

Exhibit No.:
Witness: Paul A. Coomes, Ph.D.
Type of Exhibit: Direct Testimony
Issues: Noranda Economic Impact
Sponsoring Party: Noranda Aluminum, Inc.
Case No.: ER-2010-0036

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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

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Case No. ER-2010-0036
Tariff Nos. YE-2010-0054
and YE-2010-0055

Direct Testimony of Paul A. Coomes, Ph.D.

On behalf of

Noranda Aluminum, Inc.

January 6, 2010

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STATE OF KENTUCKY)

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COUNTY OF JEFFERSON)

Affidavit of Paul A. Coomes, Ph.D.

Paul A. Coomes, being first duly sworn, on his oath states:

1. My name is Paul Coomes. I am a consulting economist and a member of the faculty of the University of Louisville. My address is 3604 Trail Ridge Road, Louisville, KY 40241.
2. Attached hereto and made a part hereof for all purposes is my direct testimony, which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2010-0036.
3. I hereby swear and affirm that the testimony is true and correct.

Paul A. Coomes

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

Notary Public

Before the
Missouri Public Service Commission
Case No. ER-2010-0036

Prepared Direct Testimony of Paul A. Coomes, Ph.D.

Q: Please state your name, address, profession and educational background.

A: My name is Paul A. Coomes. My address is 3604 Trail Ridge Road, Louisville KY 40241. I am a consulting economist. I have a Ph.D. in economics from the University of Texas. I have been a faculty member of the University of Louisville since 1985.

Q: Describe your experience in testifying in utility rate cases.

A: I have testified several times before the Kentucky Public Service Commission, as well as the Public Utility Commission of Ohio.

Q: What is the purpose of your testimony?

A: Noranda Aluminum, Inc., operates an aluminum smelter on the Mississippi River a few miles south of New Madrid, Missouri. I have been retained by Noranda to analyze the likely economic and fiscal impacts in the region if the smelter were to close. My testimony is provided to assist the Public Service Commission in understanding the regional economic importance of Noranda's operations, and the ramifications of electricity costs should aluminum prices reach a threshold such that the smelting operations would be financially threatened. The purpose of my testimony is to communicate the regional economic and fiscal importance of

1 this plant.

2
3 **Q: How would you summarize your findings?**

4 A: My primary objective was to measure the economic importance of Noranda's
5 smelter operations to the regional economy. My approach was to simulate what
6 would like happen to jobs, payroll, and tax revenues were the plant to close.
7 Noranda employs around 900 people and pays wages and salaries annually of
8 \$60 million. Employees live in 71 communities in eight states; however 95 percent
9 of employees live in just seven counties, all in Missouri. Were the plant to close, I
10 estimate that the total net annual impact in the region would be a loss of 3,207
11 jobs and \$121 million in total employee compensation. State and local
12 governments in Missouri would lose about \$16 million annually in tax revenues.

13
14 **Q: What information have you relied on in reaching your conclusions, and**
15 **what is the source of that information?**

16 A: Noranda has provided me with background information about its operations and
17 its workforce. Specifically, Noranda is a major producer of primary aluminum in
18 the United States. It currently employs nearly 900 people and pays wages and
19 salaries annually of over \$60 million, plus large fringe benefits. Workers reside in
20 71 communities in eight states. However 95 percent of employees reside in the
21 top seven counties, those nearest to the city of New Madrid – New Madrid, Scott,
22 Dunklin, Pemiscot, Stoddard, Mississippi, and Cape Girardeau counties, all in
23 Missouri.

1 **Q: What type of analysis have you performed with respect to the economic**
2 **impact of Noranda's aluminum smelter?**

3 A: I have taken the seven Missouri counties listed above as the primary impact
4 region for the smelter, and have built an impact model of the regional economy.
5 The model is capable of predicting in great detail the effects of smelter operations
6 on jobs, payroll, and output in all the other industries in the region. The model
7 predicts that if the smelter were to close the regional economy would lose a total
8 of 3,207 jobs and annual wages and salaries of \$121 million. The impacts on local
9 and state government revenues would be severe. I estimate that annual tax
10 receipts to state and local governments would fall by at least \$16 million were the
11 plant to close.

12
13 **Q: Have you also analyzed the impact of Noranda's aluminum smelter on the**
14 **economy of the state of Missouri?**

15 A: Yes. I have also estimated the impacts on the state of Missouri as a whole.
16 These are larger than the more geographically constrained seven county area. I
17 estimate the loss in Missouri would be 3,885 jobs with annual wages and salaries
18 of \$158 million. State and local governments would lose over \$19 million in annual
19 tax receipts were the plant to close.

20
21 **Q: Besides the loss of jobs, wages and salaries and tax revenues, does**
22 **Noranda's aluminum smelter have any other impact on the state of**
23 **Missouri?**

24 A: Yes. My estimates concerning job loss, wages and salaries and tax revenues

1 involve the economic and fiscal categories most easily quantified. There are other
2 impacts, though they are harder to measure with precision. Local real estate and
3 retail markets are linked to the payrolls at the smelter. Social indicators, like
4 unemployment and crime, also are related to the plant's employment levels, as
5 are public costs for unemployment benefits, retraining, and social services.

6
7 **Q: For background purposes, can you describe the basic operations of an**
8 **aluminum smelter?**

9 **A:** Yes. Aluminum is made from alumina, or aluminum oxide, essentially by passing
10 enormous electric current through steel 'pots' containing a cryolite-alumina
11 mixture. This process is often called reduction, because the electrolysis process
12 separates alumina into its elements, one of which is the aluminum metal. The
13 process is also called smelting. The molten aluminum is siphoned off the pots and
14 formed into crucibles, which when cooled become the familiar ingots traded on
15 the international metals market. The website mii.org/Minerals/photoal.html
16 provides a simple explanation of the production process. Alumina is made from
17 bauxite, most of which is obtained from Australia, Brazil, Guinea, and Jamaica.
18 Because of the extremely large electricity requirements, most aluminum smelting
19 is done near sources of inexpensive electricity, such as hydroelectric plants.
20 Moreover, since the least cost method of shipping alumina and aluminum is by
21 barge, smelters are often located on major rivers such as the Mississippi and
22 Ohio rivers.

23
24 **Q: Is Noranda's smelter a important source of employment in its region?**

1 A: Yes. The Noranda smelter is among the largest private sector employers in the
2 regional economy, and clearly the largest industrial employer in New Madrid
3 County. The web site for the City of New Madrid contains a statistical profile for
4 each county (www.new-madrid.mo.us). It shows the top employers in New
5 Madrid County to be Noranda, Associated Electric Cooperative, Riceland, Beverly
6 Healthcare, Specialloy Metals, and City, County, and State governments. The
7 electric coop, nursing home and government operations exist to serve the local
8 market, and hence do not bring in new dollars to the regional economy.

9
10 **Q: Does Noranda's smelter contribute a significant portion of the salaries and**
11 **wages earned in New Madrid County?**

12 A: Yes. Federal data shows that \$136.6 million, or 43 percent, of the County's
13 \$320.7 million in total private industry labor and proprietor earnings are attributed
14 to the manufacturing industry, of which Noranda is by far the largest firm. With the
15 average pay close to \$69,000, no other place of work in the County comes close
16 to this employment opportunity. Moreover, employee benefits are very lucrative.
17 The company reports that its contributions to the social security and Medicare
18 programs for its employees, plus the value of retirement, health insurance, and
19 other fringe benefits adds about 60 percent to the base wages and salaries.

20
21 **Q: Besides the loss of salaries and wages, how does the loss of a large**
22 **employer affect an area like New Madrid County?**

23 A: The effect of losing a large employer, particularly in a lightly populated county,
24 goes far beyond the loss of payrolls. Often the company is the primary force in the

1 local housing market, the largest contributor of property taxes to the local school
2 system, the largest contributor of health care benefits and therefore the largest
3 indirect customer of the local hospital, and the largest contributor of dollars and
4 time to local charities. Moreover, when a large plant closes, not only do public
5 revenues fall but public costs go up. Other statewide employers and employees
6 must contribute to pay for the unemployment benefits to laid off workers,
7 increased Medicaid costs as families lose income and health insurance coverage,
8 and overall increased social services costs. Crime rates tend to rise with
9 unemployment, as do alcohol and drug addiction. Local community and technical
10 colleges see enrollments surge as laid off workers try to retrain. And major
11 community investments must be made in economic development efforts to
12 replace the lost engines.

13
14 **Q: Can you provide the Commission with an example of a community similar to**
15 **New Madrid that actually experienced the closure of a smelter and**
16 **demonstrates the likely consequences of a closure of Noranda's aluminum**
17 **smelter?**

18 **A:** Yes. The linkage between smelter closures and local unemployment is clear from
19 the public data on Monroe County, Ohio – the site of the Ormet aluminum smelter
20 which was shut down during most of 2004-2006, and then restarted. Monroe
21 County has a population of only about 14,000, and like New Madrid the aluminum
22 plant is most important employer in the county, drawing employees from a similar
23 seven county region.

1

2 **Q: What was the impact of the closure of the Ormet aluminum smelter?**

3 A: In Schedules 1 and 2, I provide the official estimates of payroll growth and
4 unemployment rates in Monroe and for the state of Ohio as a whole. In Schedule
5 1, one can clearly see a negative impact on county payrolls as the plant was shut
6 down, then restarted. The payroll growth also tracks county unemployment data,
7 as shown in Schedule 2. The state of Ohio tracks the national unemployment rate
8 fairly closely, and one can see the effects of the 2001-02 recession, with Ohio's
9 unemployment rate rising from four to six percent, before falling in 2005. Monroe
10 County has been consistently higher than the state average. And it is clear that
11 Monroe had a major jump in unemployment when the Ormet smelter was idled
12 during the 2004-06 period, and fell in 2007 after the plant was back in production.

13

14 **Q: Describe the approach you took in choosing a methodology to estimate the**
15 **economic and fiscal impacts of Noranda's aluminum smelter.**

16 A: Because the aluminum and related manufacturing operations serve primarily
17 national and international markets, they bring new dollars into the regional
18 economy. In this sense, a shut-down of the smelter would have large and
19 predictable negative economic and fiscal impacts in southeast Missouri. The
20 activity supports thousands of jobs and millions of dollars in payrolls, and
21 ultimately large tax revenues for Missouri state and local governments. I took
22 these factors into account in defining the regional economic footprint for purposes
23 of this impact study, and used an input-output model and tax rate calculations to
24 measure the regional impacts.

1

2 **Q: How did you determine the geographic area to include in your analysis?**

3 A: Noranda's aluminum smelter is located in an industrial park on the Mississippi
4 River a few miles south of New Madrid, Missouri. While New Madrid County is the
5 site for the aluminum plant, the economic and fiscal impacts permeate a much
6 larger region. I defined the impact region based on the geographic footprint of the
7 workforce. Workers commute in to the aluminum plant, and take their paychecks
8 to their home county, where they pay for housing and many retail and personal
9 services. Noranda provided a breakdown of employment by city and zip code of
10 residence, and I converted these to a county basis, as shown in the Schedule 4.
11 Workers reside in 71 communities in eight states. However 95 percent of
12 employees reside in the top seven counties, those nearest to the city of New
13 Madrid – New Madrid, Scott, Dunklin, Pemiscot, Stoddard, Mississippi, and Cape
14 Girardeau counties, all in Missouri. Schedule 3 is a map that shows the regional
15 counties, major cities, road and water features in the economic impact area. The
16 counties shaded on this map are the top places of residence for Noranda
17 employees, and these are the ones we use to investigate impacts. The star
18 denotes the approximate location of the Noranda aluminum smelter. The top 20
19 communities of residence for Noranda employees are shown on Schedule 4.

20

21 **Q: How has the population of this seven-county region changed during the**
22 **period 2000 to 2008?**

23 A: The Census Bureau has published population estimates for counties as of July
24 2008, and these are shown in Schedule 5. The Bureau provides a breakout of the

1 components of population change, showing growth from natural increase (births
2 minus deaths), net domestic migration, plus net international migration. It is
3 evident from these data that Cape Girardeau County is growing from all sources,
4 and posted a higher rate of population growth this decade than did the state of
5 Missouri. The remainder of the region is losing residents due to domestic out-
6 migration. Overall, the region has had no net growth in population since 2000.
7 New Madrid County, site of the Noranda Aluminum plant, has been especially
8 impacted, losing 2,200 residents or 11 percent of its population.

9
10 **Q: Is Noranda's aluminum smelter an important source of jobs for this seven-**
11 **county region?**

12 **A:** Yes. The regional importance of the jobs at the aluminum plant should be clear
13 from Schedule 6. New Madrid County has only around 8,500 wage and salary
14 jobs, of which Noranda – by far the largest private employer - accounts for about
15 850. The City of New Madrid's website (www.new-madrid.mo.us) lists the largest
16 employers as Noranda, Associated Electric Cooperative, Riceland, Beverly
17 Healthcare, and Specialloy Metals. However, the very high average pay at the
18 Noranda plant is sufficient to pull New Madrid well above any other regional
19 county in terms of overall pay. Cape Girardeau County easily has the greatest
20 number of jobs in the region, with 45,700; however, on average these jobs pay
21 \$2,300 less than in New Madrid County. No other county in the region comes
22 close in terms of average pay.

23
24 **Q: Does Noranda make other types of payments to residents of this area?**

1 A: Yes. Noranda also makes monthly pension payments to a large number of former
2 employees or surviving spouses, most of whom who live in the region. The
3 company estimates that there are 540 current beneficiaries, receiving an average
4 of \$631 per month. This amounts to about \$4 million per year in additional income
5 flowing to residents. The pension payments are almost evenly split between
6 former hourly and former salaried employees. In addition, some retirees continue
7 to have some company provided life insurance and health insurance benefits.
8 Continuing benefits to former employees are contingent upon the financial health
9 of the company.

10
11 **Q: Please explain the methodology you used to evaluate the economic and**
12 **fiscal impacts of Noranda's aluminum smelter.**

13 A: I used standard regional economic impact methods to evaluate the economic and
14 fiscal impacts of Noranda's aluminum plant. I purchased detailed economic data
15 for the seven counties most impacted, and used them to build an IMPLAN input-
16 output model of the region. I also constructed a similar model of the state of
17 Missouri as a whole. The models are able to simulate the effects of changes in
18 economic activity for any of 500 regional industries. They also can predict detailed
19 inter-industry purchases and household spending related to industrial changes.

20
21 **Q: What "sector of interest" or industry did you focus on in building your**
22 **IMPLAN model?**

23 A: In IMPLAN, the sector of interest for this study is number 172, Primary Aluminum
24 Production. This industry is defined according to the North American Industrial

1 Classification System (NAICS) code 331312. The official definition is as follows:

2 This U.S. industry comprises establishments primarily engaged in (1) making
3 aluminum from alumina and/or (2) making aluminum from alumina and rolling,
4 drawing, extruding, or casting the aluminum they make into primary forms (e.g.,
5 bar, billet, ingot, plate, rod, sheet, strip). Establishments in this industry may make
6 primary aluminum or aluminum-based alloys from alumina. The source of this
7 information is: www.census.gov/epcd/naics02/def/ND331312.HTM#N331312.

8
9 **Q: Please explain the IMPLAN model.**

10 **A:** The IMPLAN model provides estimates of indirect (inter-industry purchases) and
11 induced (household spending) effects on sales, jobs, and payrolls for export-
12 based expansions or contractions of any of 500 local industries. For example, the
13 job multiplier for the primary aluminum production industry in the New Madrid
14 region economic area is 3.624, meaning that for every job at the aluminum
15 smelter, another 2.624 jobs are created elsewhere in the regional economy.
16 Similarly, the employee compensation multiplier for the industry there is 1.994,
17 meaning that for every dollar of payroll created at the aluminum smelter another
18 \$0.994 in payrolls are created in other sectors around the region.

19
20 **Q: Did you also include a value added multiplier in your analysis?**

21 **A:** Yes. The value added multiplier for the industry is 1.912, meaning that for every
22 dollar of value added created at the aluminum smelter, another \$0.912 in value
23 added is created in other sectors around the region. Value added is closely
24 related to the concept of regional gross product. It is our best measure of how

1 much industrial revenue sticks to the local economy. To see why this is important,
2 imagine a hypothetical manufacturing operation that purchased \$1 million of
3 materials from an Asian company, and then did some minor final enhancements
4 and repackaging of a product it sold for \$1.5 million. A measure of 'output' at the
5 plant would show sales of \$1.5 million, but only \$0.5 million of value was actually
6 created at the site. Regional value added essentially measures the difference
7 between revenues and cost of materials, and is equivalent to the payments to
8 labor and owners of capital and land in the region.

9
10 **Q: Could you please explain the difference between indirect and induced**
11 **effects, and how these effects are accounted for in your analysis?**

12 **A:** Yes. Regional economists often make the distinction between the indirect and
13 induced components of a multiplier, and in some cases make separate estimates
14 for each. The indirect effects refer to the linkages between the exporting industry
15 (aluminum) and their industrial vendors (transportation, electricity, barges, tools,
16 computers, insurance). When the directly impacted industry expands, it raises its
17 purchases from its vendors, thus lifting their employment and payrolls. Noranda
18 reports a total of 1,344 vendors, including hundreds of suppliers of tools,
19 machinery, instruments, and engineering services; but also including many local
20 nonprofit groups like the Boy Scouts, sports teams, Red Cross, schools, and
21 libraries to which gifts were made. Over 1,000 of the vendors are located in
22 Missouri. The induced effects refer to the impact of the new export-based sales
23 on the local economy through the rounds of re-spending of the additional
24 household income caused by the expansion. Regional sales of cars, groceries,

1 building supplies, banking services, and so on are all sensitive to growth in
2 disposable income. In the rest of the analysis, I simply use the total impact
3 multipliers just discussed, and they incorporate both indirect and induced effects.
4

5 **Q: Please explain your analysis of the tax and fiscal impacts of Noranda's**
6 **aluminum smelter.**

7 A: There are no good national sources of data on which to make estimates of the
8 fiscal impacts of an industrial expansion or contraction in a region. Noranda has
9 provided some data on direct tax payments to local and state governments,
10 including property taxes, sales taxes, and income taxes. I have aggregated these
11 in my fiscal impact statement explained below. However, the impacts on
12 governments are much greater than these direct payments. Employees pay sales
13 taxes when they spend their wages in the local economy, and are liable for
14 individual income taxes in Missouri. These payments can be estimated using
15 published data on tax receipts from Missouri state government, as well as tax
16 information from city and county governments in the region. By comparing the
17 growth in tax receipts to the growth in payrolls historically, I calculated 'effective'
18 tax rates and used those to estimate the amount of income and sales taxes linked
19 to the aluminum industry payrolls.
20

21 **Q: How did you determine the effective state tax rates in Missouri for the**
22 **purpose of your calculations?**

23 A: Schedule 7 provides historical data for state-level income and sales tax receipts.
24 Effective tax rates are shown in the last two columns. I used the average of the

1 last five years as a measure of current effective tax rates: 1.86% for sales taxes,
2 and 5.12% for individual income taxes.

3
4 **Q: How did you determine effective local sales tax rate for the purpose of your**
5 **calculations?**

6 A: All county and city governments in the region levy local sales taxes. I obtained tax
7 receipt data for the seven county governments and the twenty most important city
8 governments in the region. The receipts in FY08 are shown in Schedule 8. I then
9 computed an effective local sales tax rate by dividing sales tax receipts (\$66.8
10 million) by the total wages and salaries (\$3.1 billion) in the region. This yields an
11 effective sales tax rate of 2.18%.

12
13 **Q: How did you use these effective tax rates to determine the fiscal impact of**
14 **the closure of Noranda's aluminum smelter?**

15 A: The state and local effective tax rates were multiplied by the Noranda-related
16 wages and salaries to predict fiscal impacts if the aluminum plant were to close.

17
18 **Q: What other impacts on taxes would result from a closure of Noranda's**
19 **aluminum smelter?**

20 A: Additional tax impacts are also likely, though much harder to quantify. For
21 example, proprietors and corporations around the region are liable for state
22 individual and corporate income taxes. Gasoline taxes, unemployment insurance
23 taxes, insurance premiums taxes, building permit fees, motor vehicle sales taxes,
24 and many other business tax categories would see some decline if the smelter

1 were to shut-down. Employees would also pay less in the way of gasoline taxes,
2 motor vehicle sales taxes, and there would be a dampening effect on the regional
3 real estate market. These categories are much harder to measure than the
4 income and general sales taxes, but are not as important dollar-wise as the main
5 taxes I did measure in my analysis.

6
7 **Q: Did you reach a conclusion concerning the economic and fiscal impacts of**
8 **Noranda's aluminum smelter?**

9 A: Yes. I was able to estimate the economic and fiscal impacts of the aluminum
10 smelter. I essentially simulated what would happen if the operation was removed
11 from the region and state. The plant employs nearly 900 persons with an annual
12 payroll of over \$60 million, excluding benefits. The loss of these jobs, wages and
13 salaries are the direct effects shown at the top of Schedules 9 and 10.

14
15 **Q: How did you determine the total impact of the loss of these jobs, wages and**
16 **salaries on the seven-county region?**

17 A: In Schedule 9, I show the most important regional economic multipliers. These
18 were derived from a custom input-output model of the seven county region, and
19 refer specifically to the primary aluminum industry. A job multiplier of 3.624 means
20 that for every job gained/lost in the region's aluminum industry, the region
21 gains/loses another 2.624 jobs elsewhere in the economy. Similarly, the
22 employment compensation multiplier of 1.994 means that a dollar of aluminum
23 industry payroll support one more dollar of regional payroll in other industries. The
24 model estimates that Noranda creates 'value added' of about \$140 million at the

1 New Madrid site. The regional value added multiplier is 1.912.

2
3 **Q: How did you use these multipliers to determine the total regional economic**
4 **impact of a closure of Noranda's aluminum smelter?**

5 A: The total regional economic impact is obtained by multiplying the direct impacts
6 times the multipliers. I estimated the total job impact in the seven-county region to
7 be about 3,200 jobs, the employee compensation impact to be about \$121 million
8 annually, and value added by all companies in the region to be \$267 million.

9
10 **Q: How did you determine the total regional fiscal impact of a closure of**
11 **Noranda's aluminum smelter?**

12 A: As discussed above, I used effective tax rates – calculated from historical tax
13 collection data – to estimate individual income and sales taxes paid to state and
14 local governments, as a function of Noranda-related payrolls. I also added in
15 some company-reported data on property and other taxes paid in 2008. These
16 are aggregated in the last line of Schedule 9, and amount to over \$16 million
17 annually.

18
19 **Q: Did you perform a similar analysis to determine the impact of a closure of**
20 **Noranda's aluminum smelter on the state's economy?**

21 A: Yes. I have made similar economic estimates for the state of Missouri as a whole
22 using IMPLAN. These are shown in Schedule 10. Note that the economic
23 multipliers are higher than for the seven county region. This reflects the broader
24 geographic scope for vendors, employees, and retailers. Noranda purchases

1 important inputs from outside the New Madrid area but inside the state of
2 Missouri. For example, Noranda has a number of vendors located in St. Louis.
3

4 **Q: Based on these calculations, what is your estimate of the impact of a**
5 **closure of Noranda's aluminum smelter on the economy of the state of**
6 **Missouri?**

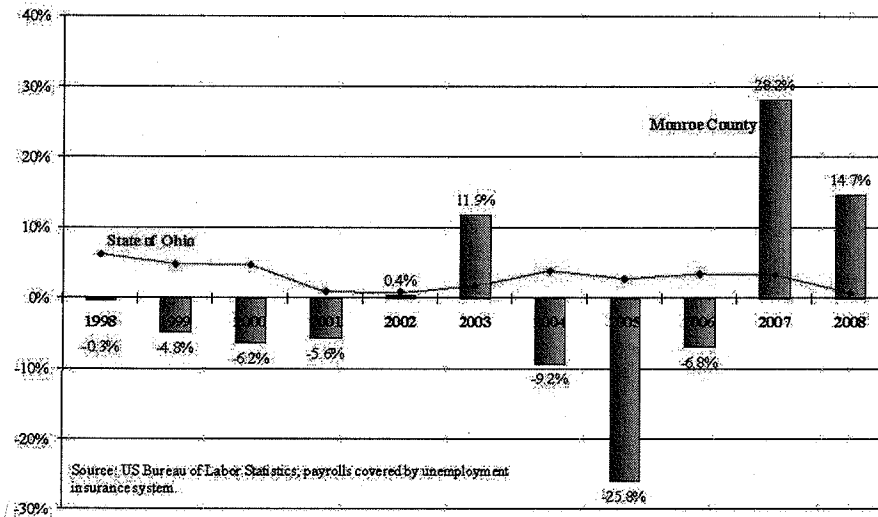
7 A: Using these state-level economic multipliers results in larger estimated impacts. I
8 estimate the total statewide impact of the aluminum operation to be 3,885 jobs,
9 \$158 million in payrolls, and \$336 million in value added by companies.
10

11 **Q: Based on these calculations, what is your estimate of the fiscal impacts of a**
12 **closure of Noranda's aluminum smelter on Missouri's tax collections?**

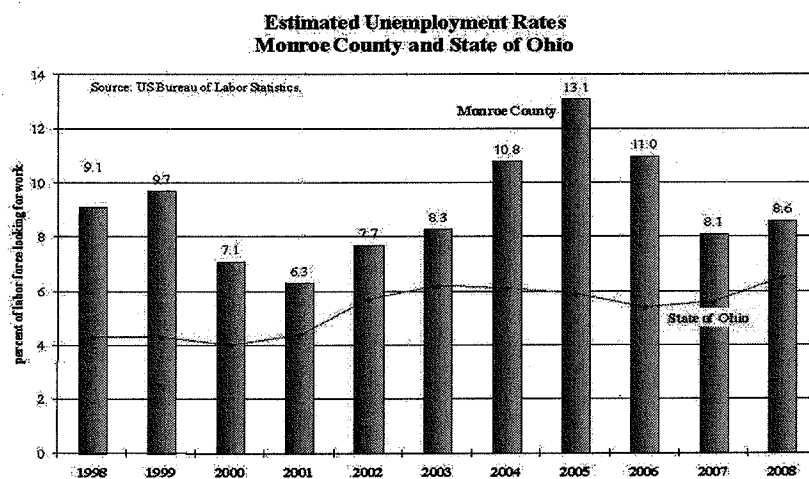
13 A: The fiscal impacts are also proportionately larger. Missouri state government
14 receives about \$12.5 million in tax receipts annually from the operation, and local
15 governments receive nearly \$7 million in revenues.

Schedule 1

**Growth in Total Wages and Salaries Paid
Monroe County and State of Ohio**



Schedule 2



Schedule 3



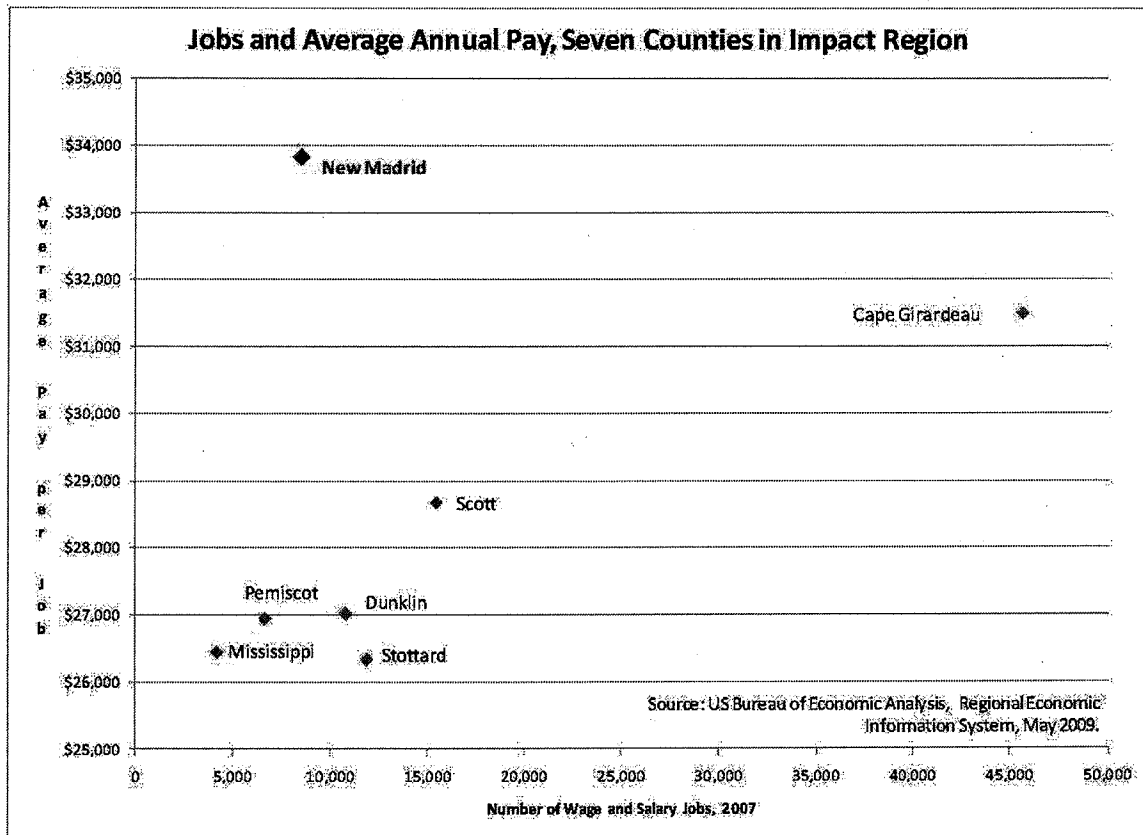
Schedule 4

Noranda Aluminum Employees, Top 20 Communities of Residence				
City	County	State	Total Employees	share of total
Sikeston	Scott	MO	166	18.9%
New Madrid	New Madrid	MO	110	12.5%
Portageville	New Madrid	MO	95	10.8%
East Prairie	Mississippi	MO	60	6.8%
Malden	Dunklin	MO	46	5.2%
Libourn	New Madrid	MO	28	3.2%
Cape Girardeau	Cape Girardeau	MO	27	3.1%
Dexter	Stoddard	MO	26	3.0%
Campbell	Dunklin	MO	23	2.6%
Kennett	Dunklin	MO	22	2.5%
Parma	New Madrid	MO	22	2.5%
Jackson	Cape Girardeau	MO	17	1.9%
Risco	New Madrid	MO	17	1.9%
Charleston	Mississippi	MO	16	1.8%
Gideon	New Madrid	MO	14	1.6%
Matthews	New Madrid	MO	14	1.6%
Marston	New Madrid	MO	13	1.5%
Caruthersville	Pemiscot	MO	12	1.4%
Hayti	Pemiscot	MO	12	1.4%
Benton	Scott	MO	10	1.1%

Schedule 5

Components of Population Change, 2000 to 2008									
Counties	Population, 2000 Census	Births	Deaths	Net Domestic Migration	Net Internatio nal Migration	statistical residual	Population July 1, 2008	Change this Decade	Percent Change this Decade
Cape Girardeau	68,693	7,518	5,663	2,822	294	-421	73,243	4,550	6.6%
Dunklin	33,157	3,928	3,757	-1,867	140	-147	31,454	-1,703	-5.1%
Mississippi	13,427	1,615	1,427	-77	16	-50	13,504	77	0.6%
New Madrid	19,757	2,028	1,969	-2,146	6	-87	17,589	-2,168	-11.0%
Pemiscot	20,047	2,680	1,944	-2,277	71	-62	18,515	-1,532	-7.6%
Scott	40,422	4,890	3,344	-1,191	92	-196	40,673	251	0.6%
Stoddard	29,706	2,974	3,008	-13	48	-170	29,537	-169	-0.6%
7-County Region	225,209	25,633	21,112	-4,749	667	-1,133	224,515	-694	-0.3%
State of Missouri	5,596,678	647,107	447,939	38,111	52,563	25,085	5,911,605	314,927	5.6%
Source: US Census Bureau									

Schedule 6



Schedule 7

Missouri State Income and Sales Tax Receipts				
Wages and Salaries (000), by place of work	Sales and Use Taxes (000)	Individual Income Taxes (000)	Effective Tax Rates, Revenues as % of Wages and Salaries	
			Sales Tax	Individual Income Tax
\$12,280,681	\$341,833	\$153,036		
\$12,985,293	\$347,648	\$197,914	2.68%	1.52%
\$13,954,055	\$370,140	\$267,854	2.65%	1.92%
\$15,247,291	\$417,656	\$343,239	2.74%	2.25%
\$16,438,302	\$458,787	\$341,724	2.79%	2.08%
\$17,244,339	\$487,900	\$374,985	2.83%	2.17%
\$19,124,793	\$551,144	\$427,345	2.88%	2.23%
\$21,111,272	\$622,608	\$495,849	2.95%	2.35%
\$23,658,662	\$693,914	\$558,496	2.93%	2.36%
\$26,241,535	\$754,359	\$659,956	2.87%	2.51%
\$28,139,541	\$690,110	\$735,301	2.45%	2.61%
\$30,468,521	\$729,476	\$823,387	2.39%	2.70%
\$31,825,609	\$769,641	\$931,752	2.42%	2.93%
\$33,820,429	\$831,130	\$1,010,799	2.46%	2.99%
\$37,205,762	\$954,030	\$1,152,125	2.56%	3.10%
\$39,869,599	\$981,742	\$1,273,195	2.46%	3.19%
\$42,094,532	\$1,043,676	\$1,347,871	2.48%	3.20%
\$44,755,784	\$1,091,121	\$1,501,424	2.44%	3.35%
\$47,601,493	\$1,129,797	\$1,739,047	2.37%	3.65%
\$50,131,949	\$1,202,876	\$1,895,611	2.40%	3.78%
\$52,616,194	\$1,287,630	\$2,136,334	2.45%	4.06%
\$53,827,387	\$1,253,090	\$2,138,161	2.33%	3.97%
\$56,699,608	\$1,305,765	\$2,225,262	2.30%	3.92%
\$58,890,124	\$1,386,757	\$2,384,446	2.35%	4.05%
\$62,500,813	\$1,493,661	\$2,579,291	2.39%	4.13%
\$66,583,892	\$1,578,967	\$2,988,629	2.37%	4.49%
\$70,213,448	\$1,665,713	\$3,212,380	2.37%	4.58%
\$75,018,257	\$1,716,115	\$3,533,673	2.29%	4.71%
\$79,497,019	\$1,695,324	\$3,881,050	2.13%	4.88%
\$83,829,769	\$1,732,349	\$4,183,488	2.07%	4.99%
\$88,781,420	\$1,764,763	\$4,367,792	1.99%	4.92%
\$90,685,517	\$1,836,843	\$4,675,200	2.03%	5.16%
\$92,126,196	\$1,818,584	\$4,454,887	1.97%	4.84%
\$93,984,974	\$1,829,608	\$4,420,950	1.95%	4.70%
\$97,467,102	\$1,916,266	\$4,641,033	1.97%	4.76%
\$101,870,320	\$1,969,797	\$5,031,195	1.93%	4.94%
\$106,600,626	\$2,002,899	\$5,473,188	1.88%	5.13%
\$111,575,583	\$2,046,047	\$5,912,595	1.83%	5.30%
\$115,488,137	\$1,960,143	\$6,232,327	1.70%	5.40%
Sources: Wages and salaries from US Bureau of Economic Analysis; tax receipt data from Missouri Department of Revenue.				

Schedule 8

Sales and Use Tax Receipts, FY08			
County and City Governments			
	County	Sum of Cities	County plus Cities
Cape Girardeau	\$12,488,368	\$22,582,282	\$35,070,650
Dunklin	\$2,733,473	\$2,662,574	\$5,396,047
Mississippi	\$1,593,193	\$1,274,440	\$2,867,633
New Madrid	\$2,841,173	\$1,418,055	\$4,259,228
Pemiscot	\$1,858,361	\$1,656,148	\$3,514,509
Scott	\$3,460,324	\$7,012,590	\$10,472,914
Stoddard	\$2,526,597	\$2,659,212	\$5,185,809
7-County Region	\$27,501,489	\$39,265,301	\$66,766,790
Source: Missouri Department of Revenue, Comprehensive Annual Financial			
http://dor.mo.gov/cafr/taxcountiescities.pdf			

Schedule 9

Estimated Annual Economic and Fiscal Impacts	
Noranda Aluminum Smelter, New Madrid, Missouri	
Direct	
Jobs	885
Wages and salaries	\$60,827,645
Value added	\$139,845,000
Economic Multipliers*, Primary Aluminum, Seven Missouri Counties	
Jobs	3.624
Employment compensation	1.994
Value added	1.912
Total Regional Economic Impact	
Jobs	3,207
Wages and salaries	\$121,280,227
Value added	\$267,319,032
Fiscal impacts	
Missouri state income tax receipts**	\$6,209,695
Missouri state sales tax receipts**	\$2,359,094
City and county sales tax receipts***	\$2,754,149
Local and state property tax receipts	\$3,322,767
State corporate income taxes	\$1,400,000
Total taxes, from above	\$16,045,705
* Multipliers estimated using IMPLAN Professional input-output model of regional economy, September 2009.	
** State tax receipts related to payrolls estimated from historical effective tax rates, i.e., the ratio of tax collections to wages and salaries paid in Missouri.	
*** Local sales and use taxes for county and city governments obtained from the Kentucky Department of Revenue. These were aggregated to the seven county region, then divided by the total wages and salaries in the region to get an effective tax rate.	

Schedule 10

Estimated Annual State-wide Economic and Fiscal Impacts		
Noranda Aluminum Smelter, New Madrid, Missouri		
Direct		
Jobs		885
Wages and salaries		\$60,827,645
Value added		\$139,845,000
Economic Multipliers*, Primary Aluminum, State of Missouri		
Jobs		4.390
Employment compensation		2.598
Value added		2.404
Total Regional Economic Impact		
Jobs		3,885
Wages and salaries		\$158,020,915
Value added		\$336,250,590
Fiscal impacts		
Missouri state income tax receipts**		\$8,090,863
Missouri state sales tax receipts**		\$3,041,183
City and county sales tax receipts***		\$3,555,916
Local and state property tax receipts		\$3,322,767
State corporate income taxes		\$1,400,000
Total taxes, from above		\$19,410,729
* Multipliers estimated using IMPLAN Professional input-output model of Missouri economy, September 2009.		
** State tax receipts related to payrolls estimated from historical effective tax rates, i.e., the ratio of tax collections to wages and salaries paid in Missouri.		
*** Local sales and use taxes for county and city governments obtained from the Kentucky Department of Revenue. These were aggregated to the seven county region, then divided by the total wages and salaries in the region to get an effective tax rate.		