

Exhibit No.:
Issues: Class Cost-of-Service
Rate Design
Witness: Michael S. Scheperle
Sponsoring Party: MO PSC Staff
Type of Exhibit: Surrebuttal Testimony
File No.: ER-2010-0356
Date Testimony Prepared: January 12, 2011

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

SURREBUTTAL TESTIMONY

OF

MICHAEL S. SCHEPERLE

KCP&L GREATER MISSOURI OPERATIONS COMPANY

FILE NO. ER-2010-0356

*Jefferson City, Missouri
January 2011*

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of)
KCP&L Greater Missouri Operations)
Company for Approval to Make Certain)
Changes in its Charges for Electric)
Service)

File No.: ER-2010-0356

AFFIDAVIT OF MICHAEL S. SCHEPERLE

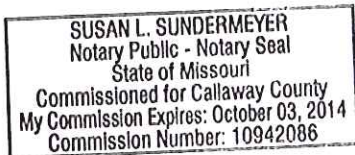
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Michael S. Scheperle, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 8 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Michael S. Scheperle

Michael S. Scheperle

Subscribed and sworn to before me this 12th day of January, 2011.



Susan L. Sundermeyer
Notary Public

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1 **SURREBUTTAL TESTIMONY**

2 **OF**

3 **MICHAEL S. SCHEPERLE**

4 **KCP&L GREATER MISSOURI OPERATIONS COMPANY**

5 **FILE NO. ER-2010-0356**

6
7 Q. Please state your name and business address.

8 A. My name is Michael S. Scheperle and my business address is Missouri Public
9 Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

10 Q. Are you the same Michael S. Scheperle who filed direct testimony in this
11 proceeding on December 1, 2010, both in question and answer format and as part of the
12 Missouri Public Service Commission Staff's (Staff) Rate Design and Class Cost-of-Service
13 Report, and who filed on December 17, 2010, rebuttal testimony in question and answer
14 format?

15 A. Yes, I am.

16 Q. What is the purpose of your surrebuttal testimony?

17 A. I respond to the Class Cost-of-Service (CCOS) rebuttal testimonies of (1)
18 KCP&L Greater Missouri Operations Company (GMO) witness Paul Normand regarding the
19 Production-Capacity allocator; (2) GMO witness Tim M. Rush regarding his rate design
20 recommendations; and (3) compare rate design recommendations by other parties.

21 **Production-Capacity Allocator**

22 Q. With regard to how Staff developed its Production-Capacity allocator by the
23 BIP method, Mr. Normand states on pages 5-6 of his rebuttal testimony that Staff's approach

1 is similar to his approach, but that Staff’s use of total annual energy “results in a double dip
2 allocation of base units to lower load factor classes” and that Staff’s use of NCP (non-
3 coincident peak) data “incorrectly increase[s] the cost allocation to the Residential class for
4 what are total integrated system costs.” Do you agree with Mr. Normand’s criticisms?

5 A. No. GMO uses the generating units it owns to meet 80% of the energy and
6 capacity needs of its MPS and L&P customers and purchased power contracts for the
7 remaining 20%. GMO’s purchased power contracts include Gray County Wind contract,
8 Nebraska Public Power District (NPDD) Cooper contract and spot. Staff considers the
9 generating units GMO owns together with its purchased power to be included in Staff’s base
10 allocation component of the BIP method, since GMO meets approximately 20% of GMO’s
11 customers’ energy and capacity needs with purchased power. By considering purchased
12 power in the base component, Staff is not using a higher level of energy delivery than is
13 typically produced by base units, Mr. Normand’s criticism. Furthermore, in its BIP method
14 for GMO Staff calculates both a base component and a peak component. GMO has no
15 intermediate generating facilities; therefore, the methodology for the intermediate component
16 has no impact when using the BIP method to derive Production-Capacity allocators for GMO.
17 The peak component is calculated by subtracting the already allocated base component.
18 Therefore, Staff does not double dip in its BIP methodology, as usage characteristics
19 (including purchases) are calculated in the base component, and the peak component simply
20 found by subtracting the already calculated base component.

21 Q. What about Mr. Normand’s criticism that Staff’s use of NCP data “incorrectly
22 increase[s] the cost allocation to the Residential class for what are total integrated system
23 costs”?

1 A. Both Staff's and GMO's BIP methods are based on classifying generating
2 facilities as either base facilities or peaking facilities (no intermediate component). GMO
3 classified the peak component based on coincident peak (CP) less base component. Staff
4 classified the peak component based on NCP less base component. Staff uses NCP
5 information to alleviate free ridership. Free ridership is when service rendered completely off-
6 peak is not assigned any responsibility for capacity costs. Street lights are not on during the
7 day and therefore would not be allocated any capacity costs at all if CP information is used as
8 GMO proposes. Because, Staff uses NCP information in the peak component, there is no free
9 ridership and the allocation factor is more stable and equitable method than using a CP
10 method.

11 **Rate Design Recommendations**

12 Q. What is GMO's response to Staff's rate design proposal?

13 A. In the rebuttal testimony of Mr. Rush GMO asks the Commission to ignore
14 Staff's proposed rate design and, instead, adopt GMO's request that its requested increase be
15 spread to all customer classes and all rate elements on an equal percentage basis.

16 Q. How does GMO support its rate design request?

17 A. They are not supported by GMO's own CCOS studies, which show that for
18 certain customer classes the rate schedule revenue responsibility of the class far exceeds
19 GMO's cost to serve the class (revenue exceeds cost to serve - Tables 3A and 3B, Paul
20 Normand, Direct Testimony, pages 20 & 21). Staff is not aware of any support for GMO's
21 rate design proposal.

22 Q. How would one determine whether the rate schedule revenue responsibility of
23 a class exceeds the utility's cost to serve the class?

1 A. One way to do this is by the use of the Index of Return. For example, GMO's
2 CCOS study shows for MPS a Small General Service (SGS) Index of Return of 1.37. GMO's
3 study shows for L&P a General Service (GS) Index of Return of 2.34 and a Large General
4 Service (LGS) Index of Return of 1.24. An Index of Return above 1.0 indicates the revenue
5 responsibility of the customer class exceeds GMO's cost to provide service to that class;
6 therefore, to equalize revenue responsibility and cost-of-service, rate revenue responsibility
7 should be reduced for these classes. GMO's CCOS study shows for MPS an Index of Return
8 of 0.69 for Large Power Service (LPS) and for L&P an Index of Return of .65 for LPS. These
9 Indices of Return indicate that GMO's cost to serve the LPS classes exceeds the revenue
10 responsibility of these classes and therefore, that the rates for those classes, on an overall
11 revenue neutral basis, should be increased.

12 Q. Would an equal percentage increase lessen or eliminate these Index of Return
13 variations?

14 A. No. The way to lessen or eliminate these Index of Return variations is to adopt
15 Staff recommendations that, instead of increasing the rates (revenue responsibility) of each
16 class by the same percentage, adjustments should be made to move the revenue responsibility
17 of each customer class closer to GMO's cost to serve that class, as determined by an adequate
18 CCOS study.

19 Q. Are the concerns with Staff's rate design proposal Mr. Rush expresses on page
20 4 of his rebuttal testimony, i.e., "that it did not take into account the customer shifts for the
21 non-residential classes that will likely result from its proposal" and it "does not explore the
22 disruption of the relationship between classes, leading to the potential rate switching impact
23 of its proposal" valid?

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Michael S. Scheperle

1 A. No. I believe Mr. Rush is wrong. For example, Staff recommended
2 the same percentage increase for numerous non-residential rate schedules. Staff
3 recommended the system average increase be applied to the following MPS rate
4 schedules:

- 5 • Small General Service – Primary and Secondary
- 6 • Large General Service – Primary
- 7 • Large General Service – Secondary
- 8 • Large Power Service – Primary
- 9 • Large Power Service – Secondary

10 Since each component of each rate schedule receives the same percentage increase, no
11 rate switching should occur.

12 Staff recommended the system average increase less 0.93% be applied to the
13 following rate schedules for MPS:

- 14 • Small General Service – No Demand
- 15 • Small General Service – Short Term without Demand

16 Customers who take service under the SGS (No Demand and Short Term without
17 Demand) rate schedules are very small customers, where the demand is assumed to not
18 exceed 30 kW. The customers taking service under all other non-residential rate schedules
19 (excluding lighting) have demand meters and their capacity demands exceed 30 kW. Since
20 usage characteristics dictate customer qualifications for certain rate schedules, no rate
21 switching should occur between SGS (No demand) and SGS (Short Term without Demand)
22 as, under Staff's rate design proposal, each component of these rate schedules would receive
23 the same percentage increase, and the demands of these customers would not exceed 30 kW.

1 Q. Do you agree with Mr. Rush that Staff's rate design recommendation for L&P
2 may lead to potential rate switching by L&P customers?

3 A. No. I believe Mr. Rush is wrong for L&P also. For example, Staff recommends
4 the same percentage increase be applied to numerous non-residential rate schedules. Staff
5 recommends the same increase percentage be applied to the following L&P rate schedules
6 (system average less 2.1%):

- 7 • General Service – General Use
- 8 • General Service – Limited Demand
- 9 • General Service – Short Term
- 10 • General Service – Separate Meter SH/WH
- 11 • Large General Service – Primary, Secondary and Substation

12 Since each component of each rate schedule receives the same percentage increase, no
13 rate switching should occur.

14 Staff recommends the system average increase plus 0.83% be applied to the following
15 non-residential rate schedule.

- 16 • Large Power Service – Time of Use (Primary, Secondary, Substation,
17 Transmission)

18 The LPS rate schedule is available to very large commercial or industrial customers
19 who have a very high load factor, and the customer must have, or be willing to assume, a
20 minimum demand of 500 kW. GS (General Use) and LGS customers only have to be willing
21 to assume, a minimum demand of 40 kW. Any rate switching that might occur should be
22 minimal. Staff recommends that it is time to start moving the revenue responsibilities of
23 customer classes (generally correlating to rate schedules) closer to GMO's cost to serve them.

1 **Comparison of Rate Design Recommendations**

2 Q. Have you prepared a summary of the rate design proposal the parties have
3 presented in their prefiled direct and rebuttal cases?

4 A. Yes. For ease of reference, in Schedule MSS-S1 (MPS) and Schedule MSS-S2
5 (L&P), I have summarized the revenue neutral results for all the parties that presented rate
6 design testimony in their direct or rebuttal cases. Included in each schedule is: identification
7 of the sponsoring party, the approximate percentage change by rate schedule, and footnotes
8 detailing each proposal based on a Commission ordered increase to GMO's rates in this case.

9 Q. What specifically does the Commission need to order to implement Staff's
10 recommendation on the issues you've addressed in prefiled testimony?

11 A. The Commission would need to order the following changes to the MPS rate
12 schedules:

13 1. The following MPS customer classes receive the system average increase, as the
14 revenue responsibilities of these customer classes are close to GMO's cost to serve
15 them:

- 16 • Residential – Regular
- 17 • Residential – Space Heating
- 18 • Small General Service – Secondary and Primary
- 19 • Large General Service – Primary
- 20 • Large General Service – Secondary
- 21 • Large Power Service – Primary
- 22 • Large Power Service – Secondary
- 23 • Special – Thermal Energy Storage

24 2. The following MPS customer classes receive no increase for the first \$5 million,
25 because their current revenue responsibilities exceed GMO's cost of serving them. For
26 any Commission ordered increase above \$5 million, that the additional amount above

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1 \$5 million be allocated on an equal percentage basis to the following MPS customer
2 classes:

- 3 • Residential – Other
- 4 • Small General Service – No Demand
- 5 • Small General Service – Short Term without Demand

- 6 3. The MPS Lighting customer class receives the system average percent increase plus an
7 additional approximate 1% increase, because the current revenue responsibility of that
8 customer class is less than GMO's cost to serve it.

9 And, Staff recommends the following changes to the L&P rate schedules:

- 10 1. Allocate the first \$3 million of any Commission ordered increase as an equal percentage
11 increase to the rate schedules for the following L&P customer classes, as their revenue
12 responsibilities are less than GMO's cost to serve them:

- 13 • Residential – Regular
- 14 • Residential – Other
- 15 • Residential – Space Heating
- 16 • Large Power Service – Time of Use (TOU) for Primary, Secondary, Substation
17 and Transmission (1 rate schedule)

- 18 2. Allocate any Commission ordered increase above \$3 million to all L&P rate schedules on
19 an equal percentage basis.

20 Additionally, Staff recommends that GMO:

- 21 1. Complete its evaluation of Light Emitting Diode (LED) Street and Area Lighting (SAL)
22 systems and, no later than 12 months of the effective date of the Commission's Report and
23 Order in this case, file proposed LED lighting tariff sheet(s) to offer a LED SAL demand-
24 side program, unless GMO's analysis shows that a LED SAL demand-side program would
25 not be cost-effective, and if a LED SAL demand-side program is not cost-effective, update
26 the Staff as to the finding's rationale and file a proposed tariff sheet(s) that would provide
27 LED SAL services at cost to its customers.

28 Q. Does this conclude your surrebuttal testimony?

29 A. Yes, it does.