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Witness: Paul M. Normand
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Case No.: ER-2010-0356
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-0356

REBUTTAL TESTIMONY

OF

PAUL M. NORMAND

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**Kansas City, Missouri
December 2010**

KCP&L Exhibit No. GMO 29
Date 2/17/11 Reporter als
File No. ER-2010-0356

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1	Description of Allocation Factors from NARUC Cost Allocation Manual

1 **Q: Did any party other than the Company and Staff prepare and file a CCOS in this**
2 **case?**

3 **A:** Yes. One additional witness prepared testimony and cost of service details which I will
4 be commenting on in this rebuttal testimony—Mr. Maurice Brubaker representing large
5 energy users served by GMO's MPS and LP operations.

6 **Q: Could you briefly show a comparison of the various CCOS presented in this filing?**

7 **A:** The following (Table 1) class cost of service rates of return for the provided studies:

8

Table 1

GMO CCOS ROR (%) Result Summaries

	----- MPS -----		----- L&P -----	
	KCP&L	Brubaker's Industrial	KCP&L	Brubaker's Industrial
Total Retail Jurisdiction	5.82	5.82	5.77	5.77
Residential	6.13	5.52	6.56	4.53
Small Gen. Service	7.95	7.64	13.51	11.88
Large Gen. Service	5.00	5.70	7.17	7.24
Large Power	4.01	5.81	3.75	6.11
Total Lighting	3.59	3.42	-0.67	3.33

Note: MPSC Staff utilized a different method to perform their study ROR not directly available.

9 **Q: What is the purpose of the CCOS study?**

10 **A:** The purpose of a CCOS study is to directly assign costs based on Company records or
11 allocate each relevant and identifiable component of cost on an appropriate basis in order
12 to determine the proper cost to serve the Company's customer classes under study.

13 **Q: How is this analysis used to determine customer rates?**

14 **A:** The results of the CCOS study are used to provide guidance in applying any overall rate
15 change to the Company's individual customer classes. Once the overall rate change is
16 assigned to the individual classes, the CCOS study can be used to examine individual rate

1 designs and make changes to the rate components of customer charge, demand charge,
2 and energy charge.

3 **Q: Is there a fundamental difference between the Staff's CCOS study approach and the**
4 **Company's CCOS study?**

5 A: Staff's overall approach to recognizing the importance of distinguishing various
6 generation fixed and variable costs by type of generation based on the Base, Intermediate,
7 and Peaking (BIP) method is consistent with the cost of service study that I presented.
8 By using the BIP method, Staff has also recognized the importance of production class
9 allocation by matching the use and benefit of almost 70% of GMO's costs of service. By
10 layering these fixed and variable costs and synchronizing their respective class allocation
11 factors, a much more robust cost responsibility assignment is achieved. (See Staff
12 Report, pages 12-16.) Contrary to Mr. Brubaker's assertion, this approach to production
13 allocation is well recognized in the industry, and I have used this approach as well as
14 similar methods for over 30 years. Admittedly, the method does require more data and
15 preparation than the more simplistic 4 CP method; however the additional effort is
16 warranted to properly allocate major base load production plants to customer classes. I
17 should also note that I have never advocated the use of a 4 CP production allocator.
18 Attachment 1 is a description of the various production allocation factors taken from the
19 NARUC Cost Allocation Manual (1992).

20 My disagreement with respect to Staff's production approach is primarily in the
21 second step with respect to the cost allocations to customer classes once the identification
22 by type of generation was identified as follows:

1

Table 2

<u>Production Plant</u>	<u>Staff</u>	<u>GMO</u>
Base Units	Annual Energy	Base Energy
<i>Comment: Staff's approach double dips by using total annual energy.</i>		
Intermediate Units	N/A	N/A
Peaking Units	4 NCP Less Base & Immediate	4 CP Less Base & Intermediate (N/A)
<i>Comment: Staff magnifies the class allocations by basing their allocator on NCP levels versus a 4 CP level.</i>		

2 **Q: Why do you disagree with Staff's production class allocation approach in their**
3 **CCOS?**

4 **A:** The structure of Staff's approach was essentially quite similar to what I proposed for
5 GMO operations using the BIP; however the choice of annual energy for base unit
6 allocations and non-coincident peak or NCP data for the class allocation of peaking units
7 incorrectly skews the results somewhat from my study.

8 **Q: Please explain.**

9 **A:** As mentioned in the comments of Table 2, using annual energy requirements presents a
10 higher level of energy delivery than is typically produced by base units. This can be
11 noted by observing Figures 3 and 6 where several months of the year are well above a
12 base portion of energy delivery commonly associated with base units. The use of annual
13 energy results in a double dip allocation of base units to lower load factor classes. This
14 can also be noted by reviewing the data from each study as follows:

	<u>MPS</u>	<u>L&P</u>
Energy 1 (Annual Average)	722,408	263,656
Dem 1A (Base Average)	655,410	223,058

1 In addition, the use of NCP data serves to incorrectly increase the cost allocation to the
2 Residential class for what are total integrated system costs. This is because utilities
3 dispatch generating capacity to match hourly peaks. NCP methods are traditionally
4 utilized for allocation of distribution plant where it is desirable to recognize the higher
5 undiversified demands imposed on facilities located closer to customers. However, class
6 peaks by themselves have little to do with hourly generating resource requirements.

7 **Q: And what is the outcome of this difference with respect to the results of Staff study?**

8 A: As mentioned in the comment of Table 1, Staff did not produce a rate of return as part of
9 their study so direct comparison with the other studies is not directly available. Staff
10 chose to represent the classes with respect to their revenue deficiencies. Accordingly, the
11 Staff study shows deficiencies by class. While these amounts cannot be directly
12 compared to the values in Table 1, they do provide a sense that the NCP allocations used
13 within the BIP structure along with the annual energy allocator for base units have tended
14 to shift costs from the large, energy users to the residential customers.

15 **Q: Have you reviewed the direct testimony of Mr. Brubaker?**

16 A: Yes, I have.

17 **Q: Are there any fundamental differences between Mr. Brubaker's CCOS study
18 approach and the Company's CCOS study?**

19 A: Yes, Mr. Brubaker provides a modified version of my study, and he chose to limit his
20 presentation to the major classes. Since his study does not break down costs by season or
21 by any further detail than Class level, the study provides very limited insight into any
22 credible rate design proposal. Mr. Brubaker also proposes different production and
23 transmission allocation methods.

1 **Q: Do you agree with his recommended use of a 4 CP allocation from production and**
2 **transmission facilities?**

3 A: No, I do not. The recommendation to use a 4 CP, 4 NCP, or Average and Excess (A&E)
4 allocation has very limited use in the allocation process especially for production
5 facilities. Unless all customers exhibit the same usage characteristics or all production
6 facilities exist as only peaking types with the same cost structures, advocating a 4 CP or 4
7 NCP class allocation produces rather large cost allocation shifting and inequities.
8 Attempts to classify these costs as fixed and ignoring the hourly energy capabilities
9 completely mask their very cost justification which is to produce energy and is an integral
10 part of the planning process.

11 **Q: Why is it important that production allocation methods such as the BIP be**
12 **reasonable?**

13 A: The use of a production stacking approach such as the BIP to the class allocation for the
14 largest portion (approximately 67%) of a utility's costs is by far the most representative
15 procedure that mirrors both the planning as well as the operation of any utility's
16 production facilities.

17 Utilities must provide energy for all hours of the year (Figure 1 – MPS and Figure
18 4 – L&P) based on a load duration curve which is simply the combined hourly usage of
19 all customers. To accomplish this, the overall resource planning effort is quite complex
20 and considers a myriad of costs and engineering factors associated with planning.

21 The BIP method allows for a more complete recognition of the dual nature of
22 generating resources and provides a more structured and precise way to model the costs
23 and develop appropriate class allocators for production plant.

1 As Figures 2 – MPS and 5 – L&P show, the annual load duration curve is
2 segmented by horizontal partitions (dashed lines) to identify various energy threshold
3 requirements that will be provided by each GMO operation from their available
4 generation resources. Figures 2 – MPS and 5 – L&P also show the class allocations that I
5 have recommended as appropriate for the corresponding production facilities. Figures 3
6 – MPS and 6 – L&P present a separate representation of Figures 1 through 4 which
7 represents MPS and L&P's monthly coincident peaks with the four (4 CP) and twelve (12
8 CP) identified as dashed lines. A review of these figures clearly demonstrates that a
9 simple 4 CP or 4 NCP approach is totally inappropriate for either production or
10 transmission cost allocation to customer classes.

11 Finally, the BIP method introduces reasonable and sufficient detail into the
12 production cost causation to allow a detailed examination of seasonal costs and any
13 resulting seasonal pricing evaluations. More importantly, the BIP procedure
14 synchronizes the different fixed and variable costs associated with the GMO production
15 resources in achieving a more equitable class allocation.

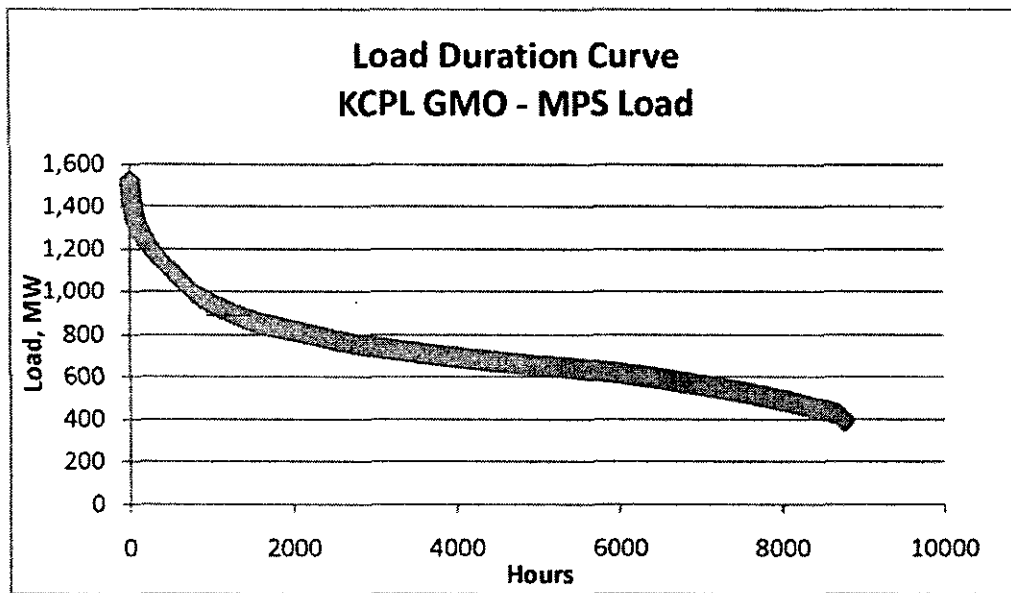


Figure 1

1

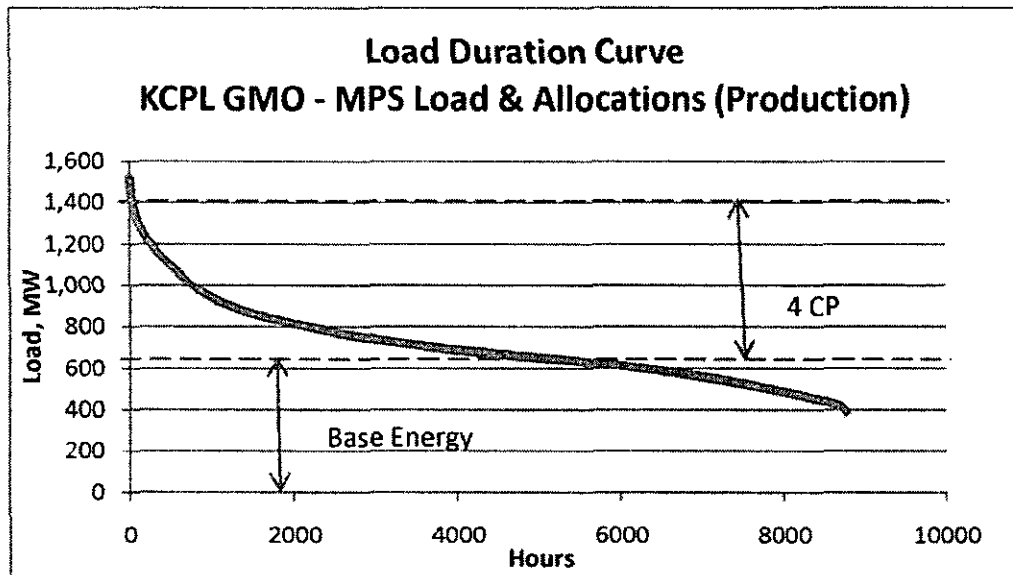


Figure 2

2

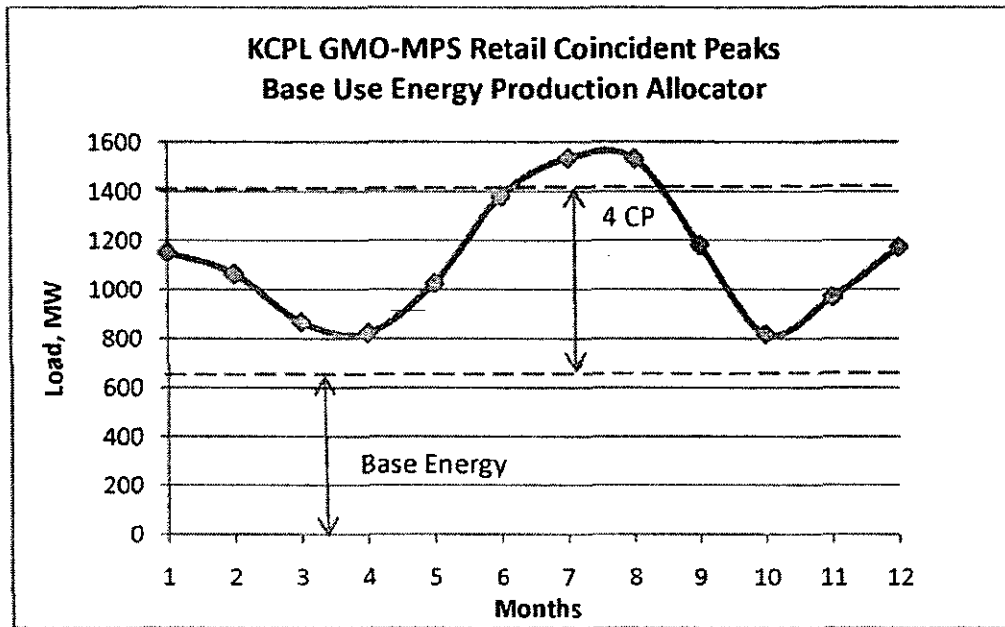


Figure 3

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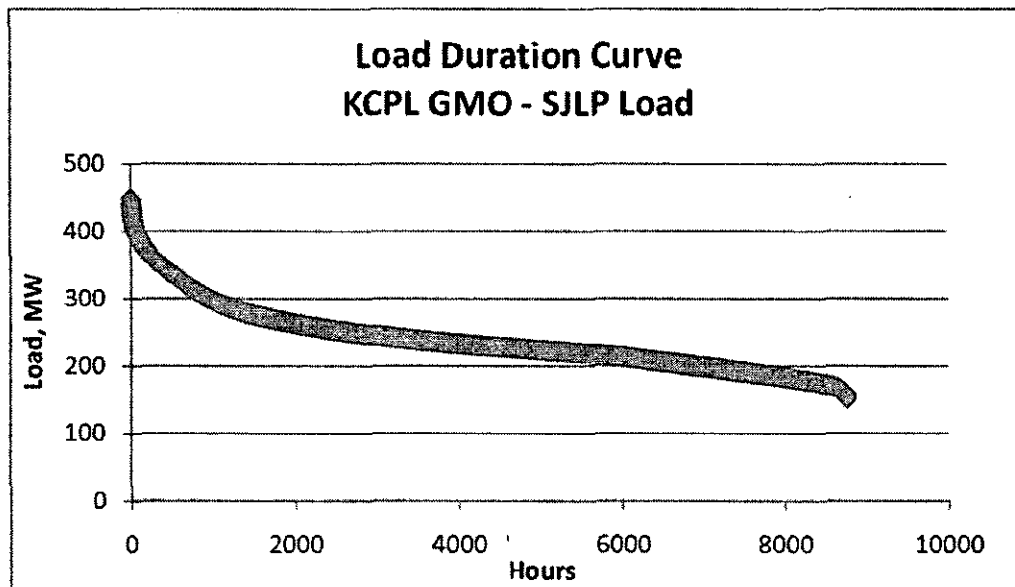


Figure 4

2

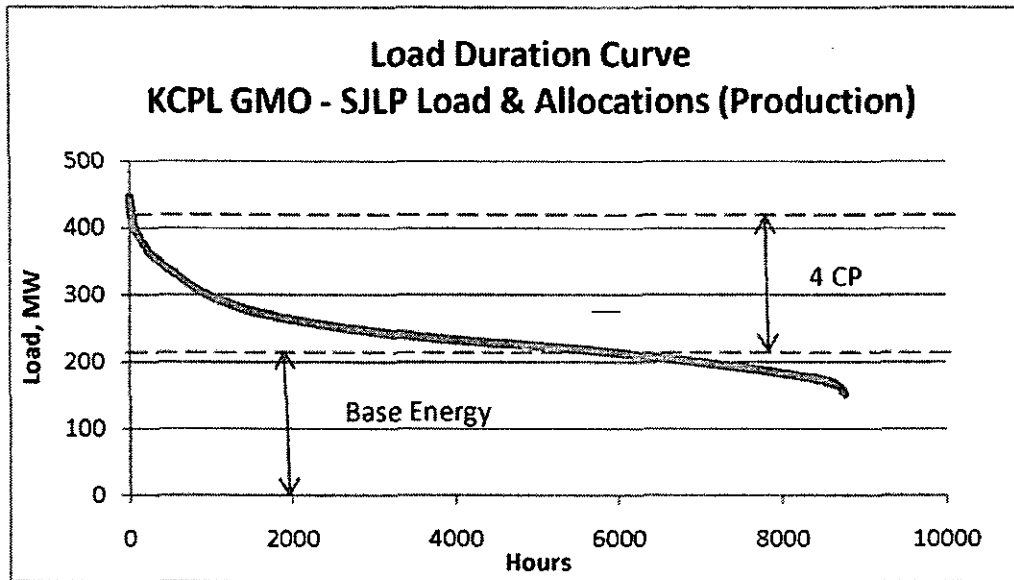


Figure 5

1

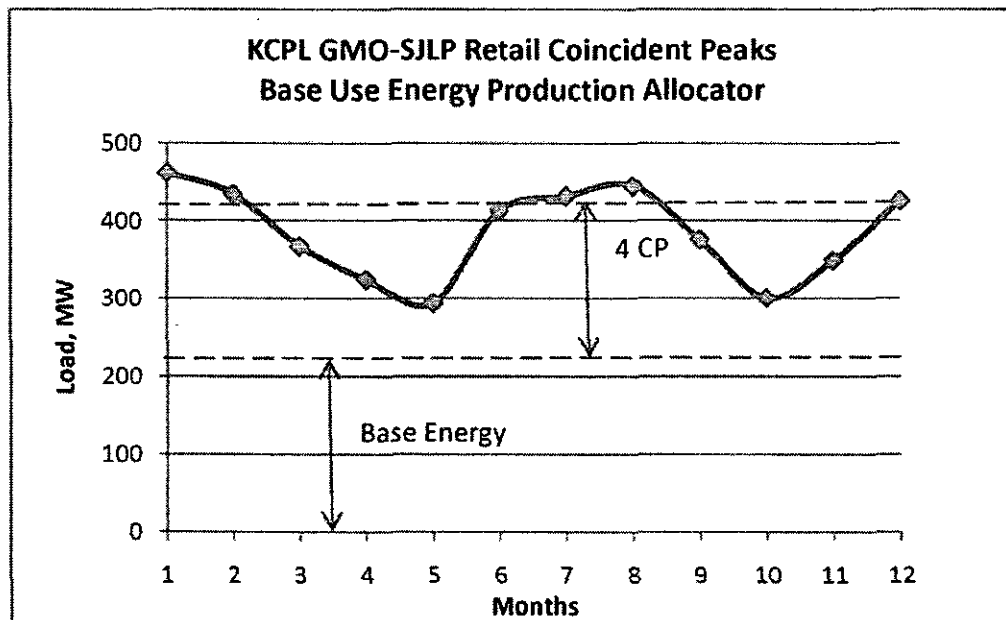


Figure 6

2

1 Q: What is another important aspect in the allocation of production plant?

2 A: From both a planning and operation point of view, there are two costs that represent
3 production facilities: fixed and variable. Unless these two costs are synchronized in the
4 allocation process, a potentially severe and material misallocation will occur in class cost
5 allocation. This can be clearly evidenced by simply reviewing my Schedule PMN-3 A
6 and B of my Direct Testimony at the Uniform Rate of Return (9.00%) section (MPS-3A
7 page 19 and LP-3B page 23). The various unbundled costs which make up the total
8 revenue requirement for the Company based on the cost of service assumptions included
9 in the model are as follows:

10

Table 3

	-----MPS-----		-----L&P-----	
	<u>(\$M)</u>	<u>%</u>	<u>(\$M)</u>	<u>%</u>
<u>Demand</u>				
Production	185.2	30.8	65.2	35.9
Transmission	55.0	9.2	7.1	3.9
Distribution	110.3	18.4	26.6	14.7
Total Demand	350.5	58.3	98.9	54.5
<u>Energy</u>	203.6	33.9	69.3	38.2
<u>Customer</u>	46.8	7.8	13.2	7.3
Total Company	600.9	100.0	181.4	100.0
Total Production	388.8	64.7	134.5	74.1

11 The total production-related costs equal 32% (Demand) plus 35% (Energy), or
12 67% of total costs. Allocating 32% of all revenue requirements on simply one, two or
13 four coincident peaks is unadvisable and will distort the class allocation away from larger
14 energy users and, more importantly, deviates from the planning and operation process.

1 Tables 4A and 4B, below, summarize these relationships and show the percent
 2 responsibility related to 4 CP versus energy use (column 5).

3 **Table 4A – MPS**

**4 CP AND ENERGY COMPARISON
 (with losses)**

<u>Class</u>	<u>4 CP (MW)</u>	<u>%</u>	<u>Energy @ Gen w/Losses (MWH)</u>	<u>% Energy</u>	<u>MWH per 4CP MW</u>
	(1)	(2)	(3)	(4)	(5) = (3) / (1)
Residential	844.5	60.0%	2,979,524	47.5%	3,528.2
Small GS	169.7	12.1%	868,269	13.8%	5,115.9
Large GS	168.3	12.0%	963,973	15.4%	5,729.4
Large Power	224.1	15.9%	1,466,383	23.4%	6,544.9
Total Excl Lighting	1,406.5	100.0%	6,278,150	100.0%	4,463.6

5 **Table 4B – L&P**

**4 CP AND ENERGY COMPARISON
 (with losses)**

<u>Class</u>	<u>4 CP (MW)</u>	<u>%</u>	<u>Energy @ Gen w/Losses (MWH)</u>	<u>% Energy</u>	<u>MWH per 4CP MW</u>
	(1)	(2)	(3)	(4)	(5) = (3) / (1)
Residential	196.9	47.3%	864,771	37.8%	4,392.9
Small GS	21.2	5.1%	116,097	5.1%	5,464.6
Large GS	71.4	17.2%	421,065	18.4%	5,900.2
Large Power	126.5	30.4%	883,552	38.7%	6,982.5
Total Excl Lighting	416.0	100.0%	2,285,484	100.0%	5,493.9

6
 7 Tables 4A and 4B present class results that clearly show that the primary
 8 beneficiaries of production allocation factors based on a CP method are large energy
 9 users. Simply put, assigning a major portion of fixed costs based on a 4 CP allocation
 10 when these customers can only consume a smaller level of the energy is illogical. As can
 11 be noted in columns (5), large users use almost twice the energy per MW which is

1 primarily provided by base resources of GMO operations. Base units will operate at their
2 maximum capability for most available hours of the year, and peaking conditions will be
3 met by alternative resources. The BIP approach is the only production allocation that
4 properly mirrors the planning and generation of a power system.

5 **Transmission Plant**

6 **Q: Do you have similar concerns with transmission plant?**

7 A: Yes, I do. While the transmission component of total revenue requirements is much less
8 (7.9%), the basic arguments are the same with respect to the Company's transmission
9 facilities. This is also clearly shown on Figures 3 and 6, attached.

10 **Q: What allocation factor did you propose for transmission plant?**

11 A: I proposed the use of a 12 CP which considers all of the Company's monthly peaks as the
12 most representative of the Company's entire transmission plant investments. In doing so,
13 my approach provides the following benefits:

14 1 – Well recognized method;

15 2 – Easily replicated;

16 3 – Much more stable and equitable than the limited CP methods;

17 4 – 12 CP better captures the backbone high voltage system;

18 5 – Inherent in this 12 CP method is an energy association that is implied; and

19 6 – Excludes the inadequate allocation of total energy as proposed by Staff.

20 **Q: Since your review of Staff's and other intervenors' testimonies, do you still believe**
21 **the results of each GMO operation's CCOS study as proposed provide the most**
22 **reasonable results?**

1 A: Yes, I do. My approach is more realistic and more closely matches the planning and
2 operations of GMO's power system for all functional cost levels. This same approach
3 was recently proposed and filed in KCP&L's Kansas filing, Docket No. 10-KCPE-415-
4 RTS.

5 **Q: Did the Commission in Kansas accept your approach?**

6 A: Yes, in the final order dated November 22, 2010 the Commission endorsed my approach
7 and stated that "the BIP method provides more structure for modeling costs of production
8 plant and use of generating resources. It also allows for a detailed examination of
9 seasonal costs and corresponding seasonal rate allocations." Attributes that are also
10 directly relevant to this case.

11 **Q: Did the other parties rely on their own CCOS study results in proposing a rate
12 design?**

13 A: Yes, despite the issues previously identified, Staff and the Industrials utilized their studies
14 to propose rate design changes.

15 **Q: Does that conclude your testimony?**

16 A: Yes, it does.

