Exhibit No.:	
Issues:	Cost analysis – With and Without Noranda
Witness:	Richard A. Voytas
Sponsoring Party:	Union Electric
Type of Exhibit:	Surrebuttal Testimony
Case No.:	EA-2005-0180
Date Testimony Prepared:	February 14, 2005

MISSOURI PUBLIC SERVICE COMMISSION

Case No. EO-2005-0180

SURREBUTTAL TESTIMONY

OF

RICHARD A. VOYTAS

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
February 2005

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Application of Union Electric Company for a Certificate of Public Convenience and Necessity authorizing it to construct, install, 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	))))))))	Case No. EA-2005-0180

AFFIDAVIT OF RICHARD A. VOYTAS

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

Richard A. Voytas, being first duly sworn on his oath, states:

1. My name is Richard A. Voytas. I am employed by Ameren Services Company as Manager of the Corporate Analysis section in the Corporate Planning Department.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company, d/b/a AmerenUE, consisting of 16 pages and Schedule RAV-14, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

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

Richard A. Voytas

Richard A. Voytas

Subscribed and sworn to before me this 14th day of February, 2005.

Mary Hoyt

Notary Public

My commission expires: 4-1-2006

MARY HOYT
Notary Public - Notary Seal
STATE OF MISSOURI
Jefferson County
My Commission Expires: April 1, 2006

TABLE OF CONTENTS

SURREBUTTAL TESTIMONY

OF

RICHARD A. VOYTAS

CASE NO. EO-2005-0180

I. INTRODUCTION.

Q. Please state your name and business address.

A. My name is Richard A. Voytas. My business address is 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. By whom and in what capacity are you employed?

A. I am employed by Ameren Services Company as Manager of the Corporate Analysis section in the Corporate Planning Department.

Q. Are you the same Richard A. Voytas who previously submitted direct testimony in this docket?

A. Yes.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to address issues related to the Metro East-related rebuttal testimonies of Staff witnesses Robert E. Schallenberg and Michael S. Proctor. The Commission's approval of the Metro East transfer on February 10, 2005 renders Mr. Schallenberg's and Dr. Proctor's Metro East-related testimony moot, but given that it has been filed, I am addressing it in my surrebuttal testimony. The Company's counsel may also address their Metro East-related testimony in other filings with the Commission.

Q. Did you rely upon any particular information in preparing your surrebuttal testimony?

A. Yes. I relied on workpapers submitted by Staff in "STAFF RESPONSE TO AMERENUE FILINGS" in the Metro East docket submitted on February 7, 2005. I also relied on the Company's analyses of the impact of serving Noranda submitted in the Metro East docket after I submitted my direct testimony in this case on December 20, 2004. In particular, I relied upon the Company's January 31, 2005 Metro East docket filing which included considering of the cost impact of adding Noranda.

II. <u>THE METRO EAST TRANSFER APPROVAL.</u>

Q. How does the Commission's approval of the Metro East transfer on February 10, 2005 impact your surrebuttal testimony with regard to Mr. Schallenberg and Dr. Proctor?

A. Their Metro East-related testimony is directed entirely to Staff's contention that transferring the Metro East territory without considering Noranda is, in Staff's view, detrimental to the public interest. It is my belief Staff no longer holds that view given that Mr. Schallenberg, at his February 8, 2005 deposition, stated that Staff would not hold the view that the Metro East transfer is detrimental to the public interest if the Commission approved it because the Commission "would have made a finding in that case [Metro East] that it's not detrimental to the public interest." Schallenberg Depo. P. 16, lines 16-17. Mr. Schallenberg was also very clear during his deposition that Staff basically favors the Noranda Application, subject only to a resource adequacy condition suggested by Dr. Proctor and Staff has issues with the proposed Large Transmission Service ("LTS") tariff. Mr. Nelson's surrebuttal testimony responds to Dr. Proctor's concerns relating to his resource adequacy condition, and Mr. Cooper's surrebuttal testimony addresses the LTS tariff issues. Regardless, all of the analyses submitted in the Metro East docket that examine serving Noranda show that transferring Metro East, which has now been approved, and in turn serving Noranda, is clearly a lower cost option for the Company and Missouri ratepayers versus any other case where Noranda is not served.

Q. Please explain.

A. In compliance with the Commission's December 30, 2004 Order Directing Filing in the Metro East docket, the Company examined four different scenarios and filed analyses on all four scenarios. The Company's final filing (submitted on January 31, 2005) is attached to my surrebuttal testimony as Schedule RAV-14. This filing is the filing discussed by Mr. Schallenberg in his rebuttal testimony. In brief, the Company's January 31 filing in the Metro East docket shows that the lowest cost option is to transfer Metro East and in turn to serve Noranda ("Scenario 4" in that filing) versus the other options that were under consideration in that filing, including the option of not transferring Metro East. That is precisely the scenario that will occur if the Company's Application in this case is approved now that Metro East has been approved and will be transferred.

Q. You earlier referenced a Staff filing in response to the Company's filings. What did Staff's filing show?

A. Staff's February 7 Metro East filing, though flawed in a number of respects as discussed in more detail below, confirmed that under the conditions by which the Metro East transfer will now occur, as ordered by the Commission, transferring Metro East and in turn serving Noranda is the lowest cost option to AmerenUE versus the other options under consideration.

Q. Does the basic premise of Mr. Schallenberg's rebuttal testimony matter at this point?

A. No, but in order to provide the Commission with more complete information about inaccuracies in Mr. Schallenberg's rebuttal testimony, I am providing additional information for the Commission in Sections III and IV of my surrebuttal testimony.

III. RESPONSE TO REBUTTAL TESTIMONY OF ROBERT E. SCHALLENBERG.

Q. Briefly summarize Mr. Schallenberg's position regarding the Metro East transfer.

A. Mr. Schallenberg states it is Staff's position that the Metro East Transfer as proposed by Ameren as a necessary condition for AmerenUE serving the Noranda load is detrimental to the public interest.

Q. Does Staff's pleading submitted on February 7, 2005 support Mr. Schallenberg's contention that the Metro East Transfer is detrimental to the public interest?

A. No. Assuming that the results shown in tables 1.1 to 3.3 on pages 6 to 10 of Staff's filing are accurate, the following conclusions can be drawn from Staff's filing:

1. Transferring Metro East and in turn serving Noranda (Scenario 4) is the best option for Missouri ratepayers under Staff Cases 1 and 2.

2. Ignoring Noranda entirely, transferring Metro East (Scenario 3) is a better option than not transferring Metro East (Scenario 1) under Staff Cases 1 and 2.3.

3. Case 3 is not applicable because it assumes the Company would not make the "first" JDA amendment. The first JDA amendment and the economic benefits of it are assured by the Commission's February 10 order approving the Metro East transfer rendering Staff's Case 3 irrelevant and moot.

Q. You suggested that there are flaws in Staff's analysis in any event. Is one of those flaws related to Mr. Schallenberg's contention at page 7, lines 3-4 of his rebuttal

testimony that "Ameren uses a high discount rate, 9.4%, that places greater value on early year cost differentials."

A. Yes. First, recognize that Staff changed the discount rate to 7.79% in their filing and *still* produced results that favored the Metro East transfer as a better deal for Missouri ratepayers. Although I am a user of AmerenUE financial parameters, not the developer of them, my understanding is that AmerenUE is facing significant future investment to support customer needs. Increased capital expenditures contribute to increased risks, and as risk increases, the Company's cost of capital increases. As with capital budgeting and valuation analyses performed by the Company, when evaluating longer-term capital decisions or analyses which have a meaningful degree of permanence additional sources of risk must be accounted for. Using risk adjusted discount/hurdle rates and costs of capital which capture such risks is more appropriate for such analyses than simply using a spot measurement of cost of capital which only captures, to the extent measured correctly and objectively, investors' current return expectations. Current measures of cost of capital do not assure that investments or business decisions will meet investors' future return requirements.

In fact, the cost-of-capital used to support the analyses in my direct testimony and in Schedule RAV-14 is *identical* to that used internally by AmerenUE to evaluate capital decisions. By design, it attempts to ensure that future capital costs, debt and equity, have a reasonable chance of being realized. It is a hurdle rate that places more stringent criteria on decisions that add to rate base. This serves to the ultimate benefit of ratepayers and helps keep rates competitive.

Q. Mr. Schallenberg also claimed at page 7, lines 8-10 of his rebuttal testimony that "incremental administrative and general (A&G) expenses is overstated to the extent

that there would be any material increase in these expenses at all under the no Metro East Transfer scenario." Please respond.

A. Neither the Company nor Staff has ever had the need to attempt to allocate A&G expenses down to the individual generating plant level. Allocated A&G administrative expenses are a major cost component in the Metro East transfer economic analysis. The alternative to the transfer is the addition of 1,100 MW of combustion turbine generators ("CTGs") which will essentially triple the size of AmerenUE's CTG fleet. The new, state-of-art CTGs as opposed to the existing fleet of AmerenUE CTGs are highly tuned machines designed to achieve the lowest emissions possible. Continuous emissions monitoring systems are installed with each new machine. The emissions are analyzed and reported to the Environmental Protection Agency each month. There is significant additional accounting reporting work associated with the type of financing associated with many of the new CTGs. Additional natural gas supply staff has been added to meet the fuel requirements for the CTGs. A significant amount of engineering support is needed to maintain and improve the new CTG operations. To assert that there that there are no incremental A&G expenses associated with tripling the size of AmerenUE's CTG fleet with 1,100 MW of state-of-the-art CTGs is both illogical and unreasonable. Omitting an A&G cost component for the 1,100 MW of CTGs that AmerenUE would have had to add absent the Metro East transfer understates the benefit of the Metro East transfer to Missouri ratepayers.

Q. On page 7 lines 17-20 of his rebuttal testimony Mr. Schallenberg states that the study performed by AmerenUE did not increase fixed operation and maintenance (O&M) expense over the twenty year horizon of the study. Is that statement true and what impact would increasing fixed O&M expenses have on the results of the study?

A. Mr. Schallenberg is partially correct. The Company did include increases in fixed O&M expenses for new capacity added in both the “with and without Noranda” cases studied over the twenty year planning horizon. However, it did not include any increases in fixed O&M expenses during the twenty year planning horizon in the generation existing as of the end of 2003. However, these increases would have to be added to both the “with and without Noranda” scenarios in the same amount. The impact would be to increase the difference between the two cases in favor of the “with Noranda” scenario. That result is due to the fact the same fixed O&M expense would be spread over more MWh in the “with Noranda” scenario. The “with Noranda” scenario is the only relevant scenario at this time now that Metro East has been approved.

Q. On page 7 and 8 lines 21-22 and 1-2 of his rebuttal testimony Mr. Schallenberg states that the study performed by AmerenUE did not consider the impacts of capital expenditures to its existing generation fleet for environmental compliance purposes. Is that statement true and what impact would including additional capital expenditures for that purpose have on the results of the study?

A. Mr. Schallenberg is correct. The Company did not include any additional capital expenditures to its existing generation fleet for environmental compliance purposes in its study. As with the fixed O&M expenses any additional costs would need to be added to both the “with and without Noranda” scenarios in the same amount. Again the impact would be increase the difference between the two cases in favor of the “with Noranda” scenario and, again, that is the only scenario at issue at this time. That result is due to the fact that the same investment cost would be spread over more MWh’s in the “with Noranda” scenario. I will address the environmental capital expenditures added by Staff in Staff’s February 7, 2005 Metro East filing in my surrebuttal to Dr. Proctor’s testimony in Section IV.

Q. Mr. Schallenberg states that Ameren used a four-month coincident peak (4 CP) methodology as the starting point for the allocation of investment costs among the Missouri, Illinois and FERC jurisdictions before consideration of the Metro East Transfer. Staff changed it to twelve-month coincident peak (12 CP) in their modified analysis. Please comment.

A. The Staff's modification of the Company's 4 CP allocation method to a 12 CP increased the costs associated the Metro East transfer. Despite the change and corresponding cost increase, Staff's modified analysis showed that both the Metro East transfer by itself as well as the combination of the Metro East transfer and the addition of the Noranda load benefited AmerenUE Missouri ratepayers. Although I am not a cost of service expert, the use of inconsistent allocation methods for AmerenUE production and transmission plant between two state jurisdictions results in either greater than or less than full recovery of costs. This result underscores another reason for, as well as the need for, the Metro East transfer. Granting the Company's request to transfer its MetroEast service territory to AmerenCIPS, an Illinois only company, and thereby making AmerenUE's a Missouri only jurisdictional electric utility should mitigate, if not eliminate, the need for future disagreements on the allocation of common production and generation plant investment between two state jurisdictions.

Q. On page 9, line 12 in his testimony Mr. Schallenberg states "Lack of data from Ameren or disagreements over study approaches and assumptions have created the current opposition to the Metro East Transfer." Please comment.

A. Unfortunately Mr. Schallenberg does not mention the specific lack of data that he is complaining about. Consequently, I cannot respond to Mr. Schallenberg's allegation of a lack of data. In terms of the disagreements of study approaches as those approaches relate to the

Metro East transfer least cost analysis, the record in the Metro East case together with the record in this case shows that Staff has come full circle on the type of least cost analysis that it prefers. It almost appears that Staff was searching for that special analysis methodology that will show that the Metro East transfer will not benefit Missouri ratepayers. Let me explain. Beginning with the Company's prior attempt to reach settlement with Staff regarding the Metro East transfer, both Staff and the Company utilized a historical test year approach to do the economic analysis of the transfer. The results showed that the transfer benefited Missouri ratepayers. Then during the Metro East transfer proceedings Staff witness Dr. Proctor stated that he preferred "budget forecasts for any of the direct or indirect costs associated with the transfer." Schedule RAV-14 is a budget forecast of the type Dr. Proctor indicated he preferred. Staff took the Company's forecast and modified it. Even after the modifications, the results of the Metro East transfer least cost analysis showed a benefit to Missouri ratepayers. Knowing this, Mr. Schallenberg claimed in his deposition in this case (page 50, lines 10 through 13) that the numbers used in the budget forecast are not "the dollars that are gonna be on the [actual] books" and it takes a rate case to determine the actual dollars for a historical test year. What Mr. Schallenberg is saying is that Staff now seems to have switched back to a preference for a test year approach, which is the approach initially taken by the Company and filed in the Metro East docket.

Q. On page 9, line 14 in his rebuttal testimony, Mr. Schallenberg states "Since AmerenUE contends that it is beneficial to AmerenUE to add load (i.e., the Noranda Load), it is questionable that it can be beneficial to AmerenUE to lose load (i.e., the Metro East Load)." Do you agree with his statement?

A. Absolutely not. Furthermore, the statement reveals a lack of understanding of the very nature of the two fundamentally different transactions.

Q. Why?

A. At a very basic level resource planning is just keeping supply equal to load. One can visualize this notion as a mathematical equation: supply = load. By his testimony, Mr. Schallenberg assesses the transactions, Metro East transfer and Noranda, to be approximately equivalent on the load (demand) side of the resource planning equation. However, he fails to recognize it is on the supply side of the resource planning equation that the two transactions differ. In fact, because of the difference on the supply side of the equation, both transactions CAN be (and are) beneficial to AmerenUE Missouri ratepayers, a conclusion reached by both Staff's and the Company's analyses.

Q. Please explain the differences on the supply side?

A. For the Metro East transaction, one can conceptually view it as AmerenUE's Missouri customers acquiring a "slice" of existing generation assets which has an embedded cost of $374/Kw and includes a variety of generation assets (i.e. coal, nuclear, hydro, combustion turbines, etc). *In order to validate Mr. Schallenberg's incorrect assertion that the transactions are just opposites, when adding the Noranda load AmerenUE would first have to sell this slice of existing generation freed up by the Metro East transfer.* Obviously, this is not the transaction that AmerenUE proposed. To serve the Noranda load, AmerenUE is proposing to utilize its existing fleet of low cost generation, which would include the newly acquired slice freed up by the Metro East transfer, to provide the additional energy for serving Noranda. In addition, AmerenUE would acquire combustion turbines in 2006-2007 to meet the new capacity (i.e.

reliability requirements) imposed by the addition of the Noranda load. From this explanation, it should obvious that these two transactions are substantially different.

Q. Since the transactions are vastly different on the supply side resources, can both transactions be beneficial to AmerenUE?

A. Again, absolutely. The revenue requirement analyses submitted in both the Metro East docket and in this case prove this conclusively. In the Metro East Transfer, AmerenUE acquires low production cost generating assets at book value. These generating assets would be used to lower the production cost for AmerenUE's existing customers. Currently, AmerenUE's Illinois customers receive the benefits of these low cost assets. With Noranda, AmerenUE will utilize its existing low production cost generation to supply energy to Noranda. In addition, AmerenUE will acquire combustion turbines to fulfill its reliability needs. In a nutshell, these are the differences that make both transactions beneficial to AmerenUE.

Q. Mr. Schallenberg refers at pages 9 -10 at lines 23 to 3 of his rebuttal testimony to "Ameren's Missouri retail regulated operations subsidy of Illinois non-regulated generating operations through the current Joint Dispatch Agreement" ("JDA"). Please comment.

A. I will respond to the specifics of Staff's attempt to analyze the impact of the JDA on the Metro East transfer in my surrebuttal testimony to Dr. Proctor's rebuttal testimony in Section IV. Using Staff's own analysis of the JDA, Staff shows that the Metro East transfer is the lowest cost option for AmerenUE Missouri ratepayers under the only two relevant cases that Staff analyzed. The continuation of the existing JDA has not and will not cost AmerenUE Missouri ratepayers anything during the current rate moratorium.

IV. RESPONSE TO REBUTTAL TESTIMONY OF MICHAEL S. PROCTOR.

Q. Is it your understanding that Dr. Proctor was the primary Staff analyst who incorporated an estimate of the environmental upgrade costs based on a recent Ameren financial filing?

A. Yes. Based on Dr. Proctor's deposition, it is my understanding Dr. Proctor took environmental capital expenditure estimates from a recent Ameren SEC Form 10-K filing, spread these expenditures evenly over the time periods mentioned in the filing, and included the annual capital expenditures in Staff's analysis of Scenarios 1-4 as submitted in Staff's February 7, 2005 Metro East filing.

Q. Did Dr. Proctor include an estimate of fixed and variable O&M which would be associated with the environmental capital expenditures?

A. No.

Q. Why would Dr. Proctor include the environmental capital expenditures as they were incurred in his analysis as opposed to when the equipment was used and useful?

A. Based on Dr. Proctor's deposition, it appears that Dr. Proctor simply did not have enough information to make this determination. Regardless, in the process of computing net present values for these capital expenditures, Dr. Proctor's approach will increase the net present value which makes the Metro East transfer look more costly.

Q. After the environmental equipment was assumed to go into commercial operation did Dr. Proctor make a corresponding decrease in variable production emissions costs to reflect reduced emissions at the AmerenUE generators plants with the emissions technology?

A. No. This too makes the Metro East transfer look more costly.

Q. Did Dr. Proctor consider the potential for electric market price increases that may be directly related to new environmental equipment installations?

A. No. The level of environmental capital expenditures required for all coal burning plants in the Midwest will force many marginal coal units to be retired. This in turn will put upward pressure on electric market prices. An increase in electric market prices will impact the least cost analyses of Scenarios 1-4.

Q. Is Staff familiar with emissions control technologies?

A. Dr. Proctor stated in his deposition that he was only generally familiar with emissions controls technologies.

Q. Is Staff familiar with emissions rules that may or may not require the capital expenditures used by Dr. Proctor in Staff's February 7, 2005 analysis?

A. Dr. Proctor stated that he does not have expertise in this area.

Q. Does the Company know how it will comply with the final emissions rules?

A. Final emissions rules have not been issued. The Company's emissions compliance strategy is still in the developmental stage. To attempt to put environmental capital expenditure placeholders into the least cost analyses that support both the Metro East transfer and Noranda certificate cases, appears to be a meaningless exercise at this point. When a comprehensive strategy is defined, it will be a relatively complex task that requires knowledge of the emissions rules, emission control technologies and operating constraints and electric price market modeling to incorporate this cost component into any analyses.

Q. On page 4 of Staff's February 7, 2005 filing, Staff states they "want to provide full information to the Commission with respect to the effect of the JDA" and "to

make the Commission aware of the material effect of the JDA on the proposed Metro East Transfer". Do you think their analysis fulfills these objectives?

A. No.

Q. Why?

A. The portion of the analysis related to the JDA is fundamentally flawed. Consequently, the analysis does not provide the information that Staff has required in order to conduct the studies. Any conclusions drawn are flawed from the start.

Q. Please explain why the analysis is flawed?

A. When performing resource planning, the Company plans for AmerenUE by itself. AmerenUE is defined as AmerenUE –Missouri customers, AmerenUE –Illinois customers (which will soon change because of the transfer), AmerenUE wholesale customers, and sales to off-system parties. On page 2, Staff acknowledges this fact by correctly stating that AmerenUE's analysis was performed on a stand-alone basis.

The Staff's fundamental mistake is in taking this stand-alone analysis and applying the terms of the JDA. It is incorrect to apply the allocation terms of the JDA to the **"stand-alone"** off-system profits.

Q. Why is it incorrect to apply the JDA's allocation terms to the "stand-alone" off-system profits?

A. With the JDA in place, off-system sales will be different than the off-system sales from the **"stand-alone"** analysis**.** Apparently, Staff assumed that operating under the JDA will not materially impact the amount of off-system sales.

Q. Is the assumption that operating under the JDA will not materially impact the amount of off-system sales correct?

A. No.

Q. Will the off-system sales be more or less operating under the terms of the JDA?

A. I do not know. But, I do know that under the JDA, the generating fleets of **both** AmerenUE and Ameren Energy Generating Company ("AEG") have the opportunity to sell off-system and this reality will impact the off-system sales analysis. The off-system sales from the **combined** generating fleets are allocated, according to the terms of the JDA, to both AmerenUE and AmerenCIPS. Staff's incorrect "JDA analysis" assumed that only off-system sales from AmerenUE's fleet are allocated between AmerenUE and AmerenCIPS.

Q. Is an analysis that models the JDA a simple task?

A. No. Analyzing the JDA requires that the generation and load for both companies be modeled in a production costing model that has the ability to mimic JDA type dispatch as well as stand alone dispatch.

Q. If the analysis you describe above was done, could the profits of off-system sales be allocated accurately for the model?

A. Yes.

Q. Did you see any other problems with the JDA portion of the Staff's analysis and, if so, what were those problems?

A. Yes, there are other problems. In applying the allocation terms for off-system sales under the JDA, the Staff used projected numbers from various analyses for 2006. Staff proceeded to use these 2006 allocations for *every* year of the 20-year study. To have the correct allocations, Staff needs to calculate them for each year separately. Then, Staff should have applied the allocations to the off-system sales calculated from a modeling run using both AmerenUE's and AEG's generation performed as described above.

Q. Why is calculating the allocations for every year important?

A. If one uses just one year's allocations for every year, the allocation will not reflect the resource plans for the other 19 years. For example, under the current terms of the JDA, off-system sales are allocated based on each company's load, though that will now change as a result of the first amendment to the JDA. One of the major inputs, and biggest unknowns, to a JDA analysis is Ameren Energy Marketing's ("AEM") post-2006 load responsibilities. As Dr. Proctor recognized during his deposition, the continued implementation of retail choice in Illinois (which began in 1999) makes AEM's post-2006 load responsibilities an unknown. Further, there is expected to be an auction process in place beginning January 1, 2007. What, if any bids are won by AEM will not be known until mid 2006, and can change each year as a result of the auction process. By using just the one year, the Staff simply assumed AEM's (and AmerenUE's) load shapes stay the same for each year of the study period. I am certain the load shapes will change.

Q. What impact does this flawed JDA analysis have on their results?

A. Due to the flaw in the JDA analysis alone, the results for Staff's Case 2 (off-system profits allocated on generation) and Case 3 (off-system profits allocated on load) are invalid and meaningless. Cases 2 and 3 certainly fall short of the Staff's objective "to provide full information to the Commission with respect to the effects of the JDA".

Q. Does this conclude your testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union Electric Company d/b/a AmerenUE for an Order Authorizing the Sale, Transfer and Assignment of Certain Assets, Real Estate, Leased Property, Easements and Contractual Agreements to Central Illinois Public Service Company d/b/a AmerenCIPS, and in Connection therewith, Certain Other Related Transactions.	**)**	**Case No. EO-2004-0108**

UNION ELECTRIC COMPANY'S d/b/a AMERENUE'S FOURTH RESPONSE TO THE COMMISSION'S DECEMBER 30, 2004 ORDER DIRECTING FILING

COMES NOW Union Electric Company d/b/a AmerenUE (the "Company" or "AmerenUE") and hereby files its Fourth Response to the Commission's December 30, 2004 Order Directing Filing (the "Order"). In this regard, AmerenUE states as follows:

Introduction

1. The Order directs the Company to conduct and provide to the Commission "least cost" analyses of four different scenarios using the minimization of the present worth of long-run utility costs, as called for by the Commission's Electric Utility Resource Planning Rule (4 CSR 240-22). The Order also directed the Company to provide a narrative description and summary of the analyses consistent with each of the four scenarios.[1]

2. On January 3, 2005, the Company filed its Initial Reply to the Order. The Company filed additional responses on January 6 and January 24, 2005, and prior to this filing, has provided analyses relating to three of the four scenarios (Scenarios 1, 3 and 4).

3. The four scenarios are summarized as follows:

[1] The Order also directed the Company to provide discussion regarding any alternative plans that it has to meet its infrastructure commitments contained in the Stipulation and Agreement approved by the Commission in Docket No. EC-2002-1, a discussion that was provided in the Company's January 6, 2005 filing in this case.

a. The Metro East transfer does not occur, and AmerenUE does not serve Noranda on June 1, 2005 (*i.e., the status quo*);

b. The Metro East transfer does not occur, but AmerenUE does serve Noranda on June 1, 2005 *(this scenario is purely a hypothetical that will not occur because AmerenUE does not have sufficient capacity to serve both loads)*;

c. The Metro East transfer does occur, and AmerenUE does not serve Noranda on June 1, 2005 *(this is the scenario that would have existed if the Metro East transfer had occurred and the proposal to serve Noranda had not been made)*; and

d. The Metro East transfer does occur, and AmerenUE does serve Noranda on June 1, 2005 *(this is the scenario that the Company seeks to accomplish as a result of its request for authority to transfer the Metro East service territory in this case and to serve Noranda in Case No. EA-2005-0180).*

<u>Executive Summary</u>

4. Provided with this Response are analyses for all four scenarios. Analyses for Scenarios 1, 3 and 4 are being re-submitted with this Response which was originally intended to include only the Scenario 2 analysis which had not previously been done, because an error was discovered in the spreadsheets relating to the Scenario 1, 3 and 4 analyses that were submitted with the Company's January 6 and January 24 filings. That error arose from double-counting certain fixed and variable production costs in each of these scenarios. We explain that error in more detail below, but in brief, by double-counting certain of these production costs, AmerenUE's aggregate generation-related production costs in each of the three scenarios previously submitted were overstated. AmerenUE contacted Staff to apprise them of the error before filing this Response and was advised that Staff was aware of same.

5. Correcting this error does not change which of the four scenarios is most beneficial for Missouri ratepayers, nor does it change the relative ranking of each scenario relative to the other scenarios. In summary, Scenario 4 – transferring the Metro East service territory and then serving

Noranda – is the most beneficial of the four scenarios for Missouri ratepayers, as demonstrated by the following table, which ranks each of the four scenarios from lowest to highest cost[2]:

Scenario	**Total Cost in $/MWh**	**Description**
4	$53.17	Transfer Metro East to AmerenCIPS; Serve Noranda
2[3]	$54.32	Keep Metro East; Serve Noranda
3	$54.45	Transfer Metro East to AmerenCIPS; Do Not Serve Noranda
1	$55.45	Do not transfer Metro East to AmerenCIPS; Do Not Serve Noranda

Discussion of the Analyses Submitted with this Fourth Response

6. Attached to this Fourth Response as Exhibit A are the detailed results of the requested analysis of Scenario 2. Also attached to this Response, as Exhibits B, C and D, respectively, are the detailed results for Scenarios 1, 3 and 4 (updated to correct the double-counting error noted above). The Scenario 1, 3 and 4 analyses submitted with this Response are, except for correcting the double-counting error, identical to those submitted on January 24, 2005 with the Company's Third Response.

7. The double-counting error corrected in this filing is simple and occurred as a result of an oversight on the part of the Company's analysts. The error occurred when fixed and variable operation and maintenance ("O & M") costs were counted twice in the tables reflected in Exhibits B through D – once in the row labeled "Total Production Cost ($mm)" and once in the row labeled "Embedded Cost, $/MWH." The error caused the "Total Cost, $/MWH" to be overstated in the results for the three scenarios which were previously submitted. For example, the total generation-related production costs for AmerenUE (using the figures from when the O & M was mistakenly double counted under Scenario 4) were $63.39/MWh, as reflected in Exhibit C submitted with the

[2] Appendix 1 attached to this Response summarizes all of the results submitted by the Company in this filing, as well as the Company's January 6 and January 24 filings.
[3] As discussed in more detail in paragraph 10 below, the results submitted with this filing with regard to Scenario 2 are hypothetical and unrealistic because the Scenario 2 analysis, as were the analyses of the other scenarios, assumed service to Noranda on June 1, 2005 with continuing service to Metro East. Service to both loads on June 1, 2005 cannot occur.

Company's Third Response on January 24, 2005. By correcting the error, the total generation-related costs dropped to $53.17/MWh, as reflected on Exhibit D attached to this Response.

8. More specifically, the double-counting error occurred when the Company's analysts inadvertently failed to remove the fixed and variable O & M cost components from the MIDAS production cost modeling run as these cost components were cut and pasted into spreadsheets that serve as the workpapers for the Scenarios 1-4 analyses. Again, these costs were already included in the Embedded Cost component which is based on AmerenUE's actual 2003 revenue requirement. The MIDAS modeling itself was and is correct, and the actual AmerenUE revenue requirement for 2003 is correct, but in compiling the spreadsheets from which Exhibits B through D were produced, the analysts should have carried over only the fuel and emission cost components from the MIDAS production costing runs, not the fixed and variable production costs.

9. Nonetheless, as did the results presented in the past three weeks and indeed as did the test year-based least cost analysis presented to the Commission in the Metro East evidentiary hearings last Spring, these corrected analyses show that transferring the Metro East service territory to AmerenCIPS results in lower costs for ratepayers versus the option of not transferring the Metro East service territory to AmerenCIPS. This is true independent of any considerations relating to Noranda. It is also true independent of any consideration of non cost-based benefits of completing the Metro East transfer.[4] The analyses requested by the Commission include, however, considerations related to Noranda. Moreover, if one considers Noranda, all of the results – those presented in the Noranda docket together with those submitted on January 6, January 24 and with this filing – show that serving Noranda versus not serving Noranda (Scenario 4) is the *best* of these options for ratepayers.

[4] Benefits we have previously discussed, including freeing the Company and the Commission from the inherent conflicts that exist from AmerenUE's operations in two different states with different regulatory regimes and promoting the Commission's stated desire that AmerenUE meets its capacity needs with hard assets – steel in the ground – a desire promoted by the Metro East transfer.

10. A further point regarding the Scenario 2 analysis submitted with this Response also bears noting. The Scenario 2 analysis results submitted with this Response unrealistically assumes that AmerenUE could acquire or build the very large[5] quantity of capacity that would be required to keep the Metro East load and to serve Noranda by June 1, 2005. That assumption is false. Consequently, Scenario 2, though listed in the table in paragraph 5 as an option, is indeed not an option. The only options truly under consideration are reflected in Scenarios 1, 3 and 4. Of those options, there is no doubt that Scenario 4 (transfer Metro East and serve Noranda) is superior to all others and, even if Noranda was not at issue, there is no doubt that Scenario 3 (transferring Metro East) is superior to not doing so.

Conclusion

11. The Order also required the Company to provide "the complete analysis underlying each of these studies to Staff and the Office of the Public Counsel." The workpapers (i.e. the "complete analysis") provided to Staff and Public Counsel one week ago has not changed and provide the entire basis for the four analyses submitted with this Response. The only changes that have been made to those workpapers – to remove the double-counting of certain O & M costs as described above – are reflected in the attached results.

12. The Company regrets any confusion this double-counting error may have caused. The error was discovered just prior to the date this filing was due and, upon discovering it, the Company promptly corrected it and notified the Commission's Staff of the error. As a result of that notification, the Company understands the Staff had previously identified the error.

13. Finally, these results, and indeed all of the results provided in response to the Order, confirm what the test year-based least cost analysis showed at the evidentiary hearings which occurred some 11 months ago. Transferring the Metro East service territory lowers costs versus not

[5] The actual capacity needed by June 1, 2005 (which is highly confidential) is discussed in the highly confidential version of Mr. Voytas' pre-filed Direct Testimony in the Noranda docket at p. 5, line 6 to page 6, line 6.

transferring the Metro East service territory, and remains a good deal for Missouri ratepayers. Serving Noranda, which is also in the public interest, and is dependent on transferring the Metro East service territory,[6] should also be approved because these analyses show serving Noranda is beneficial versus not doing so.

Dated: January 31, 2005

Respectfully submitted,

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[6] And transferring the Pinckneyville and Kinmundy combustion turbines, which is also necessary to serve Noranda, depends on transferring Metro East. We would also note that Mr. Voytas' affidavit, which accompanied the Company's January 18, 2005 Response to Dr. Proctor's affidavit, demonstrates that the "Ameren system" also lacks sufficient capacity to "give" to AmerenUE to allow AmerenUE service to both the Metro East service territory and Noranda, though in any event, it would be inappropriate for AmerenUE to depend on unregulated generation from its affiliates.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on the following parties of record by e-mail this 31st day of January, 2005, at the e-mail addresses set forth below:

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APPENDIX 1

The following table shows total generation-related production costs, on a present worth basis, as presented in the Company's January 6, January 24, and January 31 filings, ranked from least cost to highest cost. "N/a" stands for "not available," given that some analyses had not been done at the time of earlier filings.

Scenario	January 6 Filing	January 24 Filing	January 31 Filing[7]
4	$62.68	$63.39	$53.17
2	n/a	n/a	$54.32
3	$65.55	$65.62	$54.45
1	n/a	$65.73	$55.45

Regardless of the aggregate level of generation-related production costs in the various filings, all of the filings show that the least cost scenario is Scenario 4 – transferring the Metro East service territory and in turn serving Noranda. All of filings also show, as did the test year-based least cost analysis submitted in 2004, that transferring the Metro East service territory is a lower cost option than not transferring the Metro East service territory, independent of any Noranda-related or other non-cost based considerations.

[7] This last column reproduces the table shown in the body of the Response to which this Appendix is attached.

Exhibit A - Work Papers for Metro East-Noranda Analysis

Scenario 1 - No Metro East Transfer, No Kin/Pinck Transfer, No Noranda Case - Acquire CTG Capacity to Serve Metro East and Replace Kin/Pinck, Build PC & CTGs

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Native Market Sold (GWh)	37897	38795	39324	39753	39473	39870	40401	41050	41416	41849	42276	42813	43279	43679	44218	44684	45154	45630	46110	46595
to MO retail	33443	34299	34792	35184	35532	35906	36415	37041	37382	37794	38149	38640	39059	39413	39906	40325	40750	41179	41613	42052
to IL retail	3836	3865	3891	3917	3941	3964	3985	4009	4034	4055	4127	4173	4219	4266	4312	4358	4405	4451	4497	4544
to MO wholesale	618	631	642	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-System Sold (GWh)	8744	7898	7394	7723	8590	7906	9399	10896	10007	9757	10391	9787	9389	9691	9084	8807	9352	9352	9352	9352
Off-System Bought (GWh)	90	140	148	219	87	94	62	12	13	10	7	17	20	31	25	116	42	42	42	42
Off-System Purchase Cost ($)mm	$5.1	$7.9	$7.9	$10.1	$4.4	$4.9	$2.6	$0.7	$0.8	$0.6	$0.4	$1.1	$1.2	$2.0	$1.7	$7.1	$3.6	$3.6	$3.6	$3.6
Off-System Fuel Cost ($mm)	$83	$80	$81	$85	$97	$98	$125	$145	$144	$147	$158	$164	$164	$165	$176	$168	$167	$167	$167	$167
Production Cost ($mm)	$410	$418	$437	$455	$468	$485	$536	$576	$596	$615	$631	$665	$684	$693	$735	$748	$756	$764	$772	$781
Native Production Cost ($mm)	$327	$338	$356	$370	$371	$387	$411	$431	$452	$468	$473	$501	$520	$528	$559	$580	$589	$597	$605	$613
for MO retail	$291	$301	$317	$330	$337	$352	$373	$392	$411	$425	$430	$455	$472	$479	$508	$527	$535	$542	$550	$557
for MO wholesale	$6	$6	$7	$7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
for IL retail	$29	$30	$32	$33	$34	$35	$38	$39	$41	$43	$43	$46	$48	$48	$51	$53	$54	$55	$55	$56
Off-System Revenue ($mm)	$267	$235	$217	$235	$267	$255	$355	$434	$415	$430	$477	$471	$469	$485	$491	$494	$482	$482	$482	$482
Native Margin ($mm)	$174	$146	$123	$138	$158	$150	$222	$280	$264	$276	$313	$301	$300	$315	$311	$321	$310	$310	$310	$310
to MO retail	$155	$130	$110	$123	$143	$136	$202	$255	$240	$250	$285	$274	$272	$286	$282	$291	$281	$281	$281	$281
to MO wholesale	$3	$3	$2	$3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
for IL retail	$16	$13	$11	$12	$14	$14	$20	$26	$24	$25	$29	$28	$27	$29	$28	$29	$28	$28	$28	$28
SO2 Emissions Cost ($mm)	$52.6	$49.6	$48.2	$48.1	$44.3	$28.8	$26.6	$24.4	$23.2	$21.8	$15.6	$15.9	$15.9	$15.8	$16.0	$16.1	$16	$16	$16	$16
Native SO2 Emissions Cost ($mm)	$42.7	$41.2	$34.9	$36.2	$32.1	$21.2	$18.6	$16.1	$15.8	$14.9	$10.3	$10.8	$11.0	$10.8	$11.3	$11.5	$11.2	$11.2	$11.3	$11.3
for MO retail	$38.0	$36.7	$31.1	$32.3	$29.1	$19.3	$16.9	$14.6	$14.3	$13.6	$9.3	$9.8	$10.0	$9.8	$10.2	$10.4	$10.2	$10.2	$10.2	$10.3
for MO wholesale	$0.8	$0.8	$0.7	$0.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
for IL retail	$3.8	$3.7	$3.1	$3.3	$2.9	$1.9	$1.7	$1.5	$1.4	$1.4	$0.9	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0
NOx Emissions Cost ($mm)	$0.0	$0.0	$35.4	$24.4	$24.3	$16.7	$15.8	$15.3	$15.1	$14.5	$11.3	$11.7	$11.5	$11.6	$11.9	$11.7	$12	$12	$12	$12
for MO retail	$0.0	$0.0	$31.5	$21.7	$22.0	$15.2	$14.4	$13.9	$13.7	$13.2	$10.3	$10.6	$10.4	$10.5	$10.8	$10.7	$10.6	$10.6	$10.6	$10.6
for MO wholesale	$0.0	$0.0	$0.7	$0.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
for IL retail	$0.0	$0.0	$3.2	$2.2	$2.2	$1.5	$1.4	$1.4	$1.4	$1.3	$1.0	$1.1	$1.0	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1
Off-System Emissions Cost ($mm)	$10	$8	$13	$12	$12	$8	$8	$8	$7	$7	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Energy Cost, $/MWH	$5.36	$6.27	$7.99	$7.70	$7.01	$7.09	$5.63	$4.49	$5.34	$5.34	$4.33	$5.24	$5.67	$5.48	$6.22	$6.54	$6.82	$6.93	$7.03	$7.13
Embedded Cost, $/MWH	$48.55	$47.33	$46.66	$46.14	$46.60	$46.12	$45.47	$44.71	$44.30	$43.82	$43.41	$42.86	$42.40	$42.02	$41.50	$41.07	$40.64	$40.21	$39.79	$39.38
New Capacity Charge, $/MWH	$1.56	$1.52	$1.50	$1.48	$1.50	$1.48	$6.89	$6.78	$6.72	$6.64	$6.58	$7.11	$7.03	$6.97	$7.47	$7.39	$7.60	$7.74	$7.87	$7.79
Total Cost, $/MWH	**$55.47**	**$55.13**	**$56.15**	**$55.32**	**$55.11**	**$54.69**	**$58.00**	**$55.97**	**$56.35**	**$55.80**	**$54.31**	**$55.21**	**$55.09**	**$54.46**	**$55.18**	**$55.00**	**$55.06**	**$54.88**	**$54.69**	**$54.30**
Diff: Metro East less No Metro East	**-$0.98**	**-$0.94**	**-$0.91**	**-$0.77**	**-$0.87**	**-$1.01**	**-$0.59**	**-$0.62**	**-$0.93**	**-$0.85**	**-$1.12**	**-$1.24**	**-$1.29**	**-$1.37**	**-$1.59**	**-$1.55**	**-$1.29**	**-$1.25**	**-$1.21**	**-$1.18**
Percent Difference	**-1.8%**	**-1.7%**	**-1.7%**	**-1.4%**	**-1.6%**	**-1.9%**	**-1.0%**	**-1.1%**	**-1.7%**	**-1.5%**	**-2.1%**	**-2.3%**	**-2.4%**	**-2.6%**	**-3.0%**	**-2.9%**	**-2.4%**	**-2.3%**	**-2.3%**	**-2.2%**

NPV of Total Cost, $/MWH	**2005-24**
Scenario 3 - Metro East Transfer	**$54.45**
Scenario 1 - No Metro East Trans.	**$55.45**
Scenario 3 less Scenario 1	**-$1.00**

NPV of Total Cost, $/MWH	**2005-24**
Scenario 4 - Metro East & Noranda	**$53.17**
Scenario 1 - No Metro East Trans.	**$55.45**
Scenario 4 less Scenario 1	**-$2.28**

Exhibit B - Work Papers for Metro East-Noranda Analysis

Scenario 2 - No Metro East Transfer, No Kin/Pinck Transfer, Noranda Case - Acquire CTG Capacity to Serve Metro East & Noranda and Replace Kin/Pinck, Build PC & CTGs

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Native Market Sold (GWh)	40262	42830	43358	43788	43505	43904	44436	45083	45442	45884	46307	46845	47314	47712	48250	48718	49191	49668	50150	50636
to MO retail	35808	38334	38825	39219	39565	39940	40450	41073	41408	41829	42180	42672	43094	43446	43938	44360	44786	45217	45653	46093
to IL retail	3836	3865	3891	3917	3941	3964	3985	4009	4034	4055	4127	4173	4219	4266	4312	4358	4405	4451	4497	4544
to MO wholesale	618	631	642	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-System Sold (GWh)	7317	5521	4715	5432	6292	5621	7591	9343	8139	8087	8787	7993	7613	7921	7186	7130	7569	7569	7569	7569
Off-System Bought (GWh)	301	424	405	676	301	339	265	48	62	102	41	76	100	110	122	445	171	171	171	171
Off-System Purchase Cost ($)mm	$16.2	$22.7	$20.9	$30.0	$14.6	$16.8	$10.6	$2.7	$3.5	$5.3	$2.4	$4.6	$5.9	$7.0	$7.8	$26.0	$13.6	$13.6	$13.6	$13.6
Off-System Fuel Cost ($mm)	$70	$59	$55	$64	$77	$76	$115	$137	$131	$138	$152	$152	$153	$153	$160	$156	$155	$155	$155	$155
Production Cost ($mm)	$424	$441	$460	$481	$498	$518	$576	$624	$643	$667	$687	$718	$741	$749	$792	$807	$815	$823	$831	$839
Native Production Cost ($mm)	$354	$383	$405	$417	$421	$441	$461	$486	$511	$529	$536	$566	$587	$597	$632	$651	$660	$668	$676	$684
for MO retail	$316	$341	$360	$372	$382	$401	$419	$442	$465	$481	$487	$514	$534	$542	$574	$592	$600	$607	$614	$621
for MO wholesale	$7	$7	$8	$8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
for IL retail	$32	$34	$36	$37	$38	$40	$42	$45	$47	$48	$49	$52	$54	$55	$58	$60	$60	$61	$62	$63
Off-System Revenue ($mm)	$219	$152	$130	$160	$187	$172	$282	$367	$335	$355	$402	$387	$385	$398	$397	$410	$395	$395	$395	$395
Native Margin ($mm)	$141	$88	$67	$88	$101	$90	$161	$223	$198	$211	$246	$231	$228	$241	$233	$251	$237	$237	$237	$237
to MO retail	$125	$78	$59	$78	$92	$82	$146	$203	$180	$192	$223	$209	$207	$219	$212	$228	$215	$215	$215	$215
to MO wholesale	$3	$2	$1	$2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
for IL retail	$13	$8	$6	$8	$9	$8	$15	$20	$18	$19	$22	$21	$21	$22	$21	$23	$22	$22	$22	$22
SO2 Emissions Cost ($mm)	$53.5	$51.3	$49.4	$49.5	$45.9	$29.7	$27.7	$25.6	$24.1	$22.6	$16.2	$16.5	$16.5	$16.3	$16.6	$16.6	$16	$16	$16	$16
Native SO2 Emissions Cost ($mm)	$45.2	$45.4	$40.9	$41.1	$36.8	$24.3	$21.2	$18.4	$18.0	$16.9	$11.7	$12.3	$12.5	$12.2	$12.8	$12.9	$12.6	$12.7	$12.7	$12.7
for MO retail	$40.3	$40.5	$36.4	$36.6	$33.4	$22.1	$19.3	$16.7	$16.4	$15.4	$10.6	$11.2	$11.4	$11.1	$11.6	$11.7	$11.5	$11.5	$11.5	$11.6
for MO wholesale	$0.9	$0.9	$0.8	$0.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
for IL retail	$4.1	$4.1	$3.7	$3.7	$3.4	$2.2	$1.9	$1.7	$1.6	$1.5	$1.1	$1.1	$1.1	$1.1	$1.2	$1.2	$1.2	$1.2	$1.2	$1.2
NOx Emissions Cost ($mm)	$0.0	$0.0	$36.7	$25.4	$25.4	$17.5	$16.9	$16.3	$16.0	$15.5	$12.1	$12.3	$12.1	$12.2	$12.5	$12.4	$12	$12	$12	$12
for MO retail	$0.0	$0.0	$32.7	$22.6	$23.0	$15.9	$15.3	$14.8	$14.5	$14.0	$10.9	$11.2	$11.0	$11.1	$11.3	$11.2	$11.2	$11.2	$11.2	$11.2
for MO wholesale	$0.0	$0.0	$0.7	$0.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
for IL retail	$0.0	$0.0	$3.3	$2.3	$2.3	$1.6	$1.5	$1.5	$1.5	$1.4	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1
Off-System Emissions Cost ($mm)	$8	$6	$9	$8	$9	$5	$7	$7	$6	$6	$5	$4	$4	$4	$4	$4	$4	$4	$4	$4
Energy Cost, $/MWH	$6.90	$8.50	$10.08	$9.76	$9.13	$9.36	$7.87	$6.66	$7.71	$7.73	$6.81	$7.78	$8.24	$8.11	$8.93	$9.30	$9.39	$9.46	$9.53	$9.60
Embedded Cost, $/MWH	$45.59	$42.58	$42.04	$41.62	$42.03	$41.64	$41.11	$40.49	$40.16	$39.76	$39.43	$38.97	$38.59	$38.28	$37.85	$37.49	$37.13	$36.78	$36.43	$36.08
New Capacity Charge, $/MWH	$2.68	$2.50	$2.47	$2.45	$2.47	$2.45	$7.33	$7.22	$7.16	$7.09	$7.03	$7.50	$7.43	$7.37	$7.83	$7.75	$7.94	$8.06	$8.18	$8.10
Total Cost, $/MWH	**$55.16**	**$53.59**	**$54.59**	**$53.83**	**$53.64**	**$53.45**	**$56.31**	**$54.37**	**$55.03**	**$54.58**	**$53.27**	**$54.25**	**$54.26**	**$53.76**	**$54.61**	**$54.55**	**$54.47**	**$54.30**	**$54.14**	**$53.78**

NPV of Total Cost, $/MWH	**2005-24**
Scenario 2 - No ME Tran, Noranda	**$54.32**
Scenario 1 - No ME Tr, No Noranda	**$55.45**
Scenario 2 less Scenario 1	**-$1.13**

NPV of Total Cost, $/MWH	**2005-24**
Scenario 4 - ME Tran, Noranda	**$53.17**
Scenario 2 - No ME Tran, Noranda	**$54.32**
Scenario 2 less Scenario 4	**-$1.15**

Exhibit C - Work Papers for Metro East-Noranda Analysis

Scenario 3 - Metro East Transfer, Kin/Pinck Transfer, No Noranda - Build PC & CTGs

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Native Market Sold (GWh)	34067	34947	35444	35844	35551	35916	36415	37053	37413	37794	38167	38652	39060	39424	39921	40325	40735	41148	41565	41987
to MO retail	33449	34316	34803	35191	35551	35916	36415	37053	37413	37794	38167	38652	39060	39424	39921	40325	40735	41148	41565	41987
to MO wholesale	618	631	642	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-System Sold (GWh)	10507	9741	9453	9461	10425	9799	10933	12168	11569	11099	11753	11349	10927	11230	10808	10411	10945	10945	10945	10945
Off-System Bought (GWh)	15	26	21	33	17	20	0	0	0	1	1	2	3	8	8	13	7	7	7	7
Off-System Purchase Cost ($)mm	$0.9	$1.7	$1.2	$1.7	$0.9	$1.1	$0.0	$0.0	$0.0	$0.0	$0.1	$0.2	$0.2	$0.5	$0.6	$0.9	$0.7	$0.7	$0.7	$0.7
Off-System Fuel Cost ($mm)	$94	$93	$95	$96	$108	$108	$127	$143	$145	$145	$154	$165	$164	$167	$180	$174	$170	$170	$170	$170
Production Cost ($mm)	$381	$387	$406	$419	$430	$444	$488	$521	$541	$554	$567	$601	$616	$626	$665	$678	$684	$691	$698	$705
Native Production Cost ($mm)	$287	$294	$311	$323	$321	$335	$361	$378	$396	$409	$412	$436	$452	$459	$485	$504	$514	$521	$528	$535
for MO retail	$280	$288	$304	$316	$321	$335	$361	$378	$396	$409	$412	$436	$452	$459	$485	$504	$514	$521	$528	$535
for MO wholesale	$6	$6	$7	$7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Off-System Revenue ($mm)	$339	$305	$293	$297	$336	$329	$418	$488	$485	$492	$543	$547	$546	$565	$583	$580	$564	$564	$564	$564
Native Margin ($mm)	$233	$202	$180	$187	$213	$211	$282	$336	$331	$339	$382	$377	$377	$392	$398	$401	$389	$389	$389	$389
to MO retail	$228	$198	$177	$183	$213	$211	$282	$336	$331	$339	$382	$377	$377	$392	$398	$401	$389	$389	$389	$389
to MO wholesale	$5	$4	$4	$4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SO2 Emissions Cost ($mm)	$50.1	$47.4	$46.4	$46.0	$42	$28	$25	$23	$22	$21	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15
Native SO2 Emissions Cost ($mm)	$38.3	$37.1	$29.5	$31.6	$27.6	$18.4	$16.1	$14.0	$13.8	$13.0	$8.9	$9.4	$9.6	$9.3	$9.8	$10.0	$9.8	$9.8	$9.8	$9.9
for MO retail	$37.5	$36.3	$28.9	$30.9	$28	$18	$16	$14	$14	$13	$9	$9	$10	$9	$10	$10	$10	$10	$10	$10
for MO wholesale	$0.8	$0.8	$0.6	$0.7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NOx Emissions Cost ($mm)	$0.01	$0.03	$33.6	$22.8	$23	$16	$14	$14	$14	$13	$10	$11	$11	$11	$11	$11	$11	$11	$11	$11
for MO retail	$0.0	$0.0	$32.9	$22.4	$23	$16	$14	$14	$14	$13	$10	$11	$11	$11	$11	$11	$11	$11	$11	$11
for MO wholesale	$0.0	$0.0	$0.7	$0.5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Off-System Emissions Cost ($mm)	$12	$10	$17	$14	$15	$9	$9	$9	$9	$8	$6	$6	$6	$6	$6	$5	$6	$5	$5	$5
Energy Cost, $/MWH	$2.71	$3.72	$5.48	$5.34	$4.48	$4.43	$3.01	$1.90	$2.48	$2.54	$1.30	$2.07	$2.45	$2.21	$2.72	$3.08	$3.60	$3.73	$3.86	$3.99
Embedded Cost, $/MWH	$51.77	$50.46	$49.76	$49.21	$49.75	$49.25	$48.57	$47.74	$47.28	$46.80	$46.34	$45.76	$45.28	$44.87	$44.31	$43.86	$43.42	$42.99	$42.55	$42.13
New Capacity Charge, $/MWH	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5.82	$5.72	$5.67	$5.61	$5.55	$6.14	$6.07	$6.02	$6.57	$6.51	$6.75	$6.91	$7.07	$7.00
Total Cost, $/MWH	**$54.48**	**$54.18**	**$55.24**	**$54.55**	**$54.24**	**$53.68**	**$57.41**	**$55.36**	**$55.42**	**$54.95**	**$53.19**	**$53.97**	**$53.80**	**$53.09**	**$53.60**	**$53.45**	**$53.77**	**$53.63**	**$53.49**	**$53.12**

EXHIBIT D - Work Papers for Metro East-Noranda Analysis

Scenario 4 - Metro East Transfer, Kin/Pinck Transfer, Noranda Case - Acquire CTG Capacity Build PC & CTGs

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Native Market Sold (GWh)	36772	38934	39509	39914	39608	39983	40415	41004	41379	41864	42218	42639	43130	43483	43906	44396	44891	45392	45898	46410
to MO retail	36154	38303	38868	39261	39608	39983	40415	41004	41379	41864	42218	42639	43130	43483	43906	44396	44891	45392	45898	46410
to MO wholesale	618	631	642	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-System Sold (GWh)	8643	7889	7270	7654	8511	7836	9509	11105	10122	9785	10444	9986	9485	9811	9343	8980	9521	9521	9521	9521
Off-System Bought (GWh)	183	122	137	211	76	83	56	9	10	7	4	12	13	21	16	86	30	30	30	30
Off-System Purchase Cost ($)mm	$11.4	$7.0	$7.3	$9.6	$3.8	$4.2	$2.3	$0.5	$0.6	$0.4	$0.3	$0.7	$0.8	$1.4	$1.0	$5.2	$2.5	$2.5	$2.5	$2.5
Off-System Fuel Cost ($mm)	$81	$79	$80	$84	$97	$97	$125	$146	$144	$148	$159	$167	$166	$167	$180	$172	$170	$170	$170	$170
Production Cost ($mm)	$390	$411	$435	$454	$467	$483	$534	$574	$593	$613	$628	$661	$680	$689	$729	$744	$752	$761	$769	$778
Native Production Cost ($mm)	$309	$333	$355	$370	$370	$386	$409	$428	$449	$466	$469	$494	$515	$522	$549	$572	$582	$591	$599	$608
for MO retail	$304	$326	$349	$363	$370	$386	$409	$428	$449	$466	$469	$494	$515	$522	$549	$572	$582	$591	$599	$608
for MO wholesale	$6	$6	$7	$7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Off-System Revenue ($mm)	$277	$233	$215	$234	$266	$254	$360	$444	$423	$434	$483	$485	$478	$495	$511	$509	$496	$496	$496	$496
Native Margin ($mm)	$186	$146	$121	$137	$157	$149	$227	$289	$271	$279	$318	$313	$307	$323	$327	$333	$321	$321	$321	$321
to MO retail	$183	$143	$119	$135	$157	$149	$227	$289	$271	$279	$318	$313	$307	$323	$327	$333	$321	$321	$321	$321
to MO wholesale	$4	$3	$2	$3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SO2 Emissions Cost ($mm)	$51.5	$49.8	$48.4	$48.3	$44	$29	$27	$24	$23	$22	$16	$16	$16	$16	$16	$16	$16	$16	$16	$16
Native SO2 Emissions Cost ($mm)	$41.6	$41.4	$35.3	$36.5	$32.3	$21.4	$18.6	$16.0	$15.7	$14.9	$10.3	$10.7	$11.0	$10.7	$11.1	$11.4	$11.1	$11.1	$11.2	$11.2
for MO retail	$40.9	$40.6	$34.6	$35.8	$32.3	$21.4	$18.6	$16.0	$15.7	$14.9	$10.3	$10.7	$11.0	$10.7	$11.1	$11.4	$11.1	$11.1	$11.2	$11.2
for MO wholesale	$0.8	$0.8	$0.7	$0.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NOx Emissions Cost ($mm)	$0.0	$0.0	$35.5	$24.5	$24	$17	$16	$15	$15	$14	$11	$12	$11	$12	$12	$12	$12	$12	$12	$12
for MO retail	$0.0	$0.0	$34.8	$24.0	$24.3	$16.8	$15.8	$15.3	$15.1	$14.5	$11.3	$11.6	$11.5	$11.5	$11.9	$11.7	$11.6	$11.6	$11.6	$11.6
for MO wholesale	$0.0	$0.0	$0.7	$0.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Off-System Emissions Cost ($mm)	$10	$8	$13	$12	$12	$7	$8	$8	$8	$7	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Energy Cost, $/MWH	$4.79	$6.04	$7.88	$7.58	$6.91	$6.98	$5.40	$4.17	$5.06	$5.16	$4.10	$4.80	$5.35	$5.11	$5.61	$6.04	$6.39	$6.50	$6.62	$6.73
Embedded Cost, $/MWH	$47.96	$45.27	$44.61	$44.16	$44.66	$44.24	$43.77	$43.14	$42.75	$42.25	$41.90	$41.48	$41.01	$40.68	$40.29	$39.84	$39.40	$38.97	$38.54	$38.11
New Capacity Charge, $/MWH	$0.00	$0.84	$1.32	$1.31	$1.33	$1.31	$6.54	$6.45	$6.39	$6.32	$6.26	$6.79	$6.72	$6.66	$7.17	$7.09	$7.23	$7.35	$7.27	$7.74
Total Cost, $/MWH	**$52.75**	**$52.15**	**$53.82**	**$53.05**	**$52.90**	**$52.53**	**$55.71**	**$53.76**	**$54.20**	**$53.73**	**$52.26**	**$53.08**	**$53.08**	**$52.45**	**$53.07**	**$52.97**	**$53.02**	**$52.83**	**$52.43**	**$52.58**
Diff: Noranda less No Noranda	**-$1.73**	**-$2.03**	**-$1.42**	**-$1.50**	**-$1.34**	**-$1.15**	**-$1.70**	**-$1.60**	**-$1.22**	**-$1.21**	**-$0.93**	**-$0.89**	**-$0.73**	**-$0.64**	**-$0.52**	**-$0.48**	**-$0.75**	**-$0.80**	**-$1.06**	**-$0.54**
Percent Difference	**-3.2%**	**-3.8%**	**-2.6%**	**-2.7%**	**-2.5%**	**-2.1%**	**-3.0%**	**-2.9%**	**-2.2%**	**-2.2%**	**-1.8%**	**-1.7%**	**-1.4%**	**-1.2%**	**-1.0%**	**-0.9%**	**-1.4%**	**-1.5%**	**-2.0%**	**-1.0%**

NPV of Total Cost, $/MWH	**2005-24**
Scenario 4 - Noranda	**$53.17**
Scenario 3 - No Noranda	**$54.45**
Scenario 4 less Scenario 3	**-$1.28**

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on the following parties of record by e-mail this 14th day of February, 2005, at the e-mail addresses set forth below:

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