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Cost of Service/
Rate Design

Hong Hu/Direct

Public Counsel

ER-2001-672

DIRECT TESTIMONY

OF

HONG HU

FILED³

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Missouri Public
Service Commission

Submitted on Behalf of the Office of the Public Counsel

UtiliCorp United Inc.
Case No. ER-2001-672

December 6, 2001

In the Matter of the tariff filing of)
 UtiliCorp United Inc., (“UtiliCorp”) to)
 implement a general rate increase for)
 retail electric service provided to customers)
 in the Missouri service area.)

My commission expires May 3, 2005.

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**DIRECT TESTIMONY
OF
HONG HU**

UTILICORP UNITED, INC.

CASE NO. ER-2001-672

1 **Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

2 A. Hong Hu, Public Utility Economist, Office of the Public Counsel, P. O. Box
3 7800, Jefferson City, Missouri 65102.

4 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.**

5 A. I hold a Bachelor of Engineering degree in Management of Information Systems
6 from Tsinghua University of Beijing, China and a Masters of Arts degree in
7 Economics from Northeastern University. I have completed the comprehensive
8 exams for a Ph.D. in Economics from the University of Missouri at Columbia. I
9 have been employed as a regulatory economist with the Office of Public Counsel
10 (OPC) since March 1997.

11 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THIS COMMISSION?**

12 A. Yes, I have testified before the Commission on numerous issues including class
13 cost of service and rate design in natural gas, electric, telecommunications and
14 water cases.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2 A. The purpose of my direct testimony is to present the preliminary results of a Class
3 Cost of Service (CCOS) study conducted by OPC in this case. I will also discuss
4 OPC's recommendations regarding rate design based on the information currently
5 available in this case.

6 **I. CLASS COST OF SERVICE STUDY**

7 **Q. WHAT ARE THE MAIN PURPOSES OF PERFORMING A CCOS STUDY?**

8 A. The main purpose of a CCOS Study is to determine the relative class cost
9 responsibility for each customer class by allocating costs in a reasonable manner,
10 and thus provide guidance for determining how rates (e.g., customer charges)
11 should be designed to collect revenues from customers within a class, depending
12 on customer usage levels and patterns.

13 **Q. HAS THE COMPANY FILED A CCOS STUDY IN THIS CASE?**

14 A. No. The Company has not filed a CCOS study in this case. Instead, it proposed
15 an equal percentage increase in almost all tariff rates for its electric operations
16 within the area it describes as the Missouri Public Service (MPS) division.

17 **Q. WHY DIDN'T THE COMPANY FILE A CCOS STUDY?**

18 A. In response to OPC DR No. 702, the Company described its reasoning for failing
19 to submit a CCOS Study stating that since "[the Staff's] preference, and
20 Commission precedent, was for across-the-board rate changes in revenue
21 requirements cases", "[f]iling a class cost of service study in this case would have

1 wasted the resources of the company, the Commission, the staff, and other parties
2 to the case".

3 **Q. DOES PUBLIC COUNSEL BELIEVE THAT THE COMPANY'S EXPLANATION**
4 **CONSTITUTES A VALID JUSTIFICATION FOR NOT FILING A CCOS STUDY IN THIS**
5 **RATE CASE?**

6 A. No. Given the major changes that have recently occurred in UtiliCorp's Missouri
7 operations when the Company acquired St. Joseph Light and Power Company
8 (SJLP), vague claims of wasted resources do not justify increasing rates without
9 reviewing studies that look at revenue requirements for each of the major rate
10 classes. A CCOS study provides guidance for the Commission in the
11 determination of each customer class's revenue responsibility. In this case, a
12 CCOS Study together with consideration of all other relevant factors, would
13 provide an appropriate basis upon which the Commission can make the requisite
14 determination that the rate design produces rates for each customer class that are
15 just and reasonable. Notwithstanding consideration of other relevant factors, an
16 equal percentage increase or decrease in revenues of all customer classes may be
17 just and reasonable if there was a recent rate case where rates were adjusted to
18 reasonably reflect cost of service and if there weren't any subsequent major
19 changes in a company's cost structure. However, these exceptions to the need for
20 a current class cost of service study do not exist in this case.

21 **Q. IS THERE A NEED FOR CCOS STUDIES IN THIS CASE?**

22 A. Yes. It is my understanding that, the rate structure contained in current tariffs for
23 UtiliCorp within the MPS area was developed in case No. EO-91-245 and was
24 implemented in Case No. ER-93-37. Public Counsel believes that nearly ten

1 years is too long a period over which to assume that the Company's cost structure
2 has not changed significantly, or to warrant a decision that an equal percentage
3 increase will produce just and reasonable rates without a re-examination of the
4 Company's cost of service.

5 Furthermore, during the period since Utilicorp's last rate case, the Company
6 acquired and integrated its operations with SJLP. This alone represents a major
7 change in the Company's structure and could significantly affect the cost and
8 revenue responsibility of each customer class. For example, UtiliCorp started
9 joint dispatch for MPS and SJLP in August 2001. The generation and
10 transmission related cost of service for each customer class now is very likely to
11 be different from when UtiliCorp d.b.a. MPS was a stand-alone company in
12 Missouri. Also, other cost savings may have resulted from the merger, which
13 may benefit different customer classes to different degrees. For example, there
14 may be cost savings in the customer accounting department that may benefit the
15 residential class more than the other classes.

16 Section 393.150 (2) RSMo clearly directs that "...**At any hearing involving a**
17 **rate sought to be increased, the burden of proof to show that the increased**
18 **rate or proposed increased rate is just and reasonable shall be upon the gas**
19 **corporation, electrical corporation, water corporation or sewer corporation, ..."**
20 (emphasis added.) In this case, the length of time since the last CCOS study was
21 approved and the major change in the Company's corporate structure are factors
22 which make it appropriate to examine the Company's class cost of service and
23 rate design prior to finding that the Company has met its statutory burden.

1 **Q. HAS OPC PREPARED A CCOS STUDY?**

2 A. Yes. Although, much of the data Public Counsel would utilize in developing a
3 CCOS Study was unavailable, I have updated OPC's MPS CCOS study from
4 Case No. ER-93-37 to reflect an estimate of the Company's current cost, as well
5 as customer numbers, sales and revenues. I would like to emphasize that my
6 disaggregated approach in conducting this cost study was due to the circumstance
7 in this case and should not be construed to alter OPC's legal position that
8 UtiliCorp operates in Missouri as a single unified electric corporation and that
9 revenue requirement, cost allocations and ultimately the rate design should
10 reasonably reflect this consolidated operation.

11 **Q. HOW WOULD YOU CHARACTERIZE THE RESULTS OF YOUR STUDY?**

12 A. I consider the updated study results as preliminary at best for the following
13 reasons.

14 First, the CCOS study that I performed was limited to UtiliCorp's MPS service
15 area because incomplete information was available to conduct a company-wide
16 study. OPC believes that the appropriate approach would be to perform a CCOS
17 study for both MPS and SJLP, since UtiliCorp is now an integrated company that
18 serves both areas.

19 Second, information from the Company is not as detailed or complete as it would
20 be if the Company had conducted its own fully distributed CCOS study.
21 Therefore, many allocation factors used in OPC's study are based on old MPS
22 specific information since no recent studies of the Company's current aggregated
23 cost characteristics have been performed.

1 Third, because this case has a highly unusual procedural schedule that includes
2 the simultaneous filing of revenue requirement and rate design testimonies the
3 Staff's accounting data and other relevant information that Public Counsel
4 typically reviews in developing a CCOS study was not available before the filing
5 of this testimony. Therefore, I utilized the Company's updated case data.

6 For these reasons, the CCOS study I performed can only be viewed as a
7 preliminary effort. I can only draw broad conclusions based on the tentative
8 results of this study and I intend to update the study if and when more accurate
9 information is available.

10 **Q. PLEASE DESCRIBE THE RESULTS OF PUBLIC COUNSEL'S CCOS STUDY.**

11 A. Schedule HH DIR-1 shows the results of Public Counsel's preliminary CCOS
12 Study which was based on the assumption that total company revenues remain
13 constant in an attempt to identify if any revenue neutral interclass revenue shift is
14 needed. The result of the study indicates that some class revenue shifts may be
15 warranted. However, I must once again emphasize that more studies need to be
16 done before a prudent conclusion can be reached.

17 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

18 A. I recommend that if the Commission finds that a significant revenue requirement
19 increase is warranted, it should order the Company to conduct a detailed
20 company-wide CCOS study in a subsequent cost of service/rate design case to
21 determine whether any revenue neutral interclass shifts are appropriate. The
22 complexity of the cost of service/rate design issues and the relevant analysis
23 needed, as well as the quality and availability of the data required (especially

1 when the Company has not prepared a CCOS study in their initial filing), make a
2 comprehensive electric CCOS study and rate design virtually impossible in the
3 short procedural schedule established for the rest of this case. If the Commission
4 finds that a significant revenue requirement increase is not warranted then OPC
5 believes the Commission should require the Company to include a company-wide
6 CCOS study in the next UtiliCorp rate case.

7 **II. RATE DESIGN RECOMMENDATIONS**

8 **Q. WHAT GENERAL FRAMEWORK FOR RATE DESIGN WOULD OPC PROPOSE?**

9 A. OPC has consistently recommended that the Commission adopt a rate design that
10 balances movement towards cost of service with rate impact and affordability
11 considerations. To reach this balance, OPC believes that the Commission should
12 adopt a gradual approach in mitigating large interclass revenue shifts. Also, to
13 address affordability, equity, and rate impact considerations, no class should
14 receive a net increase (the combined effect of revenue neutral shifts and overall
15 revenue requirement decrease) in its revenue requirement while there is a total
16 company revenue requirement reduction. Similarly, no class should receive a net
17 decrease in its revenue requirement while there is a total company revenue
18 requirement increase.

19 Because of the special circumstances of this particular case, I would recommend
20 the Commission not make any decision to change the relative class revenue
21 responsibility because further investigation into the Company's class cost of
22 service is needed. If the Commission determines that there is enough evidence in
23 this case for a cost of service/rate design decision, OPC recommends balancing

1 the movement towards cost of service with rate impact, equity, and affordability
2 considerations.

3 **Q. HAS UTILICORP PROPOSED MISCELLANEOUS AND OTHER SPECIFIC TARIFF**
4 **CHANGES THAT YOU WOULD LIKE TO ADDRESS?**

5 A. Yes. UtiliCorp proposed to increase the reconnection charge during and after
6 business hours from \$10 and \$25 to \$30 and \$55, to increase the meter read by
7 appointment charge during and after business hours from \$5 and \$10 to \$20 and
8 \$30.

9 **Q. DOES OPC AGREE WITH THE PROPOSED INCREASE IN THE RECONNECTION**
10 **CHARGES AND THE METER READ CHARGES?**

11 A. No. While OPC appreciates the Company's attempt to perform selective cost
12 studies and design miscellaneous charges that reflect the Company's actual cost of
13 performing these various services, OPC disagrees with the Company on what the
14 proper charges should be to recover the actual cost.

15 After a review of the Company's workpapers, I found that the Company has
16 included non-productive time loading in the loaded labor rate. It also included
17 overhead cost and enterprise support in its calculation of actual cost. OPC
18 disagrees with the inclusion of these costs. The miscellaneous charges in question
19 now are based on a cost causation, per-job basis. The non-productive time, i.e.
20 the vacation, sick time, holidays, training and standby time, are already included
21 in customer rates for electric services provided by the Company, and should not
22 be included in the charge on a per-job basis. By the same token, the overhead cost
23 and enterprise support cost are already recovered through basic customer rates and

1 should not be included in the calculation of the job specific cost. In addition, the
2 Company has included an after-hours loaded labor rate for customer servicemen
3 but has not included the supporting information for the calculation in their
4 workpapers. Furthermore, some of the charges that the Company proposes are
5 actually higher than the alleged actual cost that is calculated by the Company.

6 **Q. IF DESPITE PUBLIC COUNSEL'S RECOMMENDATION TO REQUIRE THE COMPANY**
7 **TO PREPARE MORE FULLY DEVELOPED COST STUDIES THE COMMISSION DECIDES**
8 **TO DETERMINE RATES IN THIS PROCEEDING, WHAT RECONNECTION CHARGES**
9 **AND METER READING CHARGES DOES OPC RECOMMEND?**

10 A. After removing the costs that OPC believes should not be included from the
11 Company's current calculation of actual cost of performing the miscellaneous
12 services, I have calculated the actual cost for reconnection during and after hours
13 to be \$16.27 and \$30.37. The actual cost for meter reads during and after hours is
14 calculated to be \$11.74 and \$15.28. Therefore, I would recommend the
15 reconnection charge during business hours be increased from \$10 to \$15 and the
16 reconnection charge after business hours be increased from \$25 to \$30. I also
17 recommend the meter read charge during business hours to be increased from \$5
18 to \$10 and the meter read charge after business hours to be increased from \$10 to
19 \$15.

20 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

21 A. Yes.

COST OF SERVICE SUMMARY

STATE OF SERVICE SUMMARY		CUSTOMER CLASSES						
		JURISDICTIONAL						
		TOTAL	RESIDENTIAL	Small GS	Large GS	Large Power	Schools & Churches	
1	TOTAL RATE BASE	577,717,618	337,175,234	86,459,766	69,152,280	77,678,811	7,251,526	
2								
3	O & M EXPENSES	204,759,180	105,242,837	31,783,011	28,524,282	36,274,528	2,934,521	
4	DEPREC. & AMORT. EXPENSE	38,222,761	21,978,096	5,705,357	4,670,547	5,400,306	468,454	
5	TAXES	24,898,788	14,277,745	3,736,764	3,006,599	3,402,590	475,090	
6								
7	Subtotal - Expenses and Taxes	\$267,880,728	\$141,498,678	\$41,225,133	\$36,201,428	\$45,077,425	\$3,878,065	
8								
9	CURRENT RATE REVENUE	\$288,713,124	\$153,224,648	\$48,541,963	\$38,982,937	\$44,619,612	\$3,343,964	
10	CLASS % OF CURRENT REVENUE	100.00%	53.07%	16.81%	13.50%	15.45%	1.16%	
11								
12	MISCELLANEOUS REVENUE CREDIT	2 \$0	0.0	0.0	0.0	0.0	0	
13	OTHER REVENUE	2 \$30,809,105	16,549,786.8	4,720,231.1	4,086,658.6	5,015,994.6	436,434	
14	Total Offsetting Revenues	\$30,809,105	\$16,549,787	\$4,720,231	\$4,086,659	\$5,015,995	\$436,434	
15								
16	IMPLICIT RATE OF RETURN	8.94%	8.39%	13.92%	9.93%	5.87%	-1.35%	
17								
18	REQUIRED OPERATING INCOME	\$51,641,501	30,139,699	7,728,537	6,181,441	6,943,618	648,205	
19								
20	TOTAL COST OF SERVICE	\$319,522,229	171,638,377	48,953,670	42,382,869	52,021,043	4,526,271	
21								
22	COS LESS OFFSETTING REVENUES	288,713,124	155,088,590	44,233,439	38,296,210	47,005,048	4,089,837	
23								
24	COS INDICATED RATE REVENUE NEUTRAL SHIFT	(0)	1,863,942	(4,308,524)	(686,727)	2,385,436	745,873	
25	COS REQUIRED % RATE REVENUE NEUTRAL SHIFT		1.22%	-8.88%	-1.76%	5.35%	22.31%	
26	CLASS % OF REVENUE AFTER COS REQUIRED REVENUE SHIFT		53.72%	15.32%	13.26%	16.28%	1.42%	
27								
28	OPC RECOMMENDED 1/2 REVENUE NEUTRAL SHIFT	(0)	931,971	(2,154,262)	(343,363)	1,192,718	372,937	
29	OPC RECOMMENDED % RATE REVENUE NEUTRAL INCREASE		0.61%	-4.44%	-0.88%	2.67%	11.15%	
30	CLASS % OF REVENUE RECOMMENDED BY OPC		53.39%	16.07%	13.38%	15.87%	1.29%	