rate or tariff as subsequently approved by the MoPSC in a later rate proceeding, for a period under such rates of fifteen (15) years, such period to commence when Noranda begins taking service under the attached LTS tariff and ESA. The Term shall automatically be extended in one-year increments unless or until the Agreement is terminated at the end of the Term or any annual extension thereof by a written notice of termination given by either Party and received not later than five years prior to the date of termination.

6. **Other Regulatory Assurances.** AmerenUE's obligations hereunder, including without limitation its obligations as provided for by Exhibit A, are conditioned upon receipt of the regulatory assurances described in Paragraphs 2 and 3 above and any related Federal Energy Regulatory Commission ("FERC") approval(s), and a determination by AmerenUE, in its sole discretion, that such regulatory assurances and FERC approval(s) are sufficient. AmerenUE shall notify Noranda in writing of any determination of sufficiency under this Paragraph immediately upon its decision, but in no event later than 30 days after the MoPSC and FERC issue their final orders addressing the subject matter of this Agreement.

7. **Enforceability.** In the event that any provision of this Agreement shall be held by any court of competent jurisdiction to be illegal, void or unenforceable as applied in any particular circumstance, its illegality or unenforceability in such circumstance shall neither affect nor impair the enforceability of such provision in any other circumstance or impair the enforceability of any provision of this Agreement to the maximum extent permitted by applicable law.

8. **Modification.** The terms of this Agreement may not be amended, modified or waived except by an instrument in writing signed by both Parties.

9. **Signed Counterparts.** This Agreement may be signed in separate counterparts, each of which shall be binding on the Parties who are signatory to a counterpart.


10. **Final Agreement.** This Agreement is intended to supersede and control with respect to the Parties' understanding irrespective of the Letter of Intent and any prior oral agreement.

11. **Limitation Of Damages.** No Party (or any affiliate thereof) shall be liable to the other Party (or any affiliate thereof) for indirect, consequential, special, incidental, or punitive damages of any kind or nature whatsoever in connection with this Agreement.

12. **Assignment.** This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns. Noranda shall not assign or transfer its rights or obligations under this Agreement, by operation of law or otherwise, without the prior written consent of AmerenUE, which consent shall not be unreasonably withheld. The Parties expressly agree, however, that a potential assignee's failure to satisfy the credit requirements as set forth in the LTS tariff in Exhibit A shall be reasonable grounds for withholding consent.

IN WITNESS THEREOF, the undersigned have executed this Agreement as of the date first above written.

Noranda Aluminum, Inc.

By 

Name Keith Gregston

Title President & General Manager, Noranda Aluminum, Inc. - Primary Division

Union Electric Company d/b/a AmerenUE

By 

Name Steven R. Sullivan
Senior Vice President Gov't / Regulatory Policy,
General Counsel & Secretary

Title _____

Exhibit A to Agreement
Noranda Aluminum, Inc. and Union Electric Company
December 14, 2004

UNION ELECTRIC COMPANY ELECTRIC SERVICE

P. S. C. MO., SCHEDULE NO. ____
ORIGINAL SHEET NO. ____

APPLYING TO MISSOURI SERVICE AREA
SERVICE CLASSIFICATION NO. 12 (M)
LARGE TRANSMISSION SERVICE RATE

Rates Based on Monthly Meter Readings

Summer Rate (Applicable during four (4) monthly billing periods
of June through September)

Customer Charge - per month \$210.00
Demand Charge - per kW of Billing Demand \$11.816
Energy Charge - per kWh \$0.02242
Reactive Charge - \$0.24 per kVar

Winter Rate (Applicable during eight (8) monthly billing periods
of October through May)

Customer Charge - per month \$210.00
Demand Charge - per kW of Billing Demand \$4.504
Energy Charge - per kWh \$0.01974
Reactive Charge - \$0.24 per kVar

Optional Time-of-Day Adjustments

Additional Customer Charge - \$14.00 per month

Energy Adjustment - per kWh	On-Peak Hours(1)	Off-Peak Hours(1)
Summer kWh	+\$0.0045	-\$0.0025
Winter kWh	+\$0.0020	-\$0.0011

(1) On-peak and off-peak hours applicable shall be as
specified within this service classification.

Energy Line Loss Rate. Compensation for Customer's energy line losses
from use of the transmission system(s) outside Company's control
area shall be in the form of energy solely supplied by Company to

the transmission owner(s) and compensated by payment at a monthly rate of \$0.0325 per kWh after appropriate Rider C adjustment of meter readings.

Annual Contribution Factor. Customer shall pay an Annual Contribution Factor to Company, calculated as follows:

The Annual Contribution Factor ("ACF") shall be calculated as of the date of the completion of each successive 12-month billing period, commencing with the first annual anniversary date of service to Customer under the rate. In the event the ACF is eliminated or discontinued prior to the said anniversary date, no Customer payment is required.

The ACF shall be calculated so as to provide Company an annual net bundled kilowatt-hour realization to Company of \$0.0325/kWh, after appropriate Rider C adjustments to Customer's monthly kilowatt-hour and kilowatt meter readings. All energy and compensation due as a result of the Energy Line Loss and Reactive Charge provisions herein, if any, shall be excluded in the calculation of the ACF. The ACF shall be eliminated effective upon a Missouri Public Service Commission ("MoPSC") order in a Complaint case, rate case proceeding, or any other regulatory proceeding where Company's rates for its bundled Service Classifications are changed.

1. **Transmission Service Requirements.** Company's obligation to provide service under this rate is conditioned upon receipt of approval from the appropriate Regional Transmission Organization ("RTO") to incorporate Customer's load within Company's Network Integration Transmission Service agreement without the obligation or requirement that Company construct, upgrade, or improve any existing or new transmission plant or facilities.

Customer shall be responsible for securing firm transmission service throughout the Contract Term outside of Company's control area at no cost or charge to Company (except for Energy Line Losses), if necessary, and Customer agrees to indemnify and hold Company harmless from all such costs or charges imposed or billed. In any event, Customer shall be responsible for all costs and charges imposed or billed to Company from an RTO that are based on the fact that Customer's load is not directly connected to Company's system (e.g. Through and Out rates imposed by the Midwest Independent System Operator, Inc.)

2. **Credit Requirements.** A Customer taking service under this rate shall agree to the following special credit terms and conditions, in addition to those that may be required pursuant to Company's rules, regulations, rates or tariffs: Company, upon request and in its sole discretion, may demand of Customer a security deposit in the form of cash, letter of credit or surety bond, equal to two times (2x)

the highest monthly utility bill from the prior 12-month period, upon the occurrence of any of the following:

- a. an assignment to Customer or Customer's parent of a long-term public debt rating by Moody's that falls below the rating of Baa3;
 - b. an assignment to Customer or Customer's parent of a long-term public debt rating by Standard & Poor's that falls below the rating of BBB-;
 - c. a significant change in ownership, as determined by Company, including but not limited to a change in ownership or possession of the assets of Customer;
 - d. the assessment of two (2) late payment charges within any 12 month rolling period; or
 - e. Customer makes an assignment for the benefit of creditors, or otherwise becomes bankrupt or insolvent (however evidenced), in which case Company may pursue other remedies available in law or equity, including a declaration that the agreement is in default.
3. **Payments.** Bills are due and payable within ten (10) days from date of bill.
4. **Contract Term.** A Customer taking service under this rate shall agree to an initial Contract Term of 15 years. The Contract Term shall be extended in one-year increments unless or until the contract is terminated at the end of the Contract Term or any annual extension thereof by a written notice of termination given by either party and received not later than five years prior to the date of termination. During the Contract Term, a Customer taking service under this rate agrees that Company shall be the exclusive supplier of power and energy to Customer's premises, and waives any right or entitlement by virtue of any law, including but not limited to Section 91.026 RSMo as it now exists or as amended from time to time, statute, rule, regulation, or tariff, to purchase, acquire or take delivery of power and energy from any other person or entity.
5. **Tax Adjustment.** Any license, franchise, gross receipts, occupation or similar charge or tax levied by any taxing authority on the amounts billed hereunder will be so designated and added as a separate item to bills rendered to customers under the jurisdiction of the taxing authority.
6. **Rate Application.** This rate shall be applicable, at Customer's request, to any Customer that 1) consumed 3 million MWh in the preceding 12 months, or can demonstrate to the Company's satisfaction that it will consume said

amount in the next 12 months if historical data are unavailable, 2) can demonstrate to Company's satisfaction that such energy was routinely consumed at a load factor of 98% or higher or that Customer will, in the ordinary course of its operations, operate at a similar load factor, 3) arranges and pays for transmission service necessary for the delivery of electricity over the transmission facilities of a third party, 4) does not require use of Company's distribution system, excepting Company's metering equipment, for service to Customer, and 5) meets all other required terms and conditions of the rate.

7. **Character of Service Supplied.** Company will supply a standard three-phase alternating current transmission service voltage. The appropriate adjustments under Rider C will apply; however, there will be no adjustments under Rider B.
8. **Demand Meters.** Company will be responsible for the demand meters which have been installed for the measurement of demands.
9. **Billing Demand.** The billing demand in any month will be the highest demand established during peak hours or 50% of the highest demand established during off-peak hours, whichever is highest during the month, but in no event less than 5,000 kilowatts.

Peak hours and off-peak hours are defined as follows:

Peak hours: 10:00 A.M. to 10:00 P.M., Monday thru Friday.

Off-peak hours: All other hours including the entire 24 hours of the following days: New Year's Day, Independence Day, Thanksgiving Friday, Good Friday, Labor Day, Christmas Eve Day, Memorial Day, Thanksgiving Day, Christmas Day.

All times stated above apply to the local effective time.

10. **Reactive Charge.** The kVar charge specified in this rate shall be applicable to the kilovars by which the Customer's average metered kilovars exceed the Customer's kilovars at an average power factor of 90% lagging during the billing period. Such average kilovar billing units shall be determined in accordance with the following formula:

$$\text{kVar} = \left(\frac{\text{kVarh}}{\text{kWh}} - 0.4843 \right) (\text{kW})$$

where:

kVar = kilovar billing units

kVarh = metered kilovarhours

kWh = metered kilowatthours

kW = metered kilowatts

0.4843 = kilovar requirement at 90% lagging power factor.

Where in Company's sole judgment application of the above formula would not be appropriate to a Customer, an agreement between Company and Customer for the costs or charges associated with reactive supply facilities may be substituted for said formula.

11. **Optional Time of Day ("TOD") Service.** Applicable at Customer's option for all Large Transmission Service usage, subject to the following provisions:
 - a. Customer will be transferred to this TOD rate option effective with TOD meter installation and transferred from this TOD rate option to the applicable non-TOD rate after the meter is removed.
 - b. A Customer electing this TOD option shall remain on the option for a minimum period of 12 months, provided however, that Customer may discontinue this option within the first 90 days following election subject to the continued payment of the TOD Customer Charge, in lieu of any other customer charge, for the full 12-month term of this option.
 - c. any Customer canceling this TOD option may not thereafter resume billing under said option for a period of one year following the last billing period on the TOD option.
12. **General Rules and Regulations.** In addition to the above specific rules and regulations, all of Company's General Rules and Regulations shall apply to the supply of service under this rate.

ELECTRIC SERVICE AGREEMENT

20

To: Union Electric Company d/b/a AmerenUE

The undersigned (hereinafter called "Customer") requests Union Electric Company d/b/a AmerenUE (hereinafter called "Company") to supply electric service to Customer under the following terms:

First: Company to supply and Customer to take and pay for all electric service required for the operation of electric equipment installed or to be installed by Customer on property located at St. Jude Industrial Park and used in the aluminum smelting business, under the terms and conditions of Company's Rules and Regulations and Company's Service Classification No. 12(M) Large Transmission Service Rate for Large Transmission Service.

Service hereunder to be delivered at:

Billing Periods	Nominal Voltage	Phase	kW Demand
October thru May	161,000 volts	3	500,000
June thru September	161,000 volts	3	500,000

Second: Customer satisfies the terms and conditions of the Rate Application paragraph for Service Classification No. 12 (M). Customer agrees to notify Company in writing of any contemplated change in kW demand.

Third: This agreement shall become effective as of the date written above and shall continue in force for an initial term of fifteen (15) years, from and after the date Customer shall first receive delivery hereunder which shall be on or before June 1, 2005, and thereafter until terminated in the manner required or permitted by Service Classification No.12(M).

Fourth: This agreement is made subject to Service Classification No. 12(M) and all other applicable rules, regulations and orders of the Regulatory Authorities having jurisdiction, now or hereafter in force. The terms of this agreement, including the rates herein set forth, are subject to change to conform to any change made by Company, with the approval of said Regulatory Authorities, in Company's rates, rules and regulations applicable to the class of service rendered hereunder.

Fifth: This agreement shall be binding upon the parties hereto and their successors and assigns. This agreement cannot be assigned by Customer, by operation of law or otherwise, unless by written consent, which consent shall not be unreasonably withheld. Customer expressly agrees, however, that a potential assignee's failure to satisfy the credit requirements as set forth in Service Classification No. 12

(M) shall be reasonable grounds for withholding consent to
an assignment

Accepted:

UNION ELECTRIC COMPANY

NORANDA ALUMINUM, INC.

By _____

By _____

Title _____

Title _____

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served via e-mail, to the following parties on the 21st day of December, 2004.

Office of the General Counsel
Missouri Public Service Commission
Governor Office Building
200 Madison Street, Suite 100
Jefferson City, MO 65101
gencounsel@psc.state.mo.us

Office of the Public Counsel
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/s/James B. Lowery

James B. Lowery