

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

<b>AN ELECTRONIC EXAMINATION BY THE PUBLIC</b>	)	
<b>SERVICE COMMISSION OF THE ENVIRONMENTAL</b>	)	
<b>SURCHARGE MECHANISM OF LOUISVILLE GAS</b>	)	<b>CASE NO.</b>
<b>AND ELECTRIC COMPANY FOR THE TWO-YEAR</b>	)	<b>2017-00267</b>
<b>BILLING PERIOD ENDING APRIL 30, 2017</b>	)	

**DIRECT TESTIMONY OF**

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

**Filed: August 21, 2017**

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

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

8 **Q. Have you previously testified before this Commission?**

9 A. Yes. I have previously testified before this Commission in proceedings concerning the  
10 Companies’ fuel adjustment clauses, environmental cost recovery (“ECR”) surcharge  
11 mechanisms, and the most recent ECR compliance plan proceedings (Case No. 2016-  
12 00026 (KU) and Case No. 2016-00027 (LG&E)).

13 **Q. Are you sponsoring any exhibits?**

14 A. Yes. I am sponsoring two exhibits identified as Exhibit DAR-1 and Exhibit DAR-2.

- 15 • Exhibit DAR-1: Current Monthly ES Forms 1.10, 2.00, and 2.40
- 16 • Exhibit DAR-2: Proposed Monthly ES Forms 1.10, 2.00, and 2.40

17 **Q. What is the purpose of this proceeding?**

18 A. The purpose of this proceeding is to review the past operation of LG&E’s  
19 environmental surcharge, including the six-month billing period ending April 30, 2017  
20 that is part of the two-year billing period also ending April 30, 2017, determine whether  
21 the surcharge amounts collected during the period are just and reasonable, and then  
22 incorporate or “roll-in” such surcharge amounts into LG&E’s existing electric base  
23 rates.

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to summarize the operation of LG&E's environmental  
3 surcharge during the billing period under review, demonstrate that the amount collected  
4 during the period was just and reasonable, present and discuss LG&E's proposed  
5 adjustment to the Environmental Surcharge Revenue Requirement based on the  
6 operation of the surcharge during the period and explain how the environmental  
7 surcharge factors were calculated during the period under review. In addition, my  
8 testimony will recommend that the cumulative ECR revenue requirement for the twelve  
9 months ending with the expense month of February 2017 be used for purposes of  
10 incorporating or "rolling-into" LG&E's electric base rates the appropriate surcharge  
11 amounts using the methodology previously approved by the Commission, most  
12 recently in Case No. 2015-00222.

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

15 A. LG&E billed an environmental surcharge to its customers from November 1, 2016  
16 through April 30, 2017. For purposes of the Commission's examination in this case,  
17 the monthly LG&E environmental surcharges are considered as of the six-month billing  
18 period ending April 30, 2017; that same review period is part of the two-year billing  
19 period also ending April 30, 2017. (The three previous billing periods were reviewed  
20 in Case Nos. 2015-00412, 2016-00215, and 2016-00438.) In each month of the six-  
21 month period under review in this proceeding, LG&E calculated the environmental  
22 surcharge factors in accordance with its ECR Tariff, and the requirements of the  
23 Commission's previous orders concerning LG&E's environmental surcharge. The

1 calculations were made in accordance with the Commission-approved monthly forms  
2 and filed with the Commission ten days before the new monthly charge was billed by  
3 the Company.

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

6 A. The capital and operating costs included in the calculation of the environmental  
7 surcharge factors for the six-month billing period under review were the costs incurred  
8 each month by LG&E from September 2016 through February 2017, as detailed in the  
9 attachment in response to Question No. 2 of the Commission Staff's Request for  
10 Information, incorporating all required revisions.

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

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

19 A. In Case No. 2016-00027, the Commission approved LG&E's 2016 ECR Compliance  
20 Plan that included three new projects and associated operation and maintenance costs.  
21 Pursuant to the Commission's August 8, 2016 Order approving the Settlement  
22 Agreement in Case No. 2016-00027, LG&E began including the approved projects in

1 the monthly filing for the August 2016 expense month that was billed in October 2016  
2 with separate authorized rates of return for the Pre-2016 and 2016 ECR Plans.

3 **Q. Please describe the most recently approved changes to the environmental**  
4 **surcharge mechanism and the monthly ES Forms.**

5 A. In Case No. 2016-00438, LG&E's most recent ECR six-month review case, the  
6 Commission reduced the return on equity to be used in the monthly environmental  
7 surcharge filings to 9.70% for all ECR Plans. Pursuant to the Commission's June 23,  
8 2017 Order, the changes were implemented with the June 2017 expense month that was  
9 billed in August 2017. The lower return on equity, therefore, will not impact the  
10 recovery of costs for this review period. However, the lower return on equity will be  
11 used in this proceeding to establish the overall rate of return on capital to be used to  
12 calculate the environmental surcharge in future filings as discussed later in this  
13 testimony.

14 **Q. Is LG&E proposing any changes to the environmental surcharge mechanism and**  
15 **the monthly ES Forms?**

16 A. Yes. As a result of the change to lower the return on equity for all ECR Plans discussed  
17 above, the separate columns to reflect the two different rates of return are no longer  
18 needed on the following ES Forms:

- 19 • ES Form 1.10 – Jurisdictional Surcharge Billing Factor;
- 20 • ES Form 2.00 – Revenue Requirement of Environmental Compliance Costs, and;
- 21 • ES Form 2.40 – O&M Expenses and Determination of Cash Working Capital
- 22 Allowances.

1 This change is shown in Exhibit DAR-1 and Exhibit DAR-2 reflecting the before and  
2 after of the change to these ES Forms. No changes are proposed to the ES Forms not  
3 specifically stated in my testimony.

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

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

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

9 A. No. During the period under review, there were no changes to Rate Base from the  
10 originally filed billing months as summarized in LG&E's response to the Commission  
11 Staff's Request for Information, Question No. 1. In addition, there were no changes  
12 identified as a result of preparing responses to the requests for information in this  
13 review.

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

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

19 Pursuant to the terms of the Settlement Agreement approving the 2011 ECR  
20 Plan, LG&E calculated the short- and long-term debt rate using average daily balances  
21 and daily interest rates in the calculation of the overall rate of return true-up adjustment  
22 for the six-month period ending February 28, 2017.

1                   The support for this calculation is shown in LG&E’s response to Question No.  
2                   1 of the Commission Staff’s Request for Information.

3     **Q.    Are there corrections to information provided in the monthly filings during the**  
4     **billing period under review?**

5     A.    No. There are no corrections to information provided in the monthly filings during the  
6     six-month billing period under review.

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

9     A.    Yes. LG&E experienced an under-recovery of \$3,995,561 for the billing period ending  
10    April 30, 2017. LG&E’s response to Question No. 2 of the Commission Staff’s  
11    Request for Information shows the calculation of the under-recovery. An adjustment  
12    to the revenue requirement is necessary to reconcile the collection of past surcharge  
13    revenues with actual costs for the billing period under review.

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

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

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

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

Expense Month	12-Month Average Revenues	Billing Month	Actual Revenues Subject to ECR Billing Factors
September 2016	\$ 68,289,497	November 2016	58,935,506
October 2016	68,709,035	December 2016	65,104,315
November 2016	69,282,901	January 2017	69,064,915
December 2016	69,766,065	February 2017	59,309,822
January 2017	70,312,825	March 2017	59,437,595
February 2017	69,707,171	April 2017	58,485,586
*The 12-month average revenues and the Actual Revenues subject to ECR Billing Factors reflect net revenues for Group 2.			

7

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

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

14 A. LG&E is proposing that the under-recovery be collected in five months following the  
 15 Commission's Order in this proceeding. Specifically, LG&E recommends that the  
 16 Commission approve an increase to the Environmental Surcharge Revenue  
 17 Requirement spread over 5 months. The proposed increase of \$799,112 per month for



1 four months and \$799,113 for one month would begin in the second full billing month  
2 following the Commission's Order in this proceeding. This method is consistent with  
3 the method of implementing previous over- or under-recovery positions in prior ECR  
4 review cases.

5 **Q. What is the bill impact on a residential customer for the proposed collection of the**  
6 **under-recovery?**

7 A. The inclusion of the collection reflecting the under-recovery position in the  
8 determination of the ECR billing factor will increase the billing factor by  
9 approximately 0.93%. For a residential customer using an average of 959 kWh per  
10 month, the impact of the adjusted ECR billing factor would be an increase of  
11 approximately \$0.94 per month for five months.

12 **Q. Should the Commission approve incorporating into LG&E's base rates the**  
13 **environmental surcharge amounts found just and reasonable for the two-year**  
14 **billing period ending April 2017?**

15 A. Yes. It is now appropriate to incorporate into electric base rates the surcharge amounts  
16 the Commission finds just and reasonable for the two-year billing period ending April  
17 2017. LG&E recommends that an incremental environmental surcharge amount of  
18 \$52,893,140 be incorporated into base rates at the conclusion of this case. LG&E  
19 determined the incremental roll-in amount of \$52,893,140 using environmental  
20 surcharge rate base as of February 28, 2017 and environmental surcharge operating  
21 expenses for the twelve-month period ending February 28, 2017. If approved, the total  
22 amount of environmental surcharge that will be included in base rates will be  
23 \$126,556,149. The implementation of the change in base rates reflecting the roll-in

1 amount should take effect with bills rendered beginning with the first billing cycle in  
2 the second month following the month in which the Commission issues its Order in  
3 this proceeding.

4 **Q. If the Commission accepts LG&E's recommendation to incorporate the proposed**  
5 **amount into base rates, what will be the impact on LG&E's ECR revenue**  
6 **requirement?**

7 A. The incorporation of the recommended surcharge amount into base rates will increase  
8 base rates and, two months later, decrease ECR revenues by an equal amount. There  
9 will be no impact on the environmental costs LG&E is allowed to recover from its  
10 customers; only the method of collection will be impacted.

11 **Q. Please explain why ECR revenues will not decrease in the same month that base**  
12 **rates will increase.**

13 A. The ECR is billed on a two-month lag, meaning that costs are incurred, for example, in  
14 February 2017 (expense month) and ECR billing factor revenues are collected two  
15 months later in April 2017 (billing month). LG&E's determination of costs recoverable  
16 through the billing factor (E(m) for the expense month) are reduced by the ECR  
17 revenue included in base rates. Therefore, total ECR costs for the month of February  
18 are collected from customers through base rates in February and through the ECR  
19 billing mechanism in April. If base rates increase due to a roll-in in February, the  
20 portion of ECR costs incurred in February that is recovered through base rates will  
21 increase and the resulting decrease in the ECR billing factor will be applied in April.  
22 If the decrease in the ECR billing factor were applied in February, the same month that  
23 base rates change, then LG&E would not be collecting the correct amount of ECR

1 revenue associated with costs incurred in December. This is because the February  
2 billing factor is associated with the December expense month and must be calculated  
3 using base rates in effect in December.

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

6 A. LG&E is recommending an overall rate of return on capital of 10.34%, including the  
7 currently approved 9.70% return on equity and adjusted capitalization, to be used to  
8 calculate the environmental surcharge. This is based on capitalization as of February  
9 28, 2017, the Commission's Order of June 23, 2017 in Case No. 2016-00438 and use  
10 of the 2017 gross-up revenue factor that excludes the §199 manufacturing tax  
11 deduction.

12 See the response and attachment to Commission Staff's Request for  
13 Information Question No. 7 following this testimony.

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

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

- 16 a) The Commission should approve the proposed increase to the Environmental  
17 Surcharge Revenue Requirement over five months. The proposed increase of  
18 \$799,112 per month for four months and \$799,113 for one month starting the  
19 second full billing month following the Commission's Order in this proceeding;
- 20 b) The Commission should determine the environmental surcharge amount for the  
21 six-month billing period ending April 30, 2017 to be just and reasonable;

- 1 c) The Commission should approve the use of an overall rate of return on capital  
2 of 10.34%, using a return on equity of 9.70%, beginning in the second full  
3 billing month following the Commission's Order in this proceeding;
- 4 d) The Commission should approve a "roll-in" of \$52,893,140 in incremental  
5 environmental costs into LG&E's base rates, for a total base rate ECR  
6 component of \$126,556,149, to be included in base rates following the  
7 methodology previously approved by the Commission and implemented by  
8 LG&E. The implementation of the change in base rates reflecting the roll-in  
9 amount should take effect with bills rendered beginning with the first billing  
10 cycle in the second month following the month in which the Commission issues  
11 its Order in this proceeding; and
- 12 e) The Commission should approve the proposed ES Forms as reflected in Exhibit  
13 DAR-2.

14 **Q. Does this conclude your testimony?**

15 A. Yes.

VERIFICATION

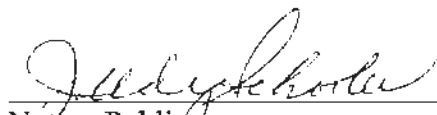
COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Derek A. Rahn**, being duly sworn, deposes and says that he is Manager - Revenue Requirement 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 4<sup>th</sup> day of August 2017.

  
\_\_\_\_\_(SEAL)  
Notary Public

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

## APPENDIX A

### **Derek A. Rahn**

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

### 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), Project Management (2006), Microsoft Project (2005), Advanced Operator (2008), Basic Shaft Alignment (2006).

### Previous Positions

Manager, Transmission Policy & Tariffs	Sep 2010 – Oct 2015
Group Leader, Transmission Operations Engineering	Dec 2008 – Sep 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

**LOUISVILLE GAS AND ELECTRIC COMPANY  
ENVIRONMENTAL SURCHARGE REPORT**

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

**For the Expense Month of**

**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

	Pre-2016 Environmental Compliance Plans	2016 Environmental Compliance Plan
(1) RB	=	
(2) RB / 12	=	
(3) $(ROR + (ROR - DR) (TR / (1 - TR)))$	=	
(4) OE	=	
(5) BAS	=	
(6) BR	=	
(7) E(m) (2) x (3) + (4) - (5) + (6)	=	
(8) Total E(m) = sum of Pre-2016 E(m) + 2016 E(m)	=	

**Calculation of Adjusted Net Jurisdictional E(m)**

(9) Jurisdictional Allocation Ratio for Expense Month -- ES Form 3.10	=
(10) Jurisdictional E(m) = Total E(m) x Jurisdictional Allocation Ratio [(8) x (9)]	=
(11) Adjustment for (Over)/Under-collection pursuant to Case No. 2016-00438	=
(12) Prior Period Adjustment (if necessary)	=
(13) Revenue Collected through Base Rates	=
(14) Adjusted Net Jurisdictional E(m) [(10) + (11) + (12) - (13)]	=

**Calculation of Group Environmental Surcharge Billing Factors**

	<u>GROUP 1 (Total Revenue)</u>	<u>GROUP 2 (Net Revenue)</u>
(15) Revenue as a Percentage of 12-month Total Revenue ending with the Current Month -- ES Form 3.00	=	
(16) Group E(m) [(14) x (15)]	=	
(17) Group R(m) = Average Monthly Group Revenue for the 12 Months Ending with the Current Expense Month -- ES Form 3.00	=	
(18) Group Environmental Surcharge Billing Factors [(16) ÷ (17)]	=	

**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**ENVIRONMENTAL SURCHARGE REPORT**  
Revenue Requirements of Environmental Compliance Costs  
For the Expense Month of

**Determination of Environmental Compliance Rate Base**

	Pre-2016 Environmental Compliance Plan	2016 Environmental Compliance Plan
Eligible Pollution Control Plant		
Eligible Pollution CWIP Excluding AFUDC		
Subtotal		
Additions:		
Inventory - Emission Allowances per ES Form 2.31, 2.32, 2.33, and 2.34		
Cash Working Capital Allowance		
Net Unamortized Closure Cost Balance <sup>1</sup>		
Subtotal		
Deductions:		
Accumulated Depreciation on Eligible Pollution Control Plant		
Pollution Control Deferred Income Taxes		
Subtotal		
Environmental Compliance Rate Base		

**Determination of Pollution Control Operating Expenses**

	Pre-2016 Environmental Compliance Plan	2016 Environmental Compliance Plan
Monthly Operations & Maintenance Expense		
Monthly Depreciation & Amortization Expense		
less investment tax credit amortization		
Monthly Taxes Other Than Income Taxes - Eligible Plant		
Monthly Taxes Other Than Income Taxes - Closure Costs		
Amortization of Monthly Closure Costs		
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		

**Determination of Beneficial Reuse Operating Expenses**

	Environmental Compliance Plan
Total Monthly Beneficial Reuse Expense	
Adjustment for Beneficial Reuse in Base Rates (from ES Form 2.61)	
Net Beneficial Reuse Operations Expense	

**Proceeds From By-Product and Allowance Sales**

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

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 2.40

**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**ENVIRONMENTAL SURCHARGE REPORT**  
O&M Expenses and Determination of Cash Working Capital Allowance

**For the Month Ended:**

Environmental Compliance Plan		
O&M Expenses	Pre-2016 Environmental Compliance Plans	2016 Environmental Compliance Plan
11th Previous Month		
10th Previous Month		
9th Previous Month		
8th Previous Month		
7th Previous Month		
6th Previous Month		
5th Previous Month		
4th Previous Month		
3rd Previous Month		
2nd Previous Month		
Previous Month		
Current Month		
Total 12 Month O&M		

Determination of Working Capital Allowance		
12 Months O&M Expenses		
One Eighth (1/8) of 12 Month O&M Expenses	1/8	1/8
Pollution Control Cash Working Capital Allowance		

**LOUISVILLE GAS AND ELECTRIC COMPANY  
ENVIRONMENTAL SURCHARGE REPORT**

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

For the Expense Month of

**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	=	
(2) RB / 12	=	
(3) (ROR + (ROR - DR) (TR / (1 - TR)))	=	
(4) OE	=	
(5) BAS	=	
(6) BR	=	
(7) E(m)	(2) x (3) + (4) - (5) + (6)	=

**Calculation of Adjusted Net Jurisdictional E(m)**

(8)	Jurisdictional Allocation Ratio for Expense Month -- ES Form 3.10	=
(9)	Jurisdictional E(m) = Total E(m) x Jurisdictional Allocation Ratio [(7) x (8)]	=
(10)	Adjustment for (Over)/Under-collection pursuant to Case No.	=
(11)	Prior Period Adjustment (if necessary)	=
(12)	Revenue Collected through Base Rates	=
(13)	Adjusted Net Jurisdictional E(m) [(9) + (10) + (11) - (12)]	=

**Calculation of Group Environmental Surcharge Billing Factors**

		<u>GROUP 1 (Total Revenue)</u>	<u>GROUP 2 (Net Revenue)</u>
(14)	Revenue as a Percentage of 12-month Total Revenue ending with the Current Month -- ES Form 3.00	=	
(15)	Group E(m) [(13) x (14)]	=	
(16)	Group R(m) = Average Monthly Group Revenue for the 12 Months Ending with the Current Expense Month -- ES Form 3.00	=	
(17)	Group Environmental Surcharge Billing Factors [(15) ÷ (16)]	=	

ES FORM 2.00

**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**ENVIRONMENTAL SURCHARGE REPORT**  
Revenue Requirements of Environmental Compliance Costs  
For the Expense Month of

**Determination of Environmental Compliance Rate Base**

	Environmental Compliance Plan	
Eligible Pollution Control Plant		
Eligible Pollution CWIP Excluding AFUDC		
Subtotal		
Additions:		
Inventory - Emission Allowances per ES Form 2.31, 2.32, 2.33, and 2.34		
Cash Working Capital Allowance		
Net Unamortized Closure Cost Balance <sup>1</sup>		
Subtotal		
Deductions:		
Accumulated Depreciation on Eligible Pollution Control Plant		
Pollution Control Deferred Income Taxes		
Subtotal		
Environmental Compliance Rate Base		

**Determination of Pollution Control Operating Expenses**

	Environmental Compliance Plan	
Monthly Operations & Maintenance Expense		
Monthly Depreciation & Amortization Expense		
less investment tax credit amortization		
Monthly Taxes Other Than Income Taxes - Eligible Plant		
Monthly Taxes Other Than Income Taxes - Closure Costs		
Amortization of Monthly Closure Costs		
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		

**Determination of Beneficial Reuse Operating Expenses**

	Environmental Compliance Plan
Total Monthly Beneficial Reuse Expense	
Adjustment for Beneficial Reuse in Base Rates (from ES Form 2.61)	
Net Beneficial Reuse Operations Expense	

**Proceeds From By-Product and Allowance Sales**

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

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 2.40

**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**ENVIRONMENTAL SURCHARGE REPORT**  
O&M Expenses and Determination of Cash Working Capital Allowance

**For the Month Ended:**

Environmental Compliance Plan	
O&M Expenses	Environmental Compliance Plans
11th Previous Month	
10th Previous Month	
9th Previous Month	
8th Previous Month	
7th Previous Month	
6th Previous Month	
5th Previous Month	
4th Previous Month	
3rd Previous Month	
2nd Previous Month	
Previous Month	
Current Month	
Total 12 Month O&M	

Determination of Working Capital Allowance	
12 Months O&M Expenses	
One Eighth (1/8) of 12 Month O&M Expenses	1/8
Pollution Control Cash Working Capital Allowance	