BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Missouri Public Service tariff sheets designed to increase rates for gas service provided to customers in the Missouri service area of the company.	))))	Case No. GR-93-172

AFFIDAVIT OF RYAN KIND

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Ryan Kind of lawful age, being first duly sworn, deposes and states:

1. My name is Ryan Kind. I am a Public Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 25 and Schedules 1 through 2.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Ryan Kind

Ryan Kind

Subscribed and sworn to me this 28th day of May, 1993.

Bobbie J. Richards

Bobbie J. Richards
Notary Public

My commission expires November 3, 1996.

BOBBIE J RICHARDS
NOTARY PUBLIC STATE OF MISSOURI
COLE COUNTY
MY COMMISSION EXP. NOV 3,1996

DIRECT TESTIMONY

OF

RYAN KIND

MISSOURI PUBLIC SERVICE

CASE NO. GR-93-172

Q. Please state your name and business address.

A. Ryan Kind, Office of the Public Counsel, P.O. Box 7800, Jefferson City, Missouri 65102.

Q. Please summarize your educational and employment background.

A. I have a B.S.B.A. in Economics and a M.A. in Economics from the University of Missouri-Columbia (UMC). While I was a graduate student at UMC, I was employed as a Teaching Assistant with the Department of Economics, and taught classes in Introductory Economics, and Money and Banking, in which I served as a Lab Instructor for Discussion Sections.

My previous work experience includes three and one-half years of employment with the Missouri Division of Transportation as a Financial Analyst. My responsibilities at the Division of Transportation included preparing transportation rate proposals and accompanying testimony for rate cases involving various segments of the trucking industry.

Q. Have you testified previously before this Commission?

A. Yes, prior to this case I submitted written testimony in five gas rate cases, an electric rate design case (EO-88-158), an electric complaint case (EC-92-214), two electric rate cases (ER-93-37 and ER-93-41), a municipal underground service rider case (ER-92-181), and Southwestern Bell's Caller ID case (TR-93-123).

Q. What is the purpose of your testimony?

A. First, I will address Missouri Public Service's proposed Economic Development Rider (EDR). Next, I will present the results of Public Counsel's Class Cost of Service (COS) Study for this case. My testimony will describe how those results were derived.

ECONOMIC DEVELOPMENT RIDER

Q. What are the main issues that you will address regarding MPS's proposed EDR?

A. My comments and recommendations regarding MPS's proposed EDR will deal with the issues of discrimination, subsidy, load building, free riders, and competitive disadvantage. I will address these issues because they are the most significant areas where MPS's proposed EDR can have a negative effect on the public interest.

Q. Please provide a brief description of MPS's proposed EDR.

A. The rider is available to industrial customers with annual usage in excess of 12,000 MCFs who are locating new or expanding existing facilities in MPS's service area. Qualified customers will receive discounts (on the non-gas portion of their bills) of 30% during the first year, 25% during the second year, 20% during the third year, 15% during the fourth year, and 10% during the fifth year. The discounts will cease after the fifth year.

Q. Will the EDR's discounted rates be available to businesses that are experiencing difficulties due to economic downturns, high raw materials cost increases, etc.?

A. The EDR would not be available to these businesses unless they are expanding existing facilities or relocating from a location outside of the Company's service territory.

Q. When are public utility rates considered to be discriminatory?

A. When some customers are charged a rate that is different from the rate paid by other members of their class, even though their usage patterns are similar, that rate is generally considered to be discriminatory.

Q. Is MPS's EDR discriminatory?

A. Yes, it appears that it is, since existing customers that are not expanding their facilities would pay a higher rate than new customers and existing customers who are expanding their facilities. However, determining whether a rate is discriminatory is a legal issue and I can only offer a non-lawyer's view on this issue. This topic will be addressed more thoroughly by Public Counsel when this case reaches the briefing stage.

Q. Will MPS's proposed EDR harm some of MPS's non-EDR customers?

A. Yes, unless MPS's proposed EDR satisfies the two conditions that are necessary to insure that non-EDR customers will not be harmed.

Q. What are the two conditions to which you are referring?

A. A utility's non-EDR customers will not be harmed (with the exception of those businesses that are put at a competitive disadvantage; see my discussion on pages 14 and 15 below) by the offering of an EDR if (1) the revenues received from EDR customers are sufficient to cover the costs of providing service to them in the long run and if (2) the EDR rate is made available to customers only when it is necessary to attract their additional load. Unless both of these conditions are met, non-EDR customers will be subsidizing the cost of providing service to EDR customers.

Q. How can MPS's non-EDR customers be harmed if the first condition is not met?

A. If MPS provides service to EDR customers at a rate that does not cover their long-run marginal cost (LRMC), then other ratepayers will be required to subsidize EDR customers by paying higher rates than they would if the EDR customers' new or additional loads did not exist.

Q. What steps can a utility take to increase the likelihood that its EDR satisfies the first condition?

A. A utility can increase the likelihood of satisfying the first condition by performing a study to determine the LRMC of serving a typical EDR customer and then setting the discounted EDR rate at a level that is high enough to cover the typical EDR customers's LRMC.

Q. Why did you say "increase the likelihood," rather than "ensure"?

A. The LRMC of serving each customer is unique since it depends on each customer's specific circumstances. These specific circumstances will vary depending on: the extent to which the portion of the Company's distribution facilities that are needed to serve the customer are presently under-utilized, the cost of additional distribution plant that must be installed to provide service, the extent to which plans for expanding distribution capacity must be accelerated to accommodate the additional load from the EDR customer, and the amount by which distribution plant replacement costs exceed the embedded cost of distribution plant.

By using the typical customer's LRMC as the benchmark, some customers whose specific LRMC is less than the typical LRMC could be excluded from the rate, and some customers whose specific LRMC exceeds the typical LRMC could be served at the EDR rate. Using the typical LRMC as a standard is, however, preferable to having no standard at all.

Q. Has MPS performed a LRMC study to determine whether the revenues from typical EDR customers will be sufficient to cover their LRMC?

A. No. In MPS's response to OPC DR No. 526, it stated that "MPS has not performed a long-run marginal cost study."

Q. Do you believe the Company should be required to show that its discounted EDR rates are greater than the LRMC of providing service to the typical EDR customer before the Commission grants approval to the proposed rider?

A. Yes. I recommend that the Commission deny MPS's request for approval of its EDR until the Company has shown that non-EDR customers are not harmed by its proposal, which cannot be accomplished without a reasonable LRMC study.

Q. How can MPS satisfy the second necessary condition for ensuring that non-EDR ratepayers are not harmed?

A. There is probably no way to satisfy this condition with 100 percent certainty. This is because doing so would require analyzing each customer on a case-by-case basis to ensure that the discounted EDR rate was necessary to encourage that customer's additional load. If the EDR customer's additional load would have occurred without offering a discounted rate, then that customer is a free rider.

Q. Please define the term "free rider."

A. In this particular case, free riders would be those customers who are allowed to take service under MPS's EDR even though they would have chosen to locate or expand their facilities in MPS's service territory regardless of the additional incentive provided by the EDR. From a statewide perspective, free riders would be those customers that are allowed to take service under a Missouri utility's EDR even though they would have chosen to locate or expand their facilities in the state of Missouri regardless of the additional incentive provided by the EDR. It should be noted, that in order to determine the allocative efficiency effects of EDRs, the relevant perspective would be to analyze the free rider issue from a national (or even international) perspective.

Q. Is a utility-specific perspective adequate to determine whether the free rider impacts of a specific utility's EDR are beneficial to the public interest of Missourians as a whole?

A. No. The analysis of how free riders impact the public interest must be broadened to at least a statewide perspective.

Q. Could non-EDR customers be harmed if MPS provides service to EDR customers who are free riders even if the revenue from the free riders was sufficient to cover the long-run marginal costs of serving them?

A. Yes, but only if EDR revenues were not imputed to the level that would have existed without the EDR discount in a rate case where test year revenues included discounted EDR revenues. If revenues were not imputed, then rates for at least some non-EDR customers would have to rise to make up for the unnecessary rate discount offered to the free riders (and reflected in test year revenues), so that the Company would receive its revenue requirement.

Q. Would MPS's shareholders be harmed if EDR revenues were imputed to their undiscounted level in a rate case?

A. Possibly. It would depend on the offsetting gains that shareholders received from the Company's EDR. Shareholders could receive both tangible (revenues) and intangible (goodwill) benefits if MPS has a gas EDR. MPS's shareholders will receive an intangible benefit if businesses and people in its service territory perceive the Company's charitable efforts to promote local economic development as a benefit to the community.

Q. How could MPS's shareholders receive tangible benefits from the proposed EDR?

A. Depending on the circumstances, the revenues that new EDR customers pay to MPS between rate cases may benefit shareholders by enhancing the Company's rate of return. The first requirement that must be met for this to occur is that MPS's short-run marginal cost of serving an EDR customer must be less that the EDR rate. This condition will be easily met in most cases since short-run marginal costs do not include the cost of accelerating plans for increasing the capacity of distribution plant.

Q. What factors, other than the relationship between short-run marginal costs and EDR rates, will determine the extent to which a utility benefits from new EDR revenues between rate cases?

A. There is general agreement that utilities have an incentive to increase sales by building load between rate cases. A utility would stand to benefit the most in a situation where it was earning an amount greater than or equal to its allowed rate of return. In this situation, the utility would not have any plans for coming to the Commission for rate relief and the additional EDR revenues would benefit shareholders by causing the utility's rate of return to increase.

A utility would stand to benefit the least if its rate of return was less that its allowed level and it was planning on requesting a general rate increase in the near future. In this situation, the additional EDR revenues might raise the utility's rate of return up to its allowed rate of return and cause the utility to defer its plans for a rate case. While the utility would benefit the least in this situation, its shareholders still would not be harmed, and they may benefit from avoiding the regulatory risk associated with rate cases. It should be noted that while deferring a rate case will generally benefit ratepayers, ratepayers will not benefit if the EDR customers are free riders (unless EDR revenues are imputed) and the short-term benefits of deferring a rate case may be offset in the long-run if the EDR rates do not exceed the LRMC of serving EDR customers.

Q. Given the broad range of circumstances that affect whether and to what extent a utility's shareholders will benefit from an EDR, do you believe MPS's shareholders are likely to receive long-run benefits from the Company's EDR that would at least partially offset any harm to them that would result from imputing EDR revenues?

A. Yes. Generally speaking, if a utility offers an EDR over an extended period of time, it is highly probable that there will be times when circumstances exist that allow its shareholders to benefit from it. In fact, it is almost certain that MPS's shareholders will benefit from any EDR customers that it begins providing service to shortly after this rate case since the Company will be earning its allowed rate of return at that time. As I noted previously, when a company that is already earning its allowed rate of return increases its sales, it will almost certainly begin earning a rate of return greater than its allowed rate of return.

Q. Does MPS's proposed EDR contain any special provisions that are likely to affect whether MPS shareholders will benefit from it?

A. Yes. The rider will only be available to new loads added prior to January 1, 1995. Since MPS's current rate case will not be concluded prior to the last half of 1993, MPS's proposed EDR will be available for less than one and one-half years following the conclusion of this rate case. Therefore, since any additional sales that result from this rider will begin to occur during a time period when the Company is probably earning a rate of return close to its authorized level, the EDR is likely to benefit shareholders.

Q. Would Public Counsel object to MPS's proposed EDR if the Company satisfied the first condition (EDR rates set above level of LRMC as shown by a reasonable LRMC study) and if the Company's rider specified that test year revenues would be imputed in future rate cases?

A. Not if it is determined that EDR rates do not violate statutory prohibitions against discriminatory rates.

Q. Are you aware of any other gas utility's in Missouri that charge discounted rates to certain industrial customers who either locate new facilities or expand existing facilities?

A Yes. Gas Service, a division of Western Resources (formerly KPL) has an EDR.

Q. Does Gas Service's EDR contain a provision that requires EDR revenues to be imputed for ratemaking purposes?

A. Yes, it does.

Q. Does Public Counsel believe the Commission should require MPS to incorporate a similar provision in its EDR if the Commission decides to allow MPS to offer an EDR at this time?

A. Yes. We recommend that MPS be required to incorporate the following revenue imputation provision, which is similar to the one contained in Gas Resource's EDR:

> Prior to any determination of the Company's revenue requirement for rate making purposes before the Commission, test year revenue levels shall first be

> adjusted to the level corresponding to that which would have been produced in the test year under the rate schedule that would have been applicable if the Economic Development Rider did not exist.

Q. Does Public Counsel have any other recommendations regarding MPS's proposed EDR?

A. Yes. These other recommendations will be especially important if the Commission does not accept Public Counsel's primary recommendations and decides that MPS should be allowed to have an EDR even though it has not shown that EDR rates will exceed LRMC and if the Commission decides to do so without requiring the Company to add a revenue imputation provision to its proposed EDR. If the Commission rejects Public Counsel's primary recommendation, we recommend the Commission at least require MPS to make some changes in its EDR that will lessen that likelihood that non-EDR customers will be harmed by allowing free riders to be served under the EDR.

Q. Does MPS's proposed EDR contain any applicability criteria that will prevent free riders from qualifying for the rider?

A. Yes. The Applicability section of the proposed EDR contains language stating that:

> New or expanded facilities under construction or otherwise committed to operation <u>prior to the effective date of this rider</u> are not eligible for service under this rider. (emphasis added)

While this language may prevent some free riders from being eligible for the proposed EDR, Public Counsel recommends modifying this criteria so it reads:

> New or expanded facilities under construction or otherwise committed to operation prior to the effective date of an EDR contract between the customer and Missouri Public Service are not eligible for service under this rider.

This proposed modification will prevent those who have new or expanded facilities under construction or otherwise committed to operation <u>after</u> the effective date of the EDR, but <u>prior</u> to the effective date of the EDR contract between the customer and MPS, from being eligible for the EDR.

Q. Does Public Counsel recommend any additional eligibility criteria that will help prevent free riders from taking service under MPS's proposed EDR?

A. Public Counsel recommends adding the following eligibility criteria to the Applicability section of MPS's proposed EDR:

> (1) Firms who certify to the Company that but for the incentives provided and required by this program, they would not have otherwise chosen to expand or locate within the Company's service area; and
>
> (2) Firms who are determined by the Company to have locational requirements which are sufficiently flexible to feasibly and economically permit location of the facility outside the Company's service area. For the purposes of this program, the Company shall consider applicants to have satisfied this requirement if they are proposing to operate a business which is predominately classified within Standard Industrial Classification ("SIC") major groups 20 through 39 (as defined by the Standard Industrial Classification Manual, 1987, published by the Executive Office of the President OMB) or for which more than 50% of the facility's output is sold outside the state of Missouri; and

(3) Firms for whom the cost of electric service (prior to consideration of the effects of the program) are expected to constitute 2% or more of the total value of output produced by the applicable load; and

(4) Existing customers of the Company, new firms, or firms moving from outside of Missouri or relocating or expanding from unsuitable facilities within Missouri.

Q. Are there any other issues of which you believe the Commission should be aware when deciding whether MPS's proposed EDR promotes the public interest?

A. Yes. When the Commission decides whether MPS's proposed EDR promotes the public interest, it should consider any adverse effects that may result from placing businesses that are in competition with MPS's EDR customers at a competitive disadvantage.

Q. Are you aware of any Missouri businesses that are concerned that they may be put at a competitive disadvantage if their rivals qualify for discounted EDR rates?

A. Yes. AG Processing, Inc. (AGP), a company that is located in St. Joseph Light & Power's service territory, recently expressed its concerns about this issue in its Motion to Intervene and Motion to Suspend Tariff and Motion to Consolidate in Case No. ER-93-48 where it stated that:

> AGP's second concern relates to competitive fairness. AGP's annual electric bill is approximately $1,500,000. Since electricity is such a large expense, its price can effect [sic] the cost of the end product. While AGP would not be placed at a competitive disadvantage if the new business was not engaged in its lines of business, it would have serious difficulty if this discount was

made available to a facility operated by a competitor, while AGP had to pay the full price for electricity.

Q. What factors should the Commission consider in deciding whether MPS's proposed EDR promotes the public interest despite the harm that may be caused by its creation of a competitive disadvantage for some Missouri businesses?

A. If MPS's proposed EDR decreases the ability of some Missouri business to compete with MPS's EDR customers, then Missouri businesses both within and outside of MPS's service area may be harmed. If businesses within MPS's service area are harmed by MPS's EDR, then any potential benefit to the public interest in the form of new jobs in MPS's service area may be cancelled out by this harm. If Missouri businesses outside of MPS's service area are harmed by MPS's EDR, then not only may a loss in jobs outside of MPS's service territory cancel out any gains within MPS's service territory, but the loss in utility revenues and tax base associated with the lost jobs and decreased industrial production may cause utility rates and taxes to rise for customers in any area where the job loss occurred.

CLASS COST OF SERVICE STUDY

Q. Please outline the basic elements of the Class COS Study that you performed for this case.

A. The main purpose of a Class COS Study is to determine the COS for each of the customer classes by allocating costs to them in a reasonable manner. The three primary steps that must be taken in order to perform a Class COS Study are the be, classification, and allocation of costs.

Allocation of costs involves categorizing accounts by the type of function with which an account is associated. Accounts are categorized as being related to Production, Transmission, Distribution, Customer Accounts, Administrative and General, etc., depending on the gas Local Distribution Company (LDC) functions of which they are a part.

Once costs have been functionalized, they are classified as being customer (related to the number of customers), demand (related to the class portion of peak usage), commodity (related to annual throughput), or "other" related, depending on the function with which they are associated. For example, meter, regulator, and service line expenses are considered customer-related, since a certain amount of expense will be incurred solely for hooking a customer up to the LDC. These expenses will be incurred for each customer whether or not the customer uses any gas so it would not be reasonable to classify them as being commodity-related.

Finally, after classifying costs, the analyst chooses allocation factors that will distribute a reasonable share of jurisdictional costs to each customer class. Allocation factors are based on ratios that reflect the proportion of total units (total number of customers, total annual throughput, etc.) attributable to a certain customer class.

These ratios are then used to calculate the proportions of various cost categories for which a class is responsible.

Q. Which customer classes have you used?

A. I have used the same customer classes that MPS has used in its COS study and rate proposal. These are Residential, Commercial Firm, Commercial Interruptible, Industrial Firm, and Industrial Interruptible.

Q. Which of MPS's costs are the main focus of this case?

A. Margin costs and the proposed margin rates are the main focus of this rate case. Non-gas or margin costs are costs that the LDC incurs when it delivers gas from its suppliers to its customers. These costs include the expenses and capital costs associated with the operation of the utility's gas plant as well as Customer and Administrative and General expenses.

Q. What data is your Class COS Study based on?

A. It is based on information from MPS's Minimum Filing Requirements (MFRs) and information that Public Counsel received in response to Data Requests (Drs). I used financial and billing unit information from these sources for the test year ending May 31, 1992. My use of this information should not be seen as an endorsement of MPS's methods for calculating accounting costs or billing determinants. I have only used this information to perform Public Counsel's Class COS Study.

Public Counsel witness Dr. Philip B. Thompson provided the monthly customer class peak day usage data based on information provided by MPS and Staff. For a detailed explanation of how the peaks were calculated, see the direct testimony of Dr. Thompson.

Q. Next, please discuss the methods that you used to allocate functionalized costs. First, how did you allocate transmission plant?

A. I used an allocator that was calculated based on the Relative Incremental System Utilization Method (RISUM). The theoretical basis for this allocation method, which was developed by OPC witness Dr. Philip B. Thompson, is described in his testimony. I have adopted the commonly-used principle that "expenses follow plant," so I used the same allocator for operation and maintenance (O&M) expenses that are directly related to use of transmission plant. (This principle was also applied to distribution plant O&M expenses.)

Q. How were Land and Land Rights, Structures and Improvements, and Mains plant (accounts 374, 375, and 376) allocated?

A. I used the same RISUM allocator for these accounts.

Q. How did you calculate the RISUM allocator?

A. I followed the same basic procedure outlined in Dr. Thompson's direct testimony where he provides a simplified illustration of how the RISUM allocator is calculated. My workpapers, which show the step-by-step procedure that I used to calculate OPC's RISUM allocator, will be provided to any party requesting them.

The class monthly peak data and the economies of scale factor that I used in calculating the allocator were provided to me by Dr. Thompson. His testimony describes the source of these input values.

Q. How did you allocate accounts 380 through 384 (Services, Meters, and Regulators)?

A. I used allocators based on the weighted number of customers in each class. These allocators reflect the relationship between the cost of equipment or facilities and the number of customers and average peak demand per customer in each class. Meter cost per customer is a good example of this relationship. The meter cost for a customer class is dependent on the number of customers in the class (since each customer requires a meter) and the peak usage for the class's average customer (since this will determine average meter size).

Q. Please explain the source of the weighted-customer numbers used to allocate Services, Meters, and House Regulators (accounts 380, 381, and 383).

A. I used the customer-class cost breakdowns developed by MPS for use in its COS study to calculate the weighted customer allocators used in OPC's COS study.

Q. Please describe the allocators that you applied to the remaining distribution accounts.

A. I used total annual throughput to allocate Measuring and Regulating Station Equipment (Accounts 378 and 379). I allocated Other Equipment (Account 387) based on the allocation of all other previously allocated distribution plant.

Q. How did you allocate General Plant?

A. I divided the General Plant accounts into two categories. The first category includes general plant accounts that support the company's overall operations, such as Communications Equipment (Account 397). Accounts in this category were allocated on the basis of each class's proportion of total company COS. In this way, the costs allocated to each class from these accounts corresponds to the extent to which each class is responsible for company's overall cost of operation.

I placed accounts that contain costs associated with the direct support of other LDC functions in the second category. For example, Power Operated Equipment (Account 396) contains costs that are primarily related to the construction, operation, and maintenance of transmission and distribution plant. For this reason, I allocated this category of accounts on the basis of previously allocated non-general plant.

Q. Let's turn now to the allocation of Operation and Maintenance expenses. How did you allocate gas purchase, production, storage, and distribution expenses?

A. I used the "expenses follow plant principle" for allocating most of the accounts in these categories. One notable exception was purchased gas costs for which I used the gas expense figures provided by MPS.

Q. How did you allocate Other Distribution Operating Expenses and Rents (Accounts 879 and 880)?

A. I allocated these expenses using the same method that MPS used. MPS allocated these expenses based on all other previously allocated distribution operating expenses. The Company's response to OPC DR No. 527 indicated that it chose this allocation method because "these expenses are larger for the interruptible or transportation customers."

Q. How was Meter Reading expense (Account 902) allocated?

A. These costs should be allocated based on weighted customer numbers since the lower geographic density of larger customers tends to increase the per-customer cost of reading meters. I have used the same customer-class density weights that MPS used to calculate its mains allocation factor. These weights are two Commercial and Industrial Firm customers and six for Commercial and Industrial Interruptible customers.

Q. How did you allocate the other Customer Accounts expenses?

A. I allocated all of the other accounts in this category, except for Uncollectibles (account 904), based on the same weighted-customer allocator that I used for Meter Reading. My choice of a weighted-customer allocator for these accounts is based on the additional complexity in the metering and billing process associated with larger customers. Uncollectibles are allocated based on unweighted customer numbers.

Q. How were Customer Service and Sales Promotion expenses allocated?

A Customer Service accounts were allocated on the basis of unweighted customer numbers and Sales Promotion expenses were allocated based on my COS allocator. I chose to use my COS allocator for sales promotion expenses since these costs are incurred for the purpose of lowering the average margin cost (by increasing sales) of providing service to customers in each of the customer classes. The amount by which customers in each class benefit from a lower average cost will be proportional to the share of overall costs of service per customer that they are responsible for incurring.

Q. How did you allocate Administrative and General (A & G) expenses?

A. I divided these expenses into three categories. I allocated Property Insurance expense (Account 924) on the basis of gross plant since this expense is linked to the value of the plant that the Company requires in order to serve each customer class. Injuries and Damages and Employee Pensions and Benefits (Accounts 925 and 926) are both payroll related expenses so they were allocated on the basis of the amount of payroll expense that I had previously allocated to each class. I believe all of the remaining A & G accounts represent expenditures that support the company's overall operation, so I have allocated them on the basis of each class's share of total company COS.

Q. How did you allocate property and payroll taxes?

A. Property taxes were allocated on the basis of the amount of total gross plant that I had previously allocated to each class. Payroll taxes were allocated based on the amount of payroll expenses that I had previously allocated to each class.

Q. How have you allocated state and federal income taxes?

A. These taxes are allocated on the basis of rate base since a utility company's income taxes are a function of the size of its rate base, and thus a class should contribute revenues for income taxes in accordance with the proportion of rate base that is necessary to serve it.

Q. Please describe the results of Public Counsel's Class COS Study.

A. Line 15 on Schedule 1 shows the inter-class revenue shifts indicated by OPC's Class COS Study, assuming that total company revenues remain constant. Line 17 of this schedule shows the percentage by which margin rate revenues in each class would have to change in order to make each customer class's proportion of current revenue equal to its proportion of total COS at the rate of return recommended by OPC witness Mr. John Tuck.

Line 16 on Schedule 2 shows the inter-class revenue shifts indicated by OPC's COS study if the Company receives its full requested revenue requirement increase. Line 18 on this schedule shows the percentage by which margin revenues must change to make each customer class's rate of return equal to the overall company rate of return recommended by OPC witness Mr. Tuck. I will furnish the more detailed workpapers that support Public Counsel's COS study to any party requesting them.

Q. Is Public Counsel proposing rates that match the percentage changes in class margin revenues indicated by its COS study?

A. No. We are proposing changes in rates that will move class revenues in the direction indicated by our COS study. In his direct testimony, Dr. Thompson presents the details of Public Counsel's class revenue change and rate proposal.

Q. Does Public Counsel's COS study incorporate any of the revenue requirement adjustments sponsored by OPC witness Mr. Ted Robertson?

A. No, it does not. We have used the same accounting costs and billing determinants that MPS used in its COS study. We used these same accounting costs and billing determinants so that our study could be easily compared with MPS's study, and our use of MPS's data should not be interpreted as an endorsement of its validity.

Q. Did you perform any analysis to see if the Company's proposed customer charge increase is justified based on the customer-related costs that are attributable to the Residential class?

A. Yes, my analysis showed that the customer-related cost, which is one of the factors considered in determining an appropriate customer charge level, is $9.57. I believe my analysis shows that it would be reasonable to increase the Residential Class customer charge to $9.00 (assuming MPS receives most of its entire requested revenue increase). At the $9.00 level, the customer charge will be close to a cost based level and still not cause any unreasonable customer impacts since this is not an excessively large increase over the current $7.50 Residential Class customer charge.

Q. Does this conclude your testimony?

A. Yes, it does.

KIND DIRECT
GR-93-172

PUBLIC COUNSEL COS SUMMARY
MISSOURI PUBLIC SERVICE

		TOTAL	RESIDENTIAL	COMMERCIAL FIRM	COMMERCIAL INTERRUPTIBLE	INDUSTRIAL FIRM	INDUSTRIAL INTERRUPTIBLE
1	O & M Expenses	24,161,680	14,885,593	6,874,337	87,063	557,821	1,756,866
2	Depreciation Expense	2,541,420	1,463,081	508,590	19,675	34,237	515,836
3	Taxes	1,922,498	1,133,282	380,220	14,060	25,701	369,234
4	TOTAL EXPENSES AND TAXES	$28,625,598	$17,481,955	$7,763,148	$120,799	$617,759	$2,641,937
5	TOTAL RATE BASE	$48,919,630	$27,881,888	$9,864,154	$387,531	$638,358	$10,147,699
6	OPC RECOMMENDED RATE OF RETURN	9.39%	9.39%	9.39%	9.39%	9.39%	9.39%
	OPERATING INCOME WITH						
7	EQUALIZED RATES OF RETURN	$4,593,553	$2,618,109	$926,244	$36,389	$59,942	$952,869
8	TOTAL COST OF SERVICE (L. 4 + L. 7)	33,219,151	20,100,065	8,689,392	157,188	677,701	3,594,806
9	less OTHER REVENUE	(51,589)	(31,260)	(10,058)	(350)	(707)	(9,214)
10	REQUIRED RATE REVENUE (except taxes on revenue increase)	$33,167,562	$20,068,805	$8,679,334	$156,839	$676,994	$3,585,591
	CURRENT RATE REVENUES						
11	Purchased Gas	15,983,571	9,692,076	5,323,649	39,264	441,001	487,581
12	Non-gas margin	15,648,631	9,610,732	4,303,954	120,559	226,158	1,387,228
13	TOTAL RATE REVENUE	$31,632,202	$19,302,808	$9,627,603	$159,823	$667,159	$1,874,809
14	REVENUE PLUG	$1,535,360	$930,338	$299,343	$10,405	$21,050	$274,225
	REVENUE NEUTRAL INTER-CLASS REVENUE SHIFTS INDICATED						
15	BY OPC COS STUDY	$0	($164,341)	($1,247,612)	($13,390)	($11,215)	$1,436,558
	PERCENTAGE RATE REVENUE CHANGE						
16	WITH NO OVERALL REVENUE INCREASE	0.00%	-0.85%	-12.96%	-8.38%	-1.68%	76.62%
	PERCENTAGE MARGIN REVENUE CHANGE						
17	WITH NO OVERALL REVENUE INCREASE	0.00%	-1.71%	-28.99%	-11.11%	-4.96%	103.56%

SCHEDULE 1

KIND DIRECT
GR-93-172

PUBLIC COUNSEL COS SUMMARY
MISSOURI PUBLIC SERVICE

		TOTAL	RESIDENTIAL	COMMERCIAL FIRM	COMMERCIAL INTERRUPTIBLE	INDUSTRIAL FIRM	INDUSTRIAL INTERRUPTIBLE
1	O & M Expenses	24,161,680	14,885,593	6,874,337	87,063	557,821	1,756,866
2	Depreciation Expense	2,541,420	1,463,081	508,590	19,675	34,237	515,836
3	Taxes	1,922,498	1,133,282	380,220	14,060	25,701	369,234
4	TOTAL EXPENSES AND TAXES	$28,625,598	$17,481,955	$7,763,148	$120,799	$617,759	$2,641,937
5	TOTAL RATE BASE	$48,919,630	$27,881,888	$9,864,154	$387,531	$638,358	$10,147,699
6	OPC RECOMMENDED RATE OF RETURN	9.39%	9.39%	9.39%	9.39%	9.39%	9.39%
7	OPERATING INCOME WITH EQUALIZED RATES OF RETURN	$4,593,553	$2,618,109	$926,244	$36,389	$59,942	$952,869
8	TOTAL COST OF SERVICE (L. 4 + L. 7)	33,219,151	20,100,065	8,689,392	157,188	677,701	3,594,806
9	less OTHER REVENUE	(51,589)	(31,260)	(10,058)	(350)	(707)	(9,214)
10	REQUIRED RATE REVENUE (except taxes on revenue increase)	$33,167,562	$20,068,805	$8,679,334	$156,839	$676,994	$3,585,591
	CURRENT RATE REVENUES						
11	Purchased Gas	15,983,571	9,692,076	5,323,649	39,264	441,001	487,581
12	Non-gas margin	15,648,631	9,610,732	4,303,954	120,559	226,158	1,387,228
13	TOTAL RATE REVENUE	$31,632,202	$19,302,808	$9,627,603	$159,823	$667,159	$1,874,809
14	REQUIRED RATE REVENUE less CURRENT RATE REVENUE	1,535,360	765,997	(948,269)	(2,984)	9,835	1,710,782
15	Revenue Conversion Factor	1.567784	1.567784	1.567784	1.567784	1.567784	1.567784
16	REQUIRED RATE REVENUE INCREASE	$2,407,113	$1,200,918	($1,486,681)	($4,679)	$15,418	$2,682,137
17	REQUIRED PERCENTAGE INCREASE	7.61%	6.22%	-15.44%	-2.93%	2.31%	143.06%
18	REQUIRED PERCENTAGE INCREASE IN MARGIN REVENUE	15.38%	12.50%	-34.54%	-3.88%	6.82%	193.35%

SCHEDULE 2