

EXHIBIT

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Issue(s):

Class Cost of Service/

Rate Design/

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ER-2007-0002

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Missouri Public
Service Commission

REBUTTAL TESTIMONY OF BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

AMERENUE
(RATE DESIGN)

CASE NO. ER-2007-0002

February 5, 2007

OPC submitted on 4/2
Date 3/20/07 Case No. ER-2007-0002
Reporter RF

412

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

In the Matter of Union Electric Company d/b/a)
AmerenUE for Authority to File Tariffs)
Increasing Rates for Electric Service)
Provided to Customers in the Company's)
Missouri Service Area.)

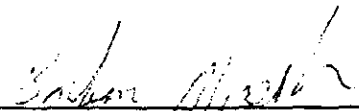
Case No. ER-2007-0002

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am Chief Utility Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.




Barbara A. Meisenheimer

Subscribed and sworn to me this 5th day of February 2007.



JERENE A. BUCKMAN
My Commission Expires
August 10, 2009
Cole County
Commission #05754036



Jerene A. Buckman
Notary Public

My Commission expires August 10, 2009.

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**REBUTTAL TESTIMONY
OF
BARBARA MEISENHEIMER**

**AMERENUE
CLASS COST OF SERVICE AND RATE DESIGN**

CASE NO. ER-2007-0002

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

2 A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel,
3 P. O. 2230, Jefferson City, Missouri 65102.

4 **Q. HAVE YOU TESTIFIED PREVIOUSLY IN THIS CASE?**

5 A. Yes, I submitted direct testimony on cost of service and rate design issues on
6 December 29, 2006.

7 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

8 A. The purpose of my rebuttal testimony is to present Public Counsel's updated class
9 cost of service (CCOS) studies. I will also response to the cost of services studies
10 and the direct testimony of other parties.

1 **Q. IN PREPARATION OF YOUR TESTIMONY, WHAT MATERIALS DID YOU REVIEW?**

2 A. I have reviewed the direct testimony rate design testimony of the Staff, Noranda
3 Aluminum Inc., Missouri Industrial Energy Consumers (MIEC), AARP and
4 AmerenUE.

5 **I. CLASS COST OF SERVICE STUDY AND RATE DESIGN UPDATES**

6 **Q. HAVE YOU UPDATED YOUR CLASS COST STUDIES?**

7 A. Yes. I have updated my CCOS studies to reflect modification I have made since
8 the filing of direct testimony. The first change corrects a computational error that
9 affects the Payroll related allocations in my studies. The second modification
10 adjusts the assignment of distribution plant costs. I sought clarification on this
11 issue from the Company regarding work papers referenced in the Company's
12 direct cost study. I did not received the DR responses in time to consider all
13 changes that may be necessary based on the DR responses but I was able to obtain
14 some of the information from testimony filed by the Company in a previous case.
15 I have incorporated the information I obtained. The next change corrects the
16 allocation factors for Accounts 360-Land & Land Rights, 361-Structures &
17 Improvements and 362-Station Equipment. Finally, I have modified the allocator
18 used to allocate transmission related costs. In direct testimony I argued that
19 transmission plant costs can be equitably allocated on the same basis as
20 production plant. I continue to believe that this is generally a reasonable
21 assumption in allocating transmission related costs. However, making such an
22 assumption coupled with a Time of Use (TOU) based production demand
23 allocator raises additional question about the allocation. Using an alternative
24 12CP allocator for transmission related costs has minimal impact on my cost of

1 service study results and I have decided to switch to the 12CP allocator to
2 minimize the contested issues related to class cost of service.

3 **Q. DO YOU ANTICIPATE FURTHER UPDATES TO YOUR STUDIES?**

4 A. Yes. The Staff has informed me that there may be changes in the revenues
5 assigned to the classes. I will adjust my studies if the Staff revenue adjustments
6 significantly affect the revenue allocations in my studies. I may also update my
7 studies if I receive DR responses from the Company.

8 **Q. DID THE MODIFICATIONS DESCRIBED ABOVE HAVE A SIGNIFICANT IMPACT ON**
9 **YOUR CCOS STUDY RESULTS?**

10 A. The correction to the Payroll related allocations had a significant affect on the
11 allocation of costs between Residential and LTS. The other modifications had a
12 smaller impact.

13 The updated CCOS study results are illustrated in Schedule REB BAM-1
14 and Schedule REB BAM-2. Schedule REB BAM-1 illustrates the results of the
15 study for which I used a time of use (TOU) allocator to assign demand related
16 production costs and associated expenses. Schedule REB BAM-2 illustrates the
17 results of the study for which I used an Average and 3 Coincident Peak (A&3CP)
18 allocator to assign demand related production costs and associated expenses. The
19 tables below summarize for each class the current percent of revenue as well as
20 the amount and percentage change from current revenues required to equalize the
21 rates of return.

Table 1. Updated CCOS Results (TOU Production Allocator)

	Residential	SGS	LGS	SPS	LPS	LTS
Class Revenue %	41.93%	11.36%	21.51%	9.40%	8.47%	7.33%
Revenue Neutral Shift	(\$2,640,984)	(\$15,892,564)	(\$28,802,148)	\$4,245,242	\$31,857,133	\$11,233,321
% Change	-0.30%	-6.64%	-6.58%	2.29%	20.05%	8.28%

Table 2. Updated CCOS Results (A&3CP Production Allocator)

	Residential	SGS	LGS	SPS	LPS	LTS
Class Revenue %	42.94%	11.47%	21.28%	9.18%	8.15%	6.98%
Revenue Neutral Shift	\$31,947,592	(\$11,961,258)	(\$36,724,369)	(\$3,370,116)	\$21,033,882	(\$925,731)
% Change	3.62%	-5.00%	-8.39%	-1.82%	13.24%	-0.68%

Q. HOW DO YOU RECOMMEND THAT THE COMMISSION ACCOMMODATE FACTORS SUCH AS AFFORDABILITY, RATE IMPACT, AND RATE CONTINUITY IN DETERMINING RATE DESIGN?

A. In direct testimony, I recommended that the Commission adopt a rate design that balances movement toward cost of service with rate impact and affordability considerations. To reach this balance, I recommended that in cases where the existing revenue structure departs greatly from the class cost of service, the Commission should impose, at a maximum, class revenue shifts equal to one half

1 of the "revenue neutral shifts" indicated by Public Counsel's Class Cost of
2 Service studies. Revenue neutral shifts are shifts that hold overall company
3 revenue at the existing level but allow for the share attributed to each class to be
4 adjusted to reflect the cost responsibility of the class. In addition to moving half
5 way to the revenue neutral shifts, I recommend that if the Commission determines
6 that an overall increase in revenue requirement is necessary in this case, then no
7 customer class should receive a net decrease as the combined result of: (1) the
8 revenue neutral shift that is applied to that class, and (2) the share of the total
9 revenue increase that is applied to that class. Likewise, if the Commission
10 determines that an overall decrease in revenue requirement is necessary, then no
11 customer class should receive a net increase as the combined result of: (1) the
12 revenue neutral shift that is applied to that class, and (2) the share of the total
13 revenue decrease that is applied to that class.

14 **Q. BASED ON YOUR UPDATED CCOS RESULTS WHAT ARE YOUR RECOMMENDATIONS**
15 **ON CLASS REVENUE RESPONSIBILITY?**

16 **A.** If the Commission determines that an overall reduction in revenue requirement is
17 appropriate in this case, it would allow an opportunity for movement toward cost
18 of service without imposing significant detriment on classes that are currently
19 below cost of service. In the case of a reduction I recommend that the
20 Commission approve a reduction for classes paying in excess of class cost of
21 service in order to move toward equalizing the class rates of return. If the
22 reduction exceeds the amount necessary to accomplish equal rates of return, then
23 the remaining reduction should be applied to all classes on an equal percentage
24 basis.

1 If instead the Commission determines that a significant increase is
2 appropriate then in order to mitigate rate shock I recommend that the Commission
3 approve revenue neutral shifts that move classes no more than half way to the cost
4 of service with the condition that no customer class should receive a net decrease
5 as the combined result of: (1) the revenue neutral shift that is applied to that class,
6 and (2) the share of the total revenue increase that is applied to that class.

7 As I described above, the Staff has informed me that there may be
8 significant changes in the assignment of current class revenues. For this reason, I
9 have not developed a specific recommendation on the class revenue responsibility
10 Public Counsel proposes. Once the Staff provides updated revenues I will be able
11 to provide a specific recommendation.

12 **Q. BASED ON YOUR UPDATED CCOS RESULTS WHAT CUSTOMER CHARGES DO YOU**
13 **RECOMMEND?**

14 **A.**My CCOS studies suggest the average customer cost recoverable in a customer
15 charge is about \$6 for the Residential class and about \$10.30 for the Small
16 General Service Class. I do not anticipate significant changes in these
17 calculations in future study updates. The current customer charges exceed these
18 costs so I recommend that there be no increase in the Residential or SGS
19 customer charges in this proceeding.

II. COMPARISON OF CLASS COST OF SERVICE STUDIES

Q. PLEASE COMPARE THE RESULTS OF THE PARTIES' CLASS COST STUDIES.

A. Table 4 provides a comparison of each party's revenue neutral increase or decrease as a percentage of the current revenue used by the party.

Table 4. Comparison of Revenue Neutral
Rate Revenue Increase/Decrease Percentages

	RES	SGS	LGS	SPS	LPS	LTS
OPC TOU	-0.30%	-6.64%	-6.58%	2.29%	20.05%	8.28%
OPC A&3CP	3.62%	-5.00%	-8.39%	-1.82%	13.24%	-0.68%
Staff Case 3	0.44%	-7.52%	-4.11%	15.67%	10.92%	0.44%
Company*	5.57%	-6.94%	-8.27%	-4.33%	11.32%	-4.94%
MIEC COS 4	14.1%	-3%	-11.6%	-12.8%	-3.1%	-26.6%
MIEC COS 5	11.8%	-4.2%	-10.7%	-10.2%	1%	-19.9%
* Calculated from Warwick Schedule 1						

Staff's results appear in the direct testimony of David Roos. The MIEC results appear in the direct testimony of Maurice Brubaker. AmerenUE's results were derived from Company witness Warwick's direct testimony work papers. The OPC results appear in this testimony.

III. RESPONSE TO OTHER PARTIES DIRECT TESTIMONY

Q. DO YOU HAVE ANY RESPONSE AT THIS TIME TO THE STAFF'S CCOS STUDY RESULTS OR RATE DESIGN RECOMMENDATION?

A. I understand based on discussions with Staff that it intends to update its cost of service study to reflect anticipated class revenue adjustments. I have reviewed the work papers underlying Staff's CCOS study and with the exception of the treatment of the cost of primary distribution facilities and my use of an alternative TOU production allocator, I found the majority of allocations to be similar. I believe that it is likely that the treatment of revenue is the primary cause of difference between the Staff CCOS study results and my own. Therefore, I will not comment on the Staff CCOS study at this time.

In the direct testimony of James Busch, he recommends that revenue neutral shifts be adopted that move classes to within 5% of class cost of service and that any change in revenue requirement should be made subsequently on an equal percentage basis. He bases his recommendation on recognition that CCOS studies should be used as a guide in setting rates. He further recommends that all rate elements be adjusted on an equal percentage basis.

I agree with Mr. Busch that CCOS studies should be used as a guide in setting rates. I further support tempered movement toward cost of service when class costs vary significantly from cost of service or when other considerations such as rate impact or affordability outweigh the need to move toward costs. Mr. Busch indicates that the Staff believes a revenue requirement reduction is appropriate in this case. If the Commission agrees then I would recommend that the Commission approve reducing the revenues of classes paying in excess of

1 class cost of service. While in the case of a reduction Public Counsel might be
2 willing to move classes closer to cost than 5%, we would not oppose the
3 recommendation. In the case of a significant increase in revenue requirement such
4 as that proposed by the Company, a more moderate movement toward cost of
5 service would be appropriate.

6 With the exception of the customer charge, in the case of a revenue
7 requirement increase, Public Counsel would support increasing the Residential
8 and SGS rate elements on an equal percent basis. My CCOS study results indicate
9 that an increase in the customer charge is not necessary. Keeping the customer
10 charge as low as possible encourages customers to initiate service. Also, given
11 that the Company has requested up to 12-month recovery of the minimum charges
12 that a customer voluntarily disconnecting service would have otherwise paid,
13 increasing the customer charge unnecessarily will increase the cost of
14 reconnection following voluntary termination of service.

15 **Q. DO YOU OPPOSE THE COMPANY PROPOSAL TO BILL CUSTOMERS WHO**
16 **VOLUNTARILY TERMINATE SERVICE FOR LESS THAN 12 MONTHS?**

17 **A.** Yes. Imposing such a charge limits a customer's ability to avoid paying for
18 services they choose not to use.

19 **Q. WHAT ARE THE PRIMARY DIFFERENCES BETWEEN YOUR CCOS RESULTS AND**
20 **THOSE OF THE COMPANY AND MIEC?**

21 **A.** I believe that there are two main factors that contribute to the differences between
22 my study results and those of the Company and MIEC. The first is the allocation
23 of Primary costs for certain distribution plant accounts. The third is the use of

1 weighted versus unweighted customer numbers for allocating certain customer
2 related costs.

3 **Q. COULD YOU ELABORATE ON THE FIRST FACTOR?**

4 A. Yes. All the parties that prepared a CCOS study, including OPC, functionalized
5 distribution costs in Accounts 364 (Poles Towers and Fixtures), 365 (Overhead
6 Conductors & Devices), 366 (Underground Conduit) and 367 (Underground
7 Conductors & Devices) in a manner that recognizes a distinction between primary
8 and secondary voltage. All parties, except OPC, then classified both primary and
9 secondary distribution as having a customer related component as well as a
10 demand related component. I also allocated secondary distribution based on both
11 a customer and demand component, but I allocated primary distribution based
12 only on demand.

13 **Q. WHY SHOULD THE PRIMARY PORTION OF THESE ACCOUNTS AND RELATED**
14 **EXPENSES NOT BE CHARACTERIZED AS CUSTOMER RELATED?**

15 A. Page 20 of the NARUC Manual defines customer related cost as costs directly
16 related to the number of customers. I believe that the Primary portions of these
17 distribution costs do not reasonably satisfy this definition. First, as I explained in
18 direct testimony, many of the distribution costs associated with providing service
19 to electric utility customers are not directly associated with or reasonably
20 assignable to a particular class with precision. For example, with the exception of
21 service drops and meters, most of the facilities between the utility customer's
22 point-of-service and the distribution substation are shared facilities. Since no
23 portion of such facilities is directly related to the number of customers, the
24 associated costs are best classified as demand related, rather than customer

1 related. When a new customer is connected to the system, both customer counts
2 and customer density change but the system may not need any new poles,
3 conduits, conductors or transformers to serve the customer. In other words,
4 unlike meters that increase directly with the number of customers, the addition of
5 a new customer will not necessarily cause new investment in poles, conduits,
6 conductors or even transformers. Second, the more removed facilities are from
7 the customer the more flexible they are likely to be in serving the demand of
8 different customers and the less appropriate it is to characterize the associated
9 cost as customer related.

10 **Q. DO YOU SUPPORT THE ZERO-INTERCEPT METHOD AS A REASONABLE METHOD**
11 **FOR IDENTIFYING A PORTION OF DISTRIBUTION COSTS AS CUSTOMER RELATED?**

12 A. No. Although I did use some results of the Company's distribution study and
13 zero-intercept method to split cost between Primary and Secondary and to
14 develop a customer related portion for allocating secondary customer costs, I do
15 not believe the zero-intercept method produces a portion of costs that can
16 reasonably be defined as customer related.

17 The zero-intercept method seeks to identify that portion of plant related to
18 a zero-load hypothetically representing a system that has no demand related cost
19 component. Typically, the cost of each type of plant (measured on the vertical
20 axis) is plotted against its capacity (measured on the horizontal axis). An
21 equation representing the relationship between cost and capacity is derived
22 typically through regression analysis. This relationship is projected back to
23 where the capacity is zero. The cost at a capacity of zero is assumed to be the
24 customer related portion of costs. The obvious flaw in the method is that it does
25 not derive or prove a direct relationship between the number of customers and

1 investment in the particular type of plant. In addition to failing to derive a direct
2 relationship between customer numbers and costs, there is no reasonable
3 justification for hypothesizing the existence of a distribution system the purpose
4 of which is to make power and energy available to customers who are assumed
5 not to be able to receive some minimal level of power or energy. Furthermore, in
6 deriving the equation that describes the relationship between capacities and costs,
7 analysts must choose the form of the relationship they believe exists: linear,
8 convex or some other shape. This choice affects where the "zero-intercept"
9 occurs and may be strongly influenced by the relationship between higher
10 capacity facilities and their corresponding costs. This can be one reason the
11 minimum-intercept method may produce unreliable results such as a negative
12 intercept indicating negative cost at zero-load. From a mathematical perspective,
13 I do not believe a zero- intercept method proves that any portion of cost is
14 customer related. It is simply a method for calculating a portion of cost that can
15 be arbitrarily assigned as customer related if the analyst believes a portion should
16 be. For the reasons described above I believe that it is more reasonable to assign
17 a portion of Secondary costs as customer related so I, like the other cost
18 witnesses, used the zero-intercept results for allocating Secondary costs. Since I
19 do not agree that Primary costs can reasonably be assigned on a customer basis, I
20 did not use the Company's zero-intercept method for assigning any portion of
21 Primary costs as customer related and instead allocated them on a demand basis.

22 **Q. DO YOU AGREE WITH AARP WITNESS RON BINZ WITH RESPECT TO HIS CRITICISMS**
23 **OF THE ZERO-INTERCEPT METHOD?**

24 **A.** Yes. I agree with Mr. Binz testimony regarding the shortfalls of the zero-
25 intercept method.

1 **Q. WHAT IS YOUR RESPONSE TO THE MODIFICATIONS TO THE COMPANY CCOS**
2 **STUDY PROPOSED BY MR. BINZ ON BEHALF OF AARP.**

3
4 A. Mr. Binz testimony offers a number of modifications to address deficiencies in
5 the Company's class cost of service study that would result in a more reasonable
6 allocation of costs to smaller customers. I am in substantial agreement with Mr
7 Binz on the rationale for his proposed modifications to the production and
8 distribution cost allocators.

9 **Q. IN ADDITION TO ALLOCATING A PORTION OF PRIMARY COST ON A CUSTOMER**
10 **BASIS, ARE THERE OTHER REASONS YOU BELIEVE COMPANY'S CLASS COST OF**
11 **SERVICE STUDY DISPROPORTIONATELY ASSIGNS COSTS TO THE RESIDENTIAL**
12 **AND SGS CLASSES?**

13 A. Yes. I believe the distribution costs are disproportionately assigned to residential
14 and SGS customers because the Company allocates customer related costs on the
15 basis of unweighted customer numbers. The Company allocates the customer
16 portion of poles, overhead and underground conductors and conduit in a manner
17 that results in each residential customer being allocated the same customer related
18 cost as a Lowes or Walmart store taking service as a Large General Service
19 customer even though the Lowes or Walmart likely is served by poles that can
20 sustain heavier lines, by higher capacity conductors and more likely by
21 underground conduit. This customer allocation method coupled with the use of a
22 INCP method of allocating primary and secondary demand related costs too
23 heavily assigns costs to small low use customers.

24 The Company's zero intercept method also appears to exacerbate the over
25 assignment of costs to small customers due to the technique used for pricing out

1 the physical plant. Upon reviewing testimony filed by the expert that conducted
2 the Company distribution study it appears that the Company's study is based on
3 "reproduction cost" as opposed to booked costs. My understanding of the
4 description of this technique is that it factors up booked costs to reflect the cost of
5 current replacement. I believe that this technique results in a further layer of
6 disproportionate cost assignment to Residential and SGS customers when coupled
7 with the unweighted customer allocations and INCP demand related allocations.

8 Q. DO YOU AGREE WITH MR. BRUBAKER'S CRITICISM OF THE COMPANY'S USE OF
9 THE FOUR HIGHEST NONCOINCIDENT PEAKS IN DEVELOPING ITS A&4NCP
10 PRODUCTION ALLOCATOR?

11 A. No. While I recommend the use of an Average and 3 Coincident Peak method for
12 allocating production costs, if an A&E production allocator is to be used, I
13 believe the Company's decision to use the highest annual NCPs is appropriate.
14 On page 49 of the NARUC *Electric Cost Allocation Manual* it states that the
15 required data for the A&E method "are the **annual maximum** and average
16 demands for each customer class and the system load factor." Limiting the choice
17 of the NCPs to the summer months disproportionately attributes costs to classes
18 that use more in those months. Table 3 shown in Schedule REB BAM-3
19 illustrates the difference in the Company's and Mr. Brubaker's proposals for
20 selecting the NCP months. The months shown in the bold box correspond to the
21 3 summer month NCP values. The shaded boxes correspond to the 4 highest
22 annual NCPs. Only one of the highest NCPs for the Large Power Service
23 occurred in the summer months and none of the Large Transmission Service
24 NCPs are captured in the 3 summer months. On the other hand, the summer

1 period includes the three highest NCPs for both the Residential and Small General
2 Service classes resulting in a disproportionate assignment of cost to these classes.

3 **Q. DOES MR BRUBAKER'S CHOICE OF THE THREE SUMMER MONTH NCP METHOD**
4 **RESULT IN A HIGHER ALLOCATOR THAN WOULD RESULT FROM SELECTING THE**
5 **THREE HIGHEST NCPS ON AN ANNUAL BASIS?**

6 **A.** Yes. Table 4 shown in Schedule REB BAM-3 illustrates the difference in the
7 A&E allocators derived from using the three summer month NCPs and the three
8 highest annual NCPs. Limiting the NCP selection to the summer months
9 produces a lower allocation of costs to the Large Power Class and Large
10 Transmission classes while increasing the allocation to smaller users.

11 **Q. DO YOU AGREE WITH MR. BRUBAKER'S CONCLUSION THAT OFF SYSTEM SALES**
12 **REVENUE SHOULD BE ALLOCATED ON THE BASIS OF KWH?**

13 **A.** No. To allocate off system sales revenue on energy alone as Mr. Brubaker
14 suggests would ignore that plant investment is a component of the cost of
15 generating off-system sales volumes. On the other hand, both the Average &
16 Excess and Average & Peak methods incorporate both a component that reflects
17 average annual energy loads by class as well as a component that reflects peak
18 periods. Using one of these production allocators to assign off system sales
19 revenue does ensure that both fixed and variable aspects of the cost to generate
20 off system sales revenues are reflected in the allocation.

1 Q. THE COMPANY HAS PROPOSED A NUMBER OF CHANGES TO THE SERVICES,
2 SERVICE RATES AND TERMS AND CONDITIONS CONTAINED IN ITS TARIFF. DO YOU
3 HAVE CONCERNS REGARDING THESE PROPOSALS?

4 A. Yes. I have concerns with a number of the proposed changes.

5 Q. PLEASE DESCRIBE YOUR CONCERNS.
6

7 A. With respect to certain distribution extensions the Company proposes an
8 additional per ft fee that would apply to large lots. I have two concerns related to
9 this proposal. The first is that the applicable fee is not specified in the Company
10 tariff. The second is that while I agree that larger lots may result in higher cost it
11 is not clear that the property owner caused the costs. It may be that line is run
12 along a stretch of frontage to serve not only the property owner but also six other
13 households further down the block.

14 The Company also proposes programs that discount services to certain
15 customers. The High Load Factor Discount for LPS, The Economic
16 Redevelopment Rider and Development and Retention Riders provide a discount
17 to certain classes. Public Counsel does not oppose such discounts if they are
18 funded by shareholders.

19 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

20 A. Yes.

OPC CCOS Study Summary TOU Production Allocator

	TOTAL	RES	SGS	LGS	SPS	LPS	LTS
1 O & M EXPENSES	1,485,173,603	601,173,223	154,121,021	305,256,873	147,857,451	149,240,485	127,524,550
2 DEPREC. & AMORT. EXPENSE	289,611,658	132,461,105	34,742,447	56,778,892	24,633,834	24,603,586	16,391,794
3 TAXES	382,136,516	164,064,526	42,146,145	78,162,824	35,274,256	35,787,188	26,701,578
4							
5 TOTAL EXPENSES AND TAXES	2,156,921,777	897,698,854	231,009,613	440,198,589	207,765,540	209,631,258	170,617,922
6							
7 CURRENT RATE REVENUE	2,040,378,586	883,572,678	239,245,364	437,788,646	185,248,100	158,871,485	135,652,313
8 OFFSETTING REVENUES:							
9 Revenue Credits	622,976,364	233,164,978	63,188,111	135,216,337	65,090,751	66,655,426	59,660,762
10							
11 Total Offsetting Revenues	622,976,364	233,164,978	63,188,111	135,216,337	65,090,751	66,655,426	59,660,762
12							
11 TOTAL CURRENT REVENUE	2,663,354,950	1,116,737,657	302,433,475	573,004,982	250,338,851	225,526,911	195,313,075
12 CLASS % OF CURRENT REVENUE	100.00%	41.93%	11.36%	21.51%	9.40%	8.47%	7.33%
13							
14 OPERATING INCOME	506,433,173	219,038,803	71,423,861	132,806,394	42,573,310	15,895,652	24,695,153
15							
16 TOTAL RATE BASE	5,129,974,972	2,192,027,405	562,510,872	1,053,523,358	474,254,083	483,717,511	363,941,743
17							
18 IMPLICIT RATE OF RETURN	9.87%	9.99%	12.70%	12.61%	8.98%	3.29%	6.79%
19							
20 EQUAL RATE OF RETURN	9.87%	9.87%	9.87%	9.87%	9.87%	9.87%	9.87%
21							
22 REQUIRED OPERATING INCOME							
23 Equalized (OPC) Rates of Return	506,433,173	216,397,819	55,531,297	104,004,246	46,818,552	47,752,785	35,928,474
24							
25 TOTAL COST OF SERVICE	2,663,354,950	1,114,096,673	286,540,911	544,202,834	254,584,092	257,384,044	206,546,396
26 CLASS % of COS	100.00%	41.83%	10.76%	20.43%	9.56%	9.66%	7.76%
27							
28 MARGIN REVENUE REQUIRED							
29 to Equalize Class ROR - Revenue Neutral	2,663,354,950	1,114,096,673	286,540,911	544,202,834	254,584,092	257,384,044	206,546,396
30							
31 COS INDICATED REVENUE NEUTRAL SHIFT	(0)	(2,640,984)	(15,892,564)	(28,802,148)	4,245,242	31,857,133	11,233,321
32 % REVENUE NEUTRAL RATE INCREASE	0.00%	-0.30%	-6.64%	-6.58%	2.29%	20.05%	8.28%
33 CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	43.17%	10.95%	20.04%	9.29%	9.35%	7.20%

OPC CCOS Study Summary - A&3CP Production Demand Allocator

		TOTAL	RES	SGS	LGS	SPS	LPS	LTS
1	O & M EXPENSES	1,485,173,603	626,924,864	157,047,929	299,358,677	142,187,718	141,182,435	118,471,979
2	DEPREC. & AMORT. EXPENSE	289,611,858	140,049,380	35,604,924	55,040,862	22,963,125	22,229,108	13,724,259
3	TAXES	382,136,516	176,067,348	43,510,374	75,413,679	32,631,597	32,031,337	22,482,181
5	TOTAL EXPENSES AND TAXES	2,156,921,777	943,041,592	236,163,227	429,813,218	197,782,441	195,442,879	154,678,419
7	CURRENT RATE REVENUE	2,040,378,586	883,572,678	239,245,364	437,788,646	185,248,100	158,871,485	135,652,313
8	OFFSETTING REVENUES:							
9	Revenue Credits	622,976,364	259,946,738	66,232,101	129,082,201	59,194,218	58,275,037	50,246,070
11	Total Offsetting Revenues	622,976,364	259,946,738	66,232,101	129,082,201	59,194,218	58,275,037	50,246,070
11	TOTAL CURRENT REVENUE	2,663,354,950	1,143,519,417	305,477,465	566,870,847	244,442,317	217,146,522	185,898,383
12	CLASS % OF CURRENT REVENUE	100.00%	42.94%	11.47%	21.28%	9.18%	8.15%	6.98%
14	OPERATING INCOME	506,433,173	200,477,824	69,314,238	137,057,629	46,659,876	21,703,643	31,219,963
16	TOTAL RATE BASE	5,129,974,972	2,354,380,854	580,963,816	1,016,337,675	438,508,765	432,914,837	306,869,025
18	IMPLICIT RATE OF RETURN	9.87%	8.52%	11.93%	13.49%	10.64%	5.01%	10.17%
20	EQUAL RATE OF RETURN	9.87%	9.87%	9.87%	9.87%	9.87%	9.87%	9.87%
22	REQUIRED OPERATING INCOME							
23	Equalized (OPC) Rates of Return	506,433,173	232,425,416	57,352,979	100,333,260	43,289,760	42,737,525	30,294,232
25	TOTAL COST OF SERVICE	2,663,354,950	1,175,467,008	293,516,206	530,146,478	241,072,201	238,180,404	184,972,652
26	CLASS % of COS	100.00%	44.13%	11.02%	19.91%	9.05%	8.94%	6.95%
28	MARGIN REVENUE REQUIRED							
29	to Equalize Class ROR - Revenue Neutral	2,663,354,950	1,175,467,008	293,516,206	530,146,478	241,072,201	238,180,404	184,972,652
31	COS INDICATED REVENUE NEUTRAL SHIFT	(0)	31,947,592	(11,961,258)	(36,724,369)	(3,370,116)	21,033,882	(925,731)
32	% REVENUE NEUTRAL RATE INCREASE	0.00%	3.62%	-5.00%	-8.39%	-1.82%	13.24%	-0.68%
33	CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	44.87%	11.14%	19.66%	8.91%	8.82%	6.60%

Table 3. Non-Coincident Peak (NCP) @ Generation (Converted to MWh)						
Month	Residential	SGS	LGS	SPS	LPS	LTS
Apr-05	2049	727	1372	609	669	480
May-05	2598	829	1506	733	701	480
Jun-05	3960	984	1632	711	621	480
Jul-05	4386	1004	1765	728	730	478
Aug-05	4187	979	1690	735	684	473
Sep-05	3855	939	1689	735	692	464
Oct-05	2888	887	1647	739	713	474
Nov-05	2489	718	1365	606	568	479
Dec-05	3069	753	1419	606	552	482
Jan-06	2771	678	1257	577	533	482
Feb-06	3124	707	1308	595	540	482
Mar-06	2549	687	1218	579	499	482

Table 4. Average & Excess Allocator		
Class	3 Summer NCP	3 High NCP
RES	47.16%	46.70%
SGS	11.23%	11.14%
LGS	19.52%	19.59%
SPS	8.42%	8.50%
LPS	7.94%	8.30%
LTS	5.72%	5.77%