



an e-on company

Mr. Jeff DeRouen  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40602

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PUBLIC SERVICE  
COMMISSION

**Louisville Gas and  
Electric Company**  
State Regulation and Rates  
220 West Main Street  
PO Box 32010  
Louisville, Kentucky 40232  
www.eon-us.com

Robert M. Conroy  
Director - Rates  
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robert.conroy@eon-us.com

September 2, 2009

**RE: THE APPLICATION OF LOUISVILLE GAS AND ELECTRIC  
COMPANY FOR CERTIFICATE OF PUBLIC CONVENIENCE  
AND NECESSITY AND APPROVAL OF ITS 2009 COMPLIANCE  
PLAN FOR RECOVERY BY ENVIRONMENTAL SURCHARGE  
CASE NO. 2009-00198**

Dear Mr. DeRouen:

Please find enclosed and accept for filing the original and eight (8) copies of the Response of Louisville Gas and Electric Company to the First Set of Data Requests of Kentucky Industrial Utility Customers, Inc. dated August 18, 2009, in the above-referenced matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Robert M. Conroy

Enclosures

cc: Parties of Record

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

**In the Matter of:**

<b>APPLICATION OF LOUISVILLE GAS AND</b>	)	
<b>ELECTRIC COMPANY FOR A CERTIFICATE</b>	)	
<b>OF PUBLIC CONVENIENCE AND NECESSITY</b>	)	<b>CASE NO.</b>
<b>AND APPROVAL OF ITS 2009 COMPLIANCE</b>	)	<b>2009-00198</b>
<b>PLAN FOR RECOVERY BY ENVIRONMENTAL</b>	)	
<b>SURCHARGE</b>	)	

**RESPONSE OF**  
**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**TO**  
**KIUC FIRST SET OF DATA REQUESTS**  
**DATED AUGUST 18, 2009**

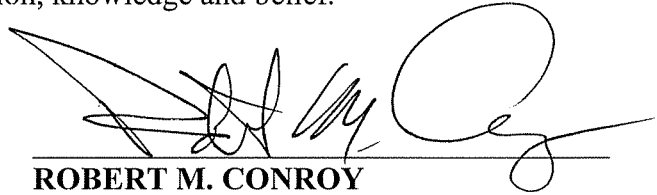
**FILED: September 2, 2009**



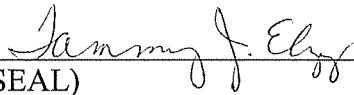
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says he is the Director – Rates for E.ON U.S. Services Inc., and that he has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
**ROBERT M. CONROY**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 2<sup>nd</sup> day of September 2009.

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

My Commission Expires:

November 9, 2010



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-1**

**Witness: Robert M. Conroy**

Q-1-1. Refer to page 2 of Exhibit RMC-3. Please provide the Company's computations of terms ROR, DR, and TR for the most recent monthly environmental surcharge filing. Provide these computations in electronic spreadsheet format with formulas intact. In addition, please provide copies of source documents relied on for the assumptions and data inputs used for these computations.

A-1-1. The Rate of Return (ROR) is calculated in accordance with Commission precedence, utilizing a 10.63% return on equity as approved in Case No. 2008-00252 (LG&E's most recent rate case).

Attached to this response is ES Form 1.10 of LG&E's most recent monthly environmental surcharge filing (Attachment 1). The composite federal and state income tax rate (TR) and the debt rate (DR) for the July 2009 expense month filing were approved by the KPSC in Case No. 2008-00549, the most recent six-month review of LG&E's ECR. The final Order is attached for reference (Attachment 2). The computations as provided in Case No. 2008-00549 in response to the Commission Staff's data request No. 6 and attached to this response (Attachment 3), are provided on the attached compact disk in electronic format with the formulas intact.

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

**Calculation of Total E(m) and  
Jurisdictional Surcharge Billing Factor**

For the Expense Month of July 2009

**Calculation of Total E(m)**

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

		Environmental Compliance Plans
RB	= \$	240,824,315
RB / 12	=	20,068,693
(ROR + (ROR - DR) (TR / (1 - TR)))	=	10.82%
OE	=	1,243,811
BAS	=	-
E(m)	= \$	3,415,244

**Calculation of Jurisdictional Environmental Surcharge Billing Factor**

Jurisdictional Allocation Ratio for Expense Month	=	91.14%
Jurisdictional E(m) = E(m) x Jurisdictional Allocation Ratio	= \$	3,112,653
Adjustment for Monthly True-up (from Form 2.00)	=	(658,207)
Adjustment for Under-collection pursuant to Case No. 2008-00549	=	202,846
Prior Period Adjustment (if necessary)	=	-
Net Jurisdictional E(m) = Jurisdictional E(m) minus Adjustment for Monthly True-up plus/minus Prior Period Adjustment	= \$	2,657,292
Jurisdictional R(m) = Average Monthly Jurisdictional Revenue for the 12 Months Ending with the Current Expense Month	= \$	64,955,041
Jurisdictional Environmental Surcharge Billing Factor: Net Jurisdictional E(m) / Jurisdictional R(m) ; as a % of Revenue	=	4.09%

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN EXAMINATION BY THE PUBLIC SERVICE        )  
COMMISSION OF THE ENVIRONMENTAL            )  
SURCHARGE MECHANISM OF LOUISVILLE GAS    ) CASE NO. 2008-00549  
AND ELECTRIC COMPANY FOR THE SIX-MONTH    )  
BILLING PERIOD ENDING OCTOBER 31, 2008     )

O R D E R

On January 28, 2009, the Commission initiated a six-month review of Louisville Gas and Electric Company's ("LG&E") environmental surcharge as billed to customers for the six-month period May 1, 2008 to October 31, 2008.<sup>1</sup> Pursuant to KRS 278.183(3), the Commission must review, at six-month intervals, the past operations of a utility's environmental surcharge. After hearing, the Commission may, by temporary adjustment of the surcharge, disallow any surcharge amounts that are not just and reasonable and reconcile past surcharge collections with actual costs recoverable pursuant to KRS 278.183(1). There are no intervenors in this case.

The Commission issued a procedural schedule that provided for discovery, the filing of prepared testimony, an informal conference, and a public hearing. LG&E filed prepared direct testimony and responded to requests for information. On March 6, 2009, LG&E and Commission Staff ("Staff") participated in an informal conference to discuss the issues in the case. During the conference, Staff requested further

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<sup>1</sup> LG&E's surcharge is billed on a two-month lag. Thus, surcharge billings for May 2008 through October 2008 are based on costs incurred from March 2008 through August 2008.



information which LG&E submitted on March 10, 2009. In its response to the Commission's May 14, 2009 Order, LG&E requested that this case be submitted for a decision based on the existing record without a public hearing. Based on the absence of intervenors and finding good cause, the Commission will grant LG&E's request and decide this case based on the evidence of record without a hearing.

SURCHARGE ADJUSTMENT

The January 28, 2009 Order initiating this case indicated that the Commission would entertain proposals to adopt one adjustment factor to net all over- or under-recoveries that may have occurred during the period under review in this proceeding. LG&E determined that it had a net under-recovery of environmental costs for the billing period ending October 31, 2008 of \$608,538.<sup>2</sup> It proposed that the net under-recovery be collected from customers in the three months following the Commission's Order in this proceeding.<sup>3</sup>

The Commission has reviewed and finds reasonable LG&E's calculation of a net under-recovery of \$608,538 for the billing period covered in this proceeding. The Commission also finds reasonable LG&E's proposal to increase the total jurisdictional environmental surcharge revenue requirement in each of the three months following the date of this Order by the amount of \$202,846. The Commission estimates that a customer with a monthly electric bill of \$100 will see an increase of approximately \$0.30 per month due to the recovery of the net under-recovery over the three-month period.

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<sup>2</sup> Conroy Direct Testimony at 3.

<sup>3</sup> Id. at 6.

RATE OF RETURN

LG&E provided the outstanding balances for its long-term debt, short-term debt, and common equity as of August 31, 2008, the last expense month of the review period. It also provided the blended interest rates for its long-term and short-term debt as of August 31, 2008.<sup>4</sup> Using this information, along with the currently approved 10.63 percent return on equity,<sup>5</sup> LG&E calculated an overall rate of return on capital, before income tax gross-up, of 7.62 percent.<sup>6</sup> LG&E also provided the overall rate of return on capital reflecting the tax gross-up approach approved in Case No. 2004-00421.<sup>7</sup>

The Commission has reviewed LG&E's determination of the overall rate of return on capital and finds 7.62 percent to be reasonable. The Commission has also reviewed the determination of the tax gross-up factor and finds that it is consistent with the approach approved in Case No. 2004-00421. Therefore, the Commission finds that the weighted average cost of capital of 7.62 percent and the income tax gross-up factor of 0.580 should be used in all LG&E monthly environmental surcharge filings subsequent to the date of this Order.

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<sup>4</sup> Response to Commission Staff's Data Request, Item 6.

<sup>5</sup> Case No. 2008-00252, Louisville Gas and Electric Company (Ky. PSC Feb. 5, 2009).

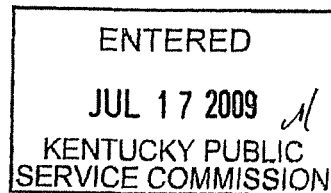
<sup>6</sup> Response to Commission Staff's Data Request, Item 6.

<sup>7</sup> Case No. 2004-00421, The Application of Louisville Gas and Electric Company for the Approval of Its 2004 Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC June 20, 2005) and Response to the Commission Staff's Data Request in this proceeding dated January 28, 2009, Item 6. In the response, LG&E determined that the income tax gross-up factor was 0.580, which would produce a tax grossed-up weighted average cost of capital of 10.82 percent.

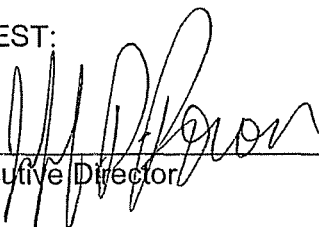
IT IS HEREBY ORDERED that:

1. LG&E's request to submit this case for a decision on the existing evidence of record without a hearing is granted.
2. LG&E shall add \$202,846 to its jurisdictional environmental revenue requirement determined in each of the first three billing months following the date of this Order, as discussed herein.
3. LG&E shall use an overall rate of return on capital of 7.62 percent and a tax gross-up factor of 0.580 in all monthly environmental surcharge filings subsequent to the date of this Order.

By the Commission



ATTEST:

  
\_\_\_\_\_  
Executive Director

Lonnie E Bellar  
Vice President - State Regulation  
Louisville Gas and Electric Company  
220 W. Main Street  
P. O. Box 32010  
Louisville, KY 40202

**Attachment 2 to Response to KIUC Question No. 1-1**  
**Page 5 of 5**  
**Conroy**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested in Appendix B of  
Commission's Order Dated January 28, 2009**

**Case No. 2008-00549**

**Question No. 6**

**Witness: Shannon L. Charnas**

- Q-6. The Commission previously ordered that LG&E's cost of debt and preferred stock would be reviewed and re-established during the 6-month review case. Provide the following information as of August 31, 2008:
- a. The outstanding balances for long-term debt, short-term debt, preferred stock, and common equity. Provide this information on total company and electric operations bases.
  - b. The blended interest rates for long-term debt, short-term debt, and preferred stock. Include all supporting calculations showing how these blended interest rates were determined. If applicable, provide the blended interest rates on total company and electric operations bases.
  - c. LG&E's calculation of its weighted average cost of capital for environmental surcharge purposes.
- A-6.
- a. Please see the attachment. There was no preferred stock as of August 31, 2008, therefore it is not listed in the attached schedule.
  - b. Please see the attachment. There was no preferred stock as of August 31, 2008, therefore it is not listed in the attached schedule.
  - c. Please see the attachment. LG&E is utilizing a return on equity of 10.63% as agreed to and approved by the Commission in its February 5, 2009 Order in Case No. 2008-00252.

Louisville Gas and Electric Company  
Outstanding Balances - Capitalization  
As of August 31, 2008

1	2	3
	Outstanding Balance Total Company	Outstanding Balance Electric Only 80.39%
1 Long-Term Debt	750,104,000	603,008,606
2 Short-Term Debt	350,797,200	282,005,869
3 Common Equity	1,185,819,585	953,280,364

Louisville Gas and Electric Company  
Blended Interest Rates  
As of August 31, 2008

	1	
	Blended Interest Rate	
	<u>Total Company</u>	
1 Long-Term Debt	5.31%	
2 Short-Term Debt	2.44%	

**Attachment 3 to Response to KIUC Question No. 1-1**  
**Page 4 of 6**  
**Conroy**

Attachment to Response to Question No. 6 (b)  
 Page 2 of 2  
 Charnas

**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**ANALYSIS OF THE EMBEDDED COST OF CAPITAL AT**  
**August 31, 2008**

	Due	Rate	Principal	Annualized Cost					Embedded Cost
				Interest	Amortized Debt		Amortized Loss- Reacquired Debt	Total	
					Issuance Expense	Premium			
Pollution Control Bonds -									
Series Y - 2000 A JC	05/01/27	1.800000%	25,000,000	450,000	-	-	105,079	555,079	2.22
Series Y - 2000 A JC	05/01/27	1.800000%	(25,000,000)	(450,000)	-	-	-	(450,000)	1.80
Series Z - 2000 A TC	08/01/30	3.225000%	83,335,000	2,688,387	38,351	-	143,700	2,870,438	3.44
Series AA - 2001 A JC	09/01/27	2.986000%	10,104,000	301,705	19,924	-	-	321,629	3.18
Series BB - 2001 A JC	09/01/26	1.700000%	22,500,000	382,500	9,876	-	77,424	469,800	2.09
Series CC - 2001 A TC	09/01/26	1.700000%	27,500,000	467,500	10,740	-	65,400	543,640	1.98
Series DD - 2001 B JC	11/01/27	1.750000%	35,000,000	612,500	10,944	-	49,056	672,500	1.92
Series EE - 2001 B TC	11/01/27	1.750000%	35,000,000	612,500	10,944	-	48,864	672,308	1.92
Series FF - 2002 A TC	10/01/32	3.623000%	41,665,000	1,509,523	36,903	-	55,812	1,602,238	3.85
Series GG - 2003 A JC	10/01/33	1.800000%	128,000,000	2,304,000	-	-	310,554	2,614,554	2.04
Series GG - 2003 A JC	10/01/33	1.800000%	(128,000,000)	(2,304,000)	-	-	-	(2,304,000)	1.80
Series HH - 2005 A JC	02/01/35	1.850000%	40,000,000	740,000	-	-	84,014	824,014	2.06
Series HH - 2005 A JC	02/01/35	1.850000%	(40,000,000)	(740,000)	-	-	-	(740,000)	1.85
JC2007A \$31M	06/01/33	2.000000%	31,000,000	620,000	-	-	29,979	649,979	2.10
JC2007A \$31M	06/01/33	2.000000%	(31,000,000)	(620,000)	-	-	-	(620,000)	2.00
JC2007B \$35.2M	06/01/33	2.000000%	35,200,000	704,000	-	-	26,358	730,358	2.07
JC2007B \$35.2M	06/01/33	2.000000%	(35,200,000)	(704,000)	-	-	-	(704,000)	2.00
JC2007A \$60M	06/01/33	4.600000%	60,000,000	2,760,000	47,192	-	6,567	2,813,759	4.69
Called Bonds			-	-	-	-	263,196	263,196	-
<b>Total External Debt</b>			<b>315,104,000</b>	<b>9,334,615</b>	<b>184,874</b>	<b>-</b>	<b>1,266,003</b>	<b>10,785,492</b>	<b>1.44%</b>
Interest Rate Swaps:									
JP Morgan Chase Bank	11/01/20	1	-	3,134,054	-	-	-	3,134,054	-
Morgan Stanley Capital Services	10/01/33	1	-	637,395	-	-	-	637,395	-
Morgan Stanley Capital Services	10/01/33	1	-	633,427	-	-	-	633,427	-
Bank of America	10/01/33	1	-	649,961	-	-	-	649,961	-
Wachovia	10/01/33	1	-	595,507	-	-	-	595,507	-
<b>Interest Rate Swaps External Debt</b>				<b>5,650,344</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>5,650,344</b>	<b>0.75%</b>
Notes Payable to Fidelia Corp	04/30/13	4.55%	100,000,000	4,550,000	-	-	-	4,550,000	4.55
Notes Payable to Fidelia Corp	08/15/13	5.31%	100,000,000	5,310,000	-	-	-	5,310,000	5.31
Notes Payable to Fidelia Corp	01/16/12	4.33%	25,000,000	1,082,500	-	-	-	1,082,500	4.33
Notes Payable to Fidelia Corp	04/13/37	5.98%	70,000,000	4,186,000	-	-	-	4,186,000	5.98
Notes Payable to Fidelia Corp	04/13/31	5.93%	68,000,000	4,032,400	-	-	-	4,032,400	5.93
Notes Payable to Fidelia Corp	11/26/22	5.72%	47,000,000	2,688,400	-	-	-	2,688,400	5.72
Notes Payable to Fidelia Corp	07/25/18	6.21%	25,000,000	1,552,500	-	-	-	1,552,500	6.21
Mandatorily Redeemable Preferred Stock:									
\$5.875 Series	07/15/08	5.8750%	-	-	-	-	4,437	4,437	0
<b>Total Internal Debt</b>			<b>435,000,000</b>	<b>23,401,800</b>	<b>-</b>	<b>-</b>	<b>4,437</b>	<b>23,406,237</b>	<b>3.12%</b>
<b>Total</b>			<b>750,104,000</b>	<b>38,386,759</b>	<b>184,874</b>	<b>0</b>	<b>1,270,440</b>	<b>39,842,073</b>	<b>5.31%</b>

	Maturity	Rate	Principal	Annualized Cost					Embedded Cost
				Interest	Expense		Loss	Total	
Notes Payable to Associated Company	NA	2.4400%	350,797,200	8,559,452	-	-	-	8,559,452	2.44
<b>Total</b>			<b>350,797,200</b>	<b>8,559,452</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,559,452</b>	<b>2.44%</b>

Embedded Cost of Total Debt 48,401,525 **4.40%**

\* Composite rate at end of current month

1 Additional interest due to Swap Agreements:

Underlying Debt Being Hedged	Notional Amount	Expiration of Swap Agreement	Fixed LG&E Swap Position	Variable Counterparty Swap Position
Series Z - PCB	83,335,000	11/01/20	To Pay: 5.495%	BMA Index
Series GG - PCB	32,000,000	10/01/32	To Pay: 3.657%	68% of 1 mo LIBOR
Series GG - PCB	32,000,000	10/01/32	To Pay: 3.645%	68% of 1 mo LIBOR
Series GG - PCB	32,000,000	10/01/32	To Pay: 3.695%	68% of 1 mo LIBOR
Series GG - PCB	32,000,000	10/01/32	To Pay: 3.648%	68% of 1 mo LIBOR
	211,335,000			

2 Call premium and debt expense is being amortized over the remaining life of bonds due 10/1/09, 6/1/15, 7/1/13 and 8/1/17

3 Reacquired bonds, which net to zero as they are also included in Short Term Debt Notes Payable to Associated Company



Louisville Gas and Electric Company  
 Outstanding Balances - Capitalization  
 August 31, 2008

1	2	3	4	5	6	7
	Electric Only	Capital Structure	Cost Rate	Weighted Average Cost of Capital	Tax Gross-up Factor	Weighted Average Cost of Capital with Equity Gross-up
1	Long-Term Debt	603,008,606	32.80%	5.31%	1.74%	1.74%
2	Short-Term Debt	282,005,869	15.34%	2.44%	0.37%	0.37%
3	Common Equity	953,280,364	51.86%	10.63%	5.51%	8.71%
4	Total	1,838,294,839			7.62%	10.82%
						Rate of Return (ROR) Grossed Up: 10.82%

Weighted Cost of Capital Grossed up for Income Tax Effect (ROR + (ROR - Debt rate) x [TR/(1-TR)])

See tax rate (TR) calculation on 6(c) page (2)

**ECR - Gross-up Revenue Factor &  
Composite Income Tax Calculation  
2008**

		2008 Federal & State Production Credit W/ 6% 2008 State <u>Tax Rate Included</u>
(1) 1. Assume pre-tax income of	\$ 100.0000	
(2)		
(3) 2. State income tax (see below)	5.6604	(37)
(4)		
(5) 3. Taxable income for Federal income tax		
(6) before production credit	94.3396	(1)-(3)
(7)	6%	
(8) 4. Less: Production tax credit (6% of Line 3)	5.6604	(6)*(7)
(9)		
(10) 5. Taxable income for Federal income tax	88.6792	(6)-(8)
(11)		
(12) 6. Federal income tax (35% of Line 5)	31.0377	(10)*35%
(13)		
(14) 7. Total State and Federal income taxes		
(15) (Line 2 + Line 6)	\$ 36.6981	(3)+(12)
(16)		
(17) 8. Gross-up Revenue Factor	63.3019	100-(15)
(18)		
(19) 9. Therefore, the composite rate is:		
(20) 10. Federal	31.0377%	(12)/100
(21) 11. State	5.6604%	(3)/100
(22) 12. Total	36.6981%	(20)+(21)
(23)		
(24)		
(25)		
(26)		
(27)		
(28) <u>State Income Tax Calculation</u>		
(29) 1. Assume pre-tax income of	\$ 100.0000	
(30)		
(31) 2. Less: Production tax credit	5.6604	(8)
(32)		
(33) 3. Taxable income for State income tax	94.3396	(29)-(31)
(34)		
(35) 4. State Tax Rate	6.0000%	
(36)		
(37) 5. State Income Tax	5.6604	(33)*(35)



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-2**

**Witness: Robert M. Conroy**

Q-1-2. Refer to page 2 of Exhibit RMC-3. Please provide the Company's computations of terms ROR, DR, and TR for the most recent monthly environmental surcharge filing adjusted for known and measurable changes that will occur in 2010, such as any changes in the Section 199 percentage deduction, if any. Provide these computations in electronic spreadsheet format with formulas intact. In addition, please provide copies of source documents relied on for the assumptions and data inputs used for these computations.

A-1-2. Please see the attached spreadsheet, provided on compact disk in electronic format with the formulas intact, which calculates the tax gross-up factor and assumed rate of return for LG&E's ECR filings, assuming 1) the cost of debt, capital structure and return on equity are unchanged from Case No. 2008-00549 (See Response to KIUC Question No. 1-1 and 2) the Kentucky Production Tax Credit increases to the maximum rate of 9% in 2010 and all other tax rates remain unchanged from current levels.



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-3**

**Witness: John N. Voyles / Robert M. Conroy**

Q-1-3. Refer to project 25 on page 2 of Exhibit JNV-1 providing estimates of the O&M expenses for beneficial reuse projects.

- a. Please provide the computational support for these estimates.
- b. Please provide all support that demonstrates that these estimates reflect only incremental O&M expense and reflect no re-allocation or diversion of existing resources and O&M expense.
- c. Please provide an estimate of revenues from the beneficial reuse projects. If the Company projects no revenues, please explain why not.
- d. Does the Company agree that it will reflect any revenues from beneficial reuse projects in the environmental surcharge?
- e. Please provide a copy of all documentation that references, describes, and/or quantifies savings that may or will be achieved as a result of the beneficial reuse projects.

A-1-3. The requested information is being provided for each of the referenced beneficial reuse projects.

1. Holcim is the opportunity to transport Trimble County fly ash to a cement manufacturing facility in Missouri. Please see page 39 of Mr. Voyles's testimony for more details on the Holcim project.
  - a. The cash flow below is the O&M associated with the beneficial reuse of fly ash by Holcim in cement production. It is based on a total of \$750,000 annual cost (2009 \$), however the contract is assumed to start in mid 2010 so \$375,000 is incurred in 2010. LG&E's cost is determined by first adjusting the total to reflect E.ON U.S.'s 75% ownership of Trimble County; LG&E's

cost is then calculated as 52% of the adjusted total (KU's share is 48%). The O&M is assumed to escalate by 6% annually.

Trimble County Station	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beneficial Reuse O&M (\$)	155,025	328,653	348,372	369,275	391,431	414,917	439,812	466,201	494,173

- b. Trimble plans to contract with Holcim for fly ash beneficial reuse. This contract is being negotiated to begin in 2010 with the construction of a fly ash barge loading facility to be built by LG&E at Trimble Station. This is a new contract and all costs associated with it are incremental for the plant.
  - c. The Company does not anticipate revenues as a result of the Holcim project.
  - d. The Company will reflect in the environmental surcharge revenues from beneficial reuse associated with projects included in the monthly environmental surcharge filing. As stated in Mr. Conroy's testimony, page 6 lines 3 through 5, LG&E is proposing to modify ES Forms 1.10 and 2.00 to separately identify the operation and maintenance costs, and/or revenues if applicable, associated with beneficial reuse opportunities. As shown on Exhibit RMC-1, LG&E is proposing to revise its tariff to include the operation and maintenance costs, and/or revenues if applicable, associated with beneficial reuse opportunities in the calculation of the revenue requirement.
  - e. O&M expenses incurred as a result of the Holcim project are entirely incremental in nature. Additionally, LG&E does not anticipate that the level of expenses currently in base rates will be impacted by the operation of the Trimble County landfill or the Holcim fly ash operations.
2. Synthetic Materials (SYNMAT) is the opportunity to reuse Trimble County gypsum in wall board production. Please see pages 38 of Mr. Voyles's testimony for more details on the Synthetic Materials project.
- a. The cash flow below is the O&M associated with the beneficial reuse of gypsum by SYNMAT in wall board production. It is based on the cost per ton as provided on page 10 of Exhibit CRS-2, footnote 9, with the assumption that 350,000 tons of gypsum will be reused annually. LG&E's cost is determined by first adjusting the total to reflect E.ON U.S.'s 75% ownership of Trimble County; LG&E's cost is then calculated as 52% of the adjusted total (KU's share is 48%). The gypsum beneficial reuse O&M assumes no escalation, per contract terms with SYNMAT.

Trimble County Station	2010	2011	2012	2013	2014	2015	2016	2017	2018
Beneficial Reuse O&M (\$)	273,000	273,000	273,000	273,000	273,000	273,000	273,000	273,000	273,000

- b. Trimble County is currently contracting with SYNMAT for gypsum beneficial reuse. Costs associated with this contract do not begin until SYNMAT completes construction of a barge loading facility on-site exclusively for the gypsum loading. Because these costs are tied to the new construction by SYNMAT, these costs are incremental for the plant. These costs are not expected to begin until spring 2010 (currently April).
  - c. The Company does not anticipate revenues as a result of the SYNMAT project.
  - d. The Company will reflect in the environmental surcharge revenues from beneficial reuse associated with projects included in the monthly environmental surcharge filing. As stated in Mr. Conroy's testimony, page 6 lines 3 through 5, LG&E is proposing to modify ES Forms 1.10 and 2.00 to separately identify the operation and maintenance costs, and/or revenues if applicable, associated with beneficial reuse opportunities. As shown on Exhibit RMC-1, LG&E is proposing to revise its tariff to include the operation and maintenance costs, and/or revenues if applicable, associated with beneficial reuse opportunities in the calculation of the revenue requirement.
  - e. O&M expenses incurred as a result of the SYNMAT project are entirely incremental in nature. Additionally, LG&E does not anticipate that the level of expenses currently in base rates will be impacted by the operation of the Trimble County landfill or the Holcim fly ash operations.
3. Louisville Underground is not currently being pursued. See the response to Question No. 5 of the Commission Staff's Initial Request for Information.





**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-4**

**Witness: John N. Voyles**

Q-1-4. Refer to projects 22 and 25 and Note 5 of Exhibit JNV-1. Note 5 states that "Execution of this beneficial reuse opportunity would reduce the capital and O&M cost of Project 22." Please provide an alternative Exhibit JNV-1 that reflects such reductions for Project 22. Also provide all supporting assumptions, data, computations and a copy of all source documents relied on for your response.

A-1-4. Please see the response to Question No. 5 of the Commission Staff Initial Request for Information.



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-5**

**Witness: John N. Voyles / Robert M. Conroy**

Q-1-5. Refer to project 22 of Exhibit JNV-1.

- a. Please provide the computational support for these estimates.
- b. Please provide all support that demonstrates that these estimates reflect only incremental O&M expense and reflect no re-allocation or diversion of existing resources and O&M expense, particularly given that the reason for the new landfill is that "The original landfill at Cane Run is nearing capacity and new storage capacity must be constructed in order to continue operation of the plant." [Voyles at 10].
- c. Please provide the O&M expense for the most recent 12 months associated with the operation of the existing landfill. In addition, please indicate which activities and which portion of the expense will continue to be incurred for the existing landfill once it is at capacity and the Company commences use of the new landfill.
- d. Please provide a copy of all documentation that references savings that may or will be achieved as a result of this project.

A-1-5. a. Please see the attached spreadsheet for the requested information.

- b. All O&M cost estimates for the new landfill were developed only for the new landfill and did not include any reductions in O&M costs associated with the existing landfill.
- c. O&M expense associated with operation of the existing landfill for the period August 2008 through July 2009 total \$1,827,074. Once the existing landfill is at capacity, certain activities associated with closing and maintaining the landfill footprint will continue; however, the level of expense to be incurred is unknown at this time. LG&E commits that incremental O&M associated with

the landfill will be netted against the level of landfill O&M included in LG&E's base rates.

- d. Exhibit JNV-2 (page 11) makes a general statement in regard to savings associated with beneficial reuse and explains that savings are primarily realized in the form of avoided CCP disposal costs such as delaying the construction of new, or expansion of existing, impoundments or landfills. Other than the possible reduction discussed in part (c) above, the project will not result in savings.

**CANE RUN LANDFILL**

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Engineering, Permits and Fees, and Construction Documents												
Landfills, Relocations, and Bridge (Engineering and Special Waste Permit)	0.31	2.10	-	-	-	-	-	-	-	-	-	2.41
Construction Documents	-	0.19	-	-	-	-	-	-	-	-	-	0.19
Flood Insurance Rate Map Revisions (LQMOR, CLOMOR, and Engineering)	-	0.06	-	-	-	-	-	-	-	-	-	0.06
Environmental Permitting and Natural Resource Mitigation	-	0.59	-	-	-	-	-	-	-	-	-	0.59
Ground Water Monitoring System	-	0.25	-	-	-	-	-	-	-	-	-	0.25
Initial Site Preparation	-	-	-	-	-	-	-	-	-	-	-	-
Clear and Grub	-	-	-	0.14	0.32	-	-	-	-	-	-	0.45
Strip (.5 FT) Topsoil / Haul (1 Mile RT) / Stockpile	-	-	-	0.05	0.12	-	-	-	-	-	-	0.17
Erosion and Sedimentation Controls	-	-	0.04	0.09	0.09	-	-	-	-	-	-	0.22
Sedimentation/Stormwater Pond - Clay Lined (1.0 Acres)	-	-	0.57	0.60	-	-	-	-	-	-	-	1.17
Collection Channels (Fabricform)	-	-	-	0.44	0.24	-	-	-	-	-	-	0.67
Earthwork - Dikes and Subgrade	-	-	-	-	-	-	-	-	-	-	-	-
Usable On-Site Soils - Excavate / Haul (1 Mile RT) / Place for Dike & Subgrade	-	-	-	0.54	0.57	-	-	-	-	-	-	1.10
Usable On-Site Soils - Excavate / Haul (1 Mile RT) / Place at Stockpile for Cap	-	-	-	0.23	0.24	-	-	-	-	-	-	0.47
Unusable On-Site Soils - Excavate / Haul (1 Mile RT) / Spoil at Borrow Site	-	-	-	0.18	0.19	-	-	-	-	-	-	0.36
Subgrade & Dike QA/QC	-	-	-	0.21	0.23	-	-	-	-	-	-	0.44
Haul Roads	-	-	-	-	-	-	-	-	-	-	-	-
On-Site Borrow Haul Road (40 Feet Wide)	-	-	-	0.09	0.02	-	-	-	-	-	-	0.10
On-Landfill Haul Road (60 Feet Wide)	-	-	-	-	0.09	0.09	0.10	-	-	-	-	0.28
Off-Landfill Haul Road (40 Feet Wide)	-	-	0.54	-	-	-	-	-	-	-	-	0.54
Liner	-	-	-	-	-	-	-	-	-	-	-	-
24 Inch Protective Cover (Bottom Ash)	-	-	-	0.87	0.44	-	-	-	-	-	-	1.31
Woven Geotextile	-	-	-	0.31	0.16	-	-	-	-	-	-	0.47
36 Inch Leachate Collection Drainage Layer (Bottom Ash)	-	-	-	1.29	0.65	-	-	-	-	-	-	1.94
10 OZ/SY Cushion Geotextile	-	-	-	0.15	0.08	-	-	-	-	-	-	0.23
60 MIL PVC Geomembrane	-	-	-	0.98	0.50	-	-	-	-	-	-	1.48
Liner System QA/QC	-	-	-	0.47	0.50	-	-	-	-	-	-	0.97
8 Inch Leachate Collector Line	-	-	-	0.02	0.06	-	-	-	-	-	-	0.08
12 Inch Leachate Trunk Line	-	-	-	0.05	0.07	-	-	-	-	-	-	0.12
Leachate Storage Pond / Dead Storage Pond (1.5 Acres)	-	-	-	0.37	-	-	-	-	-	-	-	0.37
Leachate Pump House	-	-	0.07	0.07	-	-	-	-	-	-	-	0.14
Lift Station	-	-	-	0.14	-	-	-	-	-	-	-	0.14
Force Main	-	-	0.01	0.02	-	-	-	-	-	-	-	0.03
Force Main Under Railroad (250 Feet Horizontal Boring)	-	-	0.16	0.17	-	-	-	-	-	-	-	0.33
15 Inch Underdrain Trunk Line	-	-	-	0.05	0.08	-	-	-	-	-	-	0.13
6 Inch Underdrain Collector Line	-	-	-	0.01	0.03	-	-	-	-	-	-	0.04
Cap	-	-	-	-	-	-	-	-	-	-	-	-
12 Inch Intermediate Soil Cover	-	-	-	-	0.07	0.07	0.08	-	-	-	-	0.22
24 Inch Cap System	-	-	-	-	0.10	0.11	0.11	-	-	-	-	0.32
Cap System QA/QC	-	-	-	-	0.02	0.02	0.03	-	-	-	-	0.07
Total	0.31	3.20	1.39	7.54	4.84	0.30	0.31	-	-	-	-	17.89
E.ON-US Overheads	0.01	0.11	0.05	0.26	0.17	0.01	0.01	-	-	-	-	0.63
Total with Overheads	0.32	3.31	1.44	7.80	5.01	0.31	0.33	-	-	-	-	18.52

**CANE RUN LANDFILL**

Operating & Maintenance Costs (\$)	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Ground Water Sampling and Testing	21,573	22,868	24,240	25,694	27,236	28,870	30,602	32,438	34,384	247,904
Leachate Management	-	-	75,749	80,294	85,111	90,218	95,631	101,369	107,451	635,822
Surveying (As-builts)	-	-	15,150	16,059	17,022	18,044	19,126	20,274	21,490	127,164
Leachate Pump House	-	-	7,575	16,059	17,022	18,044	19,126	30,411	32,235	140,471
Lift Station	-	-	-	16,059	17,022	18,044	19,126	20,274	21,490	112,015
Loading Fixed Calcium Sulfite	-	-	706,826	749,235	794,189	841,840	892,351	945,892	1,002,645	5,932,978
Hauling Fixed Calcium Sulfite to Landfill	-	-	-	-	-	-	-	-	-	-
1.0 Mile RT	-	-	-	-	-	-	-	325,353	1,460,644	1,785,997
1.5 Mile RT	-	-	1,121,322	1,168,601	1,259,917	1,335,512	1,415,643	1,146,278	-	7,467,274
Dozer	-	-	628,289	665,987	705,946	748,303	793,201	840,793	891,240	5,273,759
Vibrator	-	-	161,435	171,122	181,369	192,272	203,809	216,037	228,999	1,355,063
Landfill Oversight	-	-	37,874	40,147	42,556	45,109	47,815	50,684	53,725	317,911
Maintenance	-	-	-	-	-	-	-	-	-	-
Landfills	-	-	59,084	62,629	66,387	70,370	74,592	79,068	83,812	495,941
Haul Roads	-	-	16,665	17,665	18,724	19,848	21,039	22,301	23,639	139,861
Dust Control	-	-	98,473	104,362	110,644	117,263	124,320	131,779	139,686	826,568
<b>TOTAL</b>	<b>21,573</b>	<b>22,868</b>	<b>2,952,681</b>	<b>3,153,930</b>	<b>3,343,166</b>	<b>3,543,756</b>	<b>3,756,381</b>	<b>3,962,950</b>	<b>4,101,442</b>	<b>24,658,747</b>





**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to KIUC First Set of Data Requests  
Dated August 18, 2009**

**Case No. 2009-00198**

**Question No. 1-6**

**Witness: John N. Voyles / Robert M. Conroy**

Q-1.6. Refer to project 24 of Exhibit JNV-1.

- a. Please provide the computational support for these estimates.
- b. Please provide all support that demonstrates that these estimates reflect only incremental O&M expense and reflect no re-allocation or diversion of existing resources and O&M expense, particularly given that the reason for the new landfill is that "The original storage impoundment is nearing capacity and new storage capacity must be constructed in order to continue operation of the plant." [Voyles at 13].
- c. Please provide the O&M expense for the most recent 12 months associated with the operation of the existing landfill. In addition, please indicate which activities and which portion of the expense will continue to be incurred for the existing landfill once it is at capacity and the Company commences use of the new landfill.
- d. Please provide a copy of all documentation that references savings that may or will be achieved as a result of this project.

A-1-6. a. Please see the attached spreadsheet for the requested information.

- b. Currently, the CCP materials are stored in an impoundment. The materials are transported to the impoundment by means of sluicing. For the new CCP storage, a landfill will be developed and will require different systems to transport the CCP than what is currently used to sluice the material to the existing impoundment
- c. LG&E incurred \$260,000 in the twelve month period ending July 31, 2009. LG&E anticipates that some level of the existing costs will continue after the current impoundment is full and the landfill is in place because the expenses are associated with moving the ash to a point where it can then be handled for

the landfill transport as opposed to the impoundment now. LG&E commits that incremental O&M associated with the landfill will be netted against the level of impoundment O&M included in LG&E's base rates.

- d. Exhibit JNV-2 (page 11) makes a general statement in regard to savings associated with beneficial reuse and explains that savings are primarily realized in the form of avoided CCP disposal costs such as delaying the construction of new, or expansion of existing, impoundments or landfills. Other than the possible reduction discussed in part (c) above, the project will not result in savings.

**TRIMBLE COUNTY LANDFILL (PHASE I)**

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Geomembrane Liner											
Clay Liner				0.49	0.52						
Leachate Collection System and Underdrain in flat areas				0.38	0.40						0.78
Geocomposite Leachate Collection System				0.68	0.72						1.40
Ridgetop timber clearing				0.24	0.26						0.50
Ravine timber clearing				0.09	0.10						0.19
Shot-rock fill/blasted excavation	0.20			0.15	0.16						0.50
Security fencing				0.71	0.75						1.47
Diversions storm sewer around perimeter				0.11	0.12						0.23
Excavation for perimeter road				0.58	0.62						1.20
Loose soil fill				0.61	0.64						1.25
Engineering, permitting, surveying, CQA				0.41	0.43						0.84
Relocation of 345 kV transmission line				0.05	0.05						0.10
Leachate treatment wetland				1.38	1.46						2.84
Channel on ravine floor				0.14	0.15						0.30
Sediment basin				0.55	0.58						1.13
Stream mitigation				0.10	0.10						0.20
Pipe conveyor to combo landfill in Upper B				1.53	1.63						3.16
Total	0.20			17.11	18.13						18.35
E.ON-US Overheads	0.01			0.60	0.63						35.44
Total with Overheads	0.21			17.70	18.77						1.24
											36.68

Operating & Maintenance Costs (\$)	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Hauling and Placing				893,725.56	947,349.09	1,004,190.04	1,064,441.44	1,128,307.92	1,196,006.40	6,234,020
Material Handling Replacement Cost				243,850.18	258,481.19	273,990.06	290,429.46	307,855.23	326,326.54	1,700,933
TOTAL				1,137,576	1,205,830	1,278,180	1,354,871	1,436,163	1,522,333	7,934,953