COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC EXAMINATION BY THE PUBLIC	**)**
SERVICE COMMISSION OF THE ENVIRONMENTAL	**)**
SURCHARGE MECHANISM OF LOUISVILLE GAS	**) CASE NO.**
AND ELECTRIC COMPANY FOR THE SIX-MONTH	**) 2019-00015**
BILLING PERIOD ENDING OCTOBER 31, 2018	**)**

DIRECT TESTIMONY OF

DEREK A. RAHN
MANAGER, REVENUE REQUIREMENT COS
LG&E AND KU SERVICES COMPANY

Filed: March 6, 2019

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Derek A. Rahn**, being duly sworn, deposes and says that he is Manager - Revenue Requirement COS for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

Derek A. Rahn

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 4th day of March 2019.

Notary Public (SEAL)

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
State at Large, Kentucky
Commission Expires 7/11/2022

Q. Please state your name, title, and business address.

A. My name is Derek A. Rahn. I am the Manager, Revenue Requirement COS for Kentucky Utilities Company ("KU" or "Company") and Louisville Gas and Electric Company ("LG&E") and an employee of LG&E and KU Services Company, which provides services to LG&E and KU (collectively "Companies"). My business address is 220 West Main Street, Louisville, Kentucky, 40202. A complete statement of my education and work experience is attached to this testimony as Appendix A.

Q. Have you previously testified before this Commission?

A. Yes. I have previously testified before this Commission in proceedings concerning the Companies' fuel adjustment clauses, environmental cost recovery ("ECR") surcharge mechanisms, and the 2016 ECR compliance plan proceeding (Case No. 2016-00026 (KU) and Case No. 2016-00027 (LG&E)).

Q. What is the purpose of this proceeding?

A. The purpose of this proceeding is to review the past operation of LG&Es environmental surcharge during the six-month billing period ending October 31, 2018 and determine whether the surcharge amounts collected during the period are just and reasonable.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to summarize the operation of LG&E's environmental surcharge during the billing period under review, demonstrate that the amount collected during the period was just and reasonable, present and discuss LG&E's proposed adjustment to the Environmental Surcharge Revenue Requirement based on the operation of the surcharge during the period and explain how the environmental surcharge factors were calculated during the period under review.

Q. Please summarize the operation of the environmental surcharge for the billing period included in this review.

A. LG&E billed an environmental surcharge to its customers from May 1, 2018 through October 31, 2018. For purposes of the Commission's examination in this case, the monthly LG&E environmental surcharges are considered as of the six-month billing period ending October 31, 2018. In each month of the six-month period under review in this proceeding, LG&E calculated the environmental surcharge factors in accordance with its ECR Tariff and the requirements of the Commission's previous orders concerning LG&E's environmental surcharge. The calculations were made in accordance with the Commission-approved monthly forms and filed with the Commission ten days before the new monthly charge was billed by the Company.

Q. **What costs were included in the calculation of the environmental surcharge factors for the billing period under review?**

A. The capital and operating costs included in the calculation of the environmental surcharge factors for the six-month billing period under review were the costs incurred each month by LG&E from March 2018 through August 2018, as detailed in the attachment in response to Question No. 2 of the Commission Staff's First Request for Information, incorporating all required revisions.

The monthly environmental surcharge factors applied during the billing period under review were calculated consistent with the Commission's Orders in LG&E's previous applications to assess or amend its environmental surcharge mechanism and plan, as well as, Orders issued in previous review cases. The monthly environmental surcharge reports filed with the Commission during this time reflect the various changes to the reporting forms ordered by the Commission from time to time.

Q. Please describe the most recently approved changes to LG&E's ECR Compliance Plan.

A. In Case No. 2016-00027, the Commission approved LG&E's 2016 ECR Compliance Plan that included three new projects and associated operation and maintenance costs. Pursuant to the Commission's August 8, 2016 Order approving the Settlement Agreement in Case No. 2016-00027, LG&E began including the approved projects in the monthly filing for the August 2016 expense month that was billed in October 2016.

Q. Please describe the most recently approved changes to the environmental surcharge mechanism and the monthly ES forms.

A. There were three changes required and approved in Case No 2018-00258 to incorporate the effects of the reduction in the Kentucky state corporate income tax rate.

First, the gross-up rate used in the rate of return calculation was modified to reflect the lower Kentucky state corporate income tax rate of 5% effective January 1, 2018. This change was implemented with the April 2018 expense month, therefore, January and February 2018 expense months are being corrected as part of this filing.

Second, accumulated deferred income tax ("ADIT") balances included as a reduction to ECR rate base were updated to reflect the change in law. This change was also implemented effective with the April 2018 expense 1 month with modifications for the January and February 2018 expense months reflected as part of this filing.

Third, state excess deferred tax amortization had been updated and reflected, on ES Form 2.00 and 2.01.

Q. Is LG&E proposing any changes to its Environmental Cost Recovery Surcharge tariff?

A. No. There are no needed changes to the Environmental Cost Recovery Surcharge tariff.

Q. Is LG&E proposing any changes to the environmental surcharge mechanism and the monthly ES forms?

A. Yes, the Company is proposing to eliminate the section on ES Form 2.00 for Proceeds From By-Product and Allowance Sales. Any beneficial reuse from by-products is reported, in more detail, on ES Forms 2.60 and 2.61. Also, the allowance sales is reported. in more detail on ES Forms 2.31, 2.32, and 2.33.

With the reporting and use of the data on ES Form 2.60, 2.61, 2.31, 2.32, and 2.33, there is no need for the section on ES Form 2.00 for Proceeds From By-Product and Allowance Sales.

Q. Are there any changes or adjustments in Rate Base from the originally filed expense months?

A. Yes. During the period under review, there were several changes to Rate Base from the originally filed expense months July 2018 through December 2018. It had come to my attention and noted in the Monthly Environmental Surcharge Report filed February 19, 2019, the Eligible Accumulated Depreciation on ES Form 2.10 included an extra month of depreciation. In this six month review case it is being corrected for the expense months July and August 2018. The impact on the factors on average is an increase of 0.02% per month. Reflected in Exhibit DAR-1, and summarized in LG&E's attachment to the response to Question No. 1 column 9 Jurisdictional True-up.

Q. Are there any changes necessary to the jurisdictional revenue requirement (E(m))?

A. Yes. Adjustments to E(m) are necessary for compliance with the Commission's Order in Case No. 2000-00386, to reflect the actual changes in the overall rate of return on capitalization that is used in the determination of the return on environmental rate base.

Pursuant to the terms of the Settlement Agreement approving the 2011 ECR Plan, LG&E calculated the short- and long-term debt rate using average daily balances and daily interest rates in the calculation of the overall rate of return true-up adjustment for the six-month expense period ending August 31, 2018. For the expense months of March 2018 through August 2018, the weighted average cost of capital was based on the balances as of August 31, 2018 and the 9.70% return on equity for all Plan projects. The details of and support for these calculations are shown in LG&E's response to Question No. 1 of the Commission Staff's First Request for Information.

Q. Are there any other corrections to information provided in the monthly filings during the billing period under review?

A. No.

Q. As a result of the operation of the environmental surcharge during the billing period under review, is an adjustment to the revenue requirement necessary?

A. Yes. LG&E experienced an over-recovery of $4,268 for the billing period ending October 31, 2018. LG&E's response to Question No. 2 of the Commission Staff's First Request for Information shows the calculation of the over-recovery. An adjustment to the revenue requirement is necessary to reconcile the collection of past surcharge revenues with actual costs for the billing period under review.

Q. Has LG&E identified the causes of the over-recovery during the billing period under review?

A. Yes. LG&E has identified the components that make up the over-recovery during the billing period under review. The components are: (1) changes in overall rate of return as previously discussed, and (2) the use of 12-month average revenues to determine the billing factor. The details and support of the components that make up the over-recovery during the billing period under review are shown in LG&E's response to Question No. 2 of the Commission Staff's First Request for Information.

Q. Please explain how the function of the ECR mechanism contributes to the recovery position in the billing period under review.

A. The use of 12-month average revenues to calculate the monthly billing factors and then applying those same billing factors to the actual monthly revenues will result in an over- or under-collection of ECR revenues. The table below shows a comparison of the 12-month average revenues used in the monthly filings to determine the ECR billing factors and the actual revenues to which the ECR billing factors were applied in the billing month.

Expense Month	12-Month Average Revenues	Billing Month	Actual Revenues Subject to ECR Billing Factors
March 2018	$72,606,271	May 2018	$70,429,958
April 2018	$73,332,191	June 2018	$86,499,037
May 2018	$74,091,031	July 2018	$94,148,913
June 2018	$74,695,897	August 2018	$90,117,750
July 2018	$75,287,561	September 2018	$86,444,887
August 2018	$75,444,516	October 2018	$76,613,853

*The 12-month average revenues and the Actual Revenues subject to ECR Billing Factors reflect net revenues for Groups 1 and 2.

Generally, an under-recovery will occur when actual revenues for the billing month are less than the 12-month average revenues used for the expense month. Likewise, an over-recovery will usually occur when actual revenues for the billing month are greater than the 12-month average revenues used for the expense month.

Q. What kind of adjustment is LG&E proposing in this case as a result of the operation of the environmental surcharge during the billing period?

A. LG&E is proposing that the over-recovery be distributed over one month following the Commission's Order in this proceeding. Specifically, LG&E recommends that the Commission approve a decrease to the Environmental Surcharge Revenue Requirement of $4,268 for one month beginning in the second full billing month following the Commission's Order in this proceeding. This method is consistent with the method of implementing previous over- or under-recovery positions in prior ECR review cases.

Q. What is the bill impact on a residential customer for the proposed distribution of the over-recovery?

A. The inclusion of the distribution reflecting the over-recovery position in the determination of the ECR billing factor will have no effect on the billing factor. For a residential customer using an average of 1,006 kWh per month, there is no impact (using rates and adjustment clause factors in effect for the December 2018 billing month).

Q. What rate of return is LG&E proposing to use for all ECR Plans upon the Commission's Order in this proceeding?

A. LG&E is recommending an overall rate of return on capital of 8.74%, including the currently approved 9.7% return on equity and adjusted capitalization, to be used to calculate the environmental surcharge. This is based on capitalization as of August 31, 2018, the Commission's Order of November 19, 2018 in Case No. 2018-00258, use of the new corporate tax rate implemented in the Tax Cuts and Jobs Act, and new Kentucky state corporate income tax rate.

See the response and attachment to Commission Staff's First Request for Information Question No. 5 following this testimony.

Q. What is your recommendation to the Commission in this case?

A. LG&E makes the following recommendations to the Commission in this case:

a) The Commission should approve the proposed decrease to the Environmental Surcharge Revenue Requirement of $4,268 for one month beginning in the second full billing month following the Commission's Order in this proceeding;

b) The Commission should determine the environmental surcharge amount for the six-month billing period ending October 31, 2018 to be just and reasonable, and;

c) The Commission should approve the use of an overall rate of return on capital of 8.74% for all projects, using a return on equity of 9.70%, beginning in the second full billing month following the Commission's Order in this proceeding.

Q. Does this conclude your testimony?

A. Yes.

APPENDIX A

Derek A. Rahn
Manager, Revenue Requirement COS
LG&E and KU Services Company
220 West Main Street
Louisville, Kentucky 40202
(502) 627-4127

Previous Positions

Manager, Revenue Requirement	Oct. 2015 – Jan. 2018
Manager, Transmission Policy & Tariffs	Sept. 2010 – Oct. 2015
Group Leader, Transmission Operations Engineering	Dec. 2008 – Sept. 2010
Supervisor, Operations (Ghent Power Station)	Dec. 2007 – Dec. 2008
Electrical Engineer II (Ghent Power Station)	Jul. 2005 – Dec. 2007
Project Engineer (TubeMaster, Inc)	Dec 2003 – Jul. 2005

Education

Masters of Business Administration,
Bellarmine University, July 2010.
Bachelor of Science in Electrical Engineering,
University of Kentucky, December 2003.

Training:

Managing People & Processes (2014), IUS Leadership Program (2007-2008), Professional Development Program (2007-2008), Global Leadership Summit (2013, 2015, & 2017), Mentoring Program (2008, 2014 - 2017), Advanced Operator (2008), Project Management (2006), and Basic Shaft Alignment (2006).

Civic Activities

Power of One Committee Member (2007 – 2018)
Saratoga Springs Neighborhood Association Board (2017- 2018)

ES FORM 1.00

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT

Net Group E(m) and
Group Environmental Surcharge Billing Factors
For the Expense Month of July 2018

GROUP 1 (Total Revenue)

Group 1 E(m) -- ES Form 1.10, line 15	=	**$ (1,399,008)**
Group 1 ES Billing Factor -- ES Form 1.10, line 17	=	**-3.62%**

GROUP 2 (Net Revenue)

Group 2 E(m) -- ES Form 1.10, line 15	=	**$ (1,849,212)**
Group 2 ES Billing Factor -- ES Form 1.10, line 17	=	**-5.05%**

Effective Date for Billing: September billing cycle beginning August 30, 2018

Submitted by: ______________________________

Title: Manager, Revenue Requirement COS

Date Submitted: August 20, 2018

ES FORM 1.10

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT

Calculation of Total E(m) and
Group Surcharge Billing Factors

For the Expense Month of July 2018

Calculation of Total E(m)

E(m) = [(RB / 12) (ROR+(ROR -DR)(TR/(1-TR)))] + OE - BAS + BR, where

RB	=	Environmental Compliance Rate Base
ROR	=	Rate of Return on the Environmental Compliance Rate Base
DR	=	Debt Rate (both short-term and long-term debt)
TR	=	Composite Federal & State Income Tax Rate
OE	=	Pollution Control Operating Expenses
BAS	=	Total Proceeds from By-Product and Allowance Sales
BR	=	Beneficial Reuse Operating Expenses

					Environmental Compliance Plans
(1)	RB		=	$	1,124,105,774
(2)	RB / 12		=	$	93,675,481
(3)	(ROR + (ROR - DR) (TR / (1 - TR)))		=		8.73%
(4)	OE		=	$	3,204,923
(5)	BAS		=	$	0
(6)	BR		=	$	(146,501)
(7)	E(m)	(2) x (3) + (4) - (5) + (6)	=	$	11,236,292

Calculation of Adjusted Net Jurisdictional E(m)

(8)	Jurisdictional Allocation Ratio for Expense Month -- ES Form 3.10	=		98.37%
(9)	Jurisdictional E(m) = Total E(m) x Jurisdictional Allocation Ratio [(7) x (8)]	=	$	11,053,140
(10)	Adjustment for (Over)/Under-collection pursuant to Case No. 2018-0052	=	$	(730,092)
(11)	Prior Period Adjustment (if necessary)	=	$	-
(12)	Revenue Collected through Base Rates	=	$	13,571,268
(13)	Adjusted Net Jurisdictional E(m) [(9) + (10) + (11) - (12)]	=	$	(3,248,220)

Calculation of Group Environmental Surcharge Billing Factors

				GROUP 1 (Total Revenue)		GROUP 2 (Net Revenue)
(14)	Revenue as a Percentage of 12-month Total Revenue ending with the Current Month -- ES Form 3.00	=		43.07%		56.93%
(15)	Group E(m) [(13) x (14)]	=	$	(1,399,008)	$	(1,849,212)
(16)	Group R(m) = Average Monthly Group Revenue for the 12 Months Ending with the Current Expense Month -- ES Form 3.00	=	$	38,676,142	$	36,611,419
(17)	Group Environmental Surcharge Billing Factors [(15) ÷ (16)]	=		**-3.62%**		**-5.05%**

ES FORM 2.00

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT

Revenue Requirements of Environmental Compliance Costs
For the Expense Month of July 2018

Determination of Environmental Compliance Rate Base

	Environmental Compliance Plan	
Eligible Pollution Control Plant	$ 1,173,645,634	
Eligible Pollution CWIP Excluding AFUDC	276,594,623	
Subtotal		$ 1,450,240,257
Additions:		
Inventory - Emission Allowances per ES Form 2.31, 2.32, 2.33, and 2.34	143	
Cash Working Capital Allowance	979,125	
Net Unamortized Closure Cost Balance[1]	9,014,187	
Subtotal		9,993,455
Deductions:		
Accumulated Depreciation on Eligible Pollution Control Plant	78,794,918	
Pollution Control Deferred Income Taxes	257,333,020	
Subtotal		336,127,938
Environmental Compliance Rate Base		$ 1,124,105,774

Determination of Pollution Control Operating Expenses

			Environmental Compliance Plan
Monthly Operations & Maintenance Expense			$ 644,172
Monthly Depreciation & Amortization Expense			2,377,807
less investment tax credit amortization			-
Monthly Taxes Other Than Income Taxes - Eligible Plant			139,268
Monthly Taxes Other Than Income Taxes - Closure Costs			-
Amortization of Monthly Closure Costs			49,548
Amortization of Excess ADIT with gross-up	$ (4,407)	1.33245	(5,872)
Monthly Emission Allowance Expense from ES Form 2.31, 2.32, 2.33, and 2.34			-
Monthly Surcharge Consulting Fees			-
Construction Monitoring Consultant Fee			-
Total Pollution Control Operations Expense			$ 3,204,923

Determination of Beneficial Reuse Operating Expenses

	Environmental Compliance Plan
Total Monthly Beneficial Reuse Expense	$ (146,456)
Adjustment for Beneficial Reuse in Base Rates (from ES Form 2.61)	(44)
Net Beneficial Reuse Operations Expense	$ (146,501)

Proceeds From By-Product and Allowance Sales

	Total Proceeds	Amount in Base Rates	Net Proceeds
	(1)	(2)	(1) - (2)
Allowance Sales	$ 0	$ -	$ 0
Scrubber By-Products Sales	-	-	-
Total Proceeds from Sales	$ 0	$ -	**$ 0**

Note 1: The net unamortized closure cost balance is comprised of CCR closure cost expenditures less accumulated amortization, accumulated deferred income taxes and amount in base rates.

ES FORM 2.10

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT
Plant, CWIP & Depreciation Expense

For the Month Ended: July 31, 2018

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Description	Eligible Plant In Service	Eligible Accumulated Depreciation	CWIP Amount Excluding AFUDC	Eligible Net Plant In Service	Deferred Tax Balance as of 7/31/2018	Monthly ITC Amortization Credit	Monthly Depreciation Expense	Monthly Property Tax Expense
				(2)-(3)+(4)				
2009 Plan:								
Project 22 - Cane Run CCP Storage (Landfill - Phase I) [CANCELLED]								
Project 23 - Trimble County Ash Treatment Basin (BAP/GSP)	$ 9,599,354	$ 1,430,184	$ -	$ 8,169,170	$ 999,723		$ 10,336	$ 1,030
Project 24 - Trimble County CCP Storage (Landfill - Phase 1)	$ 13,395,528	$ 507,983	$ 102,919,030	$ 115,806,575	$ 2,245,046		$ 28,310	$ 1,675
Project 25 - Beneficial Reuse	$ 7,413,755	$ 696,914	$ -	$ 6,716,842	$ 1,441,990		$ 14,253	$ 852
Subtotal	$ 30,408,637	$ 2,635,081	$ 102,919,030	$ 130,692,586	$ 4,686,759	$ -	$ 52,899	$ 3,557
Less Retirements and Replacement resulting from implementation of 2009 Plan	$ (1,329,419)	$ (372,436)	$ -	$ (956,982)	$ (296,464)		$ (3,135)	$ (120)
Net Total - 2009 Plan:	$ 29,079,218	$ 2,262,645	$ 102,919,030	$ 129,735,604	$ 4,390,294	$ -	$ 49,764	$ 3,438
2011 Plan:								
Project 26 - Mill Creek Station Air Compliance	$ 1,030,393,742	$ 69,507,634	$ 4,754,986	$ 965,641,094	$ 228,997,251		$ 2,076,573	$ 122,127
Project 27 - Trimble County Unit 1 Air Compliance	$ 100,846,405	$ 6,859,141	$ -	$ 93,987,264	$ 21,450,645		$ 230,052	$ 11,950
Subtotal	$ 1,131,240,147	$ 76,366,775	$ 4,754,986	$ 1,059,628,358	$ 250,447,896	$ -	$ 2,306,625	$ 134,076
Less Retirements and Replacement resulting from implementation of 2011 Plan	$ -	$ -	$ -	$ -	$ -		$ -	$ -
Net Total - 2011 Plan:	$ 1,131,240,147	$ 76,366,775	$ 4,754,986	$ 1,059,628,358	$ 250,447,896	$ -	$ 2,306,625	$ 134,076
2016 Plan:								
Project 28 - Supplemental Mercury Control	$ 4,506,424	$ 96,884	$ (29,778)	$ 4,379,762	$ 780,892		$ 7,411	$ 486
Project 29 - Mill Creek New Process Water Systems	$ 8,756,574	$ 212,070	$ 142,053,259	$ 150,597,763	$ 1,687,804		$ 13,141	$ 1,242
Project 30 - Trimble County New Process Water Systems	$ 379,213	$ 15,532	$ 26,897,126	$ 27,260,807	$ 66,535		$ 866	$ 46
Subtotal	$ 13,642,211	$ 324,485	$ 168,920,607	$ 182,238,332	$ 2,535,230	$ -	$ 21,418	$ 1,774
Less Retirements and Replacement resulting from implementation of 2016 Plan	$ (315,942)	$ (158,987)	$ -	$ (156,955)	$ (40,400)		$ -	$ (20)
Net Total - 2016 Plan:	$ 13,326,268	$ 165,498	$ 168,920,607	$ 182,081,377	$ 2,494,830	$ -	$ 21,418	$ 1,754
Net Total - All Plans:	$ 1,173,645,634	$ 78,794,918	$ 276,594,623	$ 1,371,445,339	$ 257,333,020	$ -	$ 2,377,807	$ 139,268

Note 1: Trimble County projects for the 2009 Plan are proportionately shared by KU at 48% and LG&E at 52%.
Note 2: Effective with the September 2012 expense month, Project 22 is cancelled and the previous CWIP balance is included on ES Form 2.50 as an expense for the September 2012 expense month.
Note 3: The Deferred Tax Balance includes Excess Deferred Taxes resulting from the Tax Cuts and Jobs Act.

ES FORM 1.00

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT

Net Group E(m) and
Group Environmental Surcharge Billing Factors
For the Expense Month of August 2018

GROUP 1 (Total Revenue)

Group 1 E(m) -- ES Form 1.10, line 15	=	$	**(1,220,631)**
Group 1 ES Billing Factor -- ES Form 1.10, line 17	=		**-3.15%**

GROUP 2 (Net Revenue)

Group 2 E(m) -- ES Form 1.10, line 15	=	$	**(1,614,090)**
Group 2 ES Billing Factor -- ES Form 1.10, line 17	=		**-4.40%**

Effective Date for Billing: October billing cycle beginning October 1, 2018

Submitted by: ____________________

Title: Manager, Revenue Requirement COS

Date Submitted: September 21, 2018

ES FORM 1.10

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT
Calculation of Total E(m) and Group Surcharge Billing Factors

For the Expense Month of August 2018

Calculation of Total E(m)

E(m) = [(RB / 12) (ROR+(ROR -DR)(TR/(1-TR)))] + OE - BAS + BR, where

RB	=	Environmental Compliance Rate Base
ROR	=	Rate of Return on the Environmental Compliance Rate Base
DR	=	Debt Rate (both short-term and long-term debt)
TR	=	Composite Federal & State Income Tax Rate
OE	=	Pollution Control Operating Expenses
BAS	=	Total Proceeds from By-Product and Allowance Sales
BR	=	Beneficial Reuse Operating Expenses

					Environmental Compliance Plans
(1)	RB		=	$	1,132,514,406
(2)	RB / 12		=	$	94,376,201
(3)	(ROR + (ROR - DR) (TR / (1 - TR)))		=		8.73%
(4)	OE		=	$	3,121,356
(5)	BAS		=	$	0
(6)	BR		=	$	(153,532)
(7)	E(m)	(2) x (3) + (4) - (5) + (6)	=	$	11,206,866

Calculation of Adjusted Net Jurisdictional E(m)

(8)	Jurisdictional Allocation Ratio for Expense Month -- ES Form 3.10	=		98.30%
(9)	Jurisdictional E(m) = Total E(m) x Jurisdictional Allocation Ratio [(7) x (8)]	=	$	11,016,349
(10)	Adjustment for (Over)/Under-collection pursuant to Case No. 2018-0052	=	$	(730,092)
(11)	Prior Period Adjustment (if necessary)	=	$	-
(12)	Revenue Collected through Base Rates	=	$	13,120,978
(13)	Adjusted Net Jurisdictional E(m) [(9) + (10) + (11) - (12)]	=	$	(2,834,721)

Calculation of Group Environmental Surcharge Billing Factors

			GROUP 1 (Total Revenue)		GROUP 2 (Net Revenue)	
(14)	Revenue as a Percentage of 12-month Total Revenue ending with the Current Month -- ES Form 3.00	=		43.06%		56.94%
(15)	Group E(m) [(13) x (14)]	=	$	(1,220,631)	$	(1,614,090)
(16)	Group R(m) = Average Monthly Group Revenue for the 12 Months Ending with the Current Expense Month -- ES Form 3.00	=	$	38,733,728	$	36,710,788
(17)	Group Environmental Surcharge Billing Factors [(15) ÷ (16)]	=		**-3.15%**		**-4.40%**

ES FORM 2.00

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT

Revenue Requirements of Environmental Compliance Costs
For the Expense Month of August 2018

Determination of Environmental Compliance Rate Base

	Environmental Compliance Plan	
Eligible Pollution Control Plant	$ 1,173,607,385	
Eligible Pollution CWIP Excluding AFUDC	288,188,035	
Subtotal		$ 1,461,795,420
Additions:		
Inventory - Emission Allowances per ES Form 2.31, 2.32, 2.33, and 2.34	142	
Cash Working Capital Allowance	923,370	
Net Unamortized Closure Cost Balance[1]	9,783,673	
Subtotal		10,707,185
Deductions:		
Accumulated Depreciation on Eligible Pollution Control Plant	81,175,170	
Pollution Control Deferred Income Taxes	258,813,029	
Subtotal		339,988,199
Environmental Compliance Rate Base		$ 1,132,514,406

Determination of Pollution Control Operating Expenses

			Environmental Compliance Plan
Monthly Operations & Maintenance Expense			$ 558,381
Monthly Depreciation & Amortization Expense			2,377,776
less investment tax credit amortization			-
Monthly Taxes Other Than Income Taxes - Eligible Plant			139,263
Monthly Taxes Other Than Income Taxes - Closure Costs			-
Amortization of Monthly Closure Costs			53,449
Amortization of Excess ADIT with gross-up	$ (5,639)	1.33245	(7,513)
Monthly Emission Allowance Expense from ES Form 2.31, 2.32, 2.33, and 2.34			-
Monthly Surcharge Consulting Fees			-
Construction Monitoring Consultant Fee			-
Total Pollution Control Operations Expense			$ 3,121,356

Determination of Beneficial Reuse Operating Expenses

	Environmental Compliance Plan
Total Monthly Beneficial Reuse Expense	$ (153,494)
Adjustment for Beneficial Reuse in Base Rates (from ES Form 2.61)	(38)
Net Beneficial Reuse Operations Expense	$ (153,532)

Proceeds From By-Product and Allowance Sales

	Total Proceeds	Amount in Base Rates	Net Proceeds
	(1)	(2)	(1) - (2)
Allowance Sales	$ 0	$ -	$ 0
Scrubber By-Products Sales	-	-	-
Total Proceeds from Sales	$ 0	$ -	**$ 0**

Note 1: The net unamortized closure cost balance is comprised of CCR closure cost expenditures less accumulated amortization, accumulated deferred income taxes and amount in base rates.

ES FORM 2.10

LOUISVILLE GAS AND ELECTRIC COMPANY
ENVIRONMENTAL SURCHARGE REPORT
Plant, CWIP & Depreciation Expense

For the Month Ended: August 31, 2018

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Description	Eligible Plant In Service	Eligible Accumulated Depreciation	CWIP Amount Excluding AFUDC	Eligible Net Plant In Service	Deferred Tax Balance as of 8/31/2018	Monthly ITC Amortization Credit	Monthly Depreciation Expense	Monthly Property Tax Expense
				(2)-(3)+(4)				
2009 Plan:								
Project 22 - Cane Run CCP Storage (Landfill - Phase I) [CANCELLED]								
Project 23 - Trimble County Ash Treatment Basin (BAP/GSP)	$ 9,599,354	$ 1,440,520	$ -	$ 8,158,834	$ 1,005,828		$ 10,336	$ 1,030
Project 24 - Trimble County CCP Storage (Landfill - Phase 1)	$ 13,399,111	$ 536,293	$ 105,441,584	$ 118,304,401	$ 2,247,491		$ 28,310	$ 1,675
Project 25 - Beneficial Reuse	$ 7,413,755	$ 711,167	$ -	$ 6,702,589	$ 1,443,306		$ 14,253	$ 852
Subtotal	$ 30,412,220	$ 2,687,980	$ 105,441,584	$ 133,165,824	$ 4,696,624	$ -	$ 52,899	$ 3,557
Less Retirements and Replacement resulting from implementation of 2009 Plan	$ (1,329,419)	$ (372,436)	$ -	$ (956,982)	$ (296,464)		$ (3,135)	$ (120)
Net Total - 2009 Plan:	$ 29,082,801	$ 2,315,544	$ 105,441,584	$ 132,208,841	$ 4,400,160	$ -	$ 49,764	$ 3,438
2011 Plan:								
Project 26 - Mill Creek Station Air Compliance	$ 1,030,393,742	$ 71,584,207	$ 4,780,511	$ 963,590,045	$ 230,365,704		$ 2,076,573	$ 122,127
Project 27 - Trimble County Unit 1 Air Compliance	$ 100,846,405	$ 7,089,193	$ 42	$ 93,757,254	$ 21,518,245		$ 230,052	$ 11,950
Subtotal	$ 1,131,240,147	$ 78,673,400	$ 4,780,553	$ 1,057,347,299	$ 251,883,949	$ -	$ 2,306,625	$ 134,076
Less Retirements and Replacement resulting from implementation of 2011 Plan	$ (41,832)	$ (689)	$ -	$ (41,143)	$ (4,883)		$ (30)	$ (5)
Net Total - 2011 Plan:	$ 1,131,198,315	$ 78,672,710	$ 4,780,553	$ 1,057,306,157	$ 251,879,066	$ -	$ 2,306,595	$ 134,071
2016 Plan:								
Project 28 - Supplemental Mercury Control	$ 4,506,424	$ 104,295	$ (14,344)	$ 4,387,784	$ 811,989		$ 7,411	$ 486
Project 29 - Mill Creek New Process Water Systems	$ 8,756,574	$ 225,210	$ 148,684,200	$ 157,215,564	$ 1,695,584		$ 13,141	$ 1,242
Project 30 - Trimble County New Process Water Systems	$ 379,213	$ 16,398	$ 29,296,044	$ 29,658,859	$ 66,630		$ 866	$ 46
Subtotal	$ 13,642,211	$ 345,904	$ 177,965,899	$ 191,262,206	$ 2,574,203	$ -	$ 21,418	$ 1,774
Less Retirements and Replacement resulting from implementation of 2016 Plan	$ (315,942)	$ (158,987)	$ -	$ (156,955)	$ (40,400)		$ -	$ (20)
Net Total - 2016 Plan:	$ 13,326,268	$ 186,916	$ 177,965,899	$ 191,105,251	$ 2,533,803	$ -	$ 21,418	$ 1,754
Net Total - All Plans:	$ 1,173,607,385	$ 81,175,170	$ 288,188,035	$ 1,380,620,250	$ 258,813,029	$ -	$ 2,377,776	$ 139,263

Note 1: Trimble County projects for the 2009 Plan are proportionately shared by KU at 48% and LG&E at 52%.
Note 2: Effective with the September 2012 expense month, Project 22 is cancelled and the previous CWIP balance is included on ES Form 2.50 as an expense for the September 2012 expense month.
Note 3: The Deferred Tax Balance includes Excess Deferred Taxes resulting from the Tax Cuts and Jobs Act.