Exhibit No.:
Issues: Fuel Expense and Fuel Inventory
Witness: Cary G. Featherstone
Sponsoring Party: MoPSC Staff
Type of Exhibit: Direct Testimony
Case Nos.: EO-97-144andEC-97-362

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

CARY G. FEATHERSTONE

MISSOURI PUBLIC SERVICE, A DIVISION OF UTILICORP UNITED, INC.

CASE NOS. EO-97-144 AND EC-97-362

Jefferson City, Missouri
March 1997

DIRECT TESTIMONY

OF

CARY G. FEATHERSTONE

MISSOURI PUBLIC SERVICE

A DIVISION OF UTILICORP UNITED, INC.

CASE NOS. EO-97-144 & EC-97-362

Q. Please state your name and business address.

A. Cary G. Featherstone, 3675 Noland Road, Suite 110, Independence, Missouri.

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

A. I am a Regulatory Auditor with the Missouri Public Service Commission (Commission).

Q. Please describe your educational background.

A. I graduated from the University of Missouri at Kansas City in December 1978 with a Bachelor of Arts degree in Economics. My course work included significant study in the field of Accounting.

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

A. I have assisted, conducted and supervised audits and examinations of the books and records of public utility companies operating within the State of Missouri. I have participated in examinations of electric, industrial steam, natural gas, water and sewer and telecommunication companies. I have been involved in cases concerning proposed rate increases, earnings investigations and complaint cases as well as cases relating to mergers and acquisitions and certification cases.

Q. Have you previously filed testimony before this Commission?

A. Yes, I have. Schedule 1 to this testimony is a summary of rate cases in which I have submitted testimony. In addition, Schedule 1 also identifies cases which I have participated in regarding several audits of public utilities which I directly supervised and assisted in the audit, but I did not file prefile testimony.

Q. With reference to Case Nos. EO-97-144 and EC-97-362, have you made an examination and study of the books and records of UtiliCorp United, Inc. (UtiliCorp) and its division, Missouri Public Service?

A. Yes, with the assistance of other members of the Commission Staff (Staff).

Q. Does UtiliCorp currently operate within the State of Missouri?

A. Yes. UtiliCorp operates an electric generation, transmission and distribution system in the State of Missouri as Missouri Public Service (MPS or Company). MPS also operates a local natural gas distribution system in Missouri. UtiliCorp provides retail and wholesale electricity and natural gas to several other states, as well Canada, United Kingdom, New Zealand and Australia.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to identify the level of fuel expense and fuel inventories in the Staff's revenue requirement.

Q. What caused this testimony to be filed in this case?

A. On March 3, 1996, Staff filed a complaint case alleging that UtiliCorp's MPS division was overearning by approximately $23 million. For further explanation of the reasons for this complaint case, please see the direct testimony of Staff Witness Steve M. Traxler (page 3).

Q. What Accounting adjustments are you sponsoring in Case Nos. EO-97-144 and EC-97-362?

A. I am sponsoring the following adjustments to the Income Statement:

Steam Power Production- Fuel Annualization	S-2.1
- Purchase Power	S-3.1
Purchase Power - Contracted Demand Charge Annualization	S-4.1

FUEL AND PURCHASE POWER EXPENSE

Q. What was your responsibility in this case with regard to the determination of the cost of fuel and purchase power?

A. My responsibilities were to determine MPS's current prices for coal, natural gas and No. 2 oil burned in MPS's generating facilities and to determine the annual level of contract demand charges relating to various system participation power contracts.

Q. Please describe Adjustments S-2.1 and S-3.1.

A. These adjustments reflect the annualization of fuel expense and purchase power. They take into consideration the results of the production cost model, as well as other fuel related costs, to bring the test year fuel expense to an annualized level consistent with the test year used in Staff's complaint case. Adjustment S-2.1 reflects the annualization of fuel expense. Adjustment S-3.1 reflects the annualization of purchase power expense.

Q. What is the test year Staff utilized for this complaint filing?

A. The test year is the twelve months ending December 31, 1995 updated through June 30, 1996.

Q. How were the fuel prices utilized in determining Staff's total annualized fuel and purchased power expense?

A. Staff witness Leon C. Bender of the Energy-Engineering Department used these prices in the REAL TIME production cost model to compute the level of normalized net system fuel and purchased power expense, exclusive of purchased power demand charges. The costs associated with purchased power demand charges were subsequently added to the production cost model results. Also, leasing costs for unit trains were added to the model's results. Other costs such as fuel handling and freeze-proofing were also added to the production cost model's results to arrive at an overall total annualized level of fuel and purchase power expenses. The REAL TIME production cost model will be discussed in greater detail by Staff witness Bender in his direct testimony.

Q. What plants comprise the Company's generating facilities?

A. UtiliCorp owns or co-owns the following generating plants:

Jeffrey Energy Center-- Units 1,2 and 3 (8% ownership share)
Sibley Units 1, 2 and 3
Greenwood
Nevada
Ralph Green
KCI

Q. Please describe each plant, including the type of units at each plant and the primary and secondary fuel sources for each.

A. The Jeffrey Energy Center (Jeffrey) is jointly owned by Western Resources Inc. (Western Resources) and UtiliCorp, with UtiliCorp's ownership share being 8%. Western Resources is the operating partner of the three generating units at Jeffrey. Each of the Jeffrey units is a base-load steam unit utilizing coal as the primary fuel and No. 2 oil for start-ups and flame stabilization. The first unit at Jeffrey went into service in 1978 and the last unit went into commercial operation in 1983.

The Sibley generating station consists of three base-load steam units, which burn coal as the primary fuel and propane for start-ups and flame stabilization. The first unit went into commercial operation in 1960 and the last unit went into service in 1969.

The Greenwood plant consists of four gas turbines, the first of which went into service in 1975 and the last went into commercial operation in 1979. This facility was recently converted from oil to natural gas as its primary fuel. Oil continues to be used as an emergency backup fuel.

The Nevada generating facility which consists of one oil fired turbine went into service in 1974.

The Ralph Green plant went into commercial operation in 1981 and consists of one gas turbine unit.

The KCI plant was purchased by UtiliCorp in 1977 and consists of two gas turbine units.

Q. Were the coal prices the same for each plant?

A. No. The coal price for each plant is different because the plants do not use the same coal, do not incur the same delivery/transportation costs and have different fuel handling and unit train (lease) costs.

Q. How were the fuel prices determined?

A. The fuel prices were based on contractual coal and freight costs on a per tonage basis up through June 30, 1996. The total fuel price includes the coal cost plus freight costs for each coal-fired generating unit. A blended coal price was utilized for all of the Sibley units because different coal suppliers provide coal for these units. Also, a blended coal price was used for the Jeffrey units because the coal prices are based on a tonage basis. The freight rates for each coal supplier were used on the basis of contracts in effect as of June 30, 1996 to determine the total coal and freight costs for each coal generating unit. These costs will continue to be reviewed throughout this complaint case proceeding to determine if any updating of these prices is necessary.

Q. Were there additional costs added to fuel expense?

A. Yes. These costs include amounts for fuel handling and other related costs.

Q. How were the additional costs developed that were added to fuel expense?

A. The costs added to the fuel level (energy amount) were based on the actual expenses for calendar year 1995. An amount for fuel handling, propane and other related costs was determined for Jeffrey and Sibley and added to the fuel expense for each of these plants to develop the overall fuel expense levels. These amounts were included in the total energy costs which were included in Staff's cost of service calculation.

Q. How were the actual gas and oil prices determined?

A. The prices for natural gas were based on the months of February through June 1996. Since the gas prices were higher during that period than during 1995, Staff used this period to be conservative for the Staff's complaint case filing. The oil prices were based on the purchases of oil which occurred during the first half of 1996. These costs will continue to be reviewed throughout this complaint case proceeding to determine if any updating of these prices is necessary.

<u>SYSTEM PARTICIPATION CONTRACTED DEMAND CHARGES</u>

Q. Please describe the various system participation contracts that MPS had in place during the test year.

A. MPS has contracts with Union Electric Company (Union Electric) and Associated Electric Cooperative, Inc. (AEC) to provide power that MPS needs to meet its load requirements. Also MPS had a demand contract with West Plains Energy for the period June 1 through November 30, 1996.

Q. Did the Staff determine a demand charge associated with the Union Electric and AEC contracts?

A. Yes. The demand charge is based upon the total capacity that MPS reserves for each year. MPS's contract year for both Union Electric and AEC runs from June 1 to May 31. The Staff reviewed the contract rate for the period June 1, 1995 through May 31, 1996 for MPS's capacity agreements with Union Electric and AEC. Generally, the annualization is based on using the contract amounts applied to the kw per month of the respective contracts. However, in this instance, the December 1996 amount was annualized so as to provide a conservative estimate for demand charges because this amount was greater then the contract amounts identified in responses to Staff data requests. Currently, Staff has data requests outstanding which, once MPS supplies responses, will be used to update the demand costs for capacity purchases.

Q. How are the contract demand charges reflected in the Staff's case?

A. Adjustment S-4.1 represents the Staff's adjustment to decrease the contract demand charges. The annualized demand charge was added to the results of the production cost model to determine the total annualized level of fuel and purchased power expense. As stated previously, this amount is added separately because the REAL TIME production cost model only accounts for energy charges.

FUEL INVENTORIES

Q. What was your responsibility in this case with regard to the determination of fuel inventory levels?

A. My responsibility was to determine an estimate of an appropriate level of inventories for coal and oil maintained at UtiliCorp's generating facilities. UtiliCorp maintains coal and oil inventories for the Jeffrey units and oil inventories at the Nevada and Greenwood facilities. Also, UtiliCorp maintains coal inventories at the Sibley facilities.

Q. What inventory levels has the Staff included in this case for UtiliCorp's generating facilities?

A. A 13-month average has been used as an estimate for both coal and oil inventories for purposes of this complaint case. The Staff intends to update its case with more current information, including identifying the inventory policies of MPS so as to determine the proper level of inventory to be included in rates on an on-going basis.

Q. Has the Staff requested that MPS identify the inventory policies which it uses to determine the level of coal and oil inventories that it maintains at each of its generating facilities?

A. Yes. Staff requested this information from MPS by Data Request No. 1219, but has not received a response to this request at the time of this filing. Once this information is received, Staff will evaluate MPS's inventory policy and will update the inventory levels, if necessary.

Q. Have there been any changes to the operating characteristics of MPS's electric system?

A. Yes. Greenwood has been converted to burn both oil and natural gas. Prior to this conversion this generating facility only could burn oil.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the Earnings Review of UtiliCorp United Inc., d/b/a Missouri Public Service.	)))	Case No. EO-97-144
and		
The Staff of the Missouri Public Service Commission, Complainant, v. UtiliCorp United, Inc., d/b/a Missouri Public Service Respondent.	)))))))))	Case No. EC-97-362

AFFIDAVIT OF CARY G. FEATHERSTONE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Cary G. Featherstone, 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 9 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.

Cary G. Featherstone

CARY G. FEATHERSTONE

Subscribed and sworn to before me this 27th day of March, 1997.

Roberta A. McKiddy

Notary Public

My Commission Expires: ROBERTA A. McKIDDY
~~Notary Public, State of~~ Missouri
County of Cole
My Commission Expires 09/11/99

Cary G. Featherstone

SUMMARY OF RATE CASE INVOLVEMENT

Year	Case No.	Utility	Type of Testimony	
1980	Case No. ER-80-53	St. Joseph Light & Power Company (electric)	Direct	Stipulated
1980	Case No. OR-80-54	St. Joseph Light & Power Company (transit)	Direct	Stipulated
1980	Case No. HR-80-55	St. Joseph Light & Power Company (industrial steam)	Direct	Stipulated
1980	Case No. GR-80-173	The Gas Service Company (natural gas)	Direct	Stipulated
1980	Case No. GR-80-249	Rich Hill-Hume Gas Company (natural gas)	No Testimony filed	Stipulated
1980	Case No. TR-80-235	United Telephone Company of Missouri (telephone)	Direct Rebuttal	Contested
1981	Case No. ER-81-42	Kansas City Power & Light Company (electric)	Direct Rebuttal	Contested
1981	Case No. TR-81-208	Southwestern Bell Telephone Company (telephone)	Direct Rebuttal Surrebuttal	Contested
1981	Case No. TR-81-302	United Telephone Company of Missouri (telephone)	Direct	Stipulated
1981	Case No. TO-82-3	Investigation of Equal Life Group and Remaining Life Depreciation Rates (telephone-- depreciation case)	Direct	Contested
1982	Case Nos. ER-82-66 and HR-82-67	Kansas City Power & Light Company (electric & district steam heating)	Direct Rebuttal Surrebuttal	Contested
1982	Case No. TR-82-199	Southwestern Bell Telephone Company (telephone)	Direct	Contested
1983	Case No. EO-83-9	Investigation and Audit of Forecasted Fuel Expense of Kansas City Power & Light Company (electric-- forecasted fuel true-up)	Direct	Contested
1983	Case No. ER-83-49	Kansas City Power & Light Company (electric)	Direct Rebuttal Surrebuttal	Contested

Year	Case No.	Utility	Type of Testimony	
1983	Case No. TR-83-253	Southwestern Bell Telephone Company (telephone)	Direct	Contested
1984	Case No. EO-84-4	Investigation and Audit of Forecasted Fuel Expense of Kansas City Power & Light Company (electric-- forecasted fuel true-up)	Direct	Contested
1985	Case Nos. ER-85-128 and EO-85-185	Kansas City Power & Light Company (electric)	Direct	Contested
1987	Case No. HO-86-139	Kansas City Power & Light Company (district steam heating-- discontinuance of public utility)	Direct Rebuttal Surrebuttal	Contested
1988	Case No. TC-89-14	Southwestern Bell Telephone Company (telephone-- complaint case)	Direct Surrebuttal	Contested
1989	Case No. TR-89-182	GTE North, Incorporated (telephone)	Direct Rebuttal Surrebuttal	Contested
1990	Case No. GR-90-50	Kansas Power & Light - Gas Service Division (natural gas)	Direct	Stipulated
1990	Case No. ER-90-101	UtiliCorp United Inc., Missouri Public Service Division (electric)	Direct Surrebuttal	Contested
1990	Case No. GR-90-198	UtiliCorp United, Inc., Missouri Public Service Division (natural gas)	Direct	Stipulated
1990	Case No. GR-90-152	Associated Natural Gas Company (natural gas)	Rebuttal	Stipulated
1991	Case No. EM-91-213	Kansas Power & Light - Gas Service Division (natural gas-- acquisition/merger case)	Rebuttal	Contested
1991	Case Nos. EO-91-358 and EO-91-360	UtiliCorp United Inc., Missouri Public Service Division (electric-- accounting authority orders)	Rebuttal	Contested
1991	Case No. GO-91-359	UtiliCorp United Inc., Missouri Public Service Division (natural gas)	Memorandum Recommendation	Stipulated

Year	Case No.	Utility	Type of Testimony	
1993	Case Nos. TC-93-224 and TO-93-192	Southwestern Bell Telephone Company (telephone-- complaint case)	Direct Rebuttal Surrebuttal	Contested
1993	Case No. TR-93-181	United Telephone Company of Missouri (telephone)	Direct Surrebuttal	Contested
1993	Case No. GM-94-40	Western Resources, Inc. and Southern Union Company (natural gas-- sale of Missouri property)	Rebuttal	Stipulated
1994	Case No. GM-94-252	UtiliCorp United Inc., acquisition of Missouri Gas Company and Missouri Pipeline Company (natural gas-- acquisition case)	Rebuttal	Contested
1994	Case No. GA-94-325	UtiliCorp United Inc., expansion of natural gas to City of Rolla, MO (natural gas-- certificate case)	Rebuttal	Contested
1995	Case No. GR-95-160	United Cities Gas Company (natural gas)	Direct	Contested
1995	Case No. ER-95-279	Empire District Electric Company (electric)	Direct	Stipulated
1996	Case No. GA-96-130	UtiliCorp United, Inc./Missouri Pipeline Company (natural gas-- certificate case)	Rebuttal	Contested
1996	Case No. EM-96-149	Union Electric Company merger with CIPSCO Incorporated (electric and natural gas-- acquisition/merger case)	Rebuttal	Stipulated -
1996	Case No. GR-96-285	Missouri Gas Energy Division of Southern Union Company (natural gas)	Direct Rebuttal Surrebuttal	Contested
1996	Case No. ER-97-82	Empire District Electric Company (electric-- interim rate case)	Rebuttal	Contested
1997	Case No. EO-97-144	UtiliCorp/Missouri Public Service Company	Verified Statement	Commission Denied Motion
1997	Case No. GA-97-132	UtiliCorp/Missouri Public Service Company (natural gas-- certificate case)	Rebuttal	Contested Pending
1997	Case Nos. GA-97-133	Missouri Gas Company (natural gas-- certificate case)	Rebuttal	Contested Pending

AUDITS WHICH WERE SUPERVISED AND ASSISTED:

Year	Case No.	Utility
1986	Case No. TR-86-14 (telephone)	ALLTEL Missouri, Inc.
1986	Case No. TR-86-55 (telephone)	Continental Telephone Company of Missouri
1986	Case No. TR-86-63 (telephone)	Webster County Telephone Company
1986	Case No. GR-86-76 (natural gas)	KPL-Gas Service Company
1986	Case No. TR-86-117 (telephone)	United Telephone Company of Missouri
1988	Case No. GR-88-115 (natural gas)	St. Joseph Light & Power Company
1988	Case No. HR-88-116 (industrial steam)	St. Joseph Light & Power Company