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Witness: V. William Harris
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

V. WILLIAM HARRIS

FILED³
DEC 6 2001

Missouri Public
Service Commission

UTILICORP UNITED INC.
d/b/a MISSOURI PUBLIC SERVICE

CASE NO. ER-2001-672

Jefferson City, Missouri
December 2001

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V. WILLIAM HARRIS, CPA, CIA

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DIRECT TESTIMONY
OF
V. WILLIAM HARRIS, CPA, CIA
UTILICORP UNITED INC
d/b/a MISSOURI PUBLIC SERVICE
CASE NO. ER-2001-672

Q. Please state your name and business address.

A. V. William Harris, Noland Plaza Office Building, Suite 110, 3675 Noland Road, Independence, Missouri 64055.

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

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

Q. Please describe your educational background.

A. I graduated from Missouri Western State College at St. Joseph, Missouri in 1990, with a Bachelor of Science degree in Business Administration with a major in Accounting. I successfully completed the Uniform Certified Public Accountant (CPA) examination in 1991 and subsequently received the CPA certificate. I am currently licensed as a CPA in the state of Missouri. I also successfully completed the Uniform Certified Internal Auditor (CIA) examination in 1995 and am currently certified as a CIA by the Institute of Internal Auditors in Altamonte Springs, Florida.

Q. Please describe your employment history.

A. From 1991 until I assumed my current position as a Regulatory Auditor with the Commission in 1994, I was employed as a Regulatory Auditor with the Federal Energy Regulatory Commission in Washington, DC. Prior to that, I was an

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1 Internal Auditor and Training Supervisor with Volume Shoe Corporation (d/b/a Payless
2 ShoeSource).

3 Q. What are your responsibilities with the Commission?

4 A. I am responsible for directing or assisting in the audits and examinations
5 of the books and records of regulated utility companies operating within the state of
6 Missouri.

7 Q. Have you previously filed testimony before this Commission?

8 A. Yes. I have attached a list of the cases in which I have filed testimony
9 before this Commission as Schedule 1 of my direct testimony.

10 Q. With reference to Case No. ER-2001-672, have you examined and studied
11 the books and records of UtiliCorp United Inc. (UtiliCorp) and its Missouri Public
12 Service (MPS or Company) and St. Joseph Light and Power (SJLP) operating divisions?

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

15 Q. Does UtiliCorp currently operate within the state of Missouri?

16 A. Yes. UtiliCorp operates electric generation, transmission and distribution
17 systems in the state of Missouri as MPS and SJLP. MPS provides electricity on a retail
18 and wholesale basis, and also operates a local natural gas distribution system in Missouri.
19 UtiliCorp provides retail and wholesale electricity and natural gas to several other states,
20 as well Canada, United Kingdom, New Zealand and Australia.

21 Q. What is the purpose of your direct testimony in this proceeding?

22 A. The purpose of my direct testimony in this proceeding is to present the
23 Staff's recommendations concerning the Company's fuel expense and purchased power
24 demand cost.

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1 Q. What adjustments are you sponsoring in Case No. ER-2001-672?

2 A. I am sponsoring the following Adjustments to the Income Statement in
3 Accounting Schedule 10:

4 Steam Power Production - Fuel Annualization S-14.4

5 Combustion Turbine Production - Fuel Annualization S-26.1

6 Purchased Power Energy Annualization S-34.1

7 Known and measurable decrease in Sibley 3 outage option S-37.7

8 Q. Please describe adjustments S-14.4, S-26.1, S-34.1 and S-37.7.

9 A. These items reflect the Staff's fuel and related expense adjustments to the
10 Staff test year. I will provide a more detailed discussion of these adjustments later in my
11 direct testimony.

12 **OVERVIEW OF ELECTRIC GENERATION**

13 Q. What generating facilities does the Company own and use for the
14 production of electric power?

15 A. UtiliCorp/MPS owns or co-owns the following generating facilities:

16 Jeffrey Energy Center--Units 1, 2 and 3 (8% ownership share)

17 Sibley Units 1, 2 and 3 (100%)

18 Greenwood 1, 2, 3 and 4 (100%)

19 Nevada (100%)

20 Ralph Green (100%)

21 KCI (100%)

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

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

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

11 The Greenwood plant consists of four gas turbines, the first of which went
12 into service in 1975 and the last went into commercial operation in 1979. In 1996, this
13 facility was converted from oil to natural gas as its primary fuel. Oil continues to be used
14 as an emergency backup fuel.

15 The Nevada generating facility, which consists of one oil-fired turbine
16 used for peaking purposes, went into service in 1974.

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

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

21 Q. How are quantities expressed for the various types of fuels?

22 A. Coal is purchased in tons; natural gas is purchased in decatherms (Dtms);
23 fuel oil is purchased in either gallons or barrels (there are 42 gallons in a barrel). The
24 actual quantities purchased for coal and natural gas are converted into a BTU content for

1 purposes of calculating the cost of the purchase. Fuel oil is generally priced on a per
2 gallon or per barrel basis rather than on the basis of BTU content.

3 Q. What is the meaning of BTU content?

4 A. BTU stands for "British Thermal Unit." MBTU stands for one thousand
5 BTU and MMBTU stands for a thousand-thousand (or a million) BTU. The BTU content
6 of a fuel indicates the heating quality of the fuel when it is burned. By converting the
7 individual fuel units to MMBTU, all of the fuels used in each of MPS' generating
8 facilities will be on a "common" basis in regard to heat or energy content

9 **FUEL AND PURCHASED POWER EXPENSE**

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

12 A. My responsibilities were to determine the current prices for coal, natural
13 gas and No. 2 oil burned in the Company's generating facilities and to determine the
14 annual level of contracted demand charges relating to various system participation power
15 contracts. I provided MPS and SJLP fuel prices to Staff witness David Elliott (of the
16 Engineering Section of the Energy Department) for input into the RealTimeTM production
17 cost model (production cost model or fuel model) because the Staff is modeling fuel in
18 this case on a joint dispatch basis. The Staff used the fuel model to calculate a portion of
19 its annualized fuel and purchased power expense.

20 Q. Why did you determine fuel prices for both of UtiliCorp's Missouri
21 divisions?

22 A. UtiliCorp is currently joint dispatching MPS and SJLP generating units.

23 Q. How did you examine the fuel prices in this case?

1 A. I reviewed the coal and freight contracts and the natural gas contracts,
2 including transportation and capacity agreements. The Staff performed numerous
3 analyses of actual historical information regarding the operations of the individual
4 generating units. The analyses included fuel burns by unit, MMBTUs consumed, and the
5 number, length and type of outages. The Staff also reviewed the purchases of power
6 from other utilities over several years and, where warranted, the Staff made additional
7 inquiries on the fluctuations of certain prices.

8 Q. How did the Staff use fuel prices in determining the total annualized fuel
9 and purchased power expense?

10 A. Staff witness Elliott used these prices in the production cost model to
11 compute the level of normalized net system fuel and purchased power expense, exclusive
12 of purchased power demand charges, cost of off-system sales (sales to other electric
13 utilities) and cost of energy exchanged. I subsequently added the costs associated with
14 purchased power demand charges, off-system sales and energy exchanged to the
15 production cost model results. I also added the following costs to the production cost
16 model's results to arrive at an overall total annualized level of fuel and purchased power
17 expense:

- 18 • maintenance and leasing costs for unit trains
- 19 • maintenance costs for railroad spur
- 20 • gas transportation costs
- 21 • non-labor fuel handling costs
- 22 • cost of SO² allowances

23 The RealTimeTM production cost model will be discussed in greater detail
24 by Staff witness Elliott in his direct testimony. Labor costs related to fuel handling will

1 be addressed in Staff witness Graham A. Vesely's payroll annualization. Property taxes
2 related to unit trains will be addressed in Staff witness Amanda C. McMellen's property
3 tax annualization.

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

5 A. The costs added to the fuel model result (energy amount) were based on
6 the actual expenses for calendar year 2000. The 2000 calendar year was used for fuel
7 additive costs instead of June 30, 2001 levels because these costs are generally less
8 material than the coal and freight costs and because a relationship could be developed
9 based on actual 2000 fuel additive costs that could be applied to tonnages generated
10 based on the fuel model results. A dollar amount for fuel handling and other related costs
11 was determined for the Jeffrey and Sibley generating facilities and added to the fuel
12 expense for each of these power plants, as calculated by the fuel model, to develop the
13 overall fuel expense levels. These amounts were included in the total energy costs,
14 which were included in Staff's cost of service (revenue requirement) calculation.

15 **FUEL PRICES**

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

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

20 Q. How were the fuel prices for coal determined?

21 A. The fuel prices were based on contractual coal and freight costs on a per
22 ton basis through June 30, 2001. The total fuel price includes the coal cost plus freight
23 costs for each coal-fired generating unit. A blended coal price was used for all of the
24 Sibley units because different coal suppliers provide coal for these units. Also, a blended

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1 coal price was used for the Jeffrey units because the coal prices are developed using a
2 two-tier pricing approach on a tonnage basis. The freight rates for each coal supplier
3 were determined on the basis of contracts in effect as of June 30, 2001 to determine the
4 total coal and freight costs for each coal-fired generating unit.

5 Q. Have fuel prices changed since June 30, 2001?

6 A. Yes. Effective July 1, 2001, fuel prices changed for MPS' coal suppliers
7 and freight carriers. Each coal and freight contract has a provision, which allows semi-
8 annual price changes on a tonnage basis. The fuel prices used in this case reflect the
9 July 1, 2001 price changes for coal and freight. Staff is performing a true-up in this case
10 through January 31, 2002. I will determine if any further changes to fuel prices will be
11 necessary and will reflect such price changes as appropriate.

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

13 A. The prices for natural gas and fuel oil were based on actual prices incurred
14 during the four-year period from July 1, 1997 through June 30, 2001. The Staff used the
15 four-year period to reflect actual prices incurred since the true-up period of MPS's latest
16 rate proceeding in Case No. ER-97-394. Because the prices fluctuated significantly
17 (upward and downward) the Staff used a four-year average to be reflective of all prices,
18 both high and low. These costs will continue to be reviewed throughout this proceeding
19 to determine if any updating of these prices is appropriate. Staff will perform a true-up
20 through January 31, 2002 and will consider fuel prices through that period.

21 MPS burns No. 2 fuel oil as a primary fuel at its Nevada facility. All other
22 No. 2 fuel oil burned by MPS is as an emergency fuel or for start-ups/flame stabilization.

23 Q. What monthly natural gas prices did the Staff use in developing its total
24 fuel cost for each plant?

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1 A. I examined the gas invoices, the monthly prices, and the weighted average
2 price by plant and combined composite price from July 1997 to June 2001 to determine if
3 any trends existed. Since MPS also filed rate cases in 1993 and 1997, the Staff updated
4 its similar analyses from those cases enabling the Staff to have information on gas prices
5 dating back to January 1986. The analyses performed by the Staff indicated that natural
6 gas prices are very volatile. Accordingly, the Staff believes that the use of a four-year
7 average gas price for each month (i.e., [May 1998+May 1999+May 2000+May 2001]/4)
8 is necessary to smooth out these fluctuations. I developed an average commodity price in
9 dollars per MMBTU for the four years ended June 30, 2001 by month. The average
10 commodity price includes the average actual prices paid for gas at all of MPS's
11 generating units during the entire year, including high peak gas demand in the winter as
12 well as summer months.

13 The delivered price of natural gas includes the commodity costs of the
14 natural gas itself and any transportation charges required to move the natural gas from the
15 supply and production side to the delivery point of each generating station. MPS has firm
16 transportation capacity reserved on the natural gas pipelines and must pay a firm price
17 each month, regardless of usage. This firm price was included in the overall prices I
18 examined, but is not included in the average prices I gave to Staff witness Elliott to be
19 input for the Staff's fuel model. Instead I added them to the fuel model's outputs to
20 determine fuel expense in this case.

21 Q. Has any other Staff witness filed direct testimony on natural gas prices?

22 A. Yes. Please refer to the direct testimony of Staff witness Kwang Choe of
23 the Procurement Analysis Department.

DEMAND CHARGES – CAPACITY CONTRACTS

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

A. Because of MPS's increasing system demand and the lack of available sources for increased Company generation, MPS has contracted with several companies in recent years to obtain the additional power needed to meet its load requirements.

During the test year MPS had capacity contracts (as previously noted, also referred to as demand contracts) with the following entities in order to provide the power that MPS needed to meet its native load requirements:

- Aquila Power (Aquila)
- Associated Electric Cooperative, Inc. (AEC)
- Kansas City Board of Public Utilities (BPU)
- Kansas City Power & Light Company (KCPL)
- Southwestern Public Service Company (SPS)
- West Plains Energy – Kansas (West Plains), and
- Western Resources, Inc. (Western)

(An electric utility's native load is the sum of the electric power needs of the retail and wholesale customers in that electric utility's service territory.)

Q. Describe any changes in MPS' capacity contracts during the test year.

A. The capacity contracts with Aquila, AEC and SPS expired during the test year. The contract with West Plains changed during the test year from 45 MW to 100 MW.

Q. Describe any changes in MPS's capacity contracts during the known and measurable period.

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1 A. The capacity contracts with BPU and KCPL expired during the known and
2 measurable period. The contract with West Plains changed during the known and
3 measurable period from 100 MW to 160 MW.

4 Q. How did the Staff reflect the contract demand charges in this case?

5 A. The contract with Western expires during the true-up period. A capacity
6 contract with MEP Pleasant Hill begins during the true-up period. Staff will reflect the
7 test year contract demand charges until an adjustment can be made for all known and
8 measurable changes through the end of the true-up period.

9 The annualized demand charges are treated separately from the results of
10 the production cost model to determine the total annualized level of fuel and purchased
11 power expense. As stated previously, this amount is included as a separate adjustment
12 because the RealTimeTM production cost model only accounts for energy charges.

13 Q. Were there any other fuel or purchased power related costs that were not
14 calculated in the Staff's production cost model?

15 A. Yes. The fuel costs associated with off-system sales (to other electric
16 utilities) and energy exchanged were added to the results of the Staff's production cost
17 model since the model is based upon net system input only and does not reflect these
18 types of sales.

19 Q. What level of fuel costs associated with off-system sales and energy
20 exchanged did the Staff include in its annualized fuel and purchased power expense
21 calculation?

22 A. The Staff analyzed off-system sales and energy exchanged and determined
23 the test year level to be reasonable. Therefore, the Staff used the test year level of fuel
24 costs associated with interchange sales and energy exchanged.

CALCULATION OF FUEL AND PURCHASED POWER ADJUSTMENTS

Q. Please summarize the Staff's calculation of the fuel and purchased power energy costs in this proceeding.

A. The Staff's annualized fuel and purchased power energy costs represent the cost of producing and purchasing power to meet the level of megawatt-hour (MWH) sales in the Staff's revenue annualization in this case. As previously stated, I provided Staff witness Elliott the fuel prices, including related freight costs, as inputs into the production cost model. The Staff's annualized net system load (sales adjusted for line losses and Company use) was provided by Staff witness Lena Mantle of the Electric Department. Staff witness Elliott input these and other components, including capacity and availability of the generating units, energy costs from the purchased power demand contracts and purchased power energy costs, into the production cost model. Please refer to the respective direct testimonies of Staff witnesses Elliot and Mantle.

After reviewing the results of the production cost model, I added other fuel cost-related components that were not inputs into the model. These included non-labor related fuel handling costs, unit train lease expenses, operations and maintenance (O&M) costs for the unit trains, maintenance costs for MPS' railroad spur, gas transportation costs and MPS's cost of SO² allowances. The result represents Staff's annualized fuel expense reflected in adjustments S-14.4 and S-26.1 and Staff's annualized purchased power energy costs reflected in Staff adjustment S-34.1.

Q. Please describe Staff adjustment S-37.7.

A. MPS purchases an energy call-option that is contingent upon the loss of its Sibley 3 unit. Staff adjustment S-37.7 reflects the difference between the

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1 December 31, 2000 test year costs and the known and measurable costs for the 12 months
2 ended June 30, 2001.

3 Q. What items will you be responsible for updating in the true-up period?

4 A. As explained in the direct testimony of Staff Accounting witness
5 Phillip K. Williams, the Commission has authorized a true-up in this case through
6 January 31, 2002, as recommended by the Company, the Office of the Public Counsel
7 and the Staff. I will be responsible for updating fuel prices for any changes that might
8 occur through the true-up period of January 31, 2002. I will also be responsible for
9 reflecting demand capacity contract changes through the January 31 true-up audit period.
10 During the true-up, Staff will determine the impacts of the new Aries Combined Cycle
11 Unit on the fuel issues. Refer to Staff witness Mark L. Oligschlaeger's direct testimony
12 for more information on the Aries Combined Cycle Unit.

13 Q. Does this conclude your direct testimony?

14 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of the Tariff)	
Filing of Missouri Public Service (MPS))	
A Division of UtiliCorp United Inc., to)	Case No. ER-2001-672
Implement a General Rate Increase for Retail)	
Electric Service Provided to Customers in the)	
Missouri Service Area of MPS)	

AFFIDAVIT OF V. WILLIAM HARRIS

STATE OF MISSOURI)	
)	ss.
COUNTY OF COLE)	

V. William Harris, being 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 13 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.


V. William Harris

Subscribed and sworn to before me this 4th day of December 2001.



TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004



V. William Harris

Schedule of Testimony Filings

Case No.	(Type)	Company
ER-95-279	(Direct)	Empire District Electric Company
GR-96-285	(Direct, Rebuttal, Surrebuttal)	Missouri Gas Energy (Southern Union Co.)
GR-97-272	(Direct)	Associated Natural Gas Company
EC-98-573	(Direct, Rebuttal, Surrebuttal)	St. Joseph Light and Power Company
HR-99-245	(Direct, Rebuttal, Surrebuttal)	St. Joseph Light and Power Company
GR-99-246	(Direct, Rebuttal, Surrebuttal)	St. Joseph Light and Power Company
ER-99-247	(Direct, Rebuttal, Surrebuttal)	St. Joseph Light and Power Company
EM-2000-292	(Rebuttal)	Utilicorp United / St. Joseph Light & Power
EM-2000-369	(Rebuttal)	Utilicorp United / Empire District Electric
EO-2000-845	(Rebuttal)	St. Joseph Light and Power Company
TT-2001-115	(Rebuttal)	Green Hills Telephone Corporation
TC-2001-401	(Direct)	Green Hills Telephone Corporation
ER-2001-299	(Direct, Rebuttal, Surrebuttal)	Empire District Electric Company

Case Nos. GR-96-285, EM-2000-292, EM-2000-369, EO-2000-845 and ER-2001-299 were litigated. All others were stipulated.