COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
THE COMMISSION STAFF'S THIRD REQUEST FOR INFORMATION

DATED FEBRUARY 7, 2017

FILED: FEBRUARY 20, 2017

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Daniel K. Arbough

Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Senior Vice President – Operations for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Lonnie E. Bellar

Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 16th day of February 2017.

Judy Schooler (SEAL)

Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says that he is Vice President – State Regulation and Rates for Louisville Gas and Electric Company and Kentucky Utilities Company, an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Robert M. Conroy

Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **Christopher M. Garrett**, being duly sworn, deposes and says that he is Director – Rates for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Christopher M. Garrett

Christopher M. Garrett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **John P. Malloy**, being duly sworn, deposes and says that he is Vice President – Gas Distribution for Louisville Gas and Electric Company and Kentucky Utilities Company, an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

John P. Malloy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

STATE OF TEXAS)
) **SS:**
COUNTY OF TRAVIS)

The undersigned, **Adrien M. McKenzie**, being duly sworn, deposes and says he is Vice President of FINCAP, Inc., that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Adrien M. McKenzie

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10 day of February 2017.

(SEAL)
Notary Public

My Commission Expires:

10/03/2017

BRYAN ANDERSON
NOTARY PUBLIC
STATE OF TEXAS
NOTARY ID 12692365-3
10/3/17

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **Gregory J. Meiman**, being duly sworn, deposes and says that he is Vice President, Human Resources for Louisville Gas and Electric Company and Kentucky Utilities Company, an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Gregory J. Meiman

Gregory J. Meiman

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 16th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **Valerie L. Scott**, being duly sworn, deposes and says that she is Controller for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

Valerie L Scott
Valerie L. Scott

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:

JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **William Steven Seelye**, being duly sworn, deposes and states that he is a Principal of The Prime Group, LLC, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

William Steven Seelye

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

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **David S. Sinclair**, being duly sworn, deposes and says that he is Vice President, Energy Supply and Analysis for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

David S. Sinclair

David S. Sinclair

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)

Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) **SS:**
COUNTY OF JEFFERSON)

The undersigned, **John K. Wolfe**, being duly sworn, deposes and says that he is Vice President - Electric Distribution for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

John K. Wolfe

John K. Wolfe

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of February 2017.

Judy Schooler (SEAL)
Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 1

Responding Witness: Daniel K. Arbough / David S. Sinclair

Q-1. Refer to Filing Requirement - 807 KAR 5:001, Section 16(8)(d), Electric Operations, Schedule D-1, page 1 of 9.

a. Refer to line 3, Residential. The description of the $2,151,857 adjustment from the base period to the forecasted test period reads, "Variance reflects forecasted increase in billing determinants from the base period to the forecasted period at current tariff rates." Provide the reason(s) for the increase in the billing determinants and explain how the amount of the increase was determined.

b. Refer to line 4, Commercial. The description of the ($3,705,615) adjustment from the base period to the forecasted test period reads, "Variance reflects forecasted decrease in billing determinants from the base period to the forecasted period at current tariff rates." Provide the reason(s) for the decrease in the billing determinants and explain how the amount of decrease was determined.

c. Refer to line 5, Industrial. The description of the $5,208,053 adjustment from the base period to the forecasted test period reads, "Variance reflects forecasted increase in billing determinants from the base period to the forecasted period at current tariff rates." Provide the reason(s) for the increase in the billing determinants and explain how the amount of the increase was determined.

d. Refer to line 6, Public Street and Highway Lighting. The description of the $148,953 adjustment from the base period to the forecasted test period reads, "Variance reflects forecasted increase in billing determinants from the base period to the forecasted period at current tariff rates." Provide the reason(s) for the increase in the billing determinants and explain how the amount of the increase was determined.

e. Refer to line 7, Other Sales to Public Authorities. The description of the ($369,552) adjustment from the base period to the forecasted test period reads, "Variance reflects forecasted decrease in billing determinants from the base period to the forecasted period at current tariff rates." Provide the reason(s) for the decrease in the billing determinants and explain how the amount of decrease was determined.

f. Refer to line 13, Late Payment Charges. The description of the ($257,003) adjustment from the base period to the forecasted test period reads, "Variance reflects trend in this account and is based on a historic average." Provide supporting work papers, spreadsheets, etc., which show the derivation of this adjustment, along with any necessary narrative explanation.

g. Refer to line 14, Electric Service Revenues. The description of the $87,180 adjustment from the base period to the forecasted test period reads, "Variance reflects trend in this account and is based on a historic average." Provide supporting work papers, spreadsheets, etc. which show the derivation of this adjustment along with any necessary narrative explanation.

h. Refer to line 15, Rent from Electric Property. The description of the ($19,368) adjustment from the base period to the forecasted test period reads, "Variance reflects trend in this account and is based on a historic average." Provide supporting work papers, spreadsheets, etc., which show the derivation of this adjustment along with any necessary narrative explanation.

i. Refer to line 16, Other Miscellaneous Revenue. The description of the $2,002,258 adjustment from the base period to the forecasted test period reads, "Variance reflects increase in transmission revenues." Provide supporting work papers, spreadsheets, etc., which show the derivation of this adjustment along with any necessary narrative explanation.

A-1.

a. The increase in residential revenue is primarily due to slight residential customer growth in the urban centers of Louisville and other factors, as described in Mr. Sinclair's direct testimony pages 10 – 11 as well as in the Filing Requirement 16(7)(c) Item B and Item C attached at Tab 16 of the Company's Application. In addition to the slight residential growth, the calculation of the forecasted revenue is based on a return to average weather following the mild weather patterns in the base period, which resulted in lower revenues. Also, see Exhibit DSS-1, which provides a comparison of LG&E electric customers, billing demand, and energy by rate classes for the base period versus the test period.

	A	**B**	
	Base Period	**Forecasted Period**	**B-A**
	Base Revenue (including base fuel)		
LG&E Residential Billing Determinants			
Customer Count (12 month average)	359,003	364,014	5,012
Energy Forecast (MWh)	4,203,960	4,184,990	(18,970)
Total Revenues:			
Total Customer Revenue	$46,406,811	$46,962,044	$555,233
Base Energy Revenue	217,051,884	219,164,932	2,113,048
Total Base Fuel Revenue	114,557,389	114,040,965	(516,424)
	$378,016,084	$380,167,941	$2,151,857

b. The decrease in LG&E commercial billing determinants is primarily due to lower projected demand volumes for these customers as described in Mr. Sinclair's direct testimony and lower projected fuel revenues. In addition, see Exhibit DSS-1, which provides a comparison of LG&E electric customers, billing demand, and energy by rate classes for the base period versus the test period.

	A	**B**	
	Base Period	**Forecasted Period**	**B-A**
	Base Revenue (included base fuel)		
LGE Commercial Billing Determinants			
Customer Count (12 month average)	44,115	45,515	1,401
Energy Forecast (MWh)	3,855,035	3,803,575	(51,460)
Demand Forecast (MVA/MW)	11,571	10,914	(657)
Total Revenues			
Total Customer Revenue	$18,768,299	$19,003,872	$235,573
Base Energy Revenue	113,630,134	114,851,588	1,221,454
Total Demand Revenue	88,530,822	84,769,289	(3,761,533)
Total Base Fuel Revenue	105,048,530	103,647,421	(1,401,109)
	$325,977,785	$322,272,170	$(3,705,615)

c. The increase in the industrial revenue is primarily due to expansion projects of industrial customers as described in Mr. Sinclair's direct testimony, see page 10 of the testimony as well as in the Filing Requirement 16(7)(c) Item C, page 15 of 24 attached at Tab 16 of the Companies' Applications reflecting industrial growth.

	A	**B**	
	Base Period	**Forecasted Period**	**B-A**
	Base Revenue (including base fuel)		
LG&E Industrial Billing Determinants			
Customer Count (12 month average)	518	458	(60)
Energy Forecast (MWh)	2,708,860	2,846,869	138,009
Demand Forecast (MVA/MW)	15,964	16,413	449
Total Revenues:			
Total Customer Revenue	$818,063	$789,465	$(28,598)
Base Energy Revenue	31,104,064	32,083,051	978,988
Total Demand Revenue	59,126,372	59,622,364	495,992
Total Base Fuel Revenue	73,815,510	77,577,181	3,761,671
	$164,864,009	$170,072,061	$5,208,053

d. The slight increase in public street and highway lighting is due to a very small level of projected growth and a slightly higher usage projected.

	A	**B**	**B-A**
	Base Period	**Forecasted Period**	
	Base Revenue (including base fuel)		
LG&E Lighting Billing Determinants			
Customer Count (12 month average)	808	948	140
Energy Forecast (MWh)	18,413	18,862	450
Total Revenues:			
Total Customer Revenue	$39,292	$39,120	($172)
Base Energy Revenue	2,235,879	2,373,651	137,773
Total Base Fuel Revenue	502,646	513,998	11,352
	$2,777,816	$2,926,770	$148,953

e. The decrease in 'Other Sales to Public Authorities' is primarily due to lower projected fuel revenues accompanied with lower projected energy usage. The energy forecast is driven by increased efficiencies, a discussion of factors influencing the load forecast is included on pages 4-7 in the direct testimony of David S. Sinclair as well as in the Filing Requirement 16(7)(c) Item B and Item C attached at Tab 16 of the Companies' Applications. The decrease in revenue is partially offset by an increase in projected demand volumes.

	A	**B**	**B-A**
	Base Period	**Forecasted Period**	
	Base Revenue (including base fuel)		
LG&E Public Authority Billing Determinants			
Customer Count (12 month average)	3,504	2,868	(636)
Energy Forecast (MWh)	1,103,197	1,071,777	(31,420)
Demand Forecast (MVA/MW)	5,371	5,670	300
Total Revenues:			
Total Customer Revenue	$1,398,689	$1,412,273	$13,584
Base Energy Revenue	22,962,320	22,796,235	(166,086)
Total Demand Revenue	31,868,317	32,506,991	638,674
Total Base Fuel Revenue	30,061,645	29,205,921	(855,725)
	$86,290,971	$85,921,419	$(369,552)

f. See attached for the derivation of the adjustment. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period are based on a three year average as described in the Filing Requirement 16(7)(c) Item A pages seven through eight.

g. See attached for the derivation of the adjustment. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period are based on a three year average as described in the Filing Requirement 16(7)(c) Item A pages seven through eight.

h. See attached for the derivation of the adjustment. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period are based on a three year average as described in the Filing Requirement 16(7)(c) Item A pages seven through eight.

i. See attached for the derivation of the adjustment. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period are based assumptions included in the Filing Requirement 16(7)(c) Item A pages six through eight.

A1(f)

Late Payment Fees: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
450-LATE PAYMENT CHARGES	$ 240,292	$ 153,740	$ 149,662	$ 189,112	$ 276,202	$ 430,563	$ 252,009	$ 252,009	$ 252,009	$ 252,009	$ 216,463	$ 216,463	**$ 2,880,530**

Late Payment Fees: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
450-LATE PAYMENT CHARGES	$ 216,463	$ 216,463	$ 216,463	$ 216,463	$ 216,463	$ 216,463	$ 220,792	$ 220,792	$ 220,792	$ 220,792	$ 220,792	$ 220,792	**$ 2,623,527**

Forecast Test Period *Less Base Period* per Schedule D-1 **$ (257,003)**

A1(g)

Electric Service Revenues: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
451-RECONNECT CHARGES	$ 158,620	$ 122,192	$ 78,456	$ 96,684	$ 78,904	$ 124,096	$ 129,218	$ 129,218	$ 129,218	$ 129,218	$ 124,853	$ 124,853	**$ 1,425,530**
451-OTHER SERVICE CHARGES	7,146	7,868	9,040	6,557	6,775	8,016	6,747	6,747	6,747	6,747	7,103	7,103	**86,594**
TOTAL ELECTRIC SERVICE REVENUES	$ 165,766	$ 130,060	$ 87,496	$ 103,241	$ 85,679	$ 132,112	$ 135,965	$ 135,965	$ 135,965	$ 135,965	$ 131,956	$ 131,956	**$ 1,512,124**

Electric Service Revenues: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
451-RECONNECT CHARGES	$ 124,853	$ 124,853	$ 124,853	$ 124,853	$ 124,853	$ 124,853	$ 127,350	$ 127,350	$ 127,350	$ 127,350	$ 127,350	$ 127,350	**$ 1,513,221**
451-OTHER SERVICE CHARGES	7,103	7,103	7,103	7,103	7,103	7,103	7,245	7,245	7,245	7,245	7,245	7,245	**86,083**
TOTAL ELECTRIC SERVICE REVENUES	$ 131,956	$ 131,956	$ 131,956	$ 131,956	$ 131,956	$ 131,956	$ 134,595	$ 134,595	$ 134,595	$ 134,595	$ 134,595	$ 134,595	**$ 1,599,304**

Forecast Test Period *Less Base Period* per Schedule D-1 **$ 87,180**

A1(h)

Rent from Electric Property: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
454-RENT FROM ELEC PROPERTY	$ 280,179	$ 240,791	$ 386,693	$ 230,469	$ 300,417	$ 271,316	$ 269,793	$ 269,793	$ 269,793	$ 269,793	$ 277,862	$ 277,862	**$ 3,344,761**
454-RENT FROM ELEC PROPERTY I/C	44,985	34,187	34,147	35,472	37,435	37,421	41,890	41,890	41,890	41,890	34,620	34,620	**460,447**
TOTAL RENT FROM ELECTRIC PROPERTY	$ 325,163	$ 274,979	$ 420,840	$ 265,941	$ 337,852	$ 308,737	$ 311,683	$ 311,683	$ 311,683	$ 311,683	$ 312,482	$ 312,482	**$ 3,805,208**

Rent from Electric Property: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
454-RENT FROM ELEC PROPERTY	$ 277,978	$ 277,978	$ 277,978	$ 277,978	$ 277,978	$ 277,978	$ 283,533	$ 283,533	$ 283,533	$ 283,533	$ 283,533	$ 283,533	**$ 3,369,068**
454-RENT FROM ELEC PROPERTY I/C	34,620	34,620	34,620	34,620	34,620	34,620	34,842	34,842	34,842	34,842	34,842	34,842	**416,772**
TOTAL RENT FROM ELECTRIC PROPERTY	$ 312,598	$ 312,598	$ 312,598	$ 312,598	$ 312,598	$ 312,598	$ 318,375	$ 318,375	$ 318,375	$ 318,375	$ 318,375	$ 318,375	**$ 3,785,840**

Forecast Test Period *Less Base Period* per Schedule D-1 **$ (19,368)**

A1(i)

Other Miscellaneous Revenue: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
456-TRANSMISSION SERVICE	$ 555,336	$ 552,806	$ 650,923	$ 918,061	$ 906,010	$ 874,574	$ 784,578	$ 671,828	$ 717,287	$ 651,974	$ 958,337	$ 979,471	**$9,221,184**
456-ANCILLARY SERVICES	33,450	40,719	38,762	49,088	47,945	47,305	124,297	108,486	121,248	101,925	53,174	52,981	**819,379**
456-TAX REMITTANCE COMPENSATION	36	36	36	36	36	36	36	36	36	36	36	36	**426**
456-RETURN CHECK CHARGES	10,680	11,552	11,390	12,100	11,180	14,363	10,471	10,471	10,471	10,471	11,227	11,227	**135,603**
456-OTHER MISC REVENUES	293,851	117,557	119,511	70,148	119,683	106,447	109,206	109,206	109,206	109,206	18,782	128,063	**1,410,865**
456-EXCESS FACILITIES CHARGES	12,584	12,211	12,243	12,312	12,289	12,226	11,333	11,333	11,333	11,333	11,617	11,617	**142,429**
456-REVENUE FROM RENEWABLE ENERGY CREDITS	-	-	-	-	-	-	-	-	-	-	4,463	5,864	**10,327**
456-SOLAR SHARE SUBSCRIPTIONS	-	-	-	-	-	-	-	-	-	-	-	28,160	**28,160**
456-ELECTRIC VEHICLE CHARGING STATIONS	-	-	-	-	-	-	548	913	890	913	913	844	**5,020**
Total Other Miscellaneous Revenue	$ 905,938	$ 734,881	$ 832,865	$ 1,061,744	$ 1,097,142	$ 1,054,949	$ 1,040,468	$ 912,272	$ 970,470	$ 885,857	$ 1,058,547	$ 1,218,261	**$ 11,773,394**

Other Miscellaneous Revenue: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
456-TRANSMISSION SERVICE	$ 974,622	$ 1,057,059	$ 945,140	$ 787,666	$ 816,370	$ 814,704	$ 1,001,165	$ 1,034,250	$ 879,091	$ 743,665	$ 915,256	$ 1,035,092	**$11,004,078**
456-ANCILLARY SERVICES	48,349	49,706	58,576	47,184	42,648	44,165	55,040	54,958	47,389	44,546	54,516	47,812	**594,889**
456-TAX REMITTANCE COMPENSATION	36	36	36	36	36	36	36	36	36	36	36	36	**426**
456-RETURN CHECK CHARGES	11,227	11,227	11,227	11,227	11,227	11,227	11,451	11,451	11,451	11,451	11,451	11,451	**136,069**
456-OTHER MISCELLANEOUS REVENUES	108,239	108,239	108,239	108,239	108,239	108,239	18,957	128,238	128,238	128,238	128,238	128,238	**1,309,583**
456-EXCESS FACILITIES CHARGES	11,617	11,617	11,617	11,617	11,617	11,617	11,849	11,849	11,849	11,849	11,849	11,849	**140,798**
456-REVENUE FROM RENEWABLE ENERGY CREDITS	10,164	9,990	8,213	7,337	5,627	4,095	4,554	5,770	7,601	8,329	9,635	10,047	**91,363**
456-SOLAR SHARE SUBSCRIPTIONS	-	-	-	-	28,160	7,040	-	28,160	7,040	-	28,160	7,040	**105,600**
456-SOLAR SHARE CAPACITY CHARGE/ENERGY CREDIT	9,759	9,759	9,935	15,611	15,866	16,034	16,054	15,778	15,678	21,046	20,862	20,878	**187,260**
456-ELECTRIC VEHICLE CHARGING STATIONS	2,031	2,384	2,327	2,384	2,669	2,738	2,738	2,533	2,738	2,669	3,297	3,217	**31,727**
456-REFINE COAL KPSC	14,488	14,488	14,488	14,488	14,488	14,488	14,488	14,488	14,488	14,488	14,488	14,488	**173,858**
	$ 1,190,532	$ 1,274,506	$ 1,169,799	$ 1,005,790	$ 1,056,947	$ 1,034,382	$ 1,136,331	$ 1,307,511	$ 1,125,599	$ 986,318	$ 1,197,788	$ 1,290,150	**$ 13,775,652**

Forecast Test Period *Less Base Period* per Schedule D-1 **$ 2,002,258**

Notes:

March 2016 to August 2016 based on actuals per trial balance.

September 2016 to December 2016 based on previous budget

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 2

Responding Witness: Daniel K. Arbough / David S. Sinclair

Q-2. Refer to Filing Requirement - 807 KAR 5:001, Section 16(8)(d), Gas Operations, Schedule D-1, page 1 of 7.

a. Refer to line 3, Residential. The description of the $20,666,737 adjustment from the base period to the forecasted test period reads, "Variance is primarily driven by the GL T reset." Provide any other reason(s) for the increase in revenue and explain how the amount of the increase was determined.

b. Refer to line 4, Commercial. The description of the $8,076,226 adjustment from the base period to the forecasted test period reads, "Variance is primarily driven by the GL T reset." Provide any other reason(s) for the increase in revenue and explain how the amount of the increase was determined.

c. Refer to line 5, Industrial. The description of the $1,249,411 adjustment from the base period to the forecasted test period reads, "Variance is primarily driven by the GL T reset." Provide any other reason(s) for the increase in revenue and explain how the amount of the increase was determined.

d. Refer to line 6, Other Sales to Public Authorities. The description of the $1,006,367 adjustment from the base period to the forecasted test period reads, "Variance is primarily driven by the GL T reset." Provide any other reason(s) for the increase in revenue and explain how the amount of the increase was determined.

e. Refer to line 12, Forfeited Discounts. The description of the $46,409 adjustment from the base period to the forecasted test period reads, "Variance reflects trend in this account and is based on a historic average." Provide supporting work papers, spreadsheets, etc., which show the derivation of this adjustment, along with any necessary narrative explanation.

f. Refer to line 13, Miscellaneous Service Revenue. The description of the ($16,022) adjustment from the base period to the forecasted test period reads, "Variance reflects trend in this account and is based on a historic average."

Provide supporting work papers, spreadsheets, etc., which show the derivation of this adjustment along with any necessary narrative explanation.

A-2.

a. As noted on page 29 in the direct testimony of Mr. Chris Garrett, the jurisdictional operating revenues are projected to increase by $29.5 million between the base period and pro forma forecasted test period, primarily driven by the resetting of the GLT. The GLT reset accounts for $20,256,341 of the $20,666,737 adjustment from the base period to the forecasted test period for residential customers. The remaining $410,396 is primarily due to an increase in volumes. As described in the direct testimony of Mr. David Sinclair on page 16 – 17, volumes are higher in the forecasted period as the forecasted load is based on a return to average weather compared to the mild weather experienced in the winter months during the base period.

b. The GLT reset accounts for $7,830,626 of the $8,076,226 adjustment from the base period to the forecasted test period for commercial customers. The remaining $245,600 is primarily due to an increase in volumes. As described in the direct testimony of Mr. David Sinclair on page 16 – 17 volumes are higher in the forecasted period as the forecasted load is based on a return to average weather compared to the mild weather experienced in the winter months during the base period. Commercial customer classes are similar to residential customer classes in that they are weather sensitive with usage driven by space heating.

c. The GLT reset accounts for $848,443 of the $1,249,411 adjustment from the base period to the forecasted test period for industrial customers. The remaining $400,968 is primarily due to an increase in volumes. See Exhibit DSS-3, a 'Comparison of LG&E Gas Customers, and Volumes by Rate Classes: Base Period vs Test Period', which reflects an increase in firm industrial gas service volumes and customers.

d. The GLT reset accounts for $967,708 of the $1,006,367 adjustment from the base period to the forecasted test period for other sales to public authorities. The remaining $38,659 is largely driven by a return to average weather as the forecasted load is based on a return to average weather compared to the mild weather experienced in the winter months during the base period.

e. See attached for the derivation of the adjustment. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period is based on a three year average as described in the Filing Requirement 16(7)(c) Item A page seven.

f. See attached. The Base Period includes actual results through August 2016 and the forecast periods for the Base Period and Forecasted Test Period are based on a three year average as described in the Filing Requirement 16(7)(c) Item A page seven.

A2(e)

Forfeited Discounts: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
487 - Forfeited Discounts Gas	$ 163,140	$ 86,537	$ 65,518	$ 60,726	$ 56,646	$ 69,647	$ 106,867	$ 106,867	$ 106,867	$ 106,867	$ 96,452	$ 96,452	**$ 1,122,585**

Forfeited Discounts: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
487 - Forfeited Discounts Gas	$ 96,452	$ 96,452	$ 96,452	$ 96,452	$ 96,452	$ 96,452	$ 98,381	$ 98,381	$ 98,381	$ 98,381	$ 98,381	$ 98,381	**$ 1,168,995**
Forecast Test Period *Less Base Period* per Schedule D-1													**$ 46,409**

A2(f)

Electric Service Revenues: Base Period YE February 2017:	MAR-2016	APR-2016	MAY-2016	Jun-16	JUL-2016	AUG-2016	SEP-2016	OCT-2016	NOV-2016	DEC-2016	JAN-2017	FEB-2017	**Base Period**
451-RECONNECT CHARGES	$ 14,056	$ 14,897	$ 11,705	$ 10,389	$ 5,666	$ 5,088	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,291	$ 7,291	**$ 104,384**

Electric Service Revenues: Forecasted Test Period YE June 2018:	JUL-2017	AUG-2017	SEP-2017	OCT-2017	NOV-2017	DEC-2017	JAN-2018	FEB-2018	MAR-2018	APR-2018	MAY-2018	JUN-2018	**Forecasted Period**
451-RECONNECT CHARGES	$ 7,291	$ 7,291	$ 7,291	$ 7,291	$ 7,291	$ 7,291	$ 7,436	$ 7,436	$ 7,436	$ 7,436	$ 7,436	$ 7,436	**$ 88,363**
Forecast Test Period *Less Base Period* per Schedule D-1													**$ (16,022)**

Notes:
March 2016 to August 2016 based on actuals per trial balance.
September 2016 to December 2016 based on previous budget

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 3

Responding Witness: John P. Malloy

Q-3. Refer to Filing Requirement - 807 KAR 5:001, Section 16(8)(d), Gas Operations, Schedule D-1, page 5 of 7, Line 80, Uncollectible Accounts. The description of the $163,151 adjustment from the base period to the forecasted test year reads, "Forecasted test year includes write-offs based on a five-year average 0.226 percent of revenues." Explain why LG&E chose to use a higher amount of bad-debt expense when the trend appears to be decreasing and the proposed Advanced Metering Systems ("AMS") could result in less bad-debt expense.

A-3. The 5-year average was used to develop the revenue requirement. Despite the reduction in the uncollectible rate for the most recent year of the 5 years, the Company believes the 5-year average represents a reasonable figure. There are fluctuations in the uncollectible rate in those 5 years, not a clear trend, therefore using a 5-year average was reasonable. In addition, revenues are projected to increase from the base year to the forecasted test year, resulting in an increase in bad-debt expense.

Also, the Companies have not assumed AMS will reduce bad debt due to the already favorable collection performance of the Companies.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 4

Responding Witness: John P. Malloy

Q-4. Refer to the Application, Direct Testimony of John P. Malloy, Exhibit JPM-1, page 38 of 169. Provide the tables on this page with a breakdown of the amounts between LG&E and its sister company, Kentucky Utilities Company ("KU").

A-4. Note in the tables below the sum of the individual items shown and the totals provided might differ due to rounding:

Louisville Gas & Electric	Total Nominal $Millions 2016 -2021	2016	2017	2018	2019	2020	2021
Capital Expenses							
Meters and Network	$ 109.1	$ 0.2	$ 37.4	$ 35.1	$ 36.5	$ -	$ -
IT and Systems	$ 47.4	$ 0.2	$ 14.6	$ 17.1	$ 13.8	$ 1.7	$ -
Capex total	$ 156.5	$ 0.4	$ 51.9	$ 52.2	$ 50.3	$ 1.7	$ -
Operating Expenses							
Meters and Network	$ 6.2	$ -	$ 2.1	$ 2.0	$ 2.2	$ -	$ -
IT and Systems	$ 6.6	$ -	$ 0.3	$ 0.5	$ 1.0	$ 2.2	$ 2.6
Opex total	$ 12.9	$ -	$ 2.4	$ 2.4	$ 3.2	$ 2.2	$ 2.6
Total Costs	$ 169.3	$ 0.4	$ 54.4	$ 54.6	$ 53.5	$ 3.9	$ 2.6
Total Benefits	$ 50.3	$ -	$ 0.5	$ 2.1	$ 15.9	$ 16.0	$ 15.8

Kentucky Utilities	Total Nominal $Millions 2016 -2021	2016	2017	2018	2019	2020	2021
Capital Expenses							
Meters and Network	$ 101.1	$ 0.3	$ 25.4	$ 36.4	$ 39.1	$ -	$ -
IT and Systems	$ 62.8	$ 0.3	$ 19.3	$ 22.7	$ 18.3	$ 2.2	$ -
Capex total	$ 163.9	$ 0.6	$ 44.7	$ 59.1	$ 57.4	$ 2.2	$ -
Operating Expenses							
Meters and Network	$ 8.3	$ -	$ 1.0	$ 3.5	$ 3.8	$ -	$ -
IT and Systems	$ 8.8	$ -	$ 0.4	$ 0.6	$ 1.4	$ 2.9	$ 3.5
Opex total	$ 17.1	$ -	$ 1.5	$ 4.1	$ 5.1	$ 2.9	$ 3.5
Total Costs	$ 181.1	$ 0.6	$ 46.1	$ 63.2	$ 62.5	$ 5.1	$ 3.5
Total Benefits	$ 62.4	$ -	$ 1.1	$ 3.2	$ 15.3	$ 21.6	$ 21.2

The table titled "AMS Cost-Benefit Summary (2016-2039)" in Exhibit JPM-1, page 38 of 169 was calculated on a total company basis only.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 5

Responding Witness: William S. Seelye

Q-5. Refer to the Application, Direct Testimony of William Steven Seelye, Exhibit WSS-7. Provide the "Unit Cost of Service Based on the Cost of Service Study" for each rate class. Provide the response in Excel spreadsheet format with the formula intact and unprotected.

A-5. The "Unit Cost of Service Based on the Cost of Service Study" for each rate class was provided in the Excel spreadsheet included in the attachment to PSC 1-53 labeled Att_LGE_PSC_1-53_LGEGasCoss.xlsx. The unit cost calculations for the rate schedules are included in the tabs labeled "RGS", "CGS", "IGS", "AAGS", and "FT". Note the tabs labeled "CGS" and "IGS" form the basis for the derivation of the proposed charges for Substitute Gas Sales Service Rate SGSS, and the tabs labeled "FT" form the basis for the derivation of the proposed charges for Local Gas Delivery Service Rate LGDS. The derivation of the proposed Daily Utilization Charge for Rate FT is included in the tab labeled "Daily Utilization Charge".

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 6

Responding Witness: Valerie L. Scott

Q-6. Refer to the responses to Commission Staff's First Request for Information ("Staff's First Request"), Items 61.a. and 61.b. Provide the comparable information for calendar years 2014 and 2016 in the same format.

A-6. See attached.

BILLED TO THE SERVICE COMPANY (LKS) FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
107	Construction Work In Progress	90,619
163	Stores Expense Undistributed	348
184	Clearing Accounts	16,727
426.5	Other Deductions	437
500	Operation Supervision And Engineering	822
501	Fuel	72
561.1	Load Dispatch-Reliability	164
561.5	Reliability, Planning And Standards Development	72
566	Miscellaneous Transmission Expenses	177
586	Meter Expenses	37
588	Miscellaneous Distribution Expenses	19
593	Maintenance Of Overhead Lines	336
901	Supervision	284
902	Meter Reading Expenses	37
903	Customer Records And Collection Expenses	364
907	Supervision	144
908	Customer Assistance Expenses	72
920	Administrative And General Salaries	10,398
921	Office Supplies And Expenses	6,138
935	Maintenance Of General Plant	519,630
Grand Total		646,897

BILLED TO THE SERVICE COMPANY (PPL SERVICES CORPORATION) FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
920	Administrative And General Salaries	1,975
454	Rent From Electric Property	184,558
493	Rent From Gas Property	56,183
Grand Total		242,717

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
107	Construction Work In Progress	10,308,464	17,604,537	27,913,001
108	Accumulated Provision For Depreciation Of Utility Plant	310,143	98,949	409,092
131	Cash	(1,089,570)	-	(1,089,570)
143	Other Accounts Receivable	25,459	(2,109)	23,350
146	Accounts Receivable From Associated Companies	4,073	(337)	3,736
151	Fuel Stock	457,984,049	-	457,984,049
163	Stores Expense Undistributed	16,501	287,041	303,542
165	Prepayments	10,410,625	839,623	11,250,248
182.3	Other Regulatory Assets	501,464	-	501,464
183	Preliminary Survey And Investigation Charges	134,649	576	135,224
184	Clearing Accounts	21,744,750	1,914,998	23,659,748
186	Miscellaneous Deferred Debits	348,667	18	348,685
228.3	Accumulated Provision For Pensions And Benefits	4,396,571	-	4,396,571
232	Accounts Payable	339,763	-	339,763
234	Accounts Payable To Associated Companies	(248,204)	-	(248,204)
236	Taxes Accrued	(715,363)	-	(715,363)
241	Tax Collections Payable	(4)	-	(4)
242	Miscellaneous Current And Accrued Liabilities	1,012,408	-	1,012,408
253	Other Deferred Credits	(12,774)	1,350,360	1,337,586
408.1	Taxes Other Than Income Taxes, Utility Operating Income	3,811,764	-	3,811,764
408.2	Taxes Other Than Income Taxes, Other Income And Deductions	710	-	710
426.1	Donations	2,300,905	42,625	2,343,530
426.3	Penalties	77,751	14,992	92,744
426.4	Expenditures For Certain Civic, Political And Related Activities	168,805	576,140	744,945
426.5	Other Deductions	683,994	320,312	1,004,306
456	Other Electric Revenues	20,421	-	20,421
500	Operation Supervision And Engineering	359,277	2,803,731	3,163,008
501	Fuel	108,288	1,234,284	1,342,572
502	Steam Expenses	122,225	9,702	131,927
506	Miscellaneous Steam Power Expenses	375,217	6,534	381,751
510	Maintenance Supervision And Engineering	(187,387)	184,582	(2,804)
511	Maintenance Of Structures	159,720	88	159,808
512	Maintenance Of Boiler Plant	52,449	2,005	54,455
513	Maintenance Of Electric Plant	389,592	51,283	440,875

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
514	Maintenance Of Miscellaneous Steam Plant	6,205	122	6,327
539	Miscellaneous Hydraulic Power Generation Expenses	10,592	-	10,592
542	Maintenance Of Structures	9,913	-	9,913
544	Maintenance Of Electric Plant	330	5	335
548	Generation Expenses	4,800	-	4,800
553	Maintenance Of Generating And Electric Equipment	865	-	865
554	Maintenance Of Miscellaneous Other Power Generation Plant	1,546	43	1,589
556	System Control And Load Dispatching	32,496	1,339,994	1,372,490
560	Operation Supervision And Engineering	91,152	763,517	854,670
561.1	Load Dispatch-Reliability	649,885	876,524	1,526,409
561.2	Load Dispatch-Monitor And Operate Transmission System	78,738	57,628	136,366
561.3	Load Dispatch-Transmission Service And Scheduling	23,310	53,571	76,880
561.5	Reliability, Planning And Standards Development	45,791	409,177	454,968
561.6	Transmission Service Studies	9,785	173	9,958
562	Station Expenses	26,075	1,233	27,307
563	Overhead Line Expenses	2,804	31	2,835
566	Miscellaneous Transmission Expenses	46,786	1,221,845	1,268,630
567	Rents	3,500	-	3,500
570	Maintenance Of Station Equipment	54,712	102,697	157,409
571	Maintenance Of Overhead Lines	37,004	2,095	39,100
573	Maintenance Of Miscellaneous Transmission Plant	-	91,400	91,400
580	Operation Supervision And Engineering	265,172	806,536	1,071,708
581	Load Dispatching	433,698	346,111	779,809
582	Station Expenses	22,566	255	22,821
583	Overhead Line Expenses	2,753,236	7,936	2,761,172
586	Meter Expenses	127,036	488,101	615,137
588	Miscellaneous Distribution Expenses	653,701	893,754	1,547,456
589	Rents	1,750	-	1,750
590	Maintenance Supervision And Engineering	8,850	4,634	13,484
592	Maintenance Of Station Equipment	11,454	42	11,496
593	Maintenance Of Overhead Lines	337,155	99,221	436,376
594	Maintenance Of Underground Lines	3,396	-	3,396
595	Maintenance Of Line Transformers	105	-	105
598	Maintenance Of Miscellaneous Distribution Plant	427,907	1,131	429,037

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
807	Purchased Gas Expenses	81,008	-	81,008
814	Operation Supervision And Engineering	425	-	425
816	Wells Expenses	154	-	154
817	Lines Expenses	6,405	-	6,405
818	Compressor Station Expenses	68,341	-	68,341
821	Purification Expenses	18,571	-	18,571
833	Maintenance Of Lines	1,997	-	1,997
837	Maintenance Of Other Equipment	4,920	-	4,920
850	Operation Supervision And Engineering	294,388	18,820	313,208
851	System Control And Load Dispatching	102	-	102
856	Mains Expenses	1,729	208	1,938
860	Rents	1,050	-	1,050
863	Maintenance Of Mains	9,652	77	9,729
874	Mains And Services Expenses	10,572	2,826	13,398
875	Measuring And Regulating Station Expenses-General	224	-	224
877	Measuring And Regulating Station Expenses-City Gate Check Stations	126	-	126
878	Meter And House Regulator Expenses	232	-	232
880	Other Expenses	444,771	2,370	447,141
881	Rents	700	-	700
887	Maintenance Of Mains	187,267	5,131	192,398
892	Maintenance Of Services	147,973	-	147,973
901	Supervision	276,346	1,692,457	1,968,803
902	Meter Reading Expenses	59,794	164,262	224,056
903	Customer Records And Collection Expenses	3,927,053	5,788,892	9,715,945
905	Miscellaneous Customer Accounts Expenses	8,896	907	9,803
907	Supervision	3,227	273,168	276,395
908	Customer Assistance Expenses	11,174,719	206,827	11,381,545
909	Informational And Instructional Advertising Expenses	419,462	38,767	458,229
910	Miscellaneous Customer Service And Informational Expenses	555,559	291	555,850
913	Advertising Expenses	58,659	3,962	62,621
920	Administrative And General Salaries	1,964,561	28,448,428	30,412,989
921	Office Supplies And Expenses	1,309,522	6,128,317	7,437,838
923	Outside Services Employed	6,777,337	11,862,959	18,640,296
924	Property Insurance	-	191,749	191,749

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
925	Injuries And Damages	1,077,599	119,025	1,196,624
926	Employee Pensions And Benefits	12,806,744	174,133	12,980,877
928	Regulatory Commission Expenses	57,926	-	57,926
930.1	General Advertising Expenses	1,079,856	1,328	1,081,184
930.2	Miscellaneous General Expenses	(536,649)	1,651,037	1,114,388
931	Rents	37,182	1,168,783	1,205,965
935	Maintenance Of General Plant	259,489	565,224	824,712
Grand Total		562,695,603	93,417,660	656,113,262

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (PPL SERVICES CORPORATION)
FOR THE 2014 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
107	Construction Work In Progress	12,299		12,299
165	Prepayments	(46,315)		(46,315)
560	Operation Supervision And Engineering	(38)		(38)
580	Operation Supervision And Engineering	(38)		(38)
921	Office Supplies And Expenses	147,415		147,415
923	Outside Services Employed	6,125		6,125
925	Injuries And Damages		229,323	229,323
Grand Total		119,447	229,323	348,770

BILLED TO THE SERVICE COMPANY (LKS) FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
107	Construction Work In Progress	511,230
108	Accumulated Provision For Depreciation Of Utility Plant	47,555
131	Cash	26,134
143	Other Accounts Receivable	392
163	Stores Expense Undistributed	47,159
183	Preliminary Survey And Investigation Charges	13,596
184	Clearing Accounts	972,688
188	Research, Development And Demonstration Expenses	166
232	Accounts Payable	(118,564)
408.1	Taxes Other Than Income Taxes, Utility Operating Income	323,134
426.4	Expenditures For Certain Civic, Political And Related Activities	8,934
426.5	Other Deductions	5,923
500	Operation Supervision And Engineering	838,737
501	Fuel	276,092
502	Steam Expenses	1,670
505	Electric Expenses	(3)
506	Miscellaneous Steam Power Expenses	74,559
510	Maintenance Supervision And Engineering	47,404
511	Maintenance Of Structures	15
512	Maintenance Of Boiler Plant	726
513	Maintenance Of Electric Plant	3,605
556	System Control And Load Dispatching	80,187
560	Operation Supervision And Engineering	14,371
561.1	Load Dispatch-Reliability	1,103

BILLED TO THE SERVICE COMPANY (LKS) FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
561.2	Load Dispatch-Monitor And Operate Transmission System	14,058
561.3	Load Dispatch-Transmission Service And Scheduling	3,145
561.5	Reliability, Planning And Standards Development	762
562	Station Expenses	466
563	Overhead Line Expenses	251
566	Miscellaneous Transmission Expenses	1,658
570	Maintenance Of Station Equipment	(1,680)
571	Maintenance Of Overhead Lines	2,024
580	Operation Supervision And Engineering	4,620
581	Load Dispatching	12,963
582	Station Expenses	300
583	Overhead Line Expenses	15,574
586	Meter Expenses	6,093
588	Miscellaneous Distribution Expenses	5,651
590	Maintenance Supervision And Engineering	276
593	Maintenance Of Overhead Lines	1,408
814	Operation Supervision And Engineering	3,003
850	Operation Supervision And Engineering	13,874
880	Other Expenses	6,815
901	Supervision	3,702
902	Meter Reading Expenses	1,182
903	Customer Records And Collection Expenses	25,265
905	Miscellaneous Customer Accounts Expenses	5
907	Supervision	6,411

BILLED TO THE SERVICE COMPANY (LKS) FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
908	Customer Assistance Expenses	41,726
920	Administrative And General Salaries	94,412
921	Office Supplies And Expenses	(8,826)
923	Outside Services Employed	(4,387)
925	Injuries And Damages	2,244
926	Employee Pensions And Benefits	1,036,317
930.2	Miscellaneous General Expenses	26,240
935	Maintenance Of General Plant	531,804
Grand Total		5,024,168

BILLED TO THE SERVICE COMPANY (PPL SERVICES CORPORATION)
FROM LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge
920	Administrative And General Salaries	1,188
454	Rent From Electric Property	161,648
493	Rent From Gas Property	47,770
Grand Total		210,606

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
107	Construction Work In Progress	13,368,644	25,384,155	38,752,799
108	Accumulated Provision For Depreciation Of Utility Plant	767,553	712,841	1,480,394
131	Cash	(877,195)	-	(877,195)
143	Other Accounts Receivable	8,967	-	8,967
151	Fuel Stock	337,608,573	-	337,608,573
163	Stores Expense Undistributed	453,694	686,955	1,140,649
165	Prepayments	7,061,794	16,498,693	23,560,487
182.3	Other Regulatory Assets	2,158,449	-	2,158,449
183	Preliminary Survey And Investigation Charges	748,260	1,176	749,436
184	Clearing Accounts	21,623,637	4,001,341	25,624,978
186	Miscellaneous Deferred Debits	465,893	-	465,893
188	Research, Development And Demonstration Expenses	54,215	391,534	445,749
228.3	Accumulated Provision For Pensions And Benefits	5,585,775	-	5,585,775
232	Accounts Payable	10,704,017	1,103,816	11,807,833
236	Taxes Accrued	(1,804,368)	-	(1,804,368)
242	Miscellaneous Current And Accrued Liabilities	1,318,583	-	1,318,583
408.1	Taxes Other Than Income Taxes, Utility Operating Income	1,734,426	3,233,166	4,967,592
416	Cost And Expenses Of Merchandising, Jobbing And Contract Work	31	-	31
421	Miscellaneous Nonoperating Income	3,882	(17,970)	(14,088)
426.1	Donations	1,477,528	27,893	1,505,421
426.3	Penalties	5,499	26,348	31,847
426.4	Expenditures For Certain Civic, Political And Related Activities	73,523	494,020	567,543
426.5	Other Deductions	730,320	394,617	1,124,937
431	Other Interest Expense	1,009	-	1,009
456	Other Electric Revenues	149	-	149
500	Operation Supervision And Engineering	445,279	5,398,350	5,843,629
501	Fuel	196,342	1,808,916	2,005,258
502	Steam Expenses	133,159	27,441	160,599
505	Electric Expenses	3,588	32	3,620
506	Miscellaneous Steam Power Expenses	1,157,441	433,539	1,590,980
510	Maintenance Supervision And Engineering	288,138	606,101	894,239
511	Maintenance Of Structures	127,518	-	127,518
512	Maintenance Of Boiler Plant	52,868	1,583	54,451
513	Maintenance Of Electric Plant	302,809	41,092	343,901

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
514	Maintenance Of Miscellaneous Steam Plant	52,642	-	52,642
539	Miscellaneous Hydraulic Power Generation Expenses	1,445	-	1,445
542	Maintenance Of Structures	836	-	836
544	Maintenance Of Electric Plant	10,159	-	10,159
545	Maintenance Of Miscellaneous Hydraulic Plant	4,083	-	4,083
546	Operation Supervision And Engineering	3,469	-	3,469
548	Generation Expenses	1,845	-	1,845
549	Miscellaneous Other Power Generation Expenses	33,800	47	33,846
552	Maintenance Of Structures	6,684	-	6,684
553	Maintenance Of Generating And Electric Equipment	16,991	164	17,155
554	Maintenance Of Miscellaneous Other Power Generation Plant	30,319	169	30,488
556	System Control And Load Dispatching	4,510	1,180,977	1,185,487
560	Operation Supervision And Engineering	20,151	811,451	831,601
561.1	Load Dispatch-Reliability	16,667	222,445	239,112
561.2	Load Dispatch-Monitor And Operate Transmission System	255,958	843,057	1,099,015
561.3	Load Dispatch-Transmission Service And Scheduling	-	404,827	404,827
561.5	Reliability, Planning And Standards Development	4,409	418,755	423,164
561.6	Transmission Service Studies	22,587	-	22,587
562	Station Expenses	30,477	21,022	51,499
563	Overhead Line Expenses	9,909	10,722	20,632
566	Miscellaneous Transmission Expenses	564,940	963,812	1,528,752
567	Rents	2,180	324	2,504
570	Maintenance Of Station Equipment	55,880	179,467	235,348
571	Maintenance Of Overhead Lines	49,154	51,904	101,058
573	Maintenance Of Miscellaneous Transmission Plant	53,218	145,375	198,593
580	Operation Supervision And Engineering	107,133	956,793	1,063,926
581	Load Dispatching	548,397	151,812	700,209
582	Station Expenses	24,709	5	24,714
583	Overhead Line Expenses	838,392	12,508	850,899
586	Meter Expenses	182,339	590,590	772,929
588	Miscellaneous Distribution Expenses	485,411	1,730,235	2,215,646
589	Rents	3,062	-	3,062
590	Maintenance Supervision And Engineering	-	1,560	1,560
591	Maintenance Of Structures	56	-	56

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
592	Maintenance Of Station Equipment	26,626	1	26,627
593	Maintenance Of Overhead Lines	3,525	107,627	111,152
595	Maintenance Of Line Transformers	1,654	-	1,654
598	Maintenance Of Miscellaneous Distribution Plant	144,295	492,453	636,748
807	Purchased Gas Expenses	3,926	-	3,926
814	Operation Supervision And Engineering	126,679	-	126,679
818	Compressor Station Expenses	22,840	-	22,840
821	Purification Expenses	12	-	12
825	Storage Well Royalties	3,606	-	3,606
834	Maintenance Of Compressor Station Equipment	3,414	-	3,414
837	Maintenance Of Other Equipment	50,871	-	50,871
850	Operation Supervision And Engineering	621,188	26,194	647,382
851	System Control And Load Dispatching	110	-	110
860	Rents	250	-	250
863	Maintenance Of Mains	1,641	-	1,641
871	Distribution Load Dispatching	334	-	334
874	Mains And Services Expenses	21,834	-	21,834
875	Measuring And Regulating Station Expenses-General	753	-	753
877	Measuring And Regulating Station Expenses-City Gate Check Stations	1,654	-	1,654
878	Meter And House Regulator Expenses	7,275	120	7,395
880	Other Expenses	567,647	536,550	1,104,198
881	Rents	215	-	215
887	Maintenance Of Mains	5,029	15	5,044
892	Maintenance Of Services	-	206,936	206,936
894	Maintenance Of Other Equipment	231,538	105,826	337,364
901	Supervision	173,724	1,817,555	1,991,278
902	Meter Reading Expenses	685	223,175	223,859
903	Customer Records And Collection Expenses	3,819,292	6,905,692	10,724,984
905	Miscellaneous Customer Accounts Expenses	6,750	835	7,585
907	Supervision	3,638	290,099	293,737
908	Customer Assistance Expenses	15,221,239	237,377	15,458,615
909	Informational And Instructional Advertising Expenses	485,200	23,780	508,979
910	Miscellaneous Customer Service And Informational Expenses	219,681	605,496	825,176
913	Advertising Expenses	1,294,230	20,077	1,314,306

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (LKS)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
920	Administrative And General Salaries	1,681,747	30,401,092	32,082,838
921	Office Supplies And Expenses	662,258	5,067,076	5,729,334
923	Outside Services Employed	7,598,212	9,661,490	17,259,702
924	Property Insurance	838	235,065	235,903
925	Injuries And Damages	2,258,824	131,412	2,390,236
926	Employee Pensions And Benefits	4,303,831	12,845,082	17,148,913
928	Regulatory Commission Expenses	41,210	-	41,210
930.1	General Advertising Expenses	41,406	34	41,439
930.2	Miscellaneous General Expenses	(360,904)	2,411,083	2,050,180
931	Rents	180,327	1,077,729	1,258,056
935	Maintenance Of General Plant	12,780	576,449	589,230
Grand Total		448,913,692	143,959,976	592,873,668

BILLED TO LOUISVILLE GAS AND ELECTRIC COMPANY (LG&E) FROM THE SERVICE COMPANY (PPL SERVICES CORPORATION)
FOR THE 2016 CALENDAR YEAR

FERC Account	FERC Account Description	Direct Charge	Indirect Charge	Grand Total
107	Construction Work In Progress	-	192,987	192,987
165	Prepayments	5,751	583,010	588,761
186	Miscellaneous Deferred Debits	28,250	-	28,250
500	Operation Supervision And Engineering	-	1,218	1,218
580	Operation Supervision And Engineering	-	3,836	3,836
588	Miscellaneous Distribution Expenses	7,828	-	7,828
920	Administrative And General Salaries	128,641	428,122	556,763
921	Office Supplies And Expenses	345,067	(145,404)	199,663
923	Outside Services Employed	132,444	108,277	240,722
926	Employee Pensions And Benefits	101,917	342,271	444,188
930.2	Miscellaneous General Expenses	239,741	62,643	302,385
Grand Total		989,640	1,576,961	2,566,600

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 7

Responding Witness: William S. Seelye

Q-7. Refer to LG&E's response to Commission Staff's Second Request for Information ("Staff's Second Request"), Item 5. Explain how the 30 percent maximum increase for any light was determined.

A-7. Because the unit cost analysis for individual light types would have supported increases of over 100 percent for certain lights, the Company determined that it was appropriate to place a cap on the maximum increase for any single type of light. The Company proposed a 30 percent maximum increase to any lighting type to recognize the principles of rate continuity and gradualism. Ultimately, the 30 percent cap is based on what the Company considered to be a reasonable maximum increase for lighting rates in this proceeding.

In prior rate cases, the Companies capped the maximum increase at a somewhat higher level. For example, in KU's Case No. 2009-00548, the Company proposed to limit the increase to any lighting type to 55 percent. Furthermore, in Case No. 2009-00548, the Commission *approved* increases for individual lighting rates in the 30 to 55 percent range. For example, the rate for the 9,500 HPS light was increased by 34 percent; the rate for the 22,000 HPS light was increased by 40 percent; and the 5,800 HPS light was increased by 55 percent.

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Dated February 7, 2017

Question No. 8

Responding Witness: William S. Seelye

Q-8. Refer to LG&E's response to Staff's Second Request, Item 8.

a. Provide this response in Excel format with the formulas intact and unprotected.

b. Confirm that the proposed rates as calculated on page 1 of 6 will change if the Commission approves an energy rate for Rate Schedule GS different from that proposed by LG&E.

c. Confirm that the proposed rates as calculated on page 1 of 6 will change if the Commission approves a return on equity ("ROE") different from the 10.23 percent proposed by LG&E which was used to calculate the levelized fixed charge percentage on page 4 of 6.

A-8.

a. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

b. Confirmed.

c. Confirmed.

The attachment is Confidential and provided under seal in a separate file in Excel format.

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 9

Responding Witness: Lonnie E. Bellar

Q-9. Refer to LG&E's response to Staff's Second Request, Item 14.

a. State when interstate pipelines began limiting LG&E's ability to take gas to 1/24th of the daily quantity being delivered to LG&E for the customer.

b. State whether LG&E is specifically limited to taking 1/24th of each customer's gas, or whether LG&E is generally required to take 1/24th of its interstate pipeline deliveries.

c. State whether LG&E has incurred interstate pipeline penalties or suffered some adverse action due to customers' failure to have 1/24th of daily quantities delivered. If so, provide details concerning these events. If not, explain why LG&E is proposing the change to P.S.C. Gas No. 11. Original Sheet Nos. 30.9, Firm Transportation Service, paragraph 4 and 51.4, TS-2 Rider, paragraph 3 for Rate FT and Rider TS-2 customers.

d. Item 14 of Staff's First Request asked that LG&E provide the impact of the proposed change on the customers that will be most affected. No customer impact was provided. State whether there is no customer impact because customers are currently taking 1/24th of their daily quantity, or otherwise provide as requested the impact on the customer that will be most affected.

A-9.

a. Customers transporting under LG&E's Rate FT and Rider TS-2 rely upon Texas Gas Transmission, LLC's ("Texas Gas's") Rate FT to make deliveries of gas to LG&E. As far as LG&E is aware, Texas Gas has always required that deliveries of gas under its Rate FT be made "in as nearly as possible uniform hourly quantities during any day", that is, at 1/24th of the nominated volume. LG&E's concern regarding hourly and daily imbalances created by customers served under Rate FT is not new. Please see LG&E's response to Question No. 9(c) below.

b. Pursuant to Texas Gas's tariff, LG&E is required to take 1/24th of the volumes nominated under Texas Gas's Rate FT. Customers deliver gas to

LG&E under Texas Gas's Rate FT. Therefore, LG&E is required to take 1/24th of the daily volume of gas being nominated and delivered to LG&E by transporting customers in a given hour.

LG&E's service under Texas Gas's Rate FT also requires LG&E to take gas at 1/24th of the quantity of gas nominated and delivered. However, LG&E also contracts for Texas Gas's Rate NNS which allows LG&E to take up to 1/16th of its Rate NNS contract demand. While Rate NNS is more flexible than Rate FT, it is also more expensive than Rate FT.

Therefore, LG&E's total gas take from Texas Gas is a weighted average based on the type of pipeline services available -- whether those are LG&E's pipeline services or the service used by transportation customers to deliver gas on a given day. As the delivery point operator, LG&E is held responsible for complying with the hourly take requirements in Texas Gas's tariff.

c. To date, LG&E has not incurred any pipeline penalties. Nor has LG&E suffered an adverse action due to customers' failure to have 1/24th of daily quantities delivered. Under its tariff, Texas Gas can subject its customers to an Operational Flow Order ("OFO") and the associated penalties for failing to adhere to hourly limitations required under Texas Gas's tariff. Instead of potentially subjecting itself to an OFO issued by Texas Gas, LG&E has used its available pipeline services and its on-system gas storage to provide the daily and hourly balancing required to maintain adequate supplies to all customers (including gas transportation customers) on its gas system. LG&E's Rate FT addresses the daily imbalances created by gas transportation customers, but it does not provide LG&E with a tool to manage hourly imbalances created by gas transportation customers. For this reason, LG&E has proposed the referenced tariff change.

   LG&E has previously pointed out its concerns with gas imbalances caused by gas transportation customers. In the testimony of J. Clay Murphy in Case No. 2012-00222 at pages 23 and 24, LG&E stated:

> Despite the fact that customers served under Rate FT are typically process gas customers, customers served under Rate FT impose two significant system management risks on LG&E. First, by not accurately nominating daily gas requirements, current Rate FT customers often create significant daily imbalances which LG&E must resolve. Second, and as important, these customers can create hourly imbalances which LG&E must resolve. While these customers can be expected to generally use natural gas more consistently throughout the day than space-heating customers, they do not use natural gas in equal hourly increments. These customers use interstate pipeline transportation capacity that requires LG&E to take gas from the

pipeline at uniform daily rates of flow (*i.e.*, 1/24th of the daily nominated gas supply volume in a given hour). Any difference between hourly receipts from the pipeline and hourly deliveries to the customer are balanced by LG&E. That balancing requires LG&E to use either its on-system storage or the more flexible pipeline services held by LG&E for sales customers.

The change being proposed (to limit the Company's obligation to deliver gas in excess of 1/24th of the Customer's Maximum Daily Quantity) assists LG&E in maintaining and supporting the reliability of LG&E's gas system for all customers and helps to prevent cost subsidies among gas customers.

d. LG&E does not expect that this change will affect any existing customer once it is approved.

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Question No. 10

Responding Witness: Lonnie E. Bellar

Q-10. Refer to LG&E's response to Staff's Second Request, Item 18.d.

a. Explain why the costs in the base period for Mill Creek Unit 2 are significantly more than those of the other Mill Creek units.

b. Explain why the costs in the base period are so much greater than those in the test period for Mill Creek Unit 4.

A-10.

a. During the base period, Mill Creek Unit 2 underwent an outage in the fall of 2016 in which turbine steam valve repair work was completed in addition to miscellaneous repairs that required a unit outage. Similar work was done on Unit 3 in late spring 2016 but did not include as much backlog work. This same type of work was not done on Units 1 or 4 during the base period.

b. Mill Creek Unit 4 had an outage in the fall of 2016 involving significant powerblock work including feedwater heater, electrical switchgear and cooling tower equipment repairs. There is no planned work of this nature included in the test period.

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Question No. 11

Responding Witness: John P. Malloy

Q-11 Refer to LG&E's response to Staff's Second Request, Item 22. Explain what happens if a damaged meter base prevents the installation of an AMS meter, the customer refuses to sign the waiver, and the customer does not hire a contractor to repair the meter base.

A-11. Because meter bases sufficiently damaged to prevent AMS installation are unsafe, LG&E would inform the customer that service could not be provided until the meter base is repaired as per 807 KAR 5:006 Section 15(1)(b).

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Question No. 12

Responding Witness: Daniel K. Arbough / David S. Sinclair

Q-12. Refer to LG&E's responses to Staff's Second Request, Items 26 and 53, and the Excel attachment to Item 26. Compare the current Gas Transport Service, FT Industrial customer count with the base period and forecast test period customer counts.

A-12.

Gas Transport Service, FT Industrial Total	Current - Jan 31, 2017	Base Period	Test Period
Customer Count	69	66	63

The six customers driving the difference between the current customer count and test period customer count are all Pool Managers with no associated volumes. For forecasting purposes, only those customers on the Gas Transport Service, FT Industrial rate who use gas were considered, causing a difference of six customers in the test period.

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Question No. 13

Responding Witness: Gregory J. Meiman

Q-13. Refer to LG&E's response to Staff's Second Request, Item 37.e.

a. Explain the basis for the reduction in headcount from 1,059 for the 12 months ended June 30, 2016 to 1,045 for the 12 months ending June 30, 2018.

b. Provide the headcount for LG&E and KU Services Company for the 12 months ended June 30, 2016, the base year and test year.

A-13.

a. The reduction of 14 headcount for the 12 months ending June 30, 2016 compared to the 12 months ending June 30, 2018 (the future test period in this case) is primarily due to generating plant closures and decreases in LG&E Operations departments. These decreases were partially offset by increases in Gas Storage and Gas Distribution.

b. See chart below for the average headcount for the periods requested.

12 months ended 6/30/16	1,606
Base Year	1,650
Test Year	1,693

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Question No. 14

Responding Witness: David S. Sinclair

Q-14. Refer to LG&E's response to Staff's Second Request, Item 40. The response shows that Paddy's Run units 11 and 12 had a capacity factor of 0.10 percent in 2016. Explain if these units were operated because generation was needed, or if they were operated for testing/maintenance purposes.

A-14. Paddy's Run 11 was started a total of 12 times during 2016. Nine of these starts were for testing purposes. Paddy's Run 12 was started a total of 11 times during 2016. Eight of these starts were for testing purposes. When the units were operated for non-testing purposes, it was because generation was needed during periods of high loads and/or outages.

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Question No. 15

Responding Witness: John K. Wolfe

Q-15. Refer to LG&E's response to Staff's Second Request, Item 41.

a. State whether this response indicates that 35 percent of LG&E's customers will receive no benefit from the proposed Distribution Automation ("DA") program.

b. State whether the sole purpose of the DA program is to improve SAIDI and SAIFI performance.

A-15.

a. LG&E's response to Staff's Second Request, Item 41 indicates 35 percent of LG&E's customers will not receive the direct benefit of having Distribution Automation (DA) implemented on their circuit; however, all customers will benefit from the DA program. DA provides system intelligence in addition to its automated service restoration capabilities. DA's automated switching and its intelligence related to fault location relieve field crews of these manual and time consuming activities thus enhancing crew efficiency and availability to respond to system wide issues. In addition to DA, Section 2.5 beginning on page 19 of Exhibit PWT-5 in Mr. Thompson's testimony describes programs that will continue to be utilized to improve reliability of customers whose circuits are not well suited to DA application.

b. Improvements in SAIDI and SAIFI are not the sole purpose of the DA program. Additional DA related benefits are described in Section 2.4 on page 18 of Exhibit PWT-5 in Mr. Thompson's testimony.

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 16

Responding Witness: John K. Wolfe

Q-16. Refer to LG&E's response to Staff's Second Request, Item 43.

a. Confirm that between the years of 2016-2022 the operations and maintenance ("O&M") savings is $480,000 and the O&M costs are $6 million.

b. Provide the annual number of outages greater than three hours for the past five years.

A-16.

a. A total of $480,000 in O&M savings for LG&E and KU combined is expected between the years 2016 – 2022 as a result of the Distribution Automation (DA) program. A total of $6 million in O&M costs for LG&E and KU combined is modeled between the years 2016 – 2022 for the DA program.

Note: The financial model referenced includes O&M expenses associated with the DMS over the depreciable life of the DMS asset which ends after 2021. The Companies believe this is the reasonable period for the analysis. Annual ongoing O&M expenses modeled beyond 2021 reflect communication costs associated with the SCADA connected reclosers. A financial scenario including escalated ongoing O&M DMS expenses, as well as assumed DMS upgrade costs and timing through 2051 was completed. This scenario showed the "do nothing" alternative to be the lowest NPVRR of the alternatives evaluated. The Companies believe this scenario is based on an unreasonable period for the analysis because of the uncertainties associated with the 30-year IT system assumptions. Recognizing the uncertainty of 30-year IT system related assumptions, and noting that reliability improvement is the primary objective of the DA program, completion of the DA program remains the recommended alternative based on the justification described in Exhibit PWT-5 of Mr. Thompson's testimony.

b. All LG&E outages of greater than three hours duration during the past five years are shown in the table below. Major event days are included.

Year	**Outages**
2012	2,728
2013	2,311
2014	2,848
2015	2,469
2016	2,206

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Question No. 17

Responding Witness: Daniel K. Arbough

Q-17. Refer to LG&E's response to Staff's Second Request, Item 45. State the impact of the difference between the estimated termination payment on the interest rate swap of $13 million contained in its Application and the actual termination payment of $9.409 million on LG&E's revenue requirement in the test year.

A-17. The $3.6 million decrease in actual termination payment on the interest rate swap would have an impact of a decrease in LG&E's Electric and LG&E's Gas revenue requirement in the test year by $125,762 and $36,971 respectively.

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Dated February 7, 2017

Question No. 18

Responding Witness: Adrien M. McKenzie

Q-18. Refer to LG&E's response to Staff's Second Request, Item 51. For each authorized ROE for the proxy group of gas and electric utilities, provide the date of the authorized ROE awarded by each respective regulatory agency.

A-18. As Mr. McKenzie noted in response to Staff's Second Request for Information, Item 51, he did not conduct a research study to identify the most current ROE authorized for the respective utilities cover by his Utility Group in the course of preparing his Direct Testimony; nor was such a study necessary to support his conclusions and recommendations. In an effort to provide Staff with similar information based on data contained in his workpapers, Mr. McKenzie prepared the summary table attached in response to Staff's Second Request for Information, Item 51, which presents the average authorized ROE reported to investors by Value Line for the firms in the Utility Group. Value Line does not report any details concerning the data sources its analysts relied on in developing this information, including the dates of any relevant regulatory orders.

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Question No. 19

Responding Witness: John P. Malloy

Q-19. Refer to LG&E's response to Staff's Second Request, Item 60.a., which states that "[t]he meters installed as part of the DSM AMS program do not have remote service switches."

a. Explain if LG&E will replace all of these meters installed as part of the DSM AMS program with new meters containing the remote service switch.

b. State the number of meters LG&E has installed to date in connection with its DSM AMS program.

A-19.

a. Because the Landis+Gyr meters deployed through the DSM AMS program are new, compatible with the full AMS deployment, and provide the same benefits as the meters LG&E will deploy in the full deployment with the sole exception of lacking remote service switches, LG&E does not propose to replace the DSM AMS meters during the full deployment. Through the end of 2016 there are 711 cellular meters deployed in the LG&E service territory that will be replaced as part of the AMS Deployment. These meters are not compatible with the full AMS deployment. The cellular meters were required to provide AMS opt in service to areas that do not have mesh network installed. Mesh was installed in the denser population areas such as Lexington and Louisville and cellular was used for more rural areas.

b. Through the end of 2016 there are 2,416 AMS meters installed in the LG&E service territory.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 20

Responding Witness: John P. Malloy / William S. Seelye

Q-20. Refer to LG&E's response to Staff's Second Request, Item 62.a.

a. Refer to the attachment, pages 3 and 8 of 10. Identify the replacement plant that is referenced in line 1.

b. Explain what is shown on, and the purpose of, pages 4-5 and 9-10 of the attachment.

c. Explain how LG&E concluded that a .8 percent opt-out estimate is reasonable.

A-20.

a. The replacement plant referenced on line 1 corresponds to the cumulative replacement cost of a representative $100 investment in metering equipment based on the estimated equipment failure from a 5-year Iowa Survivor Curve. The purpose of including the replacement cost in the revenue requirement calculation is to give effect to the impact on carrying charges of the expected failure of the metering equipment over the life of the equipment.

b. Pages 4 and 9 of the attachment show the tax depreciation rates used to calculate deferred income taxes in the carrying charge calculations shown on pages 5 and 10 of the attachment. In the calculation, a five-year (MACRS) depreciation rate was utilized. The carrying charge calculations shown on pages 5 and 10 of the attachment are used to calculate the present value revenue requirement factor and the annual carrying charge rate used to determine the monthly charge for an opt out. Please note that the Company is *not* proposing an opt-out charge in this proceeding.

c. The 0.8 percent potential opt-out rate is an average of the opt-out percentages reported by eight different utilities between May 2012 and January 2015.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 21

Responding Witness: John P. Malloy

Q-21 Refer to LG&E's response to Staff's Second Request, Item 62.b. A reason given for not allowing an opt-out for an AMS meter is the possibility that meters in a remote location must "hop" or communicate with each other, and a missing meter creates a hole that may increase costs to communicate with the remaining meters.

a. Explain whether hops can occur in densely populated areas.

b. If opt-outs are permissible, provide an estimate and supporting work papers for the number of hops LG&E anticipates in its service territory.

A-21.

a. Yes, hops occur in densely populated areas. To clarify, a meter "hop" describes normal meter communications between meters and either other meters or directly to infrastructure (i.e. routers or collectors). Company believes Staff is inquiring about communication holes in a densely populated area. If so, yes, holes can occur in a densely populated area. LG&E has observed meter communication holes in the downtown network deployment. This occurs because the meter does not have a direct line to another meter, router, or collector because it is obstructed by concrete, or other physical material e.g., when a meter is located in a basement or underground area.

b. To estimate the number of hops, if opt-outs are permissible, the Company would need to know where each opt-out was located to assess the impact on meter communications. It is not possible to estimate the number of communication holes without knowing the number of opt-outs and their location to other meters, routers, and collectors. Thus, it is not possible to calculate the number of hops anticipated in the service territory with opt-out.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 22

Responding Witness: John P. Malloy

Q-22. Refer to LG&E's response to Staff's Second Request, Item 63.a.

a. State whether data transmission four times per day will be the upper limit. If not, provide the maximum number of times per day data will be transmitted.

b. Explain what "working to remotely read all MV 90 meters" entails.

A-22.

a. Four times per day to transmit customer information to the head end is not the upper limit. Although the number of times per day customer usage data can be transmitted is configurable, the Company plans this data be scheduled to transmit no more than six times per day (e.g. every four hours), consistent with the system manufacturer's best practice recommendation.

b. The Company is evaluating options to provide a service similar to the AMS proposal to our customers with MV-90 billable meters. This would include new metering infrastructure with enhanced data communication hardware to support the complex meter installations, enhanced telecommunications, and MV-90 system and process configuration.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 23

Responding Witness: John P. Malloy

Q-23. Refer to LG&E's response to Staff's Second Request, Item 63.e. The response states that there are about 30,000 customers whose premises do not have cellular coverage and that it may be costly to serve those premises with the mesh network.

a. Explain if LG&E and KU have contacted the cellular provider regarding the lack of coverage for these customers.

b. Explain if the 30,000 customers are predominantly rural customers wholly within KU's service territory.

A-23.

a. The cellular coverage analysis referenced was performed by Verizon as part of the AMS Opt-In offering. KU and LG&E have not contacted the cellular provider regarding the lack of coverage for these customer.

b. The customers whose premises do not have Verizon cellular coverage are predominantly rural KU customers. The table below provides a breakdown of customers' premises by utility, which totals to less than 30,000 because some customers have more than one meter:

Company Code Group	**Customer Premises**
KU	20,615
LG&E	41
ODP	1,396
Overall Result	**22,052**

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 24

Responding Witness: Lonnie E. Bellar

Q-24. Refer to LG&E's response to Staff's Second Request, Item 64.d. Explain how LG&E determined the pipeline route, and describe the status of LG&E's negotiations and acquisitions of private easements. Include the number of private easements necessary for the project, the number of private easements obtained to date, and whether LG&E anticipates any changes to the project scope, timeline, or estimated cost as a result of its current status for obtaining private easements.

A-24. LG&E selected the proposed route taking into consideration information from a route selection study and input from Bullitt County economic and development officials in regards to projected residential/commercial development and locations, and information from a large customer about projections for increased gas usage.

As LG&E has been monitoring this system, it authorized a local gas engineering and design firm to perform a route selection study for a natural gas pipeline to supply gas to LG&E's Mt. Washington high-pressure distribution system with a final report from the study issued in July of 2015. LG&E provided the locations of preferred source points of natural gas and the termination points of the new pipeline. Within the study areas, route corridors were identified using available GIS data. Multiple field surveys were performed by vehicle, and several initial proposed routes were selected for further evaluation. The selected proposed route was not included as part of this route study. A copy of the route study report is attached. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

Subsequent to the route study and having additional information from local officials and other sources, the proposed route was selected. The Company had a local gas engineering and design firm to perform a feasibility study for routes in this corridor and the proposed route was selected due to length and route features. The feasibility study is attached. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection. This route allowed the proposed pipeline to connect to the existing high pressure distribution pipeline at a location that will provide reliability to the system as a second gas source and capacity to serve expected growth. The key difference from the parameters used in the routing study was the starting point for the proposed pipeline. A revision was made as the Company continued to evaluate options and ultimately found that the proposed starting point selected would provide the desired benefits of improving the reliability of the existing system and would provide capacity at the desired location while minimizing the overall length of the pipeline. Additionally, the proposed route is intended to follow existing electrical line corridors for a considerable portion of route. The attached document displays the starting locations for routes from the route study previously mentioned (report date July 2015) that started at Cox's Creek and the LG&E Bardstown Operations Center and location in relation to the selected starting point. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

A summary of other routes studied in the report and comparison to the selected proposed route include:

1) Starting the pipeline in Bardstown near the Maywood subdivision and tie-in (connect) to the end of the system in Boston. The major benefit of this route would be to provide a true second feed for the entire system were considered. However, these routes were rejected because they provide much less benefit to the Hwy 480 corridor where the majority of commercial and light industrial growth is and is expected to occur (without replacing additional pipe between Boston and Hwy 480) and these routes are also 4 to 5 miles longer than the proposed route.
2) Starting the pipeline in Bardstown near the Bardstown Operations Center or near Cox's Creek and tie-in near the Clermont or Hwy 480 area. The route from the Bardstown regulator facility would provide a feed along the Hwy 245 corridor, but is an additional 7 miles longer than the proposed route. The route from Cox's Creek does not provide significant additional benefit and is 3 - 4 miles longer than the proposed route.
3) Starting the pipeline near Elizabethtown from LG&E's Magnolia gas transmission pipelines and tie-in to the Mt. Washington system near Lebanon Junction. This does provide the benefit of a gas supply from a different gas transmission pipeline system. However, this route is slightly longer and the route is very rocky, likely increasing the cost of construction. In addition, this route would not benefit the Hwy 480 area as much as the proposed route without replacing additional pipeline between Lebanon Junction and Hwy 480.

The pipeline engineering and design is in its beginning stages. The proposed pipeline route is intended to parallel an existing electric corridor for a considerable portion of the route. The engineering and design work along with the easement acquisition processes is just starting and no negotiations have taken place with the landowners. Initially, LG&E will send letters to the property owners along the preliminary route to obtain permission to survey land parcels.

For the proposed route, LG&E estimates approximately 80 easements will need to be acquired. LG&E anticipates that the number of permanent easements will likely change as the route is finalized. As typical for a pipeline project, the timeline and project cost could be impacted by changes that occur during the easement acquisition process, however at this time the Company does not have information that indicates the overall project scope of installing a new pipeline to improve the reliability and provide capacity for growth of the existing system objectives will change.

The entire attachments are Confidential and provided separately under seal.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 25

Responding Witness: Lonnie E. Bellar/John P. Malloy/Daniel K. Arbough

Q-25. Refer to LG&E's response to Staff's Second Request, Item 64.e., which states that the purpose of the pipeline is to bolster the reliability of LG&E's system, and to LG&E's response to the Attorney General's Initial Data Request ("AG's First Request"), Item 432.c.

a. Provide the existing and projected demand on LG&E's system in the Bullitt County area. Include support for all calculations and underlying assumptions, including projections for growth from state or local sources.

b. Describe the existing and proposed capacity of LG&E's system in the Bullitt County area. Include supporting calculations.

c. Provide LG&E's annual customer counts for all classes for Mt. Washington, Shepherdsville, Clermont, Lebanon Junction, and Boston, and for the Bullitt County portion of its system generally, for years 2012 through 2016, and estimates of annual customer counts related to that same area for years 2017 through 2021. The information provided should indicate how much of the anticipated growth in customer counts will be due to customer additions to currently existing lines, to the proposed pipeline construction, and whether from new or established developments.

d. Confirm that the proposed construction will make natural gas available to areas that currently do not have access to gas service. If so, provide an estimate of new customer additions and associated growth in sales volumes for 2017 through 2021.

e. Provide a discussion of the adequacy of pressure in the existing Bullitt County system, and explain whether LG&E has experienced any customer outages in this area due to inadequate system capacity to meet system demand.

f. State all assumptions, show all calculations, and provide all work papers used to derive the estimated $27.6 million project cost. Where such calculations and work papers are in Excel worksheet format, provide an electronic copy in Excel format.

g. Provide the incremental annual O&M expense associated with the ongoing operation of the new pipeline. State all assumptions, show all calculations, and provide all work papers used to derive the estimated annual incremental O&M costs. Where such calculations and work papers are in Excel worksheet format, provide an electronic copy in Excel format.

h. State how LG&E intends to finance the pipeline project.

A-25. In addition to requested responses below, please see the attached document for project information. Certain requested information is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

a. Existing Demand

The existing demand on the LG&E system in the Bullitt County area is based upon the analysis of LG&E's gas system utilizing steady state gas system hydraulic modeling software, Synergi Gas. The software was used to quantify the flow into the existing high pressure distribution system through the Mt. Washington high pressure gas facility (the starting point for the existing high pressure distribution line) in the Synergi design day (winter) model. For these conditions the current demand is approximately 884 mcfh. The Synergi model is loaded using customer meter read data from LG&E's customer information (billing) system to generate the demand data.

<u>Projected Demand</u>:

Projected demand for the Bullitt County system was developed through a combination of two data sets. The first data set was developed based on the customer meter read data and the customer rate assignment information that was extracted from LG&E's customer information system. The data from the LG&E customer information system was used to trend demand growth, and number of customers on each rate type, over a defined number of years. These growth trends were used to project future demand. The second data set was developed using residential and economic development projections from Bullitt County's economic development plans and information received by LG&E's Major Accounts department. In order to determine the projected demand growth, an assumption based on previous growth in the area was used to establish a demand per square foot to be used for the commercial developments. These projections did not factor in any production load, just space heating load for commercial properties. The Bullitt County Economic Development website includes information on the projected square footage for the various locations, which was used to project the space heating demand requirements.

Information from local officials and other sources include:

1) Based on information from the Bullitt County Economic and Development officials home construction starts in the county are expected to range annually from 300-500 homes (expected to be primarily in the Mt. Washington and Shepherdsville areas) over the next 5 years.
2) Bullitt County Economic and Development officials provided the following known warehouse and light industrial development projects. These are in various stages from zoning approvals to construction.
    a) Brooks Exit Area - (5) buildings with a projected heating load of 33 mcfh and an under roof capacity of approximately 2.25M square feet.
    b) Cedar Grove Area - (9) buildings with a projected heating load of 79 mcfh and an under roof capacity of over 4.78M square feet.
    c) Between Hwy 480 and Hwy 245 - (7) buildings with a projected load of 39 mcfh and an under roof capacity of approximately 2.79M square feet.
    d) Hwy 61/Chapeze Lane area - (2) buildings with a project heating load of 42 mcfh and an under roof capacity of approximately 2.0M square feet and over 200 acres zoned for heavy industrial use.
    e) A few hundred acres in Lebanon Junction
3) A large existing customer supplied by this system has communicated they expect to increase their gas usage considerably over the next 5 years.
4) The Kentucky State Data Center released a Projection and of Population and Household study in 2016. The study provided census data for 2010 and projected population for Kentucky counties through 2040. Bullitt County ranked 10th in percentage of growth (28.1%) and 9th in raw population growth (20,851) in the state when comparing the 2035 projected population versus 2010 Census data.
5) A new interstate exit between the Cedar Grove (Hwy 480) and Clermont (Hwy 245) exits is planned for construction over the next 2 - 3 years.

The table below provides estimates for projected system demand.

Bullitt County System Estimated Projected Demand

	Load Type	Scenario	5-Year Projection (2021)
Peak Hour Demand (mcfh)	Residential	High	56
		Low	19
	Commercial	High	208
		Low	185
	Industrial & Firm Transportation	High	241
		Low	221
	Total	High	505
		Low	425

b. The existing and proposed gas capacity of LG&E's system in the Bullitt County area is based upon the analysis of LG&E's gas system utilizing steady state gas system hydraulic modeling software, Synergi Gas. The remaining system capacity can vary depending on the location where demand is added to the system. This variation is due to hydraulic characteristics of the system. Generally, the farther downstream from the Mt. Washington high pressure gas regulation facility (the pipeline's starting point), the lower the demand capacity will be due to the hydraulics of the system. The table below provides capacities that can be added to the system (in mcfh) while maintaining minimum design gas system operating pressures with the existing connected gas loads on the existing high pressure distribution system. Following completion of this project the gas system would have the available capacity to support growth for the known inputs provided by Bullitt County and additional supply for future growth. The proposed project would increase capacity in the system by up to 1,600 mcfh. The majority of the capacity would be available from the Clermont area (Hwy 245) and north matching the area of primary growth and development.

Remaining Capacity at Different Locations in the System

Location	**Gas Load (mcfh)**
Highway 44 & Lees Lane area (northern point)	55
Highway 480 area (mid point)	45
Boston, Kentucky (end point)	25

c. Please see the table below providing the customer counts from 2012 - 2016. Note that some portions of these areas are served by other parts of LG&E's integrated gas distribution system.

	2012	**2013**	**2014**	**2015**	**2016**
Residential Customers	12,643	12,792	12,963	13,060	13,221
Large Commercial Customers	804	808	839	846	859
Industrial/Gas Transport Customers	7	9	9	10	10
Public Authorities Customers	49	56	52	51	52
TOTAL	13,503	13,665	13,863	13,967	14,142

The table below provides the projected customer counts for 2017 - 2021 based only on the area served by the existing high pressure distribution line. These projections are based on customers that are expected to be added to the existing system, which will be made more reliable as a result of adding the proposed pipeline. We expect those additions to come from a mix of new and existing developments. At this time, we are unaware of any need to service new customers by directly tapping into the proposed pipeline. Instead, the new pipeline will help to serve new growth by augmenting and reinforcing the existing system. Thus, any growth served by direct taps onto the new pipeline has not been considered or quantified because the objective of installing the pipeline is to reinforce the existing system in order to improve reliability and to provide capacity so as to allow the existing system to support potential load growth.

		2017		**2018**		**2019**		**2020**		**2021**	
	2016 Baseline	low	high	low	high	low	high	low	high	low	high
Residential Customers	13,221	13,295	13,442	13,368	13,662	13,442	13,883	13,515	14,103	13,589	14,324
Large Commercial Customers	859	879	888	899	918	918	947	944	993	961	1021
Industrial/Gas Transport Customers	10	10	10	10	10	11	16	12	17	12	18
Public Authorities Customers	52	52	52	52	52	52	52	52	52	52	52
TOTAL	**14,142**	**14,236**	**14,392**	**14,329**	**14,642**	**14,423**	**14,898**	**14,523**	**15,165**	**14,614**	**15,413**

d. Upon completion (scheduled to be no sooner than first quarter 2019) the proposed pipeline would make natural gas available to areas that do not currently have natural gas service.

Because the primary purpose of the new pipeline is to reinforce the existing system by improving reliability for existing customers and make capacity available so it can continue to support the potential load growth, growth occurring along the new pipeline has not been quantified. While growth along the new pipeline can occur the proposed pipeline will be operated as a transmission class pipeline and LG&E is currently not planning to have any pressure reducing gas facilities located on the new pipeline during construction except for the facility at the connection of the proposed pipeline and the existing high pressure distribution pipeline. The only exception to this will be that LG&E is currently planning to offer property owners of new easements the option of a farm tap service subject to all terms required for new customers. As of this time it is estimated the number of new easements to be about 80 over the pipeline route.

The proposed pipeline route for the new pipeline runs primarily through rural locations until it approaches the existing high pressure distribution pipeline near Interstate 65 and Hwy 480, which is an area of development. Based on information from local economic and development officials the primary growth areas in Bullitt County for residential housing will be in the Mt. Washington and Shepherdsville areas, while industrial/commercial growth will occur along Interstate 65 in the Hwy 480 and Hwy 245 areas and also in the Hwy 61 and 245 locations west of Interstate 65. The proposed pipeline route is intended to have the new pipeline connect at a location on the existing system to provide gas supply to the existing system supporting existing system reliability and capacity for potential growth.

e. LG&E conducts an annual review of the gas system utilizing steady state gas system hydraulic modeling software, Synergi Gas to help insure the safe and reliable operation of LG&E's gas pipeline system and gas facilities especially during the winter operating season. The purpose of this analysis is to summarize the condition of LG&E's gas system, identify low pressure points throughout gas system, and define short term and/or long term remedial measures. LG&E has not experienced any customer outages in this area due to inadequate system capacity. Gas system pressures are monitored at the terminus of this single-feed (dead end) system utilizing LG&E's supervisory control and data acquisition (SCADA) control system. The system is nearing the capacity it can serve while maintaining minimum operating pressures on the high pressure distribution system at the south end of the system. Refer to the table in 25(b) for the remaining capacity that can be added. While the system has not experienced customer outages in this area directly due to inadequate system capacity, there have been instances of third party damage on the high pressure distribution pipeline or facilities directly on the pipeline that could have caused significant outages for residential, commercial and industrial customers. One particular instance occurred in 2004 when a tractor bucket punctured the 8-inch pipeline along Hwy 44 near Halls Lane in Shepherdsville. The damage occurred during July and due to the low demand during this time of the year repairs could be made without customer outages downstream of the damage. In terms of excavation activity Bullitt County has seen an average of 5,203 locate requests and approximately 11 damages annually since 2012 Several of the damages have occurred in the vicinity of the 8-inch high pressure pipeline along Hwy 44 between Mt. Washington and Shepherdsville. In addition, the Kentucky DOT state roadway plans include designs for widening 10 miles of Hwy 44 between Mt. Washington and Shepherdsville to 5 lanes in the future (currently there is no timeframe for construction), which is a primary corridor for the 8-inch high pressure distribution line. The proposed pipeline would provide a second supply point to this system, which would help mitigate or prevent customer outages associated with damages on the existing pipeline and facilities.

f. The cost for the pipeline's construction was estimated based on historical cost for similar types of pipeline construction projects based on the estimated mileage for the preliminary route and comparing it to cost information from the route study referenced in question 24 as a check. This method was used because engineering, design and real estate and right of way activity (easement acquisitions) had not been performed at this time. Based on historical pipeline costs, the cost for this project was anticipated to be approximately $2.5 million per mile. It was expected that the pipeline route would be in the 10 - 12 mile range. Using an average of 11 miles and assumption of $2.5 million per mile, the pipeline was estimated to cost approximately $28 million. It was anticipated that as much as $500k might be spent through the end of 2016 and the balance ($27.5 million) was budgeted in the LG&E Business Plan for 2017 and 2018. Actuals in through 2016 were approximately $100k, which was added to the $27.5 million in 2017 and 2018 leading to the estimated cost of $27.6 million.

g. See attached being provided in Excel format.

h. The Company does not project finance individual projects separately. The Company expects to finance the costs of the project with a combination of new debt and equity. The debt is expected to be a combination of short-term debt, in the form of commercial paper notes, loans from affiliates via the money pool, and/or bank loans. The mix of debt and equity used to finance the projects will be determined so as to allow the Company to maintain its strong investment-grade credit ratings. The Company will continue to evaluate financing alternatives as these projects progress and will seek the approval of the Commission pursuant to KRS 278.300 to the extent required.

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Bullitt County Reinforcement

Summary

The gas supply for large sections of Bullitt County including Mt. Washington, Shepherdsville, the Hwy 480 corridor and the system's major customers ([redacted]) is supplied primarily by an 8-inch and 6-inch diameter high pressure distribution pipeline. The supply starts as an 8-inch high pressure pipeline in Mt. Washington and originates from a gas regulation facility supplied by LG&E's Calvary gas Transmission pipeline system. The high pressure distribution pipeline's available capacity has been almost fully utilized due to growth in the area which has occurred over the past decade. With the system being effectively a single-feed radial pipeline, the increased utilization has furthered reliability concerns, as well as, limited available capacity for growth in the area.

The proposed project would install a 10 to 12-mile, 12-inch natural gas transmission pipeline along the Kentucky Highway 480 corridor providing a new connection between LG&E's Calvary Transmission Pipeline and LG&E's high pressure gas distribution pipeline system. A new regulation facility will be constructed at the terminus of the new transmission pipeline to regulate the gas pressure into the lower pressure pipeline system. This project will improve reliability for the customers supplied by this system by having a second geographically diverse gas supply to the system. Currently up to 9,500 customers could lose service if supply from the 8-inch high pressure distribution pipeline is lost due to third party damage or other reason. This project would provide a second supply to this area of the system mitigating the number of customers losing service.[1] The new pipeline will provide sufficient gas supplies for the system for the foreseeable future based on known development and growth projections.

This project is included in the 2017 Business Plan (BP). Based on route studies for the project and cost information from a cross section of other natural gas transmission pipeline projects, a preliminary order of magnitude cost for the project is anticipated to be approximately $26M-$32M. The 2017 BP has $27.5M budgeted for this project in 2017 and 2018.

Background

The Mt. Washington, Shepherdsville, Clermont and Boston section of Bullitt County are primarily supplied by the 8-inch high pressure distribution line emanating from Mt. Washington and supplied from the Calvary gas transmission pipeline (note that there are distribution pipelines connected to the high pressure gas distribution system, however the distribution pipelines cannot support the supply needs for these areas or any growth in these areas without additional gas

[1] The section of the system to the south of the potential tie-in locations for the proposed pipeline would still be on a one-way feed. This would include 450 residential customers, [redacted]

CONFIDENTIAL INFORMATION REDACTED

supplies from the high pressure gas distribution system). The 8-inch high pressure line was installed in the mid-to-late 1960's initially ending in [redacted]. In 1996 an 11-mile, 6-inch high pressure distribution pipeline was installed from the 8-inch high pressure distribution pipeline (tie-in just south of Chapeze Lane near Clermont) to Boston. This pipeline was installed primarily to supply the [redacted]. The 8-inch high pressure distribution line currently supplies 23 regulator stations (serving 9,770 customers), 188 farm tap services, directly supplies [redacted] and the high growth area around Hwy 480 and I-65. The 6-inch high pressure distribution pipeline supplies 1 regulator station (serving 82 customers), 157 farm tap services and directly supplies the [redacted].

Several characteristics of the system play a key role in determining the best location to introduce additional supplies. First, 95% of customers on this system are located along the Hwy 44 corridor between Mt. Washington and Shepherdsville. This creates a large pressure drop between the current gas source and locations south of the Hwy 44 corridor. This characteristic limits the effectiveness of a reinforcement that does not tie-in (connect) south of the Hwy 44 corridor. Second, the 11-mile, 6-inch pipeline from Clermont to Boston has a large drop in pressure during winter (design day) conditions. This requires operating the 8-inch high pressure distribution pipeline in a manner to maintain adequate pressure at the point the pipeline transitions from 8-inch to 6-inch to ensure the 6-inch line can provide both the required capacity and flow rates required for customers in the Boston area including [redacted].

Gas Engineering began studying this system using system modeling software in the late 1990's and monitoring the available capacity while maintaining adequate gas system pressures during winter (design day) conditions. Based on this information the system was initially reinforced in 2005 and 2006. In 2005 LG&E did a pressure uprate for the high pressure distribution line. The pressure uprate included replacing farm tap services and increasing the system's MAOP from 175 psig to its current MAOP of 275 psig. Additional uprates are not an option due to the design limits for the existing gas infrastructure (pipe, valves and fittings). In 2006, LG&E upgraded the gas regulation facility at Mt. Washington, which connects the high pressure distribution pipeline to Calvary transmission line and regulates the pressure from the transmission system. Through system modeling, historical growth and projected growth it was anticipated at the time that the uprate and regulation facility upgrade would reinforce the system to the mid 2010's depending on growth in the area.

In the past year, LG&E Economic Development, Major Accounts and GDO personnel have been working with various Bullitt County officials, developers and large customers to better understand probable growth volumes and locations of growth on the system to determine when and where additional system reinforcement would be needed. Input from this work includes...

1) Based on information from the Bullitt County Economic and Development officials home construction starts in the county are expected to range annually from 300-500 homes (expected to be primarily in the Mt. Washington and Shepherdsville areas) over the next 5 years.

2) Bullitt County Economic and Development officials provided the following known warehouse and light industrial development projects. These are in various stages from zoning approvals to construction....
   a) Brooks Exit Area - (5) buildings with a projected heating load of 33 mcfh and an under roof capacity of approximately 2.25M square feet.
   b) Cedar Grove Area - (9) buildings with a projected heating load of 79 mcfh and an under roof capacity of over 4.78M square feet.
   c) Between Hwy 480 and Hwy 245 - (7) buildings with a projected load of 39 mcfh and an under roof capacity of approximately 2.79M square feet.
   d) Hwy 61/Chapeze Lane area - (2) buildings with a project heating load of 42 mcfh and an under roof capacity of approximately 2.0M square feet and over 200 acres zoned for heavy industrial use.
   e) Few hundred acres in Lebanon Junction
3) A large existing customer supplied by this system has communicated they expect to increase their gas usage considerably over the next 5 years.
4) The Kentucky State Data Center released a Projection and of Population and Household study in 2016. The study provided census data for 2010 and projected population for Kentucky counties through 2040. Bullitt County ranked 10th in percentage of growth (28.1%) and 9th in raw population growth (20,851) in the state when comparing the 2035 projected population versus 2010 Census data.
5) A new interstate exit between the Cedar Grove (Hwy 480) and Clermont (Hwy 245) exits is planned for construction over the next 2 - 3 years.

Gas Engineering investigated several pipeline routes and tie-in locations in evaluating the best location for this line. Other routes studied included...

1) Starting the pipeline in Bardstown near the Maywood subdivision and tie-in (connect) to the end of the system in Boston. The major benefit of this route would be to provide a true second feed for the entire system were considered. However, these routes were rejected because they provide much less benefit to the Hwy 480 corridor where the majority of commercial and light industrial growth is and is expected to occur (without replacing additional pipe between Boston and Hwy 480) and these routes are also 4 to 5 miles longer than the proposed route.

2) Starting the pipeline in Bardstown near the Bardstown Operations Center or near Cox's Creek and tie-in near the Clermont or Hwy 480 area. The route from the Bardstown regulator facility would provide a feed along the Hwy 245 corridor, but is an additional 7 miles longer than the proposed route. The route from Cox's Creek does not provide significant additional benefit and is 3 - 4 miles longer than the proposed route.

3) Starting the pipeline near Elizabethtown from LG&E’s Magnolia gas transmission pipelines and tie-in to the Mt. Washington system near Lebanon Junction. This does provide the benefit of a gas supply from a different gas transmission pipeline system. However, this route is slightly longer and the route is very rocky, likely increasing the cost of construction. In addition, this route would not benefit the Hwy 480 area as much as the proposed route without replacing additional pipeline between Lebanon Junction and Hwy 480.

CONFIDENTIAL INFORMATION REDACTED

Gas Engineering also investigated options to "loop" the existing pipeline to reinforce the system. Looping a system consists of installing an additional pipeline in parallel to an existing pipeline. The two pipelines are then tied-in (connected) together lowering the pressure drop for the area looped and therefore providing additional capacity. Based system modeling a significant portion of the existing pipeline starting in Mt. Washington would have to be looped to provide capacity just for small commercial and residential growth. Therefore, this option was rejected since it does not provide the same benefits as the proposed project.

The existing high pressure pipeline has experienced third-party damages that potentially could have caused large portions of the customers served from it to be lost. The following incidents were examples of pipeline and gas facility damages…

1) In 2004 a tractor bucket punctured the 8-inch pipeline near KY44 and Halls Lane
2) In 2005 a vehicle hit a gas regulation facility at KY44 and Fisher Lane
3) In 2005 a vehicle hit a gas regulation facility at KY44 and Bells Mill

Bullitt County has seen an average of 5,203 locate requests and approximately 11 damages annually since 2012. Several of the damages have occurred in the vicinity of the 8-inch high pressure pipeline along Hwy 44 between Mt. Washington and Shepherdsville. In addition, the Kentucky DOT state roadway plans include designs for widening 10 miles of Hwy 44 between Mt. Washington and Shepherdsville to 5 lanes in the future (there is not currently a timeframe for construction).

Following completion of this project the gas system would have the available capacity to support growth for the known inputs provided by Bullitt County and additional supply for future growth. The proposed project would increase capacity in the system by up to 1,600 mcfh. The majority of the capacity would be available from the Clermont area (Hwy 245) and north matching the area of primary growth. The proposed project would provide the necessary capacity for the [redacted], as well as some additional capacity in that area. Additional reinforcement work outside of this project may be required depending on the specifics of growth in the Lebanon Junction and Boston areas.

Project Description

- **Project Scope and Timeline**
  The scope of this project includes installing approximately 10 to 12 miles of 12-inch epoxy coated, steel pipeline with a MAOP of 720 psig from the Calvary Transmission Pipeline near

Hwy 480 in Bullitt County tying into the existing 8-inch high pressure distribution pipeline. A new regulation facility will be required at the terminus of the new transmission pipeline to regulate the gas pressure into the existing 8-inch high pressure distribution line to reduce the transmission pipeline pressure to the MAOP of the existing high pressure distribution system. The proposed pipeline will follow a route along the Hwy 480 corridor. The project team has conducted a preliminary engineering and route study along the Hwy 480 corridor and have identified (2) probable routes. The detailed engineering, surveying, ReROW and other preliminary work requested in this proposal allows Gas Engineering to finalize the route and prepare detailed design work to develop construction drawings and acquire easements for the project.

The following describes the expected project timeline:

- 4th Qtr. 2016: Bid engineering design work.
- 1st Qtr. 2017: Complete preliminary route study.
- 1st Qtr. 2017: Engineering design and right-of-way work starts.
- 3rd Qtr. 2017: Engineering design and right-of-way work70%-80% completed.
- 3rd Qtr. 2017: Bid pipeline construction labor..
- 4th Qtr. 2017: Pipeline material bid.
- 4th Qtr. 2017: Right of way clearing bid.
- 4th Qtr. 2017: Pipeline and NDT inspection bids.
- 4th Qtr. 2017: Complete right-of-way acquisition process and engineering design.
- 4th Qtr. 2017: Award contracts including pipe and construction IC approvals.
- 1st Qtr. 2018: Pre-construction meeting successful pipeline contractor.
- 2nd Qtr. 2018: Start pipeline construction.
- 1st Qtr. 2019: Complete pipeline construction.

The attachment is being provided in a separate file in Excel format.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 26

Responding Witness: Lonnie E. Bellar

Q-26. With regard to the proposed $27.6 million, 10- to 12-mile Bullitt County gas pipeline project, provide all information not otherwise already in the record of this proceeding in compliance with KRS 278.020(1), KRS 322.340, 807 KAR 5:001, Sections 4, 7, 14, and 15(2).

A-26.

See the responses to Questions Nos. 24 and 25, PSC 2-64 and AG 1-432. Additionally, LG&E submits the following for the statutes and regulations referenced in the question.

<u>KRS 278.020(1)</u>

KRS 278.020 sets forth the standard for when a project requires a Certificate of Public Convenience and Necessity ("CPCN") and specifically states a CPCN is *not* required for "ordinary extensions of existing systems in the usual course of business." The proposed Bullitt County line is an ordinary extension in the usual course of business. Thus, a CPCN is not necessary. KRS 278.020(1) does contain any specific informational filing requirements.

<u>KRS 322.340</u>

This statute addresses the need for engineering plans and specifications to be prepared by an engineer under certain circumstances and that they are signed, sealed, and dated by an engineer under certain circumstances. LG&E is in the preliminary stages of the engineering and design of the Bullitt County line. Detailed construction drawings and specifications have not been completed for the project. LG&E has entered into a contract with an engineering firm to prepare the detailed drawings and specifications described in this regulation.

<u>807 KAR 5:001, Sections 4, 7, 14</u>

Sections 4, 7, and 14 of 807 KAR 5:001 are non-substantive regulatory requirements for what would need to be included in an application for a CPCN such as the name of the applicant, its address, the required number of copies, and information regarding the applicant's incorporation. Although it has not filed an application for a CPCN for the Bullitt County line because it is an extension in the usual course of business, the information required by these sections may be found in LG&E's November 23, 2016 Application and supporting materials.

807 KAR 5:001, Section 15(2)

Section 15(2) sets for the substantive informational requirements that would be required in an application for a CPCN. Each subpart of Section 15(2) is addressed below.

(a). *The facts relied upon to show that the proposed construction or extension is or will be required by public convenience or necessity*.

As stated in the Testimony of Lonnie E. Bellar, pages 3-4, the new natural gas pipeline in Bullitt County will improve reliability by supplementing the current one-way feed with additional gas supplies from the new pipeline. This new pipeline will mitigate the exposure of approximately 9,500 customers to a loss of gas supply from the current one-way feed. Additionally, the new pipeline will allow LG&E to serve growth in the Mt. Washington, Shepherdsville, Clermont, Lebanon Junction and Boston areas of Bullitt County by providing additional gas supply from the Calvary gas transmission pipeline to existing gas infrastructure in those areas. Additionally, please see PSC 2-64.

(b). *Copies of franchises or permits, if any, from the proper public authority for the proposed construction or extension, if not previously filed with the commission.*

See the response to PSC 2-64(b) for a list of permits and notifications LG&E will investigate and obtained if necessary. As the detailed design is still incomplete, additional permits may be identified at a future date.

(c). *A full description of the proposed location, route, or routes of the proposed construction or extension, including a description of the manner in which same will be constructed, and the names of all public utilities, corporations, or persons with whom the proposed construction or extension is likely to compete.*

See the attachment for PSC 2-64(a) providing a map of the preliminary route for the pipeline. Additionally, please see the response to PSC 2-64(b) providing preliminary material specifications and design criteria that will be used for detailed engineering and design drawings and specifications. LG&E is the exclusive provider of natural gas to the customers in the area served by existing facilities and there are no other gas providers along the preliminary route for the new pipeline.

(d)(1). Three (3) copies (one (1) in portable document format on electronic storage medium and two (2) in paper medium) of maps to suitable scale showing the location or route of the proposed construction or extension, as well as the location to scale of like facilities owned by others located anywhere within the map area with adequate identification as to the ownership of the other facilities.

See the response to PSC 2-64(a) for a map with this information. There are no other natural gas suppliers in this area.

(d)(2). *Plans and specifications and drawings of the proposed plant, equipment, and facilities.*

LG&E does not have detailed plans, specifications and drawings for the pipeline and facilities. LG&E is in the preliminary engineering and design phase of this project including obtaining survey rights and easement acquisition from property owners necessary to develop detailed plans, specifications and drawings for the pipeline and facilities. LG&E currently plans to have easement acquisition complete by the end of 2017 allowing for construction to begin in 2018.

(e). *The manner in detail in which the applicant proposes to finance the proposed construction or extension.*

See the response to Question No. 25(h).

(f). *An estimated annual cost of operation after the proposed facilities are placed into service.*

See the response to Question No. 25(g).

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 27

Responding Witness: Lonnie E. Bellar

Q-27. Refer to LG&E's response to Staff's Second Request, Item 65.

a. When were LG&E's Transmission and Distribution Integrity Plans ("T&D Integrity Plans") implemented?

b. Explain why it is now necessary for four new positions to support the T&D Integrity Plans.

c. Identify and describe in detail the projects and costs LG&E has incurred to date with the T&D Integrity Plans.

A-27.

a. The written transmission integrity plan was adopted in November 2004. The implementation of the plan was done over the subsequent ten years in accordance with 49 CFR Part 192 Subpart O. This included, among other things, completing baseline assessments of all high consequence areas by December 2014. The written distribution integrity management plan was adopted in August 2011. Tasks required under that plan were generally completed for the first time over the subsequent year in accordance with 49 CFR Part 192 Subpart P. Some tasks under the distribution integrity management plan would not have been completed for the first time until a later date, such as the program reevaluation which was not due until August 2016.

b. The federal pipeline safety integrity management regulations require continuous improvement to operators' integrity management programs. The transmission and distribution integrity management programs are currently managed by the same group of employees. The programs are not currently staffed in a manner to be effectively managed as LG&E continues to improve both integrity management programs and prepares for additional regulations. In order to drive program improvement, LG&E intends to dedicate resources to each program. The more focused resources and increase in resources will allow better data mining, process improvements, and expansion of risk mitigation measures. These things will ultimately improve system integrity. In addition, a notice of proposed rulemaking containing extensive new transmission integrity regulations has been published by PHMSA. PHMSA has indicated they expect the final rule to be issued in December 2017. Incremental resources are needed to address the new regulatory mandates. The content of the final rule and future regulatory expectations could lead to additional staff needs at a later date.

c. Numerous projects, both O&M and capital, have been completed associated with the integrity management programs. They include the following:
   a. $95K Direct assessment of Ballardsville pipeline
   b. $33K Direct assessment of Calvary to Piccadilly cross over
   c. $266K Inline inspect Ballardsville pipeline
   d. $490K Inline inspect Calvary line
   e. $775K Inline inspect Magnolia 16-inch line
   f. $440K Inline inspect Magnolia 20-inch line
   g. $206K Inline inspect Muldraugh to Piccadilly pipeline
   h. $206K Inline inspect Riverport 12-inch pipeline
   i. $331K Inline inspect Riverport 8-inch pipeline
   j. $386K Inline inspect Western Kentucky A pipeline
   k. $667K Inline inspect Western Kentucky B pipeline
   l. $1,866K Piggability modifications to Calvary pipeline
   m. $880K Remote control valve/actuator installations
   n. $109K Filling casings with wax
   o. $1,386K Piggability modifications to Magnolia Pipeline & Muldraugh to Piccadilly pipelines
   p. $2,342K Piggability modifications to Western Kentucky pipelines
   q. $2,257K Piggability modifications to Ballardsville pipeline
   r. $371K Piggability modifications to Riverport pipelines
   s. $2,062K Aldyl-A pipe replacement (2016 actual, project to be completed in 2017)

   Project engineering and management labor is not included in the O&M project costs listed since those costs are not tracked in a project specific manner. Note that integrity work is often related to reviewing records, analyzing data, documenting actions, and maintaining plans/procedures rather than being project specific.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 28

Responding Witness: Lonnie E. Bellar

Q-28. Refer to LG&E's response to Staff's Second Request, Item 68.

a. Provide the normal pace of replacement of transmission lines absent the Commission's approval of the proposed accelerated three-year program, along with the typical associated annual expense.

b. The response to Item 68.b., which is labelled 68.i. in LG&E's response, states that the portion of the system proposed for replacement was constructed with the material available between 1957 and 1972. Describe the material of which the 15.5 miles of transmission line is composed.

A-28.

a. Importantly, the segments of pipeline proposed for the first phase of the Transmission Modernization program are located in predominantly HCA and Class 3 areas and are critical for the safe and reliable operation of the Company's gas system and will support compliance with current and future regulations. In addition to the Transmission Pipeline Modernization program, which includes the replacement of 15.5 miles of transmission line, LG&E plans to continue replacement projects in its storage fields and compressor stations. This activity is expected to result in a typical annual investment of about $2 million annually (based on projected spend in 2017 and 2018). The Company has historically replaced some bare steel or aging pipelines in the storage fields and compressor stations each year. For the portion of the transmission system outside of the storage fields and compressor stations, LG&E does not have other planned transmission replacement projects between 2017 and 2019. LG&E would expect to replace these transmission lines in a reactive manner or as the result of relocation projects requested by third parties. The transmission system outside of the storage fields and compressor stations has been subject to in-line inspection. As a result, there have been a number of small scale replacement projects and these could be expected to continue. By contrast, the proposed Transmission Pipeline Modernization program will allow LG&E to continue a proactive infrastructure replacement strategy similar to LG&E's Main Replacement program which is nearing completion.

b. Due to the age of the line, records indicating material properties are not available for the majority of the pipeline. For very limited portions of the line in which records are available, the pipeline is generally 0.25-inch wall thickness, manufactured to API 5L specification, and grade X42 steel. The seam type is generally unknown. Note the seam properties and construction practices, such as girth welding, for the pipe with known properties would have been done in accordance with standards of the era in which the pipe was installed rather than in accordance with modern construction practices.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 29

Responding Witness: Lonnie E. Bellar / Christopher M. Garrett

Q-29. Refer to LG&E's response to Staff's Second Request, Item 69. Confirm that the Transmission Modernization Program is expected to be completed in 2019, with no further expenditures in 2020 and beyond, and provide estimated rates by customer class for the proposed Gas Service Line Replacement Program beginning with 2020 through the remainder of the proposed program.

A-29. The Transmission Modernization Program will implement a systematic modernization program of transmission pipelines critical to LG&E's natural gas system and will support regulatory compliance with current and future regulations. As indicated in Mr. Bellar's direct testimony, the first phase of this program will run from 2017-2019 and will replace approximately 15.5 miles of transmission pipelines, encompassing three pipeline segments. Future projects in 2020 and beyond will be determined as rules within the Safety of Gas Transmission and Gathering Pipelines NPRM are finalized and will consider other future rulemaking. Future projects will also consider the system function for pipeline segments and will consider options such as additional replacement projects, pressure reductions, hydro testing, engineering assessments and alternate technology (as it becomes available). Future projects proposed to be recovered through the Gas Line Tracker mechanism will be brought before the Commission for approval.

See attached for estimated rates by customer class for the proposed Gas Service Line Replacement Program beginning with 2020 through 2032.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
CLASS ALLOCATION AND BILL IMPACT

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2020 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2020					
1	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$1,710,889	3,556,511	$0.48
2	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$711,087	299,372	$2.38
3	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$96,865	3,282	$29.51
4	**Total**	$330,952,048	100.00%	$ 2,518,841	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2021 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2021					
5	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$2,233,056	3,556,511	$0.63
6	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$928,112	299,372	$3.10
7	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$126,428	3,282	$38.52
8	**Total**	$330,952,048	100.00%	$ 3,287,596	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2022 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2022					
9	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$2,541,196	3,556,511	$0.71
10	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,056,182	299,372	$3.53
11	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$143,874	3,282	$43.84
12	**Total**	$330,952,048	100.00%	$ 3,741,252	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2023 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2023					
13	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$2,854,923	3,556,511	$0.80
14	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,186,575	299,372	$3.96
15	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$161,636	3,282	$49.25
16	**Total**	$330,952,048	100.00%	$ 4,203,133	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
CLASS ALLOCATION AND BILL IMPACT

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2024 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2024					
17	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$3,174,359	3,556,511	$0.89
18	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,319,340	299,372	$4.41
19	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$179,721	3,282	$54.76
20	**Total**	$330,952,048	100.00%	$ 4,673,421	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2025 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2025					
21	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$3,499,605	3,556,511	$0.98
22	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,454,520	299,372	$4.86
23	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$198,136	3,282	$60.37
24	**Total**	$330,952,048	100.00%	$ 5,152,260	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2026 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2026					
25	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$3,830,795	3,556,511	$1.08
26	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,592,170	299,372	$5.32
27	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$216,886	3,282	$66.08
28	**Total**	$330,952,048	100.00%	$ 5,639,851	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2027 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2027					
29	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$4,168,048	3,556,511	$1.17
30	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,732,341	299,372	$5.79
31	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$235,981	3,282	$71.90
32	**Total**	$330,952,048	100.00%	$ 6,136,369	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
CLASS ALLOCATION AND BILL IMPACT

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2028 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2028					
33	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$4,511,478	3,556,511	$1.27
34	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$1,875,078	299,372	$6.26
35	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$255,424	3,282	$77.83
36	**Total**	$330,952,048	100.00%	$ 6,641,980	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2029 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2029					
37	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$4,861,180	3,556,511	$1.37
38	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$2,020,423	299,372	$6.75
39	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$275,223	3,282	$83.86
40	**Total**	$330,952,048	100.00%	$ 7,156,826	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2030 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2030					
41	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$5,217,313	3,556,511	$1.47
42	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$2,168,441	299,372	$7.24
43	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$295,386	3,282	$90.00
44	**Total**	$330,952,048	100.00%	$ 7,681,141	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2031 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2031					
45	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$5,579,997	3,556,511	$1.57
46	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$2,319,181	299,372	$7.75
47	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$315,920	3,282	$96.26
48	**Total**	$330,952,048	100.00%	$ 8,215,098	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
CLASS ALLOCATION AND BILL IMPACT

Line No.	Rate Schedule - Distribution	Total Forecasted Revenue in Case No. 2016-00371	Allocation Percent	Revenue Requirement	Number of Bills	Year 2032 Monthly Rate Per Bill
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2032					
49	Residential Gas Service - Rate RGS	$224,794,817	67.92%	$5,949,357	3,556,511	$1.67
50	Commercial Gas Service - Rate CGS	$93,430,122	28.23%	$2,472,696	299,372	$8.26
51	Industrial Gas Service - Rate IGS	$12,727,109	3.85%	$336,832	3,282	$102.63
52	**Total**	$330,952,048	100.00%	$ 8,758,885	3,859,165	

Note (1): Rate Schedule VFD is included in Rate RGS.
Note (2): Rate Schedule AAGS is included in Rate IGS.
Note (3): Rate Schedule SGSS is included in Rate CGS.
Note (4): Rate Schedule DGGS is included in Rate IGS.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
REVENUE REQUIREMENT - DISTRIBUTION

Line No.	Description (1)	2019 December (2)	2020 December (3)	2020 Year (a) (4)	2021 December (5)	2021 Year (a) (6)	2022 December (7)	2022 Year (a) (8)
	Rate Base							
1	Gas Plant Investment-Distribution	19,121,205	29,121,205	24,121,205	33,953,205	31,537,205	38,972,205	36,462,705
2	Cost of Removal	-						
3	Accumulated Depreciation Reserve	(605,066)	(1,396,242)	(1,000,654)	(2,430,662)	(1,913,452)	(3,626,639)	(3,028,650)
4	Net Gas Plant	18,516,139	27,724,963	23,120,551	31,522,543	29,623,753	35,345,566	33,434,055
5	Accumulated Deferred Taxes	(5,254,741)	(8,862,219)	(8,862,219)	(11,469,339)	(11,469,339)	(12,951,182)	(12,951,182)
6	Net Rate Base	13,261,398	18,862,745	14,258,332	20,053,204	18,154,414	22,394,384	20,482,872
7	Rate of Return			10.44%		10.44%		10.44%
8	Return on Net Rate Base	-	-	1,489,252	-	1,896,189	-	2,139,391
	Operating Expenses							
9	Depreciation			791,176		1,034,420		1,195,977
10	Incremental Operation & Maintenance							
11	Property Taxes			238,414		356,987		405,884
12	Total Operating Expenses			1,029,589		1,391,407		1,601,861
13	**Total Revenue Requirement**	-	-	2,518,841	-	3,287,596	-	3,741,252

(a) Year Rate Base amounts based upon average (December <Year> - December <Year-1>.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
REVENUE REQUIREMENT - DISTRIBUTION

Line No.	Description (1)	2023 December (9)	2023 Year (a) (10)	2024 December (11)	2024 Year (a) (12)	2025 December (13)	2025 Year (a) (14)
	Rate Base						
1	Gas Plant Investment-Distribution	44,185,205	41,578,705	49,597,205	46,891,205	55,215,205	52,406,205
2	Cost of Removal						
3	Accumulated Depreciation Reserve	(4,990,420)	(4,308,529)	(6,528,452)	(5,759,436)	(8,247,375)	(7,387,913)
4	Net Gas Plant	39,194,785	37,270,176	43,068,753	41,131,769	46,967,830	45,018,292
5	Accumulated Deferred Taxes	(14,443,059)	(14,443,059)	(15,944,865)	(15,944,865)	(17,456,363)	(17,456,363)
6	Net Rate Base	24,751,726	22,827,117	27,123,888	25,186,904	29,511,467	27,561,928
7	Rate of Return		10.44%		10.44%		10.44%
8	Return on Net Rate Base	-	2,384,242	-	2,630,717	-	2,878,783
	Operating Expenses						
9	Depreciation		1,363,782		1,538,032		1,718,924
10	Incremental Operation & Maintenance						
11	Property Taxes		455,110		504,672		554,553
12	Total Operating Expenses	-	1,818,891	-	2,042,704	-	2,273,477
13	**Total Revenue Requirement**	-	4,203,133	-	4,673,421	-	5,152,260

(a) Year Rate Base amounts based upon average (December <Year> - December <Year-1>.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
REVENUE REQUIREMENT - DISTRIBUTION

Line No.	Description (1)	2026 December (15)	2026 Year (a) (16)	2027 December (17)	2027 Year (a) (18)	2028 December (19)	2028 Year (a) (20)
	Rate Base						
1	Gas Plant Investment-Distribution	61,045,205	58,130,205	67,094,205	64,069,705	73,368,205	70,231,205
2	Cost of Removal						
3	Accumulated Depreciation Reserve	(10,154,046)	(9,200,710)	(12,255,532)	(11,204,789)	(14,559,116)	(13,407,324)
4	Net Gas Plant	50,891,159	48,929,494	54,838,673	52,864,916	58,809,089	56,823,881
5	Accumulated Deferred Taxes	(18,977,474)	(18,977,474)	(20,508,007)	(20,508,007)	(22,047,717)	(22,047,717)
6	Net Rate Base	31,913,685	29,952,020	34,330,665	32,356,909	36,761,372	34,776,164
7	Rate of Return		10.44%		10.44%		10.44%
8	Return on Net Rate Base	-	3,128,423	-	3,379,608	-	3,632,294
	Operating Expenses						
9	Depreciation		1,906,671		2,101,486		2,303,584
10	Incremental Operation & Maintenance						
11	Property Taxes		604,758		655,275		706,103
12	Total Operating Expenses	-	2,511,428	-	2,756,761	-	3,009,686
13	**Total Revenue Requirement**	-	5,639,851	-	6,136,369	-	6,641,980

(a) Year Rate Base amounts based upon average (December <Year> - December <Year-1>.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
REVENUE REQUIREMENT - DISTRIBUTION

Line No.	Description (1)	2029 December (20)	2029 Year (a) (21)	2030 December (22)	2030 Year (a) (23)	2031 December (24)	2031 Year (a) (25)
	Rate Base						
1	Gas Plant Investment-Distribution	79,874,205	76,621,205	86,620,205	83,247,205	93,612,205	90,116,205
2	Cost of Removal						
3	Accumulated Depreciation Reserve	(17,072,291)	(15,815,703)	(19,802,800)	(18,437,545)	(22,758,611)	(21,280,705)
4	Net Gas Plant	62,801,914	60,805,501	66,817,405	64,809,660	70,853,594	68,835,500
5	Accumulated Deferred Taxes	(23,596,247)	(23,596,247)	(25,153,541)	(25,153,541)	(26,719,296)	(26,719,296)
6	Net Rate Base	39,205,666	37,209,254	41,663,865	39,656,119	44,134,297	42,116,203
7	Rate of Return		10.44%		10.44%		10.44%
8	Return on Net Rate Base	-	3,886,425	-	4,141,995	-	4,398,945
	Operating Expenses						
9	Depreciation		2,513,176		2,730,508		2,955,812
10	Incremental Operation & Maintenance						
11	Property Taxes		757,226		808,637		860,341
12	Total Operating Expenses	-	3,270,401	-	3,539,146	-	3,816,152
13	**Total Revenue Requirement**	-	7,156,826	-	7,681,141	-	8,215,098

(a) Year Rate Base amounts based upon average (December <Year> - December <Year-1>.

LOUISVILLE GAS AND ELECTRIC COMPANY
ANNUAL ADJUSTMENT TO THE GLT - NEW PROJECTS
REVENUE REQUIREMENT - DISTRIBUTION

Line No.	Description (1)	2032 December (26)	2032 Year (a) (27)
	Rate Base		
1	Gas Plant Investment-Distribution	100,859,205	97,235,705
2	Cost of Removal		
3	Accumulated Depreciation Reserve	(25,947,942)	(24,353,277)
4	Net Gas Plant	74,911,263	72,882,428
5	Accumulated Deferred Taxes	(28,293,245)	(28,293,245)
6	Net Rate Base	46,618,018	44,589,184
7	Rate of Return		10.44%
8	Return on Net Rate Base	-	4,657,243
	Operating Expenses		
9	Depreciation		3,189,331
10	Incremental Operation & Maintenance		
11	Property Taxes		912,311
12	Total Operating Expenses	-	4,101,642
13	**Total Revenue Requirement**	-	8,758,885

(a) Year Rate Base amounts based upon average (December <Year> - December <Year-1>.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 30

Responding Witness: Robert M. Conroy/Lonnie E. Bellar

Q-30. Refer to LG&E's responses to Staff's Second Request, Items 73 and 85.

a. Confirm that the electric customer whose special contract is being terminated is also the sole gas customer to be switched from sales service to proposed Rate SGSS.

b. Despite the reference to "certain customers" and "these customers" on page 46 of the Direct Testimony of Robert Conroy, state whether LG&E knows of any other customer(s) likely to be served pursuant to the proposed SGSS tariff in the next five years.

A-30. a. The Company confirms that the two customers are the same.

b. Like the customer referenced in Question 30(a) above, other gas customers served by LG&E are in close proximity to Texas Gas Transmission, LLC, which is an interstate pipeline passing through the Louisville area. There are any number of customers (large and small) which might avail themselves of the opportunity to seek service directly from the interstate pipeline. This has been, and continues to be, a real and significant competitive threat to LG&E.

At this time, another LG&E gas customer is working with the above-referenced interstate pipeline with the purpose of seeking direct service. LG&E is uncertain whether or not the customer, which has several facilities that are already being served by LG&E, will install the necessary gas system to deliver gas to the existing facilities currently served by LG&E. This customer may also be a prospective customer for service under Rate SGSS if it wants LG&E to continue to provide substitute gas service to those existing facilities.

Therefore, Rate SGSS may indeed have applicability beyond the current customer referenced in Question 30(a) above. Importantly, without such a rate, LG&E's customers will subsidize customers who maintain an ability to call on LG&E to provide an unspecified amount of gas without making a contribution to the costs that allow LG&E to make that gas service available.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 31

Responding Witness: William S. Seelye

Q-31 Refer to LG&E's response to Staff's Second Request, Item 82, and to the November 4, 2016 Order in Case No. 2016-00274[1] approving the Solar Share Program Rider ("Solar Share Order"). Refer to pages 11-12 of the Solar Share Order. Provide the calculation of the Solar Capacity Charge using LG&E's proposed ROE in Excel format with the formulas intact and unprotected.

A-31. See attachment being provided in Excel format.

[1] Case No. 2016-00274, Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of an Optional Solar Share Program Rider (Ky. PSC Dec. 12, 2016).

The attachment is being provided in a separate file in Excel format.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 32

Responding Witness: Robert M. Conroy

Q-32. Refer to LG&E's response to Staff's Second Request, Item 84. State whether LG&E would be willing to continue the inclusion of the Gas Supply Cost Component on its various rate schedules for the convenience of those who access LG&E's and other jurisdictional gas utilities' tariffs online through the Commission's Web site.

A-32. LG&E proposed the change to the Gas Supply Clause adjustment on six current rate schedules and one proposed rate schedule to allow for consistency in how all adjustment clauses appear on each rate schedule and to gain efficiencies with each quarterly Gas Supply Clause filing. LG&E believes that is it more efficient not to include the GSC in each of the rate schedules that would have to change on a quarterly basis when the GSC is revised. However, should the Commission desire this information and require it at the conclusion of this proceeding, LG&E will comply with the requirement.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 33

Responding Witness: Robert M. Conroy

Q-33. Refer to LG&E's response to Staff's Second Request, Item 92.b.(1) and (2).

a. Given that LG&E is exploring ways to modify Rate PS, and given the AMS proposed in the Application, is there a PS - Time-of-day rate tariff that LG&E can propose in this proceeding? If not, explain.

b. State whether adopting a PS - Time-of-day rate would impact revenues so that LG&E would propose to do so only as part of a rate proceeding. If not, and if not done in this proceeding, state when LG&E would anticipate filing for approval of a PS - Time-of-day tariff.

A-33.

a. One benefit of the full AMS deployment will be detailed customer usage data that is not available today for certain classes of customers. This detailed data will enable the Company to better understand the usage patterns of the customers and will enhance the development of other Time-of-Day rates. The Company currently does not have sufficient support to propose a PS Time-of-Day rate.

b. The Company believes the appropriate time for adding of new rates is in a rate case proceeding, but has added pilot rates in the past per Commission orders.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 34

Responding Witness: William S. Seelye

Q-34. Refer to LG&E's response to Staff's Second Request, Item 95. Provide the supporting calculations for each of the percentages shown for the three rate classes listed.

A-34. See attached. The customers identified in the response to PSC 2-95 were the customers within the respective rate classes that indicated the highest percentage increase because of the implementation of the new ratchet. It should be noted that the customers identified in Rate RTS and Rate TODS did not take service for a full 12-month period. Therefore, the percentage impact of the change in the ratchet might not be representative of the impact for a full 12-month period. The lack of a full 12 months of data for these customers could have been the reason that they were identified as showing the largest percentage increase.

Rate Category	Business Partner	Billing Period	Contract Capacity (kW)	Total KWH	Base Demand @ 75% Ratchet (kW)	Base Demand @ 100% Ratchet (kW)	Intermediate Demand @ 50% Ratchet (kW)	Peak Demand @ 50% Ratchet (kW)	Basic Service Charge ($)	Energy Charge ($)	Base Demand Charge @ 75% ($)	Base Demand Charge @ 100% ($)	Intermediate Demand Charge ($)	Peak Demand Charge ($)	Total Charges @ 75% Base Demand ($)	Total Charges @ 100% Base Demand ($)	Delta (100% - 75%) ($)	% Delta (100% - 75%) (%)
RTS	Customer #1	2016/01	2,400	351,000	3,208	3,208	3,208	3,208	$ 1,400	$ 13,026	$ 4,876	$ 4,876	$ 16,425	$ 22,392	$ 58,119	$ 58,119	$ -	0.0%
RTS	Customer #1	2016/02	2,400	495,000	2,553	3,208	1,604	1,604	$ 1,400	$ 18,369	$ 3,881	$ 4,876	$ 8,212	$ 11,196	$ 43,059	$ 44,054	$ 995	2.3%
RTS	Customer #1	2016/03	2,400	414,000	2,406	3,208	1,604	1,604	$ 1,400	$ 15,364	$ 3,657	$ 4,876	$ 8,212	$ 11,196	$ 39,829	$ 41,048	$ 1,219	3.1%
RTS	Customer #1	2016/04	2,400	432,000	2,406	3,208	1,604	1,604	$ 1,400	$ 16,032	$ 3,657	$ 4,876	$ 8,212	$ 11,196	$ 40,497	$ 41,716	$ 1,219	3.0%
RTS	Customer #1	2016/05	2,400	387,000	2,406	3,208	1,604	1,604	$ 1,400	$ 14,362	$ 3,657	$ 4,876	$ 8,212	$ 11,196	$ 38,827	$ 40,046	$ 1,219	3.1%
RTS	Customer #1	2016/06	2,400	423,000	2,406	3,208	2,094	1,659	$ 1,400	$ 15,698	$ 3,657	$ 4,876	$ 10,722	$ 11,578	$ 43,055	$ 44,274	$ 1,219	2.8%
RTS	Customer #1	2016/07	2,400	495,000	2,687	3,208	2,687	2,126	$ 1,400	$ 18,369	$ 4,085	$ 4,876	$ 13,758	$ 14,836	$ 52,448	$ 53,240	$ 792	1.5%
RTS	Customer #1	2016/08	2,400	450,000	2,406	3,208	2,012	1,773	$ 1,400	$ 16,700	$ 3,657	$ 4,876	$ 10,299	$ 12,372	$ 44,428	$ 45,647	$ 1,219	2.7%
									$ 11,200	**$ 127,918**	**$ 31,127**	**$ 39,009**	**$ 84,055**	**$ 105,961**	**$ 360,261**	**$ 368,143**	**$ 7,882**	**2.2%**

Rate Category	Business Partner	Billing Period	Contract Capacity (kW)	Total KWH	Base Demand @ 75% Ratchet (kW)	Base Demand @ 100% Ratchet (kW)	Intermediate Demand @ 50% Ratchet (kW)	Peak Demand @ 50% Ratchet (kW)	Basic Service Charge ($)	Energy Charge ($)	Base Demand Charge @ 75% ($)	Base Demand Charge @ 100% ($)	Intermediate Demand Charge ($)	Peak Demand Charge ($)	Total Charges @ 75% Base Demand ($)	Total Charges @ 100% Base Demand ($)	Delta (100% - 75%) ($)	% Delta (100% - 75%) (%)
TODP	Customer #2	2015/09	4,500	1,022,400	3,375	4,500	2,199	2,199	$ 330	$ 39,097	$ 10,733	$ 14,310	$ 11,062	$ 15,087	$ 76,308	$ 79,885	$ 3,578	4.7%
TODP	Customer #2	2015/10	4,500	972,000	3,375	4,500	2,244	2,236	$ 330	$ 37,169	$ 10,733	$ 14,310	$ 11,287	$ 15,336	$ 74,854	$ 78,432	$ 3,578	4.8%
TODP	Customer #2	2015/11	4,500	700,800	3,375	4,500	2,176	2,176	$ 330	$ 26,799	$ 10,733	$ 14,310	$ 10,944	$ 14,925	$ 63,730	$ 67,308	$ 3,578	5.6%
TODP	Customer #2	2015/12	4,500	652,800	3,375	4,500	2,200	2,172	$ 330	$ 24,963	$ 10,733	$ 14,310	$ 11,066	$ 14,899	$ 61,991	$ 65,568	$ 3,577	5.8%
TODP	Customer #2	2016/01	4,500	890,400	3,375	4,500	2,246	2,246	$ 330	$ 34,049	$ 10,733	$ 14,310	$ 11,299	$ 15,410	$ 71,820	$ 75,397	$ 3,578	5.0%
TODP	Customer #2	2016/02	4,500	832,800	3,375	4,500	2,390	2,363	$ 330	$ 31,846	$ 10,733	$ 14,310	$ 12,022	$ 16,210	$ 71,141	$ 74,718	$ 3,578	5.0%
TODP	Customer #2	2016/03	4,500	830,400	3,375	4,500	2,330	2,330	$ 330	$ 31,754	$ 10,733	$ 14,310	$ 11,721	$ 15,986	$ 70,524	$ 74,102	$ 3,578	5.1%
TODP	Customer #2	2016/04	4,500	876,000	3,375	4,500	2,289	2,289	$ 330	$ 33,498	$ 10,733	$ 14,310	$ 11,514	$ 15,703	$ 71,777	$ 75,354	$ 3,578	5.0%
TODP	Customer #2	2016/05	4,500	828,000	3,375	4,500	2,277	2,277	$ 330	$ 31,663	$ 10,733	$ 14,310	$ 11,452	$ 15,618	$ 69,795	$ 73,373	$ 3,578	5.1%
TODP	Customer #2	2016/06	4,500	1,027,200	3,375	4,500	2,319	2,319	$ 330	$ 39,280	$ 10,733	$ 14,310	$ 11,666	$ 15,910	$ 77,918	$ 81,495	$ 3,578	4.6%
TODP	Customer #2	2016/07	4,500	972,000	3,375	4,500	2,379	2,379	$ 330	$ 37,169	$ 10,733	$ 14,310	$ 11,964	$ 16,317	$ 76,513	$ 80,091	$ 3,578	4.7%
TODP	Customer #2	2016/08	4,500	895,200	3,375	4,500	2,260	2,260	$ 330	$ 34,232	$ 10,733	$ 14,310	$ 11,366	$ 15,501	$ 72,162	$ 75,739	$ 3,578	5.0%
									$ 3,960	**$ 401,520**	**$ 128,790**	**$ 171,720**	**$ 137,362**	**$ 186,901**	**$ 858,532**	**$ 901,462**	**$ 42,930**	**5.0%**

Rate Category	Business Partner	Billing Period	Contract Capacity (kW)	Total KWH	Base Demand @ 75% Ratchet (kW)	Base Demand @ 100% Ratchet (kW)	Intermediate Demand @ 50% Ratchet (kW)	Peak Demand @ 50% Ratchet (kW)	Basic Service Charge ($)	Energy Charge ($)	Base Demand Charge @ 75% ($)	Base Demand Charge @ 100% ($)	Intermediate Demand Charge ($)	Peak Demand Charge ($)	Total Charges @ 75% Base Demand ($)	Total Charges @ 100% Base Demand ($)	Delta (100% - 75%) ($)	% Delta (100% - 75%) (%)
TODS	Customer #3	2016/03	1,400	3,600	1,050	1,400	14	14	$ 200	$ 146	$ 5,082	$ 6,776	$ 80	$ 109	$ 5,616	$ 7,310	$ 1,694	30.2%
TODS	Customer #3	2016/04	1,400	6,800	1,050	1,400	18	18	$ 200	$ 275	$ 5,082	$ 6,776	$ 98	$ 133	$ 5,788	$ 7,482	$ 1,694	29.3%
TODS	Customer #3	2016/05	1,400	8,000	1,050	1,400	24	24	$ 200	$ 324	$ 5,082	$ 6,776	$ 133	$ 181	$ 5,920	$ 7,614	$ 1,694	28.6%
TODS	Customer #3	2016/06	1,400	11,200	1,050	1,400	26	26	$ 200	$ 453	$ 5,082	$ 6,776	$ 142	$ 194	$ 6,071	$ 7,765	$ 1,694	27.9%
TODS	Customer #3	2016/07	1,400	18,800	1,050	1,400	62	56	$ 200	$ 761	$ 5,082	$ 6,776	$ 346	$ 423	$ 6,812	$ 8,506	$ 1,694	24.9%
TODS	Customer #3	2016/08	1,400	28,400	1,050	1,400	83	83	$ 200	$ 1,150	$ 5,082	$ 6,776	$ 461	$ 629	$ 7,522	$ 9,216	$ 1,694	22.5%
									$ 1,200	**$ 3,110**	**$ 30,492**	**$ 40,656**	**$ 1,259**	**$ 1,669**	**$ 37,730**	**$ 47,894**	**$ 10,164**	**26.9%**

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 35

Responding Witness: David S. Sinclair / William S. Seelye

Q-35. Refer to LG&E's response to Staff's Second Request, Item 96.d.

a. The response indicates that secondary combustion turbines ("CTs") are operated primarily for testing and emergencies. State whether it is considered to be an emergency when a curtailment is implemented.

b. Prepare and provide an analysis which calculates the amount of CSR credits that would result if all of LG&E's and KU's CTs were used in the calculation, rather than just large-frame CTs.

A-35.

a. No, it is not considered an emergency when a curtailment is implemented. In addition to testing as mentioned in the Company's response to PSC 2-108, the secondary CTs are also used when load levels and reserve requirements exceed, or are expected to exceed, the level that could be met with the Company's other resources. Therefore, prior to an emergency situation, all available generation - including all secondary combustion turbines - would be online, curtailable load would be interrupted, power would be purchased from the market if available, and contingency reserves would be utilized as necessary. Beyond those steps, if a capacity deficiency developed, the Company would follow North American Electric Reliability Council (NERC) procedures, including requesting the initiation of an Energy Emergency Alert (EEA). The first level of an EEA occurs after an entity has curtailed all non-firm wholesale energy sales and has all available resources in use and is concerned about sustaining its required operating reserves. During the second EEA level, an entity is no longer able to provide its customers' expected energy requirements and is not maintaining the required levels of operating reserves. An EEA level 3 occurs when firm load interruption is imminent or in progress.

b. See attachment being provided in Excel format.

The attachment is being provided in a separate file in Excel format.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 36

Responding Witness: John K. Wolfe

Q-36. Refer to LG&E's response to Staff's Second Request, Item 98. Provide documentation supporting the statement, "The Company's lighting vendors have indicated to the Company that the average service life of an LED fixture is lower than conventional fixtures."

A-36. LG&E does not have documentation. Average service life of LED fixtures has not been validated in a field environment. Industry literature estimates life expectancies anywhere from 30,000 hours to 100,000 hours dependent on fixture type and operating environment with the most referenced figure being 50,000 hours (approximately 13 years). In this case, LG&E assumes after 13 years, LED fixtures will be replaced versus non-LED lights that will be maintained on average every six years to extend their life well beyond 13 years.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 37

Responding Witness: William S. Seelye

Q-37. Refer to LG&E's response to Staff's Second Request, Item 107. State whether the word "production" was included in the response in error. If not, explain what is meant by "production income."

A-37. The word "statement" was inadvertently omitted after the words "production income" in the response. Therefore, the response should have been, "Yes, all production income ***statement*** and balance sheet accounts have been allocated using the same methodology as used in the Company's most recent base rate proceeding." *Production income statement accounts* would include fixed production operation and maintenance expenses along with margins on off-system sales.

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 38

Responding Witness: Robert M. Conroy / William S. Seelye

Q-38. Refer to LG&E's response to Staff's Second Request, Item 111. Given the per-unit results contained in the Excel spreadsheets, explain why LG&E is proposing to increase the Rate TOD Secondary basic service charge to $200.00.

A-38. The unit customer cost from the BIP version of the cost of service study was $179.68. The customer charge was rounded up to $200. The customers taking service under Rate TODS are typically large customers; therefore, the level of the customer charge, including the effect of the rounding, would have little impact on customer bills.

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 39

Responding Witness: William S. Seelye

Q-39. Refer to LG&E's response to Staff's Second Request, Item 113.b. State whether the cost-of-service studies filed in this proceeding support the $.06934 Lighting Energy Service rate. Include in the response the amounts and location in the cost-of service studies that support the $.06934.

A-39. The unit energy cost from the BIP version of the cost of service study is $0.06934. The attached Excel version of the BIP cost of service study includes the unit cost sheets for Lighting Energy Rate LE and Traffic Lighting Energy Rate TE.

The attachment is being provided in a separate file in Excel format.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 40

Responding Witness: William S. Seelye

Q-40. Refer to LG&E's response to Staff's Second Request, Item 113.c.

a. This response states that O&M expenses are expected to occur every 13 years for LED fixtures and every six years for traditional lighting fixtures. Despite the higher upfront cost of LED fixtures as compared to traditional lighting fixtures, explain if it is cost beneficial to LG&E to install LED fixtures rather than traditional fixtures, given that traditional fixtures use more energy and require O&M expense roughly twice as often as LED fixtures.

b. Provide the calculation for the O&M expenses for all lights in Exhibits WSS-4 and WSS-5.

A-40.

a. The LED rates are currently more costly than other alternatives. Based on the information that is currently available to the Company, it would appear that LED fixtures will be more costly to install and to maintain than traditional fixtures. However, this assessment is not based on actual experience with installing and maintaining lights. The Company has limited experiential data on the maintenance of leased LED lighting installations. While traditional fixtures do require maintenance approximately twice as often, maintaining a traditional fixture consists only of changing the bulb and the photo cell. In contrast, bulbs cannot be replaced with LED fixtures. When the LED diodes fail, the entire fixture must be replaced, which is significantly more expensive than simply replacing a bulb and photo cell on a traditional fixture. Furthermore, the planned energy consumption of LED fixtures is assumed to be less than the traditional fixtures; however, the energy use makes up a very small percentage of the overall cost of offering LED.

   LED rates are optional service offerings that the Company is introducing because of interest expressed by customers. Despite the higher cost of the LED fixtures, customers might be interested because (i) LED fixtures promote conservation, (ii) they are considered more environmentally friendly, and (iii) they may have a better quality of light.

b. For WSS-4, see METRO 1-30. For WSS-5, see attached.

Derivation of Operation and Maintenance for LED

Bill Code	Type 1	Type 2	Type 3	Type 4	Type 5
Fixture	$166.03	$252.49	329.84	632.61	732.06
Photocell	$20.00	$20.00	$20.00	$20.00	$20.00
Labor	$62.00	$62.00	$62.00	$62.00	$62.00
Total	$248.03	$334.49	$411.84	$714.61	$814.06
Operation and Maintenance ($ / yr)	$19.08	$25.73	$31.68	$54.97	$62.62
Amount included in Monthly Unit Cost	$1.59	$2.14	$2.64	$4.58	$5.22

Bill Codes				
493	490	491	492	499
	496	497	498	

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Question No. 41

Responding Witness: William S. Seelye

Q-41 Refer to LG&E's response to Staff's Second Request, Item 116. Explain why the split between Primary and Secondary differs from those calculated in the cost-of-service study filed in LG&E's most recent base rate proceeding, Case No. 2014-00372.[2]

A-41. The analysis used to determine the primary/secondary splits included in the cost of service study filed in Case No. 2014-00372 was performed in 2001. The Company performed a new primary/secondary split analysis for the cost of service studies filed in the current proceeding. Therefore, the primary/secondary split analysis reflects changes in plant in service that have occurred during the intervening 15 years.

[2] Case No. 2014-00372, Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates (Ky. PSC June 30, 2015)

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 42

Responding Witness: Christopher M. Garrett

Q-42. Refer to LG&E's response to Staff's Second Request, Item 120. LG&E states that it proposes to true-up the regulatory liability amortization based on the actual fees received as of the end of the base period.

a. Explain why LG&E is not proposing to include an expected level of revenues related to the refined coal production facilities in the forecasted test year.

b. Provide the level of revenues expected to be received in the forecasted test year.

A-42.

a. See Response to PSC 2-120. As no prospective tax equity investors have been identified for either LG&E site, no refined coal fees were forecasted in the test year. To the extent refined coal production arrangements are implemented at LG&E sites, as represented in Case No. 2015-00264, LG&E intends to flow the benefits back to customers. LG&E proposed and the Commission approved the establishment of regulatory liabilities for the proceeds to be allocated to Kentucky retail customers in Case No 2015-00264 for this purpose. LG&E will credit the fee payments to Account 254, Other Regulatory Liabilities if and when received.

b. None (see above).

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 43

Responding Witness: Christopher M. Garrett

Q-43. Refer to the response to Kentucky Industrial Utility Customers, Inc.'s First Request for Information ("KIUC's First Request"), Items 11 and 12. State the amounts and explain in detail how the amounts of demolition costs for Paddy's Run and Cane Run are reflected in LG&E's revenue requirement for the test year.

A-43. A revenue requirement calculation has been performed in response to question KIUC 2-7. The calculation provides both the total revenue requirement and requested increase associated with the current proceeding.

Demolition expenditures and the associated terminal net salvage for Paddy's Run and Cane Run are embedded in the 13 Month Average Reserve balance for Electric Steam Production on Schedule B-3, Tab 55 of the Filing Requirements. Terminal net salvage (credits to accumulated depreciation) recovered via depreciation expense serves to reduce capitalization while demolition expenditures (debits to accumulated depreciation) increase capitalization.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 44

Responding Witness: John P. Malloy / Christopher M. Garrett

Q-44. Refer to LG&E's response to KIUC's First Request, Item 17, and LG&E's response to the AG's First Request, Item 339. Explain why the Commission should accept a 15-year depreciation life for the proposed AMS meters when LG&E acknowledges that the meters have an expected service life of 20 years and the AMS cost-benefit summary using a 15-year period shows a net cost (in net present value) as compared to the cost-benefit summary using a 20-year period, which shows a net benefit.

A-44. As the request in KIUC 1-17(j) notes, John J. Spanos stated in his testimony, "These [AMS] meters are expected to have a shorter average life and maximum life than the standard meters they are replacing. The most consistent average life within the industry for new technology electric meters is 15 years, with a maximum life potential of 25 years." Based on LG&E and KU's combined experience with advanced metering technology and their understanding of the particular AMS meters they are proposing to deploy, the Companies believe a 20-year service life expectation was appropriate to use for their cost-benefit analysis, and they note that a 20-year service life is within the life-potential range noted in the testimony of Mr. Spanos. The Companies further recognize that Mr. Spanos is a depreciation expert, and believe his approach to choosing a depreciation life of 15 years for AMS meters based on average industry experience was and is reasonable for the purposes of setting depreciation rates. Nonetheless, the Companies would not object to using a 20-year depreciation life if the Commission believes it is appropriate.

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 45

Responding Witness: David S. Sinclair

Q-45. Refer to LG&E's response to KIUC's First Request, Item 67. Explain why a discount rate of 10.6 percent is used in this analysis but a 6.62 percent rate was used in the Application, Exhibit JPM-1, page 38 of 169.

A-45. The value labeled "cost of capital" in the attachment to the response to KIUC 1-67 (6.48%) was used as the discount rate in calculating fixed charge rate. The value labeled "discount rate" in that attachment was not used to calculate the fixed charge rate, but was used to calculate the levelized cost factor for operating and maintenance expenses. The discount rate of 6.62% in the Application, Exhibit JPM-1 was calculated using a return on equity assumption of 10.23% and debt cost assumption of 4.16%, while the discount rate used in the attachment to the response to KIUC 1-67 (6.48%) was calculated using a return on equity assumption of 10.0% and debt cost assumption of 4.10%.

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Question No. 46

Responding Witness: Robert M. Conroy

Q-46. Refer to LG&E's response to KIUC's First Request, Item 73. Given the response, state whether LG&E is agreeable to reducing the Curtailable Service Rider credit non-compliance charge. If so, state the effect this change would have on revenue requirements for the test year.

A-46. The Company would be agreeable to establish the non-compliance charge as four months of the approved CSR credit. At the proposed CSR credit in this proceeding, four months of the credit would result in a reduction to the current non-compliance charge of $16. Since the forecasted test year does not contain any assumption that CSR customers would not comply with any requested interruption, there is no revenue associated with non-compliance. Any reduction to the non-compliance charge would not affect the revenue requirement in this proceeding.

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Response to Commission Staff's Third Request for Information
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Question No. 47

Responding Witness: Robert M. Conroy / William S. Seelye

Q-47. Refer to LG&E's response to KIUC's First Request, Item 94, and LG&E's response to Commission Staff's First Request, Item 53. If the Commission were not to approve the change in ratchet percentages proposed by LG&E, provide the effect it would have on the revenue at proposed rates for the following rate classes: TODS, TODP, and RTS.

A-47. If the Commission does not approve the change in the ratchet percentages proposed by LG&E, there will be no effect on the revenue at the proposed rates for TODS, TODP, and RTS. The revenue impact will be the same.

The implementation of the ratchet was designed to be revenue neutral *for each rate class.* However, the demand charge was determined using the billing units calculated at the proposed ratchet percentage. If the Commission decided not to approve the proposed ratchet percentage, the billing units would change (decrease) from those shown in the calculation of the proposed rates. The proposed demand charge would not be applicable to billing units using the current ratchet percentage because the charge was not determined on that basis. Keeping the current ratchet percentage would require a redetermination of the demand charge based on billing demands using the current ratchet percentage. Once the demand charge is recalculated using billing units determined from the current ratchet percentage, the revenue for each class would not change.

It should also be noted that the Company's proposed ratchet for the Base Demand Charges in Rates TODS, TODP, RTS and FLS is being implemented in conjunction with the elimination of its Supplemental or Standby Rider SS. If the 100% ratchet is not approved by the Commission then some other rate structure or cost recovery mechanism would need to be introduced to ensure that customers who desire to receive supplemental or standby service pay an appropriate level of fixed cost demand revenue to cover the cost of the transmission and distribution facilities installed to provide service to those customers.

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 48

Responding Witness: William S. Seelye

Q-48. Refer to LG&E's response to the First Request for Information of the Kentucky School Boards Association ("KSBA's First Request"), Item 1.c. Explain how the investment in the infrastructure required to enable AMS meter functionality and the back-office overhead to schedule and manage the installation is allocated in the cost-of-service studies.

A-48. The investment in the infrastructure was allocated based on the cost-weighted number of customers (i.e., the number of customers in each rate class multiplied by the estimated cost of the metering equipment for the class). The back-office costs for scheduling and managing the AMS equipment are allocated on the same basis as customer information expenses, which are allocated based on the cost-weighted number of customers (i.e., the number of customer in each rate class multiplied by the estimated customer information expenses for the class).

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 49

Responding Witness: John K. Wolfe

Q-49. Refer to LG&E's response to KSBA's First Request, Item 14. Provide supporting documentation for the statement that "[t]he current maintenance cost included in the majority of the LED rate codes exceeds the maintenance cost included in the rate codes of the HPS, Mercury Vapor, and Metal Halide lights."

A-49. LG&E does not have documentation. LED maintenance is estimated to require replacing the entire fixture on average every 13 years, whereas HPS, Mercury Vapor and Metal Halide fixtures require the replacement of only their bulb and photocell on average every six years.

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Dated February 7, 2017

Question No. 50

Responding Witness: Robert M. Conroy

Q-50. Refer to LG&E's response to KSBA's First Request, Item 15. State whether a light controlled by a timer, or otherwise remotely controlled, would still be charged the full lighting rate in the tariff, regardless of its level of use.

A-50. The Company stated in response to KSBA 1-15 that it would consider providing LED outside lighting that can be set on timers, but the current and proposed Lighting Service ("LS") and Restricted Lighting Service ("RLS") tariffs determination of energy consumption is billed based on the kilowatt-hours listed in Tariff Sheet No. 67 (Kilowatt-Hours Consumed by Lighting Units). To accommodate timers or remote controls, changes would need to be made in the LS and RLS tariffs to include the cost of a timer or remote controlled device and a meter to accurately measure the level of use.

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 51

Responding Witness: William S. Seelye

Q-51 Refer to LG&E's response to KSBA's First Request, Item 19. Provide an explanation of a demand loss factor.

A-51. The demand loss factors are the estimated line and transformer loss percentages at the times of the monthly peaks. The demand loss percentages are higher than the corresponding energy loss percentages for the rate classes because line and transformer losses increase as current (and thus demand) increases on the system. These percentages were developed from the Company's most recent loss study, which was completed in 2012.

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 52

Responding Witness: Lonnie E. Bellar

Q-52. Refer to LG&E's response to the AG's First Request, Item 260. Describe the Interim Final Rule regarding underground storage, and when and how it is expected to impact LG&E.

A-52. On December 19, 2016 the Pipeline and Hazardous Materials Safety Administration (PHMSA), within Federal Department of Transportation, published in the Federal Register an interim final rule (IFR), effective January 18, 2017, that revises Federal pipeline safety regulations to address critical safety issues related to down hole facilities, including wells, wellbore tubing, and casing, at underground natural gas storage facilities. The IFR incorporates American Petroleum Institute's recommended practices 1170 and 1171 by reference into the pipeline safety regulations (49 C.F.R. Part 192). Recommended practices 1170 and 1171 outline standards for the design and operation of solution-mined salt caverns used for natural gas storage, and functional integrity of natural gas storage in depleted hydrocarbon reservoirs and aquifer reservoirs. The IFR requires storage operators to establish and follow written procedures for operations, maintenance, and emergencies implementing the requirements of API RP 1170 and API RP 1171 and incorporate such procedures into their written procedures for operations, maintenance, and emergencies within one year of the IFR effective date.

Many of the requirements in the Interim Final Rule related to underground gas storage facilities are similar to gas safety requirements for gas distribution and gas transmission assets. Similarities include: identifying threats, performing risk assessments, identifying preventative & mitigative risk reduction measures, and establishing measures to evaluate program effectiveness.

LG&E operates depleted hydrocarbon and aquifer reservoirs and will be required to meet the operations, maintenance, integrity demonstration and verification, monitoring, threat and hazard identification, assessment, remediation, site security, emergency response and preparedness, and recordkeeping requirements and recommendations of API RP 1171. In addition, LG&E will be required file annual reports, obtain operator identification numbers, and file incident reports and safety-related reports.

LOUISVILLE GAS AND ELECTRIC COMPANY

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Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 53

Responding Witness: Adrien M. McKenzie

Q-53. Refer to LG&E's response to the AG's First Request, Item 282. Provide the most current Blue Chip Financial Forecasts provided in WP-13 that is currently available to LG&E.

A-53. An excerpt containing a copy of the most recent source data from the Blue Chip Financial Forecast comparable to that relied on in preparing Mr. McKenzie's testimony and exhibits is attached.

Blue Chip Financial Forecasts®

Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them

Vol. 35, No. 12, December 1, 2016

Wolters Kluwer

Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2018 through 2022 and averages for the five-year periods 2018-2022 and 2023-2027. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year					Five-Year Averages	
Interest Rates		**2018**	**2019**	**2020**	**2021**	**2022**	**2018-2022**	**2023-2027**
1. Federal Funds Rate	**CONSENSUS**	**1.8**	**2.4**	**2.8**	**3.0**	**3.0**	**2.6**	**3.0**
	Top 10 Average	2.4	3.1	3.5	3.6	3.7	3.3	3.6
	Bottom 10 Average	1.3	1.5	2.0	2.2	2.2	1.9	2.2
2. Prime Rate	**CONSENSUS**	**4.8**	**5.5**	**5.8**	**6.0**	**6.0**	**5.6**	**5.9**
	Top 10 Average	5.4	6.2	6.6	6.7	6.7	6.3	6.6
	Bottom 10 Average	4.3	4.7	5.0	5.3	5.2	4.9	5.1
3. LIBOR, 3-Mo.	**CONSENSUS**	**2.1**	**2.8**	**3.1**	**3.2**	**3.3**	**2.9**	**3.2**
	Top 10 Average	2.7	3.4	3.8	3.9	3.9	3.5	3.8
	Bottom 10 Average	1.7	2.1	2.4	2.5	2.5	2.2	2.5
4. Commercial Paper, 1-Mo.	**CONSENSUS**	**2.0**	**2.7**	**3.1**	**3.2**	**3.2**	**2.8**	**3.2**
	Top 10 Average	2.5	3.2	3.6	3.7	3.8	3.4	3.7
	Bottom 10 Average	1.6	2.1	2.5	2.6	2.6	2.3	2.6
5. Treasury Bill Yield, 3-Mo.	**CONSENSUS**	**1.7**	**2.4**	**2.8**	**2.9**	**2.9**	**2.6**	**2.9**
	Top 10 Average	2.4	3.2	3.5	3.6	3.7	3.3	3.6
	Bottom 10 Average	1.3	1.7	2.0	2.1	2.1	1.8	2.1
6. Treasury Bill Yield, 6-Mo.	**CONSENSUS**	**1.9**	**2.6**	**2.9**	**3.1**	**3.1**	**2.7**	**3.0**
	Top 10 Average	2.6	3.3	3.7	3.8	3.8	3.4	3.7
	Bottom 10 Average	1.4	1.9	2.1	2.2	2.2	2.0	2.2
7. Treasury Bill Yield, 1-Yr.	**CONSENSUS**	**2.1**	**2.7**	**3.0**	**3.1**	**3.2**	**2.8**	**3.2**
	Top 10 Average	2.8	3.5	3.8	3.9	3.9	3.6	3.8
	Bottom 10 Average	1.5	1.9	2.2	2.3	2.3	2.1	2.3
8. Treasury Note Yield, 2-Yr.	**CONSENSUS**	**2.2**	**2.9**	**3.2**	**3.3**	**3.3**	**3.0**	**3.3**
	Top 10 Average	2.9	3.6	4.0	4.0	4.0	3.7	4.1
	Bottom 10 Average	1.7	2.1	2.4	2.5	2.5	2.2	2.4
10. Treasury Note Yield, 5-Yr.	**CONSENSUS**	**2.7**	**3.2**	**3.5**	**3.6**	**3.6**	**3.3**	**3.6**
	Top 10 Average	3.3	4.0	4.3	4.3	4.4	4.0	4.4
	Bottom 10 Average	2.2	2.4	2.6	2.8	2.8	2.6	2.8
11. Treasury Note Yield, 10-Yr.	**CONSENSUS**	**3.1**	**3.5**	**3.8**	**3.9**	**3.9**	**3.6**	**3.9**
	Top 10 Average	3.8	4.3	4.6	4.6	4.6	4.4	4.7
	Bottom 10 Average	2.5	2.7	2.9	3.1	3.1	2.8	3.1
12. Treasury Bond Yield, 30-Yr.	**CONSENSUS**	**3.8**	**4.1**	**4.3**	**4.4**	**4.4**	**4.2**	**4.5**
	Top 10 Average	4.5	5.0	5.2	5.2	5.3	5.0	5.3
	Bottom 10 Average	3.1	3.3	3.5	3.6	3.6	3.4	3.6
13. Corporate Aaa Bond Yield	**CONSENSUS**	**4.8**	**5.2**	**5.4**	**5.5**	**5.5**	**5.3**	**5.5**
	Top 10 Average	5.4	5.8	6.1	6.1	6.1	5.9	6.2
	Bottom 10 Average	4.3	4.6	4.8	4.8	4.8	4.7	4.9
13. Corporate Baa Bond Yield	**CONSENSUS**	**5.9**	**6.2**	**6.4**	**6.4**	**6.4**	**6.3**	**6.4**
	Top 10 Average	6.5	6.9	7.0	7.1	7.2	6.9	7.2
	Bottom 10 Average	5.3	5.5	5.8	5.8	5.7	5.6	5.7
14. State & Local Bonds Yield	**CONSENSUS**	**4.3**	**4.6**	**4.5**	**4.8**	**4.8**	**4.6**	**4.8**
	Top 10 Average	4.9	5.3	5.4	5.5	5.6	5.3	5.6
	Bottom 10 Average	3.8	3.8	3.5	4.0	4.0	3.8	4.0
15. Home Mortgage Rate	**CONSENSUS**	**4.9**	**5.3**	**5.5**	**5.6**	**5.6**	**5.4**	**5.6**
	Top 10 Average	5.5	6.0	6.2	6.3	6.3	6.0	6.3
	Bottom 10 Average	4.3	4.6	4.7	4.9	4.9	4.7	4.9
A. FRB - Major Currency Index	**CONSENSUS**	**94.6**	**93.8**	**93.6**	**93.5**	**93.2**	**93.8**	**92.1**
	Top 10 Average	97.6	97.9	98.3	98.4	98.4	98.1	97.4
	Bottom 10 Average	91.5	89.6	88.7	88.4	87.9	89.2	86.6

		Year-Over-Year, % Change					Five-Year Averages	
		2018	**2019**	**2020**	**2021**	**2022**	**2018-2022**	**2023-2027**
B. Real GDP	**CONSENSUS**	**2.3**	**2.2**	**2.1**	**2.1**	**2.1**	**2.2**	**2.1**
	Top 10 Average	2.7	2.5	2.4	2.4	2.4	2.5	2.5
	Bottom 10 Average	1.9	1.8	1.7	1.8	1.8	1.8	1.8
C. GDP Chained Price Index	**CONSENSUS**	**2.1**	**2.1**	**2.1**	**2.1**	**2.0**	**2.1**	**2.0**
	Top 10 Average	2.4	2.4	2.4	2.4	2.2	2.3	2.2
	Bottom 10 Average	1.8	1.8	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	**CONSENSUS**	**2.4**	**2.3**	**2.3**	**2.3**	**2.3**	**2.3**	**2.3**
	Top 10 Average	2.7	2.6	2.6	2.6	2.5	2.6	2.5
	Bottom 10 Average	2.1	2.1	2.2	2.1	2.0	2.1	2.1

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 54

Responding Witness: William S. Seelye

Q-54. Refer to LG&E's response to the AG's First Request, Item 294.a., Excel spreadsheet.

a. Explain why all hours do not have a LOLP.

b. Explain how the amounts in the "Expected Unserved Energy MWh" were calculated.

A-54.

a. Technically, all hours would have a LOLP that is greater than zero. However, the output of the modeled LOLP calculation is limited in the number of decimal places displayed. Zero LOLP output values represent LOLP values that are less than the model's lower limit of 0.0000000001.

b. Expected unserved energy (EUE) for an hour is the sum of the products of each evaluated load increment (up to the hour's forecasted load) and each load increment's associated LOLP. The following simplified example demonstrates how EUE is calculated:

Load Level (MW)	Incremental Load (MW)	LOLP
7,000	1,000	0.001
6,000	1,000	0.0005
5,000	1,000	0.0002
4,000	4,000	0

If load = 6,000 MW, then EUE = 4,000*0 + (5,000-4,000)*0.0002 + (6,000-5,000)*0.0005 = 0.7 MWh.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 55

Responding Witness: John P. Malloy

Q-55. Refer to LG&E's response to the AG's First Request, Item 328.

a. Provide an update to this response regarding the discussions with Landis+Gyr.

b. State whether LG&E has reason to believe that a warranty longer than five years can be obtained.

A-55.

a. The Company continues contract negotiations. An 18-month warranty from the date of shipment is standard; however, a five-year warranty has been obtained for the AMS Opt-In Customer Offering.

b. The Company understands based on discussions with Landis+Gyr that warranties from 18 months to five years are typical in the industry. Warranties between five years and seven years are less common and beyond seven years are rare but obtainable, though the costs of such extended warranties can be significant.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 56

Responding Witness: Robert M. Conroy / John P. Malloy

Q-56. Refer to LG&E's response to the AG's First Request, Item 357.

a. State the amount LG&E is currently charging for remotely disconnecting/reconnecting customers with advanced meters.

b. Confirm that LG&E's current disconnect/reconnect charge is based on a visit to the customer's premises and manually disconnecting/reconnecting the meter.

c. State whether LG&E plans to propose a remote disconnect/reconnect charge for customers with advanced meters. If not, explain.

A-56.

a. The Company does not remotely disconnect or reconnect customers with advanced meters because the currently deployed AMS meters deployed do not have this capability. Any customer that is disconnected and reconnected is charged the tariffed rate of $28.

b. Confirmed.

c. The Company plans to utilize the current disconnect/reconnect charge for customers until costs can be collected for providing disconnect/reconnects remotely. The costs associated with remote disconnect/reconnect will be addressed in a future rate case proceeding after the AMS deployment occurs.

LOUISVILLE GAS AND ELECTRIC COMPANY

CASE NO. 2016-00371

Response to Commission Staff's Third Request for Information
Dated February 7, 2017

Question No. 57

Responding Witness: Robert M. Conroy / John P. Malloy

Q-57. Refer to LG&E's response to the First Set of Data Requests of Metropolitan Housing Coalition, Item 15. Explain why LG&E has no plans to offer prepayment services to its customers.

A-57. It is not clear that customers or customer advocates desire to have such a program. Additionally, a prepayment services program could not be offered until meters and IT systems are deployed to support such services. With the full deployment of AMS, the Company will have the ability to consider options such as prepayment.