Exhibit No.:
Witness: Maurice Brubaker
Type of Exhibit: Direct Testimony
Issue: Cost of Service
Sponsoring Party: Praxair, Inc.
Case No. ER-2001-299

Before the Public Service Commission of the State of Missouri

In the Matter of The Empire District Electric Company's tariff sheets designed to implement a general rate increase for retail electric service provided to customers in the Missouri service area of the Company	)))))	Case No. ER-2001-299

Direct Testimony of

Maurice Brubaker

On behalf of

Praxair, Inc.

Exhibit No. 95
Date 5/29/01 Case No. ER-2001-299
Reporter KEM

Project 7513
April 2001

BRUBAKER & ASSOCIATES, INC.

ST. LOUIS, MO 63141-2000

Before the Public Service Commission
of the State of Missouri

In the Matter of The Empire District Electric Company's tariff sheets designed to implement a general rate increase for retail electric service provided to customers in the Missouri service area of the Company	))))))	Case No. ER-2001-299

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Maurice Brubaker

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000. We have been retained by Praxair, Inc. in this proceeding on its behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2001-299.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things they purport to show.

Maurice Brubaker

Subscribed and sworn to before this 9th day of April 2001.

CAROL SCHULZ
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Feb. 26, 2004

Notary Public

My Commission Expires February 26, 2004.

Before the Public Service Commission
of the State of Missouri

In the Matter of The Empire District Electric Company's tariff sheets designed to implement a general rate increase for retail electric service provided to customers in the Missouri service area of the Company	))))))	Case No. ER-2001-299

Direct Testimony of Maurice Brubaker

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

Q WHAT IS YOUR OCCUPATION?

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

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A *This information is included in Appendix A to my testimony.*

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of Praxair, Inc. (Praxair). Praxair is a large industrial customer that purchases electricity under Special Transmission Service Contract: Praxair, identified in the tariffs as Schedule SC-P. Approximately 95% of Praxair's requirements are purchased on an interruptible basis. Only 5% is firm power.

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

A The purpose of my testimony is to comment on the electric class cost of service study presented by The Empire District Electric Company (Empire or Company), and to present modifications and corrections to Empire's study. I also present an alternative study which I believe is more representative of the responsibility for costs incurred by Empire in serving its various customers. In addition, I will also recommend an alternative allocation of any change in revenues found appropriate for Empire.

Utility System Characteristics

Q **WHAT IS THE IMPORTANCE OF UTILITY SYSTEM LOAD CHARACTERISTICS?**

A Utility system load characteristics are an important factor in determining the specific method which should be employed to allocate fixed, or demand-related costs on a utility system. The most important characteristic is the annual load pattern of the utility. For Empire, these characteristics are shown on Schedule 1. This schedule shows the monthly system peak demands for each of the years 1996 through 1999. The red bars show the month in which the annual system peak occurred. The bars with the red tips indicate the extent of load in excess of 90% of the annual peak occurring in any other month. Months where the load did not exceed 90% of the annual peak are shown without the red highlighting. This analysis clearly shows that summer peaks dominate on the Empire system. (This same information is presented in tabular form on Schedule 2.)

Q **EARLIER, YOU MENTIONED FIXED OR DEMAND-RELATED COSTS. WHAT ARE THEY AND HOW DO THEY RELATE TO SYSTEM LOADS?**

A The fixed or demand related costs for a utility system are generally referred to as capacity costs. As I will discuss below, utilities incur capacity-related costs in order to have sufficient capability to meet peak load requirements imposed on their systems by their customers.

Q WHAT ARE PRODUCTION AND TRANSMISSION CAPACITY COSTS?

A Capacity costs are related to the facilities owned and operated by the utility to provide service to customers. The specific cost elements include:

- Return on investment;
- Fixed operation and maintenance (O&M) expenses, consisting of costs that do not vary with the amount of energy generated and sold;
- *Depreciation expense; and*
- Ad valorem, payroll taxes and income taxes.

Q WHAT CRITERIA SHOULD BE USED TO DETERMINE AN APPROPRIATE METHOD FOR ALLOCATING PRODUCTION AND TRANSMISSION CAPACITY COSTS AMONG THE VARIOUS CUSTOMER CLASSES?

A The specific allocation method should be consistent with the principle of cost-causation; that is, the allocation should reflect the contribution of each customer class *to the demands that caused the utility to incur capacity costs.*

Q WHAT FACTORS CAUSE ELECTRIC UTILITIES TO INCUR PRODUCTION AND TRANSMISSION CAPACITY COSTS?

A Production and transmission plant must be sized to meet the maximum demand imposed on these facilities. Thus, an appropriate allocation method should

accurately reflect the characteristics of the loads served by the utility. For example, if a utility has a high summer peak relative to the demands in other seasons, then production and transmission capacity costs should be allocated relative to each customer class' contribution to the summer peak demands. If a utility has predominant peaks in both the summer and winter periods, then an appropriate allocation method would be based on the demands imposed during both the summer and winter peak periods. For a utility with a very high load factor and/or a non-seasonal load pattern, then either the Twelve Coincident Peak (12 CP) or Average and Excess (A&E) methods would be more appropriate.

Q WHAT IS THE A&E METHOD?

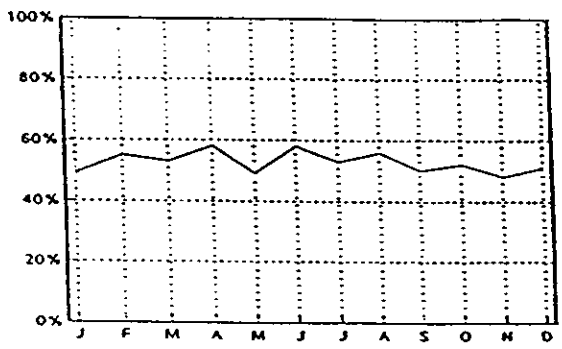
A Average and excess is one of a family of methods which incorporates a consideration of both the maximum rate of use and the duration of use. As the name implies, A&E makes a conceptual split of the system into an "average" component and an "excess" component. The "average" demand is simply the total kWh usage divided by the total number of hours in the year. This is the amount of capacity that would be required to produce energy at an absolutely level rate of use. The system "excess" demand is the difference between the actual system peak demand and the average demand. The more energy a class uses in proportion to its average demand—that is, the higher the load factor—the more likely that the class peak demand will be coincident with the system peak demand.

At the limit, a class with a 100% load factor would be 100% certain of being on at the time of the system peak. Moreover, such a customer would not contribute at all to the diversity of the system because the load is the same in all hours. Thus, the "average" component of the A&E method reflects the greater probability that a high

load factor customer will contribute to the system peak. The "excess" component, on the other hand, is a measure of the "peakiness" or variability in usage.[1]

Q WHAT DO YOU MEAN BY VARIABILITY IN USAGE?

A Consider for example two classes that have the following monthly usage patterns.



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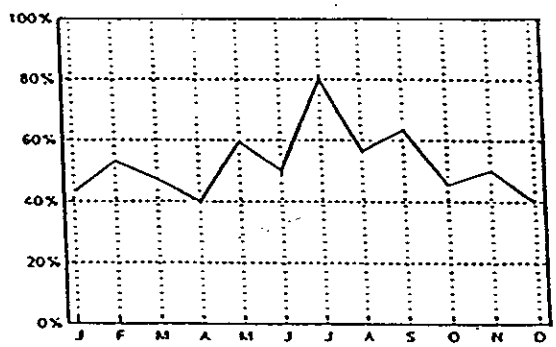

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Both classes use the same total amount of energy and, therefore, have the same average demand. The second class, though, has much greater maximum demand than the first. The greater maximum demand imposes greater costs on the utility system. This is because the utility must provide sufficient capacity to meet the projected maximum demands of its customers. There may also be higher costs due to the greater variability of usage of some classes. This variability requires that a utility cycle its generating units in order to match output with demand on a real time basis. The stress of cycling generating units up and down causes wear and tear on the equipment resulting in higher maintenance cost.

Thus, the excess component of the A&E method is an attempt to allocate the additional capacity requirements of the system (measured by the system excess) in proportion to the "peakiness" of the customer classes (measured by the class excess demands).

[1] NARUC Electric Utility Cost Allocation Manual, 1992, Page 81.

Q WHAT DEMAND ALLOCATION METHODOLOGY DO YOU RECOMMEND FOR USE ON THE EMPIRE SYSTEM?

A First, in order to reflect cost causation the methodology must give predominant weight to loads occurring during the summer months. Loads during these months (the peak loads) are the primary driver which has and continues to cause the utility to expand its generation and transmission capacity, and therefore should be given predominant weight in the allocation of capacity costs. Either a coincident peak study, using the demands during the months of July and August, or a version of an average and excess cost of service study that uses peak loads occurring during the summer would be most appropriate to reflect these characteristics on the Empire system. To be conservative, however, I will make my primary recommendation using the traditional average and excess cost allocation methodology.

In addition, the interruptible nature of the Praxair load must be appropriately recognized in any cost of service study. I will elaborate on this distinction, and its importance, later in this testimony.

Q WHAT ALLOCATION FACTORS HAVE YOU DEVELOPED?

A These are summarized on Page 1 of Schedule 3. It presents the traditional A&E allocation factor using maximum class peak demands, both as developed by Empire, and as adjusted to recognize the interruptible nature of the Praxair load. For comparison purposes, the schedule also shows the allocation factors for a 2 coincident peak (CP) allocation. Schedule 3 also presents the derivation of each of these allocation factors.

Cost of Service Analysis

Q WHAT IS A COST OF SERVICE STUDY?

A A cost of service study separates the utility's total costs into portions incurred on behalf of the various customer groups. Most of a utility's costs are incurred to jointly serve many customers. For purposes of rate design and revenue allocation, customers are grouped into homogeneous classes according to their usage patterns and service characteristics. A cost study is an analysis used to determine each class's responsibility for these costs.

Q WHAT PROCEDURES ARE USED IN A COST OF SERVICE STUDY?

A Appendix B outlines the generally-accepted concepts and steps employed in an electric class cost of service study.

Q IS THE COST OF SERVICE FRAMEWORK DESCRIBED IN APPENDIX B USED THROUGHOUT THE UTILITY INDUSTRY?

A Yes. In fact, every logical cost analysis must use these procedures of functionalizing costs (into generation, transmission, distribution and so on), classifying them (into demand-related, energy-related and customer-related) and allocating them among classes. There can, of course, be differences in the sequence of the calculations or the analytical structure, but the conceptual framework is always the same.

Q DOES THE APPLICATION OF THESE GENERAL COSTING PRINCIPLES RESULT IN DIFFERENCES IN THE PER UNIT COST OF SERVING THE VARIOUS TYPES OF CUSTOMERS?

A Yes. As explained in Appendix B, costs are <u>not</u> allocated on a per kilowatthour sold basis (not even energy-related costs, which recognize the differences in the losses incurred to serve customers at various voltage levels). Most fixed costs are allocated

either on a demand or customer basis. Recognizing the different types of costs and the different ways electricity is used by various customers leads to the conclusion that there are significant differences in the cost of serving the various customer classes.

The table below illustrates the cost of service per kilowatthour, based on the average and excess allocation methodology which I will subsequently describe in more detail.

Cost of Service
Expressed Per Kilowatthour

Residential	8.3¢
Commercial	8.4¢
General Power	5.1¢
Large Power	4.3¢
Praxair	2.3¢
Total	6.7¢

General power and large power class consumers are less costly to serve because (1) they operate at higher load factors, (2) electricity is generally sold at higher delivery voltages, and (3) they use more electricity per customer. These differentials suggest that there is nothing fundamentally wrong or inequitable about some customers paying higher/lower average rates than others. Appendix B elaborates on these differences. Praxair is even less costly to serve because it is 95% interruptible.

Q HAVE YOU ANALYZED EMPIRE'S CLASS COST OF SERVICE STUDY?

A Yes. Empire has used a traditional type of A&E cost of service study. There were a number of inconsistencies and errors in Empire's filed cost of service study which we have identified and discussed with Empire. Corrections to that study have been made. These corrections included a mis-statement of the accumulated reserves for

depreciation within the distribution function and a mis-statement of the revenues collected from Praxair. The results of the corrected version of the Company study are summarized on Schedule 4 of my Exhibit.

Q ARE THERE ANY INTERNAL METHODOLOGICAL PROBLEMS WITH EMPIRE'S STUDY?

A Yes. As previously mentioned, Praxair's load is approximately 95% interruptible. The Company's study attempted to recognize this by adjusting Praxair's revenues to equal what they would have been had the load been served on a firm basis, and also allocated costs to Praxair as if it were totally firm. The result of this study would be an indication of the cost to Empire of serving Praxair on a firm basis, and the rate of return that Praxair would be providing if it were taking firm service. The problem with the study is that Praxair is not taking firm service; 95% of its power requirements are taken on an interruptible basis and can be withdrawn by Empire on terms which are very liberal to Empire.

Q HOW SHOULD EMPIRE'S COST OF SERVICE STUDY BE ADJUSTED TO APPROPRIATELY REFLECT THE NATURE OF THE POWER TAKEN BY PRAXAIR?

A The study should be adjusted to allocate costs to Praxair based only on that portion of its load which is firm. The actual revenues received from Praxair, which are lower than firm service revenues because of the interruptible credit, should be used in the cost of service study.

Q PLEASE EXPLAIN IN MORE DETAIL THE NATURE OF INTERRUPTIBLE POWER AND HOW IT BENEFITS THE UTILITY SYSTEM AND THE OTHER CUSTOMERS?

A Interruptible power is power that is provided to customers on the basis that its availability can be withdrawn for the benefit of service to firm customers, if the power is required to provide reliable service to firm customers. In other words, interruptible power is sold to the interruptible customers when it is not needed to supply firm load customers. The conditions under which the interruptible power may be withdrawn from the interruptible customer are defined in the tariffs and contracts under which the utility sells power on an interruptible basis.

From a planning perspective, a utility does not need to plan generation resources to serve interruptible load. Rather, the planning process basically focuses on the needs of firm customers. In the case of strongly summer peaking companies (like Empire) it is the summer peak loads of the customers which drive the amount of generating resources required to provide firm service to firm customers. Having arranged for that amount of generation resources (installed generation capacity and/or firm purchased power) necessary to provide firm service, a utility is able to sell power on an interruptible basis to customers willing to accept less than firm service. The power is sold to the interruptible customers when it is not needed to supply the needs of the firm customers. This obviously allows the utility to operate with a smaller amount of generation capacity than would be the case if all load were served on a firm basis. Therefore, in performing a cost of service study, interruptible customers should not be allocated any responsibility for demand-related generation investment or purchased power costs, since their interruptible load does not cause these costs to be incurred.

Empire has the right to interrupt the Praxair load up to 400 hours in any rolling 12-month period. In addition, there is no limitation on the number of hours of interruption in a given day.

Q **HAVE YOU DEVELOPED A COST OF SERVICE ALLOCATION WHICH YOU BELIEVE IS MORE REALISTIC?**

A Yes, I have. This is shown on Schedule 5. This study uses the same basic A&E allocation methodology as the revised Company study shown in Schedule 4, except that it explicitly recognizes the interruptible nature of Praxair's load. In this cost of service study, the Praxair load (for purposes of allocating generation fixed costs) is established at the 300 kW firm level. The transmission allocation is the same as in the Company study, and does not provide any reduction from that which is allocable on a firm basis.

Q **PLEASE EXPLAIN SCHEDULE 5.**

A Schedule 5 is the full printout of our preferred A&E cost of service study. The summary page shows the key statistics, including rate base, revenues, expenses, operating income, rate of return and relative rate of return.

Line 11 on the summary shows the deviation of each class from cost of service at present rates. Taking the residential class as an example, it would require an increase of approximately $10.8 million or 11% to reach cost of service at present rates. The commercial service class would require a decrease of $2.6 million or 11%; while the general power class would require a decrease of $6.3 million or 18% to reach cost of service. Praxair would require a decrease of $537,000 or 33%.

Q **WHAT ELSE IS SHOWN AT THE BOTTOM OF THIS SCHEDULE?**

A Also shown at the bottom of the schedule are the increases or decreases in revenue, compared to proposed revenues, required to equal cost of service at Empire's claimed revenue requirement. For the residential class this is an increase of $9.8 million in addition to the proposed across-the-board increase. The commercial

service class would require a decrease of $1.6 million, the general power class would require a decrease of $5.6 million, and the large power class would require a decrease of $1.4 million. Praxair would require a decrease of $554,000.

Q WHAT IS SHOWN ON SCHEDULE 6?

A Schedule 6 presents a summary of the 2-coincident peak cost of service study. For the major customer classes the results are quite similar to the results of the A&E study.

Adjustment of Class Revenues

Q WHAT SHOULD BE THE PRIMARY BASIS FOR ESTABLISHING CLASS REVENUE REQUIREMENTS AND DESIGNING RATES?

A Cost should be the primary factor used in both steps.

Just as cost of service is used to establish a utility's total revenue requirement, it should also be the basis used to establish the revenues collected from each customer class and to design rate schedules.

Although factors such as simplicity, gradualism and ease of administration may also be taken into account, the basic starting point and guideline throughout the process should be cost of service. To the extent practicable, rate schedules should be structured and designed to reflect the important cost-causative features of the service provided, and to collect the appropriate cost from the customers within each class or rate schedule, based upon the individual load patterns exhibited by those customers.

Q WHAT IS THE BASIS FOR YOUR RECOMMENDATION THAT COST BE USED AS THE PRIMARY FACTOR FOR THESE PURPOSES?

A The basic reasons for using cost as the primary factor are equity, conservation, and engineering efficiency (cost-minimization).

Q PLEASE EXPLAIN HOW EQUITY IS ACHIEVED BY BASING RATES ON COST.

A When rates are based on cost, each customer pays what it costs the utility to provide service to that customer; no more and no less. If rates are based on other than cost factors, then some customers will pay the costs attributable to providing service to other customers–which is inherently inequitable.

Q HOW DO COST-BASED RATES FURTHER THE GOAL OF CONSERVATION?

A Conservation occurs when wasteful, inefficient use is discouraged or minimized. Only when rates are based on costs do customers receive a balanced price signal upon which to make their electric consumption decisions. If rates are not based on costs, then customers who are not paying their full costs may be induced to use electricity inefficiently in response to the distorted rate design signals they receive.

Q WILL COST-BASED RATES ASSIST IN THE DEVELOPMENT OF COST-EFFECTIVE DEMAND-SIDE MANAGEMENT (DSM) PROGRAMS?

A Yes. The success of DSM depends, to a large extent, on customer receptivity. There are many actions that can be taken by consumers to reduce their electricity requirements. A major element in a customer's decision-making process is the amount of reduction that can be achieved in the electric bill as a result of DSM activities. If the bill received by a customer is subsidized by other customers; that is, the bill is based on rates which are below cost, that customer will have less reason to engage in DSM activities than when the bill reflects the actual cost of the electric service provided.

Q **HOW DO COST-BASED RATES ACHIEVE THE COST-MINIMIZATION OBJECTIVE?**

A When the rates are designed so that the energy costs, demand costs, and customer costs are properly reflected in the energy, demand and customer components of the rate schedules, respectively, customers are provided with the proper incentives to minimize their costs, which will in turn minimize the costs to the utility.

If a utility attempts to extract a disproportionate share of revenues from a class that has alternatives available, then the utility will be faced with the situation where it must discount the rates or lose the load, either in part or in total. To the extent that the load could have been served more economically by the utility, then either the other customers of the utility or the stockholders (or some combination of both) will be worse off than if the rates were properly designed on the basis of cost.

From a rate design perspective, overpricing the energy portion of the rate and underpricing the fixed components of the rate (such as customer and demand charges) will result in a disproportionate share of revenues being collected from large customers and high load factor customers. To the extent that these customers may have lower cost alternatives than do the smaller or the low load factor customers, the same problems noted above are created.

Q **HAVE YOU PREPARED RECOMMENDATIONS FOR THE ALLOCATION OF REVENUE ADJUSTMENTS (INCREASES OR DECREASES) AMONG CUSTOMER CLASSES?**

A Yes, I have. This appears on Schedule 7.

Q **WHAT RANGE OF REVENUE CHANGES HAVE YOU CONSIDERED?**

A I have prepared a schedule which illustrates how revenue changes in the range of a $15 million increase to a $40 million increase should be apportioned.

Q WHAT IS THE BASIS FOR YOUR RECOMMENDED REVENUE ALLOCATION?

A My primary objective was to move rates closer to cost of service, while being mindful of the need to moderate increases to those customer classes that would require their rates to be adjusted significantly more than the average. The classes requiring substantially above average increases to achieve cost of service are the residential, commercial small heat, power furnace and lighting classes.

In the context of an overall increase of 20% ($40 million) I decided, for impact reasons, to limit the maximum increase to any class to 25%. Accordingly, Schedule 7 shows that these four classes received a 25% increase. (The CSH class receives 24% because that is what is required to move it to cost of service).

Next, I identified those classes whose required changes were negative, or a small positive number. I assigned to them an increase equal to one-half of the overall increase. These are the general power, Praxair and miscellaneous classes. The balance of the increase was apportioned to the remaining customer classes who required increases less than the average, but more than the prior group. The overall average increase to these customers was approximately 18%.

With a $15 million increase, or 7.5%, I followed the same pattern but allowed the maximum increases to be relatively larger than in the case when the increase was 20%. In other words, the 25% increase to the low rate of return classes is approximately 1.25 times the overall system average of 20%. For an increase of 7.5%, I limited the increase to any individual class to 11%, which is approximately 1.45 times the overall system average. The classes requiring decreases or increases close to zero were assigned a 2.5% increase and the balance or residual was assigned to other customer classes with the result that they would receive an increase of approximately 4.5%.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Qualifications of Maurice Brubaker

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Maurice Brubaker. My business mailing address is P. O. Box 412000, 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

Q PLEASE STATE YOUR OCCUPATION.

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

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I was graduated from the University of Missouri in 1965, with a Bachelor's Degree in Electrical Engineering. Subsequent to graduation I was employed by the Utilities Section of the Engineering and Technology Division of Esso Research and Engineering Corporation of Morristown, New Jersey, a subsidiary of Standard Oil of New Jersey.

In the Fall of 1965, I enrolled in the Graduate School of Business at Washington University in St. Louis, Missouri. I was graduated in June of 1967 with the Degree of Master of Business Administration. My major field was finance.

From March of 1966 until March of 1970, I was employed by Emerson Electric Company in St. Louis. During this time I pursued the Degree of Master of Science in Engineering at Washington University, which I received in June, 1970.

In March of 1970, I joined the firm of Drazen Associates, Inc., of St. Louis, Missouri. Since that time I have been engaged in the preparation of numerous studies relating to electric, gas, telephone and water utilities. These studies have included analyses of the cost to serve various types of customers, the design of rates for utility services, cost forecasts, cogeneration rates and determinations of rate base and operating income.

I have testified before the Federal Energy Regulatory Commission (FERC), various courts and legislatures, and the state regulatory commissions of Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Guam, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Missouri, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming.

The firm of Drazen-Brubaker & Associates, Inc. was incorporated in 1972 and assumed the utility rate and economic consulting activities of Drazen Associates, Inc., founded in 1937. In April, 1995 the firm of Brubaker & Associates, Inc. was formed. It includes most of the former DBA principals and staff. Our staff includes consultants with backgrounds in accounting, engineering, economics, mathematics, computer science and business.

We have prepared many studies relating to electric, steam, gas and water properties, including cost of service studies in connection with rate cases and negotiation of contracts for substantial quantities of gas and electricity for industrial use. In these cases, it was necessary to analyze property records, depreciation accrual rates and reserves, rate base determinations, operating revenues, operating expenses, cost of capital and all other elements relating to cost of service.

During the past five years, Brubaker & Associates, Inc. and its predecessor firm has participated in over 500 major utility rate cases and statewide generic investigations before utility regulatory commissions in 40 states, involving electric, gas, water, and steam rates. Rate cases in which the firm has been involved have included more than 80 of the 100 largest electric utilities and over 30 gas distribution companies and pipelines.

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.

COST OF SERVICE
DETERMINATION PROCEDURES

Overview

The objective of *cost allocation* is to determine what proportion of the utility's total revenue requirement should be recovered from each customer class. As an aid to this determination, cost of service studies are usually performed to determine the portions of the total costs that are incurred to serve each customer class. The cost of service study identifies the cost responsibility of the class and provides the foundation for revenue allocation and rate design. For many regulators, cost-based rates are an expressed goal. To better understand cost allocation and cost of service studies, it is important to first become fully acquainted with the commodity, electricity.

Electricity Fundamentals

Electricity is different from most other commodities purchased by consumers. For example:

- It cannot be stored; must be delivered as product;
- It must be delivered to the customer's home or place of business;
- The delivery occurs instantaneously when and in the amount needed by the customer; and
- Both the total quantity used (energy or kWh) by a customer and the rate of use (demand or kW) are important.

These unique characteristics differentiate electric utilities from other service-related industries.

The service provided by electric utilities is multi-dimensional. First, unlike most vital services, electricity must be delivered at the place of consumption – homes, schools, businesses, factories – because this is where the lights, appliances, machines, air

conditioning, etc. are located. Thus, every utility must provide a path through which electricity can be delivered regardless of the customer's **demand** and **energy** requirements.

Even at the same location, electricity may be used in a variety of applications. Homeowners, for example, use electricity for lighting, space conditioning, and to operate various appliances. At any instant, several appliances may be operating (e.g., lights, refrigerator, TV, air conditioning, etc.). Which appliances are used and when reflects the second dimension of utility service–the rate of electricity use or **demand**. The demand imposed by customers is an especially important characteristic because it is the maximum demands determine how much capacity the utility is obligated to provide. Generating units, transmission lines and substations and distribution lines and substations are rated according to the maximum demand that can be safely imposed on them. (They are not rated according to average annual demand; that is, the amount of energy consumed during the year divided by 8,760 hours.) On a hot summer afternoon when customers demand 900 megawatts (MW) of electricity, the utility must have at least 900 MW of generation, plus additional capacity to provide adequate reserves, so that when a consumer flips the switch, the lights turn on, the machines operate and heating and air conditioning systems heat and cool our homes, schools, offices, and factories.

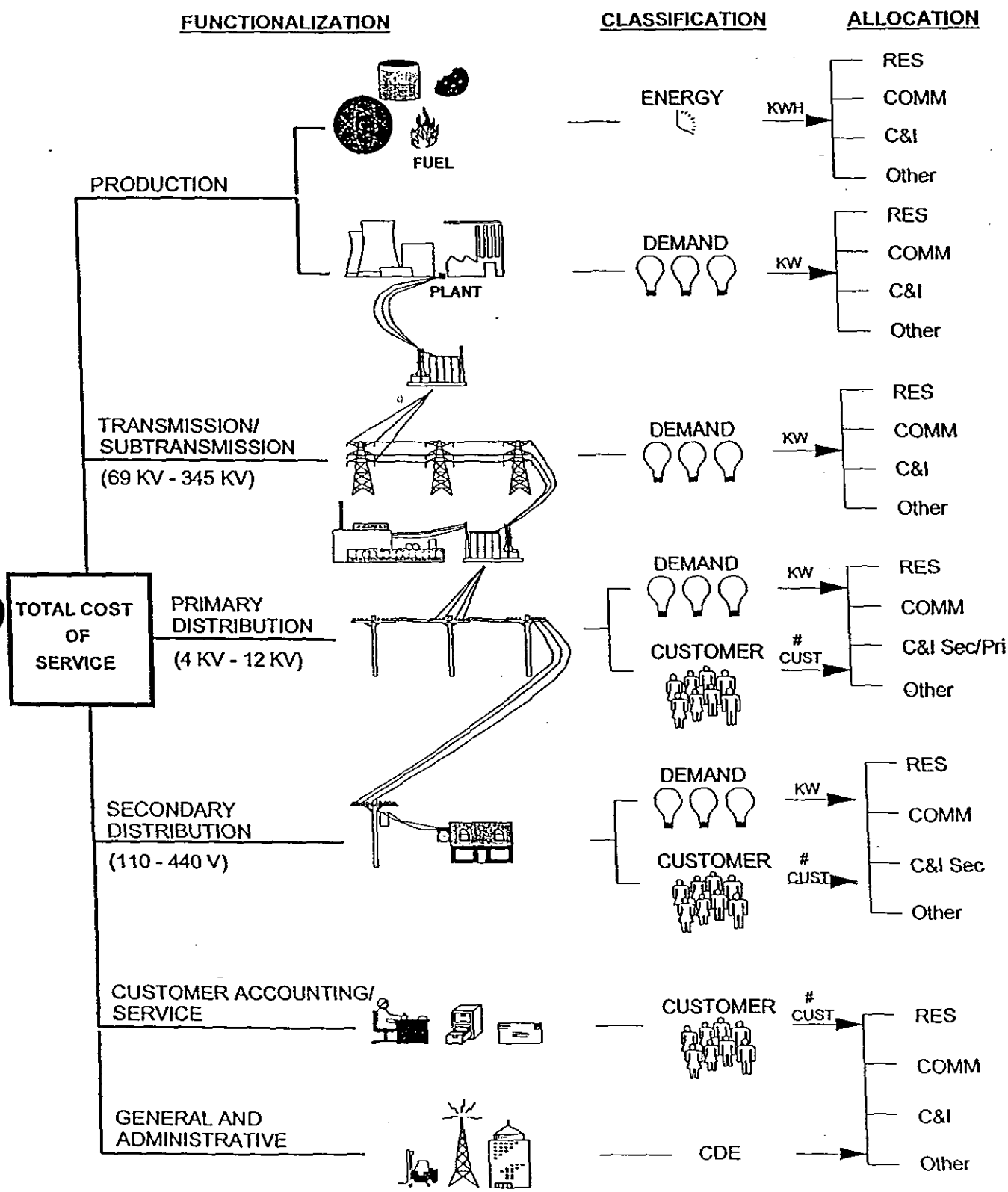
Satisfying customers' demand for electricity over time–providing **energy**–is the third dimension of utility service. It is also the dimension with which we are most familiar because people often think of electricity simply in terms of kilowatthours. To see one reason why this isn't so, let's take a more familiar commodity–bananas, for example.

The bananas we buy at the supermarket for about 90¢ a pound might originally come from Honduras where they are bought for about 25¢ a pound. In addition to the cost of buying them at the point of production, there is the cost of bringing them to this country and distributing them in bulk to wholesalers. The cost of transportation, insurance, handling and warehousing must be added to the original 25¢ a pound. Then they are distributed to

neighborhood stores, which adds more handling costs as well as the store's own costs of light, heat, personnel and rent. Shoppers can then purchase as many or few bananas as they desire at their convenience. In addition, there are losses from spoilage and damage in handling. These "line losses" represent an additional cost which must be recovered in the final price. What we are really paying for at the store is not only the fruit itself, but the service of having it available in convenient amounts and locations. If we took the time and trouble (and expense) to go down to the wholesale produce distributor, the price would be less. If we could arrange to buy them in bulk at the dock, they would be still cheaper.

As illustrated in the diagram on page 4, electric utilities are similar, except that in most cases a single company handles everything from production on down through wholesale (bulk and area transmission) and retail (distribution to homes and stores). The crucial difference is that, unlike banana producers and distributors, electric utilities have an obligation to provide continuous reliable service. The obligation is a quid-pro quo for having an exclusive right to serve all customers located within its territorial franchise. In addition to satisfying the energy (or kilowatthour) requirements of its customers, the obligation to serve means that the utility must also provide the necessary facilities to attach customers to the grid (so that service can be used at the point where it is to be consumed) and these facilities must be responsive to changes in the kilowatt demands whenever they occur.

PRODUCTION AND DELIVERY OF ELECTRICITY



Appendix B
Maurice Brubaker
Page 4

A Closer Look At The Cost of Service Study

To the extent possible, the unique characteristics that differentiate electric utilities from other service-related industries should be recognized in determining the cost of providing service to each of the various customer classes. The basic procedure for conducting a class cost of service study is simple. In an allocated cost of service study, we identify the different types of costs (**functionalization**), determine their primary causative factors (**classification**) and then apportion each item of cost among the various rate classes (**allocation**). Adding up the individual pieces gives the total cost for each class.

Functionalization

Identifying the different levels of operation is a process referred to as **functionalization**. The utility's investment and expenses are separated by function (production, transmission, etc.). To a large extent, this is done in accordance with the Uniform System of Accounts.

Referring to page 4, at the top level there is generation. The next level is the extra high voltage transmission and subtransmission system (34,500 to 345,000 volts). Then the voltage is stepped down to primary voltage levels of distribution–4,160 to 12,000 volts. Finally, the voltage is stepped down by pole transformers at the "secondary" level to 110/220 volts used to serve homes, barber shops and the like. Additional investment and expenses are required to serve customers at secondary voltages, compared to the cost of serving customers at higher voltage.

Each additional transformation, thus, requires additional investment, additional expenses and results in some additional electrical losses. To say that "a kilowatthour is a kilowatthour" is like saying that "a banana is a banana." It's true in one sense, but when you buy a kilowatthour at home you're not only buying the energy itself but also the service of having it delivered right to your doorstep in convenient form. Those who buy at the bulk or wholesale level – like large power service customers–pay less because some of the

expenses to the utility are avoided. (Actually, the expenses are borne by the customer who must invest in his own transformers and other equipment.)

Classification

Once the costs have been functionalized, the next step is to identify the primary causative factor (or factors). This step is referred to as **classification**. Costs are classified as demand-related, energy-related or customer-related.

Looking at the production function, the amount of production plant capacity required is primarily determined by the peak rate of usage during the year. If the utility anticipates a peak demand of 900 megawatts–it must install enough generating capacity to meet that anticipated demand (plus some reserve to compensate for variations in load and capacity that is temporarily unavailable). There will be many hours during the day or during the year when not all of this generating capacity will be needed. Nevertheless, it must be in place to meet the peak demands on the system. Thus, production plant investment is usually classified to demand. **Regardless of how production plant investment is classified, the associated capital costs** (which include return on investment, depreciation, fixed operation and maintenance expenses, taxes and insurance) **are fixed;** that is, **they do not vary with the amount of kilowatthours generated and sold**. These fixed costs do, however, vary with the amount of capacity (i.e., kilowatts) which the utility must install to satisfy its obligation-to-serve requirement.

On the other hand, it is easy to see that the amount of fuel burned–and therefore the amount of fuel expense–is closely related to the amount of energy (number of kilowatthours) that customers use. Therefore, fuel expense is an energy-related cost.

Some O&M expenses are fixed and therefore are classified as demand-related. Variable O&M expenses are classified as energy-related. Demand-related and energy-related types of operating costs are not impacted by the number of customers served at any moment.

Customer-related costs are a third major classification category. Obvious examples of customer-related costs include the investment in meters and service drops (the line from the pole to the customer's facility or house). Along with meter reading, posting accounts and rendering bills, these "customer costs" may be several dollars per month per customer. Less obvious examples of customer-related costs may include the investment in other distribution accounts.

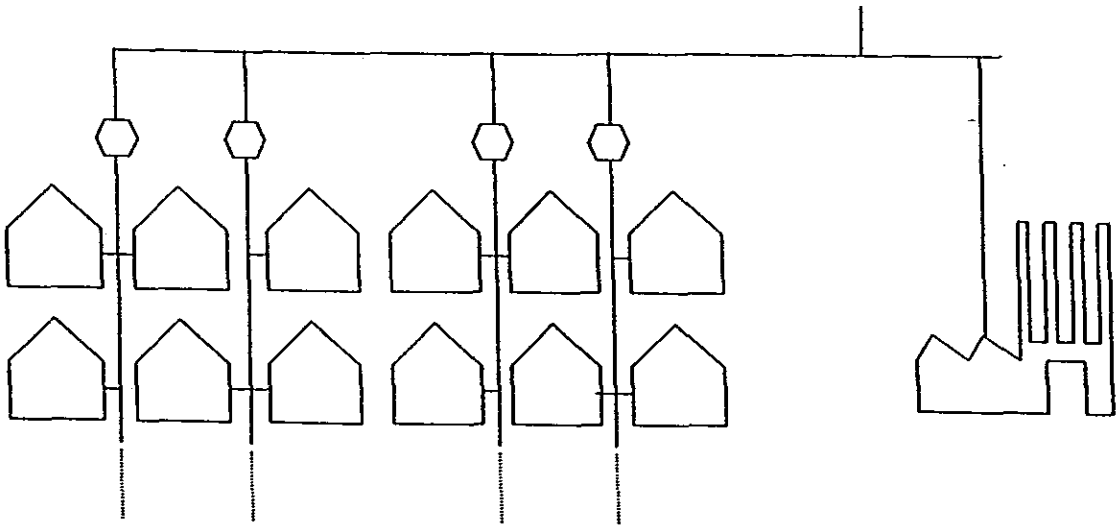
A certain portion of the cost of the distribution system–poles, wires and transformers–is required simply to attach customers to the system, regardless of their demand or energy requirements. This minimum or "skeleton" distribution system may also be considered a customer-related cost since it depends primarily on the number of customers, rather than demand or energy usage.

The diagram on page 8, for example, shows the distribution network for a utility with two customer classes, A and B. The physical distribution network necessary to attach Class A is designed to serve 12 customers, each with a 10-kilowatt load, having a total demand of 120 kW. This is the same total demand as is imposed by Class B, which consists of a single customer. Clearly, a much more extensive distribution system is required to attach the multitude of small customers (Class A), than to attach the single larger customer (Class B), even though the total demand of each customer class is the same.

Even though some additional customers can be attached without additional investment in some areas of the system, it is obvious that attaching a large number of customers requires investment in facilities, not only initially but on a continuing basis for maintenance and repair.

To the extent that the distribution system components must be sized to accommodate additional load beyond the minimum, the balance is a demand-related cost. Thus, the distribution system is classified as both demand-related and customer-related.

Classification of Distribution Investment



Total Demand = 120 kW
Class A

Total Demand = 120 kW
Class B

Demand vs. Energy Costs

The difference between demand-related and energy-related costs also explains the fallacy of the argument that "a kilowatthour is a kilowatthour." For example, the diagram on page 10, compares the electrical requirements of two customers, A and B, each using 100-watt light bulbs.

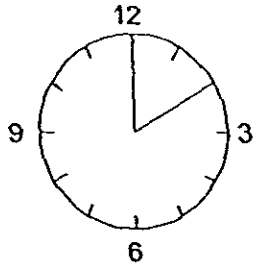
Customer A turns on all five of his/her 100-watt light bulbs for two hours. Customer B, by contrast, turns on two light bulbs for five hours. Both customers use the same amount of energy–1,000 watthours or 1 kilowatthour (kWh). However, Customer A utilized electric power at a higher rate, 500 watts per hour or 0.5 kilowatts (kW), than Customer who demanded only 200 watts per hour or 0.2 kW.

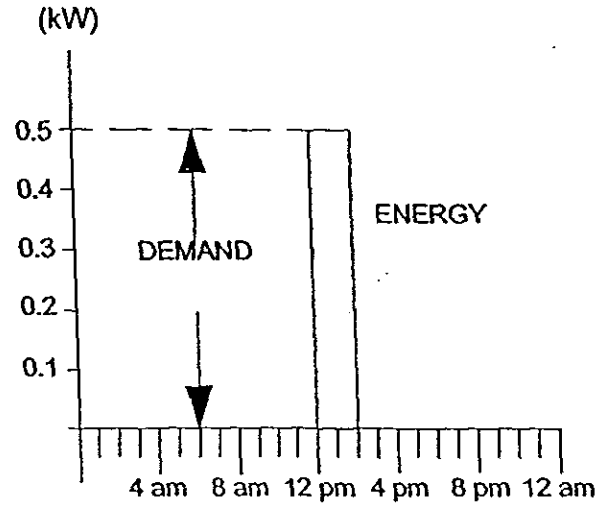
Although both customers had precisely the same kWh energy usage, Customer A's kW demand was 2.5 time Customer B's. Therefore, the utility must install 2.5 times as much generating capacity for Customer A as for Customer B. The cost of serving Customer A, therefore, is much higher.

In general, a customer who has a high load factor (defined as the average rate of usage divided by the peak rate of usage) will be cheaper to serve per kWh than a customer with a low load factor, regardless of size. Consider the analogy of a rental car which costs $40/day and 20¢/mile. If Customer A drives only 20 miles a day, the average cost will be $2.20/mile. But for Customer B, who drives 200 miles a day, spreading the daily rental charge over the total mileage gives an average cost of 40¢/mile. For both customers, the fixed cost rate (daily charge) and variable cost rate (mileage charge) are identical, but the average total cost per mile will differ depending on how intensively the car is used. Likewise, the average cost per kilowatthour will depend on how intensively the generating plant is used. A low load factor indicates that the capacity is idle much of the time; a high load factor indicates a more steady rate of usage. Since industries generally have higher load factors than residential or general service customers, they are less costly to serve on a per-kilowatthour basis. Again, we can say that "a kilowatthour is a kilowatthour" as to energy content, but there may be a big difference in how much generating plant investment is required to convert the raw fuel into electric energy.

DEMAND VS. ENERGY

CUSTOMER A

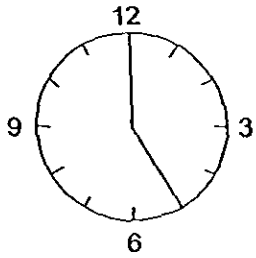


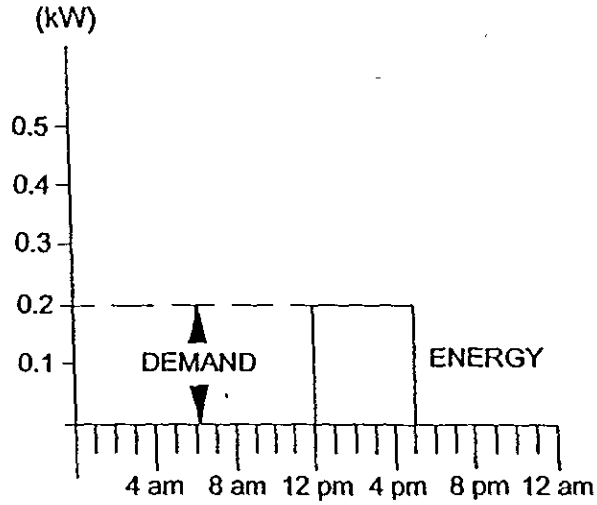


ENERGY: 500 watts x 2 hours = 1,000 watthours = 1.0 kWh

DEMAND: 500 watts = 0.5 kW

CUSTOMER B





ENERGY: 200 watts x 5 hours = 1,000 watthours = 1.0 kWh

DEMAND: 200 watts = 0.2 kW

Allocation

The final step in the cost of service analysis is the **allocation** of the costs to the customer classes. Demand, energy and customer allocation factors are developed to apportion the costs among the customer classes. Each factor simply measures the customer class's contribution to the system total cost.

For example, we have already determined that the amount of fuel expense on the system is a function of the energy required by customers. In order to allocate this expense among classes, we must determine how much each class contributes to the total kWh consumption and we must recognize the line losses associated with transporting and distributing the kWh. These contributions, expressed in percentage terms, are then multiplied by the expense to determine how much expense should be attributed to each class. A sample calculation for Empire is shown in Table 1.

TABLE 1
Energy Allocation Factor

Rate Class	Energy Generated (MWh) (1)	Allocation Factor (2)
Residential	1,677,744	41.43%
Commercial	354,741	8.76%
General Power	754,409	18.63%
Large Power	719,814	17.77%
Praxair	56,758	1.40%
Other	486,395	12.01%
Total	4,049,860	100.00%

For demand-related costs, we construct an allocation factor by looking at the important class demands. Table 2 shows the calculation of this factor for Empire. In this table for the

production demand allocation factor, Praxair's firm demand of 300 kW is utilized because this is the amount that Empire is obligated to serve.

In the case of the transmission allocation factor we have used the maximum demand of Praxair because we would not expect Empire to curtail based on transmission conditions.

TABLE 2

Demand Allocation Factor
Production System

Rate Class	Production A&E (MW) (1)	Allocation Factor (2)
Residential	401.4	48.77%
Commercial	84.8	10.30%
General Power	131.8	16.01%
Large Power	95.5	11.61%
Praxair	0.3	0.04%
Other	109.2	13.27%
Total	822.9	100.00%

TABLE 3

Demand Allocation Factor
Transmission System

Rate Class	Transmission A&E (MW) (1)	Allocation Factor (2)
Residential	398.1	48.38%
Commercial	84.1	10.22%
General Power	130.5	15.85%
Large Power	94.4	11.47%
Praxair	7.6	0.93%
Other	108.2	13.15%
Total	822.9	100.00%

Making the Cost of Service Study–Summary

The cost of service procedure involves three steps:

(1) Functionalization–Identify the different functional "levels" of the system;

(2) Classification–Determine, for each functional type, the primary cause or causes of that cost being incurred;

(3) Allocation–Calculate the class proportional responsibilities for each type of cost and spread the cost among classes.

Table 4 shows the results of a cost of service study in condensed, summary form. The revenues from each class can be calculated by taking the billing units times the current rate. The expenses (including taxes) for each class are allocated. Subtracting the expenses from the revenue gives the net operating income (also called return) from each class. Dividing this net operating income by the allocated rate base gives the rate of return (return on investment) for each class.

TABLE 4

Summary of Empire's Cost of Service Study at Present Rates (Dollars in Thousands)

Rate Class	Revenues (1)	Expenses (2)	Return (3)	Rate Base (4)	Rate of Return (5)
Residential	$ 97,649	$ 91,548	$ 6,101	$ 274,192	2.23%
Commercial	23,001	18,792	4,209	55,899	7.53%
General Power	36,123	29,164	6,958	66,669	10.44%
Large Power	25,038	23,012	2,026	43,512	4.66%
Praxair	1,598	1,216	382	1,114	34.33%
Other	27,149	23,245	3,903	66,392	5.88%
Total	$ 210,558	$ 186,977	$ 23,580	$ 507,777	4.64%

This cost study shows two things. First, it shows that at present rates not all classes are equally profitable. In other words, some classes pay a portion of the costs incurred to serve other customer classes. Second, it provides the information from which we can calculate the necessary increase in revenues from each class to achieve cost-based revenues.

Table 5 shows each class's cost-based revenue requirement. This amount is calculated by summing the required return (rate base times system rate of return) and expenses. Expressed on a cents per kWh basis, the residential and the commercial classes have an above-average cost per kWh while the other major classes have below-average costs per kWh.

TABLE 5

Class Revenue Requirement
Average and Excess Method
(Dollars in Thousands)

Rate Class	Cost-Based Revenue (1)	Energy Sales (MWh) (2)	Cost per kWh (3)
Residential	$ 121,588	1,457,518	8.34
Commercial	24,789	295,953	8.38
General Power	36,203	717,446	5.05
Large Power	27,617	636,465	4.34
Praxair	1,285	55,105	2.33
Other	29,901	436,954	6.84
Total	$ 241,383	3,599,441	6.71¢

The reasons for these differences are (1) load factor, (2) delivery voltage, and (3) size.

The general power and large power customers and Praxair have higher load factors, as shown in Schedule 1 of Appendix B. Consequently, the capital costs related to production and transmission are spread over a greater number of kilowatthours than is the case for lower load factor classes.

In addition, these customers take service at a higher voltage level. This means that they avoid the costs associated with lower voltage distribution. Nor does Empire incur as many losses to serve them.

The per capita sales to these classes are also much greater than to the other classes. Empire sells 595,391 and 17,679,585 kilowatthours per general power and large power customer, respectively, but only 13,425 kilowatthours per residential customer, or between 44 and 1317 times more per capita, as shown in Schedule 2 of Appendix B. The customer-related costs to serve the former are not 44 to 1317 times the customer-related costs to serve the residential customer.

These differences in the service and usage characteristics–load factor, delivery voltage and size–result in a lower per unit cost to serve customers operating at a higher load factor, taking service at higher delivery voltage and purchasing a larger quantity of power and energy at a single delivery point. As can be seen from Schedule 3 of Appendix B, the rate base and total operating expenses per kilowatthour sold to large power customers are lower than the corresponding per kilowatthour costs to serve the other rate classes.

And, the cost to serve Praxair is even lower because, in addition to being a large customer served at high voltage, 95% of its power requirements are taken on an interruptible basis; with only 5% being taken on a firm basis.

Thus, electricity is more than just providing kilowatthours. It is wrong to conclude that some customers are "getting a break" just because their average rates are lower than the rates of other customers paying on a per kilowatthour basis. The lower costs shown in Schedule 3 of Appendix B justify setting rates to general power and large power customers, and Praxair, which are lower per kilowatthour than the rates charged to other rate classes.

THE EMPIRE DISTRICT ELECTRIC COMPANY

Comparative Load Factors
Year Ended December 31, 2000

Line	Rate Classes		Rates (1)	Energy Generated (MWh) (2)	Transmission Average & Excess Demand (MW) (3)	Load Factor (4)
1	Residential	RG	41,43,45	1,677,744	398.1	48%
2	Commercial	CB	25	354,741	84.1	48%
3	Commercial	SH	26	127,841	31.2	47%
4	General Power	GP	68	754,409	130.5	66%
5	El. Furnace	PF	70	2,139	1.8	13%
6	Praxair		61	56,758	7.6	85%
7	Total El Build	TEB	63	311,709	61.3	58%
8	Feed Mill	PFM	67	1,084	0.5	26%
9	Large Power	LP	77	719,814	94.4	87%
10	Misc Lights	MS	33	478	0.1	95%
11	Other Lights		36,37,38,39	43,144	13.4	37%
12	Total Retail			4,049,860	822.9	56%

Appendix B
Schedule 1

THE EMPIRE DISTRICT ELECTRIC COMPANY

Kilowatthours Sold per Customer
Year Ended December 31, 2000

Line	Rate Classes		Rates (1)	Energy Sold (MWh) (2)	Number of Customers (3)	Generation per 100 kWh Sold (4)
1	Residential	RG	41,43,45	1,457,518	108,566	13,425
2	Commercial	CB	25	295,953	16,290	18,168
3	Commercial	SH	26	111,819	2,751	40,647
4	General Power	GP	68	717,446	1,205	595,391
5	El. Furnace	PF	70	2,045	3	681,769
6	Praxair		61	55,105	1	55,104,533
7	Total El Build	TEB	63	288,576	662	435,915
8	Feed Mill	PFM	67	1,174	19	61,815
9	Large Power	LP	77	636,465	36	17,679,585
10	Misc Lights	MS	33	445	1	445,438
11	Other Lights		36,37,38,39	32,893	969	33,946
12	Total Retail			3,599,441	130,503	27,581

Appendix B
Schedule 2

THE EMPIRE DISTRICT ELECTRIC COMPANY

Allocated Rate Base and Operating Expense
per kWh Sold
Cost of Service Study
Average and Excess Method
Year Ended December 31, 2000

Line	Rate Classes		Rates	Energy Sold (MWh)	Rate Base Amount (000)	Rate Base per kWh	Total Operating Expense Including Income Taxes Amount (000)	Total Operating Expense Including Income Taxes per kWh
			(1)	(2)	(3)	(4)	(5)	(6)
1	Residential	RG	41,43,45	1,457,518	$ 274,192	18.81 ¢	$ 91,548	6.28 ¢
2	Commercial	CB	25	295,953	55,899	18.89	18,792	6.35
3	Commercial	SH	26	111,819	17,812	15.93	6,285	5.62
4	General Power	GP	68	717,446	66,669	9.29	29,164	4.07
5	El. Furnace	PF	70	2,045	665	32.54	201	9.84
6	Praxair		61	55,105	1,114	2.02	1,216	2.21
7	Total El Build	TEB	63	288,576	31,830	11.03	13,054	4.52
8	Feed Mill	PFM	67	1,174	280	23.87	92	7.85
9	Large Power	LP	77	636,465	43,512	6.84	23,012	3.62
10	Misc Lights	MS	33	445	48	10.76	18	4.11
11	Other Lights		36,37,38,39	32,893	15,756	47.90	3,594	10.93
12	Total Retail			3,599,441	$ 507,777	14.11	$ 186,977	5.19

Appendix B
Schedule 3

Before the
Missouri Public Service Commission

Case No. ER-2001-299

The Empire District Electric Company

Schedules Accompanying the

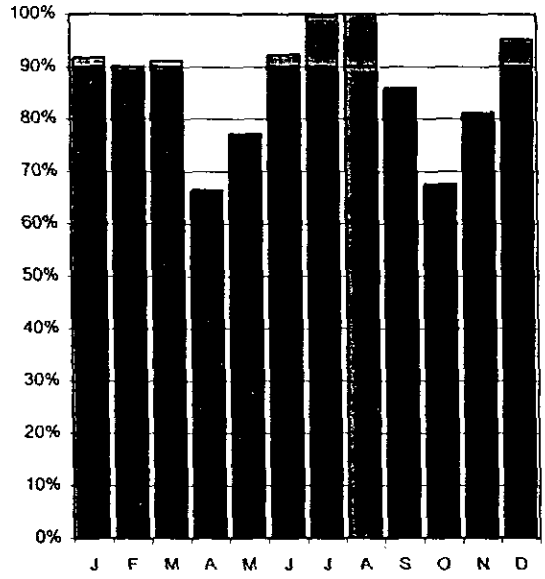
Direct Testimony of

Maurice Brubaker

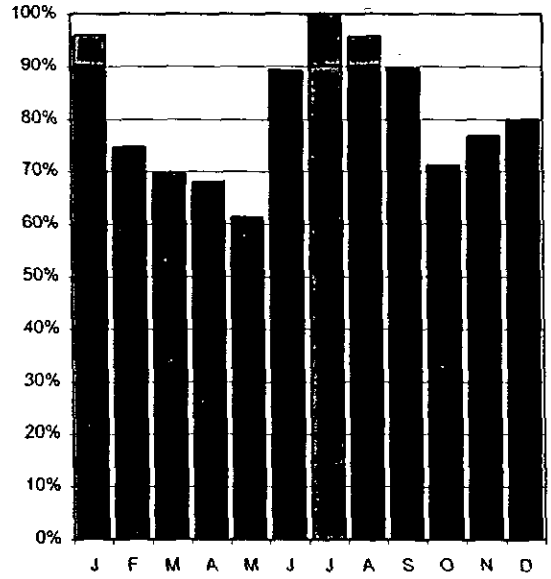
The Empire District Electric Company

Analysis of Monthly Peak Demands
as a Percent of the Annual System Peak
for the Fiscal Years 1996 through 1999

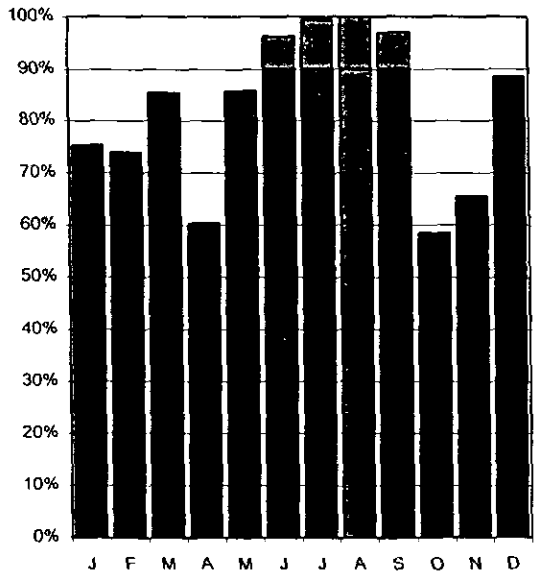
1996



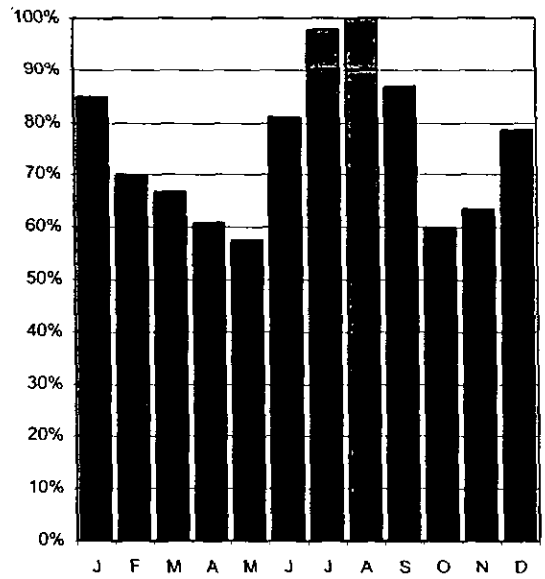
1997



1998



1999



Monthly Peak Demand

Annual System Peak

Peak Months

Schedule 1

The Empire District Electric Company

Analysis of Monthly Peak Demands
as a Percent of the Annual System Peak
for the Fiscal Years 1996 through 1999

Line	Month	1996 (1)	1997 (2)	1998 (3)	1999 (4)
1	January	92	96	75	85
2	February	90	75	74	70
3	March	91	70	85	67
4	April	66	68	60	61
5	May	77	61	86	57
6	June	92	89	96	81
7	**July**	**100**	**100**	**99**	**98**
8	**August**	**100**	**96**	**100**	**100**
9	September	86	90	97	87
10	October	68	71	59	60
11	November	81	77	66	63
12	December	95	80	88	79

The Empire District Electric Company

Monthly Peak Demands in MW
for the Fiscal Years 1996 through 1999

Line	Month	1996 (1)	1997 (2)	1998 (3)	1999 (4)
1	January	773	841	690	831
2	February	759	653	677	685
3	March	768	610	781	654
4	April	559	595	553	595
5	May	650	538	785	562
6	June	777	782	881	793
7	**July**	**839**	**876**	**910**	**958**
8	**August**	**842**	**839**	**916**	**979**
9	September	723	786	888	850
10	October	569	623	536	586
11	November	683	673	600	621
12	December	802	700	809	770

THE EMPIRE DISTRICT ELECTRIC COMPANY

Summary of Allocation Factors

Line	Rate Classes		Company Average & Excess (1)	Recommended Average & Excess (2)	Two Coincident Peak (3)
	Production Allocators				
1	Residential	RG	48.38%	48.77%	50.50%
2	Commercial	CB	10.22%	10.30%	9.68%
3	Commercial	SH	3.79%	3.82%	3.29%
4	General Power	GP	15.85%	16.01%	16.96%
5	El. Furnace	PF	0.22%	0.22%	0.00%
6	Praxair		0.93%	0.04%	0.04%
7	Total El Build	TEB	7.45%	7.52%	7.83%
8	Feed Mill	PFM	0.06%	0.06%	0.02%
9	Large Power	LP	11.47%	11.61%	11.68%
10	Misc Lights	MS	0.01%	0.01%	0.01%
11	Other Lights		1.63%	1.64%	0.00%
12	Total Retail		100.00%	100.00%	100.00%
	Transmission Allocators				
13	Residential	RG	48.38%	48.38%	50.01%
14	Commercial	CB	10.22%	10.22%	9.58%
15	Commercial	SH	3.79%	3.79%	3.25%
16	General Power	GP	15.85%	15.85%	16.80%
17	El. Furnace	PF	0.22%	0.22%	0.00%
18	Praxair		0.93%	0.93%	1.01%
19	Total El Build	TEB	7.45%	7.45%	7.76%
20	Feed Mill	PFM	0.06%	0.06%	0.02%
21	Large Power	LP	11.47%	11.47%	11.57%
22	Misc Lights	MS	0.01%	0.01%	0.01%
23	Other Lights		1.63%	1.63%	0.00%
24	Total Retail		100.00%	100.00%	100.00%

THE EMPIRE DISTRICT ELECTRIC COMPANY

Development of Company's
Production and Transmission
Average and Excess Demand Allocators

Company Load Factor Calculation:

kWh	4,054,345,666
Demand	824,064
Load Factor	56.16%
1 - LF	43.84%

Line	Rate Classes		Class Non-Coincident Peak (kW) (1)	Energy in kWh (2)	Average Demand (kW) (3)	Average Demand Percent (4)	Excess Demand (kW) (5)	Excess Demand Percent (6)	Average & Excess Allocator (7)
1	Residential	RG	477,998	1,677,744,098	191,523	41.43%	286,475	57.28%	48.38%
2	Commercial	CB	100,930	354,740,918	40,496	8.76%	60,434	12.08%	10.22%
3	Commercial	SH	37,631	127,841,278	14,594	3.16%	23,037	4.61%	3.79%
4	General Power	GP	147,618	754,408,522	86,120	18.63%	61,498	12.30%	15.85%
5	El. Furnace	PF	2,414	2,138,632	244	0.05%	2,170	0.43%	0.22%
6	Praxair		8,084	56,757,669	6,479	1.40%	1,605	0.32%	0.93%
7	Total El Build	TEB	71,242	311,709,412	35,583	7.70%	35,659	7.13%	7.45%
8	Feed Mill	PFM	613	1,084,220	124	0.03%	489	0.10%	0.06%
9	Large Power	LP	99,143	719,814,000	82,171	17.77%	16,972	3.39%	11.47%
10	Misc Lights	MS	58	477,668	55	0.01%	3	0.00%	0.01%
11	Other Lights		16,683	43,143,855	4,925	1.07%	11,758	2.35%	1.63%
12	Total Retail		962,414	4,049,860,272	462,314	100.00%	500,100	100.00%	100.00%

Note:
Column (3) = Column (2) / 8760
Column (5) = Column (1) - Column (3)
Column (7) = Column (4) * LF + Column (6) * (1-LF)

THE EMPIRE DISTRICT ELECTRIC COMPANY

Development of Recommended
Average and Excess Demand Allocators

Company Load Factor Calculation:

kWh	4,054,345,666
Demand	824,064
Load Factor	56.16%
1 - LF	43.84%

Line	Rate Classes		Class Non-Coincident Peak (kW) (1)	Energy in kWh (2)	Average Demand (kW) (3)	Average Demand Percent (4)	Excess Demand (kW) (5)	Excess Demand Percent (6)	Average & Excess Allocator (7)
	Production Allocator								
1	Residential	RG	477,998	1,677,744,098	191,523	41.99%	286,475	57.47%	48.77%
2	Commercial	CB	100,930	354,740,918	40,496	8.88%	60,434	12.12%	10.30%
3	Commercial	SH	37,631	127,841,278	14,594	3.20%	23,037	4.62%	3.82%
4	General Power	GP	147,618	754,408,522	86,120	18.88%	61,498	12.34%	16.01%
5	El. Furnace	PF	2,414	2,138,632	244	0.05%	2,170	0.44%	0.22%
6	Praxair		300		300	0.07%	-	0.00%	0.04%
7	Total El Build	TEB	71,242	311,709,412	35,583	7.80%	35,659	7.15%	7.52%
8	Feed Mill	PFM	613	1,084,220	124	0.03%	489	0.10%	0.06%
9	Large Power	LP	99,143	719,814,000	82,171	18.01%	16,972	3.40%	11.61%
10	Misc Lights	MS	58	477,668	55	0.01%	3	0.00%	0.01%
11	Other Lights		16,683	43,143,855	4,925	1.08%	11,758	2.36%	1.64%
12	Total Retail		954,630	3,993,102,603	456,135	100.00%	498,495	100.00%	100.00%
	Transmission Allocator								
13	Residential	RG	477,998	1,677,744,098	191,523	41.43%	286,475	57.28%	48.38%
14	Commercial	CB	100,930	354,740,918	40,496	8.76%	60,434	12.08%	10.22%
15	Commercial	SH	37,631	127,841,278	14,594	3.16%	23,037	4.61%	3.79%
16	General Power	GP	147,618	754,408,522	86,120	18.63%	61,498	12.30%	15.85%
17	El. Furnace	PF	2,414	2,138,632	244	0.05%	2,170	0.43%	0.22%
18	Praxair		8,084	56,757,669	6,479	1.40%	1,605	0.32%	0.93%
19	Total El Build	TEB	71,242	311,709,412	35,583	7.70%	35,659	7.13%	7.45%
20	Feed Mill	PFM	613	1,084,220	124	0.03%	489	0.10%	0.06%
21	Large Power	LP	99,143	719,814,000	82,171	17.77%	16,972	3.39%	11.47%
22	Misc Lights	MS	58	477,668	55	0.01%	3	0.00%	0.01%
23	Other Lights		16,683	43,143,855	4,925	1.07%	11,758	2.35%	1.63%
24	Total Retail		962,414	4,049,860,272	462,314	100.00%	500,100	100.00%	100.00%

Note:
Column (3) = Column (2) / 8760
Column (5) = Column (1) - Column (3)
Column (7) = Column (4) * LF + Column (6) * (1-LF)

THE EMPIRE DISTRICT ELECTRIC COMPANY

Development of
2 Coincident Peak Demand Allocators

Line	Rate Classes		Demands at the Time of the System Peak: Aug 1999 (kW) (1)	Jul 1999 (kW) (2)	Average (kW) (3)	Average Demand Percent (4)
	Production Allocator					
1	Residential	RG	438,372	379,906	409,139	50.50%
2	Commercial	CB	72,643	84,177	78,410	9.68%
3	Commercial	SH	25,294	27,940	26,617	3.29%
4	General Power	GP	123,117	151,719	137,418	16.96%
5	El. Furnace	PF	5	5	5	0.00%
6	Praxair		300	300	300	0.04%
7	Total El Build	TEB	60,255	66,702	63,479	7.83%
8	Feed Mill	PFM	68	310	189	0.02%
9	Large Power	LP	94,698	94,547	94,623	11.68%
10	Misc Lights	MS	58	58	58	0.01%
11	Other Lights		-	-	-	0.00%
12	Total Retail		814,810	805,664	810,237	100.00%
	Transmission Allocator					
13	Residential	RG	438,372	379,906	409,139	50.01%
14	Commercial	CB	72,643	84,177	78,410	9.58%
15	Commercial	SH	25,294	27,940	26,617	3.25%
16	General Power	GP	123,117	151,719	137,418	16.80%
17	El. Furnace	PF	5	5	5	0.00%
18	Praxair		8,409	8,041	8,225	1.01%
19	Total El Build	TEB	60,255	66,702	63,479	7.76%
20	Feed Mill	PFM	68	310	189	0.02%
21	Large Power	LP	94,698	94,547	94,623	11.57%
22	Misc Lights	MS	58	58	58	0.01%
23	Other Lights		-	-	-	0.00%
24	Total Retail		822,919	813,405	818,162	100.00%

THE EMPIRE DISTRICT ELECTRIC COMPANY

Summary of Corrected Cost of Service Study
Company Average and Excess Method
Twelve Months Ended December 31, 2000
(Dollars in Thousands)

Line	Description	Missouri Retail (1)	Residential (2)	Com-mercial Service (3)	Comm Small Heat (4)	General Power (5)	Power Furnace (6)	Praxair (7)	Total Electric Building (8)	Feed Mill (9)	Large Power (10)	Misc Services (11)	Lighting (12)
1	Rate Base	$ 507,777	$ 273,325	$ 55,725	$ 17,747	$ 66,322	$ 665	$ 3,044	$ 31,679	$ 280	$ 43,208	$ 48	$ 15,734
	Revenues:												
2	Present Rate Revenues	200,590	92,743	21,874	6,567	34,664	93	1,868	14,882	107	24,098	24	3,671
3	Other Revenues	9,968	4,741	1,093	384	1,405	16	68	674	5	901	1	680
4	Total Revenues	210,558	97,484	22,966	6,951	36,069	109	1,936	15,556	112	24,999	25	4,351
	Expenses:												
5	Operation & Maintenance	186,872	91,252	18,732	6,263	29,055	201	1,748	13,006	92	22,919	18	3,585
6	Net Income Taxes	106	57	12	4	14	0	1	7	0	9	0	3
7	Total Expenses	186,978	91,309	18,744	6,267	29,069	201	1,749	13,012	92	22,928	18	3,588
8	Operating Income	$ 23,580	$ 6,175	$ 4,222	$ 684	$ 7,000	$ (92)	$ 187	$ 2,544	$ 20	$ 2,071	$ 7	$ 762
9	Rate of Return	4.64%	2.26%	7.58%	3.85%	10.55%	-13.89%	6.15%	8.03%	7.18%	4.79%	13.89%	4.84%
10	Index	100	49	163	83	227	(299)	132	173	155	103	299	104
11	Subsidies *	$ 0	$ (10,578)	$ 2,653	$ (227)	$ 6,363	$ (200)	$ 75	$ 1,741	$ 12	$ 104	$ 7	$ 51
	With the Across the Board Increase												
12	Operating Income	$ 48,797	$ 20,327	$ 6,345	$ 1,563	$ 9,858	$ (34)	$ 405	$ 4,004	$ 31	$ 5,080	$ 8	$ 1,210
13	Rate of Return	9.61%	7.44%	11.39%	8.81%	14.86%	-5.04%	13.30%	12.64%	11.00%	11.76%	16.69%	7.69%
14	Index	100	77	118	92	155	(52)	138	132	114	122	174	80
15	Subsidies *	$ (0)	$ (9,640)	$ 1,606	$ (231)	$ 5,656	$ (158)	$ 182	$ 1,558	$ 6	$ 1,506	$ 6	$ (490)

* A positive subsidy number indicates that a class is paying more that its cost-to-serve.
A negative subsidy indicates that a class is not paying its cost-to-serve.

Schedule 4

THE EMPIRE DISTRICT ELECTRIC COMPANY

Summary of Corrected Cost of Service Study
Recommended Average and Excess Method
Twelve Months Ended December 31, 2000
(Dollars in Thousands)

Line	Description	Missouri Retail (1)	Residential (2)	Com-mercial Service (3)	Comm Small Heat (4)	General Power (5)	Power Furnace (6)	Praxair (7)	Total Electric Building (8)	Feed Mill (9)	Large Power (10)	Misc Services (11)	Lighting (12)
1	Rate Base	$ 507,777	$ 274,192	$ 55,899	$ 17,812	$ 66,669	$ 665	$ 1,114	$ 31,830	$ 280	$ 43,512	$ 48	$ 15,756
	Revenues:												
2	Present Rate Revenues	200,247	92,743	21,874	6,567	34,664	93	1,525	14,882	107	24,098	24	3,671
3	Other Revenues	10,311	4,906	1,128	397	1,459	17	73	700	6	940	1	685
4	Total Revenues	210,558	97,649	23,001	6,964	36,123	110	1,598	15,581	113	25,038	25	4,356
	Expenses:												
5	Operation & Maintenance	186,872	91,491	18,780	6,281	29,151	201	1,215	13,048	92	23,003	18	3,591
6	Net Income Taxes	106	57	12	4	14	0	0	7	0	9	0	3
7	Total Expenses	186,978	91,548	18,792	6,285	29,165	201	1,216	13,054	92	23,012	18	3,594
8	Operating Income	$ 23,580	$ 6,101	$ 4,209	$ 679	$ 6,958	$ (92)	$ 382	$ 2,527	$ 20	$ 2,026	$ 7	$ 762
9	Rate of Return	4.64%	2.23%	7.53%	3.81%	10.44%	-13.77%	34.33%	7.94%	7.25%	4.66%	14.00%	4.84%
10	Index	100	48	162	82	225	(297)	739	171	156	100	302	104
11	Subsidies *	$ 0	$ (10,764)	$ 2,619	$ (240)	$ 6,269	$ (199)	$ 537	$ 1,702	$ 12	$ 9	$ 7	$ 49
	With the Across the Board Increase												
12	Operating Income	$ 48,797	$ 20,316	$ 6,344	$ 1,563	$ 9,846	$ (33)	$ 448	$ 4,000	$ 31	$ 5,063	$ 8	$ 1,211
13	Rate of Return	9.61%	7.41%	11.35%	8.77%	14.77%	-4.97%	40.24%	12.57%	11.05%	11.64%	16.75%	7.69%
14	Index	100	77	118	91	154	(52)	419	131	115	121	174	80
15	Subsidies *	$ (0)	$ (9,793)	$ 1,579	$ (242)	$ 5,582	$ (157)	$ 554	$ 1,527	$ 7	$ 1,431	$ 6	$ (492)

* A positive subsidy number indicates that a class is paying more that its cost-to-serve.
A negative subsidy indicates that a class is not paying its cost-to-serve.

Schedule 5
Summary

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

	SUMMARY OF RESULTS	Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 1 of 14
	RATE BASE														
1	Electric Plant in Service		842,385,334	458,305,355	93,535,625	29,750,458	108,850,969	1,082,063	1,619,623	52,234,703	465,028	69,929,036	78,553	26,533,928	3 14
2	Depreciation Reserve		(281,185,051)	(154,232,043)	(31,402,539)	(9,870,902)	(35,685,575)	(341,253)	(487,598)	(17,154,787)	(154,155)	(22,646,443)	(26,095)	(9,183,660)	4 16
3	Total Rate Base Adjustments		(53,423,451)	(29,880,893)	(6,234,491)	(2,067,955)	(6,496,872)	(75,311)	(17,959)	(3,249,608)	(30,558)	(3,771,003)	(4,529)	(1,594,274)	6 21+25
4	Total Rate Base		507,776,832	274,192,419	55,898,595	17,811,601	66,668,522	665,499	1,114,066	31,830,308	280,315	43,511,590	47,929	15,755,994	(sum 1..3)
	OPERATING EXPENSES														
5	Total O & M Expenses		149,459,256	70,978,943	14,625,956	4,980,856	24,358,409	156,416	1,146,413	10,750,133	71,032	19,963,638	14,851	2,412,613	9 18
6	Total Depreciation Exp.		28,586,181	15,627,384	3,173,086	999,081	3,677,930	35,087	47,935	1,763,282	16,028	2,345,438	2,635	898,294	9 26
7	Total Other Tax & Misc.		8,826,545	4,884,887	981,231	301,313	1,114,474	9,587	20,989	534,121	5,072	693,775	791	280,303	9 39
8	Total Op Exp Ex Inc Tax		186,871,981	91,491,214	18,780,273	6,281,250	29,150,813	201,090	1,215,337	13,047,536	92,132	23,002,851	18,277	3,591,210	(sum 5..7)
9	Net Federal Income Tax		(108,119)	(58,383)	(11,902)	(3,793)	(14,195)	(142)	(237)	(6,778)	(60)	(9,265)	(10)	(3,355)	10 1
10	Net State Income Tax		213,797	115,448	23,536	7,500	28,071	280	469	13,402	118	18,320	20	6,634	10 2
11	Tax on Increase		15,918,967	8,596,020	1,752,439	558,399	2,090,080	20,864	34,926	997,890	8,788	1,364,102	1,503	493,955	10 3
12	Interruptible Credit	1	184,074	89,773	18,960	7,032	29,470	405	74	13,842	110	21,371	18	3,019	
13	Total Operating Expenses		203,080,700	100,234,072	20,563,306	6,850,388	31,284,239	222,497	1,250,569	14,065,892	101,088	24,397,379	19,808	4,091,463	(sum 9..11a)
14	Return On Rate Base		48,797,354	26,349,891	5,371,855	1,711,695	6,406,845	63,954	107,062	3,058,893	26,938	4,181,464	4,606	1,514,151	6 31
15	Other Operating Revenues		9,151,036	4,406,370	1,049,808	380,270	1,437,418	17,294	73,121	684,414	5,396	961,381	796	134,768	10 16
16	TOTAL COST OF SERVICE		242,727,018	122,177,593	24,885,353	8,181,813	36,253,666	269,157	1,284,510	16,440,371	122,630	27,617,462	23,618	5,470,846	13+14+15
17	Other Retail Revenues		0	0	0	0	0	0	0	0	0	0	0	0	
18	Revenue Credits		1,343,728	589,154	96,829	23,755	50,765	0	0	29,055	314	0	127	553,730	10 27
19	NET COST OF SERVICE		241,383,290	121,588,439	24,788,524	8,158,058	36,202,901	269,157	1,284,510	16,411,316	122,316	27,617,462	23,491	4,917,116	16-17-18
20	Proposed Rate Revenues		241,383,290	111,795,501	26,367,154	7,915,985	41,784,997	111,720	1,838,279	17,938,677	128,876	29,048,105	29,042	4,424,954	12 27
21	Net COS less Proposed Revenue		0	9,792,938	(1,578,630)	242,073	(5,582,096)	157,437	(553,769)	(1,527,361)	(6,560)	(1,430,643)	(5,551)	492,162	19-20
22	Return On Proposed Rates		48,797,354	20,316,327	6,344,471	1,562,551	9,846,051	(33,045)	448,247	3,999,921	30,980	5,062,903	8,026	1,210,923	14-21+(10,5)
23	Rate of Return on Proposed Rates		9.61%	7.41%	11.35%	8.77%	14.77%	-4.97%	40.24%	12.57%	11.05%	11.64%	16.75%	7.69%	22/4
24	Allowed Rate Of Return		9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	9.61%	10 44
25	Proposed Rev less Present Rev		41,136,464	19,052,154	4,493,482	1,349,040	7,120,986	19,039	313,279	3,057,104	21,963	4,950,369	4,949	754,099	20-27
26	% Increase (Prop Incr/Pres Rev)		20.5429%	20.5429%	20.5429%	20.5429%	20.5429%	20.5425%	20.5429%	20.5429%	20.5429%	20.5429%	20.5412%	20.5429%	25/27
	Subsidies with Across the Board Increase		2	(9,792,940)	1,578,631	(242,073)	5,582,096	(157,438)	553,770	1,527,362	6,560	1,430,644	5,551	(492,162)	
27	Present Rate Revenues		200,246,826	92,743,347	21,873,672	6,566,945	34,664,011	92,681	1,525,000	14,881,573	106,913	24,097,736	24,093	3,670,855	12 25
28	Return On Present Rates		23,579,857	6,100,819	4,209,442	678,981	6,958,035	(91,658)	382,478	2,527,040	20,323	2,025,840	6,711	761,845	14-30+11
29	Rate of Return On Present Rates		4.64%	2.23%	7.53%	3.81%	10.44%	-13.77%	34.33%	7.94%	7.25%	4.66%	14.00%	4.84%	27/4
30	COS less Present Revenue		41,136,464	28,845,092	2,914,852	1,591,113	1,538,890	176,476	(240,490)	1,529,743	15,403	3,519,726	(602)	1,246,261	19-27
31	% Increase (COS / Present Rev)		20.5429%	31.1021%	13.3258%	24.2291%	4.4394%	190.4127%	-15.7698%	10.2794%	14.4069%	14.6060%	-2.4999%	33.9501%	30/27
	Present Subsidies		(0)	(10,764,207)	2,619,086	(240,450)	6,268,517	(198,928)	536,822	1,702,482	11,858	8,559	7,280	48,980	
32	Equal % Increase Rate Rev		241,383,290	111,795,501	26,367,154	7,915,985	41,784,997	111,720	1,838,279	17,938,677	128,876	29,048,105	29,042	4,424,954	13 25
33	Equal % Increase less COS		0	9,792,938	(1,578,630)	242,074	(5,582,096)	157,437	(553,769)	(1,527,361)	(6,560)	(1,430,643)	(5,552)	492,161	19-32
34	Return on Eq % Incr Rates		48,797,354	20,316,327	6,344,470	1,562,550	9,846,051	(33,045)	448,247	3,999,921	30,980	5,062,903	8,027	1,210,924	14-33+(10,6)
35	ROR on Eq % Incr Rates		9.61%	7.41%	11.35%	8.77%	14.77%	-4.97%	40.24%	12.57%	11.05%	11.64%	16.75%	7.69%	34/4
36	Equal % Incr Rev less Present Rev		41,136,464	19,052,154	4,493,482	1,349,040	7,120,986	19,039	313,279	3,057,104	21,963	4,950,369	4,949	754,099	32-27
37	% Increase (Eq % Incr / Present)		20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	20.543%	36/27

Schedule 5, Page 1 of 14

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

From:
Page Line
Page 2 of 14

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	
	GROSS PLANT IN SERVICE														
	PRODUCTION PLANT														
1	Production Plant	1	337,632,134	164,663,192	34,776,110	12,897,548	54,054,905	742,791	135,053	25,389,936	202,579	39,199,091	33,763	5,537,167	
2	Total Production Plant		337,632,134	164,663,192	34,776,110	12,897,548	54,054,905	742,791	135,053	25,389,936	202,579	39,199,091	33,763	5,537,167	
	TRANSMISSION PLANT														
3	Assigned Trans. Plant	22	6,988	0	0	0	0	0	6,988	0	0	0	0	0	
4	Other Trans. Plant	2	113,554,683	54,926,400	11,605,289	4,303,722	17,998,417	249,820	1,056,059	8,459,824	68,133	13,024,722	11,355	1,850,941	
5	Total Transmission Plant		113,561,671	54,926,400	11,605,289	4,303,722	17,998,417	249,820	1,063,047	8,459,824	68,133	13,024,722	11,355	1,850,941	
6	Total P & T Plant		451,193,805	219,589,592	46,381,399	17,201,270	72,053,322	992,611	1,198,100	33,849,760	270,712	52,223,813	45,118	7,388,108	
	DISTRIBUTION PLANT														
7	Acct 360	4	1,362,935	671,548	141,798	53,064	207,493	3,403	11,797	109,889	954	139,356	82	23,549	
8	Acct 361	4	7,648,102	3,768,389	795,700	297,771	1,164,348	19,099	66,197	616,643	5,354	781,996	460	132,147	
9	Acct 362 Spec Assn.	23	242,191	0	0	0	0	0	242,191	0	0	0	0	0	
10	Acct 362 Other	4a	45,182,519	22,513,508	4,753,754	1,778,973	6,956,168	0	0	3,684,016	31,984	4,671,882	2,747	789,488	
11	Total Acct 362		45,424,710	22,513,508	4,753,754	1,778,973	6,956,168	0	242,191	3,684,016	31,984	4,671,882	2,747	789,488	
12	Acct 364 Spec Assn.	23	3,326	0	0	0	0	0	3,326	0	0	0	0	0	
13	Pri -Demand	5	33,628,283	16,753,654	3,537,559	1,324,777	5,177,029	0	0	2,744,408	23,805	3,476,998	2,024	588,030	
14	-Cust	8	14,473,967	12,041,324	1,806,764	305,120	133,650	0	0	73,424	2,107	3,993	111	107,474	
15	Sec -Demand	6	8,595,737	4,769,023	1,006,981	377,580	1,473,907	0	0	793,226	6,781	0	584	167,655	
16	-Cust	9	11,051,661	9,196,743	1,379,943	233,040	102,077	0	0	56,079	1,610	0	85	82,085	
17	Total Acct 364		67,752,975	42,760,744	7,731,247	2,240,517	6,886,663	0	3,326	3,667,137	34,303	3,480,991	2,804	945,244	
18	Acct 365 Spec Assn.	23	8,281	0	0	0	0	0	8,281	0	0	0	0	0	
19	Pri -Demand	5	38,334,201	19,098,148	4,032,603	1,510,166	5,901,499	0	0	3,128,458	27,137	3,963,566	2,307	670,318	
20	-Cust	8	22,063,154	18,354,994	2,754,111	465,105	203,726	0	0	111,923	3,212	6,086	169	163,827	
21	Sec -Demand	6	5,357,551	2,972,437	627,631	235,338	918,657	0	0	494,402	4,227	0	364	104,496	
22	-Cust	9	10,697,442	8,901,976	1,335,715	225,571	98,805	0	0	54,281	1,558	0	82	79,454	
23	Total Acct 365		76,460,629	49,327,555	8,750,060	2,436,180	7,122,687	0	8,281	3,789,064	36,134	3,969,652	2,922	1,018,095	
24	Acct 366 Pri -Demand	5	2,089,976	1,041,229	219,857	82,334	321,749	0	0	170,563	1,479	216,093	126	36,546	
25	-Cust	8	5,297,708	4,407,321	661,305	111,679	48,918	0	0	26,874	771	1,461	41	39,337	
26	Sec -Demand	6	685,009	380,052	80,248	30,090	117,458	0	0	63,214	540	0	47	13,361	
27	-Cust	9	3,292,975	2,740,280	411,171	69,437	30,415	0	0	16,709	480	0	25	24,458	
28	Total Acct 366		11,365,668	8,568,882	1,372,581	293,540	518,540	0	0	277,360	3,270	217,554	239	113,702	
29	Acct 367 Pri -Demand	5	4,353,948	2,169,142	458,018	171,523	670,284	0	0	355,326	3,082	450,177	262	76,134	
30	-Cust	8	11,036,465	9,181,563	1,377,666	232,656	101,908	0	0	55,986	1,607	3,045	85	81,950	
31	Sec -Demand	6	1,427,046	791,743	167,177	62,685	244,695	0	0	131,690	1,126	0	97	27,834	
32	-Cust	9	6,860,099	5,708,695	856,572	144,655	63,362	0	0	34,810	999	0	53	50,953	
33	Total Acct 367		23,677,558	17,851,143	2,859,433	611,519	1,080,249	0	0	577,812	6,814	453,222	497	236,871	
34	Acct 368 - Spec. Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
35	-Demand	33	17,641,244	10,410,497	2,003,426	804,571	2,606,868	0	0	1,585,444	14,993	0	962	214,483	
36	-Cust	36	33,256,748	27,665,370	4,151,105	701,025	307,065	0	0	168,694	4,842	0	11,722	246,926	
37	Total Acct 368		50,897,993	38,075,867	6,154,531	1,505,596	2,913,933	0	0	1,754,138	19,835	0	12,684	461,409	
38	Acct 369	13	32,116,259	23,116,699	5,055,189	853,703	2,679,140	0	0	393,546	11,295	0	6,686	0	
39	Acct 370 Spec Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
40	Acct 370 Other	14	11,391,369	6,892,463	2,178,416	468,793	1,126,037	7,115	648	556,329	16,240	145,328	0	0	
41	TOTAL Acct 370		11,391,369	6,892,463	2,178,416	468,793	1,126,037	7,115	648	556,329	16,240	145,328	0	0	
42	Acct 371	28	9,090,574	0	2,224,778	375,713	164,571	410	137	90,411	2,595	4,917	0	6,227,043	
43	Acct 373	29	7,741,096	0	0	0	0	0	0	0	0	0	0	7,741,096	
44	Total Distribution Plant		344,929,867	213,546,798	42,017,487	10,915,369	30,819,829	30,027	332,577	15,516,345	168,778	13,864,898	29,121	17,688,644	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 3 of 14
1	Dist. Plant minus land		343,566,932	212,875,250	41,875,689	10,862,305	30,612,336	26,624	320,780	15,406,456	167,824	13,725,542	29,039	17,665,095	
2	PIS Acct 364,365,368		195,111,597	130,164,166	22,635,838	6,182,293	16,923,283	0	11,607	9,210,339	90,272	7,450,643	18,410	2,424,748	
3	Sec PIS Acct 364,365,368		86,600,384	63,916,046	10,504,801	2,577,125	5,507,379	0	0	3,152,126	34,011	0	13,799	895,099	
4	PIS Acct 366,367		35,043,226	26,420,025	4,232,014	905,059	1,598,789	0	0	855,172	10,084	670,776	736	350,573	
5	PIS Acct 364,365		144,213,604	92,088,299	16,481,307	4,676,697	14,009,350	0	11,607	7,456,201	70,437	7,450,643	5,726	1,963,339	
6	Total T & D Plant		458,491,538	268,473,198	53,622,776	15,219,091	48,818,246	279,847	1,395,624	23,976,169	236,911	26,889,620	40,476	19,539,585	
7	Total PTD Plant		796,123,672	433,136,390	88,398,886	28,116,639	102,873,151	1,022,638	1,530,677	49,366,105	439,490	66,088,711	74,239	25,076,752	
8	Prod/Trans land	1	7,624,776	3,718,603	785,352	291,266	1,220,727	16,775	3,050	573,383	4,575	885,236	762	125,046	
9	Total PTD minus land		787,135,962	428,746,239	87,471,736	27,772,309	101,444,931	1,002,460	1,515,830	48,682,833	433,961	65,064,119	73,395	24,928,157	
	GENERAL & INTANGIBLE PLANT														
10	Production Related	38	19,619,343	9,568,354	2,020,792	749,459	3,141,057	43,163	7,848	1,475,375	11,772	2,277,806	1,962	321,757	
11	Transmission Related	39	6,598,914	3,191,698	674,368	250,083	1,045,863	14,517	61,772	491,589	3,959	756,849	660	107,556	
12	Distribution Related	40	20,043,405	12,408,913	2,441,579	634,277	1,790,898	1,745	19,326	901,634	9,807	805,670	1,692	1,027,863	
13	Total General & Intangible Plant		46,261,662	25,168,965	5,136,739	1,633,819	5,977,818	59,425	88,946	2,868,598	25,538	3,840,325	4,314	1,457,176	
14	TOTAL PLANT IN SERVICE		842,385,334	458,305,355	93,535,625	29,750,458	108,850,969	1,082,063	1,619,623	52,234,703	465,028	69,929,036	78,553	26,533,928	
	Classification of Plant														
15	Demand		653,651,014	322,647,968	67,937,083	25,320,689	103,497,284	1,074,101	1,618,792	50,500,393	414,963	69,754,628	58,387	10,826,725	
16	Energy														
17	Customer		188,734,327	135,657,387	25,598,542	4,429,769	5,353,685	7,962	831	1,734,310	50,065	174,408	20,166	15,707,203	
	DEPRECIATION RESERVE														
	PRODUCTION RESERVE														
18	Production Depreciation	1	106,230,676	51,808,701	10,941,760	4,058,012	17,007,531	233,707	42,492	7,988,547	63,738	12,333,381	10,623	1,742,183	
19	Total Prod Depr Reserve		106,230,676	51,808,701	10,941,760	4,058,012	17,007,531	233,707	42,492	7,988,547	63,738	12,333,381	10,623	1,742,183	
	TRANSMISSION RESERVE														
20	Spec Assgn Trans Plant	25	6,975	0	0	0	0	0	6,975	0	0	0	0	0	
21	Transmission Depreciation	2	34,517,054	16,695,899	3,527,643	1,308,196	5,470,953	75,938	321,009	2,571,521	20,710	3,959,106	3,452	562,628	
22	Total Trans Depr Reserve		34,524,029	16,695,899	3,527,643	1,308,196	5,470,953	75,938	327,984	2,571,521	20,710	3,959,106	3,452	562,628	
	DISTRIBUTION RESERVE														
23	Acct 360	4	0	0	0	0	0	0	0	0	0	0	0	0	
24	Acct 361	4	2,720,023	1,340,215	282,988	105,901	414,096	6,792	23,543	219,307	1,904	278,114	164	46,998	
25	Acct 362 Spec Assn.	23	48,409	0	0	0	0	0	48,409	0	0	0	0	0	
26	Acct 362 Other	4a	16,106,740	8,025,653	1,694,626	634,171	2,479,746	0	0	1,313,284	11,402	1,665,440	979	281,438	
27	Total Acct 362		16,155,150	8,025,653	1,694,626	634,171	2,479,746	0	48,409	1,313,284	11,402	1,665,440	979	281,438	
28	Acct 364 Spec Assn.	23	3,326	0	0	0	0	0	3,326	0	0	0	0	0	
29	Pri -Demand	5	11,958,726	5,957,852	1,258,010	471,111	1,841,030	0	0	975,953	8,465	1,236,473	720	209,112	
30	-Cust	8	5,147,161	4,282,077	642,513	108,505	47,528	0	0	26,111	749	1,420	39	38,219	
31	Sec -Demand	6	3,056,774	1,695,937	358,098	134,273	524,144	0	0	282,083	2,412	0	208	59,621	
32	-Cust	9	3,930,138	3,270,501	490,729	82,873	36,300	0	0	19,942	572	0	30	29,191	
33	Total Acct 364		24,096,124	15,206,367	2,749,350	796,762	2,449,002	0	3,326	1,304,089	12,198	1,237,893	997	336,143	
34	Acct 365 Spec Assn.	23	8,281	0	0	0	0	0	8,281	0	0	0	0	0	
35	Pri -Demand	5	13,630,758	6,790,861	1,433,901	536,980	2,098,437	0	0	1,112,408	9,649	1,409,353	820	238,350	
36	-Cust	8	7,845,149	6,526,613	979,298	165,381	72,440	0	0	39,797	1,142	2,164	60	58,253	
37	Sec -Demand	6	1,905,022	1,056,930	223,171	83,681	326,653	0	0	175,798	1,503	0	129	37,156	
38	-Cust	9	3,803,764	3,165,337	474,949	80,208	35,133	0	0	19,301	554	0	29	28,252	
39	Total Acct 365		27,192,973	17,539,741	3,111,319	866,250	2,532,663	0	8,281	1,347,304	12,848	1,411,517	1,038	362,011	
40	Acct 366 Pri -Demand	5	743,293	370,310	78,191	29,282	114,429	0	0	60,660	526	76,853	45	12,997	
41	-Cust	8	1,884,113	1,567,449	235,191	39,718	17,397	0	0	9,558	274	520	14	13,990	
42	Sec -Demand	6	243,621	135,164	28,540	10,701	41,774	0	0	22,482	192	0	17	4,752	
43	-Cust	9	1,171,136	974,572	146,232	24,695	10,817	0	0	5,943	171	0	9	8,698	
44	Total Acct 366		4,042,163	3,047,495	488,154	104,396	184,417	0	0	98,643	1,163	77,373	85	40,437	
45	Acct 367 Pri -Demand	5	1,548,467	771,448	162,892	61,001	238,384	0	0	126,371	1,096	160,104	93	27,077	
46	-Cust	8	3,925,083	3,265,393	489,962	82,743	36,243	0	0	19,911	571	1,083	30	29,145	
47	Sec -Demand	6	507,524	281,581	59,456	22,294	87,025	0	0	46,835	400	0	34	9,899	
48	-Cust	9	2,439,772	2,030,279	304,637	51,446	22,535	0	0	12,380	355	0	19	18,121	
49	Total Acct 367		8,420,846	6,348,701	1,016,947	217,484	384,187	0	0	205,497	2,422	161,187	176	84,242	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 4 of 14
1	Acct 368 - Spec. Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
2	-Demand	33	6,274,051	3,702,459	712,512	286,143	927,124	0	0	563,858	5,332	0	342	76,280	
3	-Cust	36	11,827,654	9,839,099	1,476,327	249,317	109,207	0	0	59,996	1,722	0	4,169	87,818	
4	Total Acct 368		18,101,705	13,541,558	2,188,839	535,460	1,036,331	0	0	623,854	7,054	0	4,511	164,098	
5	Acct 369	13	11,422,043	8,221,379	1,797,861	303,617	952,827	0	0	139,963	4,017	0	2,378	0	
6	Acct 370 Spec Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
7	Acct 370 Other	14	4,051,303	2,451,282	774,747	166,725	400,471	2,530	230	197,857	5,776	51,686	0	0	
8	Total Acct 370		4,051,303	2,451,282	774,747	166,725	400,471	2,530	230	197,857	5,776	51,686	0	0	
9	Acct 371	28	3,233,033	0	791,235	133,621	58,529	146	49	32,155	923	1,749	0	2,214,627	
10	Acct 373	29	2,753,096	0	0	0	0	0	0	0	0	0	0	2,753,096	
11	Total Dist Depr Reserve		122,188,459	75,722,391	14,896,066	3,864,387	10,892,269	9,468	83,838	5,481,953	59,707	4,884,959	10,328	6,283,090	
	GENERAL PLANT														
12	Production Related	38	7,369,836	3,594,269	759,093	281,528	1,179,911	16,214	2,948	554,212	4,422	855,638	737	120,865	
13	Transmission Related	39	2,395,132	1,158,454	244,767	90,770	379,605	5,269	22,421	178,426	1,437	274,705	239	39,038	
14	Distribution Related	41	8,476,920	5,252,329	1,033,210	268,009	755,306	657	7,915	380,128	4,141	338,654	716	435,856	
	Total Gen / Int Depr Reserve		18,241,888	10,005,052	2,037,070	640,307	2,314,822	22,140	33,284	1,112,766	10,000	1,468,997	1,692	595,759	
16	TOTAL DEPRECIATION RESERVE		281,185,051	154,232,043	31,402,539	9,870,902	35,685,575	341,253	487,598	17,154,787	154,155	22,646,443	26,095	9,183,660	
	NET PLANT														
	NET PRODUCTION PLANT														
17	Production Plant		231,401,458	112,854,491	23,834,350	8,839,536	37,047,374	509,084	92,561	17,401,389	138,841	26,865,710	23,140	3,794,984	
18	Total Net Prod Plant		231,401,458	112,854,491	23,834,350	8,839,536	37,047,374	509,084	92,561	17,401,389	138,841	26,865,710	23,140	3,794,984	
	NET TRANSMISSION PLANT														
19	Assigned Trans. Plant		13	0	0	0	0	0	13	0	0	0	0	0	
20	Other Trans. Plant		79,037,628	38,230,501	8,077,646	2,995,526	12,527,464	173,882	735,050	5,888,303	47,423	9,065,616	7,903	1,288,313	
21	Total Net Trans Plant		79,037,641	38,230,501	8,077,646	2,995,526	12,527,464	173,882	735,063	5,888,303	47,423	9,065,616	7,903	1,288,313	
22	Total P & T Plant		310,439,100	151,084,992	31,911,996	11,835,062	49,574,838	682,966	827,624	23,289,692	186,264	35,931,326	31,043	5,083,297	
	NET DISTRIBUTION PLANT														
23	Acct 360		1,362,935	671,548	141,798	53,064	207,493	3,403	11,797	109,889	954	139,356	82	23,549	
24	Acct 361		4,928,080	2,428,174	512,712	191,870	750,252	12,307	42,654	397,336	3,450	503,882	296	85,149	
25	Acct 362 Spec Assn.		193,782	0	0	0	0	0	193,782	0	0	0	0	0	
26	Acct 362 Other		29,075,779	14,487,855	3,059,128	1,144,802	4,476,422	0	0	2,370,732	20,582	3,006,442	1,768	508,050	
27	Total Acct 362		29,269,560	14,487,855	3,059,128	1,144,802	4,476,422	0	193,782	2,370,732	20,582	3,006,442	1,768	508,050	
28	Acct 364 Spec Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
29	Pri -Demand		21,669,558	10,795,802	2,279,549	853,666	3,335,999	0	0	1,768,455	15,340	2,240,525	1,304	378,918	
30	-Cust		9,326,806	7,759,247	1,164,251	196,615	86,122	0	0	47,313	1,358	2,573	72	69,255	
31	Sec -Demand		5,538,963	3,073,086	648,883	243,307	949,763	0	0	511,143	4,369	0	376	108,034	
32	-Cust		7,121,524	5,926,242	889,214	150,167	65,777	0	0	36,137	1,038	0	55	52,894	
33	Total Acct 364		43,656,850	27,554,377	4,981,897	1,443,755	4,437,661	0	0	2,363,048	22,105	2,243,098	1,807	609,101	
34	Acct 365 Spec Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
35	Pri -Demand		24,703,443	12,307,287	2,598,702	973,186	3,803,062	0	0	2,016,050	17,488	2,554,213	1,487	431,968	
36	-Cust		14,218,005	11,828,381	1,774,813	299,724	131,286	0	0	72,126	2,070	3,922	109	105,574	
37	Sec -Demand		3,452,530	1,915,507	404,460	151,657	592,004	0	0	318,604	2,724	0	235	67,340	
38	-Cust		6,893,678	5,736,639	860,766	145,363	63,672	0	0	34,980	1,004	0	53	51,202	
39	Total Acct 365		49,267,656	31,787,814	5,638,741	1,569,930	4,590,024	0	0	2,441,760	23,286	2,558,135	1,884	656,084	
40	Acct 366 Pri -Demand		1,346,683	670,919	141,666	53,052	207,320	0	0	109,903	953	139,240	81	23,549	
41	-Cust		3,413,596	2,839,872	426,114	71,961	31,521	0	0	17,316	497	941	27	25,347	
42	Sec -Demand		441,388	244,888	51,708	19,389	75,684	0	0	40,732	348	0	30	8,609	
43	-Cust		2,121,839	1,765,708	264,939	44,742	19,598	0	0	10,766	309	0	16	15,760	
44	Total Acct 366		7,323,505	5,521,387	884,427	189,144	334,123	0	0	178,717	2,107	140,181	154	73,265	
45	Acct 367 Pri -Demand		2,805,480	1,397,694	295,126	110,522	431,900	0	0	228,955	1,986	290,073	169	49,057	
46	-Cust		7,111,382	5,916,170	887,704	149,913	65,665	0	0	36,075	1,036	1,962	55	52,805	
47	Sec -Demand		919,522	510,162	107,721	40,391	157,670	0	0	84,855	726	0	63	17,935	
48	-Cust		4,420,327	3,678,416	551,935	93,209	40,827	0	0	22,430	644	0	34	32,832	
49	Total Acct 367		15,256,711	11,502,442	1,842,486	394,035	696,062	0	0	372,315	4,392	292,035	321	152,629	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 5 of 14
1	Acct 368 - Spec. Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
2	-Demand		11,367,193	6,708,038	1,290,914	518,428	1,679,744	0	0	1,021,586	9,661	0	620	138,203	
3	-Cust		21,429,094	17,826,271	2,674,778	451,708	197,858	0	0	108,698	3,120	0	7,553	159,108	
4	Total Acct 368		32,796,288	24,534,309	3,965,692	970,136	1,877,602	0	0	1,130,284	12,781	0	8,173	297,311	
5	Acct 369		20,694,216	14,895,320	3,257,328	550,086	1,726,313	0	0	253,583	7,278	0	4,308	0	
6	Acct 370 Spec Assn.		0	0	0	0	0	0	0	0	0	0	0	0	
7	Acct 370 Other		7,340,066	4,441,181	1,403,669	302,068	725,566	4,585	418	358,472	10,464	93,642	0	0	
8	Total Acct 370		7,340,066	4,441,181	1,403,669	302,068	725,566	4,585	418	358,472	10,464	93,642	0	0	
9	Acct 371		5,857,541	0	1,433,543	242,092	106,042	264	88	58,256	1,672	3,168	0	4,012,416	
10	Acct 373		4,988,000	0	0	0	0	0	0	0	0	0	0	4,988,000	
11	Total Net Dist Plant		222,741,409	137,824,407	27,121,421	7,050,982	19,927,560	20,559	248,739	10,034,392	109,071	8,979,939	18,793	11,405,554	
	NET GENERAL& INTANGIBLE PLANT														
12	Production Related		12,249,507	5,974,085	1,261,699	467,931	1,961,146	26,949	4,900	921,163	7,350	1,422,168	1,225	200,892	
13	Transmission Related		4,203,782	2,033,244	429,600	159,314	666,259	9,248	39,351	313,163	2,522	482,144	420	68,517	
14	Distribution Related		11,566,485	7,160,835	1,408,966	366,024	1,033,477	1,007	11,152	520,307	5,660	464,930	977	593,151	
15	Total Net Gen / Int Plant		28,019,774	15,168,164	3,100,265	993,269	3,660,882	37,204	55,403	1,754,633	15,532	2,369,242	2,622	862,560	
16	TOTAL NET PLANT IN SERVICE		561,200,283	304,077,563	62,133,682	19,879,313	73,163,280	740,729	1,131,766	35,078,717	310,867	47,280,507	52,458	17,351,411	
17	Production Plant		337,632,134	164,663,192	34,776,110	12,897,548	54,054,905	742,791	135,053	25,389,936	202,579	39,199,091	33,763	5,537,167	
18	Prod Depr Reserve		106,230,676	51,808,701	10,941,760	4,058,012	17,007,531	233,707	42,492	7,988,547	63,738	12,333,381	10,623	1,742,183	
19	Net Production Plant		231,401,458	112,854,491	23,834,350	8,839,536	37,047,374	509,084	92,561	17,401,389	138,841	26,865,710	23,140	3,794,984	
20	Transmission Plant		113,561,671	54,926,400	11,605,289	4,303,722	17,998,417	249,820	1,063,047	8,459,824	68,133	13,024,722	11,355	1,850,941	
21	Trans Depr Reserve		34,524,029	16,695,899	3,527,643	1,308,196	5,470,953	75,938	327,984	2,571,521	20,710	3,959,106	3,452	562,628	
22	Net Transmission Plant		79,037,641	38,230,501	8,077,646	2,995,526	12,527,464	173,882	735,063	5,888,303	47,423	9,065,616	7,903	1,288,313	
23	Distribution Plant		344,929,867	213,546,798	42,017,487	10,915,369	30,819,829	30,027	332,577	15,516,345	168,778	13,864,898	29,121	17,688,644	
24	Dist Depr Reserve		122,188,459	75,722,391	14,896,066	3,864,387	10,892,269	9,468	83,838	5,481,953	59,707	4,884,959	10,328	6,283,090	
25	Net Distribution Plant		222,741,409	137,824,407	27,121,421	7,050,982	19,927,560	20,559	248,739	10,034,392	109,071	8,979,939	18,793	11,405,554	
26	General & Intangible Plant		46,261,662	25,168,965	5,136,739	1,633,819	5,977,818	59,425	88,946	2,868,598	25,538	3,840,325	4,314	1,457,176	
27	Gen / Int Depr Reserve		18,241,888	10,005,052	2,037,070	640,307	2,314,822	22,140	33,284	1,112,766	10,000	1,468,997	1,692	595,759	
28	Net Gen / Int Plant		28,019,774	15,163,913	3,099,669	993,512	3,662,996	37,285	55,662	1,755,832	15,538	2,371,328	2,622	861,417	
29	NET PLANT IN SERVICE		561,200,283	304,073,312	62,133,086	19,879,556	73,165,394	740,810	1,132,025	35,079,916	310,873	47,282,593	52,458	17,350,268	
	RATE BASE ADJUSTMENTS														
	SUBTRACTIVE ADJUSTMENTS														
30	Customer Advances	10	201,547	171,473	25,729	4,345	0	0	0	0	0	0	0	0	
31	Interest Offset	58	3,651,301	1,978,372	404,252	129,341	476,031	4,820	7,365	228,238	2,023	307,632	341	112,885	
32	Income Tax Offset	58	225,104	121,968	24,922	7,974	29,348	297	454	14,071	125	18,966	21	6,959	
33	Deferred Tax -Lib. Dep.	49	56,713,664	30,855,447	6,297,294	2,002,952	7,328,401	72,850	109,041	3,516,706	31,308	4,707,978	5,289	1,786,399	
34	ITC	49	0	0	0	0	0	0	0	0	0	0	0	0	
35	Injuries and Damages	49	838,413	456,144	93,095	29,610	108,338	1,077	1,612	51,988	463	69,599	78	26,409	
36	Customer Deposits	19	3,252,577	2,072,372	567,580	256,914	195,873	0	0	158,686	811	0	0	342	
37	Total Subtractive Adjustments		64,882,606	35,655,776	7,412,872	2,431,136	8,137,991	79,044	118,472	3,969,689	34,730	5,104,175	5,729	1,932,994	
38	ORIGINAL COST RATE BASE		496,317,676	268,417,536	54,720,214	17,448,420	65,027,403	661,766	1,013,553	31,110,227	276,143	42,178,418	46,729	15,417,274	29 - 37

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 6 of 14
	WORKING CAPITAL														
1	Fuel	18	6,685,220	2,769,500	585,581	211,031	1,245,324	3,530	93,692	514,548	1,790	1,188,218	789	71,219	
2	Total Fuel		6,685,220	2,769,500	585,581	211,031	1,245,324	3,530	93,692	514,548	1,790	1,188,218	789	71,219	
	CASH REQUIREMENTS														
3	Production	66	(2,222,453)	(1,056,860)	(223,249)	(82,467)	(364,885)	(4,291)	(7,429)	(167,630)	(1,215)	(279,826)	(229)	(34,373)	
4	Transmission	67	(51,054)	(24,694)	(5,217)	(1,935)	(8,092)	(112)	(478)	(3,803)	(31)	(5,856)	(5)	(832)	
5	Distribution	68	(190,476)	(114,917)	(24,486)	(6,320)	(17,304)	(23)	(8)	(9,123)	(124)	(7,574)	(9)	(10,588)	
6	Cust. Accts	70	(94,106)	(78,349)	(11,787)	(1,987)	(1,452)	(4)	(1)	(357)	(9)	(53)	0	(106)	
7	Cust. Asst.	17	(14,178)	(11,795)	(1,770)	(299)	(131)	0	0	(72)	(2)	(4)	0	(105)	
8	Sales Exp.	72	(12,452)	(8,947)	(1,389)	(261)	(1,171)	(3)	(1)	(609)	(17)	(35)	0	(19)	
9	A & G	73	(199,580)	(115,216)	(22,095)	(6,386)	(24,399)	(188)	(431)	(11,754)	(137)	(13,769)	(15)	(5,190)	
10	Total Cash Requirements		(2,784,299)	(1,410,778)	(289,993)	(99,655)	(417,434)	(4,621)	(8,348)	(193,348)	(1,535)	(307,117)	(258)	(51,213)	
	MATERIALS & SUPPLIES														
11	Production	38	527,516	257,270	54,334	20,151	84,455	1,161	211	39,669	317	61,245	53	8,651	
12	Transmission	39	914,561	442,346	93,462	34,660	144,949	2,012	8,561	68,131	549	104,894	91	14,906	
13	Distribution	40	5,266,317	3,260,388	641,514	166,654	470,551	458	5,078	236,900	2,577	211,686	445	270,067	
14	Total Material & Supplies		6,708,395	3,960,004	789,310	221,465	699,955	3,631	13,850	344,700	3,443	377,825	589	293,624	
	PREPAYMENTS														
15	Production	54	270,202	131,778	27,831	10,322	43,259	594	108	20,319	162	31,370	27	4,431	
16	Transmission	55	26,993	13,056	2,759	1,023	4,278	59	251	2,011	16	3,096	3	440	
17	Distribution	56	157,769	97,622	19,210	4,994	14,115	15	176	7,107	77	6,361	13	8,079	
18	General	57	394,875	213,701	43,683	14,001	51,622	525	784	24,744	219	33,419	37	12,140	
19	Total Prepayments		849,839	456,157	93,483	30,340	113,274	1,193	1,319	54,181	474	74,246	80	25,090	
20	TOTAL WORKING CAPITAL		11,459,155	5,774,883	1,178,381	363,181	1,641,119	3,733	100,513	720,081	4,172	1,333,172	1,200	338,720	
	CWIP														
21	Total CWIP		0	0	0	0	0	0	0	0	0	0	0	0	
22	RATEBASE ADJUSTMENTS														
23	Subtractive Adjustments		64,882,606	35,655,776	7,412,872	2,431,136	8,137,991	79,044	118,472	3,969,689	34,730	5,104,175	5,729	1,932,994	
24	Working Capital		11,459,155	5,774,883	1,178,381	363,181	1,641,119	3,733	100,513	720,081	4,172	1,333,172	1,200	338,720	
25	Total Rate Base Adjustments		(53,423,451)	(29,880,893)	(6,234,491)	(2,067,955)	(6,496,872)	(75,311)	(17,959)	(3,249,608)	(30,558)	(3,771,003)	(4,529)	(1,594,274)	
	RATE BASE CALCULATION														
26	Net Plant In Service		561,200,283	304,073,312	62,133,086	19,879,556	73,165,394	740,810	1,132,025	35,079,916	310,873	47,282,593	52,458	17,350,268	
27	Total Rate Base Adjustments		(53,423,451)	(29,880,893)	(6,234,491)	(2,067,955)	(6,496,872)	(75,311)	(17,959)	(3,249,608)	(30,558)	(3,771,003)	(4,529)	(1,594,274)	
28	Total CWIP		0	0	0	0	0	0	0	0	0	0	0	0	
29	TOTAL RATE BASE		507,776,832	274,192,419	55,898,595	17,811,601	66,668,522	665,499	1,114,066	31,830,308	280,315	43,511,590	47,929	15,755,994	
30	Rate Of Return Allowed		0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	0.096100	
31	RETURN ON RATE BASE		48,797,354	26,349,891	5,371,855	1,711,695	6,406,845	63,954	107,062	3,058,893	26,938	4,181,464	4,606	1,514,151	29 * 30
	Classification of Rate Base														
32	Demand		388,312,822	190,237,020	40,012,885	14,953,326	62,228,888	657,233	1,026,601	30,292,369	248,282	42,287,220	34,886	6,334,112	
33	Energy		6,281,835	2,602,382	550,245	198,292	1,170,535	3,315	86,940	483,583	1,681	1,117,213	742	66,907	
34	Customer		113,182,182	81,353,017	15,335,465	2,659,983	3,269,098	4,951	525	1,054,356	30,352	107,156	12,302	9,354,976	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

From:
Page Line
Page 7 of 14

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	
	OPERATING AND MAINTENANCE EXPENSES														
	PRODUCTION O & M														
	Energy Related														
1	Fuel & PP Normalized	18	68,968,600	28,571,767	6,041,192	2,177,121	12,847,480	36,421	966,576	5,308,371	18,464	12,258,340	8,135	734,734	*
2	Other Variable	18	6,072,041	2,515,477	531,871	191,675	1,131,101	3,206	85,098	467,352	1,626	1,079,232	716	64,686	
3	Total Energy Related		75,040,641	31,087,244	6,573,063	2,368,796	13,978,581	39,627	1,051,674	5,775,723	20,090	13,337,572	8,851	799,420	
	Demand Related														
4	Purchase Power	1	13,034,836	6,357,089	1,342,588	497,931	2,086,877	28,677	5,214	980,220	7,821	1,513,344	1,303	213,771	*
5	Other	1	28,453,738	13,876,888	2,930,735	1,086,933	4,555,444	62,598	11,381	2,139,721	17,072	3,303,479	2,845	466,641	
6	Off System Expenses	2	3,178,209	1,537,300	324,813	120,454	503,746	6,992	29,557	236,777	1,907	364,541	318	51,805	
7	Total Demand Related		44,666,784	21,771,277	4,598,136	1,705,318	7,146,067	98,267	46,152	3,356,718	26,800	5,181,364	4,466	732,217	
8	Total Production Expense		119,707,425	52,858,521	11,171,199	4,074,114	21,124,648	137,894	1,097,826	9,132,441	46,890	18,518,936	13,317	1,531,637	
9	Total Prod. less F&PP		37,703,989	17,929,665	3,787,419	1,399,062	6,190,291	72,796	126,036	2,843,850	20,605	4,747,252	3,879	583,132	
	Classification of Production Exp.														
10	Demand		44,666,784	21,771,277	4,598,136	1,705,318	7,146,067	98,267	46,152	3,356,718	26,800	5,181,364	4,466	732,217	
11	Energy		75,040,641	31,087,244	6,573,063	2,368,796	13,978,581	39,627	1,051,674	5,775,723	20,090	13,337,572	8,851	799,420	
12	Customer														
	TRANSMISSION O & M														
13	Total Transmission Expense	39	2,676,920	1,294,747	273,564	101,449	424,266	5,889	25,059	199,418	1,606	307,024	268	43,631	
	Classification of Transmission Exp.														
14	Demand		2,676,921	1,294,747	273,564	101,449	424,266	5,889	25,059	199,418	1,606	307,024	268	43,631	
15	Energy														
16	Customer														
	DISTRIBUTION O & M														
	Operation Expenses														
17	Acct 581	40	0	0	0	0	0	0	0	0	0	0	0	0	
18	Acct 582	4a	432,289	215,401	45,482	17,021	66,554	0	0	35,247	306	44,699	26	7,554	
19	Acct 583	42	1,576,478	1,067,826	183,877	49,537	130,895	0	0	71,894	715	52,628	179	18,926	
20	Acct 584	43	353,483	266,500	42,689	9,129	16,127	0	0	8,626	102	6,766	7	3,536	
21	Acct 585	29	76,808	0	0	0	0	0	0	0	0	0	0	76,808	
22	Acct 586	44	1,508,770	912,897	288,528	62,091	149,142	942	86	73,685	2,151	19,248	0	0	
23	Acct 587	28	170,154	0	41,643	7,032	3,080	8	3	1,692	49	92	0	116,556	
24	Subtotal Operations		4,117,982	2,462,624	602,219	144,810	365,798	950	89	191,144	3,323	123,433	212	223,380	
25	Acct 580 + 588	SbOp	805,378	481629.9366275	1.1778E+005	28,321	71,541	186	17	37,383	650	24,141	41	43,688	
26	Acct 589	47	4,267	2,693	487	141	434	0	0	231	2	219	0	60	
27	Total Operation Expense		4,927,627	2,946,947	720,486	173,272	437,773	1,136	106	228,758	3,975	147,793	253	267,128	
	Maintenance Expense														
28	Acct 591 + 592	4a	491,082	244,696	51,668	19,335	75,605	0	0	40,041	348	50,778	30	8,581	
29	Acct 593	45	3,369,399	2,151,546	385,068	109,266	327,314	0	271	174,206	1,646	174,076	134	45,871	
30	Acct 594	43	478,055	360,419	57,733	12,347	21,810	0	0	11,666	138	9,151	10	4,782	
31	Acct 595	46	91,616	68,537	11,078	2,710	5,245	0	0	3,157	36	0	23	831	
32	Acct 596	29	212,346	0	0	0	0	0	0	0	0	0	0	212,346	
33	Acct 597	44	142,640	86,306	27,278	5,870	14,100	89	8	6,966	203	1,820	0	0	
34	Subtotal Maintenance		4,785,138	2,911,504	532,825	149,528	444,074	89	279	236,036	2,371	235,825	197	272,411	
35	Acct 590 + 598	SbMn	274,392	166,953	30,554	8,574	25,464	5	16	13,535	136	13,523	11	15,621	
36	Total Maintenance Exp.		5,059,530	3,078,457	563,379	158,102	469,538	94	295	249,571	2,507	249,348	208	288,032	
37	Total Distribution Expense		9,987,158	6,025,404	1,283,864	331,375	907,312	1,230	401	478,329	6,482	397,140	462	555,160	
	Classification of Distribution Exp.														
38	Demand		7,512,704	4,842,711	860,277	242,526	710,410	0	287	380,845	3,637	372,094	462	99,456	
39	Energy														
40	Customer		2,474,454	1,182,693	423,587	88,848	196,901	1,230	115	97,484	2,845	25,047	0	455,704	

Run Time: 10:43 AM
Run Date: 05-Apr-01
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THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 8 of 14
	CUSTOMER ACCOUNTING EXPENSE														
1	Acct 902	15	886,523	692,720	138,046	23,313	19,102	191	64	10,494	301	2,293	0	0	
2	Acct 903.2	7	529,437	440,441	66,087	11,161	4,889	12	4	2,686	77	146	4	3,931	
3	Acct 903.1	10	2,306,468	1,962,306	294,438	49,724	0	0	0	0	0	0	0	0	
4	Acct 904	16	611,284	512,628	44,259	7,300	42,877	0	0	3,255	19	0	0	946	
5	Subtotal Cust Acct Exp		4,333,712	3,608,095	542,830	91,498	66,868	203	68	16,435	397	2,439	4	4,877	
6	Acct 901	SbCA	392,858	327,080	49,208	8,294	6,062	18	6	1,490	36	221	0	442	
7	Acct 905	SbCA	207,648	172,880	26,009	4,384	3,204	10	3	787	19	117	0	234	
8	Adj. (Interest on Cust Dep)	19	292,732	186,514	51,082	23,122	17,629	0	0	14,282	73	0	0	31	
9	Total Customer Accounting		5,226,950	4,294,569	669,130	127,299	93,763	231	77	32,994	525	2,777	5	5,584	
	CUSTOMER SERVICE & INFORMATION														
10	Acct 908	17	335,223	278,874	41,844	7,066	3,095	8	3	1,700	49	92	3	2,489	
11	Acct 909	10	78,704	66,960	10,047	1,697	0	0	0	0	0	0	0	0	
12	Subtotal (SbtCSE)		413,927	345,834	51,891	8,763	3,095	8	3	1,700	49	92	3	2,489	
13	Acct 907	SbCS	322,099	269,112	40,379	6,819	2,408	6	2	1,323	38	72	2	1,937	
14	Acct 910	SbCS	7,382	6,168	925	156	55	0	0	30	1	2	0	44	
15	Total Customer S & I		743,409	621,114	93,196	15,738	5,559	14	5	3,053	88	165	5	4,470	
	SALES EXPENSE														
16	Other Sales Exp.	10	(183,934)	(156,488)	(23,481)	(3,965)	0	0	0	0	0	0	0	0	
17	Acct 911.1, 912.1	11	836,806	0	0	0	523,547	1,303	434	287,625	8,255	15,641	0	0	
18	Total Sales Expense		652,872	(156,488)	(23,481)	(3,965)	523,547	1,303	434	287,625	8,255	15,641	0	0	
19	TOTAL CUSTOMER EXPENSE		6,623,230	4,759,195	738,845	139,072	622,868	1,548	517	323,673	8,868	18,583	10	10,054	
	Classification of Customer Exp.														
20	Demand														
21	Energy														
22	Customer		6,623,233	4,759,195	738,845	139,072	622,868	1,548	517	323,673	8,868	18,583	10	10,054	
	ADMINISTRATIVE & GENERAL EXPENSES														
23	Labor Related (excl. 924 & 928)														
24	Production	66	3,548,290	1,687,346	356,431	131,665	582,563	6,851	11,861	267,632	1,939	446,760	365	54,878	
25	Transmission	67	624,485	302,045	63,818	23,667	98,975	1,374	5,846	46,521	375	71,624	63	10,178	
26	Distribution	40	3,595,970	2,226,272	438,042	113,795	321,304	313	3,467	161,761	1,760	144,545	304	184,408	
27	Customer	72	2,063,941	1,483,067	230,240	43,338	194,099	483	161	100,863	2,763	5,791	3	3,133	
28	Total Labor Related A&G		9,832,686	5,698,730	1,088,531	312,465	1,196,941	9,021	21,335	576,777	6,837	668,720	735	252,597	
	Plant Related A&G (Acct 924 + 928)														
29	Production	54	260,527	127,059	26,834	9,952	41,710	573	104	19,592	156	30,247	26	4,273	
30	Transmission	55	88,986	43,042	9,094	3,373	14,104	196	828	6,629	53	10,207	9	1,450	
31	Distribution	56	250,777	155,172	30,535	7,938	22,436	23	280	11,297	123	10,110	21	12,841	
32	General	57	31,547	17,073	3,490	1,119	4,124	42	63	1,977	17	2,670	3	970	
33	Total Plant Related A & G		631,837	342,346	69,953	22,382	82,374	834	1,275	39,495	349	53,234	59	19,534	
34	TOTAL A & G EXPENSES		10,464,523	6,041,076	1,158,484	334,847	1,279,315	9,855	22,610	616,272	7,186	721,954	794	272,131	
	Classification of A & G Exp.														
35	Demand		5,779,396	2,864,274	602,743	224,915	912,705	8,954	11,978	449,086	3,725	604,304	504	96,208	
36	Energy		625,003	258,930	54,749	19,738	115,877	334	10,462	47,977	169	110,014	73	6,681	
37	Customer		4,060,125	2,917,872	500,991	90,194	250,733	568	170	119,210	3,293	7,636	216	169,242	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

From:
Page Line
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		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	
	Total A & G Functionalized														
1	Production A&G		3,808,818	1,814,405	383,265	141,617	624,273	7,424	11,965	287,224	2,095	477,007	391	59,151	
2	Transmission A&G		713,471	345,087	72,912	27,040	113,079	1,570	6,674	53,150	428	81,831	72	11,628	
3	Distribution A&G		3,846,747	2,381,444	468,577	121,733	343,740	336	3,747	173,058	1,883	154,655	325	197,249	
4	General A&G		31,547	17,073	3,490	1,119	4,124	42	63	1,977	17	2,670	3	970	
5	Customer A&G		2,063,941	1,483,067	230,240	43,338	194,099	483	161	100,863	2,763	5,791	3	3,133	
6	Total A & G functionalized		10,464,523	6,041,076	1,158,484	334,847	1,279,315	9,855	22,610	616,272	7,186	721,954	794	272,131	
7	Total O & M by function (excl. A&G)														
8	Production O&M		119,707,425	52,858,521	11,171,199	4,074,114	21,124,648	137,894	1,097,826	9,132,441	46,890	18,518,936	13,317	1,531,637	
9	Transmission O&M		2,676,920	1,294,747	273,564	101,449	424,266	5,889	25,059	199,418	1,606	307,024	268	43,631	
10	Distribution O&M		9,987,158	6,025,404	1,283,864	331,375	907,312	1,230	401	478,329	6,482	397,140	462	555,160	
11	Customer O&M		6,623,230	4,759,195	738,845	139,072	622,868	1,548	517	323,673	8,868	18,583	10	10,054	
12	Total O & M functionalized		138,994,733	64,937,867	13,467,472	4,646,009	23,079,094	146,561	1,123,803	10,133,861	63,846	19,241,684	14,057	2,140,482	
13	Production Related		123,516,243	54,672,926	11,554,464	4,215,731	21,748,921	145,318	1,109,791	9,419,665	48,985	18,995,943	13,708	1,590,788	
14	Transmission Related		3,390,391	1,639,834	346,476	128,489	537,345	7,459	31,733	252,568	2,034	388,855	340	55,259	
15	Distribution Related		13,833,905	8,406,848	1,752,441	453,108	1,251,052	1,566	4,148	651,387	8,365	551,795	787	752,409	
16	Customer Related		8,687,171	6,242,262	969,085	182,410	816,967	2,031	678	424,536	11,631	24,374	13	13,187	
17	General Related		31,547	17,073	3,490	1,119	4,124	42	63	1,977	17	2,670	3	970	
18	TOTAL O&M EXPENSES		149,459,256	70,978,943	14,625,956	4,980,856	24,358,409	156,416	1,146,413	10,750,133	71,032	19,963,638	14,851	2,412,613	
	Classification of O & M Exp.														
19	Demand		60,635,803	30,773,009	6,334,721	2,274,208	9,193,448	113,110	83,476	4,386,067	35,768	6,464,786	5,700	971,512	
20	Energy		75,665,644	31,346,174	6,627,812	2,388,534	14,094,458	39,961	1,062,136	5,823,700	20,259	13,447,586	8,924	806,101	
21	Customer		13,157,812	8,859,760	1,663,423	318,114	1,070,503	3,346	802	540,366	15,006	51,266	226	635,000	
	DEPRECIATION EXPENSE														
22	Prod. Depreciation Exp.	38	12,344,817	6,020,567	1,271,516	471,572	1,976,405	27,159	4,938	928,330	7,407	1,433,233	1,234	202,455	
23	Trans. Depreciation Exp.	39	2,652,250	1,282,814	271,043	100,514	420,356	5,835	24,828	197,580	1,591	304,194	265	43,229	
24	Dist. Depreciation Exp.	41	11,852,553	7,343,883	1,444,650	374,734	1,056,081	918	11,066	531,500	5,790	473,511	1,002	609,420	
25	Gen. Depreciation Exp.	37	1,736,561	980,120	185,877	52,261	225,088	1,175	7,103	105,872	1,240	134,500	134	43,190	
26	TOTAL DEPR EXP		28,586,181	15,627,384	3,173,086	999,081	3,677,930	35,087	47,935	1,763,282	16,028	2,345,438	2,635	898,294	
	Classification of Depreciation Exp.														
27	Demand		22,063,043	10,928,212	2,290,418	847,573	3,493,483	34,848	47,905	1,703,622	14,271	2,339,473	1,945	361,292	
28	Energy														
29	Customer		6,523,137	4,699,172	882,668	151,508	184,447	239	30	59,660	1,757	5,965	690	537,002	
	REAL ESTATE & PROPERTY TAX														
30	Production	38	2,425,136	1,182,739	249,789	92,640	388,264	5,335	970	182,370	1,455	281,558	243	39,772	
31	Transmission	39	1,021,894	494,260	104,431	38,727	161,960	2,248	9,566	76,126	613	117,204	102	16,656	
32	Distribution	40	3,302,210	2,044,405	402,257	104,499	295,056	287	3,184	148,547	1,616	132,737	279	169,343	
33	General	48	381,418	207,513	42,351	13,470	49,286	490	733	23,651	211	31,663	36	12,014	
34	Total RE & Prop Tax		7,130,657	3,928,917	798,828	249,336	894,566	8,360	14,453	430,694	3,895	563,162	660	237,785	
	PAYROLL TAX														
35	Total Payroll Tax	37	1,529,737	863,388	163,739	46,037	198,280	1,035	6,257	93,263	1,093	118,481	118	38,046	
	MISCELLANEOUS TAX														
36	Miscellaneous	58	138,465	75,024	15,330	4,905	18,052	183	279	8,655	77	11,666	13	4,281	
37	City Tax Fee	31	27,685	17,558	3,334	1,035	3,576	9	0	1,509	7	466	0	191	
38	Total Misc Tax		166,150	92,582	18,664	5,940	21,628	192	279	10,164	84	12,132	13	4,472	
39	TOTAL TAX (excl IT & Rev Tax)		8,826,545	4,884,887	981,231	301,313	1,114,474	9,587	20,989	534,121	5,072	693,775	791	280,303	
40	TOTAL EXPENSES (excluding IT and Revenue Taxes)		186,871,981	91,491,214	18,780,273	6,281,250	29,150,813	201,090	1,215,337	13,047,536	92,132	23,002,851	18,277	3,591,210	
	Classification of Other Taxes														
41	Demand		6,223,791	3,084,744	647,037	240,151	983,987	9,308	17,860	482,506	4,013	651,677	539	101,969	
42	Energy		220,836	91,486	19,344	6,971	41,137	117	3,095	16,997	59	39,251	26	2,353	
43	Customer		2,381,916	1,708,657	314,850	54,191	89,349	162	34	34,618	999	2,847	226	175,981	

Run Time: 10:43 AM
Run Date: 05-Apr-01
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THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI C[illegible]E SERVICE
Twelve Months Ende[illegible]er 31, 2000

Section N
Page 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 10 of 14
1	FEDERAL INCOME TAXES	62	(108,119)	(58,383)	(11,902)	(3,793)	(14,195)	(142)	(237)	(6,778)	(60)	(9,265)	(10)	(3,355)	
2	STATE INCOME TAXES	62	213,797	115,448	23,536	7,500	28,071	280	469	13,402	118	18,320	20	6,634	
3	Tax on Increase	62	15,918,967	8,596,020	1,752,439	558,399	2,090,080	20,864	34,926	997,890	8,788	1,364,102	1,503	493,955	
4	Composite Tax Rate		0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	0.383886	
5	Tax On Diff. (Proposed Rates)		0	3,759,374	(606,014)	92,929	(2,142,890)	60,438	(212,584)	(586,333)	(2,518)	(549,204)	(2,131)	188,934	(1,20)*13
6	Tax On Diff. (Equal Increase Rates)		0	3,759,374	(606,015)	92,929	(2,142,890)	60,438	(212,584)	(586,333)	(2,518)	(549,204)	(2,131)	188,934	
	Classification of Income Taxes														
7	Demand		12,254,546	6,003,584	1,262,745	471,903	1,963,848	20,741	32,398	955,979	7,835	1,334,518	1,101	199,894	
8	Energy		198,245	82,127	17,365	6,258	36,940	105	2,744	15,261	53	35,257	23	2,111	
9	Customer		3,571,853	2,567,374	483,964	83,945	103,168	156	17	33,274	958	3,382	388	295,228	
	REVENUE CREDITS														
10	Forfeited Discounts	20	886,666	411,711	189,451	63,417	129,507	0	0	67,549	385	23,171	0	1,475	
11	Reconnection Charges	10	32,000	27,225	4,085	690	0	0	0	0	0	0	0	0	
12	Rental Income/Misc serv	47	239,468	151,135	27,326	7,919	24,340	0	12	12,961	121	12,303	10	3,341	
13	Misc. Revenue - Kepco	2	1,221,102	590,647	124,797	46,280	193,545	2,686	11,356	90,972	733	140,060	122	19,904	
14	Misc. Revenue - Other	21	131,666	13,819	25,527	10,303	37,565	0	0	18,242	173	24,224	0	1,814	
15	Off Sys.Revenue	2	6,640,134	3,211,833	678,622	251,661	1,052,461	14,608	61,753	494,690	3,984	761,623	664	108,234	
16	SubTotal Rev Credits		9,151,036	4,406,370	1,049,808	380,270	1,437,418	17,294	73,121	684,414	5,396	961,381	796	134,768	
17	Other Rev. Muni tax	31	0	0	0	0	0	0	0	0	0	0	0	0	
18		32	0	0	0	0	0	0	0	0	0	0	0	0	
19	Total Revenue Credits		9,151,036	4,406,370	1,049,808	380,270	1,437,418	17,294	73,121	684,414	5,396	961,381	796	134,768	
20			0	0	0	0	0	0	0	0	0	0	0	0	
21			0	0	0	0	0	0	0	0	0	0	0	0	
22			0	0	0	0	0	0	0	0	0	0	0	0	
23			0	0	0	0	0	0	0	0	0	0	0	0	
24			0	0	0	0	0	0	0	0	0	0	0	0	
25	Lighting Excess Facilities Rev	29	545,479	0	0	0	0	0	0	0	0	0	0	545,479	
26	Other Excess Facilities Rev	50	798,249	589,154	96,829	23,755	50,765	0	0	29,055	314	0	127	8,251	
27	Total Revenue to Allocate		1,343,728	589,154	96,829	23,755	50,765	0	0	29,055	314	0	127	553,730	
	COST OF SERVICE CALCULATION														
28	Oper Expense Excl IT & Rev Tax		186,871,981	91,491,214	18,780,273	6,281,250	29,150,813	201,090	1,215,337	13,047,536	92,132	23,002,851	18,277	3,591,210	10 6
29	Return Allowable		48,797,354	26,349,891	5,371,855	1,711,695	6,406,845	63,954	107,062	3,058,893	26,938	4,181,464	4,606	1,514,151	6 10
30	Fit Allowable		(108,119)	(58,383)	(11,902)	(3,793)	(14,195)	(142)	(237)	(6,778)	(60)	(9,265)	(10)	(3,355)	10 10
31	Sit Allowable		213,797	115,448	23,536	7,500	28,071	280	469	13,402	118	18,320	20	6,634	10 11
32	Revenue Credits		9,151,036	4,406,370	1,049,808	380,270	1,437,418	17,294	73,121	684,414	5,396	961,381	796	134,768	10 27
33	COST OF SERVICE		226,623,977	113,491,800	23,113,954	7,616,382	34,134,116	247,888	1,249,510	15,428,639	113,732	26,231,989	22,097	4,973,872	(1..4)-5
	RATE OF RETURN														
	Capitalization Amounts														
34	Long Term Debt		297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	297,695,000	
35	Preferred Stock		0	0	0	0	0	0	0	0	0	0	0	0	
36	Common Stock		269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	269,328,999	
37	Total		567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	567,023,999	
	Embedded Cost Of Capital														
38	Long Term Debt		0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	
39	Preferred Stock		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
40	Common Stock		0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	0.1150	
	Weighted Cost Of Capital														
41	Long Term Debt		0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	0.0415	
42	Preferred Stock		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
43	Common Stock		0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	0.0546	
44	Total		0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	0.0961	
45	Federal Income Tax Rate		0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	
46	State Income Tax Rate		0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	
47	FIT deductible from SIT		0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	

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Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

From:
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		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	
	ALLOCATION FACTORS														
1	Demand Values -Prod		1.0000	0.4877	0.1030	0.0382	0.1601	0.0022	0.0004	0.0752	0.0006	0.1161	0.0001	0.0164	
2	Allocator	1	1.0000000	0.4877000	0.1030000	0.0382000	0.1601000	0.0022000	0.0004000	0.0752000	0.0006000	0.1161000	0.0001000	0.0164000	
3	Demand Values -Trans		1.0000	0.4837	0.1022	0.0379	0.1585	0.0022	0.0093	0.0745	0.0006	0.1147	0.0001	0.0163	
4	Allocator	2	1.0000000	0.4837000	0.1022000	0.0379000	0.1585000	0.0022000	0.0093000	0.0745000	0.0006000	0.1147000	0.0001000	0.0163000	
5	Zero at issue		1	0	0	0	0	0	0	0	0	0	0	0	
6	Allocator	3	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	
7	NCD@ Primary Station		931450	458946	96907	36265	141804	2326	8062	75100	652	95238	56	16094	
8	Allocator	4	1.0000000	0.4927221	0.1040389	0.0389339	0.1522401	0.0024972	0.0086553	0.0806270	0.0007000	0.1022470	0.0000601	0.0172784	
9	NCD@ Primary Station X Prax		921062	458946	96907	36265	141804	0	0	75100	652	95238	56	16094	
10	Allocator	4a	1.0000000	0.4982792	0.1052122	0.0393730	0.1539571	0.0000000	0.0000000	0.0815363	0.0007079	0.1034002	0.0000608	0.0174733	
11	NCD@ Primary Lines		913980	455346	96147	36006	140706	0	0	74590	647	94501	55	15982	
12	Allocator	5	1.0000000	0.4982013	0.1051960	0.0393947	0.1539487	0.0000000	0.0000000	0.0816101	0.0007079	0.1033950	0.0000602	0.0174862	
13	NCD@ Secondary		809969	449381	94887	35579	138885	0	0	74745	639	0	55	15798	
14	Allocator	6	1.0000000	0.5548126	0.1171489	0.0439264	0.1714695	0.0000000	0.0000000	0.0922813	0.0007889	0.0000000	0.0000679	0.0195045	
15	All Customers		130503	108566	16290	2751	1205	3	1	662	19	36	1	969	
16	Allocator	7	1.0000000	0.8319042	0.1248247	0.0210800	0.0092335	0.0000230	0.0000077	0.0050727	0.0001456	0.0002759	0.0000077	0.0074251	
17	Primary Customers		130499	108566	16290	2751	1205	0	0	662	19	36	1	969	
18	Allocator	8	1.0000000	0.8319297	0.1248285	0.0210806	0.0092338	0.0000000	0.0000000	0.0050728	0.0001456	0.0002759	0.0000077	0.0074253	
19	Secondary Customers		130463	108566	16290	2751	1205	0	0	662	19	0	1	969	
20	Spec. Assn.	9	1.0000000	0.8321593	0.1248630	0.0210864	0.0092363	0.0000000	0.0000000	0.0050742	0.0001456	0.0000000	0.0000077	0.0074274	
21	Res.& Comm. Customers		127607	108566	16290	2751	0	0	0	0	0	0	0	0	
22	Spec. Assn.	10	1.0000000	0.8507840	0.1276576	0.0215584	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	
23	Industrial Customers		1926	0	0	0	1205	3	1	662	19	36	0	0	
24	Allocator	11	1.0000000	0.0000000	0.0000000	0.0000000	0.6256490	0.0015576	0.0005192	0.3437175	0.0098650	0.0186916	0.0000000	0.0000000	
25	Comm. & Ind. Customers		20967	0	16290	2751	1205	3	1	662	19	36	0	0	
26	Spec. Assn.	12	1.0000000	0.0000000	0.7769352	0.1312062	0.0574713	0.0001431	0.0000477	0.0315734	0.0009062	0.0017170	0.0000000	0.0000000	
27	Customer Service Drop		150832	108566	23741	4009	12582	0	0	1848	53	0	31	0	
28	Spec. Assn.	13	1.0000000	0.7197818	0.1574028	0.0265817	0.0834201	0.0000000	0.0000000	0.0122538	0.0003517	0.0000000	0.0002082	0.0000000	
29	Weighted Meter Investment		12890041	7799250	2465013	530468	1274181	8051	733	629521	18377	164448	0	0	
30	Allocator	14	1.0000000	0.6050601	0.1912339	0.0411533	0.0988500	0.0006246	0.0000569	0.0488378	0.0014257	0.0127578	0.0000000	0.0000000	
31	Meter Read Expense		138940	108566	21635	3654	2994	30	10	1645	47	359	0	0	
32	Allocator	15	1.0000000	0.7813891	0.1557161	0.0262968	0.0215465	0.0002156	0.0000719	0.0118372	0.0003397	0.0025870	0.0000000	0.0000000	
33	Uncollectibles		777665	652156	56305	9287	54548	0	0	4141	24	0	0	1204	
34	Allocator	16	1.0000000	0.8386079	0.0724026	0.0119422	0.0701433	0.0000000	0.0000000	0.0053249	0.0000309	0.0000000	0.0000000	0.0015482	
35	Customer Asst. Expense		6,329	5,265	790	133	58	0	0	32	1	2	0	47	
36	Allocator	17	1.0000000	0.8319042	0.1248247	0.0210800	0.0092335	0.0000230	0.0000077	0.0050727	0.0001456	0.0002759	0.0000077	0.0074251	
37	Energy (KWH @ Gen.)		4049860272	1677744098	354740918	127841278	754408522	2138632	56757669	311709412	1084220	719814000	477668	43143855	
38	Allocator	18	1.0000000	0.4142721	0.0875934	0.0315668	0.1862801	0.0005281	0.0140147	0.0769679	0.0002677	0.1777380	0.0001179	0.0106532	
39	Customer Deposits		2808284	1789292	490050	221820	169117	0	0	137010	700	0	0	295	
40	Allocator	19	1.0000000	0.6371478	0.1745016	0.0789877	0.0602208	0.0000000	0.0000000	0.0487878	0.0002493	0.0000000	0.0000000	0.0001050	
41	Forfeited Discounts		683559	317401	146054	48890	99841	0	0	52076	297	17863	0	1137	
42	Allocator	20	1.0000000	0.4643359	0.2136670	0.0715227	0.1460605	0.0000000	0.0000000	0.0761836	0.0004345	0.0261323	0.0000000	0.0016634	
43	Miscellaneous Revenue		4463272	468434	865340	349253	1273383	0	0	618361	5862	821149	0	61490	
44	Allocator	21	1.0000000	0.1049530	0.1938802	0.0782504	0.2853026	0.0000000	0.0000000	0.1385443	0.0013134	0.1839792	0.0000000	0.0137769	
45	Spec Assg -Trans. Plant-		6988	0	0	0	0	0	6988	0	0	0	0	0	
46	Allocator	22	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSO[redacted]ST OF SERVICE
Twelve Months [redacted]December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 12 of 14
1	Spec Assg -362-		1	0	0	0	0	0	1	0	0	0	0	0	
2	Allocator	23	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	
3															
4	Allocator	24													
5	Spec Assg -Trans Depr-		6975	0	0	0	0	0	6975	0	0	0	0	0	
6	Allocator	25	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	
7															
8	Allocator	26													
9															
10	Allocator	27													
11	Spec Assg -371-		1.000	0.000	0.245	0.041	0.018	0.000	0.000	0.010	0.000	0.001	0.000	0.685	
12	Allocator	28	1.0000000	0.0000000	0.2447346	0.0413299	0.0181034	0.0000451	0.0000150	0.0099456	0.0002854	0.0005408	0.0000000	0.6850000	
13	Spec Assg -373-		1	0	0	0	0	0	0	0	0	0	0	1	
14	Allocator	29	1.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	1.0000000	
15	Spec Assg -Rate Revenue-		200062752	92743347	21873672	6566945	34523014	92681	1525000	14881573	106913	24054659	24093	3670855	
16	Allocator	30	1.0000000	0.4635713	0.1093341	0.0328244	0.1725609	0.0004633	0.0076226	0.0743845	0.0005344	0.1202356	0.0001204	0.0183485	
17	Spec Assg-Interruptible Revenue		184074	0	0	0	140997	0	0	0	0	43077	0	0	
18	Allocator	30a	1.0000000	0.0000000	0.0000000	0.0000000	0.7659800	0.0000000	0.0000000	0.0000000	0.0000000	0.2340200	0.0000000	0.0000000	
19	Spec Assg -City Tax-		3956679	2509395	476529	147921	511037	1260	0	215633	1023	66528	0	27353	
20	Allocator	31	1.0000000	0.6342175	0.1204366	0.0373851	0.1291581	0.0003184	0.0000000	0.0544985	0.0002586	0.0168141	0.0000000	0.0069131	
21	Spec Assg -Excess Facility-		1343728	313	1978	72	221877	3146	360	93844	0	545479	0	476659	
22	Allocator	32	1.0000000	0.0002329	0.0014720	0.0000536	0.1651205	0.0023412	0.0002679	0.0698385	0.0000000	0.4059445	0.0000000	0.3547288	
23	Transformer Demand Alloc.		990125	584295	112444	45157	146312	0	0	88984	842	0	54	12038	
24	Allocator	33	1.0000000	0.5901226	0.1135649	0.0456074	0.1477712	0.0000000	0.0000000	0.0898715	0.0008499	0.0000000	0.0000545	0.0121581	
25	Spec Assg -Present Revenues-		200246826	92743347	21873672	6566945	34664011	92681	1525000	14881573	106913	24097736	24093	3670855	
26	Allocator	34	1.0000000	0.4631452	0.1092336	0.0327943	0.1731064	0.0004628	0.0076156	0.0743161	0.0005339	0.1203402	0.0001203	0.0183317	
27	Spec Assg -Proposed Rev-		241383290	111795501	26367154	7915985	41784997	111720	1838279	17938677	128876	29048105	29042	4424954	
28	Allocator	35	1.0000000	0.4631452	0.1092336	0.0327943	0.1731064	0.0004628	0.0076156	0.0743162	0.0005339	0.1203402	0.0001203	0.0183317	
29	Sec Cust /Transformers		130508	108566	16290	2751	1205	0	0	662	19	0	46	969	
30	Allocator	36	1.0000000	0.8318724	0.1248199	0.0210792	0.0092332	0.0000000	0.0000000	0.0050725	0.0001456	0.0000000	0.0003525	0.0074248	

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 13 of 14
	WAGES AND SALARIES														
1	Production Energy		3,240,172	1,342,313	283,818	102,282	603,580	1,711	45,410	249,389	867	575,902	382	34,518	18
2	Production Demand		3,270,119	1,555,065	328,488	121,343	536,893	6,314	10,931	246,651	1,787	411,736	336	50,576	66
3	Transmission		1,145,785	554,182	117,092	43,423	181,596	2,521	10,726	85,356	687	131,414	115	18,675	67
4	Distribution		6,597,772	4,084,694	803,705	208,788	589,518	574	6,361	296,795	3,228	265,206	557	338,346	40
5	Total PTD Labor		14,253,848	7,536,254	1,533,103	475,836	1,911,587	11,120	73,428	878,191	6,569	1,384,258	1,390	442,115	
6	Allocator PTD Labor		1.0000000	0.5287172	0.1075571	0.0333830	0.1341102	0.0007801	0.0051515	0.0616108	0.0004609	0.0971147	0.0000975	0.0310172	
7	Customer Accounting		2,729,127	2,272,175	341,844	57,620	42,110	128	43	10,350	250	1,536	3	3,071	70
8	Cust Serv & Inform		583,458	487,476	73,144	12,352	4,363	11	4	2,396	69	130	4	3,508	69
9	Sales		474,268	(113,678)	(17,057)	(2,880)	380,322	947	315	208,941	5,997	11,362	0	0	71
10	Total PTDCS Labor		18,040,701	10,182,227	1,931,034	542,928	2,338,382	12,206	73,790	1,099,878	12,885	1,397,286	1,397	448,694	
11	Allocator PTDCS Labor		1.0000000	0.5644031	0.1070376	0.0300946	0.1296170	0.0006766	0.0040902	0.0609665	0.0007142	0.0774519	0.0000774	0.0248712	
12	Administrative & General		4,404,058	2,485,664	471,400	132,538	570,841	2,980	18,013	268,500	3,145	341,103	341	109,534	
13	Total Wages & Salaries		22,444,759	12,667,891	2,402,434	675,466	2,909,223	15,186	91,803	1,368,378	16,030	1,738,389	1,738	558,228	
14	Allocator Labor	37	1.0000000	0.5644031	0.1070376	0.0300946	0.1296170	0.0006766	0.0040902	0.0609665	0.0007142	0.0774519	0.0000774	0.0248712	
	INTERNAL ALLOCATORS														
15	Gross Prod PIS Plant	38	1.00000	0.48770	0.10300	0.03820	0.16010	0.00220	0.00040	0.07520	0.00060	0.11610	0.00010	0.01640	2 2
16	Gross Trans PIS Plant	39	1.00000	0.48367	0.10219	0.03790	0.15849	0.00220	0.00936	0.07450	0.00060	0.11469	0.00010	0.01630	2 5
17	Gross Dist PIS Plant	40	1.00000	0.61910	0.12181	0.03165	0.08935	0.00009	0.00096	0.04498	0.00049	0.04020	0.00008	0.05128	2 44
18	Gross Dist Plant - land	41	1.00000	0.61960	0.12189	0.03162	0.08910	0.00008	0.00093	0.04484	0.00049	0.03995	0.00008	0.05142	3 1
19	PIS Accts 364,365,368	42	1.00000	0.67735	0.11664	0.03142	0.08303	0.00000	0.00000	0.04560	0.00045	0.03338	0.00011	0.01201	3 2
20	PIS Accts 366,367	43	1.00000	0.75393	0.12077	0.02583	0.04562	0.00000	0.00000	0.02440	0.00029	0.01914	0.00002	0.01000	3 3
21	PIS Acct 370	44	1.00000	0.60506	0.19123	0.04115	0.09885	0.00062	0.00006	0.04884	0.00143	0.01276	0.00000	0.00000	2 40
22	PIS Accts 364,365	45	1.00000	0.63855	0.11428	0.03243	0.09714	0.00000	0.00008	0.05170	0.00049	0.05166	0.00004	0.01361	3 4
23	PIS Acct 368	46	1.00000	0.74808	0.12092	0.02958	0.05725	0.00000	0.00000	0.03446	0.00039	0.00000	0.00025	0.00907	2 37
24	PIS Acct 364	47	1.00000	0.63113	0.11411	0.03307	0.10164	0.00000	0.00005	0.05413	0.00051	0.05138	0.00004	0.01395	2 17
25	Gross G&I Plant	48	1.00000	0.54406	0.11104	0.03532	0.12922	0.00128	0.00192	0.06201	0.00055	0.08301	0.00009	0.03150	3 12
26	Total Gross Plant	49	1.00000	0.54406	0.11104	0.03532	0.12922	0.00128	0.00192	0.06201	0.00055	0.08301	0.00009	0.03150	3 13
27	Sec PIS 364,365,368	50	1.00000	0.73806	0.12130	0.02976	0.06360	0.00000	0.00000	0.03640	0.00039	0.00000	0.00016	0.01034	2 6
28	Total Gross T&D Plant	51	1.00000	0.58556	0.11695	0.03319	0.10648	0.00061	0.00304	0.05229	0.00052	0.05865	0.00009	0.04262	3 5
29	Total Gross PTD Plant	52	1.00000	0.54406	0.11104	0.03532	0.12922	0.00128	0.00192	0.06201	0.00055	0.08301	0.00009	0.03150	3 6
30	PTD - land	53	1.00000	0.54469	0.11113	0.03528	0.12888	0.00127	0.00193	0.06185	0.00055	0.08266	0.00009	0.03167	3 8
31	Net Prod Plant	54	1.00000	0.48770	0.10300	0.03820	0.16010	0.00220	0.00040	0.07520	0.00060	0.11610	0.00010	0.01640	4 35
32	Net Trans Plant	55	1.00000	0.48370	0.10220	0.03790	0.15850	0.00220	0.00930	0.07450	0.00060	0.11470	0.00010	0.01630	4 38
33	Net Dist Plant	56	1.00000	0.61876	0.12176	0.03166	0.08946	0.00009	0.00112	0.04505	0.00049	0.04032	0.00008	0.05121	4 41
34	Net G & I Plant	57	1.00000	0.54119	0.11062	0.03546	0.13073	0.00133	0.00199	0.06266	0.00055	0.08463	0.00009	0.03074	4 45
35	Tot Net Plant	58	1.00000	0.54183	0.11071	0.03542	0.13037	0.00132	0.00202	0.06251	0.00055	0.08425	0.00009	0.03092	4 46
36	Net Orig Cost Rate Base	59	1.00000	0.54082	0.11025	0.03516	0.13102	0.00133	0.00204	0.06268	0.00056	0.08498	0.00009	0.03106	5 8
37	Prepayments	60	1.00000	0.53676	0.11000	0.03570	0.13329	0.00140	0.00155	0.06375	0.00056	0.08736	0.00009	0.02952	5 28
38	Working capital	61	1.00000	0.50395	0.10283	0.03169	0.14321	0.00033	0.00877	0.06284	0.00036	0.11634	0.00010	0.02956	5 29
39	Rate Base	62	1.00000	0.53999	0.11008	0.03508	0.13129	0.00131	0.00219	0.06269	0.00055	0.08569	0.00009	0.03103	6 8
40	Energy Exp Production	63	1.00000	0.41427	0.08759	0.03157	0.18628	0.00053	0.01401	0.07697	0.00027	0.17774	0.00012	0.01065	6 20
41	Demand Exp Production	64	1.00000	0.48742	0.10294	0.03818	0.15999	0.00220	0.00103	0.07515	0.00060	0.11600	0.00010	0.01639	6 24
42	Prod. O & M Expenses	65	1.00000	0.44156	0.09332	0.03403	0.17647	0.00115	0.00917	0.07629	0.00039	0.15470	0.00011	0.01279	6 25
43	Prod Exp minus Fuel & PP	66	1.00000	0.47554	0.10045	0.03711	0.16418	0.00193	0.00334	0.07543	0.00055	0.12591	0.00010	0.01547	6 26
44	Trans O & M Expenses	67	1.00000	0.48367	0.10219	0.03790	0.15849	0.00220	0.00936	0.07450	0.00060	0.11469	0.00010	0.01630	6 30

Run Time: 10:43 AM
Run Date: 05-Apr-01
DOCKET NO.

THE EMPIRE DISTRICT ELECTRIC COMPANY
MISSOURI COST OF SERVICE
Twelve Months Ended December 31, 2000

Section N
Schedule 1

		Alloc	MISSOURI RETAIL	Residential	Comm Service	Comm Small Heat	General Power	Power Furnace	Praxair	Tot/Elec Building	Feed Mill	Large Power	Misc Services	Lighting	From: Page Line Page 14 of 14
1	Dist O & M Expenses	68	1.00000	0.60332	0.12855	0.03318	0.09085	0.00012	0.00004	0.04789	0.00065	0.03977	0.00005	0.05559	7 22
2	Cust Ser & Inform Exp	69	1.00000	0.83549	0.12536	0.02117	0.00748	0.00002	0.00001	0.00411	0.00012	0.00022	0.00001	0.00601	8 15
3	Cust Accounting Exp	70	1.00000	0.83256	0.12526	0.02111	0.01543	0.00005	0.00002	0.00379	0.00009	0.00056	0.00000	0.00113	8 5
4	Sales Expenses	71	1.00000	-0.23969	-0.03597	-0.00607	0.80191	0.00200	0.00066	0.44055	0.01264	0.02396	0.00000	0.00000	8 18
5	Total Customer Expense	72	1.00000	0.71856	0.11155	0.02100	0.09404	0.00023	0.00008	0.04887	0.00134	0.00281	0.00000	0.00152	8 19
6	A & G Expenses	73	1.00000	0.57729	0.11071	0.03200	0.12225	0.00094	0.00216	0.05889	0.00069	0.06899	0.00008	0.02601	9 6
7	Tot O & M Expenses	74	1.00000	0.47490	0.09786	0.03333	0.16298	0.00105	0.00767	0.07193	0.00048	0.13357	0.00010	0.01614	9 18
8	Prod Depreciation Exp	75	1.00000	0.48770	0.10300	0.03820	0.16010	0.00220	0.00040	0.07520	0.00060	0.11610	0.00010	0.01640	9 22
9	Trans Depreciation Exp	76	1.00000	0.48367	0.10219	0.03790	0.15849	0.00220	0.00936	0.07450	0.00060	0.11469	0.00010	0.01630	9 23
10	Dist Depreciation Exp	77	1.00000	0.61960	0.12189	0.03162	0.08910	0.00008	0.00093	0.04484	0.00049	0.03995	0.00008	0.05142	9 24
11	General Depreciation Exp	78	1.00000	0.56440	0.10704	0.03009	0.12962	0.00068	0.00409	0.06097	0.00071	0.07745	0.00008	0.02487	9 25
12	Total Depreciation Exp	79	1.00000	0.54668	0.11100	0.03495	0.12866	0.00123	0.00168	0.06168	0.00056	0.08205	0.00009	0.03142	9 26
13	Re & Property Tax	80	1.00000	0.55099	0.11203	0.03497	0.12545	0.00117	0.00203	0.06040	0.00055	0.07898	0.00009	0.03335	9 34
14	Total Expense Allocator	81	1.00000	0.48959	0.10050	0.03361	0.15599	0.00108	0.00650	0.06982	0.00049	0.12309	0.00010	0.01922	10 6
15	Payroll Tax Allocator	82	1.00000	0.56440	0.10704	0.03009	0.12962	0.00068	0.00409	0.06097	0.00071	0.07745	0.00008	0.02487	10 1
16	Cost of Service Ratios	83	1.00000	0.50079	0.10199	0.03361	0.15062	0.00109	0.00551	0.06808	0.00050	0.11575	0.00010	0.02195	11 6
	CLASSIFICATION ALLOCATORS														
17	Production Plant	D	337,632,135	164,663,192	34,776,110	12,897,548	54,054,905	742,791	135,053	25,389,936	202,579	39,199,091	33,763	5,537,167	
18	Transmission Plant	D	113,561,670	54,926,400	11,605,289	4,303,722	17,998,417	249,820	1,063,047	8,459,824	68,133	13,024,722	11,355	1,850,941	
19	Distribution Plant	D	166,560,355	85,339,370	17,824,752	6,728,872	25,760,155	22,502	331,792	13,877,279	121,462	13,700,068	10,062	2,844,041	
20		C	178,369,518	128,207,428	24,192,735	4,186,497	5,059,674	7,525	785	1,639,066	47,316	164,830	19,059	14,844,603	
21	General Plant	D	35,896,854	17,719,006	3,730,932	1,390,547	5,683,807	58,988	88,900	2,773,354	22,789	3,830,747	3,207	594,576	
22		C	10,364,809	7,449,959	1,405,807	243,272	294,011	437	46	95,244	2,749	9,578	1,107	862,600	
23	Production Expenses	D	28,453,737	13,876,888	2,930,735	1,086,933	4,555,444	62,598	11,381	2,139,721	17,072	3,303,479	2,845	466,641	
24	less fuel & pp	E	6,072,040	2,515,477	531,871	191,675	1,131,101	3,206	85,098	467,352	1,626	1,079,232	716	64,686	
25	Dist Operation Exp Sub	D	2,362,249	1,549,727	272,048	75,687	213,576	0	0	115,767	1,123	104,093	212	30,016	
26		C	1,755,733	912,897	330,171	69,123	152,222	950	89	75,377	2,200	19,340	0	193,364	
27	Dist Maintenance Exp Sub	D	4,430,153	2,825,198	505,547	143,658	429,974	0	271	229,070	2,168	234,005	197	60,065	
28		C	354,986	86,306	27,278	5,870	14,100	89	8	6,966	203	1,820	0	212,346	
29	Labor	D	11,018,274	5,491,520	1,128,918	406,279	1,753,991	12,223	46,007	857,035	7,604	1,145,455	897	168,345	
30		E	3,240,172	1,342,313	283,818	102,282	603,580	1,711	45,410	249,389	867	575,902	382	34,518	
31		C	8,186,321	5,834,058	989,698	166,906	551,652	1,252	386	261,954	7,560	17,032	459	355,365	
32	Cost of Service Classified	D	138,678,120	69,161,099	14,399,119	5,277,882	21,644,433	241,572	280,369	10,453,112	85,857	14,875,627	12,655	2,246,394	
33		E	67,537,373	27,363,507	5,667,591	2,040,549	12,847,606	23,207	1,003,208	5,218,016	15,136	12,668,077	8,249	682,227	
34		C	36,511,525	25,652,988	4,818,642	863,383	1,761,627	4,379	933	769,242	21,636	73,757	2,713	2,542,225	
35		total	242,727,018	122,177,593	24,885,353	8,181,813	36,253,666	269,157	1,284,510	16,440,371	122,630	27,617,462	23,618	5,470,846	
36	Net Cost of Service Classified	D	137,882,093	68,752,339	14,329,808	5,257,939	21,597,048	241,572	280,369	10,425,461	85,579	14,875,627	12,563	2,023,787	
37		E	67,526,876	27,357,915	5,666,638	2,040,284	12,846,714	23,207	1,003,208	5,217,575	15,134	12,668,077	8,247	679,875	
38		C	35,974,320	25,478,186	4,792,077	859,835	1,759,138	4,379	933	768,280	21,602	73,757	2,681	2,213,453	
39		total	241,383,289	121,588,439	24,788,524	8,158,058	36,202,901	269,157	1,284,510	16,411,316	122,316	27,617,462	23,491	4,917,116	
	KWH @ Sales adj		3,599,440,768	1,457,518,176	295,953,023	111,819,208	717,446,107	2,045,308	55,104,533	288,575,971	1,174,486	636,465,064	445,438	32,893,454	

Schedule 5, Page 14 of 14

THE EMPIRE DISTRICT ELECTRIC COMPANY

Summary of Corrected Cost of Service Study
Two Coincident Peak Method
Twelve Months Ended December 31, 2000
(Dollars in Thousands)

Line	Description	Missouri Retail (1)	Residential (2)	Com-mercial Service (3)	Comm Small Heat (4)	General Power (5)	Power Furnace (6)	Praxair (7)	Total Electric Building (8)	Feed Mill (9)	Large Power (10)	Misc Services (11)	Lighting (12)
1	Rate Base	$ 507,777	$ 279,166	$ 54,070	$ 16,248	$ 69,440	$ 25	$ 1,164	$ 32,744	$ 173	$ 43,732	$ 40	$ 10,975
	Revenues:												
2	Present Rate Revenues	200,247	92,743	21,874	6,567	34,664	93	1,525	14,882	107	24,098	24	3,671
3	Other Revenues	10,311	5,031	1,079	356	1,531	0	79	723	3	947	1	560
4	Total Revenues	210,558	97,775	22,952	6,923	36,195	93	1,604	15,605	110	25,045	25	4,231
	Expenses:												
5	Operation & Maintenance	186,872	92,703	18,338	5,903	29,823	46	1,222	13,270	66	23,054	16	2,432
6	Net Income Taxes	106	58	11	3	14	0	0	7	0	9	0	2
7	Total Expenses	186,978	92,761	18,350	5,906	29,837	46	1,222	13,276	66	23,063	16	2,434
8	Operating Income	$ 23,580	$ 5,014	$ 4,603	$ 1,017	$ 6,358	$ 47	$ 382	$ 2,329	$ 44	$ 1,982	$ 8	$ 1,797
9	Rate of Return	4.64%	1.80%	8.51%	6.26%	9.16%	188.56%	32.81%	7.11%	25.14%	4.53%	21.37%	16.37%
10	Index	100	39	183	135	197	4,061	707	153	541	98	460	353
11	Subsidies *	$ -	$ (12,904)	$ 3,396	$ 426	$ 5,086	$ 74	$ 532	$ 1,311	$ 58	$ (79)	$ 11	$ 2,090
	With the Across the Board Increase												
12	Operating Income	$ 48,797	$ 19,734	$ 6,555	$ 1,743	$ 9,525	$ 41	$ 449	$ 3,894	$ 43	$ 5,040	$ 9	$ 1,765
13	Rate of Return	9.61%	7.07%	12.12%	10.73%	13.72%	165.12%	38.55%	11.89%	25.07%	11.52%	22.61%	16.08%
14	Index	100	74	126	112	143	1,718	401	124	261	120	235	167
15	Subsidies *	$ -	$ (11,514)	$ 2,205	$ 295	$ 4,629	$ 63	$ 547	$ 1,212	$ 43	$ 1,359	$ 8	$ 1,152

* A positive subsidy number indicates that a class is paying more that its cost-to-serve.
A negative subsidy indicates that a class is not paying its cost-to-serve.

Schedule 6

THE EMPIRE DISTRICT ELECTRIC COMPANY

Recommended Revenue Allocation
(Dollars in Thousands)

Line	Rate Classes		$40 Million Increase Amount (1)	$40 Million Increase Percent (2)	$15 Million Increase Amount (3)	$15 Million Increase Percent (4)
1	Residential	RG	$ 23,200	25%	$ 10,200	11.0%
2	Commercial	CB	3,848	18%	987	4.5%
3	Commercial	SH	1,580	24%	725	11.0%
4	General Power	GP	3,400	10%	870	2.5%
5	El. Furnace	PF	23	25%	10	11.0%
6	Praxair		153	10%	40	2.5%
7	Total El Build	TEB	2,617	18%	671	4.5%
8	Feed Mill	PFM	19	18%	5	4.5%
9	Large Power	LP	4,238	18%	1,087	4.5%
10	Misc Lights	MS	2	10%	1	2.5%
11	Other Lights		920	25%	404	11.0%
12	Total Retail		$ 40,000	20%	$ 15,000	7.5%

Schedule 7