Exhibit No.:
Issues: *Fuel; Inventory; Callaway Refueling Cost; Combustion Turbine Maintenance; Environmental Cost;*
Witness: *John P. Cassidy*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case No.: *ER-2007-0002*
Date Testimony Prepared: *December 15, 2006*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

JOHN P. CASSIDY

UNION ELECTRIC COMPANY, d/b/a AmerenUE

CASE NO. ER-2007-0002

Jefferson City, Missouri
December 2006

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

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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 JOHN P. CASSIDY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

John P. Cassidy, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 32 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

John P. Cassidy
John P. Cassidy

Subscribed and sworn to before me this 14th day of December 2006

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
County of Cole
My Commission Exp. 07/01/2008

D Suzie Mankin
Notary Public

TABLE OF CONTENTS OF

DIRECT TESTIMONY OF

JOHN P. CASSIDY

CASE NO. ER-2007-0002

DIRECT TESTIMONY

OF

JOHN P. CASSIDY

UNION ELECTRIC COMPANY,
d/b/a AmerenUE

CASE NO. ER-2007-0002

Q. Please state your name and business address.

A. John P. Cassidy, 9900 Page Avenue, Suite 103, Overland, Missouri 63132.

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

A. I am employed by the Missouri Public Service Commission (Commission) as a Regulatory Auditor.

Q. Please describe your educational background.

A. I graduated from Southeast Missouri State University, receiving a Bachelor of Science degree in Business Administration, with a double major in Marketing and Accounting in 1989 and 1990, respectively.

Q. What has been the nature of your duties while in the employ of this Commission?

A. Since joining the Commission Staff in 1990, I have assisted with and directed audits and examinations of the books and records of utility companies operating within the state of Missouri. I have also conducted numerous audits of small water and sewer companies in conjunction with the Commission's informal rate proceedings.

Q. Have you previously filed testimony before this Commission?

A. Yes, I have. Please refer to Schedule 1, which is attached to my direct testimony, for a list of cases in which I have previously filed testimony.

Q. Did you make an examination and analysis of the books and records of Union Electric Company d/b/a AmerenUE (AmerenUE or Company) in regard to matters raised in Case No. ER-2007-0002?

A. Yes, in conjunction with other members of the Commission's Staff (Staff). I reviewed Company workpapers and testimony, Company responses to Staff data requests as well as various data request responses provided to other parties participating in these rate cases, fuel related contracts and fuel related reports, Ameren Corporation's (Ameren) most recent 10-K filing with the Securities and Exchange Commission, past Ameren shareholder reports and outside auditor workpapers. I obtained information from Company personnel during various meetings as well as from the websites of the following businesses and governmental agencies: Ameren, Burlington Northern Santa Fe, Union Pacific, Alliance Resources Partners, L.P., the Federal Energy Regulatory Commission and the US Department of Energy's Energy Information Administration. I attended meetings and reviewed various Company filings as part of the Company's Integrated Resource Plan which was addressed in Case No. EO-2006-0240. From the most recent rate proceeding involving AmerenUE, Case No. EC-2002-1, I reviewed the Company's response to various data requests, Company workpapers and testimony, Staff workpapers and testimony, Office of the Public Counsel (OPC) testimony and the Stipulation and Agreement as well as the Commission's Report and Order.

EXECUTIVE SUMMARY

Q. With reference to Case No. ER–2007–0002, what matters will this direct testimony address?

A. This direct testimony will provide an overview of AmerenUE's generation as well as a general discussion of the Staff's methodology for determining fuel and purchased power expenses. This testimony specifically addresses the following company related issues: the accounting prices related to fuel and related transportation costs that were used in the development of fuel expense from the Staff's production cost model, fuel inventories for rate base, proposed regulatory accounting treatment for resulting gains on the sale of emission allowances, normalization of the operations and maintenance expenses associated with the Callaway refueling, annualization of the power plant maintenance expenses and administrative expenses associated with three combustion turbines that AmerenUE acquired during the test year and environmental expenses. Except for a small portion of fuel cost, in addressing these areas, the Staff has considered actual costs incurred or costs related to signed contracts that were effective during the test year or will become effective as of January 1, 2007, the true-up cut-off date in this case.

TRAINING AND EXPERIENCE

Q. What knowledge, skill, experience, training or education do you have in these matters?

A. I have previously analyzed fuel prices, Callaway refueling expenses and environmental expenses at AmerenUE as part of Case No. EC-2002-1. I analyzed fuel costs and fuel inventories for The Empire District Electric Company as part of Case No. ER-2004-0570. I have also reviewed testimony previously filed before this Commission and

Report and Orders from past cases regarding fuel related issues and other topics discussed in this testimony. In addition to my work experience at the Commission, I have attended numerous regulatory conferences and in-house training sessions, reviewed various journals and trade articles and had many interactions with members of the utility regulatory profession.

PURPOSE OF TESTIMONY

Q. With reference to Case No. ER-2007-0002, what is the purpose of this direct testimony?

A. The purpose of this direct testimony is to explain the following adjustments which appear on Accounting Schedule 10, Adjustments to the Income Statement:

Fuel Expense Adjustments	S-7.1, S-7.2& S-8.1
Interchange Revenue Adjustment	S-5.1
Callaway Refueling Adjustment	S-6.5
Power Plant Maintenance	S-6.8 & S-17.11
Environmental Expense Adjustment	S-17.9

This testimony will also explain the following line items contained on Accounting Schedule 2, Rate Base:

Emission Allowances

Fuel Inventories for the following fuel stocks:

Nuclear, Coal, Natural Gas, Fuel Oil, Shredded Tires and Petroleum Coke

COMMISSION ORDERED TEST YEAR AND TRUE-UP PERIOD

Q. What test year and update period has the Staff utilized in the electric rate case?

A. The Staff has used the Commission ordered test year ending June 30, 2006. During March 2007, once all information is available, the Staff will perform a true-up audit for all relevant items through January 1, 2007 as previously agreed to by the parties and ordered by the Commission.

OVERVIEW OF AMERENUE ELECTRIC GENERATION FACILITIES

Q. Please identify the generating facilities that AmerenUE owns and operates for the production of electric power and include a description of each facility.

A. AmerenUE is the largest investor owned electric utility in Missouri, with the majority of its megawatt generation being coal fired. Approximately 80% of AmerenUE's electric generation during the test year was supplied by its four coal fired generation plants. AmerenUE also generates a significant amount of power with its Callaway nuclear power plant, which provided approximately 16% of its electric generation during the test year. The remainder of AmerenUE's electric generation comes from two hydroelectric plants, a pumped storage facility and various combustion turbines that are powered by natural gas or oil. AmerenUE's Taum Sauk pumped storage facility is currently unavailable for power production due to the upper reservoir breach that occurred in December 2005. AmerenUE also has a long term purchase power agreement in place with Entergy-Arkansas (formerly Arkansas Power & Light Company) which will expire in ** _____ **. AmerenUE has historically received power from Electric Energy, Incorporated (EEI) located in Joppa, Illinois. The Staff has included EEI supplied power in its production cost model based on

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AmerenUE's 40% ownership interest in EEI. The Staff's regulatory treatment for EEI as well as its proposed inclusion in the production cost model is addressed in the direct testimony of Staff witness Greg R. Meyer filed in this case. AmerenUE owns the following generating facilities that are described below:

Nuclear

Callaway: Callaway is located ten miles southeast of Fulton in Callaway County, Missouri. Callaway is AmerenUE's 1193 megawatt summer net generating capability, base load, nuclear power plant. Callaway is powered by uranium, which is used in a process called nuclear fission that heats water into steam. The steam, under pressure, spins the blades of a turbine, which in turn spins a generator that creates electricity. Callaway has historically been a reliable performer and has helped to reduce AmerenUE's dependence on higher cost generation or having to purchase power at higher costs during periods of peak demand.

Coal

Labadie Units 1-4: Labadie plant is located near Labadie, Missouri, approximately 35 miles west of St. Louis. Labadie is the largest of AmerenUE's fossil fuel plants. Its four coal fired generating units have a 2395 megawatt summer net generating capability. Labadie serves as a base load power plant and burns a combination of 8400 BTU and 8800 BTU Powder River Basin Coal (PRB).

Labadie plant is in the process of completing a new west facing turnout for rail car deliveries. When Labadie plant was originally built, coal deliveries arrived from the east because of the plant's original design to burn high sulfur Illinois coal. This east-facing design forced trains delivering PRB coal from Wyoming to travel past the Labadie plants turnout and then back up their three engines and 139 cars onto the rail track located around

the plant that is referred to as the "siding". This process was time consuming and expensive because this process blocked the Union Pacific's (UP) mainline track for over an hour and cost each train at least two hours of additional time due to inefficient train movements. This difficulty is compounded by the fact that when all four Labadie units are running at full load, the plant consumes two unit train loads of coal in a single day. Furthermore, Labadie consumes nearly half of AmerenUE's total PRB volume. The new west-facing turnout to accommodate western coal deliveries allowed Ameren to negotiate a more favorable contract with the UP railroad. ** _____

_____

_____ **

Finally, once all track modifications are complete, Labadie plant will be able to accommodate a 150 car unit train.

Rush Island Units 1-2: The Rush Island plant is located on the western bank of the Mississippi River approximately eight miles south of Festus in Jefferson County, Missouri. Rush Island's two units provide 1168 megawatts of net generating capability. The two Rush Island Units burn 8400 BTU PRB coal as their primary source of fuel.

Rush Island can accept a 150 car unit train through a coal unloading loop track that is directly connected to the Burlington Northern Santa Fe (BNSF) railroad. Also, Rush Island has a barge unloading system that allows it to accept UP delivered coal from the Company's Meramec facility or other sources of fuel from the river.

Sioux Units 1-2: Sioux plant is located adjacent to the Missouri River in St. Charles County, Missouri near West Alton. Sioux is the third largest of AmerenUE's fossil fuel plants. Its two units provide 995 megawatts of net generating capability. The Sioux plant utilizes both

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PRB and Illinois basin coal as its primary fuel source. Sioux plant is able to run solely on PRB coal; however, in order to achieve full load, the plant must utilize a blend of PRB coal and Illinois coal. In the past the Sioux plant has used petroleum coke and tire chips as supplemental fuel sources. ** _____ _____ _____ _____ ** The Staff's production cost model does not include any generation or costs resulting from the use of tire chips or petroleum coke.

Sioux can accept a 150 car unit train through a coal unloading loop track that is directly connected to the BNSF railroad. Also, Sioux has a barge unloading system that allows it to accept UP delivered PRB coal from the Company's Meramec facility and other sources of fuel from the river.

Meramec Units 1-4: Meramec plant is located on the Mississippi River in south St. Louis County, Missouri. Meramec supplies 859 megawatts of electricity with its four generating units. Meramec burns a combination of 8800 and 8400 BTU Powder River Basin Coal. However, two of Meramec's units can also be fired for full load with natural gas – the only units in the AmerenUE system that can use both natural gas and coal as fuel sources.

Meramec plant was originally constructed with a barge unloader and a single railcar dumper, and therefore was unable to receive unit trains. By 2002, a new rail loop and railcar unloading system went into service at Meramec that allowed cleaner burning, low sulfur PRB coal to be delivered to the plant by rail in 135 car unit trains. That was followed by a new two way barge loading system that allows AmerenUE to unload coal from railcars and then

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subsequently load the coal onto barges. This system has made the Meramec plant the center of a trans-loading hub for coal moving between its Rush Island and Sioux plants as well as other possible destinations.

Gas/Oil Units

Venice Units 1-5: The Venice power plant is located on the Mississippi River in Venice, Illinois and can deliver a total of 527 megawatts of electricity with its five generating units. Venice operates as a peaking plant, producing power when needed to meet peak summer demand or compensating for another plant that is down for repairs. Venice Unit 1, which went into service in 1967, burns #2 fuel oil and can deliver 25 megawatts of net generation. Venice Unit 2, completed in 2002, burns natural gas as its primary fuel source and #2 fuel oil as a secondary fuel source and can provide 48 megawatts of net generation. Venice Units 3 and 4, which were completed in June 2006, burn natural gas and each can deliver 169 megawatts of net generation respectively. Venice Unit 5 was completed in October 2006, burns natural gas and can deliver 116 megawatts of net generation.

Audrain Power Station Units 1-8: AmerenUE took ownership of the Audrain Power Station which is located in Vandalia, Missouri from NRG Energy Inc. on March 28, 2006. The eight Audrain units serve as peaking units. Audrain units burn natural gas and are capable of delivering approximately 600 megawatts of total net generating capability.

Goose Creek Units 1-6: AmerenUE took ownership of the Goose Creek units located in Platt County, Illinois from Aquila on March 31, 2006. The Goose Creek units serve as peaking units, burn natural gas and can deliver approximately 450 megawatts of total net generating capability.

Raccoon Creek Units 1-4: AmerenUE took ownership of the Raccoon Creek units located in Clay County, Illinois from Aquila on March 31, 2006. The Raccoon Creek units serve as peaking units, burn natural gas and can deliver approximately 300 megawatts of total net generating capability.

Peno Creek Units 1-4: Peno Creek units serve as peaking units. They have a summer total net generating capability of 188 megawatts and burn natural gas as their primary fuel source and #2 fuel oil as a secondary fuel source. In December 2002, AmerenUE conveyed most of its Peno Creek facility to the City of Bowling Green, Missouri and leased back the facility from the city for a twenty year term. As part of the transaction, AmerenUE retains all operations and maintenance responsibility for the facility and ownership of the facility will be returned to AmerenUE at the expiration of the lease.

Pinkneyville CT 1-8 and Kinmundy CT 1-2: Pinckneyville has a total net generating capability of 320 megawatts, burns natural gas and serves as peaking units. Kinmundy has a total net generating capability of 232 megawatts, serves as peaking units and burns natural gas as a primary fuel source and #2 fuel oil as a secondary fuel source. During 2004, Ameren received Federal Energy Regulatory Commission (FERC) approval to transfer the Kinmundy and Pinckneyville power plants from its unregulated subsidiary AmerenEnergy Generating Company to AmerenUE. The actual transfer of the units to AmerenUE took place during May 2005.

Meramec – CT 1-2: Meramec Unit 1 has a net generating capability of 55 megawatts and burns fuel oil. Meramec Unit 2 came on line during June 2000. It provides a net generating capability of 53 megawatts and burns natural gas as a primary fuel source and #2 fuel oil as a

secondary fuel source. These CT units as well as the CT units discussed below serve primarily as peaking units to respond to spikes in electricity demand.

Kirksville CT: Kirksville has a net generating capability of 13 megawatts and uses natural gas as its sole source of fuel.

Viaduct CT: Viaduct has a net generating capability of 25 megawatts and uses natural gas as its only source of fuel.

Fairgrounds CT: Fairgrounds has a net generating capability of 55 megawatts and burns #2 fuel oil as its only source of fuel.

Howard Bend CT: Howard Bend has a net generating capability of 43 megawatts and burns #2 fuel oil as its sole source of fuel.

Moberly, Mexico and Moreau CTs: Each of these CTs has a net generating capability of 55 megawatts and each relies on #2 fuel oil as its only source of fuel.

Hydroelectric Units

Osage Units 1-8: The Osage plant at Bagnell Dam is located in Lakeside, Missouri on the Osage River at the Lake of the Ozarks. Osage provides 225 megawatts of summer net generating capability power through hydroelectricity. As water passes through the dam, the pressure of falling water spins water wheels, which drive generators that produce electricity.

Keokuk Units 1-15: Keokuk plant and dam are located on the Mississippi River at Keokuk, Iowa. Keokuk plant is a "run of the river plant," meaning that water flowing downstream passes the plant on a daily basis and therefore, no water is stored. However, during times when the Mississippi River is low, not all of Keokuk's generators can be fully utilized. Keokuk has a total summer net generating capability of 133 megawatts.

Pumped Storage

Taum Sauk Units 1-2: Taum Sauk is located near Lesterville, Missouri in Reynolds County. Currently, AmerenUE's pumped storage facility is not in service due to the upper reservoir breach that occurred in December 2005. When operational, the Taum Sauk plant has a net generating capability of 430 megawatts and is used primarily on a peaking basis by being put into operation when the demand for electricity is at its greatest. The pumped storage system at Taum Sauk works much like a dam, but is primarily used to meet daily peak power demands for short periods of time and also during emergencies. Water is stored in an upper reservoir and is released to flow through turbines into a lower reservoir during these high energy demand periods. As water passes through the powerhouse, water spins the turbines, which drive generators to produce electricity. Then overnight, when the demand for electricity is low, the water is pumped back into the upper reservoir, where it is stored until needed again.

The Staff has included this plant in its production cost model as if it were still in service and providing power absent the reservoir breach. The Staff included this plant in its production cost model to take advantage of Taum Sauk's low cost generation. For a complete discussion of the rationale for Staff's inclusion of Taum Sauk in the production cost model as well as other Taum Sauk related issues please refer to the direct testimony of Staff witness Stephen M. Rackers.

The following is a complete summarized listing of all the generating units that AmerenUE uses to produce electric power based on a response to Staff Data Request No. 73, which provided summer net generating capabilities:

Unit	Type	Year Placed In Service	Summer Net MW Capability	Primary Fuel
Callaway	Base	1984	1193	Nuclear
Labadie 1	Base	1970	595	Coal
Labadie 2	Base	1971	588	Coal
Labadie 3	Base	1972	607	Coal
Labadie 4	Base	1973	605	Coal
Rush Island 1	Base	1976	585	Coal
Rush Island 2	Base	1977	583	Coal
Sioux 1	Base	1967	496	Coal
Sioux 2	Base	1968	499	Coal
Meramec 1	Base	1953	120	Coal
Meramec 2	Base	1954	122	Coal
Meramec 3	Base	1958	267	Coal
Meramec 4	Base	1961	350	Coal
Keokuk	Run of River	1914	133	Water
Osage	Pond Storage	1931	225	Water
Taum Sauk	Pump Storage	1963	430	Pumped Water
Kirksville	Peak	1967	13	Natural Gas
Venice Ct 1	Peak	1967	25	#2 Oil
Venice Ct 2	Peak	2002	48	Natural Gas
Venice Ct 3	Peak	2006	169	Natural Gas
Venice Ct 4	Peak	2006	169	Natural Gas
Venice Ct 5	Peak	2006	116	Natural Gas
Viaduct	Peak	1967	25	Natural Gas
Howard Bend	Peak	1973	43	#2 Oil
Fairgrounds	Peak	1974	55	#2 Oil
Meramec Ct 1	Peak	1974	55	#2 Oil
Meramec Ct 2	Peak	2000	53	Natural Gas
Mexico	Peak	1978	55	#2 Oil
Moberly	Peak	1978	55	#2 Oil
Moreau	Peak	1978	55	#2 Oil
Peno Creek 1-4	Peak	2002	188	Natural Gas
Pinckneyville 1-4 *	Peak	2000	176	Natural Gas
Pinckneyville 5-8 *	Peak	2001	144	Natural Gas
Kinmundy 1-2 *	Peak	2001	232	Natural Gas
Audrain 1-8 *	Peak	2001	600	Natural Gas
Goose Creek 1-6 *	Peak	2003	450	Natural Gas
Raccoon Creek 1-6 *	Peak	2002	300	Natural Gas
Total			10,424	

* AmerenUE acquired Audrain 1-8 from NRG on March 28, 2006. AmerenUE acquired Goose Creek 1-6 and Raccoon Creek 1-6 from Aquila on March 31, 2006. Goose Creek has 300 MWs committed in a purchase power agreement with Illinois Power until December 31, 2006. AmerenUE acquired Pinckneyville and Kinmundy during May 2005.

FUEL EXPENSE

Q. What was your responsibility in this case with regard to the area of fuel expense?

A. My responsibility was to provide current fuel prices for nuclear, coal, natural gas and oil to witness Michael Rahrer, the owner of RealTime Consulting, who is sponsoring the RealTime™ production cost model (production cost model or fuel model) on behalf of Staff. Staff witness Rahrer input these current fuel prices along with coal, oil and natural gas dispatch prices, adjusted on-peak and off-peak market price data for purchased power and off system sales (also referred to as interchange sales) into his production cost model. Staff witness Rahrer also included annualized net system load and various other components into his production cost model to calculate the overall AmerenUE stand alone, fuel and purchased power costs to meet normalized native load and to make off system sales. For a complete explanation of the RealTime fuel model please refer to Staff witness Michael Rahrer's direct testimony. For a complete discussion of Staff's development and use of coal and natural gas market dispatch prices and their relationship to the Staff's development of both on-peak and off-peak market price data used to model purchased power costs and off system sales, please refer to the direct testimony of Staff witness Dr. Michael Proctor filed in this rate case.

Q. Please explain how the Staff examined fuel prices in this case.

A. The Staff reviewed the Company's coal commodity and coal transportation contracts. The Staff reviewed nuclear, natural gas and fuel oil prices as reflected in Company fuel reports. The Staff also reviewed actual purchased power prices associated with the Company's long term purchase power agreement with Entergy-Arkansas. Finally, the Staff reviewed the Company's responses to various data requests related to fuel costs and participated in meetings and had discussions with Company personnel concerning fuel prices and fuel inventory levels.

Q. What nuclear fuel prices did the Staff use in its production cost model for the Company's Callaway generating plant?

A. The Staff used the average of actual test year nuclear fuel prices for the Callaway plant as were reported in the Company's C-9 statistical reports that were provided in the response to Staff Data Request No. 60. The Staff reviewed a nine-year history of actual nuclear fuel prices for the Callaway plant as reported in the Company's C-9 statistical reports and determined that test year nuclear fuel prices appeared to be reasonable. For comparison purposes, the Staff's test year average nuclear fuel price of ** _____ ** cents per MMBTU compares closely to an average of the twelve monthly nuclear fuel prices, for calendar year ending December 31, 2005, that were used by the Company in its fuel model, which was ** _____ **cents per MMBTU. The Staff also included a ** ___ ** cent / MWH cost, consistent with the Company, in order to reflect annual required costs that are associated with the disposal of spent nuclear fuel as well as approximately ** _____ ** million in fees paid to the U.S. Department of Energy (DOE) related to decommissioning and dismantling of certain DOE facilities.

Q. How did the Staff determine the cost of coal used at AmerenUE plants?

A. AmerenUE has secured all of its 2007 8400 and 8800 PRB coal commodity purchase requirements through Ameren's pool contract agreements with various coal suppliers. All of these contracts specify base commodity prices, which are subject to certain quality adjustments, and specifically identify prices scheduled to take effect by January 1, 2007. ** _____

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The Staff examined all of Ameren's pooled coal contracts that included these specified contract prices for each type of coal that is burned by AmerenUE, Ameren Energy Generating Company (AEG) and Ameren Energy Resources Generating Company. Mine-specific coal prices applicable to AmerenUE were supplied by the Company in Supplemental Response No. 2 to Staff Data Request No. 310. The Staff included all mine-specific AmerenUE PRB coal commodity prices, as well as the coal commodity prices related to the Illinois basin coal procured from ** _____ ** that include the effect of coal price increases scheduled to take effect by January 1, 2007 in its cost of service calculation. With regard to the pending ** _____ ** coal contract, the Staff has substituted the pricing terms stated in the current ** _____ **contract as a surrogate price. The Staff will address the finalized ** _____ ** coal commodity contract prices as part of the pending true-up audit which will be performed during March 2007. The following chart summarizes the average mine specific commodity costs that were determined by the Staff, based on information supplied in response to Staff Data Request Nos. 271 and 310, for each of AmerenUE's generation plants:

	Cost at Mine $ /Ton
Labadie	** _____ **
Rush Island	** _____ **
Meramec	** _____ **
Sioux	** _____ **

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Q. How did the Staff examine the cost of transporting the coal from the various mines to AmerenUE's generating plants?

A. The Staff examined all current PRB rail transportation contracts and the Illinois truck and barge transportation contracts for shipping coal which included all rates scheduled to take effect by January 1, 2007. Each of these transportation contracts were further explained in detail in the Company's response to Staff Data Request No. 310. The terms of the PRB rail transportation contracts call for a specified base transportation rate to which a fuel surcharge or price escalator can be applied. Generally, the rail fuel surcharge is determined by the price of on-highway diesel fuel as reported on the DOE's Energy Information Administration (EIA) website. Each of AmerenUE's UP coal transportation contracts, applicable to Labadie and Meramec, include price escalators that are tied directly to the price of US on-highway diesel fuel as reported by EIA. AmerenUE's BNSF coal transportation contracts, applicable to Rush Island and Sioux, include price escalators that are determined by the price of US on-highway diesel fuel as reported on the EIA website. These US on-highway diesel fuel prices are used to determine mileage rates that are then multiplied by the distance from the mines to the respective coal plants to determine the fuel surcharge. BNSF coal transportation contracts also state terms related to certain train size, cycle time and unloading time penalties for both Rush Island and Sioux. The Staff has included in its cost of service calculation the delivery component of coal prices that include the impact of scheduled coal base transportation price increases that will take effect January 1, 2007. These base transportation components are shown below:

	PRB Base Delivery $ /Ton
Labadie	** _____ **
Rush Island	** _____ **
Meramec	** _____ **
Sioux	** _____ **

** _____

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Again, the delivery costs associated with approximately, ** _____

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_____ ** coal as part of the pending true-up audit.

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Q. Please explain how the Staff determined the various fuel surcharge rates it included in the production cost model for each of the rail, barge and trucking transportation contracts that the Company has in place.

A. ** _____
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[redacted] **

Q. Please summarize how Staff developed the delivered price per ton of coal that was included in the Staff's production cost model.

A. To determine its recommended delivered coal price for each coal plant, the Staff calculated a weighted commodity coal cost based on the number of tons being delivered to each AmerenUE plant. To this weighted coal commodity cost, the Staff added the contract transportation rate with related surcharges per ton that will take effect through January 1, 2007. The Staff also added ** [redacted] ** Finally, the Staff added a ** [redacted] ** per ton component for railcar costs that included among other items, maintenance and repairs to railcars, inspection fees, and related coal car depreciation expense using the depreciation rates provided by Staff witness Jolie L. Mathis of the Staff's Engineering and Management Service Department. The sum of the three price components which are made up of coal commodity costs, transportation costs (base rates, fuel surcharges and all applicable penalty fees) and railcar costs added together equal the delivered price per

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ton per plant included in the Staff's fuel model. A copy of the Staff's coal fuel cost inputs to the production cost model is attached as Schedule 2 to this direct testimony.

Q. Why is depreciation expense on coal cars included with the Company's fuel prices for coal?

A. The Company accounts for the depreciation expense related to its coal cars in its fuel expense accounts. The following journal entries demonstrate how the company accounts for depreciation related to its coal cars on its books and records as the Company purchases the coal and then subsequently burns the coal as part of the generation of electricity:

DR Fuel Inventory

CR Depreciation Reserve

DR Fuel Expense

CR Fuel Inventory

This accounting treatment for coal car depreciation expense is in conformance with FERC Uniform System of Accounts (USOA) guidelines.

Q. Did the Staff develop prices to dispatch the Company's coal units?

A. Yes. I provided the contractual coal commodity prices (or mine mouth prices) by generation plant to Staff witness Proctor. Staff witness Proctor used these prices to develop coal dispatch prices to develop the economic dispatch of the coal units to generate electricity. Staff witness Proctor used his coal dispatch prices to develop a correlation to off-peak market energy prices. Please refer to the Staff witness Proctor's testimony for a full explanation of the coal dispatch prices.

Q. What natural gas and oil prices did the Staff include in its production cost model?

A. The Staff obtained an update of the gas and oil prices that the Company used in its production cost model through November 2006 in response to Staff Data Request No. 428. Based on an analysis of natural gas and oil prices performed by Staff witness Proctor, the Staff used the most recent 12 months of gas and oil prices through November 2006 to dispatch natural gas and oil fired units and also to price out the generation output as calculated by the Staff's production cost model. The Staff will continue to monitor the natural gas and oil prices as provided by the Company and make any adjustments that are necessary as part of the scheduled true-up audit. Staff witness Proctor used the natural gas prices to develop a correlation to on-peak market energy prices. Please refer to Staff witness Proctor's direct testimony in this case for a full explanation of this calculation.

Q. What prices did the Staff include for the Company's capacity purchase power contract with Entergy-Arkansas?

A. The Staff included a ** _____ ** per megawatt hour price based on actual test year purchases. The Staff's price was developed by weighting the price for each month during the test year by the actual megawatt hours that were taken each month, to develop a ** _____ ** weighted average price for the test year.

Q. What does Staff adjustment S-5.1 represent?

A. Staff adjustment S-5.1 represents its inclusion of additional revenue in order to annualize to the interchange sales revenues that were calculated by Staff witness Rahrer's production cost model. Interchange sales revenues were calculated in the production cost model by using the market energy prices that were determined by Staff witness Proctor. My

responsibility was to record this adjustment in the Staff's cost of service calculation by subtracting the Company's per book interchange revenues from the Staff's annualized interchange revenues. Please refer to Staff witness Proctor's direct testimony filed in this case for a complete explanation of market energy prices that were used in the Staff's production cost model.

Q. What do Staff adjustments S-7.1 and S-8.1 represent?

A. Staff Adjustments S-7.1 and S-8.1 annualize fuel and purchased power expenses to serve native load and to meet interchange sales, respectively. These adjustments reflect the new coal contract terms as previously discussed in this testimony as well as Staff witness Proctor's market energy prices for purchases. Please refer to Staff witness Proctor's direct testimony filed in this case for a complete explanation of market energy prices that were used in the Staff's production cost model.

FUEL INVENTORIES – RATE BASE

Q. What coal inventory level have you included in this case for AmerenUE's four coal fired plants?

A. The Staff has included a 60 day supply of coal for the Company's Labadie, Rush Island and Sioux plants based on the Staff's average daily burn for each of these generation facilities, as calculated by the production cost model. The Meramec plant has a limited storage capability which only equates to approximately a 45 day supply of coal at Meramec, based on the Staff's 10,510 ton average daily burn as calculated by the RealTime production cost model. Therefore, the Staff is recommending this approximate 45 day supply of coal, which represents the maximum level of coal that can be stored, as the appropriate inventory level for the Meramec generation facility. The Staff's coal inventory

levels included in the cost of service calculation reflect the same current coal prices that were used as inputs to the production cost model.

Q. What levels of nuclear fuel, oil, gas storage, shredded tires and petroleum coke did the Staff include in this case?

A. The Staff included the average of balances that existed for the 13 months ending June 30, 2006 for oil, gas for electric generation and petroleum coke. The Staff included the average balances that existed for the 18 months ending June 30, 2006 for nuclear fuel, as a representative ongoing level. The Staff has included a zero inventory balance for shredded tires, since the Company does not currently maintain an inventory of shredded tires.

TREATMENT FOR GAINS ON THE SALE OF SULFUR DIOXIDE (SO_2) EMISSION ALLOWANCES

Q. How does the Company record the proceeds from SO_2 emission allowance sales?

A. **

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_____

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_____ **

Q. How does the Staff propose that proceeds from emission allowances sold during the test year and in the future be treated?

A. The Staff proposes that the test year level of gains on emission allowances, totaling approximately ** _____ ** be recorded in FERC USOA Account 254, Clean Air Allowance Proceeds. The Staff further proposes that, on a going forward basis, AmerenUE record the proceeds from emission allowance transactions in Account 254. The balance of Account 254 will represent a Regulatory Liability to be used as an offset to rate base. The Staff believes that it is appropriate to use the gain on the sale of emission allowances to offset the Company's investment in emission control equipment.

Q. Please explain Staff Adjustment S-7.2.

A. ** _____

_____

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_____ **

Q. Has the Company indicated that it has any plans to invest in emission control equipment in the near future?

A. Yes. The Company has informed the Staff that it will install emission control equipment on its Sioux plant in late 2009. Sioux is the highest SO_2 emitter in the AmerenUE system because of its use of a blend of PRB and Illinois basin coal that is necessary to achieve full capacity.

Q. Is inclusion of the proceeds that result from the gains on the sale of emission allowances in a regulatory liability account consistent with the treatment approved by this Commission for other electric utilities?

A. Yes. Similar accounting treatment for gains on the sale of emission allowances was approved by this Commission for both The Empire District Electric Company as part of Case No. EO-2005-0263 and Kansas City Power & Light Company (KCPL) as part of Case No. EO-2005-0329. However, the KCPL plan calls for inclusion of the cost of SO_2 coal delivery adjustment transactions in the same regulatory liability account that is used to record the gains on the sale of emission allowances. The Staff is aware that there is an issue pending before this Commission, in Case No. ER-2006-0314, with regard to what level of SO_2 transaction costs should be included in KCPL's regulatory liability account. The Staff is not opposed to the KCPL method of including SO_2 transaction costs as part of the regulatory liability account. Based on the Commission's ruling in Case No. ER-2006-0314 and through additional discussion among all the parties to this rate case, there may need to be some modification to Staff's position with regard to this area.

CALLAWAY REFUELING

Q. Please describe the recent refueling and maintenance outage at the Company's Callaway nuclear power plant that occurred from September 19, 2005 through November 19, 2005.

A. Callaway undergoes a refueling and maintenance outage process approximately every 18 months. The refueling involves the removal of spent uranium dioxide fuel from the nuclear reactor. The used fuel is safely stored on site in a spent fuel pool housed in the Fuel Building which is located adjacent to the Reactor Building. Callaway has enough space to safely store all used fuel that accumulates at the plant until 2019. Callaway has the capability to provide additional storage capacity through 2024. Eventually, the plant will ship its used fuel to a permanent disposal facility licensed by the U.S. Nuclear Regulatory Commission. While refueling takes place, the Company typically completes numerous maintenance activities, performs inspections and testing and also completes necessary capital improvements as needed to the power plant. The Company's most recent outage involved the replacement of all four steam generators with an improved design, as well as the installation of new turbine rotors for all four turbines. In the reactor building the steam generators serve as boilers to produce the steam needed for generating electricity. The turbine rotors, powered by the steam pressure, turn a rotating coil inside the generator that is designed to produce electricity. During the most recent outage, the Company also installed major controls and displays that replaced many mechanical switches and gauges with modernized computer consoles and displays. The Staff has included in its cost of service calculations all capital improvements that were completed on the Callaway nuclear power plant as part of its plant in service calculations.

Q. Please explain Staff Adjustment S-6.5.

A. Staff adjustment S-6.5 removes approximately $7.2 million from the Staff's cost of service calculation in order to normalize expenses associated with maintenance projects pertaining to the Company's refueling of the Callaway nuclear power plant. The

Company refueled the Callaway nuclear power plant during the time period covering September 19 through November 19, 2005, which is within the Staff's test year ending June 30, 2006. The Company refuels the Callaway nuclear plant on an eighteen-month cycle. Therefore, the cost of refueling must be normalized to reflect the amount incurred during a twelve month period. This adjustment removes one third of approximately $21.5 million test year level of non-labor maintenance project costs related to the nuclear plant refueling. All labor related costs associated with the Callaway refueling are addressed in the Staff's payroll annualization and discussed in the direct testimony of Staff witness Lisa K. Hanneken.

POWER PLANT MAINTENANCE ASSOCIATED WITH THREE ACQUIRED COMBUSTION TURBINES

Q. Please identify the three combustion turbine facilities that AmerenUE acquired during the test year.

A. AmerenUE acquired Audrain Units 1-8 from NRG on March 28, 2006. AmerenUE acquired Raccoon Creek Units 1-6 and Goose Creek Units 1-6 from Aquila on March 31, 2006.

Q. Please explain Staff adjustments S-6.8 and S-17.11.

A. Staff adjustments S-6.8 and S-17.11 annualize power plant operations and maintenance (O&M) expenses and the related administrative and general (A&G) expenses, respectively, for all three recently acquired combustion turbine facilities. The Staff obtained actual O&M and A&G expenses for each of these plants for the period covering April 1, 2006 through October 31, 2006 and used these actual expense levels to develop a representative monthly expense level that was used to annualize costs for the five months

where actual costs were not available. The Staff subtracted actual test year expenses from its annualized expense levels to complete its adjustments. The Staff will continue to monitor actual O&M costs for each plant as the information becomes available through December 31, 2006, one day before the end of the true-up period, and make any necessary changes to its adjustment based on the additional available information.

ENVIRONMENTAL EXPENSE

Q. Please explain how the Company accounts for environmental expense.

A. Using an accrual basis of accounting, the Company maintains a reserve, which is accumulated to pay for environmental costs related to the clean-up of contaminated sites. The Company maintains environmental reserve balances for estimated environmental costs that relate to both gas and electric operations. The following example demonstrates journal entries that the Company records when accruing and then subsequently paying for environmental expense:

Set up of Reserve

DR Administrative and General – Miscellaneous

CR Reserve for Clean-up of Contaminated Facilities

Payment

DR Reserve for Clean-up of Contaminated Facilities

CR Cash or Accounts Payable

Q. How did the Company account for environmental expense during the test year ending June 30, 2006 for it electric operations?

A. During the test year, the Company accrued ** _____ ** for electric operations related environmental expenses. During the same timeframe, the Company

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incurred actual non-labor related electric operations related environmental expense totaling ** _____ **. At June 30, 2006, the Company maintained an accrued environmental reserve balance of ** _____ ** related to its electric operations. This environmental reserve balance represents the amount of accrued environmental expenses in excess of what the Company has actually incurred.

Q. Were there any test year environmental expenses that related to work that was actually performed prior to the test year and likewise, were there any payments made subsequent to the test year that related to environmental costs that were actually incurred during the test year?

A. Yes. In the response to Staff Data Request No. 285, the Company identified actual payments for electric environmental work that was performed prior to the test year but were paid during the test year, as well as any payments that were made subsequent to the test year for work performed during the test year. The adjusted test year levels of actual payments for environmental expenses to reflect these out of period adjustment are shown below:

	UE-Electric
Test Year Actual Payments Incurred	** _____ **
Less: Payments during test year for work performed prior to test year	** _____ **
Plus: Payments subsequent to test year for work performed during the test year	** _____ **
Staff adjusted environmental expenses actually paid during the test year	** _____ **

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Q. Please explain the Staff adjustment S-17.9 to the Company's electric related environmental expenses.

A. The Staff included in its electric cost of service calculation the out of period adjusted test year level of ** _____ ** which represents actual non-labor related environmental expenses that the Company incurred during the twelve months ending June 30, 2006 as a representative ongoing level of total electric environmental expense. The calculation for the Staff's adjustment is shown below:

Electric Operations:

Actual Electric Environmental Expense Incurred	** _____ **
Less: Company Accrued Per Book Environmental Expense	**_____**
Staff's Environmental Adjustment S-17.9 – Electric Operations	$(1,369,110)

Staff Adjustment S-17.9 removes $1,369,110 of excess electric related environmental expense accruals that were made by the Company during the test year, in order to treat environmental expenses under a cash basis approach.

Q. How does the Company explain its use of the accrual basis of accounting to address its future environmental expenses?

A. The Company believes that it needs to make accruals now for future environmental costs. The Company books its environmental reserve within a minimum and maximum liability, as required by Statement of Financial Accounting Standard No. 5 and Financial Accounting Standards Board Interpretation No. 14. Ameren periodically evaluates the minimum and maximum environmental liability and adjusts the reserves accordingly. The amount recorded as a liability is not dependent upon when the cash will be required to

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settle such obligations. For ratemaking purposes, the Staff believes this is unreasonable because the actual timing and the amount of these expenditures are largely unknown.

Q. Why does the Staff recommend a cash basis approach for the Company's environmental expenses?

A. The Staff recommends using a cash basis approach to account for the Company's environmental expenses in order to eliminate the impact of the $1,369,110 of excess electric accrual from its electric cost of service calculations. If included in rates, this over-accrual would force customers to pay unnecessarily for activities that are not actually being performed. The cash basis approach proposed by the Staff will provide a determination of rates based on actual known and measurable costs on a going forward basis, as opposed to the Company's accrual basis, which relies upon an estimate of what actual future payments and costs may be.

Q. Does this conclude your direct testimony?

A. Yes, it does.

RATE CASE PROCEEDING PARTICIPATION

JOHN P. CASSIDY

COMPANY	**CASE NO.**
Missouri Cities Water Company	**WR-91-172**
Payroll and Related Pensions OPEBS General Insurance Expense Advertising Expense Miscellaneous Expenses	
Type of Testimony Filed: Direct and Surrebuttal	
St. Louis County Water Company	**WR-91-361**
Tank Painting Main Failures Residue Removal General Insurance Expense PSC Assessment Miscellaneous Expenses	
Type of Testimony Filed: Direct	
Southwestern Bell Telephone Company	**TC-93-224**
Advertising Expenses Promotional Giveaways Miscellaneous Expenses	
Type of Testimony Filed: Direct and Surrebuttal	

COMPANY	CASE NO.
Laclede Gas Company	**GR-94-220**
Payroll and Payroll Taxes Incentive Compensation 401 (K) Dental and Vision Insurance Data Processing	
Type of Testimony Filed: Direct	
The Empire District Electric Company	**ER-95-279**
Revenues Uncollectibles Expense Municipal Franchise Taxes Postage Expense Emission Credits	
Type of Testimony Filed: Direct	
Imperial Utility Corporation	**SC-96-247**
Rate Base Depreciation Reserve Depreciation Expense CIAC Property Taxes Property Insurance Lab Testing Expense Sludge Removal Expense	
Type of Testimony Filed: Rebuttal	
St. Louis County Water Company	**WR-97-382**
Payroll and Payroll Taxes Employee Benefits Employee Savings Shared Employees	
Type of Testimony Filed: Direct	

COMPANY	CASE NO.
Laclede Gas Company	**GR-98-374**
Payroll and Payroll Taxes 401 (K) Health Care Costs Pension Plan Director's Pension Plan Trustee Fees SERP Outside Consulting Incentive Compensation Advertising Expense	
Type of Testimony Filed: Direct	
United Water Missouri, Inc.	**WR-99-326**
Payroll and Payroll Taxes 401 (K) Health Care Costs Employee Relocation Corporation Franchise Tax Advertising Expense Dues and Donations Miscellaneous Expenses	
Type of Testimony Filed: Direct	
Union Electric Company	**EC-2000-795**
Injuries and Damages Legal Expense Environmental Expense	
Type of Testimony Filed: Direct	
Union Electric Company	**GR-2000-512**
Revenues Uncollectibles Expense Customer Deposits	
Type of Testimony Filed: Direct	

COMPANY	CASE NO.
Laclede Gas Company	**GR-2001-629**

Revenues
Gross Receipts Tax
Gas Supply Incentive Plan
Gas Costs
Uncollectibles Expense
Non-Utility Operations

Type of Testimony Filed: Direct

Union Electric Company, d/b/a AmerenUE	**EC-2002-01**

Fuel Expense
Callaway Refueling
Legal Expense
Environmental Expense
Capacity Purchases
Midwest ISO
Payroll and Related
Incremental Overtime

Type of Testimony Filed: Direct and Surrebuttal

Union Electric Company, d/b/a AmerenUE	**EC-2002-1025**

Legal Expense
Environmental Expense
Midwest ISO

Type of Testimony Filed: Direct

Laclede Gas Company	**GR-2002-356**

Revenues
Gross Receipts Tax
Gas Supply Incentive Plan
Gas Costs
Uncollectibles Expense
Income Taxes

Type of Testimony Filed: Direct

COMPANY	CASE NO.
Laclede Gas Company	**GT-2003-0117**

Financial Aspects

Type of Testimony Filed: Direct

Missouri-American Water Company	**WR-2003-0500 & WC-2004-0168**

Allocation of Belleville Labs Cost to MAWC
National Call Center
Compensation for Services Provided from MAWC to AWR
Information Technology Services
Capitalization of Shared Services
Transition Costs
Cost Allocation Manual
Affiliate Transactions
Severance Costs
National Call Center Transition Costs
National Shared Services Transition Costs

Type of Testimony Filed: Direct & Surrebuttal

Missouri-American Water Company	**SM-2004-0275**

Acquisition Adjustment

Type of Testimony Filed: Direct

The Empire District Electric Company	**ER-2004-0572**

Interim Energy Charge
Fuel Expense
Purchased Power
Off System Sales
KCPL Transmission Expense
Income Taxes

Type of Testimony Filed: Direct & Surrebuttal

SCHEDULE 2

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY