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Witness: Janice Pyatte
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Case No.: ER-2001-299
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

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Missouri Public
Service Commission

REBUTTAL TESTIMONY

OF

JANICE PYATTE

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2001-299

Jefferson City, Missouri
May, 2001

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OF
JANICE PYATTE
THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2001-299

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CLASS COST OF SERVICE

Q. Please describe which witnesses are sponsoring the class cost-of-service studies that are being compared.

A. Staff's class cost-of-service study is described in the testimony of Staff witnesses Anne Ross, James C. Watkins and myself. The summary of the Staff's class cost-of-service study was presented as Schedule 1 in the April 10, 2001 direct testimony of Ms. Ross. Mr. Watkins is responsible for the methodology used in Staff's class cost-of-service study and for the development of Staff's cost allocation factors. Ms. Ross is responsible for grouping costs by functional category and applying the cost allocation factors to these costs. I contributed inputs to both Mr. Watkins and Ms. Ross.

The Company's class cost-of-service study is sponsored by EDE witness David W. Gibson. The original cost-of-service study is described on pages 22-31 of Mr. Gibson's direct testimony, filed November 3, 2000. The study itself is denoted as Section N of that same testimony. A revised version of the Company's class cost-of-service study was subsequently provided to the parties.

OPC's class cost-of-service study is sponsored by OPC witness Hong Hu. The description of her methodology is contained in Ms. Hu's direct testimony filed April 10, 2001. A revised version of OPC's class cost-of-service study and rate design proposal was subsequently provided to the parties.

Praxair's class cost-of-service study is sponsored by Praxair witness Maurice Brubaker. Mr. Brubaker's direct testimony, filed April 10, 2001, includes the results of a study that he denotes as the "corrected" Company study; however EDE has not adopted either Mr. Brubaker's "corrections" or his results. Praxair's class cost-of-service study is

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1 shown in Schedule 5 of Mr. Brubaker's direct testimony.

2 Q. How do the four class cost-of-service studies compare in terms of basic
3 inputs?

4 A. Two of the class cost-of-service studies presented in this case (Company's and
5 Praxair's) are based upon accounting costs that include the Company's \$41 million dollar
6 requested overall increase. The two other class cost-of-service studies (Staff's and OPC's)
7 are based upon Staff accounting costs that show a \$15 million dollar overall increase.

8 The sales and revenues used in the Company's study represent actual (historical) data
9 for January-July 2000 and forecasted (projected) data for August-December 2000. The \$41
10 million requested increase is reflected in the costs. The monthly class peak demands used for
11 the demand allocation factors are demands from October 1998 – September 1999. Praxair's
12 study uses the same input data as the Company's study.

13 The Staff's class cost-of-service study uses the sales, customer numbers and revenues
14 developed by Staff, based on historical calendar year 2000, with an "allowance for known and
15 measurable changes through the true-up ending June 30, 2001."

16 OPC's updated class cost-of-service study uses Staff accounting costs, Staff revenues
17 and the Company's monthly class peak demands.

18 Q. How do the four class cost-of-service studies compare in terms of the
19 customer classes being studied?

20 A. The class cost-of-service studies sponsored by the Company, OPC, and Praxair
21 calculate cost responsibility separately for most of EDE's existing rate schedules. Staff's
22 study calculated cost responsibility by cost-of-service classes that are generally composed of
23 multiple rate schedules. All studies calculated cost responsibility for Praxair, also denoted as

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- 1 Special Contract. A comparison of the various class and rate schedule designations is listed
2 below.

Class/Rate Schedule	Empire	Staff	OPC	Praxair
Residential	X	X	X	X
Commercial (CB)	X		X	X
Space Heat (SH)	X		X	X
Feed Mill	X		X	X
MS (traffic signals)	X		X	X
Small General Service		X		
General Power	X		X	X
Total Electric Buildings	X		X	X
Large General Service		X		
Large Power	X	X	X	X
Special Contract (Praxair)	X	X	X	X
Lighting	X		X	X
Power Furnace	X		X	X
Total Non-Studied		X		

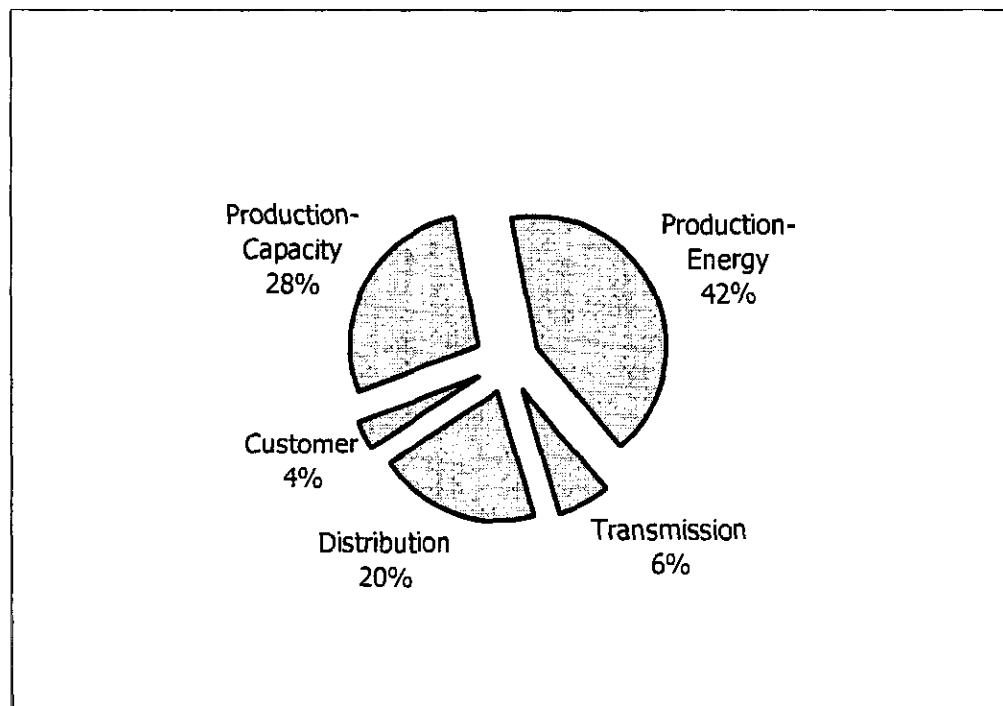
- 3 An additional difference among the class cost-of-service studies is that Staff did
4 not study the three lighting rate schedules or the power furnace rate schedule.
5 Consequently, Staff's class cost-of-service study results do not include a measure of class
6 cost responsibility for these rate schedules.

- 7 Q. How do the four class cost-of-service studies compare in terms of the
8 functionalization of costs and the allocation of the functionalized costs to customer classes?

- 9 Staff is the only party sponsoring a functionalized class cost-of-service study in this
10 case; i.e., the results are shown in terms of each class' allocated costs by function
11 (production, transmission, distribution, etc.). The class cost-of-service studies sponsored

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1 by the Company, OPC, and Praxair show the allocation of each element of rate base and
2 expense to customer classes, but not explicitly to functions. The Staff's functionalized
3 costs, in total and by customer class, are shown in numeric form on Schedule 1 attached to
4 the testimony of Staff witness Anne Ross. The distribution of total Missouri costs of The
5 Empire District Electric Company by function, as calculated by Ms. Ross, is shown below
6 in a graphical format.



7
8 The functional mix of costs for each customer class differs from the total shown above.
9 Schedule 4 of my April 10, 2001 direct testimony on the issues of Class Cost of Service
10 and Rate Design shows a similar graphical representation for each customer class.

11 Because the various parties use different approaches to perform their class cost-of-
12 service studies, it is difficult to quantify the differences between studies that are due to the
13 functionalization of costs separately from the differences due to the allocation of those
14 costs between the various customer classes. My experience with class cost-of-service

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1 studies done in rate design cases leads me to predict that the differences between the
2 methods used to functionalize costs in the various studies in this case are relatively minor
3 in terms of their dollar impact on the overall results. The large differences are typically
4 due to the choice of methods to allocate the functionalized costs to customer classes.

5 Q. Are there other differences between the four class cost-of-service studies that
6 are noteworthy?

7 A. In addition to the differences previously mentioned, there are a number of
8 other dissimilarities between the four class cost-of-service studies that should be noted.
9 These dissimilarities relate to the treatment of the investment and revenues associated with
10 special and excess distribution facilities; the treatment of the expenses and revenues
11 associated with off-system sales; the treatment of interruptible load and credits; and the
12 split of distribution costs by voltage level.

13 Q. How do the four class cost-of-service studies compare in terms of their
14 results?

15 A. As I have described, the parties sponsoring the various class cost-of-service
16 studies in this case did not use the same inputs (costs, sales, revenues or demands); did not
17 study that same customer classes; did not use the same class cost-of-service study
18 approach; and differed substantially in their treatment of a number of important items. In
19 addition, the shortened procedural schedule in this case has not allowed me to examine all
20 of these topics in detail. The most meaningful comparison that I can do in this situation is
21 to compare the results of the various class cost-of-service studies on a revenue neutral
22 basis, i.e., before any increase in overall revenues from this case. My comparison is shown
23 on Schedule 1 in graphical form.

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1 Q. Please describe the charts in Schedule 1.

2 A. My comparison of the results of the Staff, OPC, and Praxair class cost-of-
3 service studies is shown on Schedule 1 attached to this testimony. The Company's study has
4 not been included because it did not show results at any level except \$41 million. Each chart
5 shows the dollars that are required to correct any imbalances between class cost
6 responsibility, as measured by the specific class cost-of-service study, and current class
7 revenues. The four studies indicate that there are some significant imbalances between the
8 Company's costs of providing electric service to the various customer classes and the
9 revenues/rates those classes are paying for electric service. The studies differ considerably,
10 however, about which customer classes are "paying too much" (shown as bars below the zero
11 dollar line) and which customer classes are "paying too little" (shown as bars above the zero
12 dollar line). In addition, there is a disagreement between Staff and the other parties about
13 whether using a class cost-of-service study to examine the adequacy of lighting rates is even
14 an appropriate thing to do.

15 The Company's study and Praxair's study generally show that the Residential class is
16 "paying too little", while the non-residential classes are "paying too much". The major
17 exception to this generalization is the result for Special Contract (Praxair). The Company's
18 study results indicate that the costs attributed to Praxair are significantly higher than the
19 revenues being recovered from this customer. The cost-of-service study sponsored by Praxair
20 finds the opposite.

21 The Staff's study indicates that the imbalances are primarily between the Small
22 General Service class, which is paying significantly more than their cost to serve, and the
23 Large Power and Special Contract (Praxair) classes, which are paying significantly less than

1 attributed costs.

2 The results of OPC's class cost-of-service study generally mirror the results of the
3 Staff's study.

4 **RATE DESIGN**

5 Q. Please briefly describe how each party proposes to collect any additional
6 revenues that result from this case.

7 A. The Staff's proposal for collecting any additional revenues that result from
8 this case is that the first \$15,133,316 of additional revenue be divided in a manner
9 consistent with the Staff's class cost-of-service results; namely, that the percentage
10 increase to the Small General Service class be less than the system average increase; that
11 the percentage increase to the Large Power & Special Contracts classes be greater than
12 the system average increase; and that all other classes (Residential, Large General Service,
13 and Lighting & Power Furnace) receive the system average percentage increase. The
14 Staff's proposal also specifies that any additional revenue in excess of \$15,133,316 be
15 applied as an equal percentage increase to all classes and rate schedules. I am Staff's
16 witness on this issue and examples of the class revenue increases that would result at
17 various levels of overall revenue increase is presented on Schedule 3 of my direct
18 testimony.

19 The Company's proposal, presented by David W. Gibson, is that any additional
20 revenue allowed by the Commission in this case should be recovered by "...an equal
21 percentage increase for all rate groups. . ."[Gibson, direct, page 32].

22 OPC witness Hong Hu sponsors OPC's methodology for increasing or decreasing
23 class revenues. OPC's methodology is similar in concept to Staff's methodology, in that there

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1 is a reallocation of class revenues at lower levels of overall revenue increase, followed by
2 additional revenue being applied as an equal percentage increase to all classes. OPC's rate
3 design proposal is generated within its class cost-of-service study spreadsheet, so that OPC's
4 proposal changed when Ms. Hong revised her class cost-of-service study during pre-hearing.
5 Despite the fact that OPC's class cost-of-service study determined class cost responsibility by
6 individual rate schedule, Ms. Hong's rate design proposals are based upon customer classes
7 consisting of multiple rate schedules. Presumably each rate schedule contained within a
8 customer class should experience a uniform percentage increase. The classes and the rate
9 schedules that OPC has linked for rate design purposes are shown on page 14 of Ms. Hong's
10 direct testimony.

11 Praxair's proposal is contained on Schedule 7 and described on page 15 of Mr.
12 Brubaker's direct testimony

13 Q. How do the four proposals for collecting additional revenue compare?

14 A. My comparison of the four rate design proposals for collecting any additional
15 revenues that are allowed in this case is shown on Schedule 2 attached to this testimony.
16 Each page shows, in graphical form, what each party's proposed distribution of the increase in
17 overall revenues.

18 The proposals of Staff, OPC, and Praxair are each consistent with a movement
19 towards class cost responsibility, as measured by its class cost-of-service results, although no
20 party advocates moving all of the way to cost of service. The Company's rate design
21 proposal is not based on the results of its class cost-of-service study.

22 Q. Please briefly describe how each party proposes to change the individual rates
23 on each rate schedule?

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1 A. Staff proposes that rate levels should be determined by increasing all rate
2 components on each rate schedule by the percentage increase in overall class revenue. [Pyatte,
3 direct, page 9]. Company's proposal is that all rate components on each rate schedule be
4 increased by the percentage increase in Missouri retail revenue. Praxair makes no proposal on
5 this issue. OPC's proposal relates only to the level of the residential customer charge. "...
6 Public Counsel believes that the current customer charge ... can be raised by the residential
7 class revenue increase percentage. ..." [Hong, direct, page 15].

8 Q. Are there rate design objectives that need to be considered in addition to
9 balancing class revenues with class cost responsibility?

10 A. Yes. The design of electric rate schedules is an exercise in balancing many,
11 sometimes contradictory, objectives. Some objectives that need to be considered in crafting a
12 rate design proposal for this case are:

- 13 • moving class revenues towards class cost responsibility, as measured by class
- 14 cost-of-service results
- 15 • limiting the impacts on customers' electric bills
- 16 • preserving the "continuity-between-rate schedules" feature of the existing rate
- 17 design

18 In a regulated environment, it is also paramount that any rate design be shown to collect the
19 Commission-ordered revenues on a normalized basis before Staff can find the Company's
20 ultimate tariff filing to be in compliance with the Report and Order in this case.

21 Q. Are there situations in this case where implementing a party's proposal for
22 collecting additional revenue may conflict with other rate design objectives?

23 A. Yes. One such situation can be found in Praxair's proposal to change the

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revenues collected by the Small Heating (SH) rate schedule by a greater percentage than the Commercial Service (CB) rate schedule. There is also the potential that implementation of Praxair's proposal for the General Power (GP) rate schedule and the Total Electric Buildings (TEB) rate schedule may also cause a rate design problem.

Q. Please explain what rate design problems could result from the implementation of the Praxair proposal?

A. The rate design problems that I foresee can be illustrated by the effect of Praxair's proposal on the Commercial Service (CB) rate schedule and the Small Heating (SH) rate schedules.

Both the CB and the SH rate schedules serve small (under 40 kW) commercial customers; the distinction between them being whether the customer "...permanently installs and regularly uses electric space-heating equipment for all internal space-heating comfort requirement..."[language from the Availability section of the SH rate schedule] The current rates of the two schedules are shown below.

	CB	SH
Customer Charge	\$10.83	\$10.83
Summer Energy Charge	7.36 cents	7.36 cents
Winter First 700 kWh	7.36 cents	7.36 cents
Winter Over 700 kWh	5.01 cents	3.83 cents

The only differences in the rates is that the winter tail block energy rate is lower in the winter for the SH customers than it is for the CB customers; the remaining rate design features are the same for both rate schedules.

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1 Praxair's proposal for these two rate schedules is that the revenues collected by the
2 SH customers be increased by more than the system average percentage increase and the
3 revenues collected by the CB customers be increased by less than system average. Praxair's
4 witness does not specify how that feat should be accomplished or whether he believes that
5 preserving the rate design features (all rates are the same except for the winter tail block
6 energy rate) is an important consideration.

7 As a practical matter, preserving the existing rate design while simultaneously meeting
8 the new revenue constraints may be difficult, if not impossible. My fear is that, in the rush of
9 a rate case, significant rate design changes will be made without adequate consideration of the
10 ramifications of doing so. In this situation, adoption of Praxair's proposal could have the
11 unintended consequence of eliminating the SH rate schedule as a viable rate schedule, as most
12 or all of the SH customers switch to the cheaper CB rate schedule.

13 Q. Do you foresee rate design problems arising from the implementation of the
14 rate design proposals of the three other parties (Company, Staff, and OPC)?

15 A. The Company's proposal to factor all rates by the same percentage will most
16 certainly preserve the features of the existing rate design. Staff's proposal and OPC's
17 proposal will not cause the problems described above because each party proposes uniform
18 percentage increases for the multiple rate schedules that constitute each class. If there were a
19 potential rate design problem with these two proposals, it would likely be in the continuity
20 between the General Power (GP) rate schedule (that serves mid-sized customers) and the
21 Large Power (LP) rate schedules.

22 Q. Does this conclude your rebuttal testimony?

23 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

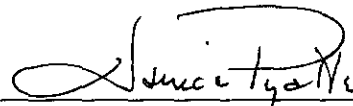
IN THE MATTER OF THE)
APPLICATION OF THE EMPIRE)
DISTRICT ELECTRIC COMPANY FOR)
A GENERAL RATE INCREASE)

Case No. ER-2001-299

AFFIDAVIT OF JANICE PYATTE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Janice Pyatte, of lawful age, on her oath states: that she has participated in the preparation of the foregoing written testimony in question and answer form, consisting of 12 pages of testimony to be presented in the above case, that the answers in the attached written testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

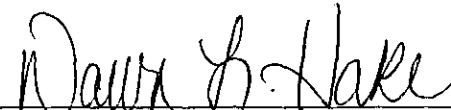


Janice Pyatte



Subscribed and sworn to before me this 2nd day of May, 2001.

My commission expires _____
DAWN L. HAKE
Notary Public - State of Missouri
County of Cole
My Commission Expires Jan 9, 2005

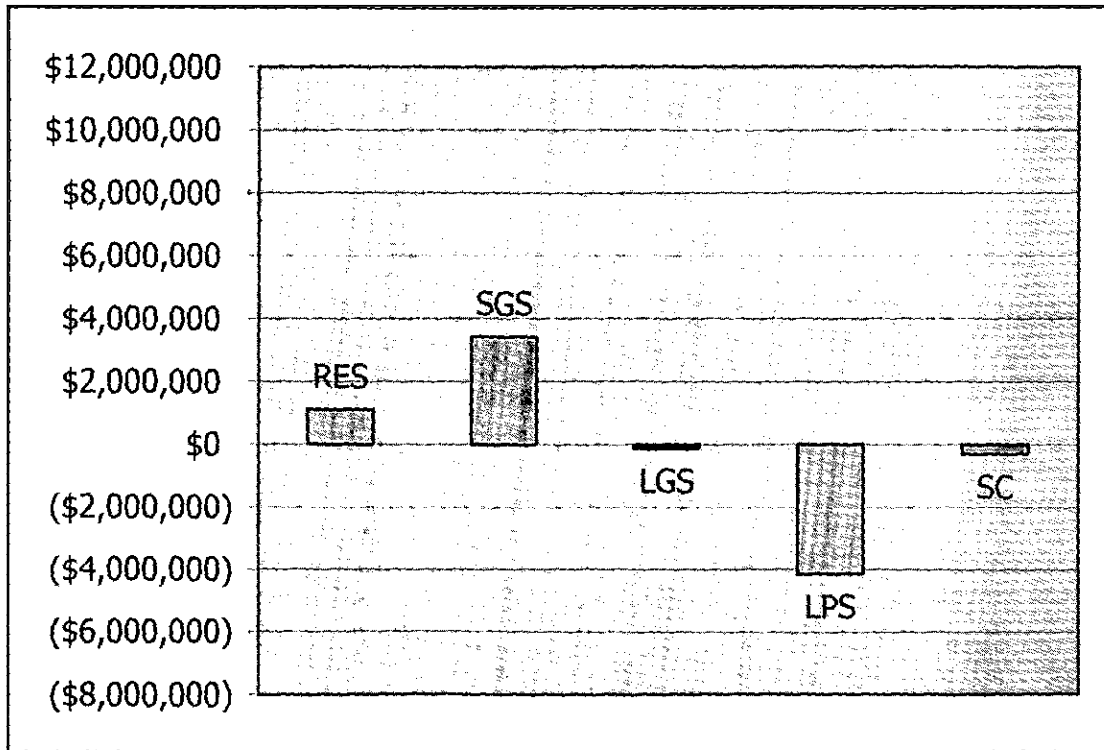


Notary Public

**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF CLASS COST-OF-SERVICE RESULTS**

REVENUE SHIFTS REQUIRED BEFORE ANY INCREASE IN OVERALL REVENUES

STAFF'S CLASS COST-OF-SERVICE STUDY

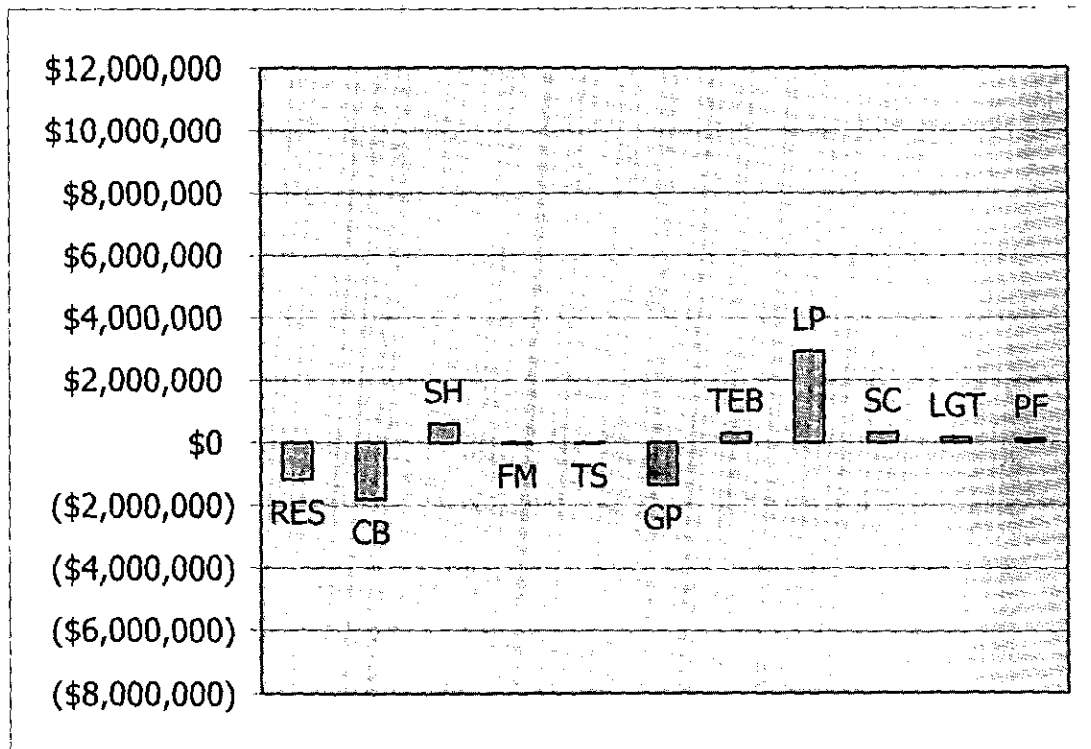


RES	SGS	LGS	LPS	SC
\$1,114,839	\$3,428,968	(\$110,251)	(\$4,135,431)	(\$298,125)

**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF CLASS COST-OF-SERVICE RESULTS**

REVENUE SHIFTS REQUIRED BEFORE ANY INCREASE IN OVERALL REVENUES

OPC CLASS COST-OF-SERVICE STUDY

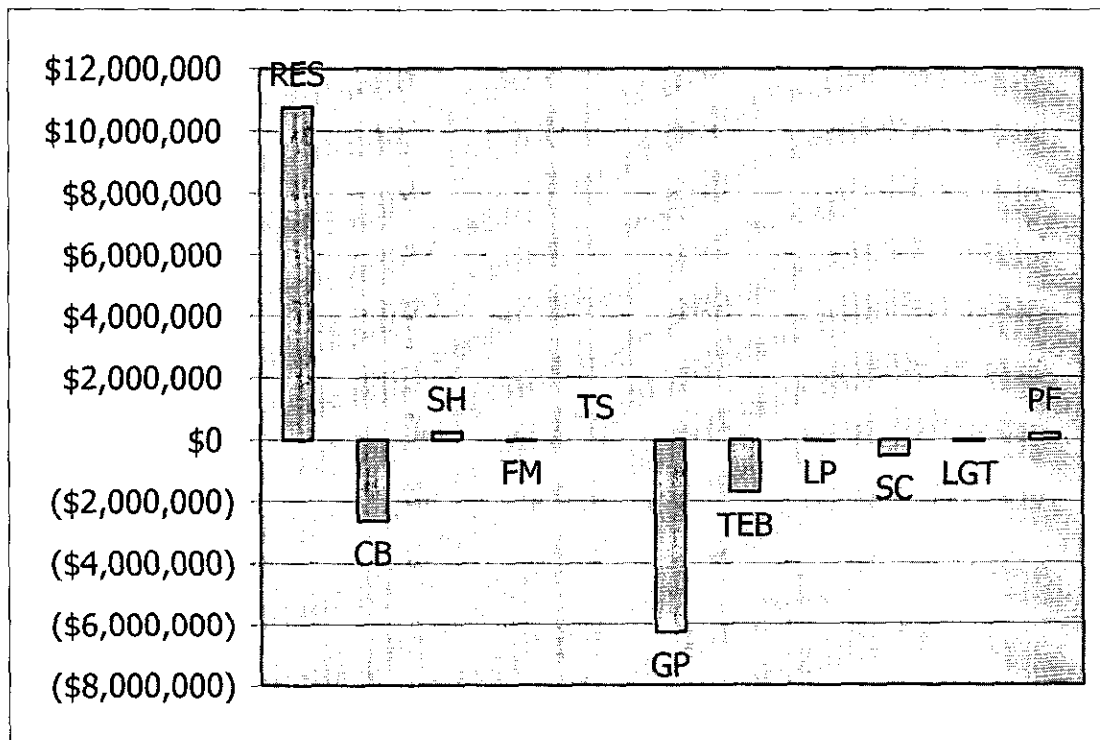


RES	CB	SH	FM	TS	
(\$1,163,236)	(\$1,809,855)	\$592,435	(\$20,212)	(\$3,322)	
GP	TEB	LP	SC	LGT	PF
(\$1,335,111)	\$288,942	\$2,906,436	\$303,170	\$148,823	\$91,930

**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF CLASS COST-OF-SERVICE RESULTS**

REVENUE SHIFTS REQUIRED BEFORE ANY INCREASE IN OVERALL REVENUES

PRAXAIR, INC. CLASS COST-OF-SERVICE STUDY

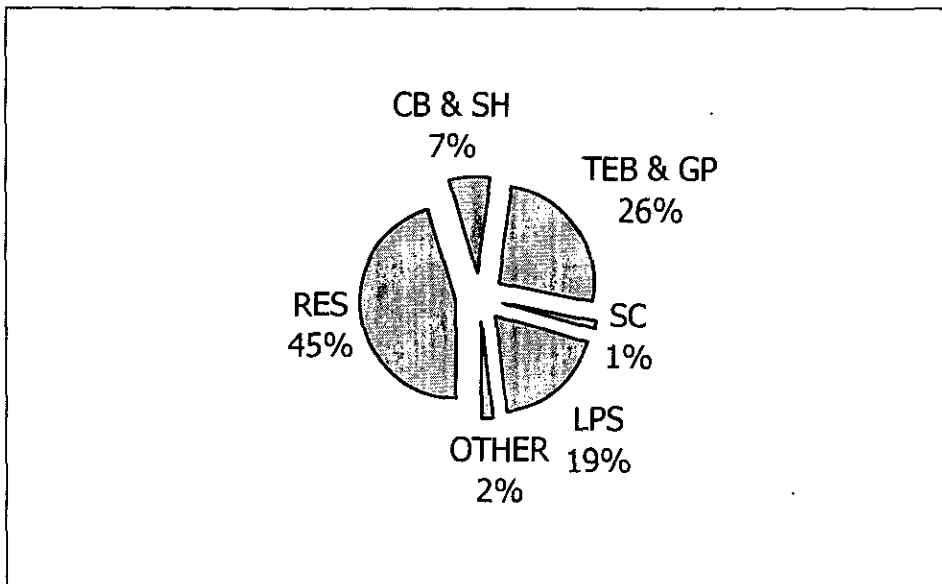


RES	CB	SH	FM	TS	
\$10,764,207	(\$2,619,086)	\$240,450	(\$11,858)	(\$7,280)	
GP	TEB	LP	SC	LGT	PF
(\$6,268,517)	(\$1,702,482)	(\$8,559)	(\$536,822)	(\$48,980)	\$198,928

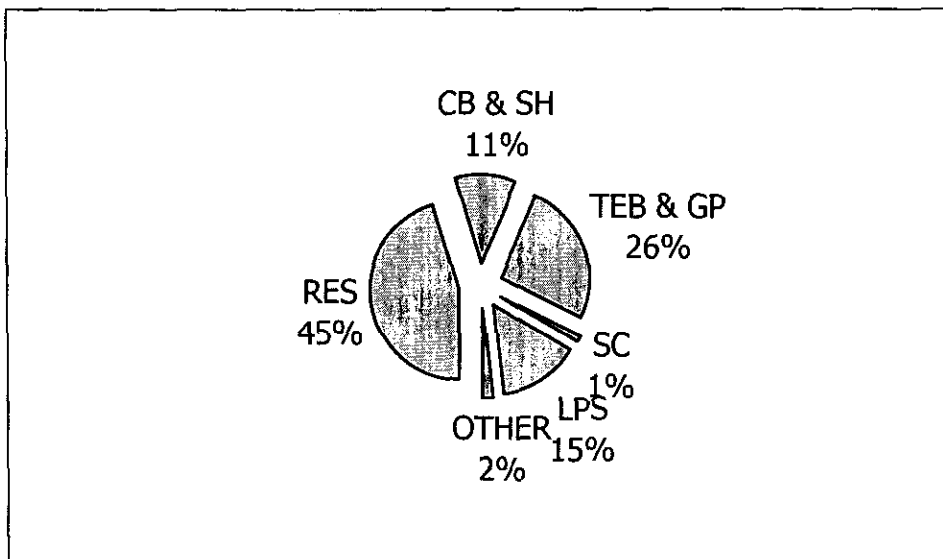
**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF RATE DESIGN PROPOSALS**

PROPOSED DISTRIBUTION OF INCREASE IN OVERALL REVENUES

STAFF PROPOSAL AT \$15 MILLION INCREASE



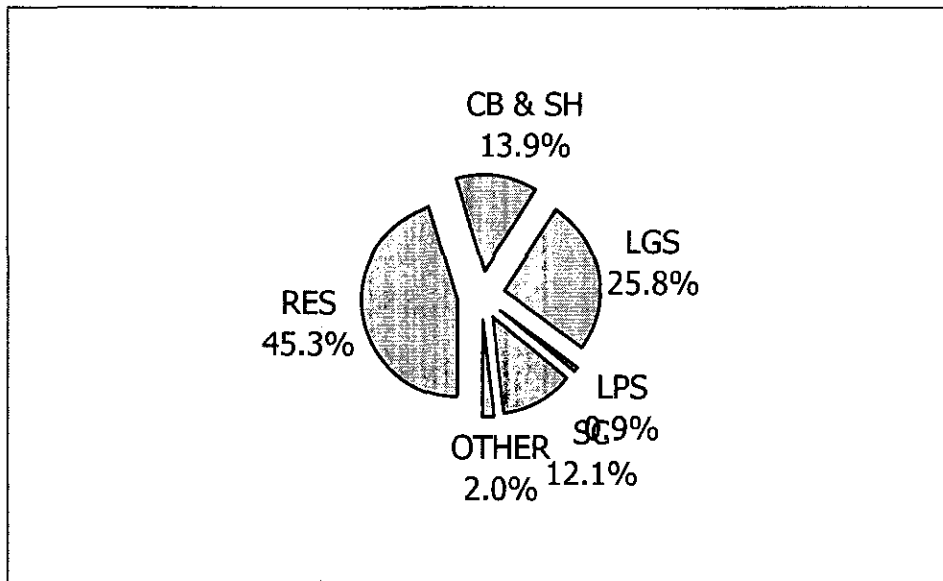
STAFF PROPOSAL AT \$40 MILLION INCREASE



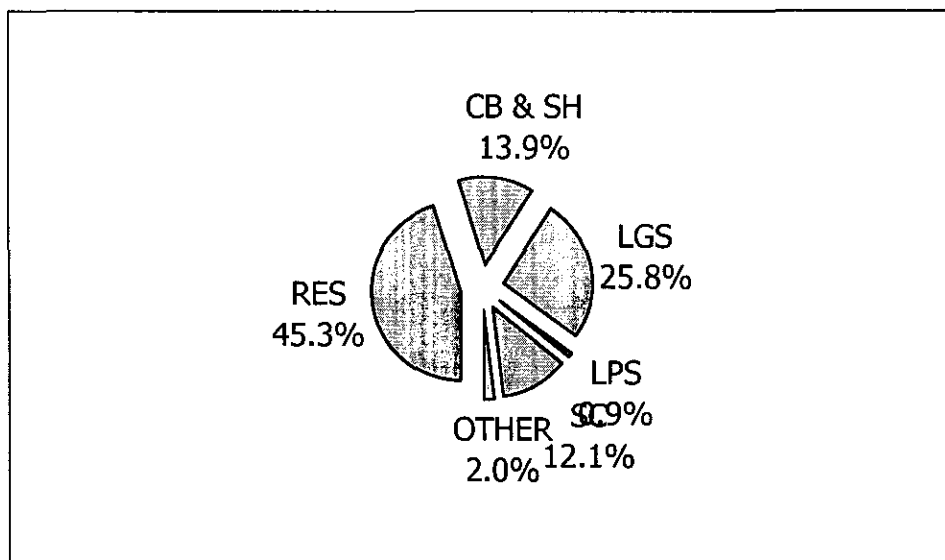
**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF RATE DESIGN PROPOSALS**

PROPOSED DISTRIBUTION OF INCREASE IN OVERALL REVENUES

COMPANY PROPOSAL AT \$15 MILLION INCREASE



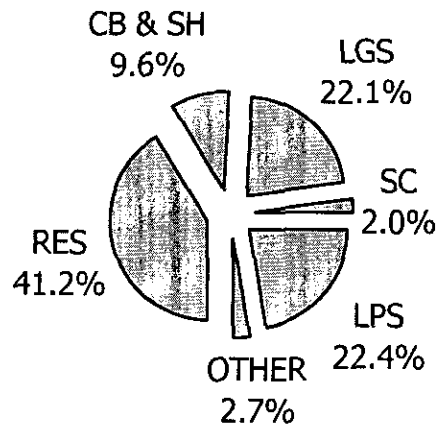
COMPANY PROPOSAL AT \$40 MILLION INCREASE



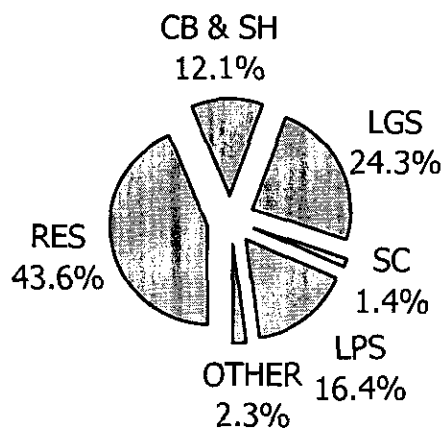
**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF RATE DESIGN PROPOSALS**

PROPOSED DISTRIBUTION OF INCREASE IN OVERALL REVENUES

OPC PROPOSAL AT \$15 MILLION INCREASE



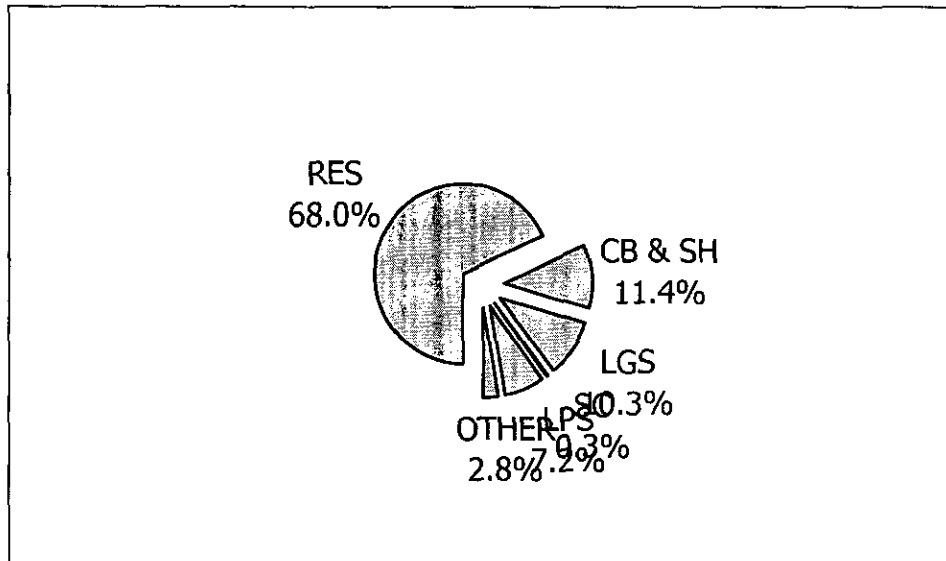
OPC PROPOSAL AT \$40 MILLION INCREASE



**THE EMPIRE DISTRICT ELECTRIC COMPANY CASE NO. ER-2001-299
COMPARISON OF RATE DESIGN PROPOSALS**

PROPOSED DISTRIBUTION OF INCREASE IN OVERALL REVENUES

PRAXAIR PROPOSAL AT \$15 MILLION INCREASE



PRAXAIR PROPOSAL AT \$40 MILLION INCREASE

