FINNEGAN, CONRAD & PETERSON L.C.
ATTORNEYS AND COUNSELORS AT LAW
1209 PENNTOWER OFFICE CENTER
3100 BROADWAY
KANSAS CITY, MISSOURI 64111

(816)753-1122
FACSIMILE: (816)756-0373

JEREMIAH D. FINNEGAN
STUART W. CONRAD
C. EDWARD PETERSON

Internet: stucon@fcplaw.com

Writer's 24-Hour Number:
(800)821-5073 PIN:247-4501

August 14, 2000

VIA FEDERAL EXPRESS

FILED[3]
AUG 15 2000
Missouri Public Service Commission

Mr. Dale H. Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P.O. Box 360
301 West High R530
Jefferson City, Missouri 65102

Re: **Union Electric [Ameren]**
Case No. GR-2000-512

Dear Mr. Roberts:

Enclosed is the original and eight (8) copies of the **Prepared Direct Testimony of John Mallinckrodt** on Rate Design issues, which please file in the above matter and call to the attention of appropriate Commission personnel.

An additional copy is ENCLOSED, which please stamp as "filed" and return to me in the postage paid envelope provided. If there are questions, just call.

Sincerely yours,

FINNEGAN, CONRAD & PETERSON, L.C.

By: Stuart W. Conrad

SWC:s
Enclosures

31

Union Electric Company
d/b/a Ameren UE

Missouri Public Service Commission
Case No. GR-2000-512

SERVICE LIST

Office of the Public Counsel
PO Box 7800
Jefferson City, MO 65102

Ronald K. Evans
Union Electric Company
PO Box 149
St. Louis, MO 63166

Thomas R. Schwarz, Jr.
Missouri Public Service Commission
PO Box 360
Jefferson City, MO 65102

Michael Pendergast
Laclede Gas Company
720 Olive Street
St. Louis, MO 63101

Stuart W. Conrad
Finnegan, Conrad & Peterson
3100 Broadway, 1209 Penntower Office
Kansas City, MO 64111

Exhibit No.:	
Issues:	Class Cost of Service/Rate Design
Witness:	John W. Mallinckrodt
Type of Exhibit:	Direct Testimony and Schedules
Sponsoring Party:	Midwest Gas Users Association
Company:	Union Electric Company
Case Nos.:	GR-2000-512

Before the

Missouri Public Service Commission

In the Matter of Union Electric Company d/b/a Ameren UE for Authority to File Tariffs Increasing Rates for Gas Service Provided to Customers	)))))	Case No. GR-2000-512

Direct Testimony and Schedules of

John W. Mallinckrodt

On behalf of

Midwest Gas Users Association

Project 7336
August 2000

BAI
BRUBAKER & ASSOCIATES, INC.
CHICAGO, IL 60422

Before the

Missouri Public Service Commission

In the Matter of Union Electric Company d/b/a Ameren UE for Authority to File Tariffs Increasing Rates for Gas Service Provided to Customers	)))))	Case No. GR-2000-512

Index to the Testimony of John W. Mallinckrodt

Before the

Missouri Public Service Commission

In the Matter of Union Electric Company d/b/a Ameren UE for Authority to File Tariffs Increasing Rates for Gas Service Provided to Customers	)))))	Case No. GR-2000-512

Affidavit of John W. Mallinckrodt

State of Illinois)
) **SS**
County of Cook)

John W. Mallinckrodt, being first duly sworn on his oath, states:

1. My name is John W. Mallinckrodt. I am a consultant in the field of utility regulation and a member of the firm, Brubaker & Associates, Inc. We have been retained by the Midwest Gas Users Association to testify in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of Pages 1 through 15, inclusive; and attached Schedules 1 through 12; all of which testimony and schedules were prepared in written form for introduction into evidence in the Missouri Public Service Commission Case No. GR-2000-512 on behalf of said Intervenor.

3. I hereby swear and affirm that my answers contained in the testimony are true and correct to the best of my knowledge and belief, and that the attached schedules were prepared under my supervision and direction and truly and accurately shows the matters and things they purport to show.

John W. Mallinckrodt

Subscribed and sworn to before me this 11th day of August 2000.

Notary Public

My Commission expires 11/6/03.

OFFICIAL SEAL
PATRICIA M TELL
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 11/06/03

Before the

Missouri Public Service Commission

In the Matter of Union Electric Company d/b/a Ameren UE for Authority to File Tariffs Increasing Rates for Gas Service Provided to Customers	)))))	Case No. GR-2000-512

Direct Testimony of John W. Mallinckrodt

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A John W. Mallinckrodt, 723 Gardner Road, Flossmoor, Illinois 60422.

Q PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.

A This is set forth in Schedule A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of the Midwest Gas Users Association (MGUA).

Q ON WHAT SUBJECTS HAVE YOU BEEN ASKED TO TESTIFY?

A I have been asked to testify in regard to cost as the appropriate basis for establishing class revenue requirements and the design of transportation service (TS) rates.

Rates Should be Based on Costs

Q HOW SHOULD UNION ELECTRIC COMPANY'S (UE) RATES BE DESIGNED?

A Just as cost of service is the basis for the determination of UE's overall revenue requirement, it should also be the basis used to determine the revenues to be derived from each customer class, and to design the specific rate schedules for each customer class. The fundamental starting point and guideline should be the cost of serving each customer and each class. To the extent rates for a class deviate from cost of service, movement of the rates to cost of service is essential while still giving consideration to factors such as simplicity, gradualism, and ease of administration.

Q WHY SHOULD COST BE USED FOR THESE PURPOSES?

A The basic reasons for adhering to the cost of service principle throughout the rate design process may be summarized as stability, conservation, engineering efficiency (cost-minimization), and equity.

With respect to stability, when rates are closely tied to costs, and when customer use patterns change, the earnings impact on the utility will be minimized because changes in revenues will then closely track changes in the level of costs. From the customer's perspective, cost-based rates provide a more stable basis for determining future levels of energy costs. If rates are based on factors other than cost, it is much more difficult to translate expected utility-wide cost changes into changes in the rates charged to particular customer classes. This reduces the attractiveness of expansion by new and existing industries because of the lessened ability to plan.

With respect to conservation, which is properly defined as the avoidance of wasteful or inefficient use (and not just less use), only when rates are based on costs

do customers receive a balanced price signal against which to make their consumption decisions. If rates are not based on costs, then these choices can be distorted.

In terms of engineering efficiency, when rates are designed so that demand, customer, and commodity costs are properly reflected in the rate structure, customers are provided with the proper incentive to minimize their costs, which will in turn minimize the costs to the utility.

With respect to equity, when rates are based on costs, each customer pays what it costs the utility to serve, no more and no less. To the extent rates are not based on costs, some customers are required to pay part of the costs associated with service supplied to other customers, which clearly violates the principle of equity.

Also, to the extent that rates do not reflect costs, multi-plant firms will be encouraged to shift production from high energy cost plants to lower energy cost plants in order to remain competitive. Such a shifting of production to lower cost plants would reduce employment and the overall contribution of the manufacturing concern to the state and local economies. This would require that the rates to the remaining customers be increased if the utility's fixed cost coverage were to be maintained, which, in turn, would be self-defeating to the presumed beneficiaries of below-cost rates. To the extent that industrial customers are intentionally overcharged in an attempt to extract from them a higher contribution to fixed costs, the potential for load loss is greatly increased.

Customer Class Characteristics

Q DO THE CUSTOMER CLASSES HAVE DIFFERENT CHARACTERISTICS, WHICH LEAD TO DIFFERENT COST RESPONSIBILITIES?

A Yes, they do. Two class characteristics that I have examined for UE's system are load factor and average monthly use per customer.

Q PLEASE DEFINE LOAD FACTOR.

A Load factor expresses the ratio of average daily use to peak use on a percentage basis. If a customer used the same amount of gas every day, for example 100 Mcf, then the average daily use would be 100 Mcf and the peak daily use would also be 100 Mcf. Therefore, the load factor would be 100%. However, if the customer had a peak usage of 400 Mcf with the same average daily usage of only 100 Mcf, then the load factor would be 100/400 times 100%, or 25%. Four times as much capacity is required to provide the same annual quantity of gas for a 25% load factor customer than for a 100% load factor customer.

Q WHAT ARE THE LOAD FACTORS OF UE'S CUSTOMER CLASSES?

A The load factors of the residential, general service (GS), interruptible service (IS), and transportation service (TS) (both Standard and Large Volume) customer classes range from 27% to 55%, as set forth on **Schedule 1**.

Because the usage by interruptible customers could be expected to be reduced to zero on the peak day, the class load factor based on peak day usage approaches infinity. However, even if the interruptibility is disregarded, the interruptible class in particular has a load factor that is quite high. In the test year, it was 55% based on a non-coincident peak (NCP) usage derived by dividing the total

December and January usage of the class by 40. The transportation class has a slightly lower load factor, which was 49% in the test year. These calculations were based on Annual Normalized Throughput and NCP usage (except IS).

Q HOW DOES THE AVERAGE MONTHLY USE PER CUSTOMER VARY AMONG THE CUSTOMER CLASSES?

A The residential class has the smallest average monthly use at 67 Ccf per customer. In contrast, the average monthly usage of the TS class is 37,445 Ccf. Hence, the average TS customer uses more than 559 times as much gas as the average residential customer in any month. The average monthly consumption of each class is set forth on **Schedule 2**.

Q DO THESE CUSTOMER CLASS CHARACTERISTICS HAVE AN IMPACT ON THE AVERAGE COST TO SERVE THE CUSTOMER CLASSES?

A Yes. A high load factor indicates that the customer's use of utility facilities is quite efficient. The result is that the fixed cost associated with the facilities to serve a high load factor customer is spread over a relatively large amount of consumption, and therefore the per unit cost is significantly less than for low load factor customers. Of course, when a customer not only has a high load factor but is also interruptible, efficiency is further increased as the utility is not required to make investments that would be needed to serve the interruptible customer at the time of the system peak.

A high average use per customer also is an indication of a lower average cost. This occurs because customer-related costs, such as meters, services and billing, are spread over many more units of consumption with the result being a much lower unit cost.

Q IS IT BENEFICIAL FOR THE DISTRIBUTION SYSTEM TO MAINTAIN A HIGH LOAD FACTOR?

A Yes it is. Just as a customer class load factor is indicative of efficient use of the distribution resources needed to provide service to that customer class, so the system load factor is an indicator of the efficient overall use of the distribution system. Based on this test year data, the system load factor is 31%. Three times as much capacity is required to deliver the same annual quantity of gas for the total system than if the system load factor was 100%.

Class Cost of Service

Q HAS UE PREPARED A CLASS COST OF SERVICE STUDY?

A Yes. UE has prepared a study based on the test year ended June 30, 1999. The study develops the cost to serve customers under the Company's existing rate schedules.

Q HOW DO THE PRESENT REVENUES OF THE CLASSES RELATE TO THE COST RESPONSIBILITIES INDICATED BY THE COMPANY COST OF SERVICE STUDY?

A **Schedule 3-1** shows the rate base, operating income, rate of return, and index of return based on UE's study. This study indicates that GS, IS, and TS customers are currently providing above-average returns, and revenues in excess of the costs they impose on the system. The residential customers, however, do not provide revenues sufficient to cover their share of the system cost.

Q WHAT IS THE RELATIVE RATE OF RETURN FOR THE TRANSPORTATION CUSTOMER CLASS UNDER PRESENT RATES?

A Under the present rates, the TS customers provide a relative rate of return of 16.90%. With an index of 345, the TS class rate of return is more than three times the test year system average under present rates. Thus, the average charge for TS was $0.57/Mcf higher than that necessary to provide a return equal to the average return of UE. This amounts to $2,124,544 per year as set forth on **Schedule 3-2**.

Q WHAT INCREASE HAS BEEN PROPOSED BY THE COMPANY IN ITS STUDY AND HOW HAS THE INCREASE IN REVENUES BEEN SPREAD AMONG THE CUSTOMER CLASSES?

A UE has proposed an overall increase of approximately $12.1 million. Consistent with the current variation from cost as shown by its class cost of service study, UE has proposed that rates for the interruptible and transportation customers be reduced to bring them to cost. The requested increase is spread among the other rate schedules as set forth on **Schedule 4**. The average rate reduction for the interruptible and transportation customers is also set forth on **Schedule 4**.

Q WHAT IMPACT DOES THE PROPOSED RATE INCREASE HAVE ON UE'S CLASS COST OF SERVICE RESULTS?

A Since there is a proposed decrease in the interruptible and the transportation revenues to cost of service, the rate of return is 10.32% under the Company's study for all classes. Since the total Company average return also increases to 10.32% according to the UE proposal, the index of return for all classes is 100. The results of the adjusted UE study under proposed rates are summarized on **Schedule 5**.

Under the Company study and the proposed rate levels, the revenues collected from the TS customers annually are at the cost of service as defined in the study submitted with UE's direct testimony. It is appropriate for UE to propose rates that recover the cost of service. However, UE's study still overstates the cost to serve the TS customers.

Q PLEASE EXPLAIN WHY UE'S STUDY OVERSTATES THE COST TO SERVE THE TS CUSTOMERS.

A UE's study uses an average and excess demand type allocation methodology that does not properly reflect the allocation of transmission and distribution costs to the classes. Therefore, a further cost of service adjustment should be made. This could be done by utilizing a revised average and excess demand method to allocate these costs. Such a revision would more accurately identify the customer component of the allocator and lower the cost allocated to the TS class.

UE's average and excess demand methodology is based on a base demand determined using the normalized average daily sales and transport volumes during the four summer months of minimal temperature-related usage (June, July, August, and September). By subtracting this base demand from the NCP demand, the excess demand was calculated. The weighted percentage of base (13%) and excess (87%) demands was used respectively to allocate the customer-related and NCP demand-related portions of each class' general T&D plant, such as the investment in distribution mains.

A revised average and excess demand method should be utilized instead. The base or average demand should be based on the average daily sales and transport volumes for the year. The excess demand, as above, would be determined

by subtracting this base demand from the NCP demand. I have performed such a study with the following results. The weighted percentage of base (31%) and excess (69%) demands that result from this method should be used respectively to allocate the customer-related and non-coincident demand-related portions of each class' general T&D plant.

Q DOES AN NCP METHOD SUCH AS AVERAGE AND EXCESS DEMAND METHOD ACCURATELY REFLECT THE USAGE OF THE SYSTEM AT SYSTEM PEAK?

A In the sense that any method other than coincident peak (CP) reflects both the usage and timing of the peaks on the system, only a coincident method that measures the actual use of the system at the actual time system peaks occur would accurately reflect that usage profile.

Q WHY THEN HAVE YOU CHOSEN TO USE AN NCP METHOD AS A BASIS FOR YOUR RECOMMENDATION?

A Even an allocation approach that is blind to seasonality of usage such as NCP indicates that there is a substantial subsidy in the present rates from the larger higher load factor classes to the residential class. Reflecting the coincident use of the system would only reveal larger subsidies and would not alter the direction of the correction that should be applied.

Q HAVE YOU ALSO PREPARED A CLASS COST OF SERVICE STUDY?

A Yes. I reviewed UE's filed study and made changes in UE's class cost of service study. This revised study incorporated the revised base and excess demand referenced above and the weighted percentage to allocate T&D plant. In doing so,

the increase proposed by UE has been utilized. However, this should not be viewed or taken as an endorsement of that level of overall revenue.

Q DOES THIS CLASS COST OF SERVICE STUDY ADDRESS ALL COST ALLOCATION ISSUES?

A No. Even with the changes to the cost of service study I propose, there is still a concern with the proper allocation of the cost of mains, services, meters, and regulators to the Transportation and Interruptible classes. UE's filed cost of service study allocated too much of these costs to these classes.

Q PLEASE EXPLAIN WHY YOU BELIEVE TOO MUCH OF THESE COSTS ARE ALLOCATED TO THESE CLASSES.

A Pursuant to MGUA's Data Request No. 45, I received a Distribution Inventory (DI) Study that was a redacted version of the DI Study. It appears that a non-redacted copy was previously provided to the Office of Public Counsel in response to Office of Public Counsel Data Request No. 79. I am attaching as **Schedule 6** to my testimony what was received. The attached version is not highly confidential since it does not include customer-specific information. The DI Study provides information on the specific on-site facilities and equipment used by the Company in providing gas delivery service to each of its individual Interruptible and Transportation Rate customers. The DI Study accurately reflects the Company's investment in customer specific equipment such as services, meters, and regulators. The Company developed an updated cost of service study based on the DI Study. UE, in response to MGUA's Data Request No. 23, produced this study as part of Witness Phil Difani's workpapers supporting his Supplemental Direct Testimony (see **Schedule 7**). This

information improves the accuracy of the Company's allocated class cost of service study because these T&D costs can be directly assigned to the specific customer or customer group. This eliminates the need to allocate these costs to these classes. Direct assignment of these costs is more accurate than any form of cost allocation. The updated cost of service study indicates that the filed cost of service study was allocating too much cost to the Interruptible and Transportation classes.

Q WHAT DO YOU RECOMMEND WITH RESPECT TO THE DI STUDY AND THE UPDATED COST OF SERVICE STUDY?

A I recommend that the DI study be adopted and used to directly assign T&D investment to the Interruptible and Transport classes. I recommend that UE's revised cost of service study be modified in the same manner as I proposed the filed cost of service study be modified. Our revised cost of service study should be used to determine the rates for the customer classes in this case.

Q HOW DO THE PRESENT REVENUES OF THE CLASSES RELATE TO THE COST RESPONSIBILITIES INDICATED BY THE COMPANY'S REVISED COST OF SERVICE STUDY?

A **Schedule 8-1** shows the rate base, operating income, rate of return, and index of return based on UE's revised cost of service study, based on the DI Study. This study indicates that IS, GS, and TS customers are currently providing above-average returns, and revenues in excess of the costs they impose on the system. The residential customers, however, do not provide revenues sufficient to cover their share of the system cost.

Q WHAT IS THE RELATIVE RATE OF RETURN FOR THE TRANSPORTATION CUSTOMER CLASS UNDER PRESENT RATES?

A Under the present rates, the transportation service customers provide a relative rate of return of 48.76%. With an index of 996, the TS class rate of return is almost ten times the test year system average under present rates. Thus, the average charge for TS was $1.06/Mcf higher than that necessary to provide a return equal to the average return of UE. This amounts to $3,950,934 per year as set forth on **Schedule 8-2**.

Q HAVE YOU PREPARED A REVISED CLASS COST OF SERVICE STUDY TO REFLECT THE SAME CHANGES PROPOSED ABOVE TO UE'S REVISED COST OF SERVICE STUDY?

A Yes. I reviewed UE's revised study and made the same changes in UE's revised class cost of service study as proposed above to the filed study. This revised study was utilized to prepare the same comparisons as shown in the schedules cited above and to prepare MGUA's recommended rates. In doing so, the increase proposed by UE has been utilized. However, this should not be viewed or taken as an endorsement of that level of overall revenue.

Q HOW DO THE PRESENT REVENUES OF THE CLASSES RELATE TO THE COST RESPONSIBILITIES INDICATED BY MGUA'S REVISED COST OF SERVICE STUDY?

A **Schedule 9-1** shows the rate base, operating income, rate of return and index of return based on MGUA's revised cost of service study, based on the DI Study. This study indicates that IS, GS, and TS customers are currently providing above-average returns, and revenues in excess of the costs they impose on the system. The residential

customers, however, do not provide revenues sufficient to cover their share of the system cost.

Q WHAT IS THE RELATIVE RATE OF RETURN FOR THE TRANSPORTATION CUSTOMER CLASS UNDER PRESENT RATES?

A Under the present rates, the transportation service customers provide a relative rate of return of 63.53%. With an index of 1297, the TS class rate of return is almost 13 times the test year system average under present rates. Thus, the average charge for TS was $1.16/Mcf higher than that necessary to provide a return equal to the average return of UE. This amounts to $4,332;489 per year as set forth on **Schedule 9-2**.

Q HOW WOULD THE INCREASE IN REVENUES BE SPREAD AMONG THE CUSTOMER CLASSES?

A Consistent with the current variation from cost as shown by MGUA's revised class cost of service study, MGUA proposes that rates for the interruptible and transportation customers be reduced to bring them to cost. The requested increase is spread among the other rate schedules as set forth on **Schedule 10**. The average rate reduction for the interruptible and transportation customers is also set forth on **Schedule 10**.

Q WHAT IMPACT DOES THE PROPOSED RATE INCREASE HAVE ON MGUA'S CLASS COST OF SERVICE RESULTS?

A Since there is a proposed decrease in the interruptible and the transportation revenues to cost of service, the rate of return is 10.32% under MGUA's study for all classes. Since the total Company average return also increases to 10.32% according to the UE proposal, the index of return for all classes is 100. The results of the adjusted MGUA study under proposed rates are summarized on **Schedule 11**.

Recommendation for Cost-Based Rates

Q DO YOU HAVE A RECOMMENDATION FOR RATES BASED ON COST OF SERVICE?

A Yes. It is my recommendation that the rates for all of the services provided by UE be adjusted to reflect the cost of providing the services as determined in the DI Study and shown in the revised MGUA cost of service study. Also, I believe it is important that the rates be moved to cost so as to resolve the inequities that are created by rates that are not based upon costs. This should include moving the customer charges for the TS classes closer to the full recovery of all customer-related costs as quantified in the cost of service studies. The remainder of the TS class costs should be recovered in a two-block rate design similar to that proposed by UE. The blocks should be split also as proposed by UE.

Q WHAT IS YOUR RECOMMENDED RATES FOR THE TRANSPORTATION CLASS?

A For the Standard Transportation class, I recommend a customer charge of $60 per month and a first block throughput charge of $0.0515 per Ccf and a second block throughput charge of $0.0324 per Ccf. For the Large Volume Transportation class, I recommend a customer charge of $1,735 per month and a first block throughput charge of $0.0515 per Ccf and a second block throughput charge of $0.0270 per Ccf. See **Schedule 12** for a summary of these rates and a comparison to UE current, filed, and revised rates. These rates or charges are all based on the Company's full revenue increase and would decrease if the full revenue request was not approved. The rates for the interruptible transportation class would have to be developed to reflect the fact that the service provided is not firm, unlike the Standard and Large Volume TS, which are firm. The rates should also be lower than the firm rates.

1 **Q DOES THIS CONCLUDE YOUR TESTIMONY?**

2 A Yes, it does.

Qualifications of John W. Mallinckrodt

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A John W. Mallinckrodt. My business mailing address is 723 Gardner Road, Flossmoor, Illinois 60422.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and am employed by Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I hold a Bachelor's degree in Engineering from the University of Missouri, and a Master of Business Administration degree from the University of Chicago.

From 1969 through 1989, I was employed by Natural Gas Pipeline Company of America (NGPL), a subsidiary of MidCon Corporation. At NGPL, the positions I held included Assistant Vice President of Engineering and Assistant Vice President of Planning. My responsibilities as AVP of Engineering included system design, storage reservoir engineering, code compliance and environmental matters. As AVP of Planning I was responsible for strategic and business planning for the Company. During my years with MidCon/Peoples Energy, I also worked for The Peoples Gas Light and Coke Company as Field Superintendent of Distribution and Administrative Assistant to the President. I also have experience in pipeline design, construction and operations.

In 1989, I was employed by K&W Design/Construction as General Manager of Engineering and Construction. I directed the engineering, design and construction of projects for major food, pharmaceutical and petrochemical client companies.

I joined the firm of Drazen-Brubaker & Associates, Inc. (DBA) in June of 1991. In April 1995 the firm of Brubaker & Associates, Inc. was formed. It includes most of the former DBA principals and staff. Since 1991 I have been engaged in the preparation of studies relating to utility rate matters and have participated in interstate pipeline, intrastate pipeline, oil pipeline, gas distribution and electric rate cases.

In addition to our main office in St. Louis, the firm also has branch offices in Kerrville, Texas; Plano, Texas; Denver, Colorado; and Chicago, Illinois.

Q HAVE YOU PREVIOUSLY APPEARED BEFORE A REGULATORY COMMISSION OR A PUBLIC AUTHORITY?

A I have submitted testimony and appeared before the Federal Energy Regulatory Commission, the Delaware Public Service Commission, the Iowa Utilities Board and the Public Utility Commission of Texas. In addition, I have submitted testimony in cases before the Illinois Commerce Commission, the Louisiana Public Service Commission, and the Missouri Public Service Commission.

Q ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

A I am a registered professional engineer in the State of Illinois.

UNION ELECTRIC COMPANY

Load Factors by Customer Class
Test Year Ended June 30, 1999

Line	Customer Class	Annual Sales (Therms) (1)	Average Daily Usage (Therms) (2)	Peak Daily Usage (Therms) (3)	Load Factor (4)
1	Residential	75,610,384	207,152	767,019	27.01%
2	General	43,377,210	118,842	411,831	28.86%
3	Interruptible	6,366,027	17,441	31,842	54.77% [1]
4	Transportation	37,407,121	102,485	209,246	48.98%
5	Total	162,760,742	445,920	1,419,938	31.40%

[1] The actual load factor for the interruptible class is very large when curtailability is recognized. However, the peak daily usage for the interruptible class, which does not recognize the right of UE to curtail usage, produced a 55% load factor for the interruptible class. This interruptible load factor is, therefore, for comparative illustration only.

Schedule 1
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Average Monthly Usage per Customer
Test Year Ended June 30, 1999

Line	Customer Class	Annual Sales (Therms) (1)	Average Number of Customers (2)	Average Monthly Use per Customer (Therms) (3)
1	Residential	75,610,384	94,695	67
2	General	43,377,210	11,682	309
3	Interruptible	6,366,027	19	27,921
4	Transportation	37,407,121	83	37,445
5	Total	162,760,742	106,480	127

Schedule 2
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Class Cost-of-Service Study
under Present Rates
Rate Base, Operating Income, Rate of Return
and Index of Return
Test Year Ended June 30, 1999

Line	Customer Class	Rate Base (1)	Operating Income (2)	Rate of Return (3)	Index of Return (4)
1	Residential	$90,474,342	$1,260,229	1.39%	28
2	General	$33,086,850	$3,181,983	9.62%	196
3	Interruptible	$1,773,122	$396,291	22.35%	456
4	Transportation	$10,835,308	$1,830,990	16.90%	345
5	Total	$136,169,622	$6,669,492	4.90%	100

Schedule 3-1
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Class Cost-of-Service Study
under Present Rates
Variation from Cost of Service
Compared to Current Revenues
Test Year Ended June 30, 1999

Line	Customer Class	Current Rate Revenue (1)	Variation From Cost (2)	Percent Variation From Cost (3)
1	Residential	$22,919,683	($5,181,350)	-22.61%
2	General	$9,547,166	$2,551,203	26.72%
3	Interruptible	$765,530	$505,603	66.05%
4	Transportation	$3,940,498	$2,124,544	53.92%
5	Total	$37,172,878	$0	0.00%

Schedule 3-2
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Company Proposed Increase per Cost of Service Study
Test Year Ended June 30, 1999

Line	Customer Class	Present Rate Revenue (1)	Proposed Revenue (2)	Proposed Increase Amount (3)	Proposed Increase Percent (4)
1	Residential	$22,919,683	$34,254,480	$11,334,796	49.5%
2	General	$9,547,166	$10,793,220	$1,246,054	13.1%
3	Interruptible	$765,530	$609,886	-$155,644	-20.3%
4	Transportation	$3,940,498	$3,583,228	-$357,270	-9.1%
5	Total	$37,172,878	$49,240,814	$12,067,936	32.5%

Schedule 4
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Class Cost-of-Service Study
Rate Base, Operating Income, Rate of Return
and Index of Return Under Proposed Rates
Test Year Ended June 30, 1999

Line	Customer Class	Rate Base (1)	Operating Income (2)	Rate of Return (3)	Index of Return (4)
1	Residential	$90,474,342	$9,338,762	10.32%	100
2	General	$33,086,850	$3,415,225	10.32%	100
3	Interruptible	$1,773,122	$183,022	10.32%	100
4	Transportation	$10,835,308	$1,118,420	10.32%	100
5	Total	$136,169,622	$14,055,428	10.32%	100

Schedule 5
John W. Mallinckrodt

AmerenUE's Response to
Office of the Public Counsel Data Request
Case No. GR-2000-512

No. 79:
Please provide all workpapers and supporting materials for the "Distribution Inventory Study". If available, please also provide the "Distribution Inventory Study" for each operating district.

Response:

See attached summary file <DatasummaryFinal.xls>. Electronic files from the districts are also included.

Signed By: Phil DiFani
Prepared By: Phil DiFani
Title: Senior Rate Engineer

HIGHLY CONFIDENTIAL

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data		Meter Cost			Regulator Cost			Valve Cost		
	Customer Name/Address	Account Number	Inst. Date	Original Cost	Depreciation Reserve	Inst. Date	Original Cost	Depreciation Reserve	Inst. Date	Original Cost	Depreciation Reserve
		1210002119	1993	568.40	81.28	1993	175.82	17.37			
		1210002119									
		9011009811	1973	969.47	565.20	1973	761.92	306.90			
		9011009811									
		9011009811									
		2001005911	1992	$ 9,414.35	1,553.37	1992	$ 1,287.89	146.82	1992	8,218.35	1,608.74
		3230008716	1993	3,079.45	440.36	1993	395.75	39.10			
		4951004710	1998	$ 1,159.54	38.26	1998	$ 3,542.18	80.76			
		190002418	1997	$ 1,191.89	65.55	1997	$ 1,680.49	63.86			
		411008519	1997	1,077.25	59.25	1979	262.35	81.75			
		601005117	1997	1,191.89	65.55	1997	1,491.94	56.69			
		601005117									
		5730008410	1997	3,912.80	215.20	1997	357.04	13.57			
		5730008410									
		5730008410									
		6051006911	1967	914.47	653.85	1967	372.43	183.98			
		6051006911									
		6051006911									
		5201005013	1999	$ 1,912.94	21.04	1999	$ 515.03	3.91			
		7701006812	1995	4,093.39	405.25	1991	175.82	22.72			
		7701006812									
		5620003114	1994	$ 1,526.84	184.75	1994	$ 1,659.83	138.76			
		4290008210	1988	$ 3,142.37	795.02	1988	$ 1,287.89	225.12			
		4290008210									
		4690003412	1965	873.99	663.36	1965	65.52	34.36			
		4690003412	Unknown			Unknown					
		8550002111	1997	4,679.51	257.37	1997	714.08	27.14			
		8550002111									
		8550002111									
		570008816	1972	2,659.67	1,609.10	1972	3,580.28	1,496.56	1972	910.73	653.68
		570008816					(1998 price				
		570008816									
		3411008810	1997	2,105.04	115.78	1997	714.08	27.14			
		3411008810									
		5880005611				Pre - 1978					
		5880005611	1978	680.09	321.68	1978	152.76	49.92			
		Totals (I)	19	$ 45,153	$ 8,111		$ 19,193	$ 3,016		$ 9,129	$ 2,262

Schedule 6
Page 2 of 15
John W. Mallinckrodt

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Customer Data: Account Number	Services Cost: Inst Date	Services Cost: Original Cost	Services Cost: Depreciation Reserve
		1210002119	1993	448.20	118.28
		1210002119			
		9011009811	1973	1,371.12	1,371.12
		9011009811			
		9011009811			
		2001005911	1992	$ 9,925.32	3,022.26
		3230008716	1993	1,079.65	284.92
		4951004710	1998	$ 3,170.37	193.08
		190002418	1994	$ 14,819.73	3,309.25
		411008519	1978	10,810.80	9,436.75
		601005117	1991	1,236.00	426.54
		601005117			
		5730008410	1997	669.15	67.92
		5730008410			
		5730008410			
		6051006911	1967	61.20	61.20
		6051006911			
		6051006911			
		5201005013	1986	$ 3,795.33	2,080.22
		7701006812	1991	12,562.90	4,335.46
		7701006812	1994	3,658.62	816.97
		5620003114	1990	$ 2,779.68	1,072.12
		4290008210	1988	$ 2,565.20	1,197.69
		4290008210			
		4690003412			
		4690003412	1995	13,202.82	2,412.16
		8550002111	1982	1,497.27	1,063.81
		8550002111			
		8550002111			
		570008816	1971	4,643.73	4,643.73
		570008816	1987	2,444.83	1,240.75
		570008816			
		3411008810	1976	10,579.40	10,093.81
		3411008810			
		5880005611	1978	6,571.88	5,736.59
		5880005611	1983	1,521.00	1,018.92
		Totals (l)		**$ 109,414**	**$ 54,004**

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Account Number	Meter Cost: Inst. Date	Original Cost	Depreciation Reserve	Regulator Cost: Inst. Date	Original Cost	Depreciation Reserve	Valve Cost: Inst. Date	Original Cost	Depreciation Reserve
N.A.											
S.C.		3050009815	1970-72			1970	$ 859.78	385.53	1970	$ 3,508.36	2,701.26
S.C.		3050009815				1970	$ 115.75	51.90	1970	$ 652.00	502.01
S.C.		3050009815							1970	$ 1,276.20	982.61
S.C.		3050009815							1970	$ 461.67	355.46
S.C.		3050009815							1970	$ 1,618.62	1,246.26
S.C.		5343028007	1999	$ 1,912.94	$ 21.04	1999	$ 3,542.18	26.92			
		Totals (S.C.)		**$ 1,913**	**$ 21**		**$ 4,518**	**$ 464**		**$ 7,517**	**$ 5,788**

Schedule 6
Page 4 of 15
John W. Mallinckrodt

T		4251005411	1997	$ 6,198.44	340.91	1997	$ 3,251.29	123.55	1997	unknown	
T		4351005311	1980	$ 4,977.40	2,135.30	1980	$ 808.89	239.75			
T		8251005818	1980	$ 1,582.63	678.95	1980	$ 808.89	239.75			
T		5351005418	1980	$ 1,582.63	678.95	1980	$ 102.96	30.52			

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Customer Data: Account Number	Services Cost: Inst Date	Services Cost: Original Cost	Services Cost: Depreciation Reserve
N.A.					
S.C.		3050009815	1970	$ 135.75	135.75
S.C.		3050009815	1970	$ 1,870.00	1,870.00
S.C.		3050009815			
S.C.		3050009815			
S.C.		3050009815			
S.C.		5343028007	1998	$ 1,840.86	112.11
		Totals (S.C.)		**$ 3,847**	**$ 2,118**
T		4251005411	1997	$ 8,357.50	848.29
T		4351005311	1980	$ 862.29	682.67
T		8251005818	1980	$ 934.65	739.96
T		5351005418	1980	$ 603.00	477.40

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Customer Data: Account Number	Meter Cost: Inst. Date	Meter Cost: Original Cost	Meter Cost: Depreciation Reserve	Regulator Cost: Inst. Date	Regulator Cost: Original Cost	Regulator Cost: Depreciation Reserve	Valve Cost: Inst. Date	Valve Cost: Original Cost	Valve Cost: Depreciation Reserve
T		2951004516	1998	$ 2,371.55	78.26	1971	$ 812.29	351.88			
T		2951004516				1971	$ 812.29	351.88			
T		6551005314	1995	$ 2,912.43	288.33	1995	$ 297.82	20.37			
T		2651005913	1996	$ 6,198.44	477.28	1970	$ 671.65	301.17			
T		4151005510	1989	$ 3,126.63	722.25	1989	$ 368.81	58.86			
T		5151005617	1994	$ 3,498.60	423.33	1994	$ 1,032.07	86.28			
T		7751005211	1990	116.03	24.25	1990	1,108.54	160.07			
T		7751005211									
T		6751005114	1990	2,885.04	602.97	1990	1,108.54	160.07			
T		6751005114									
T		8351005718	1996	$ 2,563.15	197.36	1980	$ 808.89	239.75			
T		8351005718				1980	$ 102.96	30.52			
T		4951005817	1999	23,651.03	260.16	1999	714.08	5.43	1999	624.19	8.15
T		4951005817				1999					
T		4951005817				1999					
T		9751005415	1992	6,855.80	1,131.21	1992	1,974.74	225.12			
T		9751005415								1,874.56	910.73
T		5551005217	1980	$ 4,977.40	2,135.30	1980	$ 106.60	31.60			
T		1151005210	1998	$ 2,371.55	78.26	1998	$ 334.56	7.63			
T		851004413	1986	$ 2,288.71	679.75	1986	$ 861.86	176.85			
T		6651005214	1997	$ 2,105.03	115.78	1997	$ 3,542.18	134.60			
T		6651005214	1996	$ 3,912.80	301.29	1996	$ 4,041.06	214.98			
T		4051005610	1994	$ 3,498.60	423.33	1994	$ 1,032.07	86.28			
T		4051005610									
T		751005619	1970	$ 761.28	494.07	1970	$ 109.99	49.32			
T		7351005611	1985	$ 3,024.24	964.73	1985	$ 241.87	53.31			
T		7251005711	1990	$ 3,518.90	735.45	1990	$ 933.16	134.75			
T		7251005711				1990	$ 933.16	134.75			
T		2351005117	1990	$ 3,518.90	735.45	1990	$ 933.16	134.75			
T		6251005614	1997	$ 1,191.89	65.55	1997	$ 622.05	23.64			
T		3251005314	1985	$ 1,594.98	508.80	1985	$ 241.87	53.31			
T		8651005418	1999	$ 1,159.54	12.75	1999	$ 515.03	3.91			
T		6351005514	1985	$ 1,594.98	508.80	1985	$ 241.87	53.31			
T		351005011	1987	$ 997.36	274.27	1987	$ 354.45	67.35			
T		3151005414	1985	$ 2,885.04	920.33	1985	$ 885.43	195.15			
T		3451005114	1997	$ 1,191.89	65.55	1997	$ 622.05	23.64			
T		6151005714	1996	$ 2,563.15	197.36	1985	$ 682.16	150.35			
T		3851005810	1994	926.51	112.11	1995	438.40	29.99			
T		8951005118	1997	3,912.80	215.20	1989	406.21	64.83			
T		8951005118									
T		3951004613	1993	$ 8,979.21	1,284.03	1993	$ 1,287.89	127.24			
T		720003616	1998	$ 4,610.19	152.14	1998	$ 3,542.18	80.76			
T		5251005517	1995	$ 2,912.43	288.33	1982	$ 157.48	41.89			
T		2751005813	1985	$ 2,182.14	696.10	1985	$ 529.55	116.71			
T		2751005813	1975	$ 1,077.25	580.64	1975	$ 326.56	121.61			
T		8150003618	1999	1,523.11	16.75	1999	357.04	2.71			

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data		Services Cost		
	Customer Name/Address	Account Number	Inst Date	Original Cost	Depreciation Reserve
T		2951004516	1971	$ 22,281.00	22,281.00
T		2951004516			
T		6551005314	1995	$ 150.40	27.48
T		2651005913	1990	$ 5,193.50	2,003.13
T		4151005510	1989	$ 14,161.00	6,036.83
T		5151005617	1994	$ 12,328.70	2,753.00
T		7751005211	1990	149.22	57.55
T		7751005211			
T		6751005114	1990	149.22	57.55
T		6751005114			
T		8351005718	1996		
T		8351005718			
T		4951005817	1983	18,557.40	12,431.60
T		4951005817	1999	40,044.40	812.90
T		4951005817			
T		9751005415	1992	19,060.00	5,803.77
T		9751005415			
T		5551005217	1980	$ 74.88	59.28
T		1151005210	1998	$ 2,029.30	123.58
T		851004413	1986	$ 1,296.00	710.34
T		6651005214	1989	$ 5,170.50	2,204.18
T		6651005214	1966	$ 18.05	18.05
T		4051005610	1994	$ 14,819.86	3,309.27
T		4051005610			
T		751005619	1970	$ 103.29	103.29
T		7351005611	1985	$ 8,321.37	4,898.79
T		7251005711	1980	$ 1,086.00	859.79
T		7251005711			
T		2351005117	1980	$ 1,020.84	808.20
T		6251005614	1989	$ 1,750.01	746.03
T		3251005314	1993	$ 3,194.00	842.90
T		8651005418	1991	$ 4,977.72	1,717.81
T		6351005514	1985	$ 1,650.75	971.80
T		351005011	1987	$ 2,617.50	1,328.38
T		3151005414	1985	$ 3,952.00	2,326.54
T		3451005114	1981	$ 955.90	717.98
T		6151005714	1980	$ 84.28	66.72
T		3851005810	1995	398.70	72.84
T		8951005118	1989	3,710.00	1,581.57
T		8951005118			
T		3951004613	1993	$ 1,039.60	274.35
T		720003616	1998	$ 46,728.00	2,845.74
T		5251005517	1982	$ 497.90	353.76
T		2751005813	1985	$ 1,813.90	1,067.84
T		2751005813	1975	$ 5,511.60	5,482.39
T		8150003618	1976	402.36	383.89

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data		Meter Cost			Regulator Cost			Valve Cost		
	Customer Name/Address	Account Number	Inst. Date	Original Cost	Depreciation Reserve	Inst. Date	Original Cost	Depreciation Reserve	Inst. Date	Original Cost	Depreciation Reserve
T		8150003619									
T		851005519	1986	554.28	164.62	1986	683.99	140.35			
T		851005519									
T		7051005911	1975	1,933.82	1,042.33	1975	720.57	268.34			
T		651005719	1985	$ 1,594.98	508.80	1985	$ 374.59	82.56			
T		1751005716	1982	$ 2,013.86	775.34	1982	$ 1,059.10	281.72			
T		7151005811	1998	$ 831.93	27.45	1998	$ 505.94	11.54			
T		7151005811				1998	$ 505.94	11.54			
T		3951005710	1998	926.51	30.57	1966	86.81	44.20			
T		3951005710				1966	86.81	44.20			
T		3751005910	1978	$ 1,582.63	748.58	1978	$ 173.61	56.74			
T		5851005015	1997	1,267.20	69.70	1997	1,491.94	56.69		4851.78	910.73
T		5851005015									
T		8851005218	1965	873.99	663.36	1965					
T		8851005218									
T		151005113	1997	$ 3,912.80	215.20	1997	$ 4,528.63	172.09			
T		151005113				1997	$ 334.56	12.71			
T		2151005317	1990	$ 2,885.04	602.97	1990	$ 998.60	144.20			
T		2151005317									
T		1951004410	1998	$ 1,159.54	38.26	1992	$ 1,365.52	155.67			
T		1951004410				1992	$ 1,365.52	155.67			
T		6851004015	1985	$ 2,182.14	696.10	1985	$ 186.49	41.10			
T		6851004015				1985	$ 186.49	41.10			
T		2051005417	1989	$ 4,276.21	987.80	1989	$ 368.81	58.86			
T		3051005513	1989	$ 997.36	230.39	1989	$ 998.60	159.38			
T		2051005417									
T		3051005513				1989	$ 998.60	159.38			
T		3851004713	1994	$ 1,526.84	184.75	1994	$ 1,659.83	138.76			
T		3851004713					$ 1,127.58	1,127.58			
T		2251005217	1991	$ 1,019.87	190.72	1991	$ 768.71	99.32			
T		2851005713	1995	1,526.84	151.16	1995	395.75	27.07			
T		2851005713				1995	438.40	29.99			
T		5051005717	1995	5,555.31	549.98						
T		9551005614	1997	$ 2,105.03	115.78	1997	$ 669.11	25.43			
T		1851005616	1990	1,174.90	245.55	1990	429.88	62.07			
T		1851005616									
T		2851004616	1999	$ 4,610.19	50.71	1999	$ 7,084.35	53.84			
T		2851004616				1999	$ 27.11	0.21			
T		1350009312	1998	4,610.19	152.14	1998	1,785.78	40.72			
T		1350009312									
T		6051005814	1985	$ 3,142.37	1,002.42	1985	$ 560.99	123.64			
T		6051005814									
T		7851005111	1968	341.91	236.94	1968	43.95	21.04			
T		7851005111									
T		7851005111									
T		9951005215	1996	3,912.80	301.29	1981	98.46	27.69			

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Customer Data: Account Number	Services Cost: Inst Date	Services Cost: Original Cost	Services Cost: Depreciation Reserve
T		8150003619			
T		851005519	1986	1,111.25	609.08
T		851005519			
T		7051005911	1992	$ 3,119.10	949.77
T		651005719	1985	$ 7,588.00	4,467.06
T		1751005716	1982	$ 9,996.00	7,102.16
T		7151005811	1981	$ 1,110.00	833.72
T		7151005811			
T		3951005710	1966	10,830.19	10,830.19
T		3951005710			
T		3751005910	1978	$ 1,700.30	1,484.19
T		5851005015			
T		5851005015	1997	25,600.00	2,598.40
T		8851005218	1965	53.00	53.00
T		8851005218			
T		151005113	1990	$ 11,625.45	4,483.94
T		151005113			
T		2151005317	1990	$ 1,579.75	609.31
T		2151005317			
T		1951004410	1992	$ 3,865.28	1,176.98
T		1951004410			
T		6851004015	1985	$ 4,200.30	2,472.72
T		6851004015			
T		2051005417	1989	$ 6,529.92	2,783.70
T		3051005513	1989	$ 4,994.10	2,128.98
T		2051005417			
T		3051005513			
T		3851004713	1984	$ 7,362.36	4,633.13
T		3851004713			
T		2251005217	1991	$ 731.36	252.39
T		2851005713	1995	3,987.00	728.42
T		2851005713			
T		5051005717	1995	$ 3,348.00	611.68
T		9551005614	1996	$ 21,189.12	3,010.97
T		1851005616	1990	895.32	345.32
T		1851005616			
T		2851004616	1999	$ 9,735.00	197.62
T		2851004616			
T		1350009312	1998	776.60	47.29
T		1350009312			
T		6051005814	1985	$ 3,919.00	2,307.12
T		6051005814			
T		7851005111	1968	4,009.00	4,009.00
T		7851005111			
T		7851005111			
T		9951005215	1981	14,914.80	11,202.51

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Account Number	Meter Cost: Inst. Date	Original Cost	Depreciation Reserve	Regulator Cost: Inst. Date	Original Cost	Depreciation Reserve	Valve Cost: Inst. Date	Original Cost	Depreciation Reserve
T		9951005215				1981	146.78	41.27			
T		9951005215									
T		8151005918	1995	$ 4,093.39	405.25	1995	$ 302.95	20.72			
T		1651005816	1998	$ 1,523.11	50.26	1990	$ 1,041.72	150.42			
T		1651005816				1990	$ 73.70	10.64			
T		5851004917	1996	$ 2,563.15	197.36	1996	$ 644.28	34.28			
T		4551005110	1991	$ 4,284.84	801.27	1991	$ 961.88	124.27			
T		5451005318	1980	$ 4,977.40	2,135.30	1980	$ 213.20	-63.19			
T		4451005211	1999	$ 786.09	8.65	1999	$ 515.03	3.91			
T		6451005415	1976	$ 1,077.25	556.94	1976	$ 126.13	45.05			
T		7451005511	1982	$ 2,013.86	775.34	1982	$ 847.05	225.32			
T		8451005618	1997	$ 1,267.20	69.70	1997	$ 622.05	23.64			
T		9451005715	1997	$ 1,267.20	69.70	1997	$ 622.05	23.64			
T		551005819	1979	$ 1,582.63	713.77	1997	$ 622.05	23.64			
T		551005819				1997	$ 622.05	23.64			
T		1551005916	1985	$ 1,083.16	345.53	1995	$ 1,195.29	81.76			
T		451005910	1992	$ 1,526.84	251.93	1992	$ 880.27	100.35			
T		1451005018	1997	$ 6,198.44	340.91	1992	$ 6,502.57	741.29			
T		1451005018									
T		7551005411	1992	$ 6,855.80	1,131.21	1992	$ 961.88	109.65			
T		9351005815	1997	$ 4,679.51	257.37	1997	$ 515.03	19.57			
T		9351005815				1997	$ 622.05	23.64			
T		1851004519	1996	$ 4,679.51	360.32	1996	$ 644.28	34.28			
T		9251005915	1995	$ 2,702.09	267.51	1998	$ 3,580.28	81.63	1998	N/A	
T		9251005915				1998	N/A		1998	$ 870.75	34.09
T		9251005915				1998	N/A				
T		8551005526	1986	$ 2,288.71	679.75	1986	$ 885.43	181.69			
T		3651005011	1988	$ 568.40	143.81	1988	$ 885.43	154.77			
T		2611000815	1998	$ 6,198.44	204.55	1998	$ 3,542.18	80.76			
T		2611000814	1999	$ 1,912.94	21.04	1999	$ 5,002.18	38.02			
		Totals (T)		**$ 258,448**	**$ 40,372**		**$ 103,753**	**$ 11,277**		**$ 8,221**	**$ 1,864**

Cost, By Category, For Large Missouri Gas Customers

Cust. Class	Customer Data: Customer Name/Address	Account Number	Services Cost: Inst Date	Original Cost	Depreciation Reserve
T		9951005215	1981	1,418.40	1,065.36
T		9951005215			
T		8151005918	1995	$ 11,049.64	2,018.77
T		1651005816	1990	$ 5,378.25	2,074.39
T		1651005816			
T		5851004917	1968	$ 212.00	212.00
T		4551005110	1991	$ 2,970.00	1,024.95
T		5451005318	1997	$ 112.00	11.37
T		4451005211	1999	$ 1,950.78	39.60
T		6451005415	1980	$ 298.65	236.44
T		7451005511	1982	$ 554.40	393.90
T		8451005618	1997	$ 105.00	10.66
T		9451005715	1997	$ 515.58	52.33
T		551005819	1997	$ 490.00	49.74
T		551005819			
T		1551005916	1985	$ 156.06	91.87
T		451005910	1992	$ 24,194.88	7,367.34
T		1451005018	1992	$ 3,690.24	1,123.68
T		1451005018			
T		7551005411	1992	$ 5,601.44	1,705.64
T		9351005815	1997	$ 17,280.56	1,753.98
T		9351005815			
T		1851004519	1966	$ 6,498.00	6,498.00
T		9251005915	1998	$ 260.10	15.84
T		9251005915			
T		9251005915			
T		8551005526	1986	$ 667.80	366.02
T		3651005011	1988	$ 4,188.00	1,955.38
T		2611000815	1998	$ 2,336.40	142.29
T		2611000814	1999	$ 15,576.00	316.19
		Totals (T)		**$ 526,331**	**$ 187,343**

USAGE BY MAIN SIZE FOR LARGE MISSOURI GAS CUSTOMERS

Cust. Class	Customer Data: Customer Name/Address	Account Number	Main Information: Main Size	CCF * **Peak
		1210002119	2"	380.9
		6051006911	2"	518
		5620003114	2"	994.8
		4690003412	2"	226
			2" Total	***2119.7***
		9011009811	3"	1934
		7701006812	3"	4958.8
		8550002111	3"	4333.8
		5880005611	3"	373
			3" Total	***11599.6***
		3230008716	4"	157.8
		4951004710	4"	2731.4
		190002418	4"	1000
		411008519	4"	464.9
		601005117	4"	816.2
		5201005013	4"	1401.3
		3411008810	4"	3045
			4" Total	***9616.6***
		4290008210	6"	3810.5
		570008816	6"	1280
			6" Total	***5090.5***
		2001005911	8"	1174.8
			8" Total	***1174.8***
		5730008410	10"	2445
			10" Total	***2445***
			Grand Total (I)	***32046.2***

*: CP for Transport on January 4, 1999. NCP for Interruptibles (Dec.98 +Jan99 usage / 40)

USAGE BY MAIN SIZE FOR LARGE MISSOURI GAS CUSTOMERS

Cust. Class	Customer Data: Customer Name/Address	Account Number	Main Information: Main Size	CCF * **Peak
T		5351005418	2"	803
T		6551005314	2"	12451
T		8351005718	2"	1935
T		751005619	2"	410
T		7251005711	2"	391
T		2351005117	2"	673
T		3451005114	2"	803
T		6151005714	2"	801
T		3851005810	2"	251
T		5251005517	2"	1765
T		851005519	2"	604
T		651005719	2"	490
T		7151005811	2"	169
T		3751005910	2"	1448
T		2151005317	2"	687
T		7851005111	2"	437
T		4451005211	2"	334
T		7451005511	2"	618
T		1551005916	2"	189
T		8551005526	2"	1687
			2" Total	***26946***
T		6651005214	3"	1067
T		8951005118	3"	4380
T		8150003618	3"	946
T		8150003619	3"	1014
T		1751005716	3"	797
T		3951005710	3"	2009
			3" Total	***10213***
T		8251005818	4"	647
T		4951005817	4"	15880
T		6651005215	4"	6144
T		7351005611	4"	6391
T		3251005314	4"	414
T		6351005514	4"	222
T		351005011	4"	733
T		3151005414	4"	1718
T		2751005813	4"	468
T		8851005218	4"	2173

USAGE BY MAIN SIZE FOR LARGE MISSOURI GAS CUSTOMERS

Cust. Class	Customer Data: Customer Name/Address	Customer Data: Account Number	Main Information: Main Size	CCF * **Peak
T		1951004410	4"	742
T		2051005417	4"	584
T		3851004713	4"	942
T		1851005616	4"	576
T		2851004616	4"	6472
T		6051005814	4"	2227
T		9951005215	4"	2427
T		1651005816	4"	854
T		4551005110	4"	678
T		1851004519	4"	5191
			4" Total	***55483***
T		4251005411	6"	9011
T		4351005311	6"	4716
T		2951004516	6"	6525
T		2651005913	6"	0
T		4151005510	6"	2523
T		5151005617	6"	2437
T		7751005211	6"	1536
T		6751005114	6"	1299
T		5551005217	6"	3764
T		851004413	6"	761
T		4051005610	6"	1297
T		6251005614	6"	396
T		8651005418	6"	778
T		3951004613	6"	9960
T		6851004015	6"	4198
T		3051005513	6"	1095
T		2251005217	6"	913
T		2851005713	6"	691
T		9551005614	6"	3707
T		6451005415	6"	431
T		551005819	6"	140
T		451005910	6"	3298
T		1451005018	6"	643
T		3651005011	6"	737
T		2611000815	6"	2520.4
			6" Total	***63376.4***
T		1151005210	7"	3547

USAGE BY MAIN SIZE FOR LARGE MISSOURI GAS CUSTOMERS

Customer Data			Main Information	
Cust. Class	Customer Name/Address	Account Number	Main Size	CCF * **Peak
T		151005113	7"	284
			7" Total	***3831***
T		9751005415	8"	20963
T		720003616	8"	4409
T		7051005911	8"	2940
T		1350009312	8"	2196.3
T		8151005918	8"	2028
T		5851004917	8"	2532
T		5451005318	8"	576
T		8451005618	8"	332
T		9451005715	8"	257
T		7551005411	8"	2736
T		9351005815	8"	7140
T		9251005915	8"	0
T		2611000814	8"	444.8
			8" Total	***46554.1***
T		5851005015	12"	846
			12" Total	***846***
			Grand Total (T)	***207249.5***

*: CP for Transport on January 4, 1999. NCP for Interruptibles (Dec.98 +Jan99 usage / 40)

**: Used an NCP for _____ and _____ since CP data was not available.

Schedule 6
Page 15 of 15
John W. Mallinckrodt

AmerenUE's Response to
Midwest Gas Users' Association Data Request
Case No. GR-2000-512

No. 23:

Please provide a detailed breakdown of the facilities included in any mains directly identified as providing service solely to any specific customer or group of customers. Please describe by pipe diameter and pressure system.

Response:

See the Supplemental Direct Testimony of Phil Difani as filed in this case and his supporting workpapers.

Prepared by: Phil Difani
Title: Sr. Engineer, Rate Analysis

12824

UNION ELECTRIC COMPANY

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: GROSS PLANT IN SERVICE - PAGE 1

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN SERVICE	INTERRUPTIBLE	TRANSPORT
1		MANUFACTURED GAS PRODUCTION PLANT						
2								
3	304	Land and Land Rights	A.F.1	$36,537	$23,764	$12,759	$14	$0
4	305	Structures and Improvements	A.F.1	267,109	$173,729	$93,279	$101	$0
5	306	Boiler Plant Equipment	A.F.1	0	$0	$0	$0	$0
6	311	Liquefied Petroleum Gas Equipment	A.F.1	2,127,343	$1,383,699	$742,941	$803	$0
7								
8		TOTAL MANUFACTURED GAS PROD. PLANT		$2,431,089	$1,581,192	$848,980	$917	$0
9								
10								
11								
12		TRANSMISSION PLANT						
13								
14	365	Land & Land Rights	A.F.4	$82,682	$52,460	$24,129	$937	$5,156
15	366	Structures and Improvements	A.F.4	0	$0	$0	$0	$0
16	367	Mains	A.F.4	1,508,243	$956,947	$440,141	$17,100	$94,055
17	369	Measuring & Regulating Stat. Equip.	A.F.4	35,554	$22,558	$10,375	$403	$2,217
18								
19								
20		TOTAL TRANSMISSION PLANT		$1,626,479	$1,031,966	$474,645	$18,440	$101,428
21								
22								
23		DISTRIBUTION PLANT						
24								
25	374	Land & Land Rights	A.F.4	$286,276	$181,636	$83,542	$3,246	$17,852
26	375	Structures & Improvements	A.F.4	40,016	25,389	11,678	454	2,495
27	376	Mains	A.F.4	95,280,229	60,453,236	27,805,018	1,080,237	5,941,738
28	378	Meas & Reg Equipment - General	A.F.4	2,880,818	1,827,816	840,691	32,661	179,650
29	379	Meas & Reg Equipment - City	A.F.4	600,822	381,209	175,334	6,812	37,468
30	380	Services	PLT380	83,160,150	53,871,782	6,646,623	109,414	526,331
31	381	Meters	PLT381	11,886,538	8,078,212	3,496,718	46,641	264,966
32	382	Meter Installation	PLT382	0	0	0	0	0
33	383	House Regulators	PLT383	7,462,274	4,771,175	3,091,099	0	0
34	384	House Regulators - Installations	PLT384	0	0	0	0	0
35	385	Meas & Reg - Industrial	PLT385	914,135	0	768,418	29,416	116,300
36	386	Property on Customer Premise	A.F.4	0	0	0	0	0
37	387	Other Equipment	A.F.4	0	0	0	0	0
38								
39		TOTAL DISTRIBUTION PLANT		$179,911,258	$128,596,455	$42,919,121	$1,308,881	$7,086,801
40								
41								
42								
43		TOTAL PROD, T&D PLANT		$183,968,826	$131,209,612	$44,242,746	$1,328,239	$7,188,229

Schedule 7
Page 2 of 19
John W. Mallinckrodt

01

UNION ELECTRIC COMPANY-MISSOURI

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: GROSS PLANT IN SERVICE - PAGE 2

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN SERVICE	INTERRUPTIBLE	TRANSPORT
1								
2		INTANGIBLE PLANT						
3								
4	301	Organization	A.F.10	$2,065	$1,489	$471	$17	$88
5	302	Franchises & Consents	A.F.10	0	$0	$0	$0	$0
6								
7		TOTAL INTANGIBLE PLANT		$2,065	$1,489	$471	$17	$88
8								
9								
10								
11		GENERAL PLANT						
12								
13	389	Land and Land Rights	A.F.10	$362,414	$261,381	$82,600	$2,985	$15,448
14	390	Structures and Improvements	A.F.10	4,321,434	$3,116,717	$984,919	$35,598	$184,199
15	391	Office Furniture and Equip	A.F.10	1,519,563	$1,095,944	$346,331	$12,518	$64,771
16	392	Transportation Equip	A.F.10	2,948,041	$2,126,195	$671,903	$24,285	$125,659
17	393	Stores Equip	A.F.10	91,422	$65,936	$20,836	$753	$3,897
18	394	Tools, Shop and Garage Equip	A.F.10	1,564,558	$1,128,395	$356,586	$12,888	$66,688
19	395	Laboratory Equip	A.F.10	116,510	$84,030	$26,554	$960	$4,966
20	396	Power Operated Equip	A.F.10	2,052,067	$1,479,998	$467,697	$16,904	$87,468
21	397	Communication Equip	A.F.10	577,389	$416,426	$131,596	$4,756	$24,611
22	398	Misc Equip	A.F.10	19,283	$7,488	$2,366	$86	$443
23								
24								
25		TOTAL GENERAL PLANT		$13,563,781	$9,782,510	$3,091,388	$111,733	$578,149
26								
27		TOTAL PROD, T&D, & GENERAL PLANT		$197,532,607	$140,992,122	$47,334,135	$1,439,972	$7,766,378
28								
29		TOTAL GROSS PLANT		$197,534,672	$140,993,611	$47,334,605	$1,439,989	$7,766,466
30								
31								
32		MATERIALS & SUPPLIES	A.F.5	$1,420,179	$1,015,111	$338,794	$10,332	$55,942
33		PROPANE COSTS	A.F.1	$329,032	$214,004	$114,904	$124	$0
34		GAS STORED UNDERGROUND	A.F.12	$11,796,340	$7,485,738	$4,294,521	$16,081	$0
35		MATERIALS, SUPPLIES, AND FUEL		$13,545,551	$8,714,853	$4,748,219	$26,537	$55,942
36								
37		PREPAYMENTS	A.F.15	$235,719	$168,248	$56,485	$1,718	$9,268
38								
39		OFFSETS	A.F.15	($3,090,619)	($2,205,980)	($740,595)	($22,530)	($121,514)
40								
41		CUSTOMER ADVANCES & DEPOSITS	A.F.5	($1,446,286)	($1,033,057)	($344,783)	($10,515)	($56,931)
42								
43		ACCUM DEFERRED INCOME TAXES	A.F.15	($13,027,926)	($10,048,279)	($3,373,425)	($102,625)	($553,498)
		TOTAL GROSS RATE BASE		$193,702,211	$136,589,396	$47,680,506	$1,332,575	$7,099,734

Schedule 7
Page 3 of 19
John W. Mallinckrodt

02

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_AJK

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: RESERVES FOR DEPRECIATION - PAGE 1

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN. SERVICE	INTERRUPTIBLE	TRANSPORT
1								
2		MANUFACTURED GAS PRODUCTION PLANT						
3								
4	304	Land and Land Rights	A.F.1	$0	$0	$0	$0	$0
5	305	Structures and Improvements	A.F.1	52,714	$34,285	$18,409	$20	$0
6	306	Boiler Plant Equipment	A.F.1	0	$0	$0	$0	$0
7	311	Liquefied Petroleum Gas Equipment	A.F.1	748,554	$486,863	$261,409	$282	$0
8								
9		TOTAL MANUFACTURERED GAS PROD. PLANT		$801,268	$521,148	$279,817	$302	$0
10								
11								
12		TRANSMISSION PLANT						
13								
14	365	Land & Land Rights	A.F.4	$0	$0	$0	$0	$0
15	366	Structures and Improvements	A.F.4	0	$0	$0	$0	$0
16	367	Mains	A.F.4	647,602	$410,889	$188,986	$7,342	$40,385
17	369	Measuring & Regulating Stat. Equip.	A.F.4	9,526	$6,044	$2,780	$108	$594
18								
19		TOTAL TRANSMISSION PLANT		$657,128	$416,933	$191,765	$7,450	$40,979
20								
21								
22		DISTRIBUTION PLANT						
23								
24	374	Land & Land Rights	A.F.4	$0	$0	$0	$0	$0
25	375	Structures & Improvements	A.F.4	10,477	$6,647	$3,057	$119	$653
26	376	Mains - Distribution Supply	A.F.4	16,662,275	$10,571,852	$4,862,445	$188,908	$1,039,071
27	378	Meas & Reg Equipment - General	A.F.4	1,265,289	$802,798	$369,241	$14,345	$78,906
28	379	Meas & Reg Euipment - City Gate	A.F.4	79,923	$50,712	$23,325	$906	$4,984
29	380	Services	PLT380	29,145,612	$25,730,079	$3,174,187	$54,004	$187,343
30	381	Meters	PLT381	5,299,436	$1,564,602	$677,251	$8,111	$40,372
31	382	Meter Installation	PLT382	0	$0	$0	$0	$0
32	383	House Regulators	PLT383	1,260,003	$692,437	$567,566	$0	$0
33	384	House Regulators - Installations	PLT384	0	$0	$0	$0	$0
34	385	Meas & Reg - Industrial	PLT385	102,035	$0	$83,616	$5,279	$13,140
35	386	Property on Customer Premises	A.F.4	0	$0	$0	$0	$0
36	387	Other Equipment	A.F.4	0	$0	$0	$0	$0
37								
38		TOTAL DISTRIBUTION PLANT		$50,815,954	$39,419,127	$9,760,687	$271,672	$1,364,468
39								
40								
41								
42		TOTAL PROD, T&D PLANT		$52,274,350	$40,357,209	$10,232,270	$279,424	$1,405,447

Schedule 7
Page 4 of 19
John W. Mallinckrodt

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK

UNION ELECTRIC COMPANY-MISSOURI
GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: RESERVES FOR DEPRECIATION - PAGE 2

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN SERVICE	INTERRUPTIBLE	TRANSPORT
1								
2		INTANGIBLE PLANT						
3								
4	301	Organization	A.F.10	$0	$0	$0	$0	$0
5	302	Franchises & Consents	A.F.10	0	$0	$0	$0	$0
6								
7		TOTAL INTANGIBLE PLANT		$0	$0	$0	$0	$0
8								
9								
10		GENERAL PLANT						
11								
12	389	Land and Land Rights	A.F.10	$0	$0	$0	$0	$0
13	390	Structures and Improvements	A.F.10	$274,375	$197,886	$62,534	$2,260	$11,695
14	391	Office Furniture and Equip	A.F.10	$146,477	$105,642	$33,384	$1,207	$6,243
15	392	Transportation Equip	A.F.10	$1,842,868	$1,329,119	$420,017	$15,181	$78,551
16	393	Stores Equip	A.F.10	$8,816	$6,358	$2,009	$73	$376
17	394	Tools, Shop and Garage Equip	A.F.10	$372,340	$268,540	$84,862	$3,067	$15,871
18	395	Laboratory Equip	A.F.10	$3,789	$2,733	$864	$31	$162
19	396	Power Operated Equip	A.F.10	$1,409,062	$1,016,248	$321,146	$11,607	$60,061
20	397	Communication Equip	A.F.10	$200,512	$144,614	$45,700	$1,652	$8,547
21			A.F.10	$0	$0	$0	$0	$0
22								
23		TOTAL GENERAL PLANT		$4,258,239	$3,071,140	$970,516	$35,078	$181,505
24								
25		TOTAL GEN. AND INT. PLANT		$4,258,239	$3,071,140	$970,516	$35,078	$181,505
26								
27		TOTAL PROD,T&D, GEN & INT PLANT		$56,532,589	$43,428,349	$11,202,786	$314,502	$1,586,952
28								
29								
30		MATERIALS & SUPPLIES	A.F.5	$0	$0	$0	$0	$0
31		PROPANE COSTS	A.F.1	$0	$0	$0	$0	$0
32		GAS STORED UNDERGROUND	A.F.12	$0	$0	$0	$0	$0
33		MATERIALS, SUPPLIES, AND FUEL		0	0	0	0	0
34								
35		PREPAYMENTS	A.F.15	$0	$0	$0	$0	$0
36								
37		OFFSETS	A.F.15	$0	$0	$0	$0	$0
38								
39		CUSTOMER ADVANCES & DEPOSITS	A.F.5	$0	$0	$0	$0	$0
40								
41		ACCUM DEFERRED INCOME TAXES	A.F.15	$0	$0	$0	$0	$0
42								
43								
44		RESERVES FOR DEPRECIATION		$56,532,589	$43,428,349	$11,202,786	$314,502	$1,586,952

Schedule 7
Page 5 of 19
John W. Mallinckrodt

UNION ELECTRIC COMPANY-MISSOURI

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: NET PLANT - PAGE 1

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN SERVICE	INTERRUPTIBLE	TRANSPORT
1								
2		MANUFACTURED GAS PRODUCTION PLANT						
3								
4	304	Land and Land Rights	A.F.1	$36,537	$23,764	$12,759	$14	$0
5	305	Structures and Improvements	A.F.1	$214,395	$139,444	$74,871	$81	$0
6	306	Boiler Plant and Equipment	A.F.1	$0	$0	$0	$0	$0
7	311	Liquefied Petroleum Gas Equipment	A.F.1	$1,379,692	$896,826	$481,533	$520	$0
8								
9		NET MANUFACTURED GAS PLANT		$1,629,821	$1,060,043	$569,163	$615	$0
10								
11								
12		TRANSMISSION PLANT						
13								
14	365	Land & Land Rights	A.F.4	$82,682	$52,460	$24,129	$937	$5,156
15	366	Structures and Improvements	A.F.4	$0	$0	$0	$0	$0
16	367	Mains	A.F.4	$860,641	$546,058	$251,155	$9,757	$53,670
17	369	Measuring & Regulating Stat. Equip.	A.F.4	$26,028	$16,514	$7,596	$295	$1,623
18								
19								
20		NET TRANSMISSION PLANT		$969,351	$615,032	$282,879	$10,990	$60,449
21								
22								
23		DISTRIBUTION PLANT						
24								
25	374	Land & Land Rights	A.F.4	$286,276	$181,676	$83,542	$3,246	$17,852
26	375	Structures & Improvements	A.F.4	$29,589	$18,782	$8,620	$335	$1,842
27	376	Mains	A.F.4	$28,617,954	$49,881,384	$22,942,573	$891,329	$4,902,668
28	378	Meas & Reg Equipment - General	A.F.4	$1,615,529	$1,025,018	$471,449	$18,316	$100,745
29	379	Meas & Reg Equipment - City	A.F.4	$520,895	$330,497	$152,009	$5,906	$32,483
30	380	Services	PLT380	$32,014,538	$28,147,703	$3,472,436	$55,411	$338,988
31	381	Meters	PLT381	$9,596,202	$6,513,610	$2,819,468	$38,530	$224,594
32	382	Meter Installation	PLT382	$0	$0	$0	$0	$0
33	383	House Regulators	PLT383	$5,602,271	$3,078,738	$2,523,533	$0	$0
34	384	House Regulators - Installations	PLT384	$0	$0	$0	$0	$0
35	385	Meas & Reg - Industrial	PLT385	$812,100	$0	$684,803	$24,137	$103,160
36	386	Property on Customer Premises	A.F.4	$0	$0	$0	$0	$0
37	387	Other Equipment	A.F.4	$0	$0	$0	$0	$0
38								
39		NET DISTRIBUTION PLANT		$129,095,304	$89,177,327	$33,158,434	$1,037,209	$5,722,333
40								
41								
42								
43		NET PROD, T&D PLANT		$131,691,476	$90,852,403	$34,010,476	$1,048,814	$5,782,783

Schedule 7
Page 6 of 19
John W. Mallinckrodt

UNION ELECTRIC COMPANY-MISSOURI

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_BOK

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: NET PLANT - PAGE 2

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	MISSOURI TOTAL	RESIDENTIAL	GEN SERVICE	INTERRUPTIBLE	TRANSPORT
1								
2		INTANGIBLE PLANT						
3								
4	301	Organization	A.F. 10	$2,065	$1,489	$471	$17	$88
5	302	Franchises & Consents	A.F. 10	$0	$0	$0	$0	$0
6								
7		TOTAL INTANGIBLE PLANT		$2,065	$1,489	$471	$17	$88
8								
9								
10		GENERAL PLANT						
11								
12	389	Land and Land Rights	A.F. 10	$362,414	$261,381	$82,600	$2,985	$15,448
13	390	Structures and Improvements	A.F. 10	$4,047,059	$2,918,832	$922,385	$33,338	$172,504
14	391	Office Furniture and Equip	A.F. 10	$1,373,080	$990,301	$312,947	$11,311	$58,527
15	392	Transportation Equip	A.F. 10	$1,105,179	$797,076	$251,885	$9,104	$47,107
16	393	Stores Equip	A.F. 10	$82,606	$59,578	$18,827	$680	$3,521
17	394	Tools, Shop and Garage Equip	A.F. 10	$1,192,218	$859,855	$271,724	$9,821	$50,818
18	395	Laboratory Equip	A.F. 10	$112,721	$81,297	$25,691	$929	$4,805
19	396	Power Operated Equip	A.F. 10	$643,005	$463,750	$146,550	$5,297	$27,408
20	397	Communication Equip	A.F. 10	$376,877	$271,813	$85,896	$3,105	$16,064
21	398	Misc Equip	A.F. 10	$10,383	$7,488	$2,366	$86	$443
22								
23								
24		TOTAL GENERAL PLANT		$9,305,542	$6,711,370	$2,120,872	$76,656	$396,644
25								
26		TOTAL PROD,T&D & GEN PLANT		$141,000,018	$97,563,773	$36,131,349	$1,125,470	$6,179,426
27								
28		TOTAL NET PLANT		$141,002,083	$97,565,262	$36,131,819	$1,125,487	$6,179,515
29								
30								
31		MATERIALS & SUPPLIES	A.F.5	$1,420,179	$1,015,111	$338,794	$10,332	$55,942
32		PROPANE COSTS	A.F.1	$329,037	$274,004	$114,904	$124	$0
33		GAS STORED UNDERGROUND	A.F.12	$11,796,330	$7,885,736	$4,294,521	$16,081	$0
34		MATERIALS, SUPPLIES, AND FUEL		$13,545,554	$9,174,852	$4,748,219	$26,537	$55,942
35								
36		PREPAYMENTS	A.F.15	$230,319	$166,248	$56,485	$1,718	$9,268
37								
38		OFFSETS	A.F.15	($3,090,619)	($2,205,980)	($740,595)	($22,530)	($121,514)
39								
40		CUSTOMER ADVANCES & DEPOSITS	A.F.5	($1,445,286)	($1,033,057)	($344,783)	($10,515)	($56,931)
41								
42		ACCUM DEFERRED INCOME TAXES	A.F.15	($14,077,826)	($10,048,279)	($3,373,425)	($102,625)	($553,498)
43								
44								
45		TOTAL NET RATE BASE		$136,164,622	$93,161,047	$36,477,720	$1,018,073	$5,512,782

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK
RANGE: A1114..L1185

TITLE: A1118..L1185

UNION ELECTRIC COMPANY

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

DEPRECIATION EXPENSE

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI	RESIDNTL	GENERAL	INTERR	TRANSPORT
1								
2		MANUFACTURED GAS PRODUCTION PLANT						
3								
4	304	Land and Land Rights	A.F.1	$0	$0	$0	$0	$0
5	305	Structures and Improvements	A.F.1	6,357	$4,135	$2,220	$2	$0
6	306	Boiler Plant Equipment	A.F.1	0	$0	$0	$0	$0
7	311	Liquefied Petroleum Gas Equipment	A.F.1	$2,781	$38,882	$20,877	$23	$0
8								
9		TOTAL MANUFACTURERED GAS PROD. PLANT		$66,138	$43,016	$23,097	$25	$0
10								
11								
12		TRANSMISSION PLANT						
13								
14	365	Land & Land Rights	A.F.4	$0	$0	$0	$0	$0
15	366	Structures and Improvements	A.F.4	0	$0	$0	$0	$0
16	367	Mains	A.F.4	31,824	$20,192	$9,287	$361	$1,985
17	369	Measuring & Regulating Stat. Equip.	A.F.4	942	$598	$275	$11	$59
18								
19		TOTAL TRANSMISSION PLANT		$32,766	$20,789	$9,562	$371	$2,043
20								
21								
22		DISTRIBUTION PLANT						
23								
24	374	Land & Land Rights	A.F.4	$0	$0	$0	$0	$0
25	375	Structures & Improvements	A.F.4	$816	$518	$238	$9	$51
26	376	Mains - Distribution Supply	A.F.4	$2,334,366	$1,481,105	$681,223	$26,466	$145,573
27	378	Meas & Reg Equipment - General	A.F.4	$65,971	$41,857	$19,252	$748	$4,114
28	379	Meas & Reg Equipment - City Gate	A.F.4	$15,682	$9,950	$4,576	$178	$978
29	380	Services	PLT380	$1,300,252	$1,437,802	$184,776	$3,042	$14,632
30	381	Meters	PLT381	$741,504	$171,721	$76,928	$1,026	$5,829
31	382	Meter Installation	PLT382	$0	$0	$0	$0	$0
32	383	House Regulators	PLT383	$152,142	$83,720	$68,622	$0	$0
33	384	House Regulators - Installations	PLT384	$0	$0	$0	$0	$0
34	385	Meas & Reg - Industrial	PLT385	$23,681	$0	$23,437	$897	$3,547
35	386	Property on Customer Premises	A.F.4	$0	$0	$0	$0	$0
36	387	Other Equipment	A.F.4	$0	$0	$0	$0	$0
37								
38		TOTAL DISTRIBUTION PLANT		$4,558,814	$3,292,672	$1,059,052	$32,366	$174,724
39								
40								
41								
42		GENERAL PLANT						
43								
44	389	Land and Land Rights	A.F.10	$0	$0	$0	$0	$0
45	390	Structures and Improvements	A.F.10	$73,612	$55,976	$17,689	$639	$3,308
46	391	Office Furniture and Equip	A.F.10	$32,200	$23,223	$7,339	$265	$1,373
47	391-001		A.F.10	$6,017	$4,340	$1,371	$50	$256
48	391-002		A.F.10	$30,502	$21,999	$6,952	$251	$1,300
49	392	Transportation Equip	A.F.10	$0	$0	$0	$0	$0
50	393	Stores Equip	A.F.10	$3,939	$2,841	$898	$32	$168
51	394	Tools, Shop and Garage Equip	A.F.10	$90,872	$65,539	$20,711	$749	$3,873
52	395	Laboratory Equip	A.F.10	$4,663	$3,363	$1,063	$38	$199
53	396	Power Operated Equip	A.F.10	$0	$0	$0	$0	$0
54	397	Communication Equip	A.F.10	$51,965	$37,478	$11,844	$428	$2,215
55			A.F.10	$374	$270	$85	$3	$16
56								
57		TOTAL GENERAL PLANT		$298,144	$215,028	$67,951	$2,456	$12,708
58								
59								
60								
61		TOTAL PROD,T&D & GEN PLANT		$4,955,862	$3,571,506	$1,159,662	$35,218	$189,475

Schedule 7
Page 8 of 19
John W. Mallinckrodt

UNION ELECTRIC COMPANY

DATE: 6/01/00
FILENAME: EXPERIMENT_METERING_UE_7_11_RJK
RANGE: A93..R126

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 00, 1999

TITLE: PRODUCTION & TRANSMISSION EXPENSES

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL	TOTAL MISSOURI		RESIDENTIAL		GENERAL		INTERRUPTIBLE		TRANSPORT	
					LABOR	OTHER	LABOR	OTHER	LABOR	OTHER	LABOR	OTHER	LABOR	OTHER
1														
2		PRODUCTION EXPENSES												
3														
4		Demand Related	A.P.1	61,224	$41,697	$19,527	$27,120	$12,700	$14,561	$6,819	$16	$7	$0	$0
5														
6		Commodity Related	A.P.13	276,736	$188,881	$87,855	$113,329	$52,992	$65,360	$30,401	$9,592	$4,462	$0	$0
7														
8		TOTAL PRODUCTION EXPENSES		$337,960	$230,578	$107,382	$141,049	$65,693	$79,921	$37,220	$9,608	$4,469	$0	$0
9														
10														
11														
12														
13		TRANSMISSION EXPENSES												
14														
15		Operation												
16														
17	850	Supervision and Engineering	A.P.4	$1,903	$0	$1,903	$0	$1,207	$0	$555	$0	$22	$0	$119
18	851	Load Dispatching	A.P.4	943	$0	$943	$0	$598	$0	$275	$0	$11	$0	$59
19	856	Mains Expenses	A.P.4	144,537	$136,153	$8,384	$86,[illegible]	$5,119	$19,711	$2,443	$5,544	$95	$9,491	$523
20	857	Meas & Reg Station Exp.	A.P.4	52,550	$0	$52,550	$0	$33,342	$0	$15,335	$0	$596	$0	$3,277
21	859	Other Expenses	A.P.4	29,888	$0	$29,888	$0	$18,963	$0	$8,722	$0	$339	$0	$1,864
22	860	Rents	A.P.4	1,802	$0	$1,802	$0	$1,143	$0	$526	$0	$20	$0	$112
23														
24		TOTAL OPERATION		$231,623	$136,153	$95,469	$86,[illegible]	$60,571	$39,733	$27,860	$1,544	$1,082	$8,491	$5,954
25														
26														
27		Maintenance												
28														
29	861	Supervision and Engineering	A.P.4	$7,119	$0	$7,119	$0	$4,517	$0	$2,077	$0	$81	$0	$444
30	862	Structures and Improvements	A.P.4	$1	$0	$1	$0	$1	$0	$0	$0	$0	$0	$0
31	863	Maintenance of Mains	A.P.4	$14,598	$11,453	$3,145	$7,267	$1,996	$3,342	$918	$130	$36	$714	$196
32	865	Main of Meas. & Reg Sta Equip.	A.P.4	$1,328	$856	$472	$543	$299	$250	$138	$10	$5	$53	$28
33	867	Other Equipment	A.P.4	$2,526	0	$2,526	$0	$1,601	$0	$737	$0	$29	$0	$158
34														
35		TOTAL MAINTENANCE		$25,572	$12,309	$13,263	$7,810	$8,415	$3,592	$3,071	$140	$150	$768	$827
36														
37		TOTAL TRANSMISSION EXPENSES		$257,195	$148,462	$108,732	$94,196	$68,986	$43,325	$31,731	$1,683	$1,233	$9,258	$6,781

Schedule 7
Page 9 of 19
John W. Mallinckrodt

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_9_21_RJK
A168..R209

UNION ELECTRIC COMPANY

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

DISTRIBUTION EXPENSES

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL	TOTAL MISSOURI LABOR	TOTAL MISSOURI OTHER	RESIDENTIAL LABOR	RESIDENTIAL OTHER	GENERAL LABOR	GENERAL OTHER	INTERRUPTIBLE LABOR	INTERRUPTIBLE OTHER	TRANSPORT LABOR	TRANSPORT OTHER
		DISTRIBUTION EXPENSES												
		Operation												
	870	Operation Supervision & Eng.	A.F.4	$386,863	$261,941	$124,926	$166,196	$79,263	$76,441	$36,456	$2,970	$1,416	$16,335	$7,790
	871	Distribution Load Dispatch	A.F.4	$0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	874	Mains & Services Exp.	PLT380 & 376	$627,866	391,373	$236,493	$296,026	$172,836	$96,189	$52,091	$2,976	$1,798	$16,181	$9,770
	875	Meas & Reg Sta Exp. - Gen.	A.F.4	$170,785	113,474	$57,311	$71,997	$36,363	$33,114	$16,725	$1,287	$650	$7,076	$3,574
	876	Meas & Reg Sta Exp. - Ind.	Plt. 385	$15,245	304	$14,940	$0	$0	$257	$12,598	$9	$444	$39	$1,897.88
	877	Meas & Reg Sta. Exp - City Gate	A.F.4	$3,166	0	$3,166	$0	$2,008	$0	$924	$0	$36	$0	$197
	878	Meter & House Reg. Exp.	PLT381 & 383	$461,967	826,376	($364,409)	$521,554	($229,993)	$290,511	($128,107)	$2,095	($924)	$12,212	($5,365)
	879	Cust. Install. Exp.	A.F.4	$574,039	493,989	$80,050	$313,425	$50,790	$144,158	$23,360	$5,601	$908	$30,805	$4,992
	880	Other Expenses	A.F.4	$1,789,689	967,000	$822,689	$613,541	$521,966	$282,193	$240,074	$10,963	$9,327	$60,303	$51,302
	881	Rents	A.F.4	$33,284	0	$33,284	$0	$21,435	$0	$9,849	$0	$383	$0	$2,107
		TOTAL OPERATION		$4,063,396	$3,054,457	$1,008,929	$1,972,743	$654,667	$912,863	$263,970	$25,900	$14,038	$142,951	$76,253
		Maintenance												
	885	Main Super & Engineering	A.F.4	$125,917	$119,259	$6,659	$75,[illegible]	$4,225	$34,803	$1,943	$1,352	$75	$7,437	$415
	886	Maint. of Struc & Improve.	A.F.4	192	$0	$192	$0	$122	$0	$56	$0	$2	$0	$12
	887	Maint. of Mains	A.F.4	1,065,963	$779,827	$286,136	$494,781	$181,547	$227,572	$83,501	$8,841	$3,244	$48,631	$17,844
	889	Main of Meas & Reg. Equip - Gen.	A.F.4	207,355	$165,793	$37,562	$107,730	$23,832	$49,550	$10,961	$1,925	$426	$10,588	$2,342
	890	Main of Meas & Reg. Equip - Indust.	Plt. 385	5,224	$2,215	$3,010	$0	$0	$1,667	$2,538	$66	$89	$281	$382.33
	891	Main of Meas & Reg. Equip - City Gate	A.F.4	11,369	$9,112	$2,257	$5,782	$1,432	$2,659	$659	$103	$26	$568	$141
	892	Main of Services	Plt 380	377,485	$302,026	$75,458	$265,946	$66,344	$32,759	$8,185	$523	$131	$3,198	$799
	893	Main of Meters & House Reg	PLT381 & 383	708,346	$224,097	$484,249	$141,836	$305,629	$70,781	$170,237	$568	$1,228	$9,312	$7,156
	894	Main of Other Equip.	A.F.4	138,410	$41,474	$96,937	$26,316	$61,508	$12,103	$28,288	$470	$1,099	$2,586	$6,043
		TOTAL MAINTENANCE		$2,640,262	$1,647,803	$992,459	$1,117,253	$674,634	$440,894	$306,368	$13,849	$6,320	$76,602	$35,136
		TOTAL DISTRIBUTION EXPENSES		$6,703,648	$4,702,260	$2,001,388	$3,090,002	$1,329,302	$1,353,957	$570,339	$39,749	$20,358	$219,553	$111,390

Schedule 7
Page 10 of 19
John W. Mallinckrodt

COST

09

UNION ELECTRIC COMPANY

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK
RANGE: A248..R301

GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: CUST ACCT, CUST SERV, SALES & ADM EXP

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI TOTAL	TOTAL MISSOURI LABOR	TOTAL MISSOURI OTHER	RESIDENTIAL LABOR	RESIDENTIAL OTHER	GENERAL LABOR	GENERAL OTHER	INTERRUPTIBLE LABOR	INTERRUPTIBLE OTHER	TRANSPORT LABOR	TRANSPORT OTHER
1														
2		CUSTOMER ACCOUNTS EXPENSES												
3														
4	902	Meter Reading Expenses	A.F.6	$1,696,966	$1,372,192	$324,574	$1,100,157	$274,906	$144,710	$34,153	$4,627	$1,092	$57,698	$14,344
5	903	Customer Records and Collection	A.F.7	1,389,660	$801,615	$588,046	$696,748	$581,702	$84,721	$62,149	$5,602	$4,109	$24,544	$18,005
6	904	Uncollectable Accounts	A.F.11	680,151	$0	$680,151	$0	$625,739	$0	$54,412	$0	$0	$0	$0
7														
8		SUBTOTAL		$3,766,778	$2,174,007	$1,592,771	$1,851,905	$1,406,507	$229,430	$150,714	$10,229	$5,201	$82,442	$32,349
9														
10	905	Misc Customer Accounts Expenses	A.F.16	80,533	$7,527	$73,007	$6,431	$64,337	$794	$6,908	$35	$238	$265	$1,482
11	901	Supervision	A.F.16	109,238	89,555	19,332	$76,661	$17,052	$9,452	$1,610	$421	$63	$3,413	$193
12														
13		TOTAL CUSTOMER ACCOUNTS EXPENSES		$3,956,645	$2,271,528	$1,685,117	$1,934,978	$1,485,938	$239,722	$159,452	$10,687	$5,503	$86,141	$34,225
14														
15														
16		CUSTOMER SERVICE & SALES EXP.												
17														
18	908	Customer Assistance Expenses	A.F.16	$133,994	$112,073	$21,921	$95,408	$19,330	$11,827	$2,074	$527	$72	$4,250	$445
19	909	Info & Instruction Expenses	A.F.16	8,710	$0	$8,710	$0	$7,690	$0	$824	$0	$20	$0	$177
20	910	Misc Cust Service Expenses	A.F.16	10,087	$0	$10,087	$0	$8,895	$0	$954	$0	$37	$0	$205
21	912	Demonstration & Selling Expenses	A.F.16	83,620	$52,694	$30,986	$44,836	$27,323	$5,555	$2,932	$248	$101	$1,996	$629
22		Advertising	A.F.16	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
23	916	Misc. Sales Expenses	A.F.16	30,037	$27,060	$2,997	$23,034	$2,641	$2,854	$284	$127	$10	$1,025	$61
24														
25		SUBTOTAL		$266,448	$191,747	$74,701	$163,338	$65,871	$20,236	$7,068	$902	$244	$7,271	$1,517
26														
27	07 & 911	Supervision	A.F.16	143,465	$135,961	$7,502	$115,818	$6,415	$14,349	$710	$640	$24	$5,156	$152
28														
29		TOTAL CUST SERV & SALES EXP		$409,913	$327,710	$82,203	$279,156	$72,487	$34,584	$7,778	$1,542	$268	$12,427	$1,670
30														
31														
32		TOTAL PROD, T&D, CUST & SALES EXP		11,665,361	7,690,538	3,984,822	5,533,280	2,992,407	1,750,509	806,520	60,263	31,831	327,379	154,064
33														
34														
35		ADMINISTRATIVE & GENERAL EXP												
36														
37	20 - 935	A & G Expenses	A.F.10	$7,005,828	$1,982,074	$5,023,754	$1,429,517	$3,623,247	$451,744	$1,144,989	$16,328	$41,384	$84,485	$214,135
38														
39		TOTAL ADMINISTRATIVE AND GENERAL EXP		$7,005,828	$1,982,074	$5,023,754	$1,429,517	$3,623,247	$451,744	$1,144,989	$16,328	$41,384	$84,485	$214,135
40														
41														
42		TOTAL PROD, T&D, CUST, SALES & ADM EXP		$18,671,189	$9,672,612	$9,008,576	$6,962,797	$6,615,654	$2,202,254	$1,951,508	$79,597	$73,215	$411,864	$368,199
43														
44														
45		TOTAL O&M EXP LESS PUR GAS		$18,671,189	$9,662,612	$9,008,576	$6,962,797	$6,615,654	$2,202,254	$1,951,508	$79,597	$73,215	$411,864	$368,199

Schedule 7
Page 11 of 19
John W. Mallinckrodt

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK
RANGE: A329..R364

UNION ELECTRIC COMPANY
GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: DEPRECIATION EXPENSE

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI TOTAL	TOTAL MISSOURI LABOR	TOTAL MISSOURI OTHER	RESIDENTIAL LABOR	RESIDENTIAL OTHER	GENERAL LABOR	GENERAL OTHER	INTERRUPTIBLE LABOR	INTERRUPTIBLE OTHER	TRANSPORT LABOR	TRANSPORT OTHER
1														
2		DEPRECIATION EXPENSE												
3														
4		Amortization of Merger Costs	A.F.14	$207,453	0	207,453	$0	$133,930	$0	$53,573	$0	$1,551	$0	$8,399
5		Production Depreciation Expense	Schedule	$66,138	0	66,138	$0	$43,016	$0	$23,097	$0	$25	$0	$0
6		Transmission Depreciation Expense	Schedule	$32,766	0	32,766	$0	$20,189	$0	$9,567	$0	$371	$0	$2,643
7		Distribution Depreciation Expense	Schedule	$4,556,814	0	4,556,814	$0	$3,292,672	$0	$1,059,052	$0	$32,366	$0	$174,724
8		General Depreciation Expense	Schedule	$298,144	0	298,144	$0	$215,028	$0	$67,951	$0	$2,836	$0	$12,328
9														
10		TOTAL DEPRECIATION and AMORTIZATION EXPENSE		$5,163,315	$0	$5,163,315	$0	$3,713,436	$0	$1,215,236	$0	$36,769	$0	$197,074
11														
12														
13		OTHER EXPENSE												
14														
15		Real Estate & Property Taxes	A.F.15	$3,429,824	$0	$3,429,824	$0	$2,446,093	$0	$821,838	$0	$25,003	$0	$134,850
16		Income Taxes	A.F.16	7,365,000	0	7,365,000	$0	$5,030,797	$0	$1,972,969	$0	$55,064	$0	$290,170
17		Return	A.F.16	14,055,428	0	14,055,428	$0	$9,614,083	$0	$3,765,230	$0	$105,085	$0	$569,029
18		Payroll taxes	A.F.10	$556,058	$556,058	0	$401,042	$0	$126,734	$0	$4,581	$0	$23,702	$0
19														
20		TOTAL OTHER EXPENSE		$25,406,310	$556,058	$24,850,252	$401,042	$17,102,973	$126,734	$6,560,037	$4,581	$185,152	$23,702	$1,002,049
21														
22		TOTAL O&M, DEPR & OTHER EXP		$49,240,814	$10,218,670	$39,022,143	$7,369,919	$27,432,063	$2,328,988	$9,726,821	$84,170	$295,137	$435,566	$1,560,123
23														
24		TOTAL EXPENSE LESS PUR GAS		$49,240,814	$10,218,670	$39,022,143	$7,369,919	$27,432,063	$2,328,988	$9,726,821	$84,170	$295,137	$435,566	$1,560,123
25														
26														
27		TOTAL CLASS COST OF SERVICE		$49,240,814	$10,218,670	$39,022,143	$7,369,919	$27,432,063	$2,328,988	$9,726,821	$84,170	$295,137	$435,566	$1,560,123

Schedule 7
Page 12 of 19
John W. Mallinckrodt

DATE: 8/01/00
FILENAME: EXPERIMENT_METERING_UE_7_31_RJK
RANGE: A901..L926

UNION ELECTRIC COMPANY
GAS COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: SUMMARY OF GAS O & M EXPENSE

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI	RESIDNTL	GENERAL	INTERR	TRANSPORT
1								
2		SUMMARY OF GAS O&M EXPENSES						
3								
4		Production	Schedule	$337,969	$206,741	$117,142	$14,077	$0
5								
6		Transmission	Schedule	257,195	$161,184	$75,055	$2,916	$16,039
7								
8		Distribution	Schedule	[illegible]	$4,389,303	$1,923,295	$60,107	$330,942
9								
10		Customer Accounts	Schedule	[illegible]	$3,420,916	$399,174	$16,190	$120,365
11								
12		Customer Service & Sales Info	Schedule	409,913	$351,643	$42,363	$1,810	$14,097
13								
14		Administrative & General	Schedule	7,005,828	2,052,764	$1,596,733	$57,711	$298,620
15								
16		TOTAL GAS O&M EXPENSES		$18,671,189	$13,584,551	$4,153,762	$152,812	$780,063

Schedule 7
Page 13 of 19
John W. Mallinckrodt

	Amount	RESIDNTL	GENERAL	INTERR	TRANSPORT
A.F. 11	43,666	40,173	3,493		
# of bills	337,488	300,138	37,026	60	264
# of bills	65,163	57,951	7,149	12	51
	0	0	0	0	0
Net Rate Base	221,198	151,334	59,255	1,654	8,955
Total	667,515	549,595	106,924	1,726	9,270

Schedule 7
Page 14 of 19
John W. Mallinckrodt

METERS: METERS:

	RESIDNTL	GENERAL	INTERR	TRANSPORT	
Original absent inventory	0.6605004	0.280383	0.003799	0.0217429	
	7,851,083	3,332,788	45,153	258,448	11,886,638
					399,086
					11,487,462

Qty	Type		Total	Invoice	Capitalized Labor	Inventory	RESIDNTL	GENERAL	INTERR	TRANSPORT	
2300	American AC250	Residential/Commercial		115,000	132,480	247,480	176,206	71,274			
40	Schlumberger (Sprague) 400A	Residential/Commercial		8,080	2,304	8,384	5,969	2,415			
20	Schlumberger (Sprague) 675	Residential/Commercial		12,000	1,162	13,162	9,364	3,788			
20	American AL-800	Residential/Commercial		12,000	1,162	13,162	9,364	3,788			
20	American AL-1000	Residential/Commercial		14,000	1,162	15,162	10,788	4,364			
36	Dresser Rotary meters - various siz	Industrial		44,300	2,016	46,316		41,684	861	3,771	
16	Rockwell Large Diaphragm meters	Industrial		18,000	864	18,864		16,978	351	1,536	
10	American Large Diaphragm meters	Industrial		14,300	576	14,876		13,388	276	1,211	
80	Schlumberger (Sprague) 240	Residential/Commercial		4,000	4,608	8,608	6,129	2,479			
20	American AC630	Residential/Commercial		7,000	1,162	8,162	6,804	2,348			
40	Rockwell 250	Residential/Commercial		2,000	2,304	4,304	3,064	1,240			
6	Schlumberger Metris 250	Residential/Commercial		300	346	646	460	186			
				248,880	160,106						
						399,086	227,149	163,931	1,488	6,518	8005.6
						Total	8,078,212	3,496,718	46,641	264,966	11,886,538

INDUSTRIAL REGULATORS:

	RESIDNTL	GENERAL	INTERR	TRANSPORT	
Original absent inventory	0.840596	0.032179	0.1272244		
	739,838	28,322	111,976		880,136

Industrial (386) Inventory

	Number	Cost						
Fisher 299	10	660	6,600		28,680	1,094	4,326	34,000
Sprague CL34	45	300	13,500	Total	768,418	29,416	116,300	914,136
Fisher 99/Eq.	12.6	1200	15,000					914,136
			34,000					

Schedule 7
Page 15 of 19
John W. Mallinckrodt

UE PEAK ALLOCATION SCHEDULE

Main Size	2" & under	2" to 4"	4" to 6"	6" to 8"	10" +	Total
O.C. per Books	$35,085,575	$29,019,529	$18,719,356	$9,570,243	$3,170,155	$95,564,858
@ $4.85 per Ft.	$35,085,575	$20,863,414	$7,454,751	$2,356,264	$963,916	$66,723,921
USAGE (Peak):						
Residential	767,019	767,019	767,019	767,019	767,019	
General Service	411,831	411,831	411,831	411,831	411,831	
Interruptible	2,120	23,336	28,427	29,602	32,047	
Transport	26,946	92,642	156,018	206,404	207,250	
Sub-Total Peak	1,207,916	1,294,828	1,363,295	1,414,855	1,418,146	
Investment Allocation:						
Residential	22,279,123	17,190,333	10,531,909	5,188,205	1,714,611	$56,904,182
General Service	11,962,199	9,229,904	5,654,836	2,785,672	920,616	$30,553,228
Interruptible	61,570	523,010	390,327	200,229	71,638	$1,246,773
Transport	782,684	2,076,281	2,142,283	1,396,137	463,290	$6,860,674
	$35,085,575	$29,019,529	$18,719,356	$9,570,243	$3,170,155	$95,564,858

Schedule 7
Page 16 of 19
John W. Mallinckrodt

Meter Code	Avg. $						Transports			Totals
(IT List)	per meter	Res	SGS	LGS	Interrup	Spec. Cont.	SGS	LGS	Interrup.	$
										# Meters
702	29	7,829	466	0	0	0	0	0	0	8,295
		269	16	0	0	0	0	0	0	285
705	45	1,989,578	139,866	45	0	0	0	0	0	2,129,489
		44,339	3,117	1	0	0	0	0	0	47,457
708	80	135,655	11,344	0	0	0	0	0	0	146,999
		1,698	142	0	0	0	0	0	0	1,840
711	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
714	60	535,320	50,520	0	0	0	0	0	0	585,840
		8,922	842	0	0	0	0	0	0	9,764
717	88	3,240,132	256,503	0	0	0	0	0	0	3,496,634
		36,759	2,910	0	0	0	0	0	0	39,669
720	110	713,857	62,252	0	0	0	0	0	0	776,109
		6,479	565	0	0	0	0	0	0	7,044
723	20	59	0	0	0	0	0	0	0	59
		3	0	0	0	0	0	0	0	3
726	35	20,409	13,948	0	0	0	0	0	0	34,357
		578	395	0	0	0	0	0	0	973
729	56	6,086	6,143	0	0	0	0	0	0	12,229
		108	109	0	0	0	0	0	0	217
732	53	374	1,015	0	0	0	0	0	0	1,389
		7	19	0	0	0	0	0	0	26
735	144	23,119	83,806	289	0	0	0	0	0	107,214
		160	580	2	0	0	0	0	0	742
738	162	3,392	15,832	0	0	0	0	0	0	19,224
		21	98	0	0	0	0	0	0	119
741	348	0	209,229	37536	0	0	0	0	0	246,765
		0	602	108	0	0	0	0	0	710
747	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
750	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
753	313	0	165,876	10954	0	0	0	0	0	176,830
		0	530	35	0	0	0	0	0	565
756	596	0	114,987	4,767	0	0	0	0	0	119,754
		0	193	8	0	0	0	0	0	201
759	760	0	316,195	28,123	0	0	0	0	0	344,318
		0	416	37	0	0	0	0	0	453
765	542	0	512,923	9,217	0	0	0	0	0	522,140
		0	946	17	0	0	0	0	0	963
771	230	0	11,746	691	0	0	0	0	0	12,437
		0	51	3	0	0	0	0	0	54
774	174		521	0	0	0	0	0	0	521
		0	3	0	0	0	0	0	0	3
777	386		6,179	0	0	0	0	0	0	6,179
		0	16	0	0	0	0	0	0	16
780	579	0	157,001	5,793	0	0	0	0	0	162,794

16

Meter Code	Avg. $						Transports			Totals
(IT List)	per meter	Res	SGS	LGS	Interrup	Spec. Cont.	SGS	LGS	Interrup.	$
										# Meters
		0	271	10	0	0	0	0	0	281
783	828	0	215,382	18,224	4,970	0	5,799	9,112	828	254,317
		0	260	22	6	0	7	11	1	307
786	658		2,633		658		658			3,950
		0	4	0	1	0	1	0	0	6
789	1,477	0	79,741	17,720	7,383		2,953	20,674	5,907	134,378
		0	54	12	5	0	2	14	4	91
814	4,201				4,201				4,201	8,402
		0	0	0	1	0	0	0	1	2
902	365		365							365
		0	1	0	0	0	0	0	0	1
905	1,205		27,720							27,720
		0	23	0	0	0	0	0	0	23
908	1,192		3,576							3,576
		0	3	0	0	0	0	0	0	3
911	1,132		60,013	1,132			1,132			62,278
		0	53	1	0	0	1	0	0	55
917	1,285		53,983		2,571		1,285	2,571		60,410
		0	42	0	2	0	1	2	0	47
920	0		0							0
			0							0
923	1,684		55,587	11,791	5,053	3,369	3,369	13,476	8,422	101,067
		0	33	7	3	2	2	8	5	60
926	0		0							
			0							1
932	3,864		23,185	19,321	15,457	3,864		23,185	23,185	108,196
		0	6	5	4	1	0	6	6	28
935	1,535		3,070	1,535	3,070				6,140	13,815
		0	2	1	2	0	0	0	4	9
941	6,755			6,755		6,755		6,755	20,264	40,528
		0	0	1	0	1	0	1	3	6
#N/A	0	0	0	0		0	0	0		0
		0								0
Totals:	$	6,675,810	2,661,606	173,894	43,364	13,988	15,197	75,772	68,947	9,728,577
	meters	99,343	12,302	270	24	4	14	42	24	112,024
% Total	*(by $)*	68.6	27.4	1.8	0.4	0.1	0.2	0.8	0.7	100
	meters	%		$	%					
Total GS	12,572	11.2	*Total GS*	2,835,500	29.8					
Res	99,343	88.8	*Res*	6,675,810	70.2					

The $ amount was calculated from Bob Kenny's average cost/gas meter times ITs # of meters.

H:\EXCEL50\99 Missouri gas case\Kenney plant investment\[Gas meters and meter codes CIS1 from PBD2 rev. 7_26_00.xls]Summary

(07/31/00) * * * MILLENNIUM ONLINE PRINT: PA25976 * * * (PAGE: 1)

	C	U	DV	MAJ	MIN	NEC	BUD	DESCRIPTION	REFERENCE	AMOUNT	CHARGE DATE	QUANTITY	UNIT	PO	WO	CORP
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	7,937.00-	01/31/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	5,859.00-	02/29/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	8,686.00-	03/31/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	2,260.00-	04/30/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	4,726.00-	05/31/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	172.58-	06/30/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	68.25-	06/30/2000				A0720	AMS
	E	1	11	457	121	620	SRB	SR BILL - SR001	0G2	4,051.00-	06/30/2000				A0720	AMS
3	E									33,759.83-						
	E	2	11	880	003	220	0G2	ANDERSON,DOTTIE R	F20009001	172.58	06/30/2000				A0720	AMS
3	E									172.58						
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	6,167.00	01/31/2000	147.00	HR		A0720	AMS
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	4,541.00	02/29/2000	112.00	HR		A0720	AMS
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	6,731.00	03/31/2000	194.00	HR		A0720	AMS
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	1,843.00	04/30/2000	43.00	HR		A0720	AMS
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	3,859.00	05/31/2000	104.00	HR		A0720	AMS
	E	2	11	902	002	200	0G2	GAS SUPPORT - AMS	541	3,274.00	06/30/2000	86.00	HR		A0720	AMS
	E	2	11	902	002	683	0G2	TRANSPORTATION EX	PD002	19.00	01/31/2000				A0720	AMS
	E	2	11	902	002	683	0G2	TRANSPORTATION EX	PD002	28.00	02/29/2000				A0720	AMS
	E	2	11	902	002	683	0G2	TRANSPORTATION EX	PD002	44.00	03/31/2000				A0720	AMS
	E	2	11	902	002	683	0G2	TRANSPORTATION EX	PD002	3.00	04/30/2000				A0720	AMS
	E	2	11	902	002	683	0G2	TRANSPORTATION EX	PD002	40.00	06/30/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	1,751.00	01/31/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	1,290.00	02/29/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	1,911.00	03/31/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	414.00	04/30/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	867.00	05/31/2000				A0720	AMS
	E	2	11	902	002	231	NCP	LABOR EXP APPORTN	PD007	737.00	06/30/2000				A0720	AMS
3	E									33,519.00		686.00				
	E	2	11	921	001	220	0G2	ANDERSON,DOTTIE R	F01013001	68.25	06/30/2000				A0720	AMS
3	E									68.25						
2	E											686.00				
1												686.00				
												686.00				

Labor

$26,415

January – June 2000

Account 902-002 $33,519

Account 921-001 68

Total $33,587

Schedule 7
Page 19 of 19
John W. Mallinckrodt

DIRECT ASSIGNMENT "NETSCAN"

DATA FOR LATEST 6 MONTHS

UNION ELECTRIC COMPANY

UE Revised Class Cost-of-Service Study
under Present Rates
Variation from Cost of Service
Compared to Current Revenues
Test Year Ended June 30, 1999

Line	Customer Class	Current Rate Revenue (1)	Variation From Cost (2)	Percent Variation From Cost (3)
1	Residential	$22,917,538	($5,928,034)	-25.87%
2	General	$9,557,709	$1,200,453	12.56%
3	Interruptible	$764,420	$776,647	101.60%
4	Transportation	$3,933,211	$3,950,934	100.45%
5	Total	$37,172,878	$0	0.00%

Schedule 8-2
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Scenario 1 - 365 Average for Base Demand (31% Customer / 69% Demand)

MGUA Revised Class Cost-of-Service Study
under Present Rates
Rate Base, Operating Income, Rate of Return
and Index of Return
Test Year Ended June 30, 1999

Line	Customer Class	Rate Base (1)	Operating Income (2)	Rate of Return (3)	Index of Return (4)
1	Residential	$97,258,897	$169,082	0.17%	4
2	General	$33,549,457	$3,068,558	9.15%	187
3	Interruptible	$838,641	$558,725	66.62%	1360
4	Transportation	$4,522,627	$2,873,127	63.53%	1297
5	Total	$136,169,622	$6,669,492	4.90%	100

Schedule 9-1
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Scenario 1 - 365 Average for Base Demand (31% Customer / 69% Demand)

MGUA Revised Class Cost-of-Service Study
under Present Rates
Variation from Cost of Service
Compared to Current Revenues
Test Year Ended June 30, 1999

Line	Customer Class	Current Rate Revenue (1)	Variation From Cost (2)	Percent Variation From Cost (3)
1	Residential	$22,924,195	($7,507,136)	-32.75%
2	General	$9,552,953	$2,328,856	24.38%
3	Interruptible	$764,128	$845,791	110.69%
4	Transportation	$3,931,602	$4,332,489	110.20%
5	Total	$37,172,878	$0	0.00%

Schedule 9-2
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Scenario 1 - 365 Average for Base Demand (31% Customer / 69% Demand)

Company Proposed Increase per MGUA Revised Cost of Service Study
Test Year Ended June 30, 1999

Line	Customer Class	Present Rate Revenue (1)	Proposed Revenue (2)	Proposed Increase Amount (3)	Proposed Increase Percent (4)
1	Residential	$22,924,195	$36,138,286	$13,214,091	57.6%
2	General	$9,552,953	$11,100,920	$1,547,968	16.2%
3	Interruptible	$764,128	$320,803	-$443,325	-58.0%
4	Transportation	$3,931,602	$1,680,805	-$2,250,798	-57.2%
5	Total	$37,172,878	$49,240,814	$12,067,936	32.5%

Schedule 10
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Scenario 1 - 365 Average for Base Demand (31% Customer / 69% Demand)

MGUA Revised Class Cost-of-Service Study
Rate Base, Operating Income, Rate of Return
and Index of Return Under Proposed Rates
Test Year Ended June 30, 1999

Line	Customer Class	Rate Base (1)	Operating Income (2)	Rate of Return (3)	Index of Return (4)
1	Residential	$97,258,897	$10,039,063	10.32%	100
2	General	$33,549,457	$3,462,975	10.32%	100
3	Interruptible	$838,641	$86,565	10.32%	100
4	Transportation	$4,522,627	$466,826	10.32%	100
5	Total	$136,169,622	$14,055,428	10.32%	100

Schedule 11
John W. Mallinckrodt

UNION ELECTRIC COMPANY

Comparison of
Natural Gas Transportation Rates
as Proposed by UE and MGUA
Test Year Ended June 30, 1999

Line	Description	UE Current (1)	UE Filed (2)	UE Revised (3)	MGUA Proposed Rates (4)
	STANDARD TRANSPORTATION				
1	Customer Charge per Month	$19.75	$25.00	$60.00	$60.00
2	Electronic Gas Meter Charge per Month	$25.00	$40.00	$40.00	$40.00
	Transportation Charge per Ccf				
3	1st 7,000 Ccf	$0.16160	$0.14160	$0.06550	$0.05150
4	Over 7,000 Ccf	$0.10150	$0.08890	$0.04120	$0.03240
	LARGE VOLUME TRANSPORTATION				
5	Customer Charge per Month	$750.00	$1,110.00	$1,735.00	$1,735.00
6	Electronic Gas Meter Charge per Month	$25.00	$40.00	$40.00	$40.00
	Transportation Charge per Ccf				
7	1st 7,000 Ccf	$0.16160	$0.14160	$0.06550	$0.05150
8	Over 7,000 Ccf	$0.08450	$0.07400	$0.03430	$0.02700

Schedule 12
John W. Mallinckrodt