

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE)
GAS AND ELECTRIC COMPANY FOR AN) CASE NO.
ADJUSTMENT OF ITS ELECTRIC AND GAS) 2016-00371
RATES AND FOR CERTIFICATES OF PUBLIC)
CONVENIENCE AND NECESSITY)

PREFILED SUPPLEMENTAL TESTIMONY OF
NEAL TOWNSEND
ON BEHALF OF THE KROGER CO.

April 14, 2017

1 SUPPLEMENTAL TESTIMONY OF NEAL TOWNSEND

2 **Introduction**

3 **Q. Please state your name and business address.**

4 A. My name is Neal Townsend. My business address is 215 South State Street, Suite
5 200, Salt Lake City, Utah, 84111.

6 **Q. By whom are you employed and in what capacity?**

7 A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a
8 private consulting firm specializing in economic and policy analysis applicable to energy
9 production, transportation, and consumption.

10 **Q. Are you the same Neal Townsend who pre-filed direct testimony in this proceeding
11 on behalf of The Kroger Co. (“Kroger”)?**

12 A. Yes, I am.

13 **Q. What is the purpose of your supplemental testimony?**

14 A. My supplemental testimony addresses the results of the revised cost-of-service
15 studies provided by LG&E in its March 28, 2017 Supplemental Response to Commission
16 Staff’s First Request for Information Question No. 53, and the rate spread implications of
17 the revised studies.

18 **Q. Please summarize the conclusions of your supplemental testimony.**

19 A. I continue to recommend that LG&E’s rate spread be modified such that each of
20 the commercial-type classes (General Service, Power Service – Secondary, Power
21 Service – Primary, Time-of-Day Secondary) contributes to the interclass subsidy at an
22 *equal percentage* of its base rates, subject to the constraints that no class receive a rate
23 decrease relative to current rates nor receive an increase that is more than 2.5% above the

1 average retail increase. The results of LG&E’s revised cost-of-service studies do not
2 cause me to modify my recommendation that Time-of-Day Secondary receive no rate
3 increase, because the rates for this class are already far above its costs. In fact, the
4 revised cost-of-service studies result in higher rates of return for Time-of-Day Secondary
5 relative to LG&E’s original studies. However, the revised cost-of-service studies do
6 cause me to slightly adjust my recommended rate increases for the General Service and
7 Power Service – Secondary rate classes.
8

9 **Revised Cost-of-Service Study Results**

10 **Q. What is the nature of LG&E’s revisions to its cost-of-service studies?**

11 A. LG&E has revised the hourly load data used to develop the demand allocation
12 factors in both the modified Base-Intermediate-Peak (“BIP”) and the Loss of Load
13 Probability (“LOLP”) cost-of-service studies, based on errors identified in the Direct
14 Testimony of Stephen J. Baron on behalf of the Kentucky Industrial Utility Customers,
15 Inc. LG&E provided the revised cost-of-service studies in its March 28, 2017
16 Supplemental Response to Commission Staff’s First Request for Information Question
17 No. 53.¹

18 The most significant revision corrects an error in which all of the class load data
19 was erroneously re-ordered so that the highest loads occurred on the first day of each
20 month, and the lowest loads occurred on the last day of each month.² LG&E’s intention
21 was to align the daily load shape of the class loads to match the load shape projected for
22 the Forecasted Test Period ending June 30, 2018. This error understated the share of total

¹ LG&E’s revised hourly load data was provided in LG&E’s March 28, 2017 Supplemental Response to the Commission Staff’s Second Request for Information, Question No. 109.

² Direct Testimony of Stephen J. Baron, pp. 13-14.

load on peak days for some of the more weather-sensitive classes, and overstated the share of total load on peak days for some of the less weather-sensitive classes.³

Q. How do the results of the revised cost-of-service studies differ from those of LG&E's original studies?

A. The impact of correcting the hourly load data is greater for the LOLP study than the BIP study, due to the significant energy component included in the BIP study.⁴ Table NT-S-1, below, compares the class rates of return at current rates under the original and revised studies, for both the BIP and LOLP methods.

**Table NT-S-1
Class Rates of Return at Current Rates
Under Original and Revised BIP and LOLP Studies⁵**

Rate Class	BIP		LOLP	
	Original	Revised	Original	Revised
Residential Service	2.65%	2.62%	2.04%	1.74%
General Service	7.34%	7.37%	8.65%	8.42%
Power Service - Secondary	8.84%	8.89%	9.70%	10.14%
Power Service - Primary	6.49%	6.58%	7.03%	7.80%
Time-of-Day Secondary	11.92%	12.03%	11.90%	12.79%
Time-of-Day Primary	4.57%	4.52%	5.39%	6.16%
Retail Transmission Service	3.48%	3.70%	4.83%	6.61%
Lighting Energy Service	8.01%	6.85%	17.55%	15.12%
Traffic Energy Service	7.62%	7.27%	10.39%	9.91%
Lighting Rate RLS & LS	5.39%	5.27%	6.01%	5.90%
Special Contract 1	1.70%	2.05%	2.18%	4.08%
Special Contract 2	2.45%	2.45%	3.11%	4.01%
Total All Classes	4.92%	4.92%	4.92%	4.92%

In general, classes producing below-average rates of return at current rates under the original study continue to do so under the revised study, as is the case for classes

³ Rebuttal Testimony of William Steven Seelye, p. 27.

⁴ LG&E March 28, 2017 Supplemental Response to Commission Staff's First Request for Information Question No. 53.

⁵ LG&E March 28, 2017 Supplemental Response to Commission Staff's First Request for Information Question No. 53.

1 producing above-average rates of return. The one exception is Retail Transmission
2 Service, which produces a slightly below-average rate of return at current rates under the
3 Original LOLP study, but produces an above-average rate of return under the Revised
4 LOLP study.

5
6 **Rate Spread**

7 **Q. Has LG&E modified its recommended rate spread based on the revised cost-of-**
8 **service studies or intervenor positions in direct testimony?**

9 A. No. As explained in the Rebuttal Testimony of W. Steven Seelye, LG&E
10 contends that the cost-of-service results did not change enough to warrant a change in the
11 Company's proposed allocation of the revenue increase, which is contained within
12 narrow bandwidth of percentage increases.⁶ Consistent with its proposal in its Direct
13 filing, LG&E continues to propose increases ranging from only approximately 1.0%
14 above the system average increase to 1.8% below the system average increase of 8.52%,⁷
15 with the exception of Lighting Energy Service, which is not proposed to receive an
16 increase. Table NT-S-2, below, presents the class rates of return after applying LG&E's
17 proposed rate increases based on the revised cost-of-service studies, alongside LG&E's
18 proposed revenue increase percentages.

⁶ Rebuttal Testimony of William Steven Seelye, pp. 32-36.

⁷ The system average increase of 8.52% includes LG&E's proposed change to Curtailable Service Rider revenue, consistent with LG&E's depiction in the Direct Testimony of William Steven Seelye, p. 8, Table 1. If the change to Curtailable Service Rider revenue (and Other Operating Revenue) is excluded, LG&E's proposed overall system average increase is 8.31%, and LG&E's proposed class rate increases range from 1.2% above to 1.6% below the system average increase.

Table NT-S-2
Class Rates of Return at LG&E Proposed Rates and
LG&E Proposed Revenue Increase Percentages

Rate Class	Rate of Return on Rate Base		LG&E Rev. Increase ¹⁰
	Revised BIP ⁸	Revised LOLP ⁹	
Residential Service	4.87%	3.81%	9.54%
General Service	9.89%	11.11%	7.15%
Power Service - Secondary	11.41%	12.85%	7.05%
Power Service - Primary	9.46%	10.92%	8.25%
Time-of-Day Secondary	14.54%	15.38%	6.75%
Time-of-Day Primary	7.19%	9.19%	8.22%
Retail Transmission Service	6.63%	10.29%	8.45%
Lighting Energy Service	6.82%	15.08%	0.00%
Traffic Energy Service	9.82%	12.92%	6.76%
Lighting Rate RLS & LS	6.71%	7.41%	8.21%
Special Contracts	4.76%	7.12%	8.69%
Total All Classes	7.31%	7.31%	8.52%

As shown in Table NT-S-2, after applying LG&E’s proposed rate increases, wide disparities in class rates of return continue to exist. The rate of return for Time-of-Day Secondary Service after LG&E’s proposed increase is significantly higher than any other class under both revised studies.

The wide disparities in class rates of return are indicative of significant cross-subsidies among customer classes. The subsidies embedded in LG&E’s rate spread proposal are shown in Table NT-S-3, below. This table also shows that there are wide disparities in terms of the *degree* of subsidies that different classes are called upon to pay. For example, the General Service class is proposed to pay a subsidy that ranges from 6.9% to 9.5% of its base rates, depending on the cost-of-service study that is used.

⁸ Data Source: LG&E March 28, 2017 Supplemental Response to Commission Staff’s First Request for Information Question No. 53, attachment 2016_PSC_DR1_LGE_Attach_to_Q53_Supplemental_-_LGEE_COSS_-_BIP_-_032317_Load_Data, “Summary of Returns” tab.

⁹ LG&E March 28, 2017 Supplemental Response to Commission Staff’s First Request for Information Question No. 53, 2016_PSC_DR1_LGE_Attach_to_Q53_Supplemental_-_LGEE_COSS_-_LOLP_-_032317_Load_Data, “Summary of Returns” tab.

¹⁰ Rebuttal Testimony of William Steven Seelye, p. 32, Table 6.

1 Meanwhile, the Time-of-Day Secondary class is proposed to pay a subsidy that ranges
 2 from 18.6% to 20.0% of its proposed rates, the greatest of any class as a percentage of
 3 proposed revenue. This means that LG&E's proposed rates for Time-of-Day Secondary
 4 are 23% to 25% above cost.¹¹ In my opinion, such an outcome is excessive and
 5 unreasonable. A reasonable rate spread should not result in gross inequities of this sort.

6 **Table NT-S-3**
 7 **Subsidies Paid/(Received) at LG&E's Proposed Rate Spread**
 8 **Under the BIP and LOLP Methods (Revised Studies)¹²**

Rate Class	LG&E Proposed Revenue	Subsidy Paid/(Received) \$ ¹³			Subsidy Paid/ -Received % ¹⁴		
		BIP	LOLP	Average ¹⁵	BIP	LOLP	Avg.
Residential Service	483,649,803	(45,976,125)	(72,372,774)	(59,174,450)	-9.5%	-15.0%	-12.2%
General Service	182,642,225	12,666,633	17,415,335	15,040,984	6.9%	9.5%	8.2%
Power Service - Secondary	176,526,765	19,311,109	24,240,584	21,775,847	10.9%	13.7%	12.3%
Power Service - Primary	13,570,842	784,862	1,214,913	999,888	5.8%	9.0%	7.4%
Time-of-Day Secondary	90,137,293	16,794,437	18,069,249	17,431,843	18.6%	20.0%	19.3%
Time-of-Day Primary	136,755,655	(514,213)	6,529,057	3,007,422	-0.4%	4.8%	2.2%
Retail Transmission Service	74,719,968	(1,397,142)	4,778,942	1,690,900	-1.9%	6.4%	2.3%
Lighting Energy Service	244,537	(2,689)	26,582	11,947	-1.1%	10.9%	4.9%
Traffic Energy Service	324,800	19,854	37,575	28,715	6.1%	11.6%	8.8%
Lighting Rate RLS & LS	25,309,553	(780,479)	117,491	(331,494)	-3.1%	0.5%	-1.3%
Special Contracts	11,167,899	(906,247)	(56,953)	(481,600)	-8.1%	-0.5%	-4.3%
Total All Classes	1,195,049,340	0	0	0	0.0%	0.0%	0.0%

9 **Q. In your Direct Testimony, you recommended a revenue allocation that would**
 10 **distribute the subsidy more equitably among the commercial-type classes. After**
 11 **reviewing the results of the revised cost-of-service studies, is that still your**
 12 **recommendation?**

¹¹ Based on the Revised studies, Time-of-Day Secondary's revenue at an equalized 7.31% rate of return is \$73,342,856 under the BIP method, and \$72,068,044 under the LOLP method.

¹² Curtailable Service Riders and Other Operating Revenues are not depicted in Table NT-S-3.

¹³ Subsidy Paid/(Received) \$ represents the difference between LG&E's proposed revenues and revenues at an equalized rate of return at LG&E's proposed total revenue requirement.

¹⁴ Subsidy Paid/-Received % calculated by dividing Subsidy Paid/Received \$ by LG&E Proposed Revenue.

¹⁵ Average column is the average of the revised BIP and revised LOLP study results.

1 A. Yes. I continue to recommend that LG&E's rate spread be modified such that
2 each of the commercial-type classes (General Service, Power Service – Secondary,
3 Power Service – Primary, Time-of-Day Secondary) contributes to the interclass subsidy
4 at an *equal percentage* of its base rates, subject to the constraints that no class receive a
5 rate decrease relative to current rates nor receive an increase that is more than 2.5%
6 above the average retail increase.

7 The results of LG&E's revised cost-of-service studies do not cause me to modify
8 my recommendation that Time-of-Day Secondary receive no rate increase, because the
9 rates for this class are already far above its costs. In fact, the revised cost-of-service
10 studies result in even higher rates of return for Time-of-Day Secondary relative to
11 LG&E's original studies. However, I have recalibrated my recommended increases for
12 the General Service and Power Service – Secondary rate classes based on the revised
13 studies, resulting in a slight modification to my recommended increases for these two
14 classes. Specifically, at LG&E's proposed revenue requirement, I recommend that
15 General Service receive a rate increase \$127,195 greater than I recommended in my
16 Direct Testimony, while Power Service – Secondary receive a rate increase that is
17 \$127,195 less.

18 My recommended rate spread (at LG&E's requested revenue requirement) is
19 presented in Exhibit NT-S-1 and is summarized in Table NT-S-4, below.

1
2
3

**Table NT-S-4
Kroger Recommended Rate Spread (Revised)
at LG&E's Requested Revenue Requirement**

Rate Class	Current Revenue	Kroger Recommended Revenue Change \$¹⁶	Kroger Recommended Revenue Change %	Subsidy Paid/ (Received) \$ Average COS¹⁷	Subsidy Paid/ -Received % Average COS
Residential Service	441,518,068	42,131,735	9.54%	(59,174,450)	-12.23%
General Service	170,461,520	18,432,014	10.81%	21,292,293	11.27%
Power Service - Secondary	164,895,598	10,756,909	6.52%	20,901,589	11.90%
Power Service - Primary	12,536,325	1,355,554	10.81%	1,320,924	9.51%
Time-of-Day Secondary	84,439,205	0	0.00%	11,733,755	13.90%
Time-of-Day Primary	126,370,424	10,385,231	8.22%	3,007,422	2.20%
Retail Transmission	68,895,503	5,824,465	8.45%	1,690,900	2.26%
Lighting Energy Service	244,537	0	0.00%	11,947	4.89%
Traffic Energy Service	304,220	20,580	6.76%	28,715	8.84%
Lighting Rate RLS & LS	23,389,325	1,920,228	8.21%	(331,494)	-1.31%
Special Contracts	10,274,768	893,131	8.69%	(481,600)	-4.31%
Sales to Ultimate Customers	1,103,329,493	91,719,847	8.31%	0	0.00%
Other Revenue Items	17,449,801	1,897,880	10.88%		
Total	1,120,779,294	93,617,727	8.35%		

4 **Q. In your recommended rate spread at LG&E's requested revenue requirement,**
5 **shown above in Table NT-S-4, the Time-of-Day Secondary class would still pay a**
6 **subsidy that is greater than the other commercial-type classes. Can you please**
7 **explain why this occurs?**

8 A. As I stated above, I have constrained my recommended rate spread to ensure that
9 no class would receive a rate decrease relative to current rates. If the percentage subsidy
10 is completely equalized across the commercial-type classes, then the Time-of-Day
11 Secondary class would receive a small rate decrease relative to current rates. While I
12 believe that a rate decrease is reasonable and cost-justified for this class – indeed
13 LG&E's cost-of-service studies demonstrate that a rate decrease of approximately 13.9%

¹⁶ Kroger's recommended rate spread alters the rate increase only for General Service, Power Service – Secondary, Power Service – Primary, and Time-of-Day Secondary, relative to LG&E's proposed rate spread.

¹⁷ Average COS represents the average of the BIP and LOLP cost-of-service studies.

1 is warranted for Time-of-Day Secondary – for the purpose of this case I am
2 recommending that no class receive a decrease.

3 I have also constrained my recommended increases so that no class receives an
4 increase that is more than 2.5% above the average retail increase. The increases for both
5 General Service and Power Service – Primary were limited by this constraint, so the
6 subsidies are not completely equalized (as an equal percentage of base rates) for the
7 commercial-type classes under my proposal.

8 **Q. What is your recommendation regarding rate spread if the Commission approves a**
9 **revenue requirement that is lower than proposed by LG&E?**

10 A. Consistent with my recommendation summarized in Table NT-S-4 above, at a
11 lower revenue requirement, the Time-of-Day Secondary and Lighting Energy Service
12 classes should receive no rate increase. Any reduced revenue requirement should be
13 distributed among the remaining classes, with the percentage reduction (as applied to the
14 percentage increases in Table NT-S-4) being greater for those classes that are significant
15 subsidy payers.

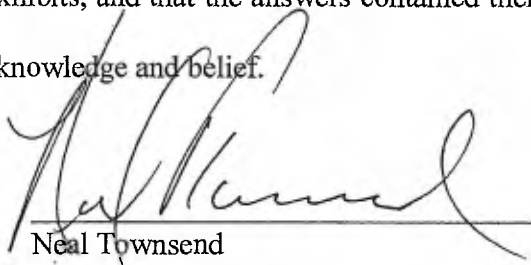
16 **Q. Does this conclude your supplemental testimony?**

17 A. Yes.

VERIFICATION

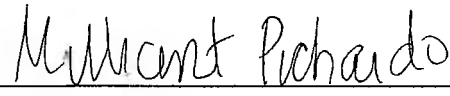
STATE OF UTAH)
)
COUNTY OF SALT LAKE) SS:

The undersigned, **Neal Townsend**, being duly sworn, deposes and says that he is a Principal in the firm of Energy Strategies, LLC, that he has personal knowledge of the matters set forth in the foregoing testimony and exhibits, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.



Neal Townsend

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 13 day of April, 2017.



Notary Public (SEAL)

My Commission Expires:
June 6, 2018

