



a PPL company

Dr. Talina R. Mathews  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40601

November 30, 2016

**RE: *Application of Louisville Gas and Electric Company For An Order  
Approving the Establishment of a Regulatory Asset***  
**Case No. 2016-00393**

Dear Dr. Mathews:

Enclosed please find and accept for filing Louisville Gas and Electric Company's Responses to the Commission Staff's Requests for Information made at the Informal Conference held on November 22, 2016 in the above referenced matter.

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

Sincerely,

Christopher M. Garrett

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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.lge-ku.com

Christopher M. Garrett  
Director Rates  
T 502-627-3328  
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chris.garrett@lge-ku.com

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

**In the Matter of:**

**APPLICATION OF LOUISVILLE GAS AND ELECTRIC ) CASE NO.**  
**COMPANY FOR AN ORDER APPROVING THE ) 2016-00393**  
**ESTABLISHMENT OF A REGULATORY ASSET )**

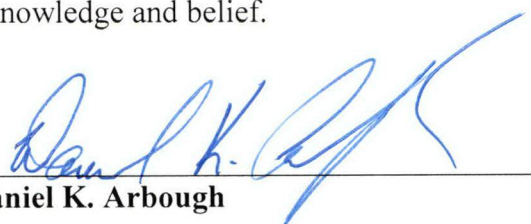
**RESPONSE OF**  
**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**TO**  
**INFORMATION REQUESTED AT THE INFORMAL CONFERENCE**  
**HELD ON NOVEMBER 22, 2016**

**FILED: November 30, 2016**

VERIFICATION


COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

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

  
\_\_\_\_\_  
**Daniel K. Arbough**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 30th day of November 2016.



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

My Commission Expires:

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

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at the Informal Conference  
Held on November 22, 2016**

**Case No. 2016-00393**

**Question No. 1**

**Responding Witness: Daniel K. Arbough**

Q-1. When was the \$128 million bond issued?

A-1. The indenture for the bond is dated October 1, 2033 and the maturity date of the bonds is October 1, 2033. However, the bonds were issued on November 20, 2003.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at the Informal Conference  
Held on November 22, 2016**

**Case No. 2016-00393**

**Question No. 2**

**Responding Witness: Daniel K. Arbough**

Q-2. Why is it more attractive to issue variable rate bonds and utilize an interest rate swap to fix the rate rather than issuing a fixed rate bond? Please provide any analysis LG&E performed when it executed the swap in 2003.

A-2. During the meeting Mr. Arbough stated that issuing variable rate tax-exempt bonds and utilizing an interest rate swap to fix the interest rate was more attractive than issuing a fixed rate bond. This is an accurate statement for the tax-exempt market, but not necessarily for the taxable market. There are two key reasons that swaps provide a benefit in the tax-exempt market. First, long-term fixed rate tax-exempt bonds have a tax risk that is assumed by the bond holder for the full life of the bond. Although the interest paid on the bonds is exempt from the investor's federal income tax (and for some investors Kentucky state income tax as well), future changes in tax law may eliminate that exemption. Investors charge a premium to take that tax risk over the life of the bond. This often results in long-term tax-exempt rates for AA or A rated issuers being very close to the taxable rate for the same issuer. Using an interest rate swap results in Louisville Gas and Electric Company ("LG&E") bearing this tax risk because the interest rate swap payments are not tax-exempt. However, LG&E is impacted only if and when the tax laws are changed to eliminate the tax risk. The Company is willing to assume this risk because a dramatic change to the tax code is viewed as unlikely and assuming the risk provides significant value to the customer. Second, the interest rate swap market is much larger than the tax-exempt bond market. A larger market with more liquidity should result in better pricing for the Company.

Attachment 1 is a chart dated as of October 3, 2003 showing that the BBRBI (an index of 25 A1 rated 30 year tax-exempt revenue bonds) was 5.20%. The interest rate swaps done for the \$128 million bond in December 2003 averaged 3.666% which is more than 1.50% lower than the index rate. Attachment 2 is a document from Goldman Sachs dated October 16, 2003. The table labeled "Tax-Exempt Rates" shows a 68% LIBOR Fixed Payer swap was priced at 3.94%, and the BMA Fixed Payer swap rate for 30 years was 4.67% whereas in the table labeled "Selected Municipal Index Data" the RBI (same as BBRBI) rate was 5.34%. In both cases the swap rates were well below the fixed rate bond index. The difference between the 4.67% for a BMA swap and the 3.94% 68% of LIBOR swap is one

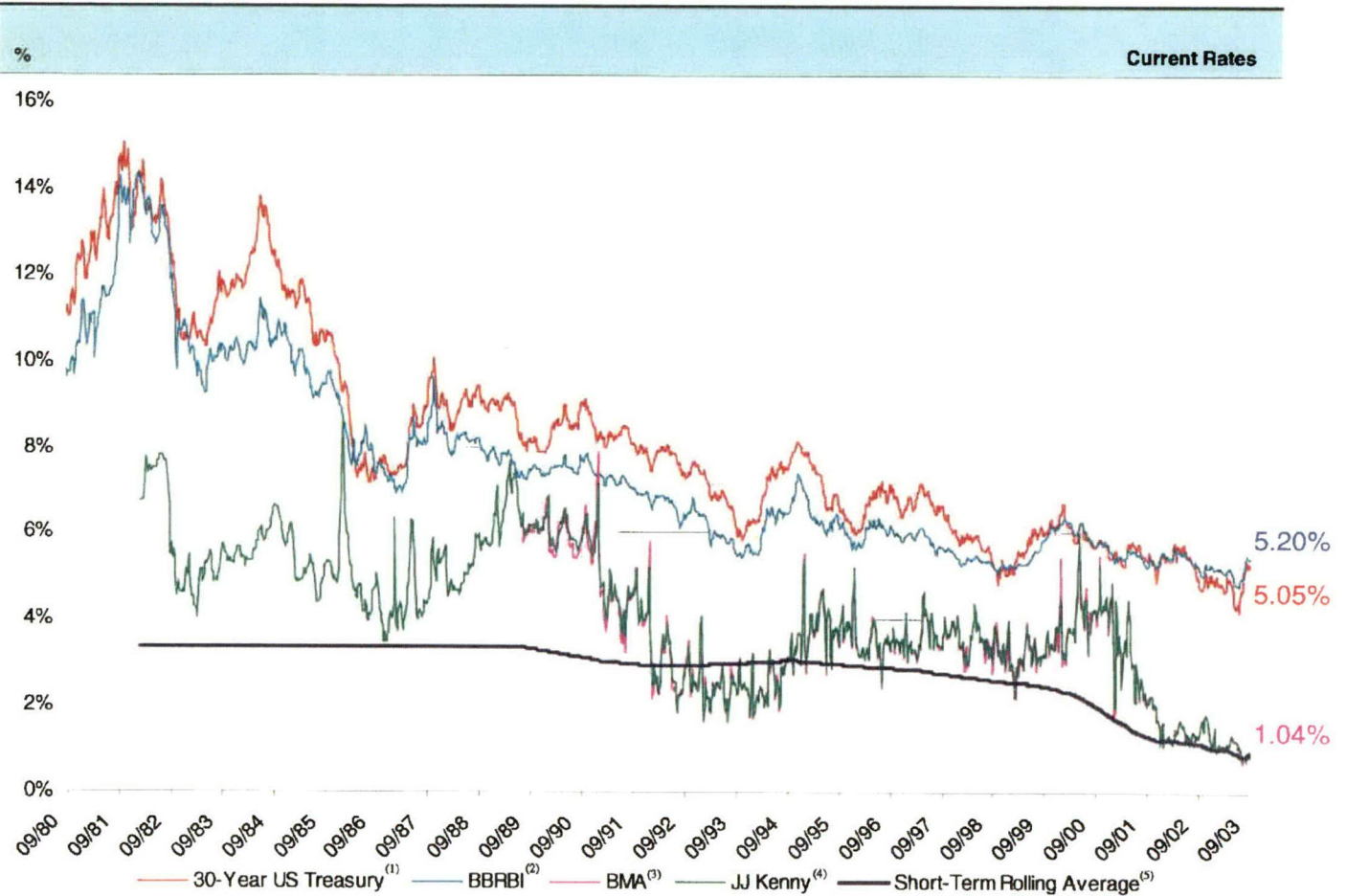
indication of the premium charged by investors to assume the tax risk discussed above. The BMA index is a tax-exempt index whereas the LIBOR rate is not. In the chart entitled "Long-term Interest Rates" you will see that the 30 year BMA Fixed Payer swap was consistently well below the Revenue Bond Index (RBI). While not presented in the chart, the 68% of LIBOR swap rates are consistently lower than the BMA swap rates.

Lastly, based upon a review of the available files, Attachment 1 and Attachment 2 represent relevant and available information that the Company utilized to evaluate and analyze the 2003 swap execution authorized by the Commission in Case No. 2003-00299.

# Historical Review of Interest Rates

As of October 3, 2003

Historical Averages			
%	30-Yr.		
	Treasury	BBRBI	BMA
1-Yr Average	4.87%	5.15%	1.14%
5-Yr Average	5.50%	5.51%	2.61%
10-Yr Average	6.09%	5.74%	3.00%
High	15.07%	14.32%	7.89%
Low	4.18%	4.78%	0.70%



## Notes

- 30-year Treasury Historical Data since September 21, 1979.
- The Bond Buyer Revenue Bond Index is the arithmetic average of the yields to maturity for 25 A1 rated, 30 year revenue bonds. BBRBI began in 1979.
- The Bond Market Association Municipal Swap Index (formerly the PSA Index) tracks non-AMT, weekly-reset bonds and began in 1989.
- JJ Kenny Index began 1982.
- The Short Term Average is the average of BMA rates from a specific date until today. The JJ Kenny Index rates are used for the Short Term Average for the time period before the inception of BMA.

Attachment I to Response to Question No. 2

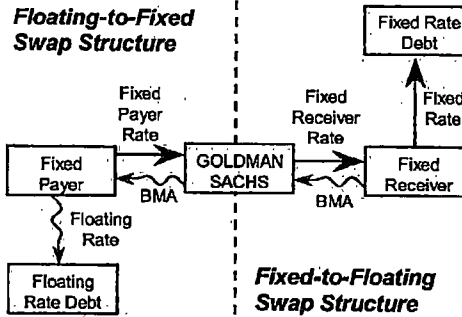
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# Municipal Rates and Swap Levels

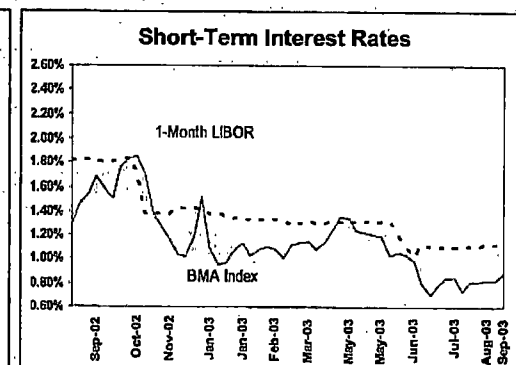
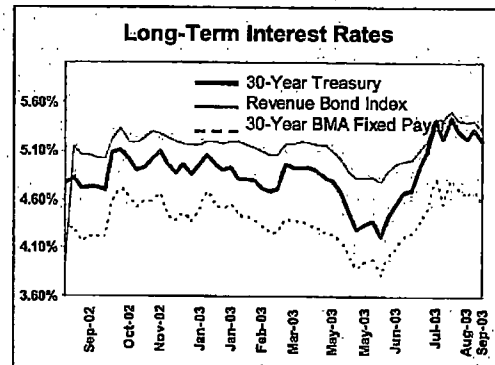
As of 10/16/03

Tax-Exempt Rates				
Maturity	"AAA" G.O. Yields	BMA Fixed Receiver	BMA Fixed Payer	68% LIBOR Fixed Payer
1	1.03	1.29	1.35	1.07
2	1.35	1.92	1.98	1.59
3	1.68	2.39	2.47	2.03
4	2.11	2.78	2.86	2.38
5	2.49	3.05	3.15	2.66
6	2.82	3.29	3.39	2.88
7	3.17	3.47	3.57	3.05
8	3.44	3.61	3.73	3.19
9	3.67	3.72	3.86	3.31
10	3.80	3.83	3.97	3.42
11	3.92	3.92	4.08	3.52
12	4.04	4.00	4.18	3.60
13	4.15	4.07	4.27	3.66
14	4.26	4.13	4.33	3.71
15	4.36	4.19	4.39	3.76
16	4.45	4.23	4.43	3.79
17	4.54	4.28	4.48	3.83
18	4.63	4.31	4.51	3.85
19	4.71	4.34	4.54	3.87
20	4.78	4.36	4.56	3.89
25	4.92	4.44	4.64	3.94
30	4.96	4.47	4.67	3.94



Selected Municipal Index Data			
	BMA	1M LIBOR	REI
Reset Day	Wednesday		Thursday
Current Week	0.93	1.12	5.34
Week's Change	0.01	0.00	0.00
YTD Average	1.02	1.23	5.15
Annual Average	1.11	1.30	5.16
3-Yr Average	1.91	2.68	5.36
5-Yr Average	2.58	3.87	5.52

JJK	LIBOR		CP	Treasury Yields					
	3-month	6-month	30-day	2-year	3-year	5-year	7-year	10-year	30-year
0.93	1.16	1.21	1.01	1.93	2.39	3.40	3.82	4.46	5.30



This information regarding current market value is provided for your information only. It is based on a good-faith estimate of the price at approximately the time indicated and may not represent a price at which either a purchase or sale can be executed with Goldman Sachs or any of its affiliates.



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at the Informal Conference  
Held on November 22, 2016**

**Case No. 2016-00393**

**Question No. 3**

**Responding Witness: Daniel K. Arbough**

- Q-3. Provide in Excel spreadsheet format, the LG&E Bond Payoff compared to a Proposed Bank Direct Purchase for the \$25 million bond.
  
- A-3. See attachment being provided in Excel format on the enclosed CD.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at the Informal Conference  
Held on November 22, 2016**

**Case No. 2016-00393**

**Question No. 4**

**Responding Witness: Daniel K. Arbough**

- Q-4. Provide a copy of the International Swap Dealers Association, Inc. ("ISDA") Master Agreement entered into between LG&E and Bank of America.
- A-4. The requested information is being provided on the enclosed CD.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at the Informal Conference  
Held on November 22, 2016**

**Case No. 2016-00393**

**Question No. 5**

**Responding Witness: Daniel K. Arbough**

- Q-5. Provide a copy of the confirmation statement as referenced in the ISDA Master Agreement entered into between LG&E and Bank of America.
- A-5. See attached.

733 South Wacker Drive, Suite 2800  
Chicago, Illinois 60606  
Tel 312-234-2732  
Fax 312-234-3603

## Bank of America N. A.

TO: Louisville Gas and Electric Company  
220 West Main Street  
Louisville, KY 40202

ATTN: Daniel Arbough  
TEL: 502-627-4965  
FAX: 502-627-4742

FROM: Bank of America, N.A.  
233 South Wacker Drive - Suite 2800  
Chicago, Illinois 60606  
Tad Gray / Mail Dellabilla

Date: 11DEC03

Our Reference No. 3174027

Internal Tracking Nos. 13074460

The purpose of this letter agreement is to confirm the terms and conditions of the Transaction entered into between Louisville Gas and Electric Company and Bank of America, N.A. (each a "party" and together "the parties") on the Trade Date specified below (the "Transaction"). This letter agreement constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified in paragraph 1 below (the "Agreement").

The definitions and provisions contained in the 2000 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. (the "Definitions") are incorporated into this Confirmation. In the event of any inconsistency between the Definitions and this Confirmation, this Confirmation will govern.

1. This Confirmation supplements, forms part of, and is subject to, the ISDA Master Agreement dated as of 19NOV03, as amended and supplemented from time to time (the "Agreement"), between the parties. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

In this Confirmation "Party A" means Bank of America, N.A. and "Party B" means Louisville Gas and Electric Company.

2. The terms of the particular Transaction to which this Confirmation relates are as follows:

Notional Amount:	USD 32,000,000.00
Trade Date:	10DEC03
Effective Date:	12DEC03
Termination Date:	01OCT33
Fixed Amounts:	
Fixed Rate Payer:	Party B
Fixed Rate Payer Payment Dates:	The 1st of each Month, commencing 01JAN04 and ending 01OCT33, subject to adjustment in accordance with the Modified Following Business Day Convention.
Fixed Rate Payer Period End Dates:	The 1st of each Month, commencing 01JAN04 and ending

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01OCT33, subject to adjustment  
in accordance with the Modified Following  
Business Day Convention except for the  
final calculation period which shall not be adjusted.

Fixed Rate: 3.69500%

Fixed Rate Day Count Fraction: 30/360

Floating Amounts:

Floating Rate Payer: Party A

Floating Rate Payer Payment Dates: The 1st of each Month, commencing 01JAN04 and ending 01OCT33, subject to adjustment in accordance with the Modified Following Business Day Convention.

Floating Rate Payer Period End Dates: The 1st of each Month, commencing 01JAN04 and ending 01OCT33, subject to adjustment in accordance with the Modified Following Business Day Convention except for the final calculation period which shall not be adjusted.

Floating Rate for Initial Calculation Period: 0.79500%

Floating Rate Option: 68.00% of USD-LIBOR-68A

Averaging: Inapplicable

Designated Maturity: 1 Month

Spread: None

Floating Rate Day Count Fraction: Actual/360

Reset Dates: The first day of each Calculation Period

Compounding: Inapplicable

Business Days: New York, London

Calculation Agent: Party A

**Optional Early Termination:**

Notwithstanding anything to the contrary in the Definitions or the Agreement, the parties hereby agree to the following Optional Early Termination provisions:

For purposes of this Optional Early Termination provision, Business Days shall mean New York and London Business Days.

Either party shall have the right (but not the obligation) to terminate this Transaction, effective as of 12DEC10 or if such day is not a Business Day, on the next succeeding Business Day (the "Optional Early Termination Date"), by providing the other party with notice of its exercise of this right five Business Days prior to the Optional Early Termination Date. This notice shall be irrevocable and may be given orally, including by telephone. Such notice shall be followed by a written confirmation confirming the substance of any telephonic notice within one Business Day of that notice. Failure to provide that written confirmation will not affect the validity of the telephonic notice.

In the event either party elects to terminate this Transaction as provided above, the Calculation Agent shall determine the Cash Settlement Amount in good faith and in a commercially reasonable manner in accordance with normal market practice in the relevant

market. Such determination shall be made on the day that is two Business Days prior to the Optional Early Termination Date. In the absence of manifest error, such determination shall be final and conclusive evidence of the Cash Settlement Amount payable in respect of such Optional Early Termination Date. Party A or Party B (as determined by the Calculation Agent) shall pay to the other party the Cash Settlement Amount on the Optional Early Termination Date. Once the Cash Settlement Amount has been fully and finally paid, then all rights, duties and obligations of the parties under and with respect to this Transaction shall terminate.

**3. Recording of Conversations:**

Each party to this Transaction acknowledges and agrees to the tape recording of conversations between the parties to this Transaction whether by one or other or both of the parties or their agents, and that any such tape recordings may be submitted in evidence in any Proceedings relating to the Agreement and/or this Transaction.

**4. Account Details:**

Account for payments to Party A:

USD  
**NAME:** BANK OF AMERICA, N.A.  
**CITY:** NEW YORK  
**ABA/SORT:** 026009593  
**ACCT:** 8550 218386  
**ATTN:** RATE DERIVATIVE SETTLEMENTS  
**SWIFT:** BOFAUS3N

Account for payments to Party B:  
 PLEASE PROVIDE

**5. Offices:**

The Office of Party A for this  
 Transaction is: Charlotte, NC

Please send reset notices to fax no. (312-234-3603)

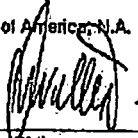
The Office of Party B for this  
 Transaction is: Kentucky, USA

Credit Support Document: As per Agreement (and Credit Support Annex if applicable).

Please confirm that the foregoing correctly sets forth the terms and conditions of our agreement by returning via telecopier an executed copy of this Confirmation to the attention of Global Derivative Operations at (fax no. (312) 234-3603).

Yours Sincerely,

Bank of America, N.A.

  
\_\_\_\_\_  
Dave Walter  
Senior Vice President

Authorized Signatory

Accepted and confirmed as of the date first written:

Louisville Gas and Electric Company

By: 

Name: Daniel K. Arbough

Title: Treasurer

Our Reference # 3174027