## 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
AND ELECTRIC COMPANY FOR THE SIX-MONTH
BILLING PERIOD ENDING OCTOBER 31, 2013

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION IN APPENDIX B OF COMMISSION'S ORDER

DATED DECEMBER 23, 2013

FILED: January 23, 2014

## VERIFICATION

## COMMONWEALTH OF KENTUCKY ) COUNTY OF JEFFERSON

The undersigned, Robert M. Conroy, being duly sworn, deposes and says that he is Director - Rates for LG\&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.


Subscribed and sworn to before me, a Notary Public in and before said County and State, this $22^{\text {m }}$ day of
 2014.


My Commission Expires:

SUSAN RA WATKINS
Notary Public, sta at lang ar
My Commission Express far, 19, 2017
Notary $10: 485723$

## VERIIFICATION

## COMMONWEALTH OF KENTUCKY )

) SS : COUNTY OF JEFFERSON

The undersigned, Christopher M. Garrett, being duly sworn, deposes and says that he is Director - Accounting and Regulatory Reporting for LG\&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.


Christopher M. Garrett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this $22^{\text {KQ }}$ day of
 2014.


Notary Public

My Commission Expires:
SUSAN RA WMATKMS
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## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information <br> in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 1

Witness: Robert M. Conroy / Christopher M. Garrett

Q-1. Concerning the rate of return on the two amendments to the environmental compliance plan, for the period under review, calculate any true-up adjustment needed to recognize changes in LG\&E's cost of debt, preferred stock, accounts receivable financing (if applicable), or changes in LG\&E's jurisdictional capital structure. Include all assumptions and other supporting documentation used to make this calculation. Any true-up adjustment is to be included in the determination of the over- or under-recovery of the surcharge for the corresponding billing period under review. Provide all exhibits and schedules of your response in Excel spreadsheet format, with formulas intact and unprotected and all rows and columns accessible.

A-1. Please see the attachment being provided in Excel format.
LG\&E calculated the true-up adjustment to recognize changes in the cost of debt and capital structure in two steps, shown on Pages 1 and 2 of the attachment to this response. Page 1 reflects the true-up required due to the changes between the Rate Base as filed and the Rate Base as Revised through the Monthly Filings. However, during the period under review there were no revisions to reflect. Page 2 represents the true-up in the Rate of Return as filed compared to the actual Rate of Return calculations, which impacted the true-up adjustment for the period under review in this case. No further revisions to Rate Base were identified in preparation of this response.

Page 3 provides the adjusted weighted average cost of capital for the billing period under review ending October 31, 2013. The Commission approved a single rate of return for all Plans in Case No. 2012-00222; therefore, the Pre-2011 and 2011 Plans are no longer shown separately. LG\&E calculated the short- and long-term debt rates using average daily balances and daily interest rates pursuant to the Commission's Order in Case No. 2011-00162.

LG\&E did not engage in accounts receivable financing or have any preferred stock outstanding during the period under review.

Louisville Gas \& Electric Company
Overall Rate of Return True-up Adjustment - Revised Rate Base Impact on Calculated E(m)

Attachment to Response to Question No. 1


Louisville Gas \& Electric Company
Overall Rate of Return True-up Adjustment - Revised Rate of Return
Impact on Calculated E(m)

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Billing <br> Month | Expense <br> Month | Rate of Return as Filed | Rate of Return as Revised | Change in Rate of Return | Rate Base as Revised | True-up Adjustment | Jurisdictional <br> Allocation, ES <br> Form 1.10 | Jurisdictional True up Adjustment |
|  |  |  |  | (4) - (3) |  | (5) * (6) / 12 |  | (7) * (8) |
| May-13 | Mar-13 | 10.52\% | 10.46\% | -0.06\% | 139,933,777 | $(6,997)$ | 92.94\% | (6,503) |
| Jun-13 | Apr-13 | 10.61\% | 10.46\% | -0.15\% | 161,383,490 | $(20,173)$ | 92.71\% | $(18,702)$ |
| Jul-13 | May-13 | 10.61\% | 10.46\% | -0.15\% | 182,125,984 | $(22,766)$ | 90.64\% | $(20,635)$ |
| Aug-13 | Jun-13 | 10.61\% | 10.46\% | -0.15\% | 202,935,087 | $(25,367)$ | 94.04\% | $(23,855)$ |
| Sep-13 | Jul-13 | 10.61\% | 10.46\% | -0.15\% | 221,625,403 | $(27,703)$ | 93.97\% | $(26,033)$ |
| Oct-13 | Aug-13 | 10.61\% | 10.46\% | -0.15\% | 239,722,466 | $(29,965)$ | 95.56\% | $(28,635)$ |
|  |  |  |  |  |  | $(132,971)$ |  | $(124,362)$ |
|  | Impact of Change in Rate of Return during the six-month billing period ending October 31, 2013 |  |  |  |  | $(132,971)$ |  | \$ $(124,362)$ |

LOUISVILLE GAS AND ELECTRIC COMPANY
Adjusted Electric Rate of Return on Common Equity As of October 31, 2013

## ELECTRIC

2. Long Term Debt
3. Common Equity
4. Total Capitalization

| Per Books |
| :---: |
| $10-31-13$ |
| $(1)$ |


| Capital | Electric Rate Base | Electric Capitalization |
| :---: | :---: | :---: |
| Structure <br> (2) | Percentage <br> (3) | $(\operatorname{Col} 1 \times \operatorname{Col} 3)$ <br> (4) |


| Adjustments |
| :---: |
| to |
| Capitalization |
| (Col 18) |
| $(5)$ |


$\left.\begin{array}{rccc}\begin{array}{c}\text { Adjusted } \\ \text { Capital } \\ \text { Structure } \\ \text { (7) }\end{array} & & \begin{array}{c}\text { Annual } \\ \text { Cost } \\ \text { Rate } \\ (8)\end{array} & \end{array} \begin{array}{c}\text { Cost } \\ \text { of } \\ \text { Capital } \\ \text { (Col } 8 \times \text { Col7) } \\ \text { (9) }\end{array}\right)$
5. Weighted Cost of Capital Grossed up for Income Tax Effect $\{R O R+(R O R-D R) x[T R /(1-T R)]\}$

| 78.810\% | \$ | 59,008,146 | \$ | $(6,898,347)$ | \$ | 52,109,799 | 2.75\% | 0.32\% | 0.01\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 78.810\% |  | 871,709,777 |  | $(101,945,044)$ |  | 769,764,733 | 40.64\% | 3.53\% | 1.43\% |
| 78.810\% |  | 1,214,266,348 |  | (142,005,633) |  | 1,072,260,715 | 56.61\% | 10.25\% | 5.80\% |
|  | \$ | 2,144,984,271 | \$ | $\xrightarrow{(250,849,024)}$ | \$ | 1,894,135,247 | $\underline{ }$ |  | 7.24\% |

## ELECTRIC

1. Short Term Debt
2. Long Term Debt
3. Common Equity
4. Total Capitalization

| Electric |  | Trimble County | Investments | IDIC |
| :---: | :---: | :---: | :---: | :---: |
|  | Structure <br> (11) | (Col $11 \times$ Col 12 Line 4) <br> (12) | Col $11 \times \operatorname{Col} 13$ Line 4) <br> (13) | (Col $11 \times$ Col 14 Line 4) <br> (14) |


| Environmental |
| :---: |
| Compliance |
| Rate Base |
| (Col $11 \times$ Col 15 Line 4$)$ |
| $(15)$ |


| Advanced Coal Investment Tax Credit (b) (Col $11 \times \operatorname{Col} 17$ Line 4) (17) | Total Adjustments To Capital (Sum of $\operatorname{Col} 12-\operatorname{Col} 17$ ) (18) |
| :---: | :---: |
| 609,104 | $(6,898,347)$ |
| 9,001,446 | $(101,945,044)$ |
| 12,538,678 | (142,005,633) |
| 22,149,228 | \$ (250,849,024) |

(a) Trimble County Inventorie Materials and Supplies
Stores Expense
Coal
Limestone
Fuel Oil
Emission Allowances
Total Trimble County Inventorie
Multiplied by Disallowed Portion
Trimble County Inv. Disallowed

| \$ | 59,008,146 | 2.75\% | \$ | $(140,415)$ | \$ | $(29,802)$ | \$ | 430,743 | \$ | $(7,723,207)$ | \$ | $(44,770)$ | \$ | 609,104 | \$ | $(6,898,347)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 871,709,777 | 40.64\% |  | $(2,075,075)$ |  | $(440,418)$ |  | 6,365,592 |  | $(114,134,964)$ |  | $(661,625)$ |  | 9,001,446 |  | $(101,945,044)$ |
|  | 1,214,266,348 | 56.61\% |  | (2,890,502) |  | $(613,486)$ |  | 8,867,032 |  | $(158,985,736)$ |  | $(921,619)$ |  | 12,538,678 |  | $(142,005,633)$ |
| \$ | 2,144,984,271 | 100.000\% | \$ | (5,105,992) | \$ | (1,083,706) | \$ | 15,663,367 | \$ | $(280,843,907)$ | \$ | $(1,628,014)$ | \$ | 22,149,228 | \$ | (250,849,024) |

(b) Reflects Investment Tax Credit treatment per Case No. 2007-00179.
(c) Average daily balance per Settlement Agreement in Case No. 2011-00162.

## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 2

## Witness: Robert M. Conroy

Q-2. Prepare a summary schedule showing the calculation of Total $E(m)$, Net Retail $E(m)$, and the surcharge factor for the expense months covered by the applicable billing period. Include the expense months for the two expense months subsequent to the billing period in order to show the over- and under-recovery adjustments for the months included for the billing period under review. The summary schedule is to incorporate all corrections and revisions to the monthly surcharge filings LG\&E has submitted during the billing period under review. Include a calculation of any additional over- or under-recovery amount LG\&E believes needs to be recognized the six-month review. Include all supporting calculations and documentation for any such additional over- or underrecovery. Provide all exhibits and schedules of your response in Excel spreadsheet format, with formulas intact and unprotected and all rows and columns accessible.

A-2. Please see the attachment being provided in Excel format for the summary schedule and components that make up the over-recovery.

For the period under review, LG\&E experienced an over-recovery of $\$ 1,309,850$.

Louisville Gas \& Electric Company
Calculation of E(m) and Jurisdictional Surcharge Billing Factor
Summary Schedule for Expense Months March 2013 through August 2013
Attachment to Response to Question No. 2

| (1) |  | (2) | (3) | (4) |  | (5) | (6) | (7) | (8) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Expense <br> Month | Rate Base as Revised |  | Monthly Rate Base as Revised | Rate of Return as Revised | Operating Expenses (net of allowance proceeds) |  | Total E(m) | Jurisdictional <br> Allocation Ratio | Retail E(m) | Comments: As Revised in This Review |
|  | ES | Form 2.00 | (2) / 12 |  |  | ES Form 2.00 | (3) $*(4)+(5)$ | ES Form 1.10 | (6) * (7) |  |
| Mar-13 | \$ | 139,933,777 | 11,661,148 | 10.46\% | \$ | 111,448 | 1,331,204 | 92.94\% | 1,237,221 |  |
| Apr-13 |  | 161,383,490 | 13,448,624 | 10.46\% |  | 136,726 | 1,543,452 | 92.71\% | 1,430,935 |  |
| May-13 |  | 182,125,984 | 15,177,165 | 10.46\% |  | 154,661 | 1,742,193 | 90.64\% | 1,579,124 |  |
| Jun-13 |  | 202,935,087 | 16,911,257 | 10.46\% |  | 166,262 | 1,935,180 | 94.04\% | 1,819,843 |  |
| Jul-13 |  | 221,625,403 | 18,468,784 | 10.46\% |  | 193,113 | 2,124,948 | 93.97\% | 1,996,813 |  |
| Aug-13 |  | 239,722,466 | 19,976,872 | 10.46\% |  | 216,750 | 2,306,330 | 95.56\% | 2,203,929 |  |

Louisville Gas \& Electric Company
Calculation of E(m) and Jurisdictional Surcharge Billing Factor
Summary Schedule for Expense Months March 2013 through August 2013
Attachment to Response to Question No. 2
Page 2 of 3


Note 1: The ECR Revenue Recovered Through Base Rates for Mar-13 includes a prior period adjustment included with the May-13 expense month filing

# Attachment to Response to Question No. 2 

Page 3 of 3

## Louisville Gas \& Electric Company

Reconciliation of Combined Over/(Under) Recovery

## Summary Schedule for Expense Months March 2013 through August 2013

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Billing <br> Month | Expense <br> Month | Rate of Return as Filed | Rate of Return as Revised | Change in Rate of Return (4) - (3) | Rate Base as Revised | Impact of change in Rate of Return $(5) *(6) / 12$ | Jurisdictional Allocation, ES Form 1.10 | Jurisdictional Impact (Over)/Under (7) * (8) |
| May-13 | Mar-13 | 10.52\% | 10.46\% | -0.06\% | \$ 139,933,777 | $(6,997)$ | 92.94\% | $(6,503)$ |
| Jun-13 | Apr-13 | 10.61\% | 10.46\% | -0.15\% | 161,383,490 | $(20,173)$ | 92.71\% | $(18,702)$ |
| Jul-13 | May-13 | 10.61\% | 10.46\% | -0.15\% | 182,125,984 | $(22,766)$ | 90.64\% | $(20,635)$ |
| Aug-13 | Jun-13 | 10.61\% | 10.46\% | -0.15\% | 202,935,087 | $(25,367)$ | 94.04\% | $(23,855)$ |
| Sep-13 | Jul-13 | 10.61\% | 10.46\% | -0.15\% | 221,625,403 | $(27,703)$ | 93.97\% | $(26,033)$ |
| Oct-13 | Aug-13 | 10.61\% | 10.46\% | -0.15\% | 239,722,466 | $(29,965)$ | 95.56\% | $(28,635)$ |
|  |  |  | Cumulative Impact of Changes in Rate of Return |  |  | \$ (132,971) |  | $\underline{\text { \$ } \quad(124,362)}$ |


| (1) | (2) | (3) <br> Recovery Position Explanation-Over/(Under) |  |  |  |  |  |  |  | (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |



## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 3

## Witness: Christopher M. Garrett

Q-3 Provide the calculations, assumptions, workpapers, and other supporting documents used to determine the amounts LG\&E has reported during each billing period under review for Pollution Control Deferred Income Taxes. Provide all exhibits and schedules of your response in Excel spreadsheet format, with formulas intact and unprotected and all rows and columns accessible.

A-3. LG\&E calculates Deferred Income Taxes as the taxable portion of the difference between book depreciation, using straight line depreciation, and tax depreciation, generally using 20 year MACRS accelerated depreciation, bonus depreciation or 5 or 7 year rapid amortization. Accelerated depreciation results in a temporary tax savings to the Company and the Accumulated Deferred Tax balance reflects the value of those temporary savings as a reduction to environmental rate base.

Please see the attachment being provided in Excel format for the calculation of Deferred Income Taxes and the balance of Accumulated Deferred Income Taxes reported each month of the period under review.

# Attachment to Response to Question No. 3 

Page 1 of 3
Garrett

## Louisville Gas and Electric Company <br> Deferred Tax Calculations <br> Environmental Compliance Plans, by Approved Project

2009 - Plan
Project 23 - Trimble County Ash Treatment Basis (BAP/GSP)

| Month | Plant Balance | Book <br> Depreciation | Tax <br> Depreciation | Temporary <br> Difference | Income Tax <br> Rate | Accumulated <br> Deferred <br> Daxes | Deferred <br> Taxes on <br> Retirements |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Beg Balance |  |  |  |  |  |  | 338,013 |  |
| Mar-13 | $9,594,347$ | 17,393 | 53,394 | 36,001 | $38.9000 \%$ | 14,004 | 352,017 | - |
| Apr-13 | $9,594,347$ | 17,393 | 53,394 | 36,001 | $38.9000 \%$ | 14,004 | 366,021 | - |
| May-13 | $9,594,347$ | 17,393 | 53,394 | 36,001 | $38.9000 \%$ | 14,004 | 380,025 | - |
| Jun-13 | $9,594,347$ | 17,393 | 53,394 | 36,001 | $38.9000 \%$ | 14,004 | 394,029 | - |
| Jul-13 | $9,594,347$ | 17,393 | 53,396 | 36,003 | $38.9000 \%$ | 14,005 | 408,033 | - |
| Aug-13 | $9,594,347$ | 17,393 | 53,394 | 36,001 | $38.9000 \%$ | 14,004 | 422,037 | - |

# Attachment to Response to Question No. 3 

Page 2 of 3
Garrett

## Louisville Gas and Electric Company <br> Deferred Tax Calculations <br> Environmental Compliance Plans, by Approved Project

2009-Plan
Project 25 -Beneficial Reuse

| Month | Plant Balance | Book <br> Depreciation | Tax <br> Depreciation | Temporary <br> Difference | Income Tax <br> Rate | Accumulated <br> Deferred <br> Taxes | Deferred <br> Taxes on <br> Retirements |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Beg Balance |  |  |  |  |  |  | 849,880 |  |
| Mar-13 | $4,636,272$ | 9,504 | 15,343 | 5,840 | $38.9000 \%$ | 2,272 | 852,152 | - |
| Apr-13 | $4,636,272$ | 9,504 | 15,343 | 5,839 | $38.9000 \%$ | 2,271 | 854,423 | - |
| May-13 | $4,636,272$ | 9,504 | 15,344 | 5,840 | $38.9000 \%$ | 2,272 | 856,695 | - |
| Jun-13 | $4,636,272$ | 9,504 | 15,343 | 5,839 | $38.9000 \%$ | 2,271 | 858,966 | - |
| Jul-13 | $4,636,272$ | 9,504 | 15,346 | 5,842 | $38.9000 \%$ | 2,273 | 861,238 | - |
| Aug-13 | $4,636,272$ | 9,504 | 15,342 | 5,838 | $38.9000 \%$ | 2,271 | 863,509 | - |

Due to Bonus Depreciation for tax purposes taken on certain components of Project 25, the deferred tax calculation for this project is computed separately for Federal and State purposes. Specifically, for Federal taxes, certain assets received 50\% bonus depreciation, which reduces the Federal tax basis to $50 \%$ of the plant balance. A sample calculation of deferred taxes for Mar 2013 is shown below:

| Federal Basis | Book Depr. | Federal Tax D | Fed. Differenc | Fed Tax Rate | Fed Def Tax |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2,318,136 | 9,504 | 13,946 | 4,442 | 35.0000\% | 1,555 |
| 2,318,136 |  |  |  | 35.0000\% |  |
| State Basis | Book Depr. | State Tax Dep | St. Difference | State Tax Rate | St Def Tax |
| 4,636,272 | 9,504 | 27,891 | 18,387 | 6.0000\% | 1,103 |
|  |  |  |  |  | St. Offset for Fed Taxes not Owed (386) |
|  |  |  |  |  | Total Deferred Tax 2,272 |

# Attachment to Response to Question No. 3 

Page 3 of 3
Garrett

## Louisville Gas and Electric Company <br> Deferred Tax Calculations <br> Environmental Compliance Plans, by Approved Project

2011 - Plan
Project 26 - Mill Creek Station Air Compliance

|  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Month | Plant Balance | Book <br> Depreciation | Tax <br> Depreciation | Temporary <br> Difference | Income Tax <br> Rate | Accumulated <br> Deferred <br> Daxes | Deferred <br> Taxes on <br> Retirements |  |
| Beg Balance |  |  |  |  |  |  | 348,288 |  |
| Mar-13 | $1,983,783$ | 4,199 | 7,322 | 3,123 | $38.9000 \%$ | 1,215 | 349,503 | - |
| Apr-13 | $5,188,794$ | 6,370 | 19,200 | 12,830 | $38.9000 \%$ | 4,991 | 354,494 | - |
| May-13 | $5,188,794$ | 8,541 | 19,144 | 10,603 | $38.9000 \%$ | 4,125 | 358,619 | - |
| Jun-13 | $5,188,794$ | 8,541 | 19,144 | 10,603 | $38.9000 \%$ | 4,125 | 362,744 | - |
| Jul-13 | $5,452,105$ | 8,820 | 39,640 | 30,820 | $38.9000 \%$ | 11,989 | 374,733 | - |
| Aug-13 | $5,452,105$ | 9,098 | 39,861 | 30,763 | $38.9000 \%$ | 11,967 | 386,700 | - |

Due to Bonus Depreciation for tax purposes taken on certain components of Project 26, the deferred tax calculation for this project is computed separately for Federal and State purposes. Specifically, for Federal taxes, certain assets received 50\% bonus depreciation, which reduces the Federal tax basis to $50 \%$ of the plant balance. A sample calculation of deferred taxes for Mar 2013 is shown below:

| Federal Basis | Book Depr. | Federal Tax D | Fed. Differenc | Fed Tax Rate | Fed Def Tax |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 982,514 | 4,199 | 5,921 | 1,722 | 35.0000\% | 603 |
| 982,514 |  | - | - | 35.0000\% |  |
| 9,378 |  | 32 | 32 | 35.0000\% | 11 |
| 9,378 |  | 853 | 853 | 35.0000\% | 299 |
| State Basis | Book Depr. | State Tax Dep | St. Difference | State Tax Rate | St Def Tax |
| 1,965,028 | 4,199 | 11,821 | 7,622 | 6.0000\% | 457 |
| 18,755 |  | 123 | 123 | 6.0000\% | 7 |
|  |  |  |  |  | St. Offset for Fed Taxes not Owed (163) |
|  |  |  |  |  | Total Deferred Tax 1,215 |

## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 4

## Witness: Christopher M. Garrett

Q-4. Refer to ES Form 2.50, Pollution Control - Operations \& Maintenance Expenses, for the March 2013 through August 2013 expense months. For each expense account number listed on this schedule, explain the reason(s) for any change in the expense levels from month to month if that change is greater than plus or minus 10 percent.

A-4. Attached please find a schedule showing the changes in the operations and maintenance expense accounts for March 2013 through August 2013 expense months. The changes in the expense levels are reasonable and generally occurred as a part of routine plant operations and maintenance or normal annual testing expenses.

## 2011 Plan

Fluctuations in sorbent injection reactant (hydrated lime) expenses, account 506152, are the result of on-going operation of Trimble County Unit 1.

Fluctuations in sorbent injection operation expenses, account 506159, are the result of ongoing operation of Trimble County Unit 1.

Fluctuations in sorbent injection maintenance expense, account 512152, are the result of normal system maintenance. The slight increases in August are due to the purchase of a gravity splitter and suction hose.

## LOUISVILLE GAS AND ELECTRIC COMPANY <br> ENVIRONMENTAL SURCHARGE REPORT

Pollution Control - Operations \& Maintenance Expenses

| O\&M Expense Account | Mar-13 | Apr-13 | \% Change from Prior Period | May-13 | \% Change from Prior Period | Jun-13 | \% Change from Prior Period | Jul-13 | \% Change from Prior Period | Aug-13 | \% Change from Prior Period |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009 Plan |  |  |  |  |  |  |  |  |  |  |  |
| 502013 - ECR Landfill Operations | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 512107 - ECR Landfill Maintenance | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| Adjustment for CCP Disposal in Base Rates ( | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| Total 2009 Plan O\&M Expenses | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 2011 Plan |  |  |  |  |  |  |  |  |  |  |  |
| 502056 - ECR Scrubber Operations | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 512055 - ECR Scrubber Maintenance | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 506159 - ECR Sorbent Injection Operation | 11,943.78 | 9,788.71 | -18\% | 7,629.44 | -22\% | 8,956.98 | 17\% | 16,245.83 | 81\% | 9,760.51 | -40\% |
| 506152 - ECR Sorbent Reactant - Reagent Only | 55,270.26 | 66,911.05 | 21\% | 45,903.76 | -31\% | 87,432.83 | 90\% | 112,586.57 | 29\% | 126,289.87 | 12\% |
| 512152 - ECR Sorbent Injection Maintenance | 917.09 | 1,266.76 | 38\% | 1,308.70 | 3\% | 904.73 | -31\% | 530.46 | -41\% | 3,009.48 | 467\% |
| 506156 - ECR Baghouse Operations | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 512156 - ECR Baghouse Maintenance | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| 506151 - ECR Activated Carbon | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| Adjustment for Base Rates Baseline Amounts | - | - | 0\% | - | 0\% | - | 0\% | - | 0\% | - | 0\% |
| Total 2011 Plan O\&M Expenses | 68,131.13 | 77,966.52 | 14\% | 54,841.90 | -30\% | 97,294.54 | 77\% | 129,362.86 | 33\% | 139,059.86 | 8\% |

## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 5

## Witness: Christopher M. Garrett

Q-5. In Case No. 2000-00386, the Commission ordered that LG\&E's cost of debt and preferred stock would be reviewed and re-established during the six-month review case. Provide the following information as of August 31, 2013:
a. The outstanding balances for long-term debt, short-term debt, preferred stock, and common equity. Provide this information on total company and Kentucky jurisdictional 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 Kentucky jurisdictional bases. For each outstanding debt listed, indicate whether the interest rate is fixed or variable.
c. LG\&E's calculation of its weighted average cost of capital for environmental surcharge purposes.
d. Provide all exhibits and schedules of your response in Excel spreadsheet format, with formulas intact and unprotected and all rows and columns accessible.

A-5. a-d. Please see the attachment being provided in Excel format. There was no preferred stock outstanding as of August 31, 2013; therefore, it is not listed in the attached schedule. LG\&E is utilizing a return on equity of $10.25 \%$ as agreed to for all ECR Plans and approved by the Commission in its December 20, 2012 Order in Case No. 2012-00222.

LOUISVILLE GAS AND ELECTRIC COMPANY
Adjusted Electric Rate of Return on Common Equity
As of August 31, 2013

|  |  | Per Books 08-31-13 <br> (1) | Capital Structure <br> (2) | Electric <br> Rate Base <br> Percentage <br> (3) |  | Electric Capitalization $(\operatorname{Col} 1 \times \operatorname{Col} 3)$ <br> (4) |  | Adjustments <br> to Capitalization <br> (Col 18) <br> (5) |  | Adjusted Electric Capitalization (Col $4+\mathrm{Col} 5)$ <br> (6) | Adjusted Capital Structure <br> (7) | Annual Cost Rate (8) | Cost of Capital ( $\mathrm{Col} 8 \times \mathrm{Col} 7$ ) <br> (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELECTRIC |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Short Term Debt | \$ | 84,994,776 | 3.14\% | 78.810\% | \$ | 66,984,383 | \$ | $(6,523,432)$ | \$ | 60,460,951 | 3.14\% | 0.31\% | 0.01\% |
| 2. Long Term Debt |  | 1,106,101,976 | 40.82\% | 78.810\% |  | 871,718,967 |  | $(84,804,626)$ |  | 786,914,341 | 40.82\% | 3.65\% | 1.49\% |
| 3. Common Equity |  | 1,518,558,556 | 56.04\% | 78.810\% |  | 1,196,775,998 |  | (116,424,576) |  | 1,080,351,422 | 56.04\% | 10.25\% | 5.74\% |
| 4. Total Capitalization | \$ | 2,709,655,308 | $\underline{100.000 \%}$ |  | \$ | 2,135,479,348 | \$ | (207,752,634) | \$ | 1,927,726,714 | $\underline{100.000 \%}$ |  | 7.24\% |

5. Weighted Cost of Capital Grossed up for Income Tax Effect $\{R O R+(R O R-D R) x[T R /(1-T R)]\}$

|  |  | Electric <br> Capitalization <br> (Col4) <br> $(10)$ | Capital Structure (11) | Trimble County Inventories (a) (Col $11 \times$ Col 12 Line 4) (12) |  | Investments in OVEC \& Other (Col $11 \times$ Col 13 Line 4) (13) |  | JDIC <br> (Col $11 \times$ Col 14 Line 4) <br> $(14)$ |  | Environmental Compliance Rate Base (Col $11 \times \operatorname{Col} 15$ Line 4) (15) |  | DSM <br> Rate Base <br> (Col $11 \times$ Col 16 Line 4) <br> $(16)$ |  | Advanced CoalInvestmentTax Credit (b)(Col $11 \times$ Col 17 Line 4)(17) |  | Total <br> Adjustments <br> To Capital <br> (Sum of $\mathrm{Col} 12-\mathrm{Col} 17)$ <br> (18) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Short Term Debt | \$ | 66,984,383 | 3.14\% | \$ | $(118,181)$ | \$ | $(34,028)$ | \$ | 500,925 | \$ | $(7,527,285)$ | \$ | $(42,529)$ | \$ | 697,666 | \$ | (6,523,432) |
| 2. Long Term Debt |  | 871,718,967 | 40.82\% |  | $(1,536,351)$ |  | $(442,369)$ |  | 6,512,019 |  | $(97,854,711)$ |  | $(552,871)$ |  | 9,069,657 |  | $(84,804,626)$ |
| 3. Common Equity |  | 1,196,775,998 | 56.04\% |  | $(2,109,189)$ |  | $(607,309)$ |  | 8,940,066 |  | $(134,340,470)$ |  | $(759,012)$ |  | 12,451,338 |  | (116,424,576) |
| 4. Total Capitalization | \$ | 2,135,479,348 | $\underline{100.000 \%}$ | \$ | $\underline{(3,763,721)}$ | \$ | $\xrightarrow{(1,083,706)}$ | \$ | 15,953,010 | \$ | $\underline{(239,722,466)}$ | \$ | $\underline{\text { 1,354,412) }}$ | \$ | 22,218,661 | \$ | $\underline{(207,752,634)}$ |

(a) Trimble County Inventories

| Materials and Supplies | $\$ 8,202,655$ |  |
| :--- | ---: | ---: |
| Stores Expense | $1,433,114$ |  |
| Coal | $5,024,736$ |  |
| Limestone |  | 172,090 |
| Fuel Oil | 221,449 |  |
| Emission Allowances | $\$ 859$ |  |
| Total Trimble County Inventories | $15,054,883$ |  |
| Multiplied by Disallowed Portion | $\$ \quad 3,763,721$ |  |
| Trimble County Inv. Disallowed |  |  |

(b) Reflects Investment Tax Credit treatment per Case No. 2007-00179.

|  |  |  |  |  |  | ON | -TERM DEB |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  | Annu | alized Cost |  |  |  |  |  |  |
|  | Due | Rate |  | Principal |  |  | est/(Income) |  | rtized Debt ssuance /Discount |  | rtized Losseacquired Debt |  | er of Credit other fees |  |  | Total | Embedded Cost |
| Pollution Control Bonds - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Jefferson Co. 2000 Series A | 05/01/27 | 0.797\% | \$ | 25,000,000 | 4 | \$ | 199,168 | \$ | - | \$ | 135,301 | \$ | - |  | \$ | 334,469 | 1.338\% |
| Trimble Co. 2000 Series A | 08/01/30 | 0.140\% |  | 83,335,000 |  |  | 116,669 |  | 38,707 |  | 143,700 |  | 305,898 | a\&c |  | 604,974 | 0.726\% |
| Jefferson Co. 2001 Series A | 09/01/27 | 0.100\% |  | 10,104,000 |  |  | 10,104 |  | 20,393 |  |  |  | 35,546 | a\&c |  | 66,043 | 0.654\% |
| Jefferson Co. 2001 Series A | 09/01/26 | 0.220\% |  | 22,500,000 |  |  | 49,500 |  | 9,924 |  | 77,424 |  | 22,500 | b |  | 159,348 | 0.708\% |
| Trimble Co. 2001 Series A | 09/01/26 | 0.220\% |  | 27,500,000 |  |  | 60,500 |  | 10,790 |  | 65,400 |  | 27,500 | b |  | 164,190 | 0.597\% |
| Jefferson Co. 2001 Series B | 11/01/27 | 0.331\% |  | 35,000,000 |  |  | 116,000 |  | 10,995 |  | 49,056 |  | 35,000 | b |  | 211,051 | 0.603\% |
| Trimble Co. 2001 Series B | 11/01/27 | 0.320\% |  | 35,000,000 |  |  | 112,000 |  | 10,997 |  | 48,864 |  | 35,000 | b |  | 206,861 | 0.591\% |
| Trimble Co. 2002 Series A | 10/01/32 | 0.180\% |  | 41,665,000 |  |  | 74,997 |  | 37,221 |  | 55,812 |  | 176,268 | a\&c |  | 344,298 | 0.826\% |
| Louisville Metro 2003 Series A | 10/01/33 | 1.650\% |  | 128,000,000 | 3 |  | 2,112,000 |  | 55,091 |  | 313,732 |  | - | a |  | 2,480,823 | 1.938\% |
| Louisville Metro 2005 Series A | 02/01/35 | 5.750\% |  | 40,000,000 | 4 |  | 2,300,000 |  | - |  | 96,444 |  | - |  |  | 2,396,444 | 5.991\% |
| Trimble Co. 2007 Series A | 06/01/33 | 4.600\% |  | 60,000,000 |  |  | 2,760,000 |  | 47,534 |  | 6,615 |  | 18,270 | a |  | 2,832,419 | 4.721\% |
| Louisville Metro 2007 Series A | 06/01/33 | 1.150\% |  | 31,000,000 | 4 |  | 356,500 |  | - |  | 55,683 |  | - |  |  | 412,183 | 1.330\% |
| Louisville Metro 2007 Series B | 06/01/33 | 1.600\% |  | 35,200,000 | 3 |  | 563,200 |  | 20,686 |  | 27,531 |  | - | a |  | 611,417 | 1.737\% |
| Called Bonds |  |  |  | - |  |  | - |  | - |  | 145,956 |  |  |  |  | 145,956 |  |
| First Mortgage Bonds - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 due 2015 | 11/15/15 | 1.625\% |  | 250,000,000 |  |  | 4,062,500 |  | 522,243 |  | - |  | - |  |  | 4,584,743 | 1.834\% |
| Debt discount on FMB | 11/15/15 | 1.625\% |  | $(389,771)$ |  |  |  |  | 176,500 |  |  |  |  |  |  | 176,500 | -45.283\% |
| 2010 due 2020 | 11/15/40 | 5.125\% |  | 285,000,000 |  |  | 14,606,250 |  | 119,249 |  | - |  | - |  |  | 14,725,499 | 5.167\% |
| Debt discount on FMB | 11/15/40 | 5.125\% |  | $(2,812,253)$ |  |  |  |  | 103,360 |  |  |  |  |  |  | 103,360 | -3.675\% |
| S-3 SEC Shelf Registration | 03/27/15 |  |  |  |  |  |  |  | 2,292 |  |  |  |  |  |  | 2,292 |  |
| Revolving Credit Facility | 10/19/16 |  |  |  |  |  |  |  | 712,740 | 7 |  |  | 625,000 | d |  | 1,337,740 |  |
| Total External Debt |  |  | \$ | 1,106,101,976 |  | \$ | 27,499,388 | \$ | 1,898,722 | \$ | 1,221,518 | \$ | 1,280,982 |  | \$ | 31,900,611 | 2.884\% |
| Interest Rate Swaps: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| JP Morgan Chase Bank 5.495\% | 11/01/20 | 1 |  |  |  | \$ | 4,834,128 | \$ | - | \$ | - | \$ | - |  | \$ | 4,834,128 |  |
| Morgan Stanley Capital Services 3.657\% | 10/01/33 | 1 |  |  |  |  | 1,203,441 |  | - |  | - |  | - |  |  | 1,203,441 |  |
| Morgan Stanley Capital Services 3.645\% | 10/01/33 | 1 |  |  |  |  | 1,199,345 |  | - |  | - |  | - |  |  | 1,199,345 |  |
| Bank of America | 10/01/33 | 1 |  |  |  |  | 1,216,411 |  | - |  | - |  | - |  |  | 1,216,411 |  |
| Interest Rate Swaps External Debt |  |  |  |  |  | \$ | 8,453,325 | \$ | - | \$ | - | \$ | - |  | \$ | 8,453,325 | 0.764\% |
| Notes Payable to PPL |  | 5 | \$ | - |  | \$ | - | \$ | - | \$ | - | \$ | - |  | \$ | - |  |
| Total Internal Debt |  |  | \$ | - |  | \$ | - | \$ | - | \$ | - | \$ | - |  | \$ | - | 0.000\% |
|  |  | Total |  | 1,106,101,976 |  | \$ | 35,952,713 | \$ | 1,898,722 | \$ | 1,221,518 | \$ | 1,280,982 |  | \$ | 40,353,936 | 3.648\% |



## ECR - Gross-up Revenue Factor \& Composite Income Tax Calculation 2013

Assume pre-tax income of

State income tax (see below)

Taxable income for Federal income tax before production credit
a. Production Rate
b. Allocation to Production Income
c. Allocated Production Rate (a x b)

Less: Production tax credit
Taxable income for Federal income tax

Federal income tax

Total State and Federal income taxes

Gross-up Revenue Factor

Therefore, the composite rate is:
Federal
State
Total

State Income Tax Calculation
Assume pre-tax income of
Production credit @ 6\%

Taxable income for State income tax

State Tax Rate
$\qquad$
6.0000\%
5.6400

## LOUISVILLE GAS AND ELECTRIC COMPANY

# Response to Commission Staff's First Request for Information in Appendix B of Commission's Order Dated December 23, 2013 

Case No. 2013-00437
Question No. 6

## Witness: Robert M. Conroy

Q-6. Provide the actual average residential customer's usage. Based on this usage amount, provide the dollar impact the over/under-recovery will have on the average residential customer's bill for the requested recovery period. Provide all supporting calculations and documentation in Excel spreadsheet format, with formulas intact and unprotected and all rows and columns accessible.

A-6. Please see the attachment being provided in Excel format.
The actual average residential customer's usage for the 12-months ending November 30, 2013 is 987 kWh per month. Actual average monthly usage for residential customers will vary from month to month depending upon the time period of the year.

Based upon distributing the over-recovered position of $\$ 1,309,850$ over two months ( $\$ 654,925$ per month), the ECR billing factor will be lower by approximately $0.80 \%$ per month. For a residential customer using 987 kWh per month the impact of the adjusted ECR billing factor would be a decrease of approximately $\$ 0.75$ per month, using rates and adjustment clause factors in effect for the November 2013 billing month.

| INPUTS: |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Expense Month for calculations |  | Nov-13 |
| ECR Monthly Filing - Expense Month for calculations |  |  |  |
| Form 1.10-Line 13 | Adjusted Net Juris E(M) as filed | \$ | 2,893,058 |
| Form 1.10-Line 14 | Group 1 Rev as \% 12-mo Total Rev |  | 41.52\% |
| Form 1.10-Line 15 | Group 1 E(m) | \$ | 1,201,198 |
| Form 1.10-Line 16 | Group 1 12-month avg revenue | \$ | 33,917,457 |
| Form 1.10-Line 17 | Billing Factor filed |  | 3.54\% |
| Financial Reports - Year Ended Current Month |  |  | Nov-13 |
| Page 30 | Residential Sales (kWh) |  | 4,122,061,088 |
| Page 43 | Residential Avg Customers Year Ended |  | 347,860 |
|  | times 12 for 12-month number |  | 4,174,320 |
| Response to DR Q2 | Adjustment for (Over)/Under Collection |  | $(1,309,850)$ |
|  | Number of Months to collect/distribute |  | 2 |
|  | Monthly Adj for (Over)/Under Collection |  | $(654,925)$ |
|  | Position for Review Period Collection |  | OVER |
| Billing Factors |  |  |  |
| Tariff | Basic Service Charge |  | 10.75 |
| Tariff | Base Rate |  | 0.07949 |
| Monthly Filing | FAC for Nov-13 |  | 0.00041 |
| Tariff | DSM |  | 0.00358 |

## Residential Bill Impact Calculations



