

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

**In the Matter of:**

<b>APPLICATION OF LOUISVILLE GAS AND</b>	)	
<b>ELECTRIC COMPANY FOR AN ORDER</b>	)	<b>CASE NO. 2016-00361</b>
<b>AMENDING AND EXTENDING EXISTING</b>	)	
<b>AUTHORITY WITH RESPECT TO</b>	)	
<b>REVOLVING LINE OF CREDIT</b>	)	

**VERIFIED APPLICATION FOR AMENDMENT AND EXTENSION OF AUTHORITY**  
**WITH RESPECT TO REVOLVING CREDIT**

Louisville Gas and Electric Company (“LG&E”) hereby requests pursuant to KRS 278.300 and 807 KAR 5:001, Section 18 that the Commission amend and extend LG&E’s existing authority to allow for extending the term of its multi-year revolving credit line through January 31, 2022, and additional authority in 2017 and 2018 to extend the credit facility maturity date to up to five years from the effective date of the amendment. In support of this Application, LG&E states as follows:

1. LG&E’s full name is Louisville Gas and Electric Company. The post office address of LG&E is 220 West Main Street, Louisville, Kentucky 40202. LG&E was incorporated in Kentucky on July 2, 1913 and LG&E is currently in good standing. LG&E can be reached at the email addresses of the counsel listed below.

2. LG&E was first granted authority to enter into multi-year revolving credit facilities in Case No. 2007-00232<sup>1</sup> by Orders dated August 2, 2007, and August 9, 2007. In that case, the Commission found that granting LG&E authority to enter into multi-year revolving

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<sup>1</sup>*In the Matter of: Application of Louisville Gas and Electric Company for an Order Authorizing the Issuance of Securities and Assumption of Obligations.*

credit facilities under which LG&E could incur short-term debt from time to time would reduce the time and cost of negotiating and renewing short-term debt arrangements.<sup>2</sup>

3. By Order dated June 16, 2014, in Case No. 2014-00089,<sup>3</sup> the Commission authorized LG&E to extend the term of its existing revolving credit line, which had a term ending November 6, 2017, through December 31, 2019.

4. In Case No. 2014-00089, LG&E stated that based upon its discussions with providers of credit facilities, LG&E believed that it was likely that in the future changing market conditions and interest rates would mean that revolving credit facilities would no longer be available on terms as favorable as found in LG&E's current facility. In part, this was due to the new Basel III regulations, which began to be phased in starting in 2013 and will be fully implemented in 2019. Basel III is a new regulatory framework created by the Bank for International Settlements, and adopted by the Federal Reserve. These regulations are intended to prevent another banking crisis and establish more stringent requirements for banks with respect to capitalization, leverage and liquidity. As a result, not only are revolving lines of credit likely to be less readily available, but the current historically low commitment fees and interest spreads on actual borrowings are likely to be higher in the future.

5. Most recently, by order dated July 2, 2015, in Case No. 2015-00138, the Commission authorized LG&E to extend the term of its existing revolving line of credit for a

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<sup>2</sup> Case No. 2007-00232 (Ky. PSC Aug. 2, 2007).

<sup>3</sup>*In the Matter of: Application of Louisville Gas and Electric Company for an Order Authorizing the Issuance of Securities and the Assumption of Obligation*). LG&E's authority was previously extended by Order dated October 18, 2012, *In the Matter of: Application of Louisville Gas and Electric Company for an Order Amending and Extending Existing Authority with Respect to Revolving Line of Credit* (Case No. 2012-00410), which extended authority granted by Order dated October 10, 2011, *In the Matter of: Application of Louisville Gas and Electric Company for an Order Authorizing the Issuance of Securities and Assumption of Obligations* (Case No. 2011-00308), which extended authority granted by Order dated September 30, 2010, *In the Matter of: Application of Louisville Gas and Electric Company for an Order Authorizing the Restructure and Refinancing of Unsecured Debt and the Assumption of Obligations and for Amendment of Existing Authority* (Case No. 2010-00205). Also, by Order dated August 3, 2012, *In the Matter of: Application of Louisville Gas and Electric Company for an Order Authorizing the Issuance of Securities and Assumption of Obligations* (Case No. 2012-00233), LG&E was authorized to increase the total aggregate amount of its revolving credit facilities to \$500 million.

term through December 31, 2020.<sup>4</sup> In that proceeding, LG&E explained that the same conditions and market expectations described in Case No. 2014-00089 remained in effect with respect to revolving lines of credit. Subsequently, LG&E entered into an Amended and Restated Revolving Credit Agreement, with a term that now ends December 31, 2020.

6. The outlook regarding the effect of the Basel III regulations on the costs and availability of revolving credit has not changed materially since Case No. 2015-00138. In order to optimize the cost of short-term debt, LG&E seeks authority to extend its current revolving lines of credit to January 31, 2022. This specific maturity date, which adds an additional month to the one-year extension, was selected to synchronize the maturity dates of the credit facilities with those of its affiliate, PPL Electric Utilities Corporation and PPL Capital Funding Inc. Extending the current revolving credit facilities will allow LG&E to continue to obtain favorable short-term debt costs while avoiding higher commitment fees and related transaction costs expected in the future.

7. Under the current agreements, LG&E must notify the revolving credit service providers of its intent to extend the current lines. LG&E is currently working with these providers to determine the optimal means of extending the credit facility. As such, LG&E requests authority to amend its existing Amended and Restated Revolving Credit Agreement to effectuate the extension, and also requests authority to amend and restate the Credit Agreement, if necessary. LG&E respectfully requests an order granting such authority within sixty (60) days so that LG&E can comply with the timelines in the Amended and Restated Revolving Credit Agreement.

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<sup>4</sup> *In the Matter of: Application of Louisville Gas and Electric Company for an Order Amending and Extending Existing Authority with Respect to Revolving Line of Credit* (Case No. 2015-00138) (Ky. PSC Jul. 2, 2015).

8. Although LG&E expects that all of the credit service providers will agree to extend the credit facility at the current individual or aggregate participation levels, LG&E also requests alternative authority to enter into separate or individual revolving credit lines to replace any non-extended portion of the credit facility, up to the maximum total aggregate sizes, dates and terms described further herein.

9. Given that the Basel III regulations will be fully implemented in 2019, LG&E requests authority to extend the revolving credit facilities in 2017 and 2018, as well. With each extension the Company would extend the credit facility maturity date to up to five years from the effective date of the amendment. If the Commission grants this authority, LG&E will have the flexibility to further optimize its short-term debt costs for its customers. If the Commission grants the authority, LG&E will provide notice of each extension to the Commission within thirty days of execution.

10. Pursuant to 807 KAR 5:001, Section 18(1)(d) and (e), the extended credit facilities would be on the same terms as LG&E's existing revolving credit and would be available for the same purposes for which revolving credit is currently available. Loan proceeds could be used to provide short-term financing for LG&E's general financing needs, for example, general costs of operation or costs of LG&E's various construction programs or other obligations, until permanent or long-term financing can be arranged. In addition, the extended credit facilities could be used to provide liquidity or credit support for LG&E's other debt, for example, ensuring that LG&E has readily available funds with which to make payments with respect to variable rate bonds that could be tendered for purchase and not remarketed. However, LG&E does not assign specific financing to any particular capital project or operating or fiscal

use and does not project finance projects.<sup>5</sup> Thus, these are general reasons that LG&E might need short-term financing, rather than uses to which such financing would be assigned.

11. Attached as Exhibits 1 and 2, respectively, are a Description of LG&E's Property and a Financial Exhibit pursuant to 807 KAR 5:001, Sections 18(1)(b) and 18(2)(a), and 807 KAR 5:001, Section 12.

12. Copies of LG&E's mortgages were filed with the Commission in Case No. 2015-00138.<sup>6</sup> Attached as Exhibit 3 are two supplemental indentures that have been executed since the mortgages were filed with the Commission.

**THEREFORE**, Louisville Gas and Electric Company respectfully requests that the Commission enter an Order within sixty days authorizing LG&E to enter into such agreements and amendments as are necessary for LG&E to (1) extend its current multi-year revolving credit facilities, in the previously authorized total aggregate amount not to exceed \$500 million, for a term through January 31, 2022; (2) alternatively replace any credit facilities not extended with similar multi-year revolving credit facilities for the same term, (3) exercise extensions in 2017 and 2018, respectively, to extend the facility maturity dates to five years from the date of the amendment.

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<sup>5</sup> Because LG&E does not assign specific financing to any particular capital project, as in prior cases, there are no maps, plans and detailed estimates to provide. 807 KAR 5:001, Section 18(2)(c). The deed of trust is not involved with these revolving credit facilities.

<sup>6</sup> Copies were filed with the Commission on May 11, 2015.

Dated: October 14, 2016

Respectfully Submitted,



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*Counsel for Louisville Gas and Electric Company*

**CERTIFICATE OF SERVICE**

In accordance with 807 KAR 5:001, Section 8, this is to certify that the foregoing electronically filed October 14, 2016 Verified Application is a true and accurate copy of the same document being filed in paper medium; that the electronic filing has been transmitted to the Commission on October 14, 2016; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original in paper medium of the Verified Application is being mailed by first class U.S. Mail, postage prepaid, to the Commission October 14, 2016.

*Marcia H. Braun*

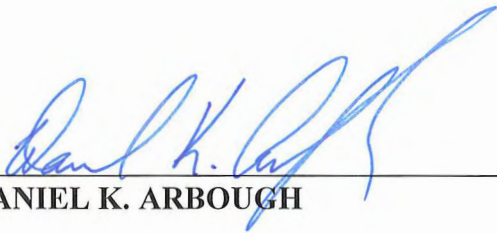
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*Counsel for Louisville Gas and Electric Company*

VERIFICATION


COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says he is Treasurer for Louisville Gas and Electric Company, that he has read the foregoing Application and knows the contents thereof, and that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and that as to these matters, he believes them to be true.

  
\_\_\_\_\_  
DANIEL K. ARBOUGH

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 12<sup>th</sup> day of October, 2016.

(SEAL)

  
\_\_\_\_\_  
Notary Public

My Commission Expires:

August 31, 2019



## Exhibit 1

Description of Property for Louisville Gas and Electric Company

LOUISVILLE GAS AND ELECTRIC COMPANY  
(807 KAR 5:001, SEC. 18(1)(b))

A DESCRIPTION OF APPLICANT'S PROPERTY, INCLUDING A  
STATEMENT OF THE NET ORIGINAL COST OF THE PROPERTY  
AND THE COST THEREOF TO APPLICANT

August 31, 2016

The applicant's generating, transmission and distribution systems described herein are calculated annually. As of December 31, 2015, the applicant had ownership in 8 and operated 6 coal fired steam electric generating units having a total capacity of 2,072 Mw; had ownership in and operated 12 combustion turbine generating units having a total capacity of 789 Mw; and owned and operated 1 hydroelectric generating station, the operation of which is affected by the water level and flow of the Ohio River, having a total capacity of 58 Mw.

The applicant's owned electric transmission system included 46 substations (32 of which are shared with the distribution system) with a total capacity of 8 million kVA and 677 pole miles of lines. The distribution system included 97 substations (32 of which are shared with the transmission system) with a total capacity of 5 million kVA, 3,899 circuit miles of overhead lines and 2,482 underground cable miles.

The applicant's natural gas transmission system includes 4,337 miles of gas distribution mains and 398 miles of gas transmission mains, consisting of 265 miles of gas transmission pipeline, 120 miles of gas transmission storage lines, 14 miles of gas combustion turbine lines, and 1 mile of gas transmission pipeline in regulator facilities. Five underground natural gas storage fields, with a total working natural gas capacity of approximately 15 Bcf, are used in providing natural gas service to ultimate consumers.

Other properties include an office building, service centers, warehouses, garages and other structures and equipment, the use of which is common to both the electric and gas departments.

The net original cost of the property and cost thereof to the applicant at August 31, 2016, was:

	<u>Electric</u>	<u>Gas</u>	<u>Common</u>	<u>Total</u>
Original Cost	\$ 5,304,773,756	\$ 1,098,537,748	\$ 272,964,762	\$ 6,676,276,266
Less Reserve for				
Depreciation	1,378,009,567	229,211,284	130,786,499	1,738,007,350 *
Net Original Cost	3,926,764,189	869,326,464	142,178,263	4,938,268,916
Allocation of Common				
To Electric and Gas	99,524,784	42,653,479	(142,178,263)	-
Total	<u>\$ 4,026,288,973</u>	<u>\$ 911,979,943</u>	<u>\$ -</u>	<u>\$ 4,938,268,916</u>

\* Excludes \$306,464,571 related to cost of removal reserves that is not included in the reserve in the Financial Statements and Additional Information, but instead is included as a regulatory liability.

Exhibit 2

Financial Exhibit for Louisville Gas and Electric

Louisville Gas and Electric Company  
Balance Sheet as of August 31, 2016

Assets		Liabilities and Proprietary Capital	
<b>Utility Plant</b>		<b>Proprietary Capital</b>	
Utility Plant at Original Cost.....	\$ 6,676,276,266.49	Common Stock.....	\$ 425,170,424.09
Less: Reserves for Depreciation and Amortization.....	<u>2,024,922,287.17</u>	Less: Common Stock Expense.....	835,888.64
Total.....	<u>4,651,353,979.32</u>	Paid-In Capital.....	464,081,499.00
		Other Comprehensive Income.....	-
		Retained Earnings.....	<u>1,154,771,973.69</u>
<b>Investments</b>		Total Proprietary Capital.....	<u>2,043,188,008.14</u>
Ohio Valley Electric Corporation.....	594,286.00	Other Long-Term Debt.....	<u>1,654,851,827.79</u>
Nonutility Property - Less Reserve.....	567,535.13	Total Long-Term Debt.....	<u>1,654,851,827.79</u>
Special Funds.....	<u>8,722,689.70</u>	Total Capitalization.....	<u>3,698,039,835.93</u>
Total.....	<u>9,884,510.83</u>	<b>Current and Accrued Liabilities</b>	
<b>Current and Accrued Assets</b>		ST Notes Payable to Associated Companies.....	-
Cash.....	6,771,449.25	Notes Payable to Associated Companies.....	33,000,000.00
Special Deposits.....	-	Notes Payable.....	73,992,949.16
Temporary Cash Investments.....	728,410.89	Accounts Payable.....	139,712,302.52
Accounts Receivable - Less Reserve.....	188,192,653.25	Accounts Payable to Associated Companies.....	21,493,795.33
Notes Receivable from Associated Companies.....	-	Customer Deposits.....	26,279,736.80
Accounts Receivable from Associated Companies.....	18,580,253.13	Taxes Accrued.....	54,912,718.85
Materials and Supplies - At Average Cost		Dividends Declared.....	26,000,000.00
Fuel.....	57,459,519.66	Interest Accrued.....	19,460,371.47
Plant Materials and Operating Supplies.....	35,061,814.86	Miscellaneous Current and Accrued Liabilities.....	<u>73,847,677.02</u>
Stores Expense.....	6,421,864.53	Total.....	<u>468,699,551.15</u>
Gas Stored Underground.....	30,462,214.08	<b>Deferred Credits and Other</b>	
Emission Allowances.....	153.44	Accumulated Deferred Income Taxes.....	1,171,709,195.18
Prepayments.....	19,430,109.43	Investment Tax Credit.....	36,823,982.65
Miscellaneous Current and Accrued Assets.....	-	Regulatory Liabilities.....	83,596,037.78
Total.....	<u>363,108,442.52</u>	Customer Advances for Construction.....	6,777,844.38
<b>Deferred Debits and Other</b>		Asset Retirement Obligations.....	190,668,016.18
Unamortized Debt Expense.....	15,416,968.56	Other Deferred Credits.....	5,249,411.47
Unamortized Loss on Bonds.....	16,093,272.95	Miscellaneous Long-Term Liabilities.....	4,249,577.64
Accumulated Deferred Income Taxes.....	284,296,675.49	Accum Provision for Pension & Postretirement Benefits.....	<u>122,963,767.39</u>
Deferred Regulatory Assets.....	442,282,247.47	Total.....	<u>1,622,037,832.67</u>
Other Deferred Debits.....	<u>6,341,122.61</u>	Total Liabilities and Stockholders' Equity.....	<u>\$ 5,788,777,219.75</u>
Total.....	<u>764,430,287.08</u>		
Total Assets.....	<u>\$ 5,788,777,219.75</u>		

Louisville Gas and Electric Company  
Statement of Income  
August 31, 2016

	Year Ended 8/31/2016
Electric Operating Revenues.....	\$ 1,117,879,183.44
Gas Operating Revenues.....	<u>273,467,272.52</u>
Total Operating Revenues.....	<u>1,391,346,455.96</u>
Fuel for Electric Generation.....	304,686,463.87
Power Purchased.....	55,764,101.16
Gas Supply Expenses.....	90,680,229.97
Other Operation Expenses.....	241,468,802.11
Maintenance.....	98,650,609.38
Depreciation.....	154,355,927.41
Amortization Expense.....	11,160,691.83
Regulatory Dedit.....	18,763.88
Regulatory Credits.....	-
Taxes	
Federal Income.....	(8,620,048.23)
State Income.....	2,933,256.66
Deferred Federal Income - Net.....	112,826,998.20
Deferred State Income - Net.....	15,556,760.41
Property and Other.....	38,614,937.42
Investment Tax Credit.....	3,000,000.00
Amortization of Investment Tax Credit.....	(1,265,698.00)
Loss (Gain) from Disposition of Allowances.....	(71.88)
Accretion Expense.....	<u>-</u>
Total Operating Expenses.....	<u>1,119,831,724.19</u>
Net Operating Income.....	271,514,731.77
Other Income Less Deductions.....	<u>(3,203,484.75)</u>
Income Before Interest Charges.....	<u>268,311,247.02</u>
Interest on Long-Term Debt.....	63,878,168.75
Amortization of Debt Expense - Net.....	3,269,932.94
Other Interest Expenses.....	<u>1,703,920.65</u>
Total Interest Charges.....	<u>68,852,022.34</u>
Net Income.....	<u>\$ 199,459,224.68</u>

Louisville Gas and Electric Company  
Analysis of Retained Earnings  
August 31, 2016

	<u>Year Ended 8/31/16</u>
Balance at Beginning of Period.....	\$ 1,080,312,749.01
Add:	
Net Income for Period.....	199,459,224.68
Deduct:	
Adjustment to Retained Earnings.....	-
Common Dividends	
Common Stock Without Par Value.....	<u>125,000,000.00</u>
Balance at End of Period.....	<u><u>\$ 1,154,771,973.69</u></u>

Exhibit 3

Supplemental Indentures for Louisville Gas and Electric

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**LOUISVILLE GAS AND ELECTRIC COMPANY**

**TO**

**THE BANK OF NEW YORK MELLON,**

**Trustee**

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**Supplemental Indenture No. 4  
dated as of September 1, 2015**

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**Supplemental to the Indenture  
dated as of October 1, 2010**

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**Establishing**

**First Mortgage Bonds, 3.300% Series due 2025  
First Mortgage Bonds, 4.375% Series due 2045**



#### **SUPPLEMENTAL INDENTURE NO. 4**

SUPPLEMENTAL INDENTURE No. 4, dated as of the first day of September, 2015, made and entered into by and between LOUISVILLE GAS AND ELECTRIC COMPANY, a corporation duly organized and existing under the laws of the Commonwealth of Kentucky, having its principal corporate offices at 220 West Main Street, Louisville, Kentucky 40202 (hereinafter sometimes called the "Company"), and THE BANK OF NEW YORK MELLON, a New York banking corporation, having its corporate trust office at 101 Barclay Street, 7th Floor, New York, New York 10286 and having its principal place of business at One Wall Street, New York, New York 10286 (hereinafter sometimes called the "Trustee"), as Trustee under the Indenture, dated as of October 1, 2010 (hereinafter called the "Original Indenture"), between the Company and said Trustee, as heretofore supplemented, this Supplemental Indenture No. 4 being supplemental thereto. The Original Indenture, as heretofore supplemented, and this Supplemental Indenture No. 4 are hereinafter sometimes, collectively, called the "Indenture."

#### **Recitals of the Company**

The Original Indenture was authorized, executed and delivered by the Company to provide for the issuance from time to time of its Securities (such term and all other capitalized terms used herein without definition having the meanings assigned to them in the Original Indenture), to be issued in one or more series as contemplated therein, and to provide security for the payment of the principal of and premium, if any, and interest, if any, on such Securities.

The Company has heretofore executed and delivered supplemental indentures for the purpose of creating series of Securities as set forth in Exhibit A hereto.

The Original Indenture and Supplemental Indentures No. 1 and No. 2, and financing statements in respect thereof, have been duly recorded and filed in the various official records in the Commonwealth of Kentucky as set forth in Supplemental Indenture No. 3.

Supplemental Indenture No. 3 has been duly recorded and filed in the various official records in the Commonwealth of Kentucky as set forth in Exhibit B hereto.

Pursuant to Article Three of the Original Indenture, the Company wishes to establish two series of Securities, such series of Securities to be hereinafter sometimes called "Securities of Series No. 5" and "Securities of Series No. 6", respectively, and, pursuant to Section 1401 of the Original Indenture, the Company wishes to correct errors in certain sections of the Original Indenture.

As contemplated in Section 301 of the Original Indenture, the Company further wishes to establish the designation and certain terms of the Securities of Series No. 5 and of the Securities of Series No. 6. The Company has duly authorized the execution and delivery of this Supplemental Indenture No. 4 to establish the designation and certain terms of such series of Securities and has duly authorized the issuance of such Securities; and all acts necessary to make this Supplemental Indenture No. 4 a valid agreement of the Company, and to make the Securities of Series No. 5 and the Securities of Series No. 6 valid obligations of the Company, have been performed.

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE NO. 4 WITNESSETH, that, for and in consideration of the premises and of the purchase of the Securities by the Holders thereof and in order to secure the payment of the principal of and premium, if any, and interest, if any, on all Securities from time to time Outstanding and the performance of the covenants therein and in the Indenture contained, the Company hereby grants, bargains, sells, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in and lien on the

Company's right, title and interest in the generating stations described in Exhibit C hereto, as and to the extent, and subject to the terms and conditions, set forth in the Original Indenture; and it is further mutually covenanted and agreed as follows:

**ARTICLE ONE**

**SECURITIES OF SERIES NO. 5**

**SECTION 101. Creation of Series No. 5.**

There is hereby created a series of Securities designated "First Mortgage Bonds, 3.300% Series due 2025", and the Securities of such series shall:

(a) be issued initially in the aggregate principal amount of \$300,000,000 and shall be limited to such aggregate principal amount (except as contemplated in Section 301(b) of the Original Indenture); provided, however, that, as contemplated in the last paragraph of Section 301 of the Original Indenture, additional Securities of such series may be subsequently issued from time to time, without any consent of Holders of the Securities of such series, if and to the extent that, prior to each such subsequent issuance, the aggregate principal amount of the additional Securities then to be issued shall have been set forth in a Supplemental Indenture, and, thereupon, the Securities of such series shall be limited to such aggregate principal amount as so increased (except as aforesaid and subject to further such increases);

(b) be dated September 28, 2015;

(c) have a Stated Maturity of October 1, 2025, subject to prior redemption or purchase by the Company;

(d) have such additional terms as are established in an Officer's Certificate as contemplated in Section 301 of the Original Indenture; and

(e) be in substantially the form or forms established therefor in an Officer's Certificate, as contemplated by Section 201 of the Original Indenture.

**SECTION 102. Creation of Series No. 6.**

There is hereby created a series of Securities designated "First Mortgage Bonds, 4.375% Series due 2045", and the Securities of such series shall:

(a) be issued initially in the aggregate principal amount of \$250,000,000 and shall be limited to such aggregate principal amount (except as contemplated in Section 301(b) of the Original Indenture); provided, however, that, as contemplated in the last paragraph of Section 301 of the Original Indenture, additional Securities of such series may be subsequently issued from time to time, without any consent of Holders of the Securities of such series, if and to the extent that, prior to each such subsequent issuance, the aggregate principal amount of the additional Securities then to be issued shall have been set forth in a Supplemental Indenture, and, thereupon, the Securities of such series shall be limited to such aggregate principal amount as so increased (except as aforesaid and subject to further such increases);

(b) be dated September 28, 2015;

(c) have a Stated Maturity of October 1, 2045, subject to prior redemption or purchase by the Company;

(d) have such additional terms as are established in an Officer's Certificate as contemplated in Section 301 of the Original Indenture; and

(e) be in substantially the form or forms established therefor in an Officer's Certificate, as contemplated by Section 201 of the Original Indenture.

## **ARTICLE TWO**

### **COVENANT**

#### **SECTION 201. Satisfaction and Discharge.**

The Company hereby agrees that, if the Company shall make any deposit of money and/or Eligible Obligations with respect to any Securities of Series No. 5 or any Securities of Series No. 6, or any portion of the principal amount thereof, as contemplated by Section 901 of the Indenture, the Company shall not deliver an Officer's Certificate described in clause (z) in the first paragraph of said Section 901 unless the Company shall also deliver to the Trustee, together with such Officer's Certificate, either:

(a) an instrument wherein the Company, notwithstanding the satisfaction and discharge of its indebtedness in respect of such Securities, or portions of the principal amount thereof, shall retain the obligation (which shall be absolute and unconditional) to irrevocably deposit with the Trustee or Paying Agent such additional sums of money, if any, or additional Eligible Obligations (meeting the requirements of Section 901), if any, or any combination thereof, at such time or times, as shall be necessary, together with the money and/or Eligible Obligations theretofore so deposited, to pay when due the principal of and premium, if any, and interest due and to become due on such Securities or portions thereof, all in accordance with and subject to the provisions of said Section 901; provided, however, that such instrument may state that the obligation of the Company to make additional deposits as aforesaid shall be subject to the delivery to the Company by the Trustee of a notice asserting the deficiency accompanied by an opinion of an independent public accountant of nationally recognized standing, selected by the Trustee, showing the calculation thereof (which opinion shall be obtained at the expense of the Company); or

(b) an Opinion of Counsel to the effect that the beneficial owners of such Securities, or portions of the principal amount thereof, will not recognize income, gain or loss for United States federal income tax purposes as a result of the satisfaction and discharge of the Company's indebtedness in respect thereof and will be subject to United States federal income tax on the same amounts, at the same times and in the same manner as if such satisfaction and discharge had not been effected.

## **ARTICLE THREE**

### **CORRECTIONS**

#### **SECTION 301. Correction of Certain Sections of the Indenture.**

In accordance with Section 1401(l) of the Original Indenture, the Original Indenture is hereby corrected as set forth in Exhibit D hereto.

**ARTICLE FOUR**

**MISCELLANEOUS PROVISIONS**

**SECTION 401. Single Instrument.**

This Supplemental Indenture No. 4 is an amendment and supplement to the Original Indenture as heretofore amended and supplemented. As amended and supplemented by this Supplemental Indenture No. 4, the Original Indenture, as heretofore supplemented, is in all respects ratified, approved and confirmed, and the Original Indenture, as heretofore supplemented, and this Supplemental Indenture No. 4 shall together constitute the Indenture.

**SECTION 402. Effect of Headings.**

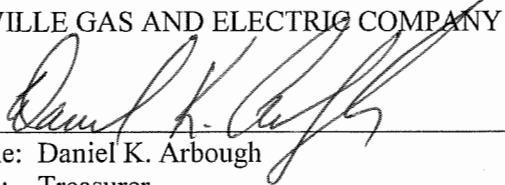
The Article and Section headings in this Supplemental Indenture No. 4 are for convenience only and shall not affect the construction hereof.

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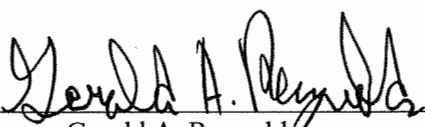
This instrument may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture No. 4 to be duly executed as of the day and year first written above.

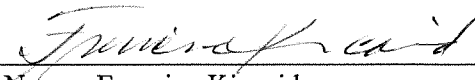
LOUISVILLE GAS AND ELECTRIC COMPANY

By:   
Name: Daniel K. Arbough  
Title: Treasurer

ATTEST:

  
Name: Gerald A. Reynolds  
Title: General Counsel, Chief Compliance  
Officer and Corporate Secretary

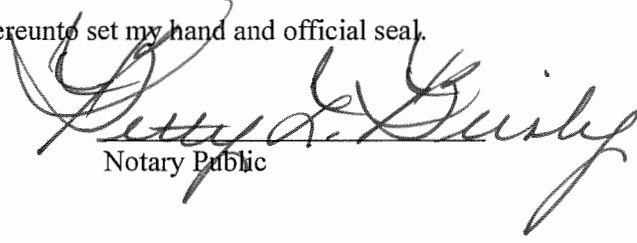
THE BANK OF NEW YORK MELLON, as Trustee

By:   
Name: Francine Kincaid  
Title: Vice President

COMMONWEALTH OF KENTUCKY            )  
  ) ss.:  
COUNTY OF JEFFERSON                 )

On this 17 day of September, 2015, before me, a notary public, the undersigned, personally appeared Daniel K. Arbough, who acknowledged himself to be the Treasurer of LOUISVILLE GAS AND ELECTRIC COMPANY, a corporation of the Commonwealth of Kentucky and that he, as such Treasurer, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Treasurer.

In witness whereof, I hereunto set my hand and official seal.

  
Notary Public

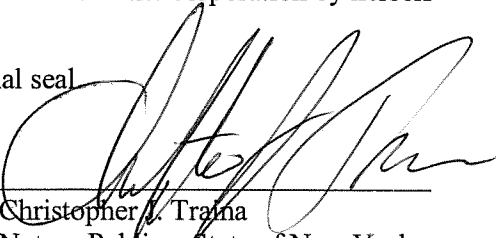


MY COMMISSION EXPIRES:  
June 21, 2018

STATE OF NEW YORK     )  
                                  ) ss.:  
COUNTY OF NEW YORK    )

On this 17<sup>th</sup> day of September, 2015, before me, a notary public, the undersigned, personally appeared Francine Kincaid, who acknowledged herself to be a Vice President of THE BANK OF NEW YORK MELLON, a corporation and that she, as Vice President, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by herself as Vice President.

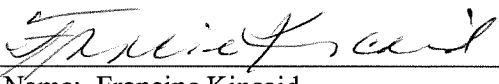
In witness whereof, I hereunto set my hand and official seal

By:   
Christopher A. Traina  
Notary Public – State of New York  
No. 01TR6297825  
Qualified in Queens County  
My Commission Expires  
March 03, 2018  
Certified in New York County

The Bank of New York Mellon hereby certifies that its precise name and address as Trustee hereunder are:

The Bank of New York Mellon  
101 Barclay Street, 7<sup>th</sup> Floor  
New York, New York 10286  
Attn: Corporate Trust Administration

THE BANK OF NEW YORK MELLON, as Trustee

By:   
Name: Francine Kincaid  
Title: Vice President



**CERTIFICATE OF PREPARER**

The foregoing instrument was prepared by:

James J. Dimas, Senior Corporate Attorney  
Louisville Gas and Electric Company  
220 West Main Street  
Louisville, Kentucky 40202

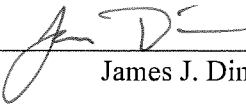
  
\_\_\_\_\_  
James J. Dimas

EXHIBIT A

LOUISVILLE GAS AND ELECTRIC COMPANY

Bonds Issued and Outstanding  
under the Indenture

<u>Supplemental Indenture No.</u>	<u>Dated as of</u>	<u>Series No.</u>	<u>Series Designation</u>	<u>Date of Securities</u>	<u>Principal Amount Issued</u>	<u>Principal Amount Outstanding<sup>1</sup></u>
1	October 15, 2010	1	Collateral Series 2010	October 20, 2010	\$574,304,000	\$574,304,000
2	November 1, 2010	2	1.625% Series due 2015	November 16, 2010	\$250,000,000	\$250,000,000
		3	5.125% Series due 2040	November 16, 2010	\$285,000,000	\$285,000,000
3	November 1, 2013	4	4.65% Series due 2043	November 14, 2013	\$250,000,000	\$250,000,000

<sup>1</sup> As of September 1, 2015.

**EXHIBIT B**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

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**Filing and Recording  
of  
Supplemental Indenture No. 3, dated as of November 1, 2013,  
to  
Indenture, dated as of October 1, 2010**

---

<b>COUNTY</b>	<b>DEED BOOK</b>	<b>PAGE NO.</b>
Breckinridge	BK: MTG 403	180 - 200
Bullitt	BK: M1522	376 - 396
Clark	BK: M776	399 - 419
Green	MBK: 285	341 - 361
Hardin	BK: 2084	706 - 726
Hart	MBK: 344	173
Henry	BK: M319	868 - 888
Jefferson	M: 13592	0087
Larue	MTGBK: 327	68
Meade	MBK: 734	567 (21)
Metcalfe	MBK: 159	463
Muhlenberg	BK: M647	436
Nelson	BK: MTG M1022	690 - 710
Oldham	BK: M2100	500 - 528
Shelby	BK: M933	24 - 44
Trimble	MBK: 197	55

**EXHIBIT C**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

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**Generating Facilities**

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**Schedule of additional generating stations located in the Commonwealth of Kentucky**

1. An undivided 22% interest in Unit 7 of the Cane Run Generating Station, located in Jefferson County, Kentucky, the remaining undivided 78% interest in Unit 7 being owned by Kentucky Utilities Company.
  
2. An undivided 38% interest in each of Unit 6 and Unit 7 of E.W. Brown Generating Station, located in Mercer County, Kentucky, the remaining 62% undivided interest in such Units being owned by Kentucky Utilities Company.

**EXHIBIT D**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

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**Corrections to Original Indenture**

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1. Clause (d) of the exceptions to the granting clauses under “EXCEPTED PROPERTY” in the Original Indenture is hereby corrected by inserting “(b),” immediately following the words “referred to in clause”.
2. Clause (p) in the third paragraph of Section 301 of the Original Indenture is hereby corrected by deleting the word “Eight” in each instance and replacing such word with the word “Nine” in each instance.
3. Clause (e) in the first paragraph of Section 806 of the Original Indenture is hereby corrected by deleting the word “Eight” and replacing such word with the word “Nine”.
4. The fourth paragraph of Section 1107 of the Original Indenture is hereby corrected by deleting the word “Eight” and replacing such word with the word “Nine”.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**TO**

**THE BANK OF NEW YORK MELLON,**

**Trustee**

---

**Supplemental Indenture No. 5  
dated as of September 1, 2016**

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**Supplemental to the Indenture  
dated as of October 1, 2010**

---

**Establishing**

**First Mortgage Bonds, Collateral Series 2016TCA**

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## SUPPLEMENTAL INDENTURE NO. 5

SUPPLEMENTAL INDENTURE No. 5, dated as of the first day of September, 2016, made and entered into by and between LOUISVILLE GAS AND ELECTRIC COMPANY, a corporation duly organized and existing under the laws of the Commonwealth of Kentucky, having its principal corporate offices at 220 West Main Street, Louisville, Kentucky 40202 (hereinafter sometimes called the "Company"), and THE BANK OF NEW YORK MELLON, a New York banking corporation, having its corporate trust office at 500 Ross Street, 12th Floor, Pittsburgh, Pennsylvania 15262 and having its principal place of business at 225 Liberty Street, New York, New York 10281 (hereinafter sometimes called the "Trustee"), as Trustee under the Indenture, dated as of October 1, 2010 (hereinafter called the "Original Indenture"), between the Company and said Trustee, as heretofore supplemented, this Supplemental Indenture No. 5 being supplemental thereto. The Original Indenture, as heretofore supplemented, and this Supplemental Indenture No. 5 are hereinafter sometimes, collectively, called the "Indenture."

### Recitals of the Company

The Original Indenture was authorized, executed and delivered by the Company to provide for the issuance from time to time of its Securities (such term and all other capitalized terms used herein without definition having the meanings assigned to them in the Original Indenture), to be issued in one or more series as contemplated therein, and to provide security for the payment of the principal of and premium, if any, and interest, if any, on such Securities.

The Company has heretofore executed and delivered supplemental indentures for the purpose of creating series of Securities as set forth in Exhibit A hereto.

The Original Indenture and Supplemental Indentures No. 1, No. 2 and No. 3, and financing statements in respect thereof, have been duly recorded and filed in the various official records in the Commonwealth of Kentucky as set forth in Supplemental Indenture No. 4.

Supplemental Indenture No. 4 has been duly recorded and filed in the various official records in the Commonwealth of Kentucky as set forth in Exhibit B hereto.

Pursuant to Article Three of the Original Indenture, the Company wishes to establish a series of Securities, such series of Securities to be hereinafter sometimes called "Securities of Series No. 7".

As contemplated in Section 301 of the Original Indenture, the Company further wishes to establish the designation and certain terms of the Securities of Series No. 7. The Company has duly authorized the execution and delivery of this Supplemental Indenture No. 5 to establish the designation and certain terms of such series of Securities and has duly authorized the issuance of such Securities; and all acts necessary to make this Supplemental Indenture No. 5 a valid agreement of the Company, and to make the Securities of Series No. 7 valid obligations of the Company, have been performed.

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE NO. 5 WITNESSETH, that, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in order to secure the payment of the principal of and premium, if any, and interest, if any, on all Securities from time to time Outstanding and the performance of the covenants therein and in the Indenture contained, the Company hereby grants, bargains, sells, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in and lien on, the real property specifically referred to in Exhibit C attached hereto and incorporated herein by reference and all right, title and interest of the Company in and to all property personal and mixed located thereon (other than Excepted Property), as and to the extent, and

subject to the terms and conditions, set forth in the Original Indenture, as heretofore amended; and it is further mutually covenanted and agreed, for the benefit of the Holders of the Securities of Series No. 7, as follows:

## **ARTICLE ONE**

### **SECURITIES OF SERIES NO. 7**

#### **SECTION 101. Creation of Series No. 7.**

There is hereby created a series of Securities designated "First Mortgage Bonds, Collateral Series 2016TCA", and the Securities of such series shall:

- (a) be issued in the aggregate principal amount of \$125,000,000 and shall be limited to such aggregate principal amount (except as contemplated in Section 301(b) of the Original Indenture);
- (b) be dated September 15, 2016;
- (c) have a Stated Maturity of September 1, 2044, subject to prior redemption by the Company;
- (d) have such additional terms as are established in an Officer's Certificate as contemplated in Section 301 of the Original Indenture; and
- (e) be in substantially the form or forms established therefor in an Officer's Certificate, as contemplated by Section 201 of the Original Indenture.

## **ARTICLE TWO**

### **MISCELLANEOUS PROVISIONS**

#### **SECTION 201. Single Instrument.**

This Supplemental Indenture No. 5 is an amendment and supplement to the Original Indenture as heretofore amended and supplemented. As amended and supplemented by this Supplemental Indenture No. 5, the Original Indenture, as heretofore supplemented, is in all respects ratified, approved and confirmed, and the Original Indenture, as heretofore supplemented, and this Supplemental Indenture No. 5 shall together constitute the Indenture.

#### **SECTION 202. Trustee.**

The Trustee accepts the amendment of the Original Indenture effected by this Supplemental Indenture No. 5 upon the terms and conditions set forth in the Original Indenture, as heretofore amended and supplemented, including the terms and provisions defining and limiting the liabilities and responsibilities of the Trustee, which terms and provisions shall in like manner define and limit its liabilities and responsibilities in the performance of the trust created by the Original Indenture, as heretofore amended and supplemented, and as hereby amended. The Recitals of the Company contained in this Supplemental Indenture No. 5 shall be taken as the statements of the Company, and the Trustee assumes no responsibility for their correctness and makes no representations as to the validity or sufficiency of this Supplemental Indenture No. 5.

#### **SECTION 203. Effect of Headings.**



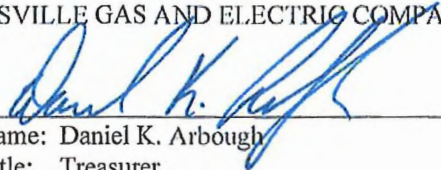
The Article and Section headings in this Supplemental Indenture No. 5 are for convenience only and shall not affect the construction hereof.

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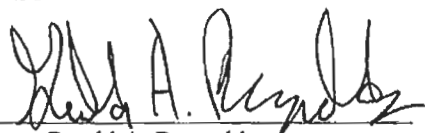
This instrument may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture No. 5 to be duly executed as of the day and year first written above.

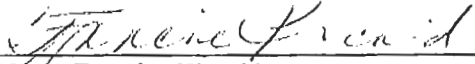
LOUISVILLE GAS AND ELECTRIC COMPANY

By:   
Name: Daniel K. Arbough  
Title: Treasurer

ATTEST:

  
Name: Gerald A. Reynolds  
Title: General Counsel, Chief Compliance  
Officer and Corporate Secretary

THE BANK OF NEW YORK MELLON, as Trustee

By:   
Name: Francine Kincaid  
Title: Vice President

COMMONWEALTH OF KENTUCKY     )  
  ) ss.:  
COUNTY OF JEFFERSON         )

On this   7   day of September, 2016, before me, a notary public, the undersigned, personally appeared Daniel K. Arbough, who acknowledged himself to be the Treasurer of LOUISVILLE GAS AND ELECTRIC COMPANY, a corporation of the Commonwealth of Kentucky and that he, as such Treasurer, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Treasurer.

In witness whereof, I hereunto set my hand and official seal.

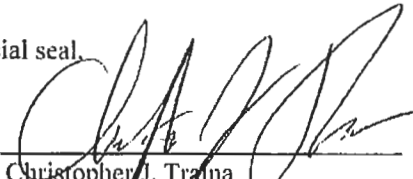


The notary seal is circular with a dashed border. The outer ring contains the text "BETTY BRINLY" at the top and "JEFFERSON COUNTY" at the bottom. The inner circle contains the text "STATE OF KENTUCKY" at the top, "NOTARY PUBLIC" in the center, and "PUBLIC" at the bottom. Below the seal, the text "MY COMMISSION EXPIRES: June 21, 2018" is printed. To the right of the seal, the signature "Betty Brinly" is written in blue ink, with a horizontal line underneath it. Below the signature, the words "Notary Public" are printed.

STATE OF NEW YORK    )  
                                  ) ss.:  
COUNTY OF NEW YORK )

On this 1st day of September, 2016, before me, a notary public, the undersigned, personally appeared Francine Kincaid, who acknowledged herself to be a Vice President of THE BANK OF NEW YORK MELLON, a corporation and that she, as Vice President, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by herself as Vice President.

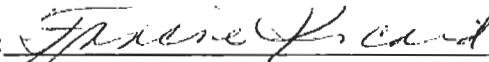
In witness whereof, I hereunto set my hand and official seal.

By:   
Christopher J. Traina  
Notary Public – State of New York  
No. 01TR6297825  
Qualified in Queens County  
Certified in New York County  
My Commission Expires  
March 03, 2018

The Bank of New York Mellon hereby certifies that its precise name and address as Trustee hereunder are:

The Bank of New York Mellon  
500 Ross Street, 12th Floor  
Pittsburgh, Pennsylvania 15262  
Attn: Corporate Trust Administration

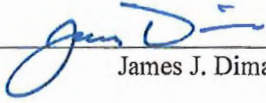
THE BANK OF NEW YORK MELLON, as Trustee

By:   
Name: Francine Kincaid  
Title: Vice President

**CERTIFICATE OF PREPARER**

The foregoing instrument was prepared by:

James J. Dimas, Senior Corporate Attorney  
Louisville Gas and Electric Company  
220 West Main Street  
Louisville, Kentucky 40202

  
James J. Dimas