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Coal and Transportation Costs Robert K. Neff Union Electric Co. Type of Exhibit: Direct Testimony Case No.: ER-2007-0002

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2007-0002

DIRECT TESTIMONY

OF

ROBERT K. NEFF

ON

BEHALF OF

UNION ELECTRIC COMPANY d/b/a AmerenUE

**** DENOTES HIGHLY CONFIDENTIAL INFORMATION****

St. Louis, Missouri July, 2006

Ameren UE Exhibit No. 14-NP Case No(s). ER-2007-0002

Public

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1		DIRECT TESTIMONY	
2		OF	
3		ROBERT K. NEFF	
4		CASE NO. ER-2007-0002	
5		I. <u>INTRODUCTION</u>	
6	Q.	Please state your name and business address.	
7	Α.	Robert K. Neff, Ameren Energy Fuels and Services Company (AFS), One	
8	Ameren Plaz	a, 1901 Chouteau Avenue, St. Louis, Missouri, 63103.	
9	Q.	What is your position with AFS?	
10	Α.	I am the Vice President of Coal Supply.	
11	Q.	What are the duties of your position?	
12	Α.	My primary responsibilities are to obtain adequate coal supplies and	
13	related transp	portation for eleven coal-fired power plants operated by Ameren Corporation	
14	(Ameren) operating subsidiaries, including Union Electric Company d/b/a AmerenUE		
15	(AmerenUE or Company). My department also procures fuel oil, manages the Ameren		
16	operating subsidiaries' sulfur dioxide (SO2) emissions allowance banks, oversees fuel-		
17	related transportation projects and handles ash recycling.		
18	Q.	Please describe your educational background, work experience and	
19	duties of you	ır position.	
20	Α.	I received a Bachelors Degree in Mechanical Engineering from	
21	Washington	University in St. Louis and a Masters in Business Administration from	
22	Southern Illin	nois University. I am a registered Professional Engineer in the State of	
23	Missouri and	I am a Certified Energy Manager. Prior to joining Ameren, I worked at the	

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1	Missouri Pacific Railroad in various engineering and operating positions. I also worked
2	as a Product Engineer at the railcar manufacturing firm of American Car and Foundry.
3	My work experience at Ameren includes 17 years in positions relating to coal
4	procurement and coal transportation, and 6 years in natural gas procurement and retail
5	electric marketing.
6	II. <u>PURPOSE AND SUMMARY OF TESTIMONY</u>
7	Q. What are the key conclusions discussed in your testimony?
8	A. The key conclusions in my testimony are:
9	1. AmerenUE's 2007 average cost of a delivered ton of coal will increase to
10	** ****** ** per ton from the ******* per ton reflected in
11	AmerenUE's books for the period corresponding to the updated test year
12	in AmerenUE's prior rate case proceeding in 2001, Case No. EC-2002-1
13	("prior 2001 test year"). This is a 42% increase in delivered per ton coal
14	cost, and at an expected 22.5 million ton total annual coal burn in 2007,
15	equates to a coal cost increase of \$162 million for 2007.
16	2. 96% of the coal burned by AmerenUE originated in the Wyoming Powder
17	River Basin (PRB) during the current 2006 test year. PRB coal markets,
18	similar to markets in other coal regions, have seen a substantial increase
19	in coal pricing and transportation since the prior 2001 test year. At the
20	expected 2007 PRB burn level of 21.9 million tons, AmerenUE's 2007
21	PRB coal and rail freight costs will account for \$136 million of the \$162
22	million total coal cost increase for 2007.

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1	3.	AmerenUE's 2007 delivered PRB coal costs will increase by **
2		million over the current 2006 test year based on a 21.9 million ton 2007
3		PRB burn level. While AmerenUE's coal and transportation costs have
4		increased in 2006, and will significantly increase again in 2007,
5		AmerenUE's costs are still well below current market prices because of
6		AFS' coal hedging program which has hedged ** ** of the coal and
7		transportation needed to meet the 2007 burn via executed contracts with
8		prices effective January 1, 2007.
9	4.	AmerenUE's coal costs are expected to continue to increase toward
10		market levels in subsequent years as existing contracts expire and new
11		agreements are signed.
12	Q.	Could you please provide a summary that explains the basis of your
	τ.	
13	key conclusio	
	-	
13	key conclusio A.	ons?
13 14	key conclusio A. plants in the t	AmerenUE will generate 79% of its electricity from coal-fired power
13 14 15	key conclusio A. plants in the t months endin	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve
13 14 15 16	key conclusio A. plants in the t months endin the coal used	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve g June 30, 2006 (current 2006 test year or test year). Ninety-six percent of
13 14 15 16 17	key conclusion A. plants in the t months ending the coal used coal is the lar	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve g June 30, 2006 (current 2006 test year or test year). Ninety-six percent of in these plants originates in the Powder River Basin. The delivered cost of
13 14 15 16 17 18	key conclusion A. plants in the t months ending the coal used coal is the lar commodities,	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve g June 30, 2006 (current 2006 test year or test year). Ninety-six percent of in these plants originates in the Powder River Basin. The delivered cost of gest single expense at a coal-fired power plant. Like all energy
 13 14 15 16 17 18 19 	key conclusion A. plants in the t months ending the coal used coal is the lar commodities, AmerenUE's	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve g June 30, 2006 (current 2006 test year or test year). Ninety-six percent of in these plants originates in the Powder River Basin. The delivered cost of gest single expense at a coal-fired power plant. Like all energy the price of coal has increased significantly since the prior 2001 test year.
 13 14 15 16 17 18 19 20 	key conclusion A. plants in the tr months ending the coal used coal is the lar commodities, AmerenUE's The spot price	AmerenUE will generate 79% of its electricity from coal-fired power est year AmerenUE is recommending for this case, consisting of the twelve g June 30, 2006 (current 2006 test year or test year). Ninety-six percent of in these plants originates in the Powder River Basin. The delivered cost of gest single expense at a coal-fired power plant. Like all energy the price of coal has increased significantly since the prior 2001 test year. average PRB coal price in the prior 2001 test year was **

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because of AmerenUE's highly effective coal hedging program, in which coal prices and 1 2 quantities are locked in well in advance of the actual need for the coal, AmerenUE's average PRB coal price during the current 2006 test year was only ****** 3 4 While AmerenUE's PRB coal cost was well below the actual market price, the cost of 5 current 2006 test year coal still increased by ****** per ton, or 71% over the prior 6 2001 test year PRB coal cost. The PRB coal cost increases in the current 2006 test year 7 represent a \$73 million increase over the PRB coal prices submitted in the prior 2001 test year based on the 22.3 million tons of PRB coal burn in the current 2006 test year. As 8 older coal contracts expire and new contracts are entered into, the price that AmerenUE 9 10 pays for coal, while still below market, continues to rise. Because AmerenUE purchases coal significantly in advance of its need, ****** of the 2007 PRB coal burn has already 11 12 been purchased at fixed prices, or price-hedged, as of June 6, 2006. It is certain that this 13 price-hedged PRB coal in calendar year 2007 will increase to ****** per ton, an 87% increase over the prior 2001 test year and a ****** increase over the current 2006 test 14 15 year. At 21.9 million tons of 2007 PRB burn, 2007 PRB coal costs are known to be \$88 16 million greater than the prior 2001 test year level

Similarly, coal transportation costs are also increasing significantly with the expiration of long-term PRB rail contracts. The average PRB transportation freight rate for the prior 2001 test year was ** **1000** ** per ton. New transportation contracts for all of the AmerenUE plants have been signed. These new transportation contracts provide for significant increases in freight rates effective January 1, 2007. The average AmerenUE 2007 PRB freight rates will increase 20% over the prior 2001 test year to ** **1000** ** per ton. As with coal, this transportation increase will apply to 21.9 million

- 1 tons of expected 2007 PRB coal burn, raising PRB transportation freight rates in 2007 by
- 2 \$48 million more than the prior 2001 test year level.
- 3 Together, 2007 PRB coal and PRB coal freight costs will account for cost
- 4 increases of \$136 million over the prior 2001 test year average price level at an expected
- 5 21.9 million ton 2007 PRB burn. 2007 PRB coal and PRB coal freight costs together will
- 6 increase ****** million above the current 2006 test year average price based on a 21.9
- 7 million ton 2007 PRB burn level. After 2007, these costs are expected to continue to rise
- 8 toward market levels.
 - Table 1 below summarizes AmerenUE's PRB coal costs since its last rate
- 10 proceeding, based upon test year data, and using the contracted-for coal and freight rates
- 11 which are locked in effective January 1, 2007.
- 12

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13 14

Table 1: Summary of PRB Coal and Freight Costs

	20012006Prior TestCurrent TestYearYear		2007	
PRB Coal Cost	** ** */ton	** ** */ton	** ** **/ton	
PRB Coal Freight Rate Cost	** **/ton	** ** **/ton	** */ton	
Total	** ***** **/ton	** **/ton	**	
Percentage increase over 2001		**	**	
Total equivalent annual costs (PRB coal and frt only) at 21.9 million tons 2007 annual burn	** million	** *** million	** *** million	

15

16 Note: The 2007 costs are based upon the PRB coal and transportation contracts

17 mentioned above which fix the prices for **** **** of expected 2007 burn. The variable

- 18 components of those contracts are based on current expectations but will be updated for
- 19 costs (SO2 content, heat rate, Diesel fuel riders) actually experienced during the test year

as updated through January 1, 2007.

In addition to PRB coal, the cost of Illinois coal has also increased significantly since the 1 2 prior 2001 test year. Although AmerenUE burns a small amount of Illinois coal relative 3 to the amount of PRB coal it burns, the increased cost of Illinois coal adds to AmerenUE's total increase in coal costs. AmerenUE burned 1,152,000 tons of Illinois 4 coal in the prior 2001 test year, 905,000 tons of Illinois coal in the current 2006 test year, 5 and is projected to burn 628,000 tons of Illinois coal in 2007. The average delivered cost 6 of Illinois coal in the prior 2001 test year was **** ****. The cost of Illinois coal in 7 2007, which is ***************************************/ton, a 22% increase. At the 628,000 ton 8 9 burn level, in 2007 Illinois coal will cost \$4.0 million more than the equivalent tonnage at the prior 2001 test year price. 10 11 Table 2 below summarizes AmerenUE's total delivered coal costs, including coal, transportation, railcars and other charges, since its last rate proceeding, based upon test 12 13 year data, and using the contracted-for coal and freight rate prices which are locked in

14 effective January 1, 2007.

1 2	Table 2: Summary	y of Total Coal and	d Transportation (Costs
2		2001 Prior Test Yr	2006 Current Test Year	2007
	Total Coal Cost	** */ton	** */ton	** **/ton
	Total Coal Transportation Cost	** */ton	** ** */ton	** **/ton
	Total	** **/ton	****/ton	** **/ton
	Percentage increase over 2001		**	**
3 4 5 6 7 8 9	Total equivalent annual costs (coal and trans only) at 22.5 million tons 2007 annual burn Note: The 2007 costs are based mentioned above which fix the p components of those contracts an costs (SO2 content, heat rate, Dia as updated through January 1, 20 A summary of my	rices for ** we based on current esel fuel riders) act 007.	of expected 2007 b expectations but wi	urn. The variable Il be updated for uring the test year
10	Q. Please explain how the remainder of your testimony will be organized.			
11	A. I will provide background on the type and amount of coal used at			
12	AmerenUE's plants, and on how coal is purchased, including a description of the coal			
13	cost pooling utilized to ensure that coal costs are as low as possible while taking			
14	advantage of the buying power represented by the combined Ameren companies. I will			
15	also address investments made in AmerenUE's transportation infrastructure and will			
16	describe new transportation contracts in effect for each of AmerenUE's coal-fired plants.			
17	Next I will address AmerenUE's rail car fleet. Finally, I will discuss in greater detail the			
18	known and measurable fuel and transportation price increases that will occur effective			occur effective
19	January 1, 2007 when the new co	oal and transportati	on contracts already	y signed by
20	AmerenUE that I referred to early	lier take effect.		
21				

1 2

III. <u>BACKGROUND OF AMOUNT AND TYPE OF COAL</u> <u>USED IN EACH PLANT</u>

3 Q. What has been the history of coal use at AmerenUE's coal-fired
4 plants?

AmerenUE's coal use both in terms of type and amount has changed since 5 Α. the plants were constructed. Originally, these plants burned high sulfur coal from mines 6 7 in Illinois. Subsequent to the enactment of the Clean Air Act of 1990, AmerenUE's coal 8 plants were modified to burn sub-Bituminous (low sulfur) coals from the PRB. Since 9 that time, PRB coal has consistently had a lower total cost than Illinois coal, taking into consideration both the delivered cost per Btu and the related cost of sulfur emissions. For 10 11 the current 2006 test year, AmerenUE burned 23.2 million tons of coal. Approximately 96%, or 22.2 million tons of AmerenUE's coal burn was supplied from the PRB. The 12 13 remaining 4%, or 906,000 tons, came from mines in the Illinois Basin for use in blending 14 with PRB coal at the Sioux and Rush Island Plants. As market conditions permit, 15 petroleum coke, or petcoke (a refinery byproduct), can be substituted for Illinois Basin 16 coal at the Sioux Plant up to the annual burn permit of 250,000 tons. Due to economics, 17 no petcoke was burned in the test year. In addition, a small amount of Tire Derived Fuel 18 (TDF), approximately 10,000 tons, was burned at AmerenUE's Sioux Plant in the current 19 2006 test year.

- 20Q.When did the AmerenUE units convert to primarily using Powder21River Basin coal?
- A. AmerenUE converted these units as follows: Labadie 1993, Meramec
 2001, Rush Island 1991, and Sioux 1994.

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١	Q.	How much c	oal does each	n plant consume	on an an	nual basis?
2	А.	The followin	g table shows	the tons burned l	by each pl	ant in the test year:
3		Plant 88	300 Btu PRB	8400 Btu PRB	Illinois	Petcoke/TDF
4		Labadie	8,793,000	1,783,000		
5		Meramec	3,463,000	392,000		
6		Sioux	2,535,000	30,000	858,000	10,000
7		Rush Island	47,000	5,196,000	48,000	
8		Total	14,838,000	7,401,000	906,000	10,000
9			Grand Tota	l All Plants: 23,1	54,000 tor	15
10	Q.	What detern	nines the abi	lity of a plant to	burn 840	0 Btu versus 8800
11	Btu coal?					
12	А.	That ability i	s determined	by the design of t	he boiler,	and whether it can
13	produce the steam necessary for full output using the lower Btu content 8400 PRB coal.					
14	The Rush Island Plant is able to achieve its full capacity burning 100% 8400 Btu coal,					
15	while the Sioux Plant requires blending an Illinois coal or higher Btu coal along with the					
16	8800 Btu PRB coal in order to produce the full capacity of the units. During the test year,					
17	the blend at Sioux plant was 75% 8800 PRB and 25% Illinois coal. Labadie burned 17%					
18	8400 Btu and 83% 8800 Btu coal in the test year, while Meramec burned 90% 8800 Btu			rrned 90% 8800 Btu		
19	coal and 10%	8400 Btu coa	1.			
20	IV. <u>B</u>	ACKGROUN	<u>ID OF COAI</u>	L PURCHASIN	G AND C	<u>OST POOLING</u>
21	Q.	How are An	1erenUE's co	al needs determ	ined?	
22	А.	The Operation	ons Analysis (Group in the Corp	orate Plar	nning Department of
23	Ameren Serv	ices Company	(Ameren Ser	vices) uses a com	puter prog	gram called

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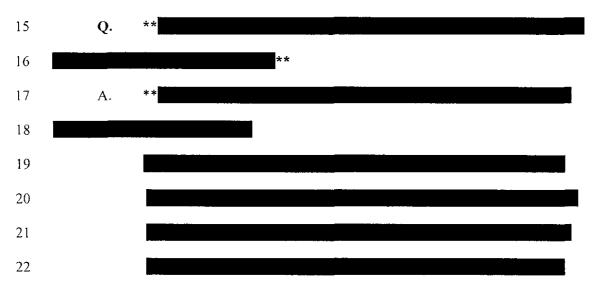
1	PROSYM to simulate the operation of AmerenUE's power plants in the context of the		
2	overall power market. The simulations produced by the PROSYM model are discussed		
3	in detail in the direct testimony of AmerenUE witness Timothy D. Finnell. The model		
4	results reflect burn rates based on a variety of inputs such as:		
5	Forecast Power Price Curves		
6	Incremental Cost of Production Forecasts		
7	Forecast Emission Allowance Market Curves		
8	Unit Specific Heat Rates		
9	Unit Outage Schedules		
10	Predicted Forced Outage Rates		
11	This model is run periodically (monthly to quarterly) to predict the input		
12	Btu needs at each generating station. The Coal Supply Department of AFS uses a		
13	spreadsheet tool called the Fuel Pattern to convert the Burn Forecast from Btus to tons of		
14	coal based on the expected quality of coal expected to be burned at each plant. The		
15	delivered cost of coal is then calculated on a \$/MMBtu basis by plant and furnished to the		
16	Operations Analysis group. The Fuel Pattern is also used to schedule coal deliveries,		
17	predict inventory changes, and identify purchase needs.		
18	Q. Is Powder River Basin coal purchased differently than Illinois Basin		
19	coal for AmerenUE?		
20	A. Yes. The Illinois Basin coal needs for AmerenUE are filled with direct		
21	purchases by AmerenUE from Illinois Basin suppliers or marketers. For PRB coals, the		
22	overall needs of Ameren's operating subsidiaries are determined and the coal is		
23	purchased as part of a pool of PRB contracts. Ameren generating companies which		

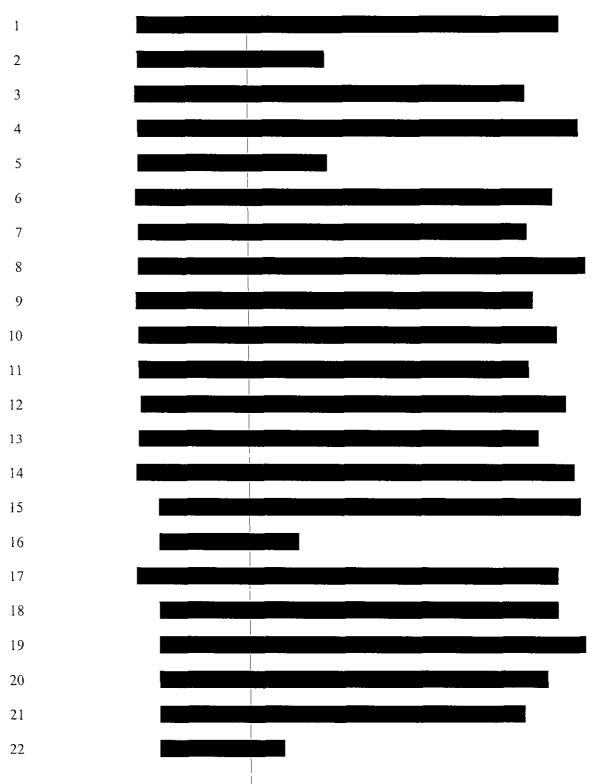
receive PRB pool coal include AmerenUE, Ameren Energy Generating Company (AEG),
 and Ameren Energy Resources Generating Company. AEG sells a portion of its coal
 received through the pool to Electric Energy, Inc.

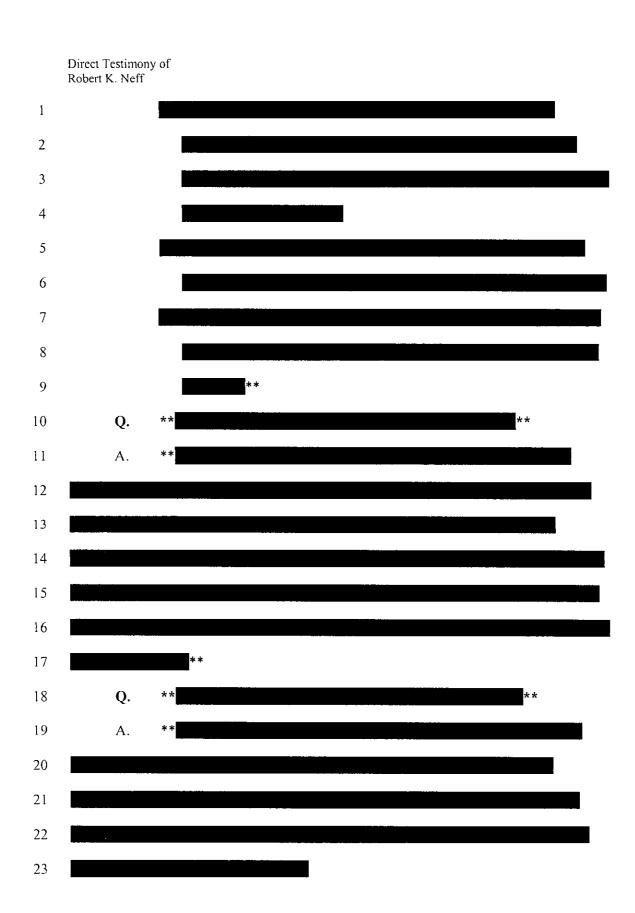
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Q. How does the PRB Pool work?

The pool is made up of two distinct sub-pools that represent the two 5 Α. 6 different types of PRB coals: 8800 Btu PRB coals for the "8800 Pool" and 8400 Btu PRB coals for the "8400 Pool." The need for coal from each pool is initially estimated 7 8 for the upcoming 5-year period via the budgeting process, which incorporates the Btu 9 forecast from the Operations Analysis group. That process provides a burn forecast for 10 each year of the budget period. During the budgeting process, AFS forecasts the need for 11 coal purchases based on market conditions, planned system improvements and existing 12 contracts. Once the annual needs for each pool are determined, AFS purchases 8800 and 8400 coals periodically throughout the year for each pool in the aggregate, not on a plant 13 or operating company specific basis. 14



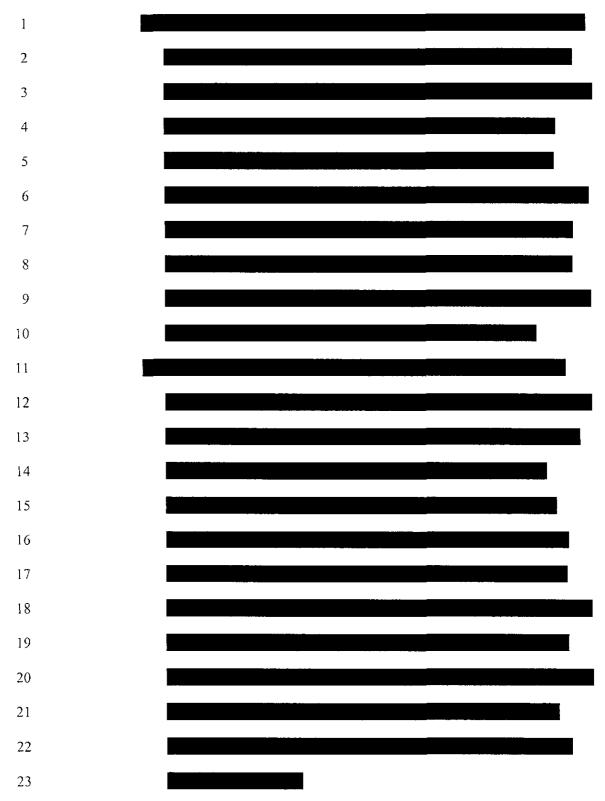




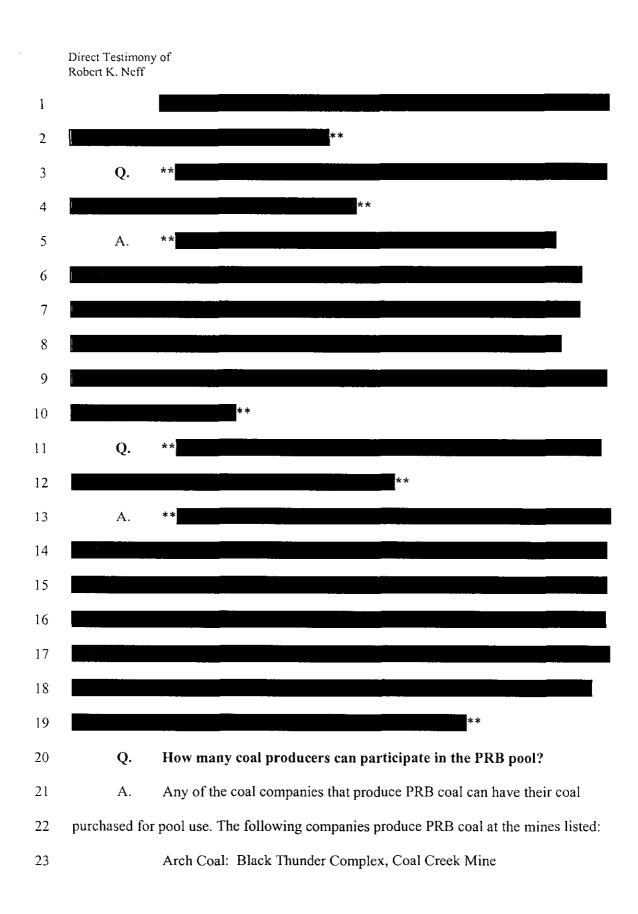
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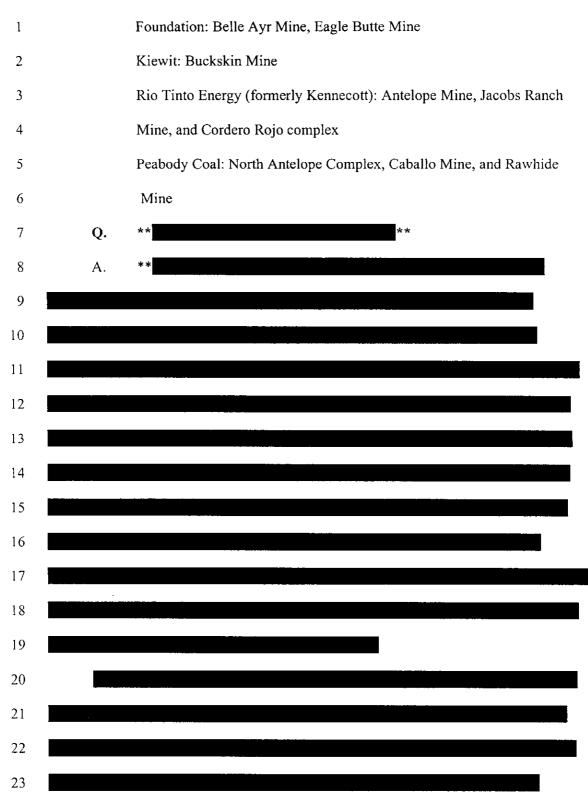
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3	**
4	Q. Provide an example of some of the hedging instruments that are used.
5	A. The vast majority of the pool's natural short position is hedged using
6	forward coal contracts. Most of the tonnage is purchased directly from suppliers at fixed
7	prices. A small portion of the coal portfolio is purchased through index-based coal
8	contracts. Such contracts protect the pool participants against volumetric risk but allow
9	the price to be locked-in at a later date using financial instruments. Typically, fixed-for-
10	floating swaps are used to lock in the price.
11	Q. What were the average costs for each pool in the current 2006 test
12	year?
13	A. For the 8800 Pool, the test year average cost was **
14	(** per million Btu) at an average quality of 8,814 Btu/lb. and 0.725 lb. SO ₂ per
15	million Btu. For the 8400 Pool, the average cost was **
16	million Btu) at an average quality of 8,447 Btu/lb., and 0.753 lb. SO ₂ per million Btu. For
17	the test year, the average PRB cost was ** per ton.
18	Q. Is coal expected to be more or less costly in the future than in the
19	current 2006 test year?
20	A. It is expected that coal costs will increase steadily over the next five years,
21	as reflected in the significantly higher prices contained in the new 2007 contracts
22	discussed earlier in my testimony.

.....

1	Q. What is the current market price for 2007 and 2008 PRB coal?
2	A. As of June 1, 2006, for calendar year 2007 delivery, 8,800 Btu/lb., 0.80 lb.
3	SO ₂ /MMBtu coal was trading on the Over The Counter (OTC or spot) market at
4	approximately \$13.55 per ton, and 8,400 Btu/lb., 0.80 lb. SO ₂ /MMBtu coal was trading at
5	approximately \$10.30 per ton.
6	For 2008, 8,800 Btu/lb., 0.80 lb. SO ₂ /MMBtu coal was trading on the OTC
7	market at approximately \$13.60 per ton, and 8,400 Btu/lb., 0.80 lb. SO ₂ /MMBtu coal was
8	trading at approximately \$10.35 per ton.
9	Q. How much PRB pool coal has been purchased for 2007?
10	A. As of June 6, 2006, approximately ***** million tons have been purchased
11	using the contracts with suppliers mentioned above. The total 2007 PRB burn for all
12	Ameren affiliates that participate in the pool is currently estimated to be approximately
13	41.3 million tons; therefore **
14	Q. What is the average cost of the PRB coal purchased for 2007?
15	A. For the tons under contract with fixed prices in 2007, the average cost is
16	** per ton, which is 87% higher than the 2001 prior test year and **
17	higher than the current 2006 test year.
18	Q. What is the coal inventory policy for AmerenUE plants?
19	A. In 2001, a coal inventory target of 55 maximum burn days was established
20	for plants that had the physical space to achieve that level of inventory.

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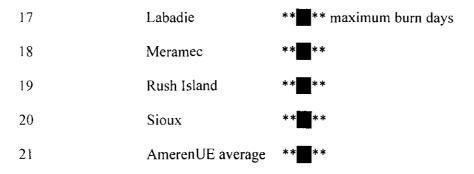
2 instead of average burn day? A maximum burn day is the amount of coal that a plant can burn when 3 Α. 4 operated at full load consistently. An average burn day is the plant's annual coal 5 consumption divided by 365. Maximum burn days were chosen for the inventory 6 guideline because it is a better measure of how many days supply that a plant actually has 7 when running at full load. 8 Which AmerenUE plants have the physical space to accommodate the **O**. 9 55-day level of inventory? 10 Labadie and Rush Island have the capability to store enough coal Α. 11 inventory for 55 maximum burn days. The Sioux Plant has the capability to store 55 12 maximum burn days of Illinois coal but does not have the space to store 55 maximum 13 burn days of PRB coal. However, by increasing the Illinois coal inventory above 55 14 maximum burn days, a Btu equivalent of 55 maximum burn days can be accommodated. 15 Meramec is currently limited by physical space to 32 maximum burn days of inventory. With the physical restrictions at Meramec and Sioux, what is the 16 **Q**. 17 overall target level of coal inventory for AmerenUE? 18 A. With these restrictions, the target inventory for AmerenUE is 49 days of 19 maximum burn. 20 Q. What were AmerenUE's inventory levels during the test year? 21 A. The test year inventory levels were unusual because of rail delivery 22 disruptions in the Powder River Basin which began in mid-May 2005.

What is a maximum burn day and why was that measurement used

1	The inventories at M	ay 1, 2005 were:
2	Labadie	** ** maximum burn days
3	Meramec	**
4	Rush Island	**
5	Sioux	**
6	AmerenUE average	**

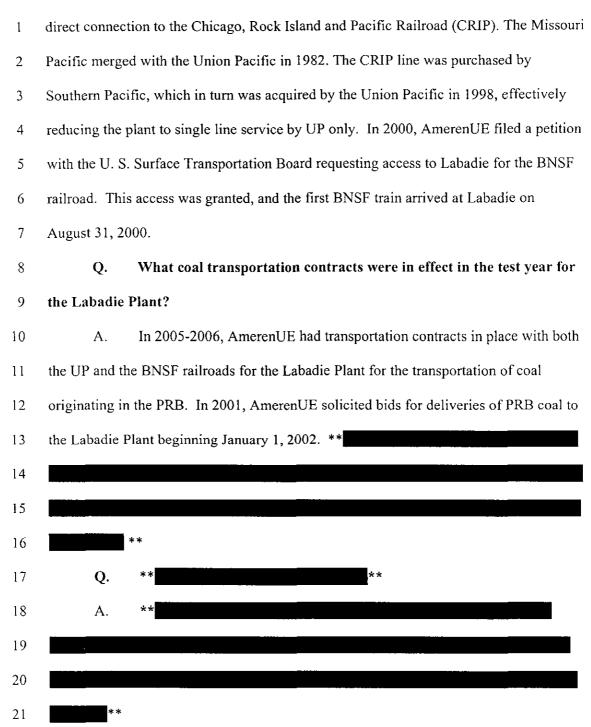
7 On May 11, 2005 there was a major storm event in the Powder River Basin. This was followed by derailments on the Joint Line on May 14, 2005 and May 15, 8 9 2005 which were blamed on poor track conditions. The Joint Line is owned and used 10 jointly by AmerenUE's two primary rail carriers to reach Powder River Basin mines. 11 The railroads undertook an extensive maintenance program which lasted until November 23, 2005. This maintenance program slowed traffic on the Joint Line, which resulted in 12 13 reduced coal deliveries to AmerenUE plants. These reduced deliveries, combined with record coal burns in 2005, decreased inventory levels. 14 As of July 1, 2005, the beginning of the test year, the inventory levels at 15

16 AmerenUE plants were:

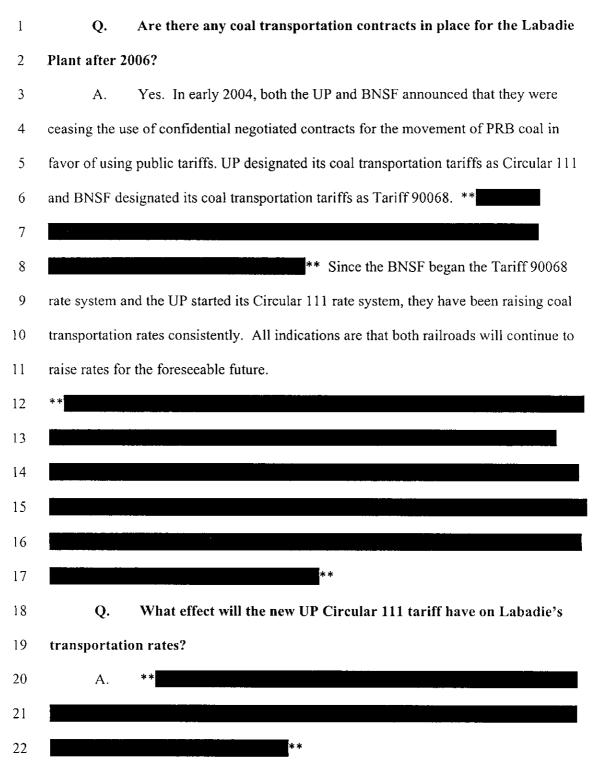


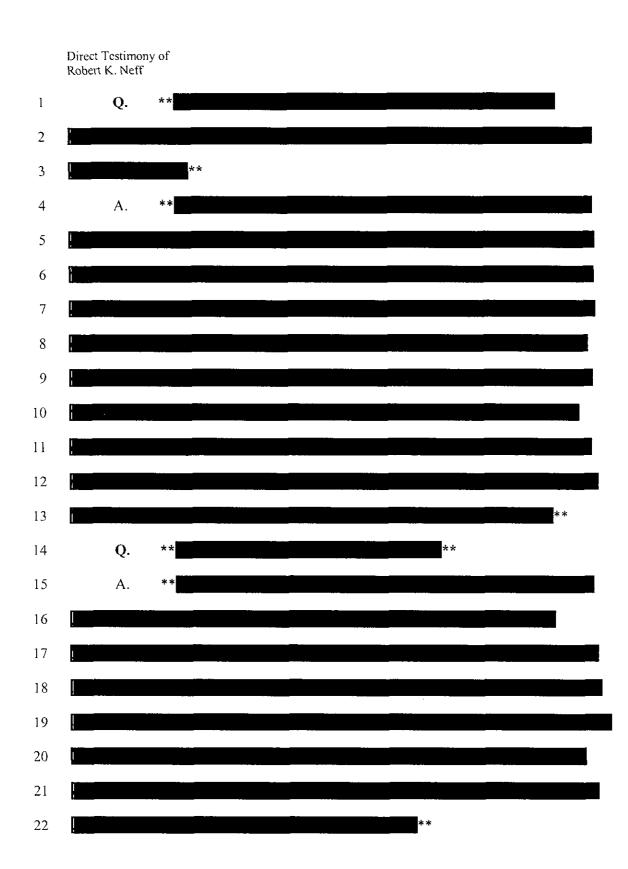
1	As of June 1,	2006, near the end of the test year, the inventory levels at
2	AmerenUE plants were:	
3	Labadie	** *** maximum burn days
4	Meramec	**
5	Rush Island	**
6	Sioux	**
7	AmerenUE average	**
8	Q. Does Amere	nUE expect inventories to increase in 2006?
9	A. While the railroads a	are planning additional maintenance beginning in March
10	2006, it is expected that rail	maintenance will not be as disruptive to coal shipments as
11	that performed in 2005. **	
12		**
13	Q. How was the	e target of 55 maximum burn days established?
14	A. A study was	performed in 2001 to determine the desired coal inventory
15	level. The study identified p	prior disruptions to coal deliveries, classifying the disruptions
16	as large or small. An invent	ory level was established that would allow one large and one
17	small disruption, and still m	aintain a minimum inventory of 35 days.
18 19		ND: TRANSPORTATION AND TRANSPORTATION FRASTRUCTURE INVESTMENT
20	Q. Briefly desc	ribe how coal is delivered to AmerenUE's four coal-fired
21	power plants.	
22	A. As mentione	d above, the majority of the coal originates from the Powder
23	River Basin in Wyoming.	Railroads are the only available method of transportation to

mines are served by one or both of the two western railroads, Union Pacific (UP) and 1 Burlington Northern Santa Fe (BNSF). Mines located south of Gillette, Wyoming are 2 served by the Joint Line, and can ship coal on either UP or BNSF. Mines north of Gillette 3 4 are only served by the BNSF. 5 All four of AmerenUE's coal-fired plants have direct access to at least one of the 6 western carriers. All four plants also have a means to receive coal from the other western 7 carrier, either via barge transload (Meramec, Rush Island and Sioux) or in the case of 8 Labadie, direct access from both the UP and the BNSF. The Sioux Plant receives some 9 of its Illinois coal by barge, and in addition receives petcoke and tires by truck. 10 Q. What has been AmerenUE's strategy for obtaining transportation 11 service to its coal-fired plants? 12 Α. AmerenUE's primary strategy for obtaining transportation to its coal-fired plants has been to expand its options and create competition among the coal 13 transportation providers. Historically, having competitive options among the coal 14 15 transportation providers has served to reduce costs and improve reliability. Industry 16 studies have shown that shippers with competitive options typically pay 20-30% less than 17 captive shippers (shippers with service from only one carrier). Competition also can 18 enhance reliability, because if one transportation provider is having a service problem, 19 there is a possibility of using a back-up provider. 20 Q. Please describe the coal transportation arrangements for 21 AmerenUE's coal-fired plants, starting with the Labadie Plant. 22 Α. When the Labadie Plant was constructed in the 1960's, a coal unloading loop track was built which had a direct connection to the Missouri Pacific Railroad and a 23

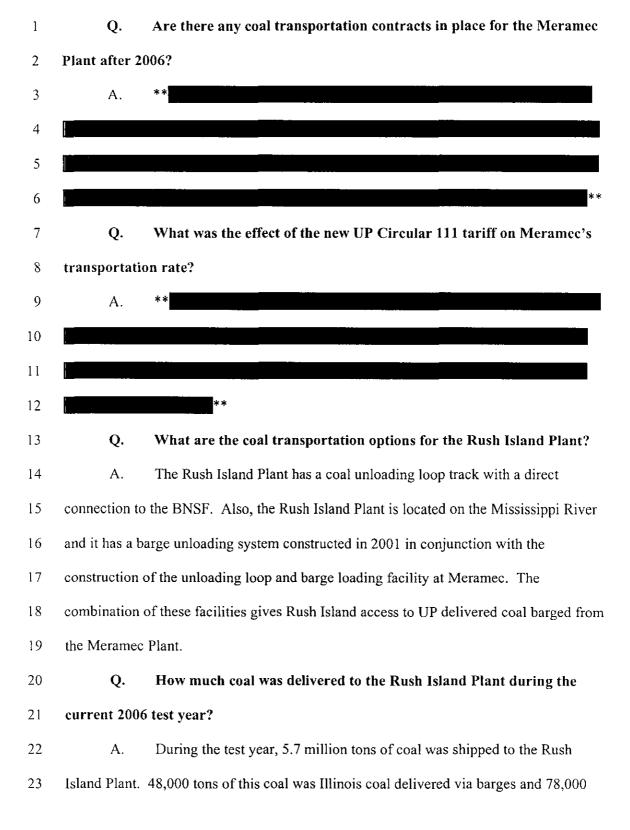


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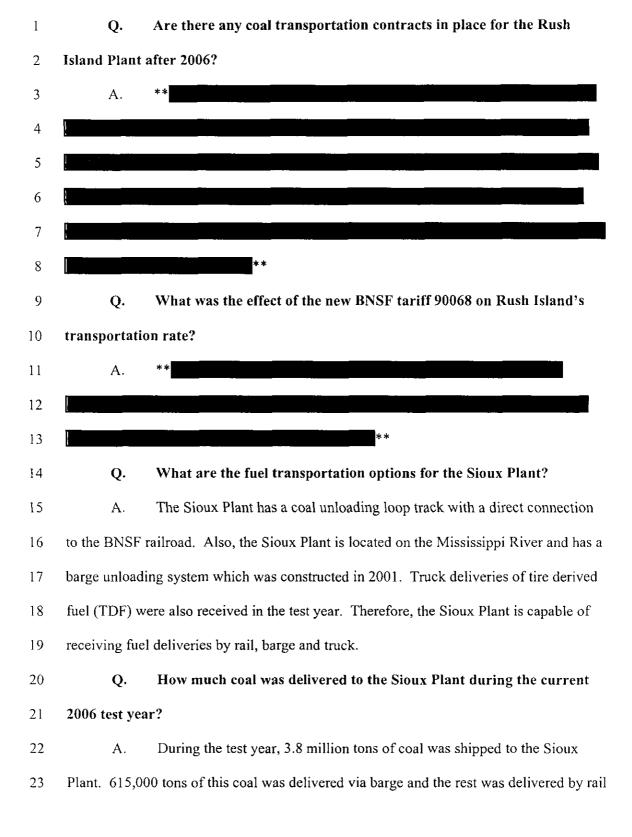
١	Q. What facilities are in place to deliver coal to the Meramec plant?
2	A. The Meramec plant was constructed in 1953 before the common use of
3	unit trains to deliver coal (a unit train is a dedicated train serving a single origin and
4	destination). The plant was constructed with a barge unloader and a single car railcar
5	dumper, and therefore was not capable of receiving unit trains. In 2001, AmerenUE
6	made the necessary modifications to the Meramec Plant to allow it to burn 100% PRB
7	coal. Coal burn at this plant increased from 1.6 million tons in the year 2000 to 3.5
8	million tons in 2005. In order to handle the large volumes of PRB coal, a loop track with
9	a direct connection to the UP railroad was constructed in 2001 to allow delivery of 135
10	car unit trains. In conjunction with the loop track, a barge loading system was
11	constructed to allow trans-loading of coal from unit trains to barges. Trans-loading is the
12	unloading of coal from railcars and the subsequent loading of the coal onto barges.
13	Q. What transportation contracts were in effect during the test year for
14	the Meramec Plant?
15	A. In 2005-2006, AmerenUE had PRB coal transportation contracts in place
16	with both the UP and the BNSF railroads for the Meramec Plant. **
17	
18	
19	
20	
21	**



tons was PRB coal delivered via UP from barges loaded at the Meramec Plant. The
 remainder of the coal was delivered directly by rail on the BNSF.

Q. Why did AmerenUE have PRB coal transportation contracts in place
with both the BNSF and UP railroads for Rush Island during the current 2006 test
year period?

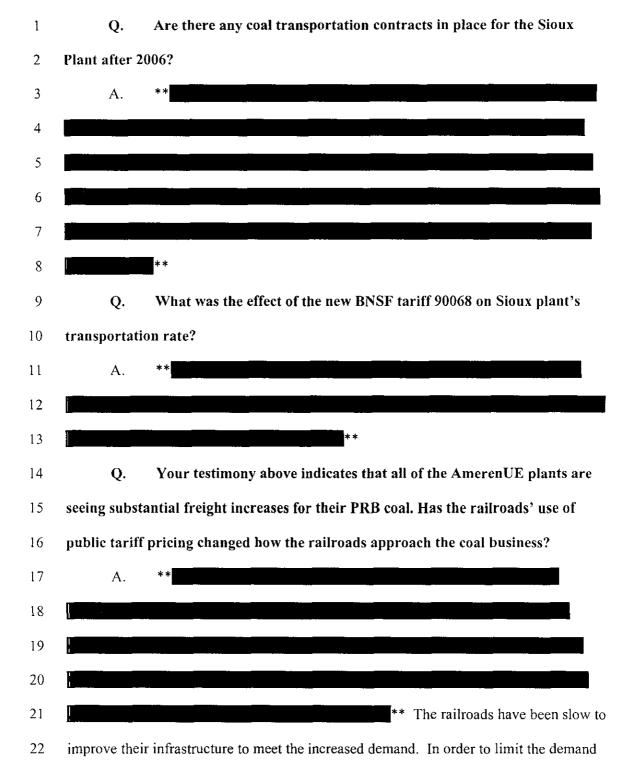
6 Α. In 2001, AmerenUE solicited bids for deliveries of PRB coal to the Rush 7 Island and Sioux Plants. AmerenUE was able to request quotes from both the BNSF and 8 UP railroads because AmerenUE was in the process of completing projects to promote 9 competition for the coal transportation providers. Both the Rush Island and Sioux Plants 10 had direct access to the BNSF. AmerenUE created competition by constructing barge unloaders at both the Rush Island and Sioux Plants and by constructing a coal 11 12 transloading terminal at the Meramec Plant. With the coal transloading terminal at the 13 Meramec Plant, PRB coal could be delivered by the UP and loaded into barges for 14 ultimate delivery to the Rush Island and Sioux Plants. Therefore, for the first time the 15 BNSF and UP had to compete for the business of delivering PRB coal to both plants. 16 Q. What transportation contracts were in effect during the current 2006 17 test year for the Rush Island Plant? 18 During the test year, AmerenUE had transportation contracts in place for Α. 19 the Rush Island Plant with the BNSF railroad, the UP railroad, and the East Side River Brokerage Company. ** 20 ** The East Side River Brokerage Company provides 21 barging services from the Meramec barge loading facility. The term of this barging 22 23 services contract is from January 1, 2005 through December 31, 2009.



on the BNSF. In addition, approximately 10,000 tons of TDF was trucked to the Sioux
 Plant during the test year.

3 Q. Why was some coal barged and the rest shipped by rail to the Sioux
4 Plant during the current 2006 test year?

5 Α. The Sioux Plant was constructed in the 1960's and both generating units at 6 the plant were designed to burn Illinois Basin coal. In the early 1990's AmerenUE 7 shifted as much of the burn as possible to lower cost PRB coal. However, the design of 8 the Sioux Plant units is such that full load cannot be achieved on the low energy content 9 of PRB coal. Therefore, approximately 18% of the higher energy content Illinois Basin 10 coal is blended in with the PRB coal in order to allow the units to operate at their 11 capacity. Some of the Illinois Basin coal burned at the Sioux Plant in 2005 was 12 transported by barge because it was more economical to do so than to deliver it by rail. 13 All of the PRB coal was shipped to the plant rail direct by the BNSF. 14 **O**. What transportation contracts were in effect during the current 2006 15 test tear for the Sioux Plant? 16 Α. During the current 2006 test year, AmerenUE had transportation contracts in 17 place for the Sioux Plant with the BNSF railroad, the UP railroad, the East Side River 18 Brokerage Company and Knighthawk Coal LLC. ** 19 20 21 22



and to increase revenue, BNSF and UP implemented tariff pricing for their coal

2 movements and have increased rates significantly.

3 Q. What are other differences in the manner in which railroads provide
4 service?

5 A. AmerenUE's rail transportation tariffs which take effect on January 1, 2007 6 contain diesel fuel oil adjustment clauses which allow the railroads to pass through 7 increases in locomotive diesel fuel oil costs through percentage rate adjustments to the 8 contracted rail transportation rate. ******

9 These adjustment clauses reflect a variable component of the transportation tariffs which

11 can vary depending on the level of the diesel fuel index used to determine the adjustment.

Q. Could AmerenUE eliminate these adjustment clauses from the rail
 transportation contracts?

A. No. The BNSF and UP have adopted new coal pricing mechanisms for
 shipments of PRB coal which transfer fuel risk to their customers. Neither railroad will
 sign a new agreement without these fuel oil riders.

Q. Do the railroads calculate the tariff fuel oil adjustment similarly?
A. Yes. UP's new rail tariff program uses On-Highway Diesel Pricing Index
Reports in combination with escalation tables to establish the adjustment as a percentage
change to the base contract rate.

In BNSF's tariff program, the fuel adjustment is implemented on a mileage rate adder, and not as a percentage change to the base contract rate. The adjustment is also calculated using On-Highway Diesel Pricing Index Reports in combination with a fuel

adjustment dollar per mile table. The adjustment is determined by multiplying the
 adjustment dollar per mile rate from the table by the rail mileage distance between the
 mine origin and plant destination.

4

Q. How does AmerenUE plan to address this exposure?

A. In 2005 AmerenUE implemented a fuel oil hedging program utilizing New York Mercantile Exchange (NYMEX) Heating Oil Call Option Contracts as a means to limit its exposure to these fuel oil riders. Since there are no established diesel fuel commodity markets, heating oil represents the best commodity that can be used to hedge fuel oil rider exposure.

10

Q. Please explain how the hedging program works.

Historically, the cost of heating oil and the On-Highway Diesel Index have 11 Α. 12 been shown to be 96 percent correlated. Utilizing Heating Oil Call Option contracts provides a hedge (a price cap) against price increases in diesel fuel, while allowing 13 14 AmerenUE to capture the benefits from downward fluctuations in price movements in 15 diesel fuel to the extent that the index is above the base amount. This is a financial hedge 16 only, with no physical commodity being purchased. Any financial gains offset the 17 increased costs under the applicable transportation contracts. The number of call options 18 contracts required to hedge the exposure is determined by the tonnage of coal that is 19 exposed under the transportation contract.

20 Q. When did the Fuel Oil Rider hedging program begin and what have
21 been the results?

- 22 A.
- 23

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1	The fuel oil hedging program began in third quarter of 2005. At approximately the same
2	time, Hurricanes Katrina and Rita inflicted severe damage to the Gulf Coast and
3	disrupted oil production. As a result, market volatility spiked, the correlation between
4	energy related commodities became disjointed, and previously effective hedges became
5	ineffective. Consequently, no hedges were put in place during this period.
6	During the fourth quarter of 2005 as market volatility settled into a more normal
7	range, AmerenUE began to put hedges in place for 2006.
8	Q. How are the diesel fuel adjustments in the transportation contracts
9	being addressed in AmerenUE's cost of service in this case?
10	A. **
11	** However, diesel fuel adjustments are contained in
12	** Contracts for all four AmerenUE
13	plants. The diesel fuel adjustment in these new contracts is based upon the On Highway
14	Diesel Pricing Index.
15	Consequently, when AFS provided AmerenUE witness Tim Finnell with its
16	delivered fuel costs for use in the PROSYM model for developing revenue requirements,
17	transportation costs were furnished which included projections for the 2007 diesel fuel
18	adjustments. These 2007 projections are very close to the index values observed thus far
19	in 2006.
20	AmerenUE will update its case to reflect actual test year fuel data through year
21	end 2006 using January 1, 2007 coal and coal transportation prices, and will update the
22	fuel costs to reflect fuel adjustments for all plants using the actual average On Highway
23	Diesel pricing index results for the year ending December 31, 2006.

1		VI. RAILCAR FLEET EXPENSES/DESCRIPTION						
2	Q.	What is the purpose of this portion of your testimony?						
3	А.	The purpose of this portion of my testimony is to provide a description						
4	AmerenUE's	railcar fleet and to describe associated expenses.						
5	Q.	Describe AmerenUE's railcar fleet.						
6	Α.	AmerenUE's four coal-fired power plants have all been designed to						
7	unload bottor	n dump coal cars. As a result, AmerenUE's railcar fleet is entirely made up						
8	of rapid discl	narge bottom dump hopper cars. See Schedule RKN-1 for a count and a						
9	detailed desc	ription of the AmerenUE's railcar fleet.						
10	Q.	Why does AmerenUE own some railcars and lease others?						
11	Α.	Ameren's Treasury Department provides an analysis every time it is						
12	determined that railcars should be acquired. The decision to own or lease the railcars is							
13	an economic decision.							
14	Q.	How does AmerenUE decide how many railcars are needed?						
15	Α.	Every year AmerenUE prepares a five-year Fuel Budget which includes						
16	forecasted fu	el burns. A spreadsheet model is then used to determine the number of						
17	railcars that	will be required to move the budgeted coal in the upcoming year. If a						
18	consistent ne	ed for additional railcars is identified, the process to acquire the cars is						
19	started.							
20	Q.	Describe AmerenUE's process to acquire railcars.						
21	А.	After the long-term need for the railcars has been determined, AmerenUE						
22	issues reques	sts for bids for the required number of cars. After receiving bids from the						
23	railcar builde	ers, the order is placed with the lowest competent bidder. AmerenUE then						

1 hires a full-time inspector to be present at the facility during the construction. In 2 addition, AmerenUE will send qualified employees to the car shop to ensure that the cars 3 are of good quality. 4 Q. What kinds of expenses are associated with AmerenUE's railcar fleet? 5 There are routine maintenance expenses, program repair expenses, Α. 6 depreciation expenses on the cars owned by AmerenUE, lease payments on the cars 7 leased by AmerenUE and miscellaneous expenses such as the cost of car inspectors, data 8 retrieval, shop inspector and Association of American Railroad fees. AmerenUE's railcar 9 fleet is also subject to ad valorem taxes in some states. These taxes are approximately 10 \$200 per year per car depending on which states the cars traveled through during the 11 year, how many miles they traveled in the states, etc. 12 **Q**. Does AmerenUE ever enter into short-term leases for railcars?

13 A. Yes. AmerenUE will enter into short-term railcar leases if a temporary
14 need for railcars arises.

15

Q. What is the purpose of short-term leasing of railcars?

A. Due to plant outages, fluctuations in burns, and changes in railroad performance, AmerenUE on occasion will be either short or long on railcar/trainset capacity for short-term periods. When railcars are needed, AmerenUE may lease equipment from the railroads, other Ameren companies (intracompany) or third parties to cover the short-term need. On occasion, AmerenUE will also have spare or extra railcar/trainset capacity. AmerenUE can choose to store these extra trainsets or lease this equipment to railroads, other Ameren companies, or other parties on a short-term basis.

1	Q. Please explain how a short-term railcar lease is structured.							
2	A. AmerenUE makes arrangements with the lessee to take a trainset or the							
3	lessor to acquire a trainset. If the counterparty is a railroad or unaffiliated party, an							
4	agreed-upon price is established and a standard industry trainset leasing agreement is							
5	signed. The lease commences on the trainset loading date when the set loads the lessee's							
6	coal and ends when the trainset is reloaded with AmerenUE coal. AmerenUE and the							
7	lessee have the opportunity to make equipment inspections at the start and end of the							
8	lease period. AmerenUE either makes a payment or receives a payment for the trainset							
9	capacity based on the lease rate and the number of days the set was leased. Payments are							
10	made or received monthly.							
11	If it is an intracompany lease, AmerenUE has established Master Leases and							
12	Riders between the companies with each lease established in a rider. Rates for use of							
13	AmerenUE cars are based on the asymmetric pricing provisions of Missouri's Affiliate							
14	Transaction Rules. For example, if AmerenUE leases a trainset to another Ameren							
15	company, AmerenUE receives the higher of market or cost. If AmerenUE leases a							
16	trainset from another Ameren Company, AmerenUE pays the lower of market or cost.							
17	Q. Please explain how the lease rate is determined?							
18	A. For railroad and third party leases, a market rate at the time of the lease is							
19	established. AmerenUE has contacts with all the major railcar leasing organizations and							
20	has long-term lease arrangements with the major railcar equipment organizations. Market							
21	rates are determined by routinely surveying these railcar leasing organizations. These							
22	market rates are also used to determine the lower/higher of cost or market for							

23 intracompany leases.

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1 VII. FUTURE KNOWN AND MEASURABLE INCREASES IN COAL PRICES

2 Q. You earlier discussed new coal contracts with higher prices effective 3 January 1, 2007. Please elaborate further.

- 4 A. I have reproduced Table 2 below. That table shows the significantly
- 5 higher coal and transportation prices and total coal and transportation costs for
- 6 AmerenUE up through 2007. AmerenUE also expects its delivered coal prices to
- 7 increase significantly in 2008 and 2009 This continues a recent trend, particularly over
- 8 the last two years when coal prices have increased dramatically. Moreover, the cost of
- 9 rail transportation has also risen since 2004 with the railroads' implementation of public
- 10 tariff pricing and fuel adjustment clauses, as I discussed above. The new contracts
- 11 entered into by AmerenUE to replace expiring contracts reflect this trend.
- 12 13

Table 2: Summary of Total Coal and Transportation Costs

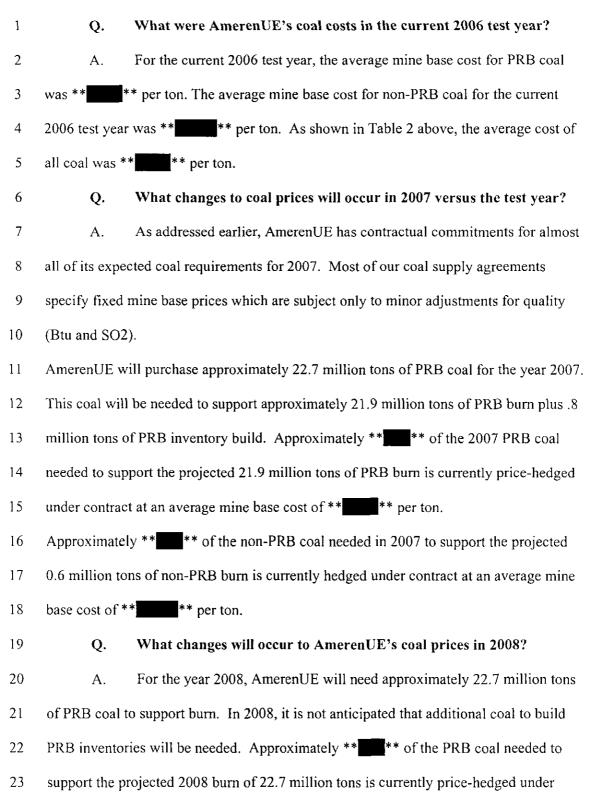
	Pri	2001 or Test Year	2006 Current Test Year		2007		
Total Coal Cost	**	**/ton	**	**/ton	**	**/ton	
Total Coal Transportation Cost	**	**/ton	**	**/ton	**	**/ton	
Total	**	**/ton	**	**/ton	**	**/ton	
Percentage increase over 2001			**	**	**	**	
Total equivalent annual costs (coal and trans only) at 22.5 million tons 2007 annual burn	** n	nillion	** n	** nillion	**	** nillion	

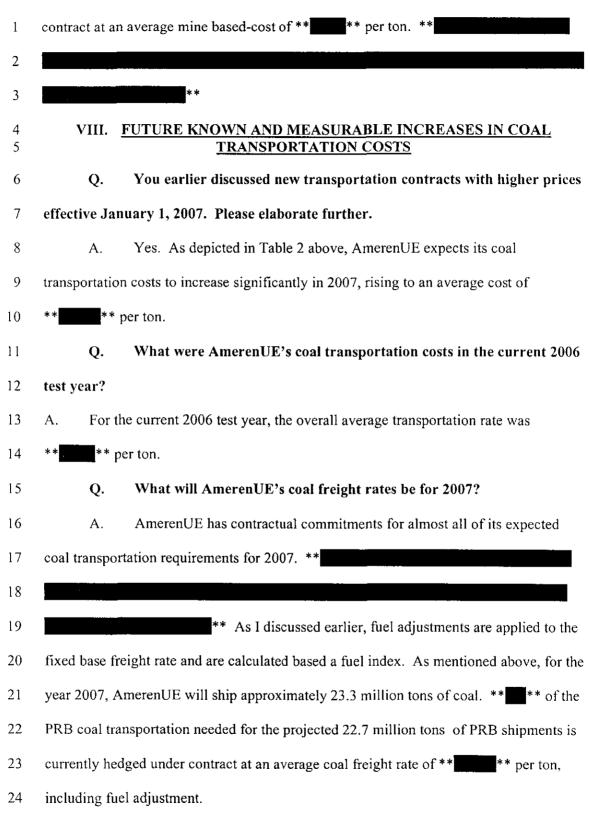
14 Note: The 2007 costs are based upon the PRB coal and transportation contracts

15 mentioned above which fix the prices for ****** of expected 2007 burn. The variable

16 components of those contracts are based on current expectations but will be updated for

- 17 costs (SO2 content, heat rate, Diesel fuel riders) actually experienced during the test year
- as updated through January 1, 2007.





Approximately ****** of the 2007 non-PRB coal transportation needed to ship 1 the projected 0.6 million tons of non-PRB burn in 2007 is currently hedged under 2 contract at an average coal freight rate of ** 3 What will AmerenUE's coal transportation prices be for 2008? 4 Q. For the year 2008, AmerenUE will ship approximately 23.3 million tons 5 A. of coal. ****** of the PRB coal transportation needed for the projected 22.7 million 6 tons of PRB shipments is currently hedged under contract at an average coal freight rate 7 of ** per ton. 8 ** of the non-PRB 2008 coal transportation needed to ship the projected 0.6 9 million tons of non-PRB burn is currently hedged under contract. 10 11 Q. Does this conclude your direct testimony? Yes, it does. 12 Α.

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

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

Case No. ER-2007-0002

AFFIDAVIT OF ROBERT K. NEFF

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

Robert K. Neff, being first duly sworn on his oath, states:

1. My name is Robert K. Neff. I work in the City of St. Louis, Missouri, and I am employed by AmerenEnergy Fuels and Services Company as Vice President.

2. Attached hereto and made a part hereof for all purposes is my Direct

Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 41 pages,

Attachment A and Schedule RKN-1 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.

Robert K. Neff

Subscribed and sworn to before me this b day of July, 2006.

Carolyn

My commission expires: May 19,2008

CAROLYN J. WOODSTOCK Notary Public - Notary Seal STATE OF MISSOURI Frankli: County My Commission Expires: May 19, 2008

EXECUTIVE SUMMARY

Robert K. Neff

Vice President, Coal Supply Ameren Energy Fuels and Services Company (AFS)

* * * * * * * * * *

The purpose of my testimony is to explain the increasing coal and related transportation costs that affect AmerenUE's revenue requirements in this case.

The key conclusions in my testimony are:

- AmerenUE will generate 79% of its electricity from coal-fired power plants in the test year AmerenUE is recommending for this case. At the same time, AmerenUE's 2007 average cost of a delivered ton of coal will have increased by 42% over the cost of a delivered ton of coal per AmerenUE's books for the period corresponding to the updated test year in AmerenUE's prior rate case proceeding in 2001. At the expected total annual coal burn in 2007, this equates to a coal cost increase of \$162 million for 2007 over 2001.
- 2. 96% of the coal burned by AmerenUE originated in the Wyoming Powder River Basin (PRB) during the current 2006 test year, which, like other coal regions, have seen a substantial increase in coal and transportation costs since 2001. At the expected 2007 PRB burn level, AmerenUE's 2007 PRB coal and rail freight costs will account for \$136 million of the \$162 million total coal cost increase for 2007.
- AmerenUE's 2007 delivered PRB coal costs will increase substantially over the current 2006 test year based on the 2007 PRB burn level. While

Attachment A-1

AmerenUE's coal and transportation costs have increased in 2006, and will significantly increase again in 2007, AmerenUE's costs are still well below current market prices because of the coal hedging program of Ameren Energy Fuels and Services Company which has hedged a high percentage of the coal and transportation needed to meet the 2007 burn via executed contracts with prices effective January 1, 2007.

 AmerenUE's coal costs are expected to continue to increase toward market levels in subsequent years as existing contracts expire and new agreements are signed.

Reporting Marks	Original # of Cars	Remaining # of Cars	Year Buill	Approx Age in 2006	Lessor	Year of Lease Expiration	Car Builder	Model	Body Materiał	Туре	Rotary Couplers?
UCEX 91001-91480	480	422	1991	15	None	N/A	Trinity	RDII	Aluminum	Hopper	No
UCEX 92001-92120	120	109	1992	14	None	N/A	Trinity	RDII	Aluminum	Hopper	No
UCEX 92121-92240	120	116	1993	13	None	N/A	Trinity	RDII	Aluminum	Hopper	No
UCEX 94001-94360	360	317	1994	12	None	N/A	Trinity	RDII	Aluminum	Hopper	No
UCEX 95001-95240	240	214	1995	11	None	N/A	Thrail	Avalanche	Aluminum	Hopper	No
UCEX 96001-96120	120	113	1996	10	None	N/A	Thrall	Avalanche	Aluminum	Hopper	Na
UCEX 97001-97249	249	243	1997	9	None	N/A	Trinity	RDIV	Aluminum	Hopper	No
UCEX 99001-99016	16	16	1999	7	None	N/A	Johnstown	Autoflood If	Aluminum	Hopper	Yes
UCEX 2001-2240	240	235	2000	6	None	N/A	Trinity	RDł∨	Aluminum	Hopper	No
UCEX 2241-2480	240	236	2000	6	None	N/A	Trinity	RDIV	Aluminum	Hopper	Yes
Owned Cars:	2,185	2,021									
UCEX 90001-90240	240	225	1990	16	Pitney Bowes	2010	Trinity	RDII	Aluminum	Hopper	No
UCEX 98001-98487	487	458	1998	8	GE	2020	Trinity	RDIV	Aluminum	Hopper	No
UCEX 2481-2600	120	118	2000	6	GE	2020	Trinity	RDIV	Aluminum	Hopper	Yes
UCEX 22001-22720	720	716	2002	4	GE	2022	Johnstown	Autoflood III	Aluminum	Hopper	No
UCEX 24501-24680	180	180	2004	2	CIT	2024	Johnstown	Autoflood III	Aluminum	Hopper	No
UCEX 25001-25145	145	145	2005	1	GE	2025	FreightCar	Autoflood III	Aluminum	Hopper	No
UCEX 26001-26700	700	700	2006	0	GE	2026	FreightCar	Autofiood III	Aluminum	Норрег	No
Leased Cars: Total Cars:	2,592	4,563									
taisi obia.											

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AMERENUE RAILCAR FLEET AS OF 6/1/06