

Exhibit No.: 107  
Witness: Maurice Brubaker  
Type of Exhibit: Surrebuttal Testimony  
Sponsoring Party: Explorer Pipeline Company and Praxair, Inc.  
Issue: Cost of Service and Rate Design  
Case No.: ER-2004-0570

**Before the  
Missouri Public Service Commission**

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In the Matter of the Tariff Filing of The )  
Empire District Electric Company to )  
Implement a General Rate Increase for ) Case No. ER-2004-0570  
Retail Electric Service to Customers in )  
its Missouri Service Area. )

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Surrebuttal Testimony and Schedules of

**Maurice Brubaker**

**FILED**

DEC 28 2004

On Behalf of

**Explorer Pipeline Company  
and Praxair, Inc.**

**Missouri Public  
Service Commission**

November 24, 2004  
Project 8228



BRUBAKER & ASSOCIATES, INC.

ST. LOUIS, MO 63141-2000

Exhibit No. 107  
Case No(s). ER-2004-0570  
Date 12-06-04 Rptr JF

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF MISSOURI**

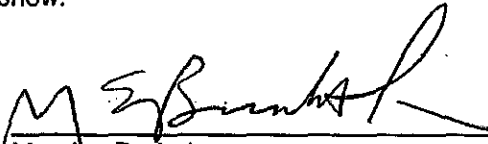
In the Matter of the Tariff Filing of The	)	
Empire District Electric Company to	)	
Implement a General Rate Increase for	)	Case No. ER-2004-0570
Retail Electric Service Provided to	)	
Customers in its Missouri Service Area.	)	

**Affidavit of Maurice Brubaker**

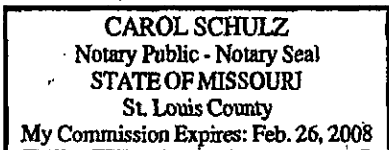
**STATE OF MISSOURI**     )  
  ) **SS**  
**COUNTY OF ST. LOUIS**    )

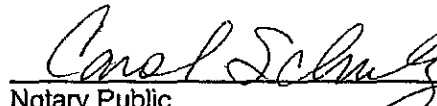
Maurice Brubaker, being first duly sworn, on his oath states:

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, MO 63141-2000. We have been retained by Explorer Pipeline Company and Praxair, Inc. in this proceeding on their behalf.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony addressing cost of service and rate design which was prepared in written form for introduction into evidence in the ER-2004-0570 Proceeding.
3. I hereby swear and affirm that my surrebuttal testimony is true and correct and shows the matters and things it purports to show.

  
\_\_\_\_\_  
Maurice Brubaker

Subscribed and sworn before this 19th day of November, 2004.



  
\_\_\_\_\_  
Notary Public

My Commission expires on February 26, 2008.

**Before the  
Missouri Public Service Commission**

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<b>In the Matter of the Tariff Filing of The</b>	)	
<b>Empire District Electric Company to</b>	)	
<b>Implement a General Rate Increase for</b>	)	<b>Case No. ER-2004-0570</b>
<b>Retail Electric Service to Customers in</b>	)	
<b>its Missouri Service Area.</b>	)	

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**Surrebuttal Testimony of Maurice Brubaker**

1    **Q    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

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

4    **Q    ARE YOU THE SAME MAURICE BRUBAKER WHO FILED DIRECT AND**  
5           **REBUTTAL TESTIMONY IN THE REVENUE REQUIREMENT, COST OF SERVICE**  
6           **AND RATE DESIGN PHASES OF THIS PROCEEDING?**

7    **A    Yes, I am.**

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

9    **A    The purpose of my surrebuttal testimony is to respond to the testimony of certain**  
10          **Missouri Public Service Commission Staff (Staff) and Office of Public Counsel (OPC)**  
11          **witnesses with respect to cost of service and rate design matters expressed in their**  
12          **rebuttal testimonies.**

Maurice Brubaker  
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**RESPONSE TO STAFF WITNESS HONG HU**

**Q AT PAGES 4 AND 5 OF HER REBUTTAL TESTIMONY, STAFF WITNESS HONG HU ADDRESSES THE "AVERAGE AND EXCESS" METHODOLOGY WHICH BOTH YOU AND EMPIRE SUPPORT. ON LINES 10 THROUGH 15 OF PAGE 4 OF HER TESTIMONY SHE CLAIMS THAT THE AVERAGE AND EXCESS METHOD IS EQUIVALENT TO THE PEAK RESPONSIBILITY METHOD IF THE EXCESS DEMAND PORTION IS ALLOCATED USING A COINCIDENT PEAK ALLOCATION FACTOR. IS THIS THE METHODOLOGY THAT YOU AND EMPIRE USED?**

**A** No. In the average and excess study that Empire submitted, and which I support, the excess demand portion is allocated using class non-coincident peak demands, not coincident peak demands. Thus, the results are not the same as a peak responsibility cost allocation method.

**Q ON PAGE 4 OF HER TESTIMONY, LINES 18 THROUGH 20, MS. HU STATES THAT IN THE AVERAGE AND EXCESS METHOD IT IS ONLY EACH CLASS'S DEMAND IN A FEW HOURS OF THE YEAR THAT DETERMINES THE CAPACITY COST ALLOCATION. SHE FURTHER STATES THAT DEMANDS EVERY OTHER HOUR ARE IGNORED AND USAGE THROUGHOUT THE YEAR PLAYS NO ROLE. HAS SHE CORRECTLY DESCRIBED THE AVERAGE AND EXCESS METHODOLOGY?**

**A** No, she has not. Under the average and excess methodology the usage throughout the year (annual energy consumption) does affect the allocation of cost. This is explicitly and clearly shown on Schedules 2 and 3 attached to my rebuttal testimony, where I illustrate the methodologies with three different classes, each of which has the same maximum demand, but has a different load factor. As clearly shown there,

1 the class with the higher load factor (i.e., the class that purchases the most energy) is  
2 allocated more costs than customers who purchase less energy. Thus, Ms. Hu's  
3 description of the average and excess methodology is incorrect.

4 **Q AT PAGE 5 OF HER TESTIMONY, STAFF WITNESS HU STATES THAT THE**  
5 **STAFF'S PROPOSED TOU METHODOLOGY (OR SOME VARIANT OR PROXY**  
6 **OF IT) IS MORE APPROPRIATE THAN THE AVERAGE AND EXCESS METHOD**  
7 **BECAUSE THE TOU METHOD ALLEGEDLY ALLOCATES COSTS IN**  
8 **ACCORDANCE WITH THE HOUR-BY-HOUR USAGE OF THE SYSTEM. DOES**  
9 **THIS MAKE THE METHODOLOGY BETTER?**

10 **A** No. It makes the methodology less desirable because it has no pretense to cost  
11 causation. It allocates costs based on the hours when the system is utilized by the  
12 different classes – when in fact the decisive factor causing the installation of the  
13 capacity is the demands imposed on the system by the various customer classes.

14 Staff's methodology is like charging for car rental only on the basis of a  
15 uniform rate per mile driven – without any recognition of the fact that the requirement  
16 to make the automobile available to the customer for a day imposes costs on the  
17 rental agency – regardless of the number of miles driven. This is why rental cars  
18 typically have a daily rate and may or may not have a mileage rate – but require the  
19 customer to pay for the gasoline. This is much like the two-part demand/energy cost  
20 allocation concept in electric utility ratemaking. Simply stated, the methodology  
21 employed by Staff for the allocation of capacity cost cannot make any claim to cost  
22 causation.

1 Q AT PAGE 7 OF HER TESTIMONY, WITNESS HU CLAIMS THAT THE  
2 COMMISSION HAS PREVIOUSLY ADOPTED A COST ALLOCATION  
3 METHODOLOGY BASED ON TIME OF USE. DO YOU HAVE ANY COMMENTS?

4 A Yes. First, the time of use methodology that the Commission utilized in the  
5 referenced proceedings was different from what the Staff or OPC is proposing in this  
6 case.

7 In addition, it is very important to note that the referenced adoption of these  
8 methodologies was practically 20 years ago – at the time that large new nuclear units  
9 were being introduced onto the system of Union Electric and Kansas City Power and  
10 Light Company. Whatever circumstances and factors may have motivated the  
11 members of the Commission 20 years ago are clearly not the same that are relevant  
12 today.

13 **RESPONSE TO OPC WITNESS BARBARA MEISENHEIMER**

14 Q DO YOU HAVE ANY COMMENTS WITH RESPECT TO OPC WITNESS  
15 MEISENHEIMER'S REBUTTAL TESTIMONY?

16 A Yes. Like Staff, she disparages the average and excess methodology and supports a  
17 proxy time of use methodology that is the same as supported by Staff. Accordingly,  
18 my comments to OPC witness Meisenheimer are the same as my comments above  
19 to Staff witness Hong Hu.

1 **RESPONSE TO STAFF WITNESS JANICE PYATTE**

2 **Q WHAT ASPECT OF MS. PYATTE'S REBUTTAL TESTIMONY WILL YOU**  
3 **ADDRESS?**

4 **A** I will address her comments with respect to appropriate adjustments to the Large  
5 Power (LP) rate in order to recognize the unique nature of the transmission level  
6 service provided to two customers (three accounts) on the rate. I will also address  
7 her comments with respect to the appropriate substation cost adder for the Praxair  
8 Special Contract (SC) rate.

9 **Q DOES MS. PYATTE AGREE WITH YOUR TESTIMONY THAT AN ADJUSTMENT**  
10 **NEEDS TO BE MADE TO THE LP TARIFF TO RECOGNIZE THE LOWER**  
11 **COST ASSOCIATED WITH SERVING THE THREE TRANSMISSION LEVEL**  
12 **ACCOUNTS?**

13 **A** Yes, she does agree in concept. However, we apparently have not reached  
14 agreement on the basis for the credit and the amount of the credit.

15 **Q PLEASE EXPLAIN THE BASIS THAT SHOULD BE USED FOR THE CREDIT.**

16 **A** The LP tariff basically assumes that customers take service at the primary distribution  
17 level. The rate is designed to include costs of not only the transmission system but  
18 also the primary distribution system.<sup>1</sup>

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<sup>1</sup> Of course, all rates also include a component for the cost of generation. However, that matter is not at issue in terms of developing an appropriate voltage level credit.

1 Please refer to Surrebuttal Schedule 1 which shows the relevant cost  
2 components that are attributable to and allocated to Large Power customers. As  
3 shown at the top, the rate receives a full allocation of transmission system costs. The  
4 way the rate is designed, there is also a full allocation of the primary level distribution  
5 system costs based on the load of all the customers served on the rate. This is the  
6 standard nature of service. The rate is designed to recover transmission costs as  
7 well as the distribution step-down substations and primary lines. If Empire furnishes  
8 the step-down substation or transformer at the customer's premises, then the  
9 customer pays separately for this. If the customer owns the substation or transformer  
10 at its premises, there are no additional charges under the LP tariff.

11 **Q HOW DOES SERVICE DIFFER IF A CUSTOMER, LIKE THE TWO EXPLORER**  
12 **PIPELINE COMPANY ACCOUNTS MENTIONED IN YOUR PREVIOUS**  
13 **TESTIMONY, OWNS ITS OWN SUBSTATION AND TAKES SERVICE DIRECTLY**  
14 **FROM THE TRANSMISSION SYSTEM?**

15 **A** This is shown on Surrebuttal Schedule 2. Note that only the transmission costs are  
16 incurred by Empire. There are no distribution substations or primary line costs  
17 incurred by Empire to supply this service. Yet, these costs are included in the rates.

18 As developed in my September 27, 2004 cost of service/rate design  
19 testimony, the cost of the primary distribution system that is included in the LP tariff,  
20 but is not needed to supply service at the transmission level, is in excess of \$2.00 per  
21 kW per month. For purposes of a proposal, I reduced this amount to \$1.50 per kW  
22 per month. This is the appropriate credit that should be given to customers who are  
23 on the LP rate, but who actually take service at the transmission level – which is a  
24 non-standard, and less costly, method of service under the LP tariff.

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1    **Q     HAVE YOU REVIEWED THE REBUTTAL TESTIMONY OF EMPIRE WITNESS**  
2    **WILLIAM EICHMAN?**

3    A     Yes, I have. In his November 4, 2004 rebuttal testimony, Empire witness Eichman  
4           essentially agrees with my methodology and analysis and explains in somewhat more  
5           detail than I just have the basis for the design of the LP rate and the quantification of  
6           the credit. I fully concur with Mr. Eichman's statements.

7    **Q     ON PAGE 9 OF HER REBUTTAL TESTIMONY, LINES 1 THROUGH 5, MS.**  
8    **PYATTE STATES THAT SHE DISAGREES WITH YOUR NUMERICAL ANALYSIS**  
9    **BECAUSE IT COMPUTES THE TRANSMISSION DISCOUNT BASED UPON**  
10   **FULLY-ALLOCATED COSTS RATHER THAN REPLACEMENT COSTS OF THE**  
11   **FACILITIES IN QUESTION. HAS SHE ACCURATELY STATED THE ISSUE?**

12   A     No. As is clear from the context of her testimony, she is focusing strictly on the single  
13           customer substation. What she is not recognizing is the extensive amount of  
14           distribution substation and primary line costs that are allocated to the LP rate. It is  
15           not a matter of the difference between embedded cost and replacement cost, rather it  
16           is a question of **which** facilities should be the basis for the credit.

17   **Q     AT PAGES 9 AND 10 OF HER TESTIMONY, MS. PYATTE APPEARS TO EQUATE**  
18   **THE APPROPRIATE CREDIT FOR TRANSMISSION LEVEL SERVICE**  
19   **CUSTOMERS SERVED ON THE LP RATE TO THE ADDER WHEN THE SINGLE**  
20   **CUSTOMER SUBSTATION IS FURNISHED BY EMPIRE ON THE TRANSMISSION**  
21   **LEVEL RATE. DO YOU AGREE WITH HER COMMENTS?**

22   A     No.

1    **Q    WHY DO YOU DISAGREE?**

2    **A    I disagree because the two concepts are entirely different. The transmission level**  
3    **service credit appropriate for customers taking service at transmission, but paying the**  
4    **LP rate, is equal to the cost associated with the distribution substations and primary**  
5    **lines that are allocated to and included in the LP tariff but not used by customers who**  
6    **take transmission level service on the LP tariff.**

7            With respect to transmission level service on the Praxair Special Contract  
8    rate, the rate is designed to include the cost of the transmission system and the  
9    customer pays an additional amount for the single customer step-down substation.  
10   That amount is currently 30¢ per kW per month. The difference is that the customer  
11   is only paying for the single customer step-down substation and is not required to pay  
12   for the extensive distribution substations and primary lines that are not used to  
13   provide service to transmission level customers. This is shown on Surrebuttal  
14   Schedule 3.

15           Accordingly, the two concepts are different because the nature of the facilities  
16   involved is different. The distribution system credit on Rate LP should be at least  
17   \$1.50 per kW per month, and the adder on the Praxair rate for the single customer  
18   substation should be \$0.30 per kW per month.

1 **RESPONSE TO STAFF WITNESS JAMES WATKINS**

2 **Q HAVE YOUR REVIEWED MR. WATKINS' NOVEMBER 4, 2004 REBUTTAL**  
3 **TESTIMONY?**

4 **A** Yes, I have. In this, he addresses my recommendation for the rate design and  
5 tracking of any amounts collected through a temporary surcharge, such as an Interim  
6 Energy Charge (IEC).

7 **Q ON PAGE 2 OF HIS TESTIMONY, BEGINNING AT LINE 5, MR. WATKINS STATES**  
8 **THAT YOU HAVE NOT PROVIDED AN EXPLANATION OF YOUR TRUE-UP AND**  
9 **REFUND MECHANISM. IN DOING SO, HE APPEARS TO ADDRESS ONLY YOUR**  
10 **SEPTEMBER 27, 2004 TESTIMONY. SHOULD HE HAVE LOOKED AT ANY OF**  
11 **YOUR OTHER TESTIMONY?**

12 **A** Yes. In my September 20, 2004 testimony on fuel and purchased power issues, at  
13 Page 9, I specifically recommended that for inclusion of costs in rates and for  
14 determining refunds, to use the same approach that was used in the Aquila rate case,  
15 Case No. ER-2004-0034. It is my recollection that Mr. Watkins was the principal  
16 architect of this methodology, and therefore there should be no uncertainty about the  
17 methodology I am recommending.

18 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

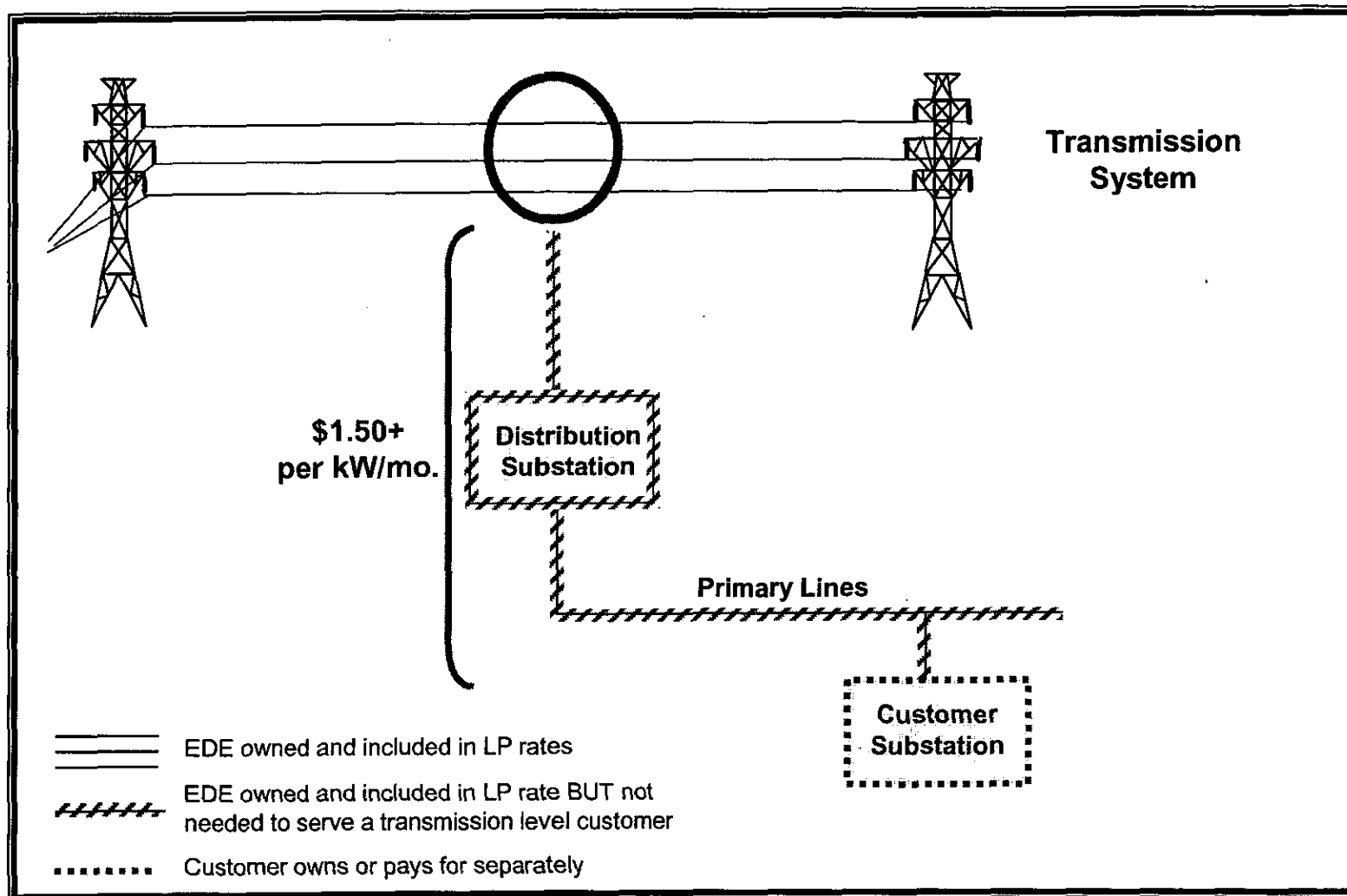
19 **A** Yes, it does.

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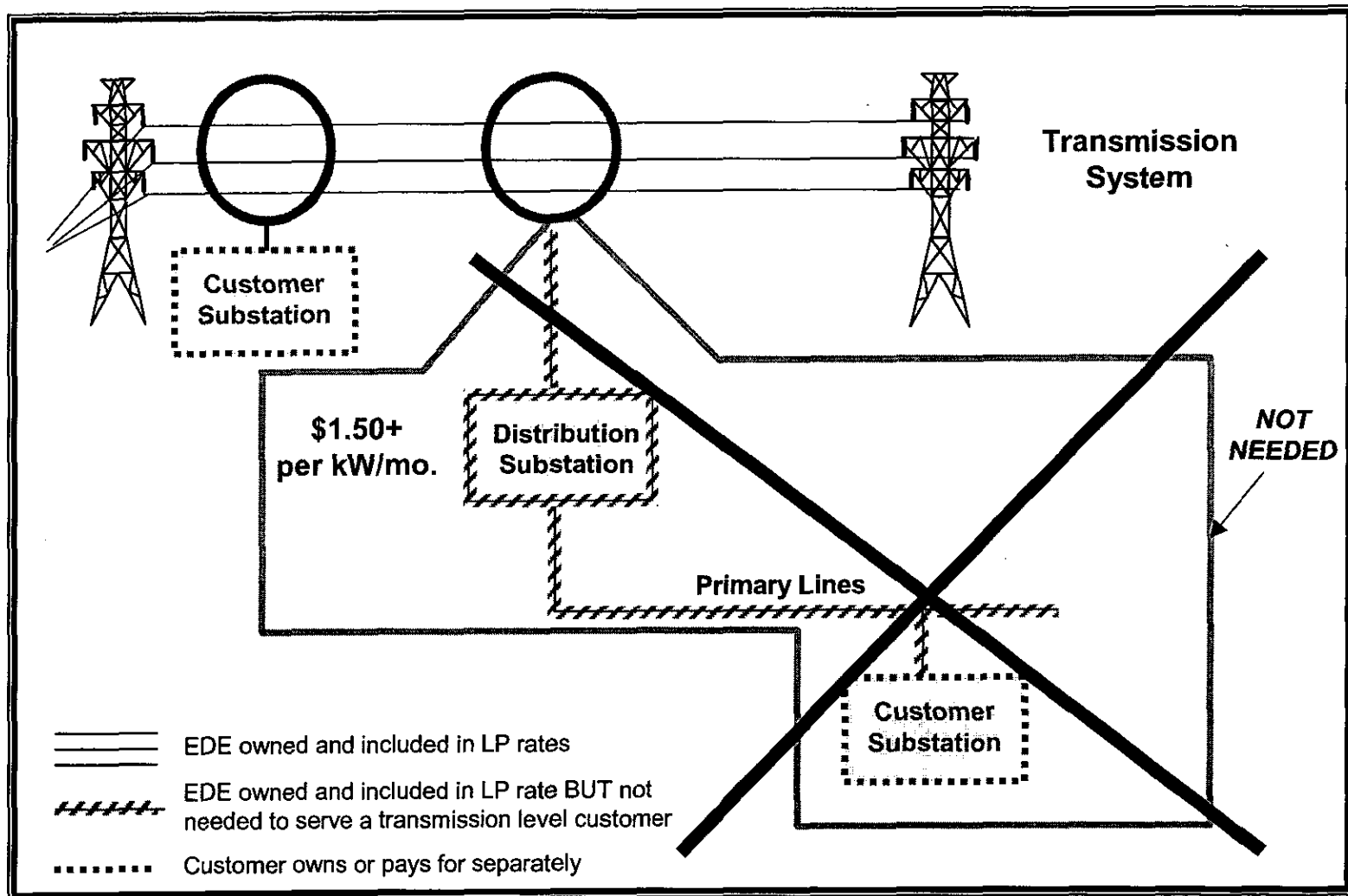
# EMPIRE DISTRICT ELECTRIC COMPANY

## Standard Service on the Large Power (LP) Rate



# EMPIRE DISTRICT ELECTRIC COMPANY

## Transmission Level Service on the Large Power (LP) Rate



# EMPIRE DISTRICT ELECTRIC COMPANY

Service on the Praxair Special Contract Transmission Level Rate

