Exhibit Number:
Issue(s): Depreciation of Plant
Witness: Guy Gilbert, P.E.
Sponsoring Party: MoPSC Staff
Case Numbers: EO-97-144 & EC-97-362

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION Division

MISSOURI PUBLIC SERVICE

CASE NOS. EO-97-144

AND EC-97-362

DIRECT TESTIMONY

OF

GUY GILBERT, P.E.

JEFFERSON CITY, MISSOURI
MARCH 1997

DIRECT TESTIMONY

OF

GUY C. GILBERT, P.E.

UtiliCorp United

d/b/a Missouri Public Service

CASE NOS. EO-97-144

and EC-97-362

Q. Please state your name and business address.

A. Guy C. Gilbert, P.O. Box 360, Jefferson City, Missouri, 65102.

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

A. I am employed by the Missouri Public Service Commission (Commission) as an engineer in the Depreciation Department.

Q. What are your duties as an engineer in the Depreciation Department?

A. I have the responsibility of performing studies regarding depreciation and of reviewing plant property records, utility property sales and other similar issues that may come before the Commission.

Q. Would you please state briefly your qualifications, educational background and experience.

A. I have received degrees in Economics and Engineering from the University of Missouri and have completed 61 credit hours of additional studies. I was a National Science Foundation Research Grant participant (NSF GY 9841) and a student research assistant at Cloud

Physics Space Sciences Research Center. After graduation, I was employed by General Dynamics' Freeman United Coal Mining Company as Assistant to the Superintendent, at Crown Complex. I have received certifications and qualifications from the United States Department of Labor in Noise Level Testing, Dust Sampling, Dust Sampling Equipment Calibration, Electricity Low/Medium/High Voltage, Dam and Refuse Impoundment Inspector and Dam, and Refuse Impoundment Inspection Instructor. I have received certifications and qualifications from the State of Illinois as Mine Manager, No. 6634; Mine Examiner, No. 10324; Electrical Hoisting Engineer, No. 2427; First Class Miner Certification, No. 17608; Sewage Treatment Plant Operator, Class K; Industrial Wastewater Treatment Works Operator, Class K; State of Illinois Mine Rescue Team, Springfield Station, No. 2; and Certified Benchman for Mine Rescue Equipment, Emergency Medical Technician-Ambulance. I am a Registered Professional Engineer in the State of Missouri.

In 1988, I was employed by the Illinois Commerce Commission. My duties consisted of preparing studies of publicly held utilities operating within the State of Illinois. In this position I have successfully completed training in Management Analyst Training, Auditing in Telecommunications and Introduction to EDP Auditing.

In 1991, I accepted a position with the Illinois Department of Energy and Natural Resources, Office of Coal Development and Marketing. While in this position, I worked with regulatory agencies, the United States Department of Energy, and trade personnel, both nationally and internationally. In this position I provided state oversight to the state funded implementation of clean coal technologies.

In 1994, I joined the Commission as an Engineer IV - Depreciation. In this position

I have successfully completed training in Basic Depreciation Concepts, Models Used In Life and Salvage Studies, Forecasting Life and Salvage, and Advanced Topics in Analysis and Forecasting from Depreciation Programs, Incorporated. My duties consist of preparing depreciation studies for regulated electric, gas, water, sewer and telephone utilities.

Q. Please state the purpose of your testimony in this case.

A. The purpose of my testimony is to make recommendations for Missouri Public Service (MPS or Company) concerning depreciation rates.

Q. Has MPS requested or proposed new depreciation rates to apply to the assets of the Company?

A. No.

Q. When were depreciation rates for MPS last ordered by the Commission?

A. Depreciation rates were last revised for MPS by a Stipulation and Agreement signed on March 19, 1993 and approved by the Commission in Case No. ER-93-37.

Q. Has Staff conducted a depreciation study of the electric utility property of MPS in this case?

A. Yes, Staff performed an average life group - whole life depreciation study.

Q. What were the results of the depreciation study?

A. The attached Schedule 1 delineates depreciation rates which were previously approved by the Commission in the Company's prior rate case, Case No. ER-93-37, and rates which are recommended as a result of Staff's study of the Company's depreciation database for this proceeding.

Q. Are there any overriding differences in the methods and assumptions used in your depreciation study from those used in previous studies and resultant depreciation rates recommended by the Staff for this Company?

A. Yes. The single largest factor that I have recognized is that interim net salvage has a greater cost of removal component than was previously recognized.

Q. Explain how you arrived at your net salvage estimates.

A. Net salvage used in determining a depreciation rate comprises two components as follows: (1) gross salvage which is received through sale of scrap material, equipment, parts returned to stock, or other sources and (2) cost of removal required to dismantle, remove or prepare equipment or scrap for sale. Net salvage is gross salvage less cost of removal and most generally is negative for most accounts, i.e., cost of removal is greater than gross salvage.

I analyzed past retirements and net salvage dollars recorded on the books of the utility and computed the percentage of salvage or cost of removal by finding the ratio of the salvage or cost of removal dollars to dollars retired and used these percentages in the calculation of depreciation rates to be applied to surviving investment contained on the Company's books.

For all of the studied plant accounts, I used five-year rolling band averages of actual salvage and cost of removal experience that was booked to the reserve for depreciation. These salvage amounts were furnished by MPS on computer diskettes. Analysis of these results then yielded the most appropriate salvage rate. The attached Schedule 2 is a comparison of the net salvage percent underlying currently approved depreciation rates and the results of my salvage study.

Q. How had Staff previously determined the net salvage percent?

A. Previously, Staff had interpreted the ratio of net salvage dollars to total plant dollars by account to derive a percentage of net salvage for inclusion in a depreciation rate calculation. This did not reflect a realistic percentage of net salvage. As a result, salvage and removal costs were understated by this calculation since these percentages were not applied to the retired plant amounts.

Q. Are there any other differences in the methods and assumptions used in your depreciation study from those used previously by Staff for this Company?

A. Yes. For accounts 311 to 316 steam production plant I have increased the depreciable lives by ten years for all steam production plant.

Q. How did you determine this increase in life span?

A. MPS submitted a depreciation study, data base and property unit catalog in compliance with Commission Rule 4 CSR 240-20.030 (6)(B) [per 9/30/97 Rule revision, correct site is now to section (5)(B)] received in its final form on May 16, 1996. This study indicates the estimated retirement dates for all three units at Sibley Station as 2010 and at Jeffrey as 2013, 2015, 2018 for Units 1, 2 and 3 respectively. MPS's Integrated Resource Plan (IRP) filed with the Commission on March 9, 1995 indicates "the Sibley Station was upgraded through a life-extension program to provide reliable and efficient operation through at least the year 2010, or beyond." From a consistency standpoint, it is not at all unlikely that Jeffrey Energy Center will also undergo a plant life extension at some future date. Further, it is not apparent from a review of MPS's IRP that additional power needs reflect replacement power associated with short-term retirement of the Sibley Station. Consequently, I added 10 years to each of the Sibley Station and Jeffery Energy Center

steam production units.

Q. Are there any other overriding differences in the methods and assumptions used in your depreciation study from those used in previous studies and resultant depreciation rates adopted by the Commission for this Company?

A. No, other then to note that there have been some minor adjustments made to the average service lives and Iowa curve types as indicated in the attached Schedule 3. I used full experience bands, that is to say I conducted my study using all of the available data, to arrive at the recommended average service lives supporting the depreciation rates.

Q. Please state your recommendation regarding the depreciation rates tabulated on Schedule 1.

A. It is my recommendation that the Commission include in its final Report and Order, approval of the revised depreciation rates contained in Schedule 1.

Q. Does this conclude your prepared 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, Inc. D/b/a/ Missouri Public Service.	)	Case No. EO-97-144
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 GUY GILBERT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Guy Gilbert of lawful age, on his oath states: that he has participated in the preparation of the foregoing written testimony in question and answer form; consisting of 6 pages and 3 schedules to be presented in this case; that the answers in the foregoing 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.

Guy Gilbert, P.E.

Subscribed and sworn to before me this 26th day of March, 1997.

Notary Public

My commission expires June 1, 1997

Missouri Public Service Company
DEPRECIATION RATES
CASE NO. EC-97-362

Account Number	Description	*Currently Ordered* Depreciation Rates %	*Commission Staff Recommended* Depreciation Rates %
	STEAM PRODUCTION PLANT		
311.0	Structures & Improvements	3.26	4.08
312.0	Boiler Plant Equipment	3.85	4.39
314.0	Turbogenerator Units	3.78	3.35
315.0	Accessory Electric Equipment	3.75	4.55
316.0	Misc. Power Plant Equipment	3.13	3.34
	OTHER PRODUCTION PLANT		
341.0	Structures & Improvements	5.61	2.17
342.0	Fuel Holders, Producers & Access.	4.59	5.26
343.0	Prime Movers	4.81	3.98
344.0	Generators	5.00	3.13
345.0	Accessory Electric Equipment	4.76	3.53
346.0	Misc. Power Plant Equipment	4.76	2.93
	TRANSMISSION PLANT		
352.0	Structures & Improvements	1.92	2.22
353.0	Station Equipment	2.04	2.45
354.0	Towers & Fixtures	2.17	2.13
355.0	Poles & Fixtures	2.72	3.00
356.0	Overhead Conductors & Devices	2.19	2.72
358.0	Underground Conductors & Devices	2.70	2.70
	DISTRIBUTION PLANT		
361.0	Structures & Improvements	2.17	2.24
362.0	Station Equipment	2.15	2.76
364.0	Poles, Towers & Fixtures	3.05	4.69
365.0	Overhead Conductors & Devices	2.36	3.08
366.0	Underground Conduit	2.53	3.03
367.0	Underground Conductors & Devices	2.68	3.18
368.0	Line Transformers	3.79	4.78
369.1	Overhead Services	2.91	8.34
369.2	Underground Services	4.04	4.37
370.1	Meters	2.35	2.37
370.5	Load Research Meters	2.35	8.85
371.0	Installations on Customers' Premises	7.12	8.12
373.0	Street Lighting & Signal Systems	4.68	4.04
	GENERAL PLANT		
390.1	Structures & Improvements	2.47	2.21
391.1	Computer Equipment	8.33	10.00
393.0	Stores Equipment	7.69	3.83
394.0	Tools, Shop & Garage Equipment	5.61	3.15
395.0	Laboratory Equipment	5.00	2.53
397.0	Communication Equipment	9.90	6.94
398.0	Miscellaneous Equipment	7.62	4.48

SCHEDULE 1

Missouri Public Service Company
DEPRECIATION NET SALVAGE RATES
CASE NO. EC-97-362

Account Number	Description	*Current* Net Salvage Rates %	*Commission Staff Recommended* Net Salvage Rates %
	STEAM PRODUCTION PLANT		
311.0	Structures & Improvements	1	-13
312.0	Boiler Plant Equipment	-4	-29
314.0	Turbogenerator Units	-2	-12
315.0	Accessory Electric Equipment	-5	-23
316.0	Misc. Power Plant Equipment	0	-1
	OTHER PRODUCTION PLANT		
341.0	Structures & Improvements	-1	-13
342.0	Fuel Holders, Producers & Access.	-1	-29
343.0	Prime Movers	-1	-12
344.0	Generators	0	-23
345.0	Accessory Electric Equipment	0	-1
346.0	Misc. Power Plant Equipment	0	3
	TRANSMISSION PLANT		
352.0	Structures & Improvements	0	0
353.0	Station Equipment	2	-15
354.0	Towers & Fixtures	0	0
355.0	Poles & Fixtures	-28	-50
356.0	Overhead Conductors & Devices	-18	-44
358.0	Underground Conductors & Devices	0	0
	DISTRIBUTION PLANT		
361.0	Structures & Improvements	-2	-5
362.0	Station Equipment	-1	-18
364.0	Poles, Towers & Fixtures	-19	-73
365.0	Overhead Conductors & Devices	-18	-53
366.0	Underground Conduit	-1	-21
367.0	Underground Conductors & Devices	-2	-25
368.0	Line Transformers	-6	-31
369.1	Overhead Services	-25	-286
369.2	Underground Services	-1	-1
370.1	Meters	-1	-1
370.5	Load Research Meters	0	0
371.0	Installations on Customers' Premises	-21	-55
373.0	Street Lighting & Signal Systems	-17	-36
	GENERAL PLANT		
390.1	Structures & Improvements	-11	-11
391.1	Computer Equipment	0	0
393.0	Stores Equipment	0	0
394.0	Tools, Shop & Garage Equipment	-1	-1
395.0	Laboratory Equipment	0	0
397.0	Communication Equipment	-1	-11
398.0	Miscellaneous Equipment	-1	0

SCHEDULE 2

Missouri Public Service Company
AVERAGE SERVICE LIFE & IOWA CURVE
CASE NO. EC-97-362

Account Number	Description	Average Service Life Years Underlying Current Rates	*Commission Staff* Recommended Average Service Life Years	Iowa Curve Type Underlying Current Rates	*Commission Staff* Recommended Iowa Curve Type
	STEAM PRODUCTION PLANT				
311.0	Structures & Improvements	31.0	31.0	R1	R1
312.0	Boiler Plant Equipment	27.0	37.9	R2	L2.5
314.0	Turbogenerator Units	27.0	37.7	S6	S4
315.0	Accessory Electric Equipment	28.0	28.4	L2	R3
316.0	Misc. Power Plant Equipment	32.0	32.0	R1.5	R1.5
	OTHER PRODUCTION PLANT				
341.0	Structures & Improvements	18.0	46.6	L0	R4
342.0	Fuel Holders, Producers & Access.	22.0	20.9	S3	S5
343.0	Prime Movers	21.0	25.4	SQ	R3
344.0	Generators	20.0	32.0	SQ	R3
345.0	Accessory Electric Equipment	21.0	28.3	S3	R2
346.0	Misc. Power Plant Equipment	21.0	34.9	S3	R5
	TRANSMISSION PLANT				
352.0	Structures & Improvements	52.0	45.0	R1	R3
353.0	Station Equipment	48.0	46.9	R2	R1.5
354.0	Towers & Fixtures	46.0	46.0	S6	S6
355.0	Poles & Fixtures	47.0	50.1	L2	L2
356.0	Overhead Conductors & Devices	54.0	52.9	R1.5	R3
358.0	Underground Conductors & Devices	37.0	37.0	SQ	SQ
	DISTRIBUTION PLANT				
361.0	Structures & Improvements	47.0	47.0	R1	R1
362.0	Station Equipment	47.0	42.8	R0.5	S1
364.0	Poles, Towers & Fixtures	39.0	36.9	L5	L5
365.0	Overhead Conductors & Devices	50.0	49.8	R2	R1.5
366.0	Underground Conduit	40.0	40.0	R4	R4
367.0	Underground Conductors & Devices	38.0	39.3	L1	R2.5
368.0	Line Transformers	28.0	27.4	S1.5	R2.5
369.1	Overhead Services	43.0	46.4	S6	R4
369.2	Underground Services	25.0	23.1	L3	S6
370.1	Meters	43.0	42.5	L4	L3
370.5	Load Research Meters	8.0	11.3	R3	S6
371.0	Installations on Customers' Premises	17.0	19.1	R2.5	R2.5
373.0	Street Lighting & Signal Systems	25.0	33.6	R2	R0.5
	GENERAL PLANT				
390.1	Structures & Improvements	45.0	50.3	L3	R2.5
391.1	Computer Equipment	12.0	10.0	R2.5	R4
393.0	Stores Equipment	13.0	26.1	L3	L0
394.0	Tools, Shop & Garage Equipment	18.0	32.1	L0	L0
395.0	Laboratory Equipment	20.0	39.6	L3	L1.5
397.0	Communication Equipment	10.0	16.0	R4	R4
398.0	Miscellaneous Equipment	13.0	22.3	S3	R5

SCHEDULE 3