

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF)	
LOUISVILLE GAS AND ELECTRIC)	
COMPANY FOR (1) AN ORDER)	
AUTHORIZING THE ISSUANCE OF)	
SECURITIES AND THE ASSUMPTION OF)	CASE NO. 2018-00335
OBLIGATIONS AND (2) AN ORDER)	
AMENDING AND EXTENDING EXISTING)	
AUTHORITY WITH RESPECT TO)	
REVOLVING LINE OF CREDIT)	

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
COMMISSION STAFF'S INITIAL REQUEST FOR INFORMATION
DATED NOVEMBER 1, 2018

FILED: NOVEMBER 16, 2018


VERIFICATION

COMMONWEALTH OF KENTUCKY)

)

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 16th day of November 2018.



Notary Public

My Commission Expires:

Judy Schooler

Notary Public, ID No. 603967

State at Large, Kentucky

Commission Expires 7/11/2022

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Initial Request for Information
Dated November 1, 2018

Case No. 2018-00335

Question No. 1

Responding Witness: Daniel K. Arbough

- Q-1. Refer to LG&E's application at paragraph 5.
- a. Describe in detail what the \$176 million in commercial paper referred to in paragraph 5 of the application was used to fund.
 - b. Explain the basis for the contention that the Tax Cuts and Jobs Act (TCJA) surcredit and the impact of TCJA on other rate mechanisms will lower cash receipts an estimated \$25 million.
 - c. Provide a detailed list of all projects for which LG&E anticipates incurring \$818 million in capital expenditures in the remainder of 2018 and calendar year 2019.
 - d. Explain what LG&E meant by "ongoing needs of the business" as used in paragraph 5 of the application.

A-1.

- a. Commercial paper is used to fund any cash need that cannot be met via operating cash flow. As noted in paragraph 3 on page 2 of the application, the Company does not assign specific financing to any particular project or use, and does not project-finance capital projects.
- b. As explained in detail by Kent W. Blake on pages 11-12 of his Direct Testimony on Rehearing in Case No. 2018-00034 dated April 6, 2018, the entire amount of the TCJA surcredit provided to customers must be financed by the Company. This is a different situation than the Companies experienced with the Tax Reform Act of 1986. Both Companies were in a net operating loss position prior to passage of TCJA due to years of a provision previously in the tax code known as "bonus depreciation". As a result, \$54 million is expected to be provided to LG&E customers via the TCJA sur-credit from September 2018 to

April 2019, and this is a reduction in cash revenue with no reduction in cash expenses. The Companies were not in a net operating loss position when the Tax Reform Act of 1986 was passed, so there were cash expense savings to offset any reduction in cash revenue. The \$25 million referenced in the financing application is the debt portion of the \$54 million mentioned above. In calculating the \$25 million the Company assumed 47% of the TCJA sur-credit amount would be funded with debt.

- c. See attached.
- d. The phrase "ongoing needs of the business" as used in paragraph 5 of the application refers to any permanent cash out flow, such as pension contributions, taxes, and interest expense.

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 1 of 20
Arbough

Project #	Description	2018	2019	Total
00026FACL	AOC MAIN HALLWAY & BREAKROOM	-	174,875.92	174,875.92
00027FACL	AOC MEN/WOMENS LOCKER ROOM	-	300,040.40	300,040.40
00028FACL	AOC ASSEMBLY ROOM RENOVATION	-	125,084.41	125,084.41
00029FACL	AOC SPACE EXPANSION	337,878.30	998,041.11	1,335,919.41
00031FACL	EOC SPACE EXPANSION	145,088.28	-	145,088.28
00032FACL	LGE CTR FITNESS CTR FLOOR LGE	14,071.31	-	14,071.31
00034FACL	BOC 1ST FLOOR RENOVATION LGE	-	884,514.08	884,514.08
00035FACL	South Ops Engineering Center	-	2,701,179.56	2,701,179.56
00036FACL	SSC ROOF REPLACEMENT	-	100,047.26	100,047.26
00039FACL	LGE CTR 12TH FLOOR KITCHEN LGE	23,452.18	-	23,452.18
00040FACL	BOC GUARDSHACK	37,915.87	-	37,915.87
00053FACL	BOC AHU-7 BOC-LL MAINT AHU RM	-	128,936.28	128,936.28
00054FACL	BOC AHU-8 BOC-LL PSRT AHU RM	-	128,936.28	128,936.28
00065FACL	GAS & EL SAFETY-TRAIN BLDG EOC	1,233,337.89	975,626.93	2,208,964.82
00066FACL	BOC DCC SPACE CONVERSION LGE	-	884,916.45	884,916.45
00067FACL	BOC ANNEX LGE	295,178.15	-	295,178.15
00068FACL	LGE CTR 23RD FL CARPET LGE	46,904.36	-	46,904.36
00072FACL	CALL CENTER RENO BOC 3 LGE	490,875.16	-	490,875.16
00075FACL	BOC Elevator refurbish	-	338,052.28	338,052.28
00076FACL	Building Façade Repairs	-	500,033.55	500,033.55
00080FACL	SSC Trnsfmr Bldg Ovhd Door	-	15,002.02	15,002.02
00082FACL	Auburndale Boiler Replacement	-	249,986.36	249,986.36
00085FACL	AOC Telecom Space Expansion	-	175,057.36	175,057.36
00105FACL	KUGO Floor 1, 2 Remodel LGE	-	154,929.68	154,929.68
00106FACL	RADIANT HEAT PANELS - LGE	15,653.45	-	15,653.45
00107FACL	BOC ROOM 201 RENO - LGE	20,497.13	-	20,497.13
00114FACL	Dix Dam Replace CRAC Units LGE	-	10,994.05	10,994.05
0064FACIL	SIMP SWITCHGEAR UPG IT L	-	56,255.50	56,255.50
0064FACTL	SIMP SWITCHGEAR UPG TR L	-	36,003.52	36,003.52
119902	Clear 12/04 A&G	131,650.00	198,709.00	330,359.00
122457	EDO ADJUSTMENTS	131,000.00	-	131,000.00
123137	LG&E POLE INSPECTION	-	4,910,864.51	4,910,864.51
123906LGE	BRCT6 C Inspection LGE	-	7,907,453.88	7,907,453.88
124090	MC Limestone Unld Bucket	-	64,480.87	64,480.87
124518	TC1 RECYC PUMP PIPING EBW	381,046.44	364,084.97	745,131.41
124526	TC COAL YARD BUILDING SIDING	-	57,441.16	57,441.16
127095	Ohio Falls Redev. #8	4,205,533.70	-	4,205,533.70
127578	MC4 Economizer	488,000.00	-	488,000.00
127590	MC4 Condenser	972,000.00	-	972,000.00
131715	N1DT Pleasure Ridge Sub-CW	-	2,129,116.37	2,129,116.37
131852	CIP-LGE-2017	30,816.01	-	30,816.01
131853	CIP-LGE-2018	212,716.15	-	212,716.15
132002	TC CT HGP Insp Unit 7	1,378,422.05	301,785.45	1,680,207.50
132756	GS GE Lab Equip	-	56,413.60	56,413.60
132960	MC1 DCS 2019	300,000.00	425,000.00	725,000.00
132967	MC4 Precipitator 2018	1,350,000.00	-	1,350,000.00
132976	MC Dozer #1	-	2,200,000.00	2,200,000.00
132999	MC4 Relays	29,000.00	-	29,000.00
133076	GS GE Dam Impnd	-	37,880.10	37,880.10
133615LGE	TC PLT ENG/MTR RWNDS	95,966.00	142,522.85	238,488.85
133622LGE	TC LAB PURCH MONITORS	-	49,189.85	49,189.85
133627LGE	TC LAB EQUIP PURCHASES	-	30,337.55	30,337.55
133653LGE	TC SAFETY & ERT EQUIP	-	31,226.40	31,226.40
133671	EFFLUENT WATER STUDY-MC	-	242,000.00	242,000.00
133679	EFFLUENT WATER STUDY-TC LGE	-	94,380.00	94,380.00
134113LGE	TC2 SCR L3 REPLACEMENT	93,445.06	-	93,445.06
134198	CR CNL-DLPRK 69KV	575,589.67	5,524,223.83	6,099,813.50
134238	DSP LIME KILN SUBSTATION	-	79,431.01	79,431.01
134898	PE Vehicle Purchases	189,724.85	200,000.00	389,724.85
135245LGE	TC2 PJFF B&C	131,557.33	-	131,557.33
136480	GS GE Test Equip Pool	39,728.63	67,209.04	106,937.67
136562	GS SL Coal Mstr Ash Anlzd LGE	-	106,433.25	106,433.25
136636	MC3 SCR Catalyst Layer 1	-	1,973,744.55	1,973,744.55
136642	MC2 FWTR HTRS Phase 1	5,000.00	-	5,000.00
137039	TC1 RPLCE AIR HEATER BASKETS	-	1,295,127.67	1,295,127.67
137503	CR AP & LF Capping & Closure	126,465.08	-	126,465.08
137572	ROUTINE EMS-LGE 2018	6,372.88	-	6,372.88

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 2 of 20
Arbough

Project #	Description	2018	2019	Total
137585LGE	TC2 DCS UPGRADE	-	368,382.19	368,382.19
137587	TC1 DCS UPGRADE	-	1,087,147.50	1,087,147.50
137633LGE	TC2 SLMS UNIT	26,200.63	12,226.54	38,427.17
138019	EMINENCE HIGH PR REG STA	12,723.94	-	12,723.94
138032	IMPROVE PIPELINES	101,780.32	499,874.04	601,654.36
138395	TC1 SH FRONT PLATEN	-	159,592.50	159,592.50
138400	TC1 SH DMW REPLACE	-	257,388.75	257,388.75
139065	LGE CTR REMODEL REMOVAL	42,306.47	49,972.95	92,279.42
139495	Gas Adjustments	9,333.36	-	9,333.36
139595	GS GE DME Phase II LGE	3,125.00	-	3,125.00
139682LGE	TC PREDICTIVE DEVICES MAINT	-	22,307.03	22,307.03
139717	MC Limestone Barge	22,000.00	-	22,000.00
139718	MC4 Inter SH Pendants	1,350,000.00	-	1,350,000.00
139721	MC 3C GSU Transformer	-	421,211.37	421,211.37
139725	TC1 REPLACE TURBINE ROOM ROOF	-	512,183.40	512,183.40
139767	MC CH Railroad Track 2018	153,000.00	-	153,000.00
139814	MC Matl Handling Chutes 2018	16,000.00	-	16,000.00
139821	MC3 SCR Catalyst L2	52,000.00	-	52,000.00
139830	MC4 SCR CATALYST L3 2018	824,000.00	-	824,000.00
139841	MC4 Expansion Joints 2018	105,000.00	-	105,000.00
139851	MC Misc Equipment 2018	283,000.00	-	283,000.00
139873	MC1 TURB MISC	-	4,072,243.86	4,072,243.86
139878	MC3 TURB MISC	-	2,444,106.71	2,444,106.71
139880	MC1 FDWTR HTRS Phase 1	330,000.00	919,977.90	1,249,977.90
139889	MC3 AIR HTR BASKETS	-	1,466,572.59	1,466,572.59
139892	MC3 FDWTR HTRS	-	1,032,054.07	1,032,054.07
139897	MC4 FDWTR HTRS	970,000.00	-	970,000.00
139901	MC Conveyor Belts 2018	275,000.00	-	275,000.00
139902	MC Safety Equipment 2018	35,000.00	-	35,000.00
139991	TEP-CR-MIDVALLEY-FNCHVL	-	77,998.46	77,998.46
140014LGE	TC CT DCS UPGRADE	-	89,083.65	89,083.65
140032LGE	TC PURCHASE JLG LIFT	-	98,379.70	98,379.70
140048LGE	TC2 TURBINE CONTROLS UPGRADE	17,016.56	-	17,016.56
140074	DIGITAL EMS COM CHNLS-LGE-2019	-	38,945.43	38,945.43
140087	LITE UPRDE EMS SWARE LGE-2019	-	28,607.17	28,607.17
140099	EMS OPERATOR MONITORS-LGE-2019	-	15,375.69	15,375.69
140107	OF Station Gantry Crane	399,761.10	-	399,761.10
140112	ROUTINE EMS-LGE 2019	-	6,081.90	6,081.90
140342LGE	MISC TOOLS LGE	-	36,892.39	36,892.39
140440	TEP-CR-NORTH TAP-SO PARK	171,820.46	2,836,855.98	3,008,676.44
140619LGE	TC CONVEYOR BELT REPLACE	-	70,787.63	70,787.63
140654LGE	TC CBU BKT & CHAIN	-	223,070.25	223,070.25
140659LGE	TC CT LCI UPGRADE #2	-	118,513.22	118,513.22
140660LGE	TC CT LC1 UPGRADE #3	109,902.83	-	109,902.83
140968	BELTLINE SEPARATION	262,253.01	-	262,253.01
141004	ST HELEN FACILITY	743,053.87	1,915,173.40	2,658,227.27
141390	Environmental Equipment LGE	-	17,500.00	17,500.00
141392	LGE FURNITURE PROJ	68,154.43	127,719.90	195,874.33
141618	Meter Shop 2019 LG&E Electric	-	40,000.00	40,000.00
142367	Retail Hardware LG&E 2018	39,409.37	-	39,409.37
142399	MC3 Gen Stator Bar Install	-	2,973,256.80	2,973,256.80
143591	MC CH Railroad Track 2019	-	170,579.90	170,579.90
143592	MC Material Hndlg Chutes 2019	-	242,996.88	242,996.88
143600	MC1 Expansion Joints 2019	-	98,136.02	98,136.02
143601	MC3 Expansion Joints 2019	-	98,136.02	98,136.02
143603	MC Misc Equipment 2019	-	693,759.91	693,759.91
143604	MC2 DCS 2020	82,000.00	-	82,000.00
143605	MC3 DCS (2019)	-	1,269,331.66	1,269,331.66
143609	MC Conveyor Belts 2019	-	267,778.65	267,778.65
143611	MC Safety Equipment 2019	-	33,728.46	33,728.46
143633	MC Misc Lab Equipment 2018	65,000.00	-	65,000.00
143634	MC Misc Lab Equipment 2019	-	62,496.82	62,496.82
143637	MC3 Turbine L-0 Buckets 2019	803,000.00	1,990,000.00	2,793,000.00
143640	CR7 NGCC Inventory	8,953.04	-	8,953.04
144475	GS GE CORS	0.27	-	0.27
144503	GS CDM GMD Protection	-	21,002.83	21,002.83
144510	GS CDM CIP Ver 7.0 LGE	-	69,721.88	69,721.88

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 3 of 20
Arbough

Project #	Description	2018	2019	Total
144531	CR7 Misc Project (multi-year)	45,622.68	116,050.04	161,672.72
144857	MOIST REMOVAL UNIT	161,381.80	-	161,381.80
144869	PRESTON CITY GATE STAT	663,005.92	2,950,027.39	3,613,033.31
145021	LGE SECURITY EQUIPMENT 2018	156,162.61	-	156,162.61
145027	LGE SECURITY EQUIPMENT 2019	-	164,548.96	164,548.96
145087	Retail Hardware LG&E 2019	-	110,000.00	110,000.00
145402	HR Cap Equip Improvmnts LGE	10,000.00	10,000.00	20,000.00
147048	MC 3 and 4 Spare GSU Trans	-	1,587,221.16	1,587,221.16
147054	MC1 Reheat Outlet Header	-	987,492.29	987,492.29
147056	MC2 Boiler Lower Slope	-	869,995.63	869,995.63
147057	MC2 Reheat Outlet Header	13,000.00	-	13,000.00
147058	MC3 Econ Inlet Header	-	1,368,236.17	1,368,236.17
147061	MC4 IR Panels	1,180,000.00	-	1,180,000.00
147078	MC 1&2 Reactant Supply Loop	-	1,090,532.74	1,090,532.74
147527	REL Locust Sub Switch MOS	271,401.39	-	271,401.39
147735	FULL UPGRD EMS SWARE-LGE-2020	-	31,423.15	31,423.15
147745	SIMP V_WALL C_RPLC-LGE 2019	-	151,033.85	151,033.85
147766	EMS DBASE EXPANSION-LGE-2019	-	33,467.15	33,467.15
147791	EMS APP ENHANCEMENTS-LGE-2018	19,192.18	-	19,192.18
147795	EMS APP ENHANCEMENTS-LGE-2019	-	19,259.35	19,259.35
147800	RTU-IP TRAFFIC TO EMS-LGE-2018	60,284.48	-	60,284.48
147802	RTU-IP TRAFFIC TO EMS-LGE-2019	-	59,739.61	59,739.61
147831	Corporate Contingency-LGE	1,085,000.00	2,170,000.00	3,255,000.00
148022	RESTROOM RENOVATIONS-BOC	621,865.84	-	621,865.84
148081	WASTE MANAGEMENT GAS RELO	214,107.45	-	214,107.45
148083	OF Bridge Resurface	-	73,513.77	73,513.77
148084	OF Asphalt Repl	-	29,298.98	29,298.98
148115	CR7 DCS Controls Plat	124,455.07	-	124,455.07
148132	GS GE CV Landfill Instrum	-	40,745.49	40,745.49
148175	GS CDM Tripwire	13,200.00	37,505.06	50,705.06
148396	Prop. Tax Cap. - LGE Non-Mech	-	375,251.71	375,251.71
148469	CR DEMO - PE ONLY	10,839,168.80	14,201,000.00	25,040,168.80
148484	N-1 DIST XFMR PLAINVIEW CW	2,389,275.86	1,119,594.66	3,508,870.52
148490	N1DT PLAINVIEW SUB	2,774,626.99	3,045,216.38	5,819,843.37
148727	LGE SMAC 2017 PROJECT	793,428.21	1,408,193.14	2,201,621.35
148755	SCM2017 LGE REPL LGCY OIL BRKR	25,400.62	-	25,400.62
148821	SR Floyd-Seminole 69kV	213,198.19	1,069,235.73	1,282,433.92
148822	CR Olin-Tip Top 69kV	-	206,338.60	206,338.60
148857	Oxmoor Underground Repl	1,606.93	-	1,606.93
148873	LEO TOOLS & EQUIPMENT 2017	3,806.56	-	3,806.56
148884	DIST XFMR LIME KILN CW	-	1,499,089.68	1,499,089.68
148885	DIST XFMR LIME KILN SUB	-	2,999,216.59	2,999,216.59
148896	LEO TRANSMISSION LINE CLR 2018	199,032.48	-	199,032.48
148897	DWNTWN NTWK VENT PRCT REPL18	309,927.98	-	309,927.98
148898	LEO DWNTWN NTWK VAULT RPR 2018	572,240.28	-	572,240.28
148899	PILC 2018 LGE CABLE REPL	5,512,549.85	-	5,512,549.85
148909	SCM2018 LGE CAP&PIN INSLTR UPG	118,614.07	-	118,614.07
148910	SCM2018 LGE RPL SUB BATTERY	8,440.00	-	8,440.00
148911	SCM2018 LGE LEGACY RELAY REPL	60,434.87	-	60,434.87
148912	SCM2018 LGE RPL LGCYAIRMAG BRK	79,894.49	-	79,894.49
148913	SCM2018 LGE REPL LGCY OIL BRKR	242,172.00	-	242,172.00
148914	SCM2018 LGE REPL LEGACY RTU	30,175.57	-	30,175.57
148920	URD CABLE REPL/REJUV LGE 2018	1,296,633.36	-	1,296,633.36
148948	SCM2018 LGE LTC OIL FILT ADDS	4,909.00	-	4,909.00
148949	SCM2018 LGE MISC CAPITAL SUB	78,975.75	-	78,975.75
148950	SCM2018 LGE MISC NESC COMPL	22,683.59	-	22,683.59
148951	SCM2018 LGE OIL CONTAIN UPGRD	64,800.17	-	64,800.17
148952	SCM2018 LGE REPL XFMR FANS	24,925.64	-	24,925.64
148953	SCM2018 LGE REPL ABB VHK MECH	7,436.57	-	7,436.57
148954	SCM2018 LGE SUB BLDNG & GND	53,929.74	-	53,929.74
148955	SCM2018 LGE WILDLIFE PROTECT	86,218.14	-	86,218.14
148961	2018 LGE TRANSFORMER REWIND	809,833.00	-	809,833.00
148963	LEO TOOLS AND EQUIPMENT 2018	208,812.61	-	208,812.61
148968	SCM2018 LGE TOOLS & EQUIPMENT	23,690.33	-	23,690.33
148988	Blue Lick DFR	2,276.80	-	2,276.80
149019LGE	TC2 TDBFP RECIRC VALVE A	28,447.56	-	28,447.56
149063	LEO PADMOUNT SWITCHGEAR 2018	95,942.62	-	95,942.62

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 4 of 20
Arbough

Project #	Description	2018	2019	Total
149155	UPGRADE ELEVATED PRESSURE	964,279.13	-	964,279.13
149157	SMALL TOOLS 2018 004060	52,796.01	-	52,796.01
149158	SMALL TOOLS 2018 004190	15,658.00	-	15,658.00
149160	REPL KUBOTAS TRAILERS 2018	243,708.83	-	243,708.83
149174	CONV DR DEEP TO UPPER 2017	0.11	-	0.11
149175	CONV DR DEEP TO UPPER 2018	436,941.70	-	436,941.70
149182	DRILL WELLS CENTER 2018	658,917.70	-	658,917.70
149183	DRILL WELLS MAG DEEP 2018	1.42	-	1.42
149185	DRILL WELLS MAG UPPER 2018	622,587.23	-	622,587.23
149274	MULD INSULATION BLKTS 2018	13,618.42	-	13,618.42
149294	EXHAUST FANS SHALE COMP BLDG	38,749.75	-	38,749.75
149296	MULD STOR FLD VALVE REPL	364,983.48	-	364,983.48
149304	MAG STOR FLD BARRICADES	41,094.02	-	41,094.02
149305	MAG REPL PUR HEAT EXCHANGERS	428,139.32	-	428,139.32
149308	MAG STATION ESD UPGRADE	552,320.01	-	552,320.01
149311	MAG DEHY ABSORBER MANWAYS	51,781.33	-	51,781.33
149313	SECUR UPGRADES MAG & CANMER	100.98	-	100.98
149314	MAG VALVE ACTUATOR UPGR	29,628.48	-	29,628.48
149315	MAGNOLIA BACKUP DEHY	747,417.30	-	747,417.30
149318	STOR FLD TRUNKLINE MODIF	675,269.99	-	675,269.99
149335	MULD BLOW TRUCK F550 W TANK	91,001.76	-	91,001.76
149336	MULD TRACK SKID LOADER	-	95,000.47	95,000.47
149344	SC CAPITAL - 2016 BP - LGE	173,387.20	100,000.00	273,387.20
149393	2018 H2S REMOVAL UNIT TOWER	4,207.40	-	4,207.40
149394	INST ADDTL FILTR IRON SULF REM	1,027,244.19	-	1,027,244.19
149397	MULD UPGR ESS SYSTEM	69,061.47	-	69,061.47
149398	H2S ANALYZER INLET TO MTR RUNS	269.35	-	269.35
149400	VINE GROVE BACKUP FEED	82,367.48	522,000.22	604,367.70
149409	2018 PURCH ELEC RECORD GAUGES	169,223.81	-	169,223.81
149419	2018 UPG CT STA TRANSMITTERS	29,446.04	-	29,446.04
149422	SCADA HARDWARE RPLC	1,073,716.33	-	1,073,716.33
149434	SECURITY CG & LRG REG STA	49,667.19	-	49,667.19
149476	LGE FAC IMPROVEMENTS 2018	45,030.22	-	45,030.22
149484	LGE FURN & CHAIR 2018	45,510.39	-	45,510.39
149490	CARPET/FLOORING - LGE 2017	12,600.90	-	12,600.90
149491	CARPET/FLOORING - LGE 2018	42,344.13	-	42,344.13
149493	AV EQUIPMENT - LGE 2018	29,174.90	-	29,174.90
149679	Middletown CIP Security Upgrds	412,860.03	-	412,860.03
149889	El Veh Chg Station LG&E 2015	71,263.00	-	71,263.00
150015LGE	TC2 BURNER NOZZLE REPL	-	46,173.25	46,173.25
150017LGE	TC2 BURNERS (C,F ROWS)	-	25,185.20	25,185.20
150018LGE	TC2 COAL FLOW ANALYZERS	-	24,451.93	24,451.93
150031LGE	TC ASH POND MOWERS	-	58,890.55	58,890.55
150034LGE	TC2 COAL MILL AREA HOIST UPG	16,875.71	-	16,875.71
150035	TC1 UPPER ARCH REPLACEMENT	134,793.00	211,189.69	345,982.69
150052LGE	TC2 LOWER SLOPE WW REPL	-	42,546.93	42,546.93
150053LGE	TC ELECTROMECH RELAY	-	84,766.70	84,766.70
150058LGE	TC COAL HAND BUILD ROOF REPL	18,034.33	-	18,034.33
150059LGE	TC UPG COAL HAND SAMPLER	-	133,842.15	133,842.15
150060LGE	TC COAL HAND BYPASS GATE	46,865.50	-	46,865.50
150065LGE	TC WASTE PUMPS SLUDGE PIT	-	33,460.54	33,460.54
150286	CNG FILL STATION MAG 2015	155.35	-	155.35
151000	TC1 & COMM 480V BREAK UPG	-	85,796.25	85,796.25
151006	TC2 NOX PROBE GRID	-	96,886.15	96,886.15
151010	TC1 COAL CONDUITS	-	128,694.38	128,694.38
151015	TC1 BURNERS (C,D ELEVAT)	-	343,185.00	343,185.00
151021	TC1 ELECTROMECH RELAYS	-	359,485.14	359,485.14
151231	EDO Contingency	1,000.00	-	1,000.00
151244	MC Limestone Lining Screw B	163,000.00	-	163,000.00
151245	MC Limestone Lining Screw C	50,000.00	260,000.00	310,000.00
151249	MC Plant Fire Protection	-	396,582.66	396,582.66
151252	MC2 Clg Tower Serv Bldg Roof	17,000.00	-	17,000.00
151253	MC3 Sootblower Steam Source	9,000.00	-	9,000.00
151255	MC 3B GSU Transformer Install	-	421,211.37	421,211.37
151258	MC2 Field Instrumentation 2018	10,000.00	-	10,000.00
151259	MC3 Field Instrumentation 2019	-	391,729.30	391,729.30
151287	MC Sump Pumps	90,000.00	-	90,000.00

Project #	Description	2018	2019	Total
151466	MT 345 Bus Redundancy	320,909.67	18,282.10	339,191.77
151481	DIST CAPACITORS LGE - 2019	-	150,046.83	150,046.83
151482	LEO TRANSMISSION LINE CLR	-	599,974.29	599,974.29
151483	LEO PADMOUNT SWITCHGEAR 2019	-	298,893.53	298,893.53
151484	DWNTWN NTWK VENT PRCT REPL19	-	1,425,454.30	1,425,454.30
151485	LEO DWNTWN NTWK VAULT RPR 2019	-	1,699,409.87	1,699,409.87
151486	PILC 2019 LGE CABLE REPL	-	11,949,165.59	11,949,165.59
151495	SCM2019 LGE CAP&PIN INSLTR UPG	-	163,876.36	163,876.36
151496	SCM2019 LGE RPL SUB BATTERY	-	102,922.93	102,922.93
151497	SCM2019 LGE LEGACY RELAY REPL	-	87,890.94	87,890.94
151498	SCM2019 LGE REPL LGCY AIRMAG BRK	-	408,940.86	408,940.86
151499	SCM2019 LGE REPL LGCY OIL BRKR	-	425,000.40	425,000.40
151500	SCM2019 LGE REPL LEGACY RTU	-	109,819.57	109,819.57
151529	SCM2019 LGE LTC OIL FILT ADDS	-	58,938.07	58,938.07
151530	SCM2019 LGE MISC CAPITAL SUB	-	122,000.13	122,000.13
151531	SCM2019 LGE MISC NESC COMPL	-	54,907.01	54,907.01
151532	SCM2019 LGE OIL CONTAIN UPGRD	-	111,000.09	111,000.09
151534	SCM2019 LGE REPL ABB VHK MECH	-	80,958.96	80,958.96
151535	SCM2019 LGE SUB BLDNG & GND	-	119,000.49	119,000.49
151538	SCM2019 LGE WILDLIFE PROTECT	-	82,999.51	82,999.51
151544	2019 LGE TRANSFORMER REWIND	-	1,139,000.40	1,139,000.40
151546	LEO TOOLS AND EQUIPMENT 2019	-	445,165.20	445,165.20
151549	SCM2019 LGE TOOLS & EQUIPMENT	-	33,000.24	33,000.24
151553	URD CABLE REPL/REJUV LGE 2019	-	1,700,658.43	1,700,658.43
151563	GS GE Alarm Mgmt CR	0.03	-	0.03
151577	MC1 Sootblower	-	293,543.16	293,543.16
151582	MC3 Coal Piping	244,000.00	-	244,000.00
151750	Spare 345/138 Transformer	1,969,454.49	-	1,969,454.49
151752	DSP Plainview 138kV UPG	439,677.60	501,247.07	940,924.67
151783	MC2 DCS Hardware 2019	-	99,108.56	99,108.56
151857	MC Landfill Closure 2018	-	272,548.54	272,548.54
151959LGE	BRCT 6&7 Auto Gas Shutoff LGE	3,000.00	-	3,000.00
152001LGE	TC CT EX2000 DIGITAL FE CT10	-	67,816.21	67,816.21
152004LGE	TC CT EX2000 DIGITAL FE CT7	65,860.00	-	65,860.00
152005LGE	TC CT EX2000 DIGITAL FE CT8	65,860.00	-	65,860.00
152006LGE	TC CT EX2000 DIGITAL FE CT9	-	70,468.24	70,468.24
152007LGE	TC CT LUBE OIL PUMPS	-	42,326.15	42,326.15
152009LGE	TC CT BULK CO STORAGE	128,609.24	-	128,609.24
152013LGE	TC CT MARK VI UPGD CT7	83,671.37	-	83,671.37
152014LGE	TC CT MARK VI UPGD CT8	98,877.74	-	98,877.74
152015LGE	TC CT MARK VI UPGD CT9	-	97,138.51	97,138.51
152016LGE	TC CT MARK VI UPGD CT10	-	96,926.88	96,926.88
152032LGE	TC CT HMI UPGRD	-	147,755.99	147,755.99
152050	CR7 Station Support Building	1,378.65	-	1,378.65
152055	CR7 T3K Hardware Refresh	-	67,155.95	67,155.95
152056	PR13 T3K Hardware Refresh	-	244,778.32	244,778.32
152063	TC1 REAR WW HANGER TUBES	-	60,597.19	60,597.19
152066	TC1 FRONT COUT SLOPE PANEL	193,994.09	-	193,994.09
152068LGE	TC2 BOILER WWALL 2018	73,541.40	-	73,541.40
152070LGE	TC SHUTTLE BARGE WINCH UPG	-	53,536.86	53,536.86
152081	TC1 EXP JOINTS	-	354,767.49	354,767.49
152092LGE	TC B BALL MILL LINER UPGD	34,320.00	-	34,320.00
152097LGE	TC RAT RELAYS LGE	-	65,891.18	65,891.18
152108	REL-MT-TC Sw-CF Brkr Add	39,226.52	-	39,226.52
152109	REL-Smyrna 604 Brkr Add	551,417.14	-	551,417.14
152128	GS SL GAS GC	31,450.00	-	31,450.00
152224	Clifty Creek DL1/DL2 Brkr Rpl	110,829.00	1,139,209.36	1,250,038.36
152226	Middletown (5) 345kV Brkr Rpl	185,548.64	1,219,553.50	1,405,102.14
152330	MC Gypsum Dewatering Non-ECR	10,357,900.07	3,893,128.00	14,251,028.07
152331	DIST CAPACITORS LGE - 2018	51,362.31	-	51,362.31
152417	CONV DR DEEP TO UPPER 2019	-	311,942.49	311,942.49
152419	DRILL WELLS MAG DEEP 2019	-	708,963.77	708,963.77
152423	DRILL WELLS MAG UPPER 2019	-	571,888.56	571,888.56
152424	DRILL OBVS WELLS MULD 2019	-	269,900.74	269,900.74
152425	DRILL WELLS CENTER 2019	-	784,901.42	784,901.42
152433	IR DROP COUPON MON SYS 2019	32,802.96	477,344.55	510,147.51
152439	2019 RPL VLVS CG & DIST REG FC	-	99,237.32	99,237.32

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 6 of 20
Arbough

Project #	Description	2018	2019	Total
152442	2019 PURCH ELEC RECORD GAUGES	-	169,925.04	169,925.04
152446	UPG CT STA TRANSMITTERS 2018	-	30,292.93	30,292.93
152449	SECURITY CG & LRG REG STA 2019	-	50,317.98	50,317.98
152455	COOLER HOUSING/SHROUDS 2019	-	94,580.28	94,580.28
152466	LOU INTL AIRPORT	524,510.24	-	524,510.24
152476	YARD COOLER AERIAL FAN REPL	575,903.25	-	575,903.25
152481	UPRG SCADA & FT SYS DATA COMM	5,852.17	-	5,852.17
152482	UPGRADE FT SYS DATA COMM 2017	86,690.70	-	86,690.70
152485	COELESING FILTER SEP MAG	623,181.84	-	623,181.84
152487	SECURITY UPGRADE MAG CENTER	13,971.71	-	13,971.71
152488	MACHINERY STORAGE SHED	148.96	-	148.96
152490	BOILER FUEL TRAINS	122,685.17	-	122,685.17
152495	MULD VALVE INDIC TRANSMITTER	0.31	-	0.31
152496	MUL STATN & FLD WASTE TANKS	20,609.51	-	20,609.51
152498	MULD HEAT TRACE IMPROVE 2018	20,099.34	-	20,099.34
152503	ODORANT TANK LEVEL PROBES 2018	34,749.36	-	34,749.36
152505	MULD ENG & COMP UPGRADE	-	348,937.97	348,937.97
152507	MUL STATN & FLD WASTE STORAGE	-	85,000.06	85,000.06
152508	COMPRESSOR ENGINE AUTO EQUIP	-	684,972.29	684,972.29
152511	SHALE BLDGS SECURITY UPGRADE	40,033.98	-	40,033.98
152513	CANNONS LN REGU STATN 2018	-	300,375.75	300,375.75
152514	ODORANT DETECTION SYSTEM	104,919.14	-	104,919.14
152517	PAVE LG&E ROAD	224,120.93	-	224,120.93
152524	ODORANT TANK LEVEL PROBES	-	34,508.73	34,508.73
152527	HOWARD LANE REDUNDANT FEED	70,359.48	-	70,359.48
152528	INGERSOLL EXHAUST HEADERS	-	69,394.90	69,394.90
152529	H2S GAS DETECTION	-	55,270.13	55,270.13
152531	ENGINE ROOM TRANSITE SIDING	-	520,165.75	520,165.75
152532	CONTROL RM W BASEMENT	-	491,296.33	491,296.33
152534	ONLINE AMINE ANALYZER	-	54,216.18	54,216.18
152535	ENGINE ROOM OVERHANG	-	160,008.55	160,008.55
152536	ENGINE VIBRATION EQUIP	-	199,959.15	199,959.15
152545	BRIDGE RPL E PKWY & BEARGRASS	0.06	-	0.06
152546	EAST END REINFORCEMENT	5,419,302.33	-	5,419,302.33
152551	DUMP TRUCK 2019	-	84,652.30	84,652.30
152553	SMALL TOOLS 2019 004060	-	54,337.63	54,337.63
152561	REPLACE PAD METERS	265.29	-	265.29
152569	Repl Secondary Locators	34,714.21	-	34,714.21
152572	Manhole Structural Rep 2018	155,163.64	-	155,163.64
152573	Manhole Structural Rep 2019	-	422,939.88	422,939.88
152583	STT Misc Project	50,908.00	50,697.50	101,605.50
152639	LGE Online Monitoring Equip	-	264,072.15	264,072.15
152642	LGE Resiliency Upgrades	-	264,072.14	264,072.14
152652LGE	TC2 BOILER WW	-	298,665.75	298,665.75
152667	TC1 BCWP OVERHAUL	-	121,877.58	121,877.58
152670	TC1 TDBFP PUMP OVERHAULS	-	125,876.22	125,876.22
152683LGE	TC2 B BFP OVERHAUL LGE	-	30,960.15	30,960.15
152693LGE	TC OFFICE UPGRADES %	93,456.48	151,241.63	244,698.11
152711	CR Skylight-Harmony Landing	-	207,995.55	207,995.55
152769	LGE REPLACE FAILED EQ - 2019	-	105,926.43	105,926.43
152772	CR7 CT 1&2 Insulation	-	82,985.58	82,985.58
152775	A/V EQUIPMENT - 2019	-	155,798.01	155,798.01
152778	LGE FACILITY IMPROVEMENTS-2019	-	106,433.25	106,433.25
152799	LG&E FURNITURE AND CHAIRS-2019	-	126,098.06	126,098.06
152805	LG&E CARPET/FLOORING-2019	-	47,641.55	47,641.55
153002	LGE CIFI RAP	-	1,749,999.96	1,749,999.96
153003	TC1 CEM PM MONITOR CHANGE	78,976.78	-	78,976.78
153004	LGE CEMI	-	779,999.94	779,999.94
153006	REL System Hardening LGE	-	3,250,000.08	3,250,000.08
153009	TC1 CEM SHELTER REPL	-	536,226.56	536,226.56
153015	Sub Exit Cable Repl LGE	257,000.00	1,603,692.57	1,860,692.57
153034LGE	TC2 UPG SAMPLE LINES SWAS	19,228.87	-	19,228.87
153047LGE	TC2 FINAL SH REPL*	-	24,451.93	24,451.93
153051	TC1 NATURAL GAS CONVERSION	69,750.00	-	69,750.00
153053LGE	TC2 GEN EXCITATION REPL	85,975.00	-	85,975.00
153055LGE	TC2 MDBFP START UPG	28,447.56	72,956.44	101,404.00
153056LGE	TC IMPOUNDMENT IMPROVEMENTS	-	79,868.10	79,868.10

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 7 of 20
Arbough

Project #	Description	2018	2019	Total
153065	Solar Projects - Community LGE	614,873.00	404,000.00	1,018,873.00
153070LGE	TC CT PEEC BATTERIES	-	76,187.07	76,187.07
153072LGE	TC FUEL HANDLING DOZER	-	624,596.70	624,596.70
153077	TC1 SCR CATALYST L2 NEW	226,593.15	2,254,736.93	2,481,330.08
153080LGE	TC2 SCR CATALYST L1 NEW-	-	146,993.00	146,993.00
153093	Purchase Garage Equip 17 BP	343.82	-	343.82
153098LGE	TC CT 7 REBUILD EXH EXP JOINTS	127,735.60	-	127,735.60
153373	Battery Replacements - LGE	-	158,538.88	158,538.88
153479	HC1293 Ckt Hardening	2,476.50	-	2,476.50
153537	OMN-Ashbottom TR2 Monitor	26,502.82	-	26,502.82
153538	OMN-Mill Creek TR5 Monitor	62,174.22	-	62,174.22
153561	DCC ENHANCEMENT LGE	1,683,570.88	1,808,022.46	3,491,593.34
153572	LGE Pole Inspection 2017	5,132.00	-	5,132.00
153662	BULLITT CO SYSTEM REINFORCE	4,383,710.32	19,997,283.51	24,380,993.83
153671	Kenwood 1155 CIFI 2017	24,862.88	-	24,862.88
153674	Highland 1103 CIFI 2017	369,055.82	-	369,055.82
153683	GS CDM SUBSTATION CALLBOX	10,400.00	-	10,400.00
153826	LGE Tech Trng Center	694.82	-	694.82
153871	PIPELINE EXPOSURE HWY 61	165,864.83	-	165,864.83
153884	MC3 Cooling Tower Elect Cable	-	743,314.21	743,314.21
153926	UPS CENTENNIAL HUB EXP SUB	42,783.54	-	42,783.54
153947	AOC RR & CONFERENCE ROOM UPG	120.51	-	120.51
154013	MAM System 2017 LG&E	838,431.25	-	838,431.25
154055LGE	TC SITE PAVING- 2017	2,063.68	-	2,063.68
154092	Distribution Auto LGE 2017	7,340,291.87	15,651,221.82	22,991,513.69
154095	IT Distribution Automation LGE	891,278.28	906,007.41	1,797,285.69
154108	REPLACE AIR HANDLERS BOC	72,259.26	-	72,259.26
154148	RFN-Eastwood Fence Rpl	80,305.81	-	80,305.81
154150	RFN-Cloverport Fence Rpl	9,249.37	-	9,249.37
154154	UPS Worldport Sectionalizing	0.01	-	0.01
154198	LRAA GAS PIPELINE RELOCATION	552,883.84	-	552,883.84
154202	MC4 Econ Inlet Check Valve	64,000.00	-	64,000.00
154231	ALPHA WAY	160,202.29	-	160,202.29
154324	MC Flyash Silo "A" Baghouse	-	594,651.36	594,651.36
154327	MC Basement Water Piping	-	198,217.14	198,217.14
154331	MC1 Hydrogen Coolers	-	242,936.57	242,936.57
154332	MC2 Hydrogen Coolers	-	242,936.57	242,936.57
154338	MC3 Hydrogen Coolers	-	242,936.57	242,936.57
154341	MC4 Hydrogen Coolers	-	242,936.57	242,936.57
154383	MC4 Hg Trap System	-	128,961.72	128,961.72
154384	MC4 Hg CEMS	-	337,284.51	337,284.51
154385	MC4 PM Probe	-	183,522.45	183,522.45
154386	MC Coal Barge Unloading PLC	65,000.00	-	65,000.00
154387	MC Coal Hndlg Fire System	300,000.00	-	300,000.00
154391	MC2 Fire Protection	-	144,754.16	144,754.16
154395	MC3 O2 Probes	-	247,771.40	247,771.40
154398	MC4 O2 Probes	250,000.00	-	250,000.00
154399	MC Boiler Video Camera	40,000.00	-	40,000.00
154402	MC1 Primary Air Flow Xmtrs	250,000.00	99,108.54	349,108.54
154406	MC Air Dryer Controls	26,000.00	-	26,000.00
154407	MC Turb Oil Demuls Restoration	-	135,880.77	135,880.77
154408	MC3 Control Valve Steam Chest	-	1,560,324.93	1,560,324.93
154412	MC "B" Reactant Feed Bldg Roof	57,000.00	-	57,000.00
154413	MC Turbine Room Roof Exh	9,000.00	-	9,000.00
154414	MC Oil/Water Separator	213,000.00	-	213,000.00
154415	MC1 Service Water Piping	-	1,189,302.70	1,189,302.70
154416	MC Snow Plow Vehicle	50,000.00	-	50,000.00
154472	4TH ST APTS VAULT	17,086.20	-	17,086.20
154473	LINCOLN PK VAULT REPLACEMENT	361,252.50	-	361,252.50
154540	MC Gypsum Loading System	1,508,000.00	-	1,508,000.00
154541	MC3 Secondary Air Meters	-	495,617.01	495,617.01
154542	MC4 Secondary Air Meters	500,000.00	148,662.85	648,662.85
154544	MC4 Boiler Flame Scanners	178,000.00	-	178,000.00
154555	MC1 SH Division PnlS - Partial	200,000.00	421,211.39	621,211.39
154556	MC1 WW Weld Overlay 2019	100,000.00	1,838,463.80	1,938,463.80
154571	UPS CENTENNIAL HUB - REIMB	1,875.49	-	1,875.49
154591	TC 345kV 4511 Breaker	263,949.95	-	263,949.95

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 8 of 20
Arbough

Project #	Description	2018	2019	Total
154593	MC2/MC3 Boiler Room Roof Drain	-	644,205.63	644,205.63
154598	MC 1A MDBFP OVERHAUL	-	158,694.30	158,694.30
154599	MC 1A Recycle Pump OVERHAUL	111,000.00	-	111,000.00
154600	MC 1B Blr Circ Pump OVERHAUL	-	119,023.04	119,023.04
154621	MC 4A CTP OVERHAUL 2017	30,000.00	-	30,000.00
154632	MC 1C Recycle Pump OVERHAUL	-	123,978.46	123,978.46
154635	MC 2A CTP OVERHAUL 2019	-	148,778.82	148,778.82
154638	MC 2B BCP OVERHAUL 2018	105,000.00	-	105,000.00
154641	MC 2B Recycl Pmp OVERHAUL 2018	125,000.00	-	125,000.00
154643	MC 2D Recyc Pump OVERHAUL 2019	-	123,978.46	123,978.46
154645	MC 3A CTP OVERHAUL 2019	320,000.00	-	320,000.00
154646	MC 3A Recyc Pump OVERHAUL 2019	-	123,978.46	123,978.46
154647	MC 3B CTP OVERHAUL 2018	150,000.00	-	150,000.00
154648	MC 3B Recyc Pump OVERHAUL 2019	-	123,978.46	123,978.46
154653	MC 4C Recyc Pump OVERHAUL 2018	98,000.00	-	98,000.00
154655	MC 4B Recyc Pump OVERHAUL 2018	159,000.00	-	159,000.00
154657	MC 4D Recyc Pump OVERHAUL 2019	-	123,978.46	123,978.46
154658	MC 4E Recyc Pump OVERHAUL 2022	-	123,978.46	123,978.46
154659	MC3 TDBFP OVERHAUL 2019	-	219,193.18	219,193.18
154676	TA1106-Phase3	85,431.62	-	85,431.62
154678	MC1 Warm-up Gas Valves	43,000.00	158,573.69	201,573.69
154679	MC2 Warm-up Gas Valves	5,000.00	-	5,000.00
154694	Madison 69kV Cap & Pin Rpl	216,882.15	-	216,882.15
154708	TC1 LOWER FURNACE WW REPL-	-	1,276,740.00	1,276,740.00
154719LGE	TC2 REPL SB CONTROL VLV-	-	52,206.66	52,206.66
154721LGE	TC2 ID FAN SEAL AIR UPG-	20,520.00	-	20,520.00
154729LGE	TC COAL CONVEYOR VFD UPGD-	46,728.20	45,952.47	92,680.67
154733LGE	TC2 BATTERY UPGD-	33,487.50	-	33,487.50
154743	TC1 COOLING TOWER PUMP OH	-	95,995.31	95,995.31
154753	TC VEHICLES	73,989.60	105,243.40	179,233.00
154757LGE	TC SWP RECIRC VLV-	50,244.89	-	50,244.89
154759LGE	TC LED LIGHTING-	(0.20)	68,928.71	68,928.51
154761	TC1 BOILER ROOF EXHAUSTERS	-	53,022.08	53,022.08
154762LGE	TC HVAC UPGD	-	26,511.04	26,511.04
154763LGE	TC2 COMMON WASTE SUMP UPG-	13,744.92	-	13,744.92
154769LGE	TC TRANSFORMER RELAY UPG-	-	66,921.08	66,921.08
154773LGE	TC2 TURBINE OIL FILTER UPG-	6,697.50	-	6,697.50
154786LGE	TC2 COND POLISHER RESIN UPG-	12,559.49	-	12,559.49
154790LGE	TC CT CEMS REPL-	29,414.91	-	29,414.91
154792LGE	TC CT WAREHOUSE-	-	254,380.16	254,380.16
154805LGE	TC LBU CLAMSHELL SPARE	58,480.70	-	58,480.70
154810LGE	TC CITY WATER LOOP TIE-	21,068.82	-	21,068.82
154831	CR7 UV LIGHTING	-	43,655.55	43,655.55
154833	CR7 EQ OVERHAUL	44,990.00	117,959.01	162,949.01
154838	PR12 H2 Cooler	-	69,375.99	69,375.99
154841	OF MAIN SUMP PUMP	35,599.87	-	35,599.87
154843	Trimble Co TCT 7-10	314,022.40	-	314,022.40
155051	UPS CENTENNIAL SUB-REIMB	218.00	-	218.00
155077LGE	TC INSIGHT CM VIB MONITOR-	(0.14)	11,153.51	11,153.37
155109LGE	BRCT5 Gen Prot Relay Upgr-LGE	68,759.72	-	68,759.72
155110LGE	BRCT6 Gen Prot Relay Upgr-LGE	-	30,147.82	30,147.82
155124	GS GenEng MHM Software	-	37,000.00	37,000.00
155127	GS GenEng Tsrmer Protection	-	134,418.10	134,418.10
155146LGE	BRCT5 Encl Vent Ctrl Upgr LGE	24,910.00	-	24,910.00
155149LGE	BRCT6 GT Thermal Insul - LGE	57,000.00	232,449.22	289,449.22
155155LGE	BRCT6 QuenchCooler Nozzles-LGE	50,540.00	-	50,540.00
155180	GS GenEng Insight CM CR7	6,959.91	-	6,959.91
155215	RFN-Beargrass Fence	230.30	-	230.30
155235	UPS Underground Replacement	539,903.88	-	539,903.88
155313	SCM2019 LGE TXFMR TOOLS	-	14,999.46	14,999.46
155316	LGE HW/SW 2018	150,712.49	-	150,712.49
155340	Air Compressor-LEO	-	29,598.75	29,598.75
155386	N1DT Pleasure Ridge Sub	998,726.50	3,885,216.54	4,883,943.04
155393	Purchase Garage Equip 2018BP	3,057.85	-	3,057.85
155396	MC1 Air Heater Baskets 2019	630,000.00	853,414.67	1,483,414.67
155397	BOC 3C CONF RM RENOVATION	1,019.66	-	1,019.66
155418	MC3 Boiler Extended Arch Inst	-	2,576,822.56	2,576,822.56

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 9 of 20
Arbough

Project #	Description	2018	2019	Total
155430	TA1173 CIFI 2017	13,518.78	-	13,518.78
155431	Convention Center Vault	3.30	-	3.30
155441	2017 LGE Auto Auction	6,575.00	-	6,575.00
155443LGE	TC F COAL CONV GALLERY REBLD-	-	845,495.04	845,495.04
155528	FOR-Ethel TR4 Brk Rpl	42,031.09	-	42,031.09
155529	MV-90 Daily Read LG&E	312,900.03	329,933.17	642,833.20
155539	St. Helens Land Purchase	482,526.27	-	482,526.27
155677	Calvary Ell Replacement	83,156.00	-	83,156.00
155680	CR1421 Exit Circuit	35,790.08	-	35,790.08
155681	CR1422 Exit Circuit	18,291.62	-	18,291.62
155705	OHIO FALLS U7 REWIND	1,524,976.01	-	1,524,976.01
155761	MULD & MAG CYBER SECURITY	66.54	-	66.54
155809	HB1147 Ckt Hardening	86,720.80	-	86,720.80
155810	SK1128 Skyline Enhancement	15,195.37	-	15,195.37
155855	Ballardsville Pipeline Repairs	113,484.58	-	113,484.58
155864	CF1204 CIFI 2018	164,826.71	-	164,826.71
155865	AK1290 CIFI 2018	348,100.79	-	348,100.79
155866	PV1252 CIFI 2018	176,046.89	-	176,046.89
155867	SY1250 CIFI 2018	22,164.35	-	22,164.35
155868	EW1241 Ckt Hardening	268,608.07	-	268,608.07
155869	CA1341 Ckt Hardening	125,563.95	-	125,563.95
155870	BR1351 Ckt Hardening	860,921.79	-	860,921.79
155884	LGE BRANDING	42,778.17	-	42,778.17
155906	Emissions Tst Trailer&Equi-LGE	2,898.36	-	2,898.36
155923LGE	BRCT5 Inlet Coils Repl LGE	116,600.00	-	116,600.00
155943	SSC Racking-LGE17	16,808.19	-	16,808.19
155988	Convention Ctr Vault-West	3,915.03	-	3,915.03
156026	Brown Hotel Vault	151,195.67	-	151,195.67
156027	ST L-O BLADES LGE	14,913.74	-	14,913.74
156071	Old Henry Rd Public Works	656,280.79	-	656,280.79
156136	SO Exit Circuit Duct	26,098.10	-	26,098.10
156137	AK1292 CIFI 2018	243,860.95	-	243,860.95
156139	CA1342 CKT HARDENING	87,440.52	-	87,440.52
156141	ET1171 CKT HARDENING	105,023.59	-	105,023.59
156144	ET1168 CIFI 2018	39,432.46	-	39,432.46
156166	Retire State St HP	0.01	-	0.01
156167	FM1260 CIFI 2018	100,403.39	-	100,403.39
156170	PCA Stewart 69kV C&P Insul	102,975.12	-	102,975.12
156188	Heath GT40 CGI 2017	14,259.19	-	14,259.19
156195	POR-Mud Lane (2) 69kV PT	86,842.52	-	86,842.52
156206LGE	NOC BUILD OUT LGE	3,878.81	-	3,878.81
156379	Enhanced Tap Line-2018	67,949.81	-	67,949.81
156382LGE	TC LIGHTING UPG-2018-	34,519.92	-	34,519.92
156402	DE Exit Circuit Repl	19,862.40	-	19,862.40
156426	UPGRADE 4KV XFMR WITH LTC	15,436.00	-	15,436.00
156428	SCM2018 LGE SCRAP EQUIPMENT	39,315.64	-	39,315.64
156430	SCM2018 LGE ARRESTERS	33,004.62	-	33,004.62
156435	Cane Run 14kV Station Modify	353,724.65	-	353,724.65
156443	Preston City Gate Property	98,144.98	-	98,144.98
156444	RFN Clay Fence	66,688.05	-	66,688.05
156446	Monroe City Gate Phase 2	102,759.57	-	102,759.57
156464	INSTALL HEAT AT BOC	11,522.16	2,000,032.82	2,011,554.98
156465	SSC TRSFMR SHOP RR AND BREAK	24,165.94	-	24,165.94
156467	MC 3&4 Clg Twr Serv Bldg Roof	20,000.00	-	20,000.00
156469	Churchill Downs-Square D	36,138.16	-	36,138.16
156471	PRTU-Kenzig Rd RTU	5,126.77	-	5,126.77
156477LGE	TC MOORING CELL UPGD 2018-	154,907.48	-	154,907.48
156481	RFN-Tip Top Fence	79,583.07	249,935.25	329,518.32
156482LGE	TC ELECTROMECH RELAY 2018-	84,774.13	-	84,774.13
156485	Canal Demolition	(8,712.59)	200,000.00	191,287.41
156486	TC1 BOILER RM ROOF EXHST 2018	52,467.17	-	52,467.17
156490	TC1 MULTIPLEX RM HVAC UNITS	48,805.00	-	48,805.00
156492LGE	TC ASH POND MOWERS 2018-	7,540.00	-	7,540.00
156494LGE	TC LAB MONITORS 2018-	43,658.91	-	43,658.91
156496LGE	TC LAB EQUIPMENT 2018-	24,361.85	-	24,361.85
156503LGE	TC CONVEYOR BELT REPL 2018-	67,922.14	-	67,922.14
156518	TEP-TC Reactors at TCSW	444,338.38	2,355,281.76	2,799,620.14

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 10 of 20
Arbough

Project #	Description	2018	2019	Total
156527	SO Exit Ckt Cable Replacement	-	1,211,256.00	1,211,256.00
156543	CR1420 Exit Circuit	151,531.83	-	151,531.83
156544LGE	BRCT5 Spare NOx Pump - LGE	34,594.37	-	34,594.37
156547	AMT Testing Analyzer&Equip-LGE	18,050.79	-	18,050.79
156589	Retire Louisville Downs B Sub	47,991.00	-	47,991.00
156610	Well Drilling Center	47,220.10	-	47,220.10
156612LGE	TC2 INSIGHT CM VIB MONIT 2018	5,094.57	-	5,094.57
156635LGE	TC CBU BUCKETS & CHAINS 2018-	222,028.67	-	222,028.67
156656LGE	TC F COAL CONV GLRY RBLD-2018	91,117.08	-	91,117.08
156660	MC 1A CWP OVERHAUL 2019	-	203,339.51	203,339.51
156664	MC 3B Mill Gearbox OVERHAUL 22	-	49,554.27	49,554.27
156666	MC4 Clg Twr Electric Cable	-	743,731.65	743,731.65
156674LGE	TC IMPOUNDMENT IMPROVE-2018	177,273.05	-	177,273.05
156677	AMT MAP System-LGE18	53,410.22	-	53,410.22
156683	RFN-Oxmoor Fence	126,323.27	-	126,323.27
156695	POR-Online Monitors-lab tests	59,886.41	-	59,886.41
156702LGE	TC SERVICE BUILD ROOF REPL-	26,486.10	-	26,486.10
156704LGE	TC REPL CRUSHER HOUSE SIDING-	29,678.24	-	29,678.24
156707LGE	TC PREDICT MAINT DEVICE 2018-	9,485.54	-	9,485.54
156718	MC3 SCR Roofing	-	346,879.98	346,879.98
156721	MC4 Dearator Room Roof	-	29,732.58	29,732.58
156722	MC4 SCR Roofing	-	346,879.98	346,879.98
156723	MC CH Diesel Fuel Tank	-	84,293.31	84,293.31
156726	MC1 Service Water Valves 2019	-	79,342.51	79,342.51
156739	MC3 Lower IR Panels	-	852,333.62	852,333.62
156753	MC4 SH Outlet 2020	900,000.00	1,381,630.48	2,281,630.48
156781	GS GenEng Stereoscope	1,839.83	-	1,839.83
156783	LGE Spare Transformer	261,107.00	290,184.68	551,291.68
156786	MC PAC Upgrade	-	297,511.21	297,511.21
156787	MC1 Precipitator	-	842,422.75	842,422.75
156789	MC3 Precipitator	-	891,977.02	891,977.02
156799	Well Drilling Doe Run	490,725.00	-	490,725.00
156801	Muldraugh Office Remodel	182.62	-	182.62
156806	TEP-Cane Run Switching 138kV	493,939.56	-	493,939.56
156820	TEP-Trimble County Relay	413,098.73	24,927.65	438,026.38
156825LGE	TC MOORING CELL REFURB-	-	159,736.20	159,736.20
156830LGE	TC MATERIAL HDLG STRUCT UPGD-	-	99,835.13	99,835.13
156836LGE	TC DCS SIMULATOR-	-	894,021.96	894,021.96
156846LGE	TC DCS METERING UPGD-	-	39,934.05	39,934.05
156848LGE	TC MATERIAL HAND OFFICE-	-	33,460.54	33,460.54
156850LGE	TC STACKER RECLAIM OH-	-	232,228.33	232,228.33
156853LGE	TC2 ID FAN SEALING AIR FLOW-	-	20,869.06	20,869.06
156855LGE	TC2 ID FAN REG DRIVE RETROFIT-	-	8,177.48	8,177.48
156859LGE	TC2 ID FAN HUB SEAL RETROFIT%	-	11,448.47	11,448.47
156909	PR13 SFC Switch Cab	70,440.78	181,446.79	251,887.57
156930	TC1 FRONT RH BEN REP	-	319,185.00	319,185.00
156931	TC1 SCANNER AIR FAN UPGRADE	-	51,477.75	51,477.75
156932	TC1 SB DRAIN PIPING OVERHAUL	-	76,796.25	76,796.25
156934	TC1 WALLBLOWER UPGRADE	-	38,398.13	38,398.13
156956LGE	TC2 DEMISTER CHEVRONS SPARE	64,721.38	-	64,721.38
156964	TC1 SDRS ME REMOVAL	-	115,194.38	115,194.38
156965	TC1 SDRS DP LEVEL TRANSMITTERS	-	43,470.10	43,470.10
156967LGE	TC2 FGD AGITATOR BLADES-	-	16,354.97	16,354.97
156978	TC1 HEATER CONTROLS UPGD	-	257,388.75	257,388.75
156980LGE	TC INVERTER UPG-	-	20,057.70	20,057.70
156999	TC1 HRH ELBOW	75,077.19	-	75,077.19
157074	TC1 IA COMP OH	-	428,981.25	428,981.25
157109LGE	TC2 BUILDING VENT UPGD*	-	54,918.79	54,918.79
157115LGE	TC CRITICAL HEAT UPGD*	-	79,868.10	79,868.10
157118LGE	TC GROUND FLR WATER MGMT-	-	29,950.54	29,950.54
157131	CR7 HVAC Controls Upgrade	-	20,528.16	20,528.16
157150LGE	TC COAL HAND BUILD ROOF RPL	-	23,960.43	23,960.43
157182	PR13 Site Riverside Fence	26,263.73	-	26,263.73
157186	PR13 Truck	-	13,131.88	13,131.88
157198	2018 Transp Auction LGE	19,650.96	-	19,650.96
157239	MC Ammonia Fogging System	125,000.00	325,000.00	450,000.00
157246	TC1 MDBFP COOLER ADD	-	107,245.31	107,245.31

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 11 of 20
Arbough

Project #	Description	2018	2019	Total
157248LGE	TC2 ABB MAINS BREAKER UPGD*	-	146,711.59	146,711.59
157280	STT Pig Runs	-	50,697.50	50,697.50
157281	STT Hydraulic Fusion	-	30,418.50	30,418.50
157283	STT ITS Customization	-	202,790.00	202,790.00
157285	STT Equip Simulators-GL	-	76,046.25	76,046.25
157286LGE	STT Valve Mnt Equ LGE	-	28,137.11	28,137.11
157288LG	STT Elec Cont Stat LGE	-	56,257.58	56,257.58
157290	TL Comp Rel Hardware LG&E	24,261.97	-	24,261.97
157294	Tip Top 69kV PT Replace	158,141.20	-	158,141.20
157295LGE	TC CT MULTILIN RELAY UPGD-	-	190,467.68	190,467.68
157297LGE	TC CT COMPRESS BLEED VLV UP%G	-	84,652.30	84,652.30
157299LGE	TC CT TURNING GEAR REFURB-	-	24,626.00	24,626.00
157301	TC1 O2 PROBE REPLACE	180,474.00	-	180,474.00
157313	DSP N1DT Pleasure Ridge	-	36,499.84	36,499.84
157322	CR7 HRH2 Blending Valve	51,480.00	-	51,480.00
157368	STT Air Compressor	-	22,306.90	22,306.90
157369	STT Trng Equip Trl	-	20,279.00	20,279.00
157431	Watterson C House- Roof Repl	28,330.34	-	28,330.34
157470CR	CR GS SL CCR WELL MONITOR 2019	-	72,413.16	72,413.16
157531LGE	TC GYPSUM BARGE UNLOADER-	56,895.12	-	56,895.12
157533	Middletown Grounding Upgrade	51,766.75	-	51,766.75
157539	MC D1 Magnetic Separator	77,000.00	-	77,000.00
157541	MC4 Service Water Valve	14,000.00	-	14,000.00
157552	Adams Street Redevelopment	-	673,446.60	673,446.60
157554	Upg CNG Trailer Heater System	126,352.00	-	126,352.00
157563LGE	CONF RM 3G BOC RENO LGE	2,143.93	-	2,143.93
157566	LEO Trailer Mounted Pump-2019	-	44,990.10	44,990.10
157567	LEO Polaris ATV-2019	-	20,127.15	20,127.15
157575	SIO-SUB OIL BREAKERS	-	849,999.97	849,999.97
157578	SIO-RELAY REPLACEMENT LGE	-	3,000,000.48	3,000,000.48
157587	Bus Solar ArchDiocese of Lou	4,667.58	-	4,667.58
157588	Harmony Landing 6690 Kit	8,843.82	-	8,843.82
157595	MC 3A Clg Twr Fan GB 2018	36,000.00	-	36,000.00
157602	DSP DEL PARK TO CANAL	-	790,331.47	790,331.47
157611	LGE HW/SW Asset Mgmt 2019	-	165,000.01	165,000.01
157615	Purchase Garage Equip 2019	-	44,990.10	44,990.10
157649	Bluelick Rd PBWK	800,292.62	1,699,637.60	2,499,930.22
157666	SCM2019 TOOLS & EQUIP 003560	-	12,000.52	12,000.52
157688	Sale of Cabel St Site	40,182.34	-	40,182.34
157696	Floyd-Seminole 69KV SR	-	164,290.88	164,290.88
157697	Canal-Del Park 69KV SR	-	1,284,176.02	1,284,176.02
157723	SPIR Northside-Clifty Creek	765,046.71	-	765,046.71
157728	LGE- Isolation Tools	11,350.68	-	11,350.68
157734	TC1 FRONT LOWER SLOPE-	156,412.80	-	156,412.80
157740	NEW CR EQUIP AND STORAGE SHED	16,991.70	-	16,991.70
157746	MC1 Feeders & Outlet Hoppers	170,000.00	490,000.00	660,000.00
157747	MC2 Feeders & Outlet Hoppers	-	170,000.00	170,000.00
157751	BOC PARKING LOT IMPROVEMENT	8,187.88	-	8,187.88
157777LGE	TC2 LOWER SLOPE REPLACE-	-	163,012.88	163,012.88
157779LGE	TC2 RH ATTEMPERATORS-	-	65,205.15	65,205.15
157785	TC1 TURBINE VALVE UPGRADE	-	343,185.00	343,185.00
157789	GS XRF GUN LGE	5,116.85	-	5,116.85
157792	GS Filter Skid LGE	41,834.88	-	41,834.88
157795	GS Filter Skid CR	14,460.45	-	14,460.45
157804	GS CR7 Bus Tie	5,411.42	-	5,411.42
157813LGE	TC CT GAS METER-	-	317,446.13	317,446.13
157826	Ahrens School Vault	515,514.32	-	515,514.32
157835	MC Landfill Closure 2nd Tier	263,000.00	-	263,000.00
157842	BOC Foyer Remodel	45,680.77	-	45,680.77
157845	Mobile Capacitor Bank-LG&E	-	850,000.00	850,000.00
157849	Grade Lane Security Upgrades	152,964.00	-	152,964.00
157857	Solar Share Land 2018 LG&E	14,492.97	-	14,492.97
157892	Smart Cities LG&E 2019	-	44,000.00	44,000.00
157894	EE Business Dvlp LG&E 2019	-	44,000.00	44,000.00
157937	TC-1 Metering (Reimbursable)	20,402.00	-	20,402.00
157943	GS Cane Run Card Readers	5,060.00	-	5,060.00
157945	GS Trimble Card Readers	4,080.00	-	4,080.00

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 12 of 20
Arbough

Project #	Description	2018	2019	Total
157955	MC Sewage Lift Station #9 2018	60,000.00	-	60,000.00
157964	MC3 SO2 Low Range Analyzer	18,000.00	-	18,000.00
157973	AS TRANS 3 LTC	3,029.24	-	3,029.24
157975	2019 F250 Ext Cab	36,106.38	-	36,106.38
157976	Gantry Crane	28,457.85	-	28,457.85
157977	SO Exit Ckt Duct Repl	917,401.24	-	917,401.24
157995	CR7 BFP Instruments LGE	22,000.00	-	22,000.00
157997	CR7 Sump Pumps LGE	19,800.00	-	19,800.00
158001	CR7 8" Gas Valves LGE	11,000.00	-	11,000.00
158003	CR7 Hytorc Wrenches	5,500.01	-	5,500.01
158005	CR7 STB CRANE VFD	4,400.00	-	4,400.00
158007	CR7 CO Analyzer	7,700.00	-	7,700.00
158014	BARDSTOWN GARAGE - 2018	23,350.21	-	23,350.21
158018	Mobile Control House- LGE	104,131.90	746,178.91	850,310.81
158021	Surface Grinder	97,005.62	-	97,005.62
158026	PR12 Gen Cir Breaker	28,000.00	-	28,000.00
158032	MC FLY ASH BARGE LOADING	50,000.00	3,000,000.00	3,050,000.00
158057	SSC PARKING LOT RESURFACE	18,863.71	-	18,863.71
158064	AOC Trailers	307,131.16	-	307,131.16
158067	TCC OpEngExp & Training Room-L	18,803.73	-	18,803.73
158070	Purchase Shop Truck	38,640.00	-	38,640.00
158073	SSC Security Upgrades	85,107.40	-	85,107.40
158083	GS TC Inclimeters	84,755.85	-	84,755.85
158096	MS Aub 2018 Equipment	45,612.00	-	45,612.00
158098	PIN- Blue Lick 345kV Repl	56,407.77	-	56,407.77
158108	HANCOCK SUB PROPERTY	1.10	-	1.10
158109	TC CCRT VEHICLES	119,736.40	-	119,736.40
158112	PBU- Paddys Run 138kV Repl	7,991.57	10,313.40	18,304.97
158115LGE	TC LED SAFETY MESSAGE BOARD-	26,698.71	-	26,698.71
158117LGE	TC2 ECON HOPPER VIBRATORS-	10,332.40	-	10,332.40
158124	MC Guardhouse (old) Roof	28,000.00	-	28,000.00
158125	TC1 HRH ELBOW 2019	-	1,211,943.75	1,211,943.75
158134	MC 2H Clg Twr Fan GB 2018	20,000.00	-	20,000.00
158136	MS Aub 2018 PowerMaster 3302	36,000.00	-	36,000.00
158139LGE	KUGO Facilities Office LGE	11,705.70	-	11,705.70
158143	EOC FIRE SYSTEM	19,006.46	-	19,006.46
158145	MC 4B Clg Twr Pump Motor 2018	135,000.00	-	135,000.00
158149	LG&E Transformer Pumps	80,276.49	-	80,276.49
158158	SPIR Mill Creek-Northside IN	-	2,036,076.65	2,036,076.65
158171	Purchase EOC Trailers	124,000.00	-	124,000.00
158188	FS GT40 Calibration 2018	9,100.00	-	9,100.00
158LGE16	Tech Training Dashboards-LGE16	16,820.52	-	16,820.52
159LGE16	Cascade Impl Gen Relays-LGE16	24,256.99	-	24,256.99
161004LGE	TC2 TURBINE RESEAL LPA & LPB	-	131,321.59	131,321.59
162174	SCM2019 LGE LEGACY ARRST REPL	-	64,999.42	64,999.42
163012	SIO Fuse Savings LGE	-	349,999.35	349,999.35
163014	SIO Rel LGE UG FCI Install	-	1,600,759.46	1,600,759.46
165001	TC1 DIVISION PANEL REPLAC	-	407,532.19	407,532.19
18PITP340	LGE PITP 2018	2,232,951.09	-	2,232,951.09
406000001	Mt Washington MP Reinforcement	0.01	-	0.01
406000003	REPLACE PAD METERS 2018	1,321,877.26	-	1,321,877.26
406000004	REPLACE PAD METERS 2019	-	1,854,128.59	1,854,128.59
406000010	REG FAC RET ZHALE SMITH-HWY 53	128,905.46	-	128,905.46
406000011	REG FAC RET ELDER PARK	98,842.90	-	98,842.90
406000021	UPGRADE ELEVATED PRESSURE 19	-	3,489,919.21	3,489,919.21
406000030	Bluelick Rd KYTC Relocation	760,000.03	1,699,991.37	2,459,991.40
406000031	Dawkins Rd Main Extension	454,038.05	-	454,038.05
406000035	Bare Steel Elimination 004060	39,842.38	-	39,842.38
406000045	Blankenbaker & Ellingsworth	-	98,388.06	98,388.06
406000046	River Road reinforcement - 1	-	168,310.62	168,310.62
406000047	River Road reinforcement - 2	-	85,497.72	85,497.72
406000048	Regulator Assemblies 2019	-	999,554.10	999,554.10
419000001	Mueller Tapping Equipment	77,846.00	-	77,846.00
419000003	GAS REGULATOR EXCHANGES	321,327.96	-	321,327.96
419000004	Equipment - backhoe 2019	-	120,114.75	120,114.75
419000005	Small Tools 2019 004190	-	174,000.54	174,000.54
422000001	KUBOTA & TRAILER	12,000.01	-	12,000.01

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 13 of 20
Arbough

Project #	Description	2018	2019	Total
438500001	Lees to CR Piggability Mod	225,230.35	-	225,230.35
445000000	SMALL TOOLS 2018	0.01	-	0.01
445000001	SMALL TOOLS 2019	-	14,966.09	14,966.09
447000001	Doe Run Storage Piggability	803,880.88	1,050,906.86	1,854,787.74
447000002	Muld Station Control Rm Repl	194,607.29	59,000.12	253,607.41
447000004	Muldraugh Station Piping Repl	1,282,000.51	-	1,282,000.51
447000006	Mul Station Pipe Repl 2019	-	1,578,910.22	1,578,910.22
447000016	ADD/REPLACE ENGINE COOLERS	247,125.12	-	247,125.12
447000022	Muldraugh Amine Replacement	-	3,501,987.33	3,501,987.33
447000030	Eng & Compr Cooling Sys Upg	-	62,984.46	62,984.46
447500001	Install Cntrl Vlvs Wells 2018	200,596.98	-	200,596.98
447500002	Install Cntrl Vlvs Wells 2019	-	315,912.04	315,912.04
448000001	Station PLC Upgrade	94,496.51	-	94,496.51
448000002	Hodgenville Distribution Upg	122.48	-	122.48
448000003	Center Distribution Upgrade	2,453.27	-	2,453.27
448000004	Cooler Handrails/ Platforms	24,136.47	-	24,136.47
448000005	Mag Field Int Corrosion Mit	68,740.49	70,163.72	138,904.21
448000006	Mag Replace Orig CAT Generator	14,420.22	-	14,420.22
448000007	Purchase CNG trucks	0.01	-	0.01
448000009	Canmer Distribution Upgrade	1,302.19	-	1,302.19
448000010	Buffalo Hodgenville Distr Upg	3,327.05	-	3,327.05
448000011	Magnolia Paving	-	83,262.05	83,262.05
448000014	Purchase CNG trucks 2019	-	50,333.80	50,333.80
448000015	Storage Field Barricades 2019	-	49,758.13	49,758.13
448000026	Small Tools 2018 004480	27,584.79	-	27,584.79
448000027	Small Tools 2019 004480	-	42,326.15	42,326.15
448000029	H2S Scavenger Upgrades	-	400,897.25	400,897.25
448000030	Magnolia Amine Replacement	-	7,068,400.73	7,068,400.73
450000001	Upg SCADA and FT Sys Data Comm	29,384.58	-	29,384.58
450000002	Ballardsville St Eq Ret & Rem	69,838.56	-	69,838.56
450000003	Cyber Sec Prot Eq Muld & Mag	69.77	-	69.77
450000009	Small Tools 2018 004500	29,443.59	-	29,443.59
450000010	Small Tools 2019 004500	-	29,510.60	29,510.60
450000017	Moisture Analyzer Eq at CG	-	92,204.38	92,204.38
451000001	Small Tools 2018 004510	29,444.70	-	29,444.70
451000002	Small Tools 2019 004510	-	29,510.60	29,510.60
451000015	Gas Control Radios	-	182,333.35	182,333.35
460000002	Small Tools 2018 004600	29,028.56	-	29,028.56
460000003	Small Tools 2019 004600	-	15,000.06	15,000.06
CACMIT445	AC_MITIGATION	292,080.46	337,671.11	629,751.57
CCAPAC451	GAS REG CAPACITY PRO	50,804.49	600,412.37	651,216.86
CCAPR340	Capital CAP/REG/RECL - 003400	1,552,929.83	2,318,191.75	3,871,121.58
CCGUPG451	UPGR FACIL CG STATION 2017	48,941.52	50,371.63	99,313.15
CCOCNT451	RET/REPL CONTR CG STA 2017	1,732.70	59,274.43	61,007.13
CCPIMP445	CP IMPRESSED CUR SYS IMPROVE	30,711.68	32,994.55	63,706.23
CDEFQ447	MULDR FAC IMP/EQ REPLACE	102,718.54	174,999.78	277,718.32
CDEFQ448	MAG FAC IMP/EQ REPL	66,499.31	150,511.15	217,010.46
CEBREG451	PURCHASE REGULATORS EXIST CUST	-	25,166.90	25,166.90
CEMTR134	LGE Electric Meters - 001340	251,598.77	738,963.95	990,562.72
CFTCUS450	FT CUSTOMER CONVERSIONS	70,526.16	89,824.86	160,351.02
CGME406	NB Gas Main Ext - 004060	1,021,788.11	2,174,443.84	3,196,231.95
CGMTR134	LGE Gas Meters - 001340	1,641,230.93	4,280,137.77	5,921,368.70
CHPSRV451	COMM HIGH PRES GAS SRV UPGR 17	337,614.17	999,650.60	1,337,264.77
CNBCD3400	NB Comm OH - 003400	1,846,446.34	3,348,396.18	5,194,842.52
CNBCD340U	NB Comm UG - 003400	3,069,686.48	5,644,606.43	8,714,292.91
CNBGS419	NB Gas Services - 004190	875,224.29	1,760,134.52	2,635,358.81
CNBRD3400	NB Resid OH - 003400	1,145,511.54	1,961,987.95	3,107,499.49
CNBRD341U	NB Resid UG - 003410	2,982,534.67	5,757,894.71	8,740,429.38
CNBREG451	PURCH REGULATORS - 004510	96,191.93	89,585.75	185,777.68
CNBSV3400	NB Elect Serv OH - 003400	418,107.11	672,479.97	1,090,587.08
CNBSV340U	NB Elect Serv UG - 003400	991,120.18	2,022,109.07	3,013,229.25
CNBVLT343	NB Network Vaults - 003430	422,876.39	1,728,237.92	2,151,114.31
CPBWK340	El Public Works - 003400	1,176,847.86	1,696,702.90	2,873,550.76
CPBWK406G	Gas Public Works - 004060	142,027.28	1,329,678.48	1,471,705.76
CPLUG4475	PLUG GAS STOR WELLS COR CASE	1,054,481.99	841,808.11	1,896,290.10
CRCT340	Cust Requested - 003400	214,476.49	324,546.17	539,022.66
CRDCBL340	Repl Defective Cable - 003400	627,287.03	1,223,081.51	1,850,368.54

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 14 of 20
Arbough

Project #	Description	2018	2019	Total
CRDD3400	Capital Rep Def OH - 003400	2,048,969.82	4,161,483.88	6,210,453.70
CRDD340U	Capital Rep Def UG - 003400	499,056.16	829,225.42	1,328,281.58
CREGFC451	GAS REG FAC UPGRADE BLKT 2017	1,401,141.32	639,735.97	2,040,877.29
CREGST451	UPGR FACIL DIST REG STATIONS	21,275.72	50,271.62	71,547.34
CRELD340	Capital Reliability - 003400	179,090.11	468,825.16	647,915.27
CRELI4475	RELIN GAS STORAGE WELLS 2016	189,279.99	577,915.09	767,195.08
CROTAR451	UPRG OBSOL ROTARY METERS	17,650.85	-	17,650.85
CRPOLE340	Pole Repair/Replace - 003400	1,988,010.95	4,731,381.19	6,719,392.14
CRSTLT332	Repair Street Lights - 003320	1,791,651.66	3,714,591.66	5,506,243.32
CSTATN447	MULD STATION BLKT	398,140.99	599,844.97	997,985.96
CSTATN448	MAGNOLIA STATION BLKT	141,206.66	399,224.10	540,430.76
CSTLT332	NB Street Lights - 003320	1,003,685.45	2,293,950.62	3,297,636.07
CSTOR447	MULD STOR FIELD/TRANS BLKT	237,316.64	1,149,727.66	1,387,044.30
CSTOR448	MAG STOR FIELD/TRANS BLKT	281,395.87	504,092.82	785,488.69
CSTRMLGE	Cap LGE Major Storms	1,813,461.18	1,668,488.37	3,481,949.55
CSYSEN340	Sys Enh - 003400	792,931.33	1,027,272.05	1,820,203.38
CSYSEN406	Sys Enh - 004060	415,501.56	744,398.90	1,159,900.46
CTBRD3400	Cap Trouble Orders OH - 003400	1,868,490.77	3,363,162.03	5,231,652.80
CTBRD340U	Cap Trouble Orders UG - 003400	806,959.40	1,976,029.25	2,782,988.65
CTBRD419	Cap Trbl Orders Gas - 004190	137,314.13	219,858.84	357,172.97
CTBRD447	Cap Trbl Orders Gas - 004470	10,000.00	-	10,000.00
CTBRD448	Cap Trbl Orders Gas - 004480	10,000.00	-	10,000.00
CTPD340	Capital Thrd Party - 003400	797,979.46	925,504.59	1,723,484.05
CTPD419	Capital Thrd Party - 004190	169,691.60	158,203.22	327,894.82
CVLT343	Capital Network Vlts - 003430	342,859.67	1,329,016.93	1,671,876.60
CXFRM311	LGE Line Transformers	3,964,893.51	6,747,614.12	10,712,507.63
CXFRM340	NB Transformers - 003400	391,806.54	714,879.44	1,106,685.98
IT0000L	IT Contingency-LGE	2,390,920.13	-	2,390,920.13
IT0001L	ABB Upgrade-LGE17	4,311.66	-	4,311.66
IT0011L	Cascade Biennial Tech-LGE17	143,921.47	-	143,921.47
IT0017L	Commun Solar Implem-LGE17-18	9,679.95	-	9,679.95
IT0024L	Daily Shift Log Repl-LGE17	157,027.65	-	157,027.65
IT0026L	Data Protection-LGE17-18	3,445.03	-	3,445.03
IT0027L	Domain Cntrls ICCP-LGE17	8,700.84	-	8,700.84
IT0034L	External Outage Map Upgr-LGE17	79,205.65	-	79,205.65
IT0035L	FieldNet SoftwareUpgr-LGE17	637.14	-	637.14
IT0037L	Forest Circuit Audit App-LGE17	44,865.04	-	44,865.04
IT0039CG	Gas Patrolling App-LGE17	76,474.50	-	76,474.50
IT0042L	GIS BI Reporting-LGE17	20,488.21	-	20,488.21
IT0044L	Impedance App-LGE17	527.96	-	527.96
IT0045L	Intrusion Prevention-LGE17-18	10,463.44	-	10,463.44
IT0046L	Inve Mgmt Bar Coding Upg-LGE17	141,605.24	-	141,605.24
IT0050L	Next Gen Radio Sys Des-LGE17	190,993.49	-	190,993.49
IT0086L	Repl Oper Workstations-LGE17	3,057.59	-	3,057.59
IT0090L	Rplce EMS Workstations-LGE17	2,923.51	-	2,923.51
IT0101L	Smallworld GIS Upgr-LGE17-19	531,072.33	3,210,674.27	3,741,746.60
IT0110L	Trans Cascade-Oracle-LGE17	7,311.15	-	7,311.15
IT0111L	Trans Vegetation Mgt-LGE17-18	48,712.84	-	48,712.84
IT0113CG	TC Plant Alt Transport-LGE17	-	200,000.00	200,000.00
IT0114L	TRMS Upgrade-LGE17	2,243.25	-	2,243.25
IT0115L	TRODS-LGE17	88,765.51	-	88,765.51
IT0139L	Main Schedulin Tool-LGE17	27,701.83	-	27,701.83
IT0154L	PE Sharepoint App-LGE17	27,611.29	-	27,611.29
IT0155L	Cust Serv Rept&Analytics-LGE17	75,789.19	-	75,789.19
IT0170L	Sec Metrics Automation-LGE17	38,330.76	-	38,330.76
IT0171L	LOB Quest Initiatives-LGE17	74,519.45	-	74,519.45
IT0177L	Logical Access-LGE17	21,473.78	-	21,473.78
IT0181L	AGENT-LGE17	3,975.32	-	3,975.32
IT0182L	Dist Cust Status Portal-LGE17	15,330.81	-	15,330.81
IT0186L	Data Center Firewalls-LGE	20,889.97	-	20,889.97
IT0188L	3rd Prty Attach Pmt Appl-LGE18	7,234.61	-	7,234.61
IT0192L	Int/DMZ Firewll Tech Upg-LGE18	3,362.98	-	3,362.98
IT0194L	ITS Integration-LGE18	66,379.79	-	66,379.79
IT0197L	3rd Prty Pymt (FiServ)-LGE18	18,109.89	-	18,109.89
IT0199L	2018 Cybersecurity Chngs-LGE18	15,600.10	-	15,600.10
IT0200L	TOA East-West Split-LGE18	3,412.69	-	3,412.69
IT0202L	Access Switch Rotation-LGE18	117,754.24	-	117,754.24

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 15 of 20
Arbough

Project #	Description	2018	2019	Total
IT0203L	Aligne Upgrade-LGE18	46,820.80	-	46,820.80
IT0204L	Analog Sunset-LGE18	84,243.98	-	84,243.98
IT0206L	Bulk Power & Env Syst-LGE18	53,550.59	-	53,550.59
IT0207L	Cabling Server Connect-LGE18	7,751.10	-	7,751.10
IT0209L	CERUS IV-LGE18	212,089.28	-	212,089.28
IT0211L	CIP Compliance Tools Yr8-LGE18	52,000.00	-	52,000.00
IT0212L	Citrix XenDsktp Mjr Upg-LGE18	113,494.33	-	113,494.33
IT0215L	CIP Compl Infrastrct Yr8-LGE18	80,576.47	-	80,576.47
IT0217L	Core Network Infrastr-LGE18	73,424.89	-	73,424.89
IT0219L	EE DSM Filing-LGE18-19	152,068.19	44,000.00	196,068.19
IT0220L	Elec Facility Enhance-LGE18-19	67,297.56	-	67,297.56
IT0221L	ke	42,786.12	-	42,786.12
IT0224L	Exchange 20xx Upgrade-LGE18	3,358.93	-	3,358.93
IT0225L	FERC Form 1 Tool Repl-LGE18-19	-	264,103.84	264,103.84
IT0231L	IP Management-LGE18	181,857.72	-	181,857.72
IT0232CG	IRAS Enhancements-LGE18	176,606.11	-	176,606.11
IT0233CG	IRAS Intern Corrosion-LGE18-19	-	208,391.00	208,391.00
IT0234L	IT Security Infrast-LGE18	36,779.78	-	36,779.78
IT0235L	ITSM CIP/AIM-LGE18-19	-	156,000.00	156,000.00
IT0238L	Louisv Electrical Upgr-LGE18	22,523.74	-	22,523.74
IT0239L	Louis Racks and Furn-LGE18	13,255.56	-	13,255.56
IT0241L	Maximo Upgrade-LGE18	188,740.73	-	188,740.73
IT0242L	Megastar & DVM MW Repl-LGE18	166,139.87	260,000.00	426,139.87
IT0244L	Microsoft Lic True-up-LGE18	47,720.57	-	47,720.57
IT0245L	Mbl & Wrkst Lic True-up-LGE18	30,092.65	-	30,092.65
IT0246L	Mobile Dispatch Enh-LGE19-20	-	415,971.91	415,971.91
IT0247L	Mobile Infrastructure-LGE18	17,946.02	-	17,946.02
IT0248L	Mobile Radio-LGE18	87,823.50	-	87,823.50
IT0249L	Monitor Replacement-LGE18	36,437.18	-	36,437.18
IT0250L	MR Hardware-LGE18	22,432.52	-	22,432.52
IT0251L	Multi-Func Dev Ref-LGE18	9,479.50	-	9,479.50
IT0252L	NAS Capacity Expan-LGE18	106,044.64	-	106,044.64
IT0253L	Network Access Infrast-LGE18	48,766.75	-	48,766.75
IT0254L	Network Access Gateways-LGE18	26,511.16	-	26,511.16
IT0255L	Network Management-LGE18	19,118.64	-	19,118.64
IT0256L	Network Test Equip-LGE18	31,937.87	-	31,937.87
IT0259L	OTN Ext Lex-Dix Ring-LGE18	177,715.40	-	177,715.40
IT0260L	Outside Cable Plant-LGE18	101,914.75	-	101,914.75
IT0261L	PeopleSoft Tools Enhance-LGE18	29,918.02	-	29,918.02
IT0262L	Personal Prod Refresh-LGE18	39,018.50	-	39,018.50
IT0264L	Rate Case 2018-LGE18-19	44,676.28	165,001.33	209,677.61
IT0265L	Replace Video Units-LGE18	53,022.32	-	53,022.32
IT0269L	Rev Collec (Transcentra)-LGE17	44,685.68	-	44,685.68
IT0271L	SAN Capacity Expansion-LGE18	159,066.96	-	159,066.96
IT0272L	SAN Switch Refresh-LGE18	776,535.09	-	776,535.09
IT0273L	SAP CCS/CSS Releases-LGE18	150,932.68	-	150,932.68
IT0274L	SAP Roadmap Strategy -LGE18	109,301.60	-	109,301.60
IT0275L	Security Infrast Enhance-LGE18	12,578.36	-	12,578.36
IT0276L	Server Cap Expn & Reliab-LGE18	45,069.91	-	45,069.91
IT0277L	Server Infrast Upgr-LGE18	95,199.37	-	95,199.37
IT0278L	LogRhythm (CIP)-LGE18	34,464.51	-	34,464.51
IT0279L	LogRhythm (Corp)-LGE18	34,464.51	-	34,464.51
IT0280L	Simpsonville Elect Upgr-LGE18	22,101.92	-	22,101.92
IT0281L	Simpsonville Furn & Rack-LGE18	13,255.55	-	13,255.55
IT0282L	Site Security Improvemts-LGE18	25,426.84	-	25,426.84
IT0285CG	SynerGEE Gas Area Module-LGE18	23,216.00	-	23,216.00
IT0287L	Tech Refresh desk/lap-LGE18	416,808.30	-	416,808.30
IT0288L	Telecom Site Reno-LGE18	33,749.88	-	33,749.88
IT0289L	TOA-LGE18	44,487.45	-	44,487.45
IT0291L	TRODS-LGE18	100,094.49	-	100,094.49
IT0292L	UC4 Upgrade to V11-LGE18	26,511.16	-	26,511.16
IT0294L	Upgrade Quest Server-LGE19	-	79,736.34	79,736.34
IT0295L	Upgrade Vmware Infrast-LGE18	24,081.19	-	24,081.19
IT0297L	Phone Expan/Break Fix-LGE18	49,780.74	-	49,780.74
IT0298L	Wireless Buildout-LGE18	73,900.72	-	73,900.72
IT0300L	WMS Upgrade-LGE18-19	644,842.25	-	644,842.25
IT0301L	Rep ASTRO Spectra Yr 1/3-LGE19	-	490,759.76	490,759.76

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 16 of 20
Arbough

Project #	Description	2018	2019	Total
IT0305L	Repl Quant Repeat Yr 1/2-LGE19	-	247,000.00	247,000.00
IT0307L	Simpsonville to Dix Dam-LGE18	78,709.57	-	78,709.57
IT0309L	Invoice Routing Automate-LGE18	52,000.00	-	52,000.00
IT0310L	PS Test Script Automate-LGE18	56,135.26	-	56,135.26
IT0312L	CyberArk Password Vault-LGE18	29,186.72	-	29,186.72
IT0314L	HR Dashboard Enhance-LGE18	152,348.46	-	152,348.46
IT0315L	Mobile App/API Monitor-LGE18	15,600.01	-	15,600.01
IT0317L	Safety Dashboard Enhance-LGE18	33,648.79	-	33,648.79
IT0318L	Mobile Safety App-LGE18	100,946.33	-	100,946.33
IT0320L	DB Refresh-LGE18	44,050.13	-	44,050.13
IT0321L	SCCM Upgrades-LGE18	21,135.56	-	21,135.56
IT0324L	PowerPlan Lease Mod Fin-LGE18	26,511.16	-	26,511.16
IT0325L	Windows 10 Upgrade-LGE18	232,870.79	-	232,870.79
IT0328L	BI Report Align Fuel-LGE18	44,865.04	-	44,865.04
IT0329L	Lockout/Tagout Replace-LGE18	462,060.08	403,939.92	866,000.00
IT0330L	ITSM Tools-LGE18	28,555.82	-	28,555.82
IT0332L	OpenText Bill Integrity-LGE18	49,351.53	-	49,351.53
IT0333L	Cst Rel Mgmt Maj Acts-LGE18-19	67,297.55	176,000.20	243,297.75
IT0334L	My Account Enhancement-LGE18	201,092.42	-	201,092.42
IT0335L	iPad Refresh Project-LGE18	74,839.64	-	74,839.64
IT0336CG	GITT Plastic Services-LGE17/18	92,408.79	-	92,408.79
IT0337CG	Barcode Gas Mat Steel-LGE18-19	105,000.00	200,000.00	305,000.00
IT0339L	Upgrade PowerBase 8.x-LGE18	44,865.05	-	44,865.05
IT0340L	Repl Opentext AP (OTAP)-LGE18	130,000.00	-	130,000.00
IT0341L	FieldSmart View Replace-LGE18	11,602.14	-	11,602.14
IT0342L	Mob Dis Replace Elec OMS-LGE18	207,496.74	-	207,496.74
IT0345L	Hyperion Upgrade-LKS18-LGE18	10,400.00	-	10,400.00
IT0346L	Cherwell Implementation-LGE18	45,096.01	-	45,096.01
IT0348L	OpenText Cred/Cont Adm-LGE18	66,277.91	-	66,277.91
IT0349L	KY Containerized E-mail-LGE18	4,398.70	-	4,398.70
IT0350L	Business Offices Kiosks-LGE19	-	55,000.00	55,000.00
IT0351L	Landlord Portal -LGE18	89,730.05	-	89,730.05
IT0352L	Exp/Repl Cust Comm Chan-LGE18	261,800.09	175,501.78	437,301.87
IT0353L	UC&C/CUCM Upgrades-LGE18	52,000.00	-	52,000.00
IT0354L	PEPSE Upgrade-LGE18	20,240.00	-	20,240.00
IT0355L	LIMS for KPDES require-LGE18	7,920.00	-	7,920.00
IT0356L	AFT Fathom Licenses-LGE18	6,600.00	-	6,600.00
IT0403L	Access Switch Rotation-LGE19	-	266,047.00	266,047.00
IT0404L	Analog Sunset-LGE19	-	182,000.00	182,000.00
IT0408L	Bulk Power & Env Systems-LGE19	-	104,000.00	104,000.00
IT0410L	Centrify Licensing-LGE19	-	10,400.00	10,400.00
IT0412L	CIP Compl Tools - Year 9-LGE19	-	130,000.00	130,000.00
IT0413L	Compliance Infra Year 9-LGE19	-	258,767.26	258,767.26
IT0417L	Core Network Infra-LGE19	-	78,000.00	78,000.00
IT0419L	Corp Web Redesign-LGE19-20	-	26,000.00	26,000.00
IT0422L	Data Domain Entrprsr Ref-LGE19	-	312,000.00	312,000.00
IT0423L	DB Backup Storage Ref-LGE18	265,111.60	-	265,111.60
IT0425L	EMS CIP-LGE19	-	55,000.00	55,000.00
IT0427L	Endpoint Protection-LGE19	-	2,600.00	2,600.00
IT0428L	FieldNet SoftwareUpgr-LGE19	-	44,000.00	44,000.00
IT0432L	IT Sec & IP Labs Enhance-LGE19	-	26,000.00	26,000.00
IT0433L	IT Security Infrs Ref-LGE19	-	83,200.00	83,200.00
IT0434L	LOAD -vendor upgrade-LGE19	-	66,000.00	66,000.00
IT0438L	Maximo Licenses-LGE19	-	57,200.00	57,200.00
IT0439L	Microsoft EA-LGE19	-	200,051.80	200,051.80
IT0440L	Microsoft Lic True-up-LGE19	-	78,000.00	78,000.00
IT0441L	Mbl & Wrkst Lic True-up-LGE19	-	36,920.00	36,920.00
IT0443L	Mobile Radio-LGE19	-	104,000.00	104,000.00
IT0444L	Monitor Replacement-LGE19	-	55,120.00	55,120.00
IT0445L	MR Hardware-LGE19	-	22,000.00	22,000.00
IT0446L	Multi-Functional Devices-LGE19	-	20,800.00	20,800.00
IT0448L	Network Access Devices-LGE19	-	78,000.00	78,000.00
IT0449L	Network Access Gateways-LGE19	-	26,000.00	26,000.00
IT0450L	Network Management -LGE19	-	19,500.00	19,500.00
IT0451L	Network Test Equipment-LGE19	-	65,000.00	65,000.00
IT0454L	Outside Cable Plant -LGE19	-	156,000.00	156,000.00
IT0456L	PeopleSoft Tools Enhance-LGE19	-	74,275.71	74,275.71

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 17 of 20
Arbough

Project #	Description	2018	2019	Total
IT0457L	Personal Prod Growth-LGE19	-	52,000.00	52,000.00
IT0458L	PowerPlan Upgrade-LGE19-20	-	644,761.31	644,761.31
IT0463L	SAP CRM/ECC Enh/SrvPack-LGE19	-	87,047.20	87,047.20
IT0466L	Sec Infra Enhancement-LGE19	-	52,000.00	52,000.00
IT0467L	Server Capacity Expan-LGE19	-	44,201.04	44,201.04
IT0469L	LogRhythm (CIP)-LGE19	-	54,600.00	54,600.00
IT0470L	LogRhythm (Corp)-LGE19	-	54,600.00	54,600.00
IT0473L	Site Security Improve-LGE19	-	26,000.00	26,000.00
IT0475L	StackVision Upgrade-LGE19	-	88,000.00	88,000.00
IT0477L	Tech Refresh desk/lap-LGE19	-	1,449,935.89	1,449,935.89
IT0479L	Telecom Site Renov-LGE19	-	52,000.00	52,000.00
IT0480L	Time and Labor Upgr-LGE19-21	-	380,772.30	380,772.30
IT0481L	TOA-LGE19	-	44,000.00	44,000.00
IT0483L	TRODS-LGE19	-	59,400.00	59,400.00
IT0486L	Voice Infra Expansion-LGE19	-	80,277.20	80,277.20
IT0488L	Vulnerability Scanning-LGE19	-	103,931.37	103,931.37
IT0489L	Wireless Buildout-LGE19	-	104,000.00	104,000.00
IT0490L	Repl Simulca Infr Yr 1/2-LGE19	-	998,288.05	998,288.05
IT0493L	Tripwire Repl for LID-LGE19	-	416,000.00	416,000.00
IT0494L	VERBA Major Upgrade-LGE19	-	104,000.00	104,000.00
IT0495L	Contractor Mgmt Upgrades-LGE19	-	88,000.00	88,000.00
IT0496L	ESP Virt Win Servers-LGE19	-	208,000.00	208,000.00
IT0497L	EACM Infrastructure Refr-LGE19	-	129,657.56	129,657.56
IT0498L	DB Refresh-LGE19	-	78,000.00	78,000.00
IT0499L	Windows 10 CBB upgrade-LGE19	-	205,149.98	205,149.98
IT0500L	SCCM Upgrades-LGE19	-	41,600.00	41,600.00
IT0501L	Ivanti AppSense Env Mgr -LGE19	-	54,597.40	54,597.40
IT0506L	Low Inc Asst Agency Prtl-LGE19	-	22,000.00	22,000.00
IT0507L	iPad Refresh Project-LGE19	-	73,243.71	73,243.71
IT0508L	SOA Middleware Upgrade-LGE19	-	78,000.00	78,000.00
IT0509L	Upgr OpenText Capt Cntr-LGE19	-	104,000.00	104,000.00
IT0511L	Trns Lnes Wk Mgmt Upg-LGE19-20	-	218,940.00	218,940.00
IT0512L	DACS Repl Prov/Mon Sys-LGE19	-	65,000.00	65,000.00
IT0513L	DACS Equip Repl (Yr1of3)-LGE19	-	208,000.00	208,000.00
IT0517L	OpenText for Acct Recons-LGE19	-	78,000.00	78,000.00
IT0518L	Drawing Mgmt System-LGE19	-	132,000.00	132,000.00
IT0519L	Insight CM Upgrade-LGE19	-	33,000.00	33,000.00
IT0520L	Maximo Upg - Reporting-LGE19	-	220,000.00	220,000.00
IT0521L	BI Rpt Migration SSRS Nat-LGE19	-	104,000.00	104,000.00
IT0522L	Plnt Mobile RO- EW Brown-LGE19	-	110,000.00	110,000.00
IT0523L	Plnt Mble RO- Mill Creek-LGE19	-	110,000.00	110,000.00
IT0524L	Ld Rsrch&Cust Seg DtaMod-LGE19	-	66,000.00	66,000.00
IT0525L	Hyperion Upgrade-LGE19	-	145,600.00	145,600.00
IT0526L	Exp Reimburse Repl (PtP)-LGE19	-	259,999.93	259,999.93
IT0527L	HR Interview Builder-LGE19	-	30,000.00	30,000.00
IT0528L	Lifeln&Retire Frms/Prtl-LGE19	-	75,000.00	75,000.00
IT0529L	Trans BREC Trnsprt IC-LGE19	-	65,000.00	65,000.00
IT0531L	Qradar Pckt Capt Crp/CIP-LGE19	-	249,326.07	249,326.07
IT0532L	UC&C/CUCM Major Upgrade-LGE19	-	52,000.00	52,000.00
IT0533L	Aspect EWrkfce App Upg-LGE19	-	39,600.00	39,600.00
IT0534L	CommSlr- Auto EnrollFee-LGE19	-	44,000.00	44,000.00
IT0535L	Expnd Pymt/Cust Srv Opt-LGE19	-	66,000.00	66,000.00
IT0536L	Gas Meter Sampling Imprv-LGE19	-	176,000.00	176,000.00
IT0537CG	Gas Strg - Maximo to ARM-LGE19	-	750,000.00	750,000.00
IT0538L	EACM Virtual Infra (CIP)-LGE19	-	130,000.00	130,000.00
IT0539L	Source Code/SW Repls(CIP)-LGE19	-	77,828.85	77,828.85
IT0540L	Windows 10 SW Upg EMS-LGE19	-	64,486.30	64,486.30
IT0541L	Passive Disc Vuln ID-LGE19	-	83,200.00	83,200.00
IT0542L	Data Classification Enh-LGE19	-	156,000.00	156,000.00
IT0543L	Inventory Mgmt Expansion-LGE19	-	156,000.00	156,000.00
IT0544L	SSL Decrypt for BC Proxy-LGE19	-	39,000.00	39,000.00
IT0545L	Solarwinds High Avail-LGE19	-	31,199.99	31,199.99
IT0546L	UDP redirect Solarwinds-LGE19	-	26,000.00	26,000.00
IT0547L	Virt Reality Train POC-LGE19	-	6,600.00	6,600.00
IT0548L	Centrify Rp CyberArk Enh-LGE19	-	156,000.00	156,000.00
IT0549L	Computing Infra Expans-LGE19	-	104,000.00	104,000.00
IT0550L	Computing Infra Upg-LGE19	-	521,202.40	521,202.40

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 18 of 20
Arbough

Project #	Description	2018	2019	Total
IT0551L	Data Center Facility Upg-LGE19	-	104,000.00	104,000.00
IT0552L	Enterprise GIS Enhments-LGE19	-	176,000.00	176,000.00
IT0553L	WMS Post Implement Mods-LGE19	-	88,000.00	88,000.00
IT0554L	IRAS PIM Post Impl Mods-LGE19	-	88,000.00	88,000.00
IT0555L	EDO Mobile Post Impl Mod-LGE19	-	88,000.00	88,000.00
IT0556L	DMZ VM Infrastructure-LGE19	-	92,040.00	92,040.00
IT0557L	Corporate RPA-LGE19	-	260,000.00	260,000.00
IT0558L	Bill Int Gas Trns Aut-LGE19-20	-	88,000.00	88,000.00
IT0559L	Genetec HW Upgrade-LGE19-20	-	66,000.00	66,000.00
IT0560L	Cust Not Expand/Repl-LGE19-20	-	176,000.10	176,000.10
IT0561L	MAM Enhments-LGE19-20	-	44,000.00	44,000.00
IT0562L	ABB Upg/iPad Depl FS-LGE19-20	-	264,000.00	264,000.00
IT0563L	RPA for Rev Integrity-LGE19-20	-	88,000.00	88,000.00
IT0564CG	Gas Operator Qual App-LGE19-20	-	247,958.65	247,958.65
IT0565CG	Strg Intgrty Mgmt App-LGE19-20	-	998,617.15	998,617.15
IT0568L	Data Analytics (SIO)-LGE19	-	429,000.00	429,000.00
IT0604L	Avaya-Route&Rpt Upg-LGE19-20	-	305,450.81	305,450.81
IT0620L	DACS/SONET Repl Eng/Des-LGE18	210,036.78	-	210,036.78
IT0663L	SharePoint Upgrade-LGE18-19	-	78,000.00	78,000.00
IT0688L	BI Upgrade-LGE19	-	156,000.00	156,000.00
IT0708L	My Acct Repl/Enhance-LGE19-20	-	217,595.27	217,595.27
IT1016L	KY SDN Impl (Phase 1)-LGE19	-	130,000.00	130,000.00
IT1067L	SONET Repl Prov/Mon Sys-LGE19	-	65,000.00	65,000.00
IT1086L	SONET Equip Repl Yr 1/4-LGE19	-	386,257.98	386,257.98
L8-2016	STORM DAMAGE T-LINE LGE 2016	44,123.32	-	44,123.32
L8-2018	Storm Damage T-Line LGE 2018	75,217.13	-	75,217.13
L8-2019	Storm Damage T-Line LGE 2019	-	111,389.18	111,389.18
L9-2019	Priority Repl T-Lines LGE 2019	-	926,540.13	926,540.13
LARM-2019	Priority Repl X-Arms LGE 2019	-	142,859.32	142,859.32
LARREST17	LGE Arrester Replacements 2017	31,695.24	-	31,695.24
LI-000037	PR CR Switching-Shively	-	731,076.79	731,076.79
LI-000054	MOS Lebanon J 423-805-815-825	22,328.20	-	22,328.20
LI-000057	REL Jeffersonstown ALT 4	107,305.40	1,039,946.69	1,147,252.09
LI-000062	REL Mt. Washington RECC	-	155,991.84	155,991.84
LI-000088	TEP-CR-Ford-Freys Hill	-	49,906.93	49,906.93
LI-000090	TEP-MOT-Skylight-Harmony Ldg	-	10,001.25	10,001.25
LINS-2018	Priority Repl Insltrs LGE 2018	39,262.73	-	39,262.73
LINS-2019	Priority Repl Insltrs LGE 2019	-	78,741.84	78,741.84
LOTFAIL18	LGE-OtherFail-2018	206,737.65	266,230.00	472,967.65
LOTFAIL19	LGE-OtherFail-2019	-	300,000.10	300,000.10
LOTH-2016	Priority Repl Other LGE 2016	13,021.86	-	13,021.86
LOTH-2018	Priority Repl Other LGE 2018	35,760.95	-	35,760.95
LOTH-2019	Priority Repl Other LGE 2019	-	157,759.95	157,759.95
L-OTHER15	LGE-Other-2015	7,210.87	-	7,210.87
LOTPR14	LG&E Other Prot Blanket 2014	628.17	-	628.17
LOTPR19	LG&E Other Prot Blanket 2019	-	40,285.08	40,285.08
LRELAY-17	Relay Replacements-LG&E-2017	175,904.76	-	175,904.76
LRTU-17	LGE RTU Replacements-17	5,361.17	-	5,361.17
LTFFAIL16	LGE-Xfrmr Fail-2016	1,869.44	-	1,869.44
LTPGENLG	Other LTP Gen Projects LGE	112,500.00	112,500.00	225,000.00
SU-000005	PBR-Hurstbrn 1 138kV BKR Rpl	68,578.06	-	68,578.06
SU-000007	PBR-Watterson (3) 138kV BKRRpl	670,827.48	-	670,827.48
SU-000008	PBR-Aiken(1) 69kV BKR Rpl	177,049.42	-	177,049.42
SU-000017	PAR-Collins Arrsters 6684,6685	82,702.33	-	82,702.33
SU-000029	PGG-Clifton GG Audit/Rmdiation	109,945.92	132,588.45	242,534.37
SU-000032	PGG-Madison GG Audit/Rmdiation	-	200,000.04	200,000.04
SU-000034	PGG-Shively GG Audit/Rmdiation	-	268,690.00	268,690.00
SU-000041	PBR-Algonquin PIN PRLY	160,644.29	721,224.85	881,869.14
SU-000059	PRLY-Clay LGE -Madison (6627)	355,719.57	270,968.78	626,688.35
SU-000060	PRLY-Ashbottom - S Park (6639)	251,066.92	66,597.13	317,664.05
SU-000061	PRLY-Aiken-Middletown (6657)	88,495.19	-	88,495.19
SU-000062	PRLY-Nachand-Watterson (6667)	105,021.63	-	105,021.63
SU-000063	PRLY-Grady-Paddys Run (6633)	301,103.01	1,060,703.74	1,361,806.75
SU-000077	PRLY-Aiken-Oxmoor (6650)	97,668.20	376,079.00	473,747.20
SU-000078	PRLY-Algonquin-Magzn (6646)	45,702.12	-	45,702.12
SU-000102	PBR Ashbttn-Cane Rn Swtch 3833	-	240,456.34	240,456.34
SU-000131	PR Flyd - Lcst - Simnole 6647	-	360,685.76	360,685.76

Case No. 2018-00335
Attachment to Response to PSC-1 Question 1(c)
Page 19 of 20
Arbough

Project #	Description	2018	2019	Total
SU-000132	PR Ashbottom - Kenwood (6649)	120,513.20	119,943.10	240,456.30
SU-000133	PR Applnc Prk-Ash Bottom 3836	-	240,456.34	240,456.34
SU-000137	PR Breckenridge-Ethel (3872)	-	240,000.00	240,000.00
SU-000141	PR Clifton-Hillcrest (6628)	120,513.22	119,943.10	240,456.32
SU-000142	PR Ford-Freys Hill (6659)	120,513.22	119,943.22	240,456.44
SU-000157	PRTU BLUE LICK	58,246.12	-	58,246.12
SU-000161	PRTU CENTERFIELD	44,003.34	-	44,003.34
SU-000171	PRTU FARNSLEY	-	150,000.00	150,000.00
SU-000172	PRTU SEMINOLE	-	150,000.00	150,000.00
SU-000261	REL Jeffersontown ALT 4 SU	350,511.94	1,838,897.46	2,189,409.40
SU-000262	PBR-Ashbottom (4) 138kV BKR	995,788.41	-	995,788.41
SU-000263	PIN-Breckenridge 69KV+	100,468.58	-	100,468.58
SU-000264	PIN-Ethel 69kv+	99,917.16	-	99,917.16
SU-000269	PBR-Taylor (1) 69kv PIN PAR	158,849.38	275,927.36	434,776.74
SU-000271	PGG-Seminole GG	-	249,960.00	249,960.00
SU-000275	PDFR CRS	-	150,000.00	150,000.00
SU-000278	PIN-Lyndon South 138-69+	114,773.21	439,624.22	554,397.43
SU-000279	PDFR Middletown	-	150,000.00	150,000.00
SU-000280	PDFR Ethel	-	299,776.62	299,776.62
SU-000292	REL-Centerfield DFR	-	222,000.00	222,000.00
SU-000293	PBR- Fern Valley PIN PRLY RTU	163,735.85	1,634,300.90	1,798,036.75
SU-000294	PBR-Magazine PRLY PIR PAR	191,406.66	1,388,438.99	1,579,845.65
SU-000335	PPLC-CP-3850 DCB-2-LGE	-	241,320.16	241,320.16
SU-000346	River Rd Hwy Relo-S	-	149,902.05	149,902.05
SU-000367	PBR-Nachand (1) BKR	-	68,955.01	68,955.01
SU-000368	PBR-Highland (2) BKR	-	137,909.86	137,909.86
SU-000369	PBR-Hancock (1) BKR	-	92,939.30	92,939.30
SU-000370	PBR-Canal (11) BKR (PIN)	258,406.09	417,726.96	676,133.05
SU-000402	PPLC-Mill Creek 3857 DCB	-	4,998.70	4,998.70
SU-000403	PPLC-Knob Creek 3857 DCB	-	9,997.35	9,997.35
TMPMCR	TMP: Mill Creek Replacement	-	299,606.00	299,606.00
TMPWKB	TMP: WK B 20" Standardization	-	1,000,198.55	1,000,198.55
130875	MC1&2 FGD, MC1FF,	333,333.33	-	333,333.33
130881	MC3 FGD & FABRIC FILTER	502,889.29	-	502,889.29
133614	MC4 FGD, FF	333,333.33	-	333,333.33
135122	MC1 PJFF Bags 2021	720,000.00	-	720,000.00
135123	MC2 PJFF Bags 2020	-	1,146,767.30	1,146,767.30
145404	Adv Meter Sys LG&E 2015	184,200.92	250,000.04	434,200.96
148833	MC ASH POND CCR	832,505.48	11,850,000.00	12,682,505.48
148834	MC CLEARWELL CCR	1,520,855.68	204,101.00	1,724,956.68
148836	MC CONSTRUCT CCR	1,898,652.45	-	1,898,652.45
148837	MC DSP CCR	-	2,187,789.00	2,187,789.00
148841	TC AP LGE CCR	1,771,500.66	4,609,020.00	6,380,520.66
148843	TC GYP LGE CCR	148,463.67	-	148,463.67
151115	TC CCRT - BOTTOM ASH LGE	565,016.25	456,892.00	1,021,908.25
151116	TC CCRT - FLY ASH LGE	3,802,863.59	918,177.00	4,721,040.59
151117	TC CCRT - GYPSUM LGE	4,448,240.81	453,908.01	4,902,148.82
151118	TC CCRT - TRANSPORT LGE	3,636,130.01	11,711,539.96	15,347,669.97
151119	TC CCRT - LANDFILL LGE	6,299,993.67	5,345,788.76	11,645,782.43
152381	MC Process Water	25,985,194.89	18,427,377.05	44,412,571.94
152384	TC LGE Process Water	11,337,161.66	5,193,726.53	16,530,888.19
152901	MC CCR New Construction	1,958,599.66	5,972,000.00	7,930,599.66
154574	MC CCR Rule Addl Land	804,191.49	-	804,191.49
155513	TC CCR New Const Proces Pd LGE	2,390,724.08	1,646,936.73	4,037,660.81
157470MC	MC GS SL CCR WELL MONITOR 2019	-	420,062.76	420,062.76
157470TC	TC GS SL CCR WELL MONITOR 2019	-	208,607.52	208,607.52
157593	TC HALE LAND 2018 LGE	15,600.00	-	15,600.00
157656LGE	TC CCRT CAPITAL SPARES-	338,833.29	-	338,833.29
158121LGE	TC CCRT BOTTOM ASH SPARES-	104,564.93	-	104,564.93
414000001	REPLACE STEEL SERVICES 2019	-	9,703,758.63	9,703,758.63
AMR414	ALDYL-A MAIN REPLACEMENT	15,680.51	-	15,680.51
CCSO419	REPL EXIST CUST SRV W RISER	916,976.02	2,405,572.47	3,322,548.49
CCSO421	REPL EXIST CS WITH RISER-MUL	24,605.65	144,000.13	168,605.78
CCSO4485	REPL EXIST CS & RISER-4485	(1,380.84)	98,916.87	97,536.03
CNBCS419	NB CUST SRV LINE & GAS RISER	2,472,216.33	4,563,544.20	7,035,760.53
CNBCS421	NB INST CUST SERV LINE & RSR	16,810.02	23,000.46	39,810.48
CNBCS4485	INST CUST SRV - MAGNOLIA	37,848.03	22,948.01	60,796.04

Project #	Description	2018	2019	Total
CRSS414	REPLACE STEEL SERVICE LINES	6,178,833.54	-	6,178,833.54
DLSMR414	DWNTWN LRG SCALE MAIN	2,037,040.68	1,079,616.52	3,116,657.20
LSMR414	Large Scale Main Replacements	899,113.84	456,492.28	1,355,606.12
PMR414	Priority Main Replacement	123,716.24	-	123,716.24
RRCS419G	REP CO GAS SERV 419	1,390,333.02	2,670,444.99	4,060,778.01
RRCS421	Serv Line Repl-Muldraugh	94,134.85	222,279.58	316,414.43
TMPPENBLN	TMP PENILE-BLANTON LN	2,930,689.06	25,792,003.65	28,722,692.71
TMPPENPRS	TMP PENILE-PRESTON	16,353,727.68	6,614,070.04	22,967,797.72
TMPPRSPIC	TMP PRESTON-PICCADILLY	1,752,657.20	22,062,414.81	23,815,072.01

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 2

Responding Witness: Daniel K. Arbough / Robert M. Conroy

- Q-2. For each capital project identified in response to Item 1 (c), state whether LG&E has obtained, is seeking, or intends to seek approval from the Commission for the capital projects by requesting a Certificate of Public Convenience and Necessity (CPCN), provide the case number in which each capital project was approved or in which approval is being sought, or state when LG&E anticipates seeking approval, if applicable.
- A-2. In accordance with KRS 278.020, the Company has received a Certificate of Public Convenience and Necessity (CPCN) for the following projects:

<u>Project</u>	<u>Case Number</u>
Trimble County CCP Storage (Landfill - Phase I)	2015-00156
Mill Creek Air Compliance	2012-00469 and 2011-00162
Trimble County CCR Rule Compliance Construction	2016-00027
Mill Creek CCR Rule Compliance Construction	2016-00027
Transmission Line relocation on Waste Management's property	2017-00195
Distribution Automation	2016-00371
Gas Service Lines and Risers	2012-00222

All other projects included in the forecast are extensions of the Company's systems in the ordinary course of business and do not require a CPCN in compliance with 807 KAR 5:001 Section 15(3).

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Initial Request for Information

Dated November 1, 2018

Case No. 2018-00335

Question No. 3

Responding Witness: Daniel K. Arbough

Q-3. For each capital project identified in response to Item 1 (c), state the amount of expenditures LG&E anticipates incurring on the project in total and "in the remainder of 2018 and calendar year 2019."

A-3. See the response to Question No. 1(c).

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Initial Request for Information

Dated November 1, 2018

Case No. 2018-00335

Question No. 4

Responding Witness: Daniel K. Arbough

Q-4. For each capital project identified in response to Item 1 (c) for which a CPCN has not been requested, briefly describe the purpose of the project.

A-4. See the response to Question No. 1(c).

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Initial Request for Information

Dated November 1, 2018

Case No. 2018-00335

Question No. 5

Responding Witness: Daniel K. Arbough

- Q-5. Refer to LG&E's application at paragraph 6. Provide a copy of all amendments, if any, to LG&E's Mortgage Indenture made since it was filed in Case No. 2015-00138¹ and explain the substance of any amendments.
- A-5. There have been three supplemental indentures subsequent to Case No. 2015-00138. Supplemental Indenture No. 4, dated September 1, 2015, created a series of Securities designated First Mortgage Bonds, 3.300% Series due 2025 and First Mortgage Bonds, 4.375% Series due 2045 which were approved in Case No. 2014-00089. Supplemental Indenture No. 5, dated September 1, 2016, created a series of Securities designated First Mortgage Bonds, Collateral Series 2016TCA for \$125 million which was approved in Case No. 2016-00083. Finally, Supplemental Indenture No. 6, dated May 15, 2017, created a series of Securities designated First Mortgage Bonds, Collateral Series 2017TCA for \$60 million which and was approved in Case No. 2017-00081. Copies of these three supplements are attached.

¹ *Application of Louisville Gas and Electric Company for an Order Amending and Extending Existing Authority with Respect to Revolving Line of Credit* (Ky. PSC entered July 2, 2015).

LOUISVILLE GAS AND ELECTRIC COMPANY

TO

THE BANK OF NEW YORK MELLON,

Trustee

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

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

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.

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.

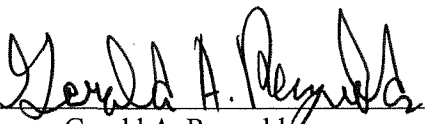
LOUISVILLE GAS AND ELECTRIC COMPANY

By: _____

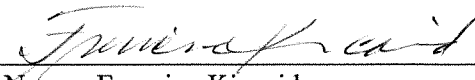
Name: Daniel K. Arbough

Title: Treasurer

ATTEST:


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

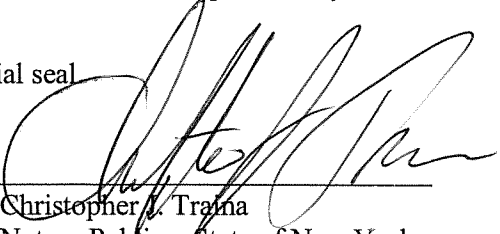
THE BANK OF NEW YORK MELLON, as Trustee

By: 
Name: Francine Kincaid
Title: Vice President

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

On this 17th 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. Trajna
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, 7th Floor
New York, New York 10286
Attn: Corporate Trust Administration

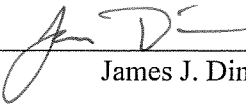
THE BANK OF NEW YORK MELLON, as Trustee

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 Outstanding¹</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

¹ As of September 1, 2015.

EXHIBIT B

LOUISVILLE GAS AND ELECTRIC COMPANY

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

COUNTY	DEED BOOK	PAGE NO.
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

Generating Facilities

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, locating 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

Corrections to Original Indenture

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**

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

Establishing

First Mortgage Bonds, Collateral Series 2016TCA

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.

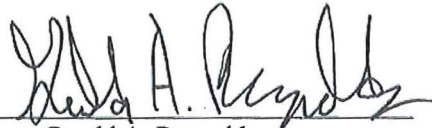
This instrument may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument.

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.

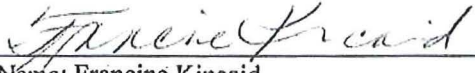
LOUISVILLE GAS AND ELECTRIC COMPANY

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.


Notary Public




MY COMMISSION EXPIRES:
June 21, 2018

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.

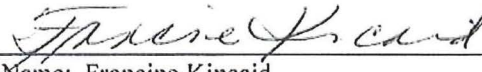
In witness whereof, I hereunto set my hand and official seal.

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

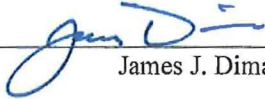
THE BANK OF NEW YORK MELLON, as Trustee

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

LOUISVILLE GAS AND ELECTRIC COMPANY

TO

THE BANK OF NEW YORK MELLON,

Trustee

**Supplemental Indenture No. 6
dated as of May 15, 2017**

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

Establishing

First Mortgage Bonds, Collateral Series 2017TCA

SUPPLEMENTAL INDENTURE NO. 6

SUPPLEMENTAL INDENTURE No. 6, dated as of the fifteenth day of May, 2017, 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. 6 being supplemental thereto. The Original Indenture, as heretofore supplemented, and this Supplemental Indenture No. 6 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 Nos. 1 through 4, 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. 5.

Supplemental Indenture No. 5 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. 8".

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. 8. The Company has duly authorized the execution and delivery of this Supplemental Indenture No. 6 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. 6 a valid agreement of the Company, and to make the Securities of Series No. 8 valid obligations of the Company, have been performed.

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE NO. 6 WITNESSETH, that, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is mutually covenanted and agreed, for the benefit of the Holders of the Securities of Series No. 8, as follows:

ARTICLE ONE

SECURITIES OF SERIES NO. 8

SECTION 101. Creation of Series No. 8.

There is hereby created a series of Securities designated "First Mortgage Bonds, Collateral Series 2017TCA", and the Securities of such series shall:

- (a) be issued in the aggregate principal amount of \$60,000,000 and shall be limited to such aggregate principal amount (except as contemplated in Section 301(b) of the Original Indenture);
- (b) be dated June 1, 2017;
- (c) have a Stated Maturity of June 1, 2033, 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. 6 is an amendment and supplement to the Original Indenture as heretofore amended and supplemented. As amended and supplemented by this Supplemental Indenture No. 6, 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. 6 shall together constitute the Indenture.

SECTION 202. Trustee.

The Trustee accepts the amendment of the Original Indenture effected by this Supplemental Indenture No. 6 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. 6 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. 6.

SECTION 203. Effect of Headings.

The Article and Section headings in this Supplemental Indenture No. 6 are for convenience only and shall not affect the construction hereof.

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. 6 to be duly executed on the 15th day of May, 2017.

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 18 day of May, 2017, 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.

Betty A. Grisby
Notary Public




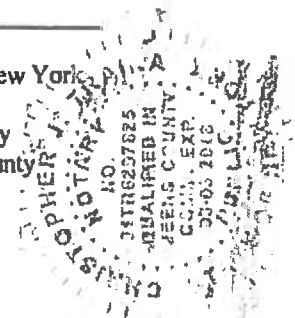
MY COMMISSION EXPIRES:
June 21, 2018

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

On this 18th day of May, 2017, 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

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 Outstanding¹</u>
1	October 15, 2010	1	Collateral Series 2010	October 20, 2010	\$574,304,000	\$424,304,000
2	November 1, 2010	2	1.625% Series due 2015	November 16, 2010	\$250,000,000	None
		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
4	September 1, 2015	5	3.300% Series due 2025	September 28, 2015	\$300,000,000	\$300,000,000
		6	4.375% Series due 2045	September 28, 2015	\$250,000,000	\$250,000,000
5	September 1, 2016	7	Collateral Series 2016TCA	September 15, 2016	\$125,000,000	\$125,000,000

¹ As of May 15, 2017.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Filing and Recording
of
Supplemental Indenture No. 5, dated as of September 1, 2016,
to
Indenture, dated as of October 1, 2010**

COUNTY	MORTGAGE BOOK	PAGE NUMBER
Breckenridge	431	407
Bullitt	M1668	631-643
Clark	M835	692
Green	M304	231-243
Hardin	2174	204-216
Hart	M374	692
Henry	M342	66-78
Jefferson	14719	206-219
Larue	352	309
Meade	M810	20-32
Metcalf	171	222
Muhlenberg	M683	453
Nelson	M1109	303-315
Oldham	M2224	819-831
Shelby	M1020	7
Trimble	M209	815

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's Initial Request for Information

Dated November 1, 2018

Case No. 2018-00335

Question No. 6

Responding Witness: Daniel K. Arbough

- Q-6. Refer to LG&E's application at paragraph 9.
- a. Explain the extent to which LG&E currently expects to raise the \$600 million at issue herein with variable-rate bonds as opposed to fixed-rate bonds.
 - b. Explain the factors that would affect LG&E's decision to raise the capital with variable-rate bonds as opposed to fixed-rate bonds and vice versa.
 - c. Explain the advantages, if any, of raising the capital with variable rate bonds as opposed to fixed-rate bonds and vice versa.
 - d. Explain whether and, if so, why LG&E contends that it is advantageous to pay down LG&E's variable-rate credit facility with variable-rate First 1 Mortgage Bonds, and if LG&E does not contend that it is advantageous, explain why LG&E would propose doing so.
- A-6.
- a. LG&E does not currently expect to issue any of the requested \$600 million as variable-rate bonds.
 - b. Increases in long-term interest rates due to economic or geopolitical factors could alter the Company's current plan.
 - c. At times, variable rate bonds can be advantageous if the yield curve is steep (i.e. the difference between short-term and long-term rates is large). Based on current market conditions, the Company believes raising capital using fixed-rate bonds is more advantageous than using variable-rate bonds. Although interest rates have been rising, long-term debt rates continue to be at historically attractive levels.

- d. FERC has authority over short-term debt issuances of the Company.² Currently, the Company has been authorized by FERC to issue short-term debt up to a maximum of \$500 million.³ Given the maturing term loan, existing short-term debt, and future funding needs, the Company must reduce its short-term debt to remain within its \$500 million limit. It is not prudent to increase the limit because it would expose the Company to excessive refinancing risk. These are the reasons it is advantageous to refinance short-term debt with long-term debt regardless of whether that debt is variable rate or fixed rate.

² 16 U.S.C § 824c.

³ Pursuant to the order issued September 18, 2017 in Docket Number ES 17-41-000

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 7

Responding Witness: Daniel K. Arbough

Q-7. Refer to LG&E's application at paragraph 10.

- a. Explain in detail what LG&E meant by "[i]n connection with the issuance of First Mortgage Bonds."
- b. Identify each type of "interest rate hedging agreement[s]" LG&E is seeking authority to enter; explain in general terms what LG&E and the counterparty would be agreeing to in each type of agreement, and briefly explain how each type of agreement would function to hedge against risk or changes in interest rates.
- c. Explain how LG&E proposes to mitigate counterparty risks when entering into interest rate hedging agreements (e.g., will LG&E only enter into such agreements with counterparties with investment grade credit ratings).
- d. Describe how LG&E proposes to ensure the quality of interest rate hedging agreements into which it enters.
- e. State the extent to which LG&E is requesting approval to enter into interest rate hedging agreements.

A-7.

- a. The purpose of the language is to indicate that any Hedging Facility would be directly associated with the bonds for which authorization is being sought. The Company is not seeking any authorization for Hedging Facilities that are speculative in nature or related to any other transaction.
- b. There are three potential types of interest rate hedging agreements LG&E seeks authority to use.
 1. Forward Starting Fixed Payer Interest Rate Swap – This transaction involves LG&E agreeing to pay a fixed interest rate on a notional

(principal) amount starting at a future date while the counterparty agrees to pay a floating interest rate on the same notional amount. For example, if LG&E expects to issue a fixed rate bond in mid-2019, it could enter into this type of swap to hedge against changes in interest rates between what the market currently expects interest rates to be in mid-2019 and what they actually are at that point in time. It is important to note that the Company would not be locking in current interest rates, but rather the market's expectation of rates on the swap starting date. When the fixed rate bond is issued in mid-2019, the swap is terminated at a gain or a loss. If the actual interest rates are higher than expected, the Company would receive a payment and that gain would be amortized over the life of the bond to effectively reduce the bond's interest rate. If the actual interest rates are lower than expected, the Company would have to make a payment to terminate the swap and that loss would be amortized over the life of the bond to effectively increase the interest rate on the bond. This is the type of agreement used in 2013 and 2015 pursuant to the authority granted in case numbers 2012-00233 and 2014-00089.

2. Treasury Lock – This transaction has a similar objective as the forward starting interest rate swap except that the Company uses treasury bonds rather than interest rate swaps. The key difference is that interest rate swaps have a credit spread element similar to the credit spread on a bond whereas there is no credit spread component to a treasury lock. Consequently, treasury locks do not hedge against changes in credit spreads. In a Treasury Lock the Company agrees on what the treasury bond yield would be on a future date. As is the case with the forward starting swap, if rates are higher when the bonds are issued the lock is settled and the Company would have a gain. If rates decline, the Company would have to make a payment upon settlement and would have a loss. The gain or loss would be amortized over the life of the underlying bond.
3. Floating Rate Payer Interest Rate Swap – This transaction involves LG&E agreeing to pay a floating interest rate on a notional (principal) amount while the counterparty agrees to pay a fixed interest rate on the same notional amount. This transaction would be done if the Company had issued a fixed rate bond and wanted to convert that obligation to a floating interest rate. As described in paragraph 10 of the application, this transaction would reduce the volatility of the value of the fixed rate bond as the change in the value of the swap should virtually offset a change in the value of the bond.

- c. The Company has requested authorization to enter into Hedging Facilities with an affiliate company or a bank. If an affiliate is used, the Counterparty would be PPL Corp. PPL Corp. has numerous ISDA master agreements in place with banks whereas the Company does not have many such agreements.⁴ Utilizing PPL Corp.'s existing agreements will save time and legal fees associated with the Company putting such agreements in place. These agreements can be quite time consuming to negotiate and attractive market opportunities may be available only for short periods. If affiliate transactions are allowed, PPL would enter into the swap with the bank and a mirror transaction with the Company. PPL would not charge any fee to provide this service. Regardless of whether the Company enters into a Hedging Facility with a bank or PPL enters into a Hedging Facility with a bank, corporate policy requires that the counterparty be rated at or above A3 as defined by Moody's Investor Services or A- as defined by Standard and Poor's at the time the transaction is booked. In addition, the counterparties all have unsecured credit exposure thresholds, and are required to post collateral if the threshold is exceeded. The exposure is measured as the market value of the swap if it was terminated that day, and is monitored on a daily basis by PPL Corp. personnel. If the counterparty is downgraded by the credit rating agencies, the credit threshold is reduced.
- d. The response assumes the question is referring to the credit quality of the Counterparty which is addressed in part c. above.
- e. The Company is seeking authority to enter into Hedging Facilities up to the entire amount of the bonds issued. If the Company were to issue less than the entire \$600 million, the Hedging Facilities would not exceed the amount of the actual bond amount.

⁴ Pursuant to the Amended and Restated Utility Services Agreement entered into February 24, 2016, PPL Corp. may procure goods and services from third parties on LG&E's behalf. The Amended and Restated Utility Services Agreement was approved by the Virginia State Corporation Commission in Case No. PUE-2015-00126 and filed with the Kentucky Public Service Commission in Case No. 2018-00295, Response to Commission Staff's First Request for Information, dated September 19, 2018, Attachment 1 to Question No. 61(c).

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 8

Responding Witness: Daniel K. Arbough

Q-8. Refer to LG&E's application at paragraph 10, which states: "If LG&E elects to issue variable rate bonds, the Hedging Facility would be an interest rate agreement designed to allow LG&E to actively manage and limit its exposure to changes in interest rates. If a fixed rate bond is issued, the Hedging Facility would be designed ... to lower the volatility in the value of the bond if the Hedging Facility is entered into after the bond is issued."

- a. Explain why LG&E cannot manage the risks referred to in the quoted language by managing the mix of variable- and fixed-rate bonds at the time of issuance.
- b. If LG&E can manage the risks referred to in the quoted language by managing the mix of variable- and fixed-rate bonds at the time of issuance, explain why it would not do so as opposed to incurring the costs and additional risks posed by interest rate hedging agreements.

A-8.

- a. The tenors of fixed-rate and variable-rate debt available in the capital markets differ. Fixed-rate debt can have a tenor of up to 30 years or longer while the longest variable-rate debt available is 5 years. Additionally, to obtain the most favorable pricing the size of the bond offering must be index⁵ eligible (i.e., at least \$300 million). These factors limit the Company's ability to mitigate the interest rate risk solely by managing the mix of variable- and fixed-rate bonds.
- b. As indicated above, the interest rate risk cannot be managed through the mix of variable-rate and fixed rate bonds.

⁵ The Bloomberg Barclays US Aggregate index.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 9

Responding Witness: Daniel K. Arbough

Q-9. Refer to LG&E's application at paragraph 10, which states: "LG&E requests authority to establish regulatory assets or liabilities for accounting purposes for the losses and gains arising from a Hedging Facility and amortize the gains and losses over the remaining life of the First Mortgage Bonds." Explain in detail how all losses and gains would be determined (e.g., what would result in a loss and what would result in a gain), and explain how and when LG&E intends to account for the losses and gains arising from its use of interest rate hedging agreements.

A-9. The interest rate swaps represent an exchange of cash flows which can convert fixed rate bonds to a variable rate or variable rate bonds to a fixed rate.

In a swap contract in which the Company pays fixed rate cash flows and receives variable rate cash flows, when the fixed interest rates are higher at the termination of the contract than at its inception, there is a gain on the contract. Where fixed interest rates are lower at the termination of the contract than at its inception then there is a loss on the contract.

Conversely, in a swap contract in which the Company pays variable rate cash flows and receives fixed rate cash flows, when fixed interest rates are higher at the termination of the contract than at its inception, there is a loss on the contract. Where interest rates are lower at the termination of the contract than at its inception then there is a gain on the contract.

In the case of a gain, if the requested treatment is granted, the Company would account for the gain as a regulatory liability and amortize this gain over the life of the bonds being hedged. In the case of a loss, if the requested treatment is granted, the Company would account for the loss as a regulatory asset and amortize the amount over the life of the bonds it was hedging. This treatment is identical to that approved in Case No. 2016-00371.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 10

Responding Witness: Daniel K. Arbough

Q-10. Refer to LG&E's application at paragraph 11.

- a. Explain how LG&E determined the costs for the proposed "interest rate hedging agreements," and provide documentation supporting those costs, if any.
- b. Identify all savings that LG&E anticipates receiving from its use of interest rate hedging agreements and explain the basis for those anticipated cost savings.
- c. State whether and, if so, explain why LG&E contends that it would be cost-beneficial for it to enter into interest rate hedging agreements in connection with the issuance of the First Mortgage Bonds for which approval is sought herein.

A-10.

- a. The cost was based on market data provided by Bloomberg on August 23. See attached for screenshots and calculation.
- b. LG&E employs hedging solely to manage interest rate risk. The hedging could result in higher costs or lower costs depending upon the movement of interest rates.
- c. As noted above, LG&E would only utilize hedging to mitigate the interest rate risk. Using forward starting swaps at the current interest rates would offset any change in interest rates between current expected rates for the future date when the Company expects to issue the bonds and the actual interest rates at that time.

COSTS TO FIXED INTEREST RATES ON A VARIABLE RATE BOND FOR 3 YEARS

3Y Swap	Spot	2.7322	[A]	
3Y Treasury	Spot	2.6761	[C]	
		<u>0.0561</u>		(Swap - Treasury) = Swap Spread
		<u>0.0100</u>		(Historical Credit Charge)
		0.07		Total "Cost"

COST TO LOCK IN 10 YEAR RATES FOR 6 MONTHS

10Y Swap	Spot	2.9003	[E]	
10Y Treasury	Spot	2.8275	[D]	
		<u>0.0728</u>		(Swap - Treasury) = Swap Spread
10Y Swap	6 Mo	2.9326	[B]	
10Y Swap	Spot	2.9003	[E]	
		<u>0.0323</u>		(Forward - Spot) = Forward Premium
		<u>0.0100</u>		(Historical Credit Charge)
		0.12		Total "Cost"

[A] Refer to page 2

[B] Refer to page 3

[C] Refer to page 4

[D] Refer to page 4

[E] Refer to page 4

91) Actions		92) Products		93) Views		94) Info		95) Settings		Swap Manager	
30) Solver (Coupon)		31) Load		32) Save		35) Trade		38) CCP			
3) Main		4) Details		5) Curves		6) Cashflow		7) Resets		8) Scenario	
9) Risk		10) CVA		11) Matrix		12) Properties					
Deal		Fixed Float Swap		Counterparty		SWAP CNTRPARTY		US 1mth Libor		Valuation Settings	
Swap		Leg 1:Fixed		Pay		Leg 2:Float		Receive		Curve Date	
Notional		10MM		Notional		10MM		Curve Date		08/23/2018	
Currency		USD		Currency		USD		Valuation		08/23/2018	
Effective		0D		Effective		0D		CSA Coll Ccy		USD	
Maturity		3Y		Maturity		3Y		<input checked="" type="checkbox"/> OIS DC Stripping			
Coupon		2.732215		Index		1M					
Pay Freq		SemiAnnual		Spread		0.000					
Day Count		30I/360		Leverage		1.00000					
Calc Basis		Money Mkt		Latest Index		2.06588					
				Reset Freq		Monthly					
				Pay Freq		Monthly					
				Day Count		ACT/360					
Market											
Leg 1: NPV		-10,053,675.74		Leg 2: NPV		10,053,675.74					
Accrued		0.00		Accrued		0.00					
Premium		-100.54		Premium		100.54					
DV01		-2,877.59		DV01		11.62					
Valuation Results								22) Calculators			
Par Cpn		2.732215		Premium		0.00000		PV01		-2,873.55	
Principal		0.00		BP Value		0.00000		BR01		USD (vs. 1M LI) 2,924.30	
Accrued		0.00						DV01		-2,865.96	
NPV		0.00						Gamma (1bp)		-0.99	
51 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852											
3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2018 Bloomberg Fi											
SN 715120 EDT GMT-4:00 H755-5703-1 24-Aug-2018 11:51:01											

91) Actions		92) Products		93) Views		94) Info		95) Settings		Swap Manager	
30) Solver (Coupon)		31) Load		32) Save		35) Trade		38) CCP			
3) Main		4) Details		5) Curves		6) Cashflow		7) Resets		8) Scenario	
9) Risk		10) CVA		11) Matrix		12) Properties					
Deal		Fixed Float Swap		Counterparty		SWAP CNTRPARTY		Ticker / SWAP		20) Properties	
Swap								Valuation Settings			
Leg 1: Fixed		Pay		Leg 2: Float		Receive		Curve Date		08/23/2018	
Notional		10MM		Notional		10MM		Valuation		08/23/2018	
Currency		USD		Currency		USD		CSA Coll Ccy		USD	
Effective		6M 02/23/2019		Effective		6M 02/23/2019		<input checked="" type="checkbox"/> OIS DC Stripping			
Maturity		10Y 02/23/2029		Maturity		10Y 02/23/2029					
Coupon		2.932577 %		Index		3M US0003M					
Pay Freq		SemiAnnual		Spread		0.000 bp					
Day Count		30I/360		Leverage		1.00000					
Calc Basis		Money Mkt		Latest Index		2.69987					
				Reset Freq		Quarterly					
				Pay Freq		Quarterly					
				Day Count		ACT/360					
Market											
Leg 1: NPV		-295,616.05		Leg 2: NPV		295,616.05					
Accrued		0.00		Accrued		0.00					
Premium		-2.96		Premium		2.96					
DV01		-8,840.28		DV01		-78.70					
Valuation Results								22) Calculators			
Par Cpn		2.932577		Premium		0.00000		PV01		-8,659.94	
Principal		0.00		BP Value		0.00000		DV01		-8,918.98	
Accrued		0.00						Gamma (1bp)		-9.54	
NPV		0.00									

51 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852
3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2018 Bloomberg FI
SN 715120 EDT GMT-4:00 H755-5703-2 24-Aug-2018 16:46:12

Enter all values and hit <GO>.

US Dollar Swaps (30/360, S/A) Cl Forward Curve Analysis
 Curve Date 08/23/18 Market Mid Back Test 08/24/18 << Curve List

7) Horizon Curve 8) Implied Forwards
 Horizon Curve Dates
 6 Mo Projected 3 Mo Projected
 6 Mo Projected 9 Mo Projected

Tenor	US Treasury Actives Curve		US Dollar Swaps (30/360, S/A) Curve (REF)	
		Spot		Spot
1 Mo		1.97649		2.38843
2 Mo		2.04958		2.34927
3 Mo		2.09339		2.36274
6 Mo		2.25337		2.48995
9 Mo		2.36428		2.55157
1 Yr		2.43144		2.63634
2 Yr		2.62344		2.79945
3 Yr		2.67612	[C]	2.84040
4 Yr		2.70619		2.84940
5 Yr		2.72581		2.85320
7 Yr		2.78289		2.86525
9 Yr		2.81517		2.88780
10 Yr		2.82747	[D]	[E] 2.90030
12 Yr		2.86617		2.92280
15 Yr		2.90505		2.94070
20 Yr		2.94324		2.94895
30 Yr		2.98065		2.92570
50 Yr		3.00839		2.83900

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LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 11

Responding Witness: Daniel K. Arbough

Q-11. State what, if any, limits LG&E contends would be reasonable for the Commission to place on LG&E's use of interest rate hedging agreements and explain the basis for LG&E's position.

A-11. LG&E believes the limits proposed in its application are reasonable constraints on LG&E's use of interest rate hedging agreements. LG&E has requested the same authority to use interest rate hedging agreements in prior financing applications, and has exercised that authority only when prudent to do so, as dictated by market conditions. LG&E has utilized such agreements to hedge against adverse interest rate movements, which is intended to benefit LG&E's customers. As explained in the response to Question No. 7, the Company is not seeking any authorization for Hedging Facilities that are speculative in nature or related to any other transaction. Given that LG&E's cost of debt, which has remained among the lowest in its utility peer group for over a decade, is subject to review in periodic rate case proceedings, LG&E does not believe limitations on the use of interest rate hedging agreements are necessary.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 12

Responding Witness: Daniel K. Arbough

- Q-12. State whether LG&E identified any risks posed by the use of interest rate hedging agreements and, if so, describe those risks and how LG&E proposes to mitigate them.
- A-12. The key risks of using interest rate hedging agreements are counterparty credit risk and basis risk. See the response to Question No. 7(b) for an explanation of how LG&E plans to mitigate counterparty credit risk. Basis risk is the risk that the derivative instrument does not move in step with the underlying bond. This risk is mitigated by matching the terms of the interest rate hedge agreement as closely as possible to the underlying terms of the bond. For example, if a Treasury Lock is used the Company would attempt to identify the specific treasury bond for the Lock that is expected to be used to price the bond. For an interest rate swap, the notional amount should match the amount of the bond, and the interest payment dates and the maturity date of a swap should match those of the bond.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 13

Responding Witness: Daniel K. Arbough

Q-13. Explain how the issuance of First Mortgage Bonds for which approval is sought herein will affect LG&E's equity position.

A-13. The issuance of First Mortgage Bonds is an exchange of short-term for long-term debt and therefore would have no impact on LG&E's equity position.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 14

Responding Witness: Daniel K. Arbough

- Q-14. State what, if any, limits or parameters LG&E contends would be reasonable for the Commission to place on its issuance of First Mortgage Bonds and explain the basis for LG&E's position (e.g., a limit on the interest rate and costs associated with fixed-rate bonds).
- A-14. LG&E's Application offered reasonable parameters regarding the issuance of First Mortgage Bonds, such as thorough reporting requirements. The reports provide the Commission the opportunity to review LG&E's business judgment on the interest rates and associated costs, and take action in rate cases if the costs are found to be unreasonable. Interest rates and the associated issuance costs are dictated by market conditions, which are fluid. If the Commission were to place a parameter on interest rates that is lower than available in the market when LG&E attempts to issue, LG&E could be unable to issue bonds. Moreover, LG&E has consistently demonstrated its ability to secure favorable interest rates and associated costs. Given that LG&E's cost of debt, which has remained among the lowest in its utility peer group for over a decade, is subject to review in periodic rate case proceedings, LG&E does not believe additional limitations are necessary or reasonable.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 15

Responding Witness: Daniel K. Arbough

Q-15 Describe the interest rates that LG&E anticipates receiving on the variable-rate and fixed-rate First Mortgage Bonds, and explain the bases for those anticipated interest rates.

A-15. The current fixed-rate for a 10 year First Mortgage Bond is 4.091%, which consists of the current 10 year risk-free treasury rate of 3.191% plus the current risk premium (spread) of 0.90%. A 30 year First Mortgage Bond would have a current rate of 4.575%, consisting of the current risk-free 30 year treasury rate of 3.425% plus the current risk premium of 1.15%. Finally, a 5 year variable rate First Mortgage Bond would have an initial interest rate of 3.102% consisting of the current 3 month LIBOR rate of 2.592% plus a the current risk premium of 51 basis points. This rate would adjust every 3 months to reflect the then-current 3 month LIBOR rate. The indicative rates shown in the attachment were obtained from PNC Bank on November 5, and will change as rates move between now and the actual issuance date.

New Issue Indications

Kentucky Utilities / Louisville Gas & Electric



Assumed Ratings: A1/A (Stable/Stable) – First Mortgage Bonds

Tenor	Floating Rate Notes				Fixed Rate Notes				
	18-Month	2-Year	3-Year	5-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Par Call to Maturity	-	-	-		-	1 Month	2 Months	3 Months	6 Months
Benchmark	3m LIBOR	3m LIBOR	3m LIBOR	3m LIBOR	2.875s of 10/21	2.875s of 10/23	3s of 10/25	2.875s of 8/28	3s of 8/48
Benchmark Yield	2.592%	2.592%	2.592%	2.592%	2.967%	3.018%	3.110%	3.191%	3.425%
Reoffer Spread Area (bps)	L + 14 A	L + 20 A	L + 32 A	L + 51 A	T + 50 A	T + 65 A	T + 80 A	T + 90 A	T + 115 A
Reoffer Yield/Coupon	2.732%	2.792%	2.912%	3.102%	3.467%	3.668%	3.910%	4.091%	4.575%

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 16

Responding Witness: Daniel K. Arbough

Q-16. Provide LG&E's current credit rating with Fitch Ratings and Standard and Poors.

A-16. LG&E has a corporate credit rating of A- and a senior secured credit rating of A from Standard and Poor's. LG&E is not rated by Fitch Ratings.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 17

Responding Witness: Daniel K. Arbough

- Q-17. Explain whether and, if so, how LG&E contends that the issuance of the First Mortgage Bonds for which approval is sought herein will affect LG&E's credit rating.
- A-17. As noted in the response to Question No. 13, the issuance of the First Mortgage Bonds is an exchange of short-term for long-term debt and therefore will have no effect on LG&E's credit ratings.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 18

Responding Witness: Daniel K. Arbough

Q-18. Explain whether and, if so, how LG&E contends that the Commission's refusal to approve the First Mortgage Bonds for which approval is sought herein will affect LG&E's credit ratings and its liquidity.

A-18. Denying approval of the issuance of bonds would have very long-lasting negative ramifications for ratepayers and the Company. The liquidity position of the Company would be severely restricted. As noted in the response to Question No. 1-6(d), the Company has obtained approval from FERC to issue short-term debt up to \$500 million. Given the pending maturity of the \$200 million term loan and current short-term debt balances totaling \$191 million, the Company would have two alternatives. The Company could seek additional equity contributions from its parent or limit dividends to help fund the upcoming capital expenditure program. Substituting higher cost equity for debt would drive customer rates up. Conversely, the Company would be forced to severely restrict its capital expenditures. This would limit the ability to provide the safe, reliable service our customers demand.

A refusal to authorize the bond issuance would be viewed very negatively by the rating agencies. Liquidity is among the most important elements rating agencies expect from issuers since a lack of liquidity can impair an issuer's ability to pay interest and principal when due. Such a denial would almost certainly result in the credit rating agencies reassessing their views of utility regulation in Kentucky being credit supportive. This, in combination with the impaired liquidity, would almost certainly result in a credit rating downgrade, thereby increasing costs to customers.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 19

Responding Witness: Daniel K. Arbough

Q-19. Refer to LG&E's application at paragraph 16 and paragraph 17. Provide a copy of any amendments to the "Credit Agreement," as that term is used in the application, made since LG&E filed Case No. 2016-00361,⁶ and briefly explain any changes to the terms and conditions of the "Credit Agreement" made in those amendments.

A-19. Subsequent to the Case No. 2016-00361 LG&E had two amendments to the "Credit Agreement". These are as follows:

- On January 4, 2017, LG&E extended the termination date of the Credit Agreement from December 31, 2020 to January 27, 2021 and on January 27, 2017, LG&E further extended the termination date by one year to January 27, 2022.
- On January 26, 2018, LG&E extended the termination date of the Credit Agreement from January 27, 2022 to January 26, 2023.

See attached for copies of the amendments to the Credit Agreement.

⁶ *Electronic Application of Louisville Gas and Electric Company for an Order Amending and Extending Existing Authority with Respect to Revolving Line of Credit* (Ky. PSC entered Dec. 9, 2016)



Dr. Talina R. Mathews
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602-0615

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

February 2, 2017

Rick E. Lovekamp
Manager - Regulatory
Affairs/Tariffs
T 502-627-3780
F 502-627-3213
rick.lovekamp@lge-ku.com

**RE: Application of Louisville Gas and Electric Company for an Order
Amending and Extending Existing Authority with Respect to
Revolving Line of Credit (Case No. 2016-00361)**

Dear Dr. Mathews:

Pursuant to Ordering Paragraph No. 6 of the Commission's Order dated December 9, 2016 and amended December 14, 2016 in the above referenced case, Louisville Gas and Electric Company ("LG&E") files an amendment (See Attached) to its Amended and Restated Revolving Credit Agreement ("Credit Agreement") in connection with its multi-year revolving line of credit.

On January 4, 2017, LG&E extended the termination date of the Credit Agreement from December 31, 2020 to January 27, 2021. Subsequently on January 27, 2017, LG&E further extended the termination date by one year, from January 27, 2021 to January 27, 2022. To date, LG&E has incurred \$295,000 of upfront and arrangement fees and \$52,377 of additional expenses, including legal fees, in connection with amending the Credit Agreement.

This information is being filed electronically pursuant to 807 KAR 5:001, Section 8. I certify that the electronically filed documents are a true representation of the documents in paper medium to be filed with the Commission within two business days from the date of this electronic filing, and that all materials in the paper documents are included in the electronic filing.

Dr. Talina R. Mathews
February 2, 2017

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

Sincerely,



Rick E. Lovekamp

**COMMITMENT EXTENSION AGREEMENT AND AMENDMENT NO. 2 TO CREDIT AGREEMENT
(Commitment Extension Pursuant to Section 2.08(d) of Credit Agreement and Amendment Pursuant to
Section 9.05 of Existing Credit Agreement)**

This **COMMITMENT EXTENSION AGREEMENT AND AMENDMENT NO. 2 TO CREDIT AGREEMENT** (this "*Agreement*") dated as of January 4, 2017, is entered into by and among **LOUISVILLE GAS AND ELECTRIC COMPANY**, a Kentucky corporation ("*Borrower*"), the undersigned Lenders (as defined in the Credit Agreement) extending their Commitments (as defined in the Credit Agreement) (collectively, the "*Extending Lenders*"), the other Lenders party hereto and **WELLS FARGO BANK, NATIONAL ASSOCIATION**, as Administrative Agent (in such capacity, the "*Administrative Agent*"), Swingline Lender and Issuing Lender. Capitalized terms used herein and not otherwise defined herein shall have the meanings attributed to them in the Credit Agreement (as hereinafter defined).

RECITALS

A. Borrower, the Extending Lenders, the Lenders (as defined in the Existing Credit Agreement) and the Administrative Agent are parties to that certain Amended and Restated Revolving Credit Agreement dated as of July 28, 2014 (as amended, restated, or otherwise modified from time to time prior to the date hereof, the "*Existing Credit Agreement*") and as amended hereby, the "*Credit Agreement*").

B. The Borrower desires to amend the Existing Credit Agreement to change the existing Termination Date, effective as of the date hereof, from December 31, 2020 to January 27, 2021, and to make certain additional changes to Section 2.08(d) of the Existing Credit Agreement, and the Lenders party hereto agree to such amendment (the "*Termination Date Amendment*"). Pursuant to Section 2.08(d) of the Credit Agreement, after giving effect to the Termination Date Amendment, Borrower has requested a further extension of the Termination Date (the "*Commitment Extension*") of the Commitments by one year, from January 27, 2021 to January 27, 2022, effective on January 27, 2017 (the "*Extension Date*").

C. Each of the undersigned Extending Lenders has agreed to extend its Commitment in accordance with Schedule I hereto.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Extension of Commitments. Effective as of the Extension Date, the Termination Date of the Commitment of each Extending Lender identified on Schedule I shall be extended to January 27, 2022, which, for purposes of Section 2.08(d)(ii) of the Credit Agreement, shall be the "*Current Termination Date*."

2. Conditions Precedent to Effectiveness of Commitment Extension. Subject to the satisfaction of the following conditions, the Commitment Extension shall be effective as of the Extension Date:

- 1) Administrative Agent shall have received:
 - a) counterparts of this Agreement, executed by Borrower and each Extending Lender;
 - b) an Extension Letter;
 - c) a certificate (in the form of Exhibit A hereto) of the Borrower dated the Extension Date signed by a Responsible Officer of the Borrower, certifying that:
 - i) on such date, no Default under the Credit Agreement has occurred and is continuing;
 - ii) the representations and warranties of the Borrower contained in the Credit Agreement are true and correct as of the Extension Date, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they were true and correct as of such earlier date

and except for the representations and warranties in Section 5.04(c), Section 5.05 and Section 5.13 of the Credit Agreement; and

- iii) any governmental, regulatory and third party approvals of any Governmental Authority, including, without limitation, the KPSC and/or FERC, required to authorize the Commitment Extension are attached thereto and remain in full force and effect.
 - d) Opinions of counsel (in the form of Exhibit B) for the Borrower, addressed to the Administrative Agent and each Lender, dated the Extension Date, in form and substance satisfactory to the Administrative Agent.
- 2) No action shall have been taken by any competent authority in connection with the approvals referred to in Section 2(1)(c)(iii) which could restrain or prevent the Commitment Extension or impose, in the reasonable judgment of the Administrative Agent, materially adverse conditions upon the consummation of the Commitment Extension.
 - 3) Borrower shall have paid all fees and expenses that are required to be paid as of the date set forth in that certain fee letter dated October 31, 2016, between the Borrower and Wells Fargo Securities, LLC;
 - 4) Lenders holding Commitments that aggregate at least 51% of the aggregate Revolving Commitments of the Lenders on or prior to the Election Date shall have agreed to extend the Current Termination Date.

3. Termination Date Amendment. Upon execution of this Agreement by the requisite Lenders under Section 9.05 of the Existing Credit Agreement, with effect from and including the date hereof, (a) Section 1.01 of the Existing Credit Agreement is amended by amending the definition of "Termination Date" by replacing "December 31, 2020" in clause (i) thereof with "January 27, 2021," and (b) Section 2.08(d)(ii) of the Existing Credit Agreement is amended by adding the words "up to" immediately prior to "one year after the Current Termination Date."

4. Miscellaneous.

- (a) (i) Headings and captions may not be construed in interpreting provisions; (ii) this Agreement shall be governed by, and construed in accordance with, the law of the State of New York; and (iii) this Agreement may be executed in any number of counterparts with the same effect as if all signatories had signed the same document, and all of those counterparts must be construed together to constitute the same document. This Agreement shall become effective when each party hereto shall have received a counterpart hereof signed by the other parties hereto.
- (b) Upon and after the execution of this Agreement by each of the parties hereto, each reference in the Credit Agreement to "this Agreement", "hereunder", "hereof" or words of like import referring to the Credit Agreement, and each reference in the other Loan Documents to "the Credit Agreement", "thereunder", "thereof" or words of like import referring to the Credit Agreement, shall mean and be a reference to the Credit Agreement as modified hereby. This Amendment shall constitute a Loan Document.

5. FULL FORCE AND EFFECT; RATIFICATION; ENTIRE AGREEMENT. EXCEPT AS EXPRESSLY MODIFIED HEREIN, ALL OF THE TERMS AND CONDITIONS OF THE EXISTING CREDIT AGREEMENT ARE UNCHANGED AND REMAINS IN FULL FORCE AND EFFECT, AND, AS MODIFIED HEREBY, THE BORROWER CONFIRMS AND RATIFIES ALL OF THE TERMS, COVENANTS AND CONDITIONS OF THE EXISTING CREDIT AGREEMENT. THIS AGREEMENT SHALL CONSTITUTE A LOAN DOCUMENT FOR ALL PURPOSES OF THE CREDIT AGREEMENT AND THE OTHER LOAN DOCUMENTS. THE EXECUTION, DELIVERY AND EFFECTIVENESS OF THIS AGREEMENT SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, OPERATE AS A WAIVER OF ANY RIGHT, POWER OR REMEDY OF ANY LENDER OR THE ADMINISTRATIVE AGENT UNDER ANY OF THE LOAN DOCUMENTS, NOR, EXCEPT AS EXPRESSLY PROVIDED HEREIN, CONSTITUTE A WAIVER OR AMENDMENT OF ANY PROVISION OF ANY OF THE LOAN

DOCUMENTS. THE CREDIT AGREEMENT AND THE OTHER LOAN DOCUMENTS, TOGETHER WITH THIS AGREEMENT, REPRESENT THE FINAL AGREEMENT BETWEEN THE PARTIES AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES. THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES.

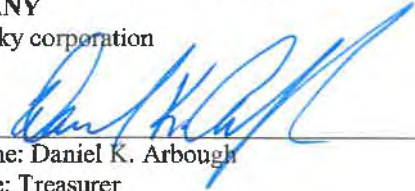
[Signature Pages to Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first above written.

**LOUISVILLE GAS AND ELECTRIC
COMPANY**

a Kentucky corporation

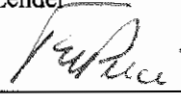
By: _____


Name: Daniel K. Arbough

Title: Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION
as Administrative Agent, Swingline Lender and
Issuing Lender

By: _____



Name: Frederick W. Price

Title: Managing Director

WELLS FARGO BANK, NATIONAL ASSOCIATION
as an Extending Lender

By:



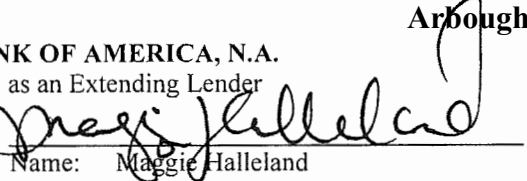
Name:

Title:


Frederick W. Price
Managing Director

BANK OF AMERICA, N.A.
as an Extending Lender

By:


Name: Maggie Halleland
Title: Vice President

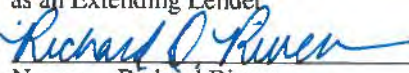
JPMORGAN CHASE BANK, N.A.
as an Extending Lender

By: 
Name: Juan J. Javellana
Title: Executive Director

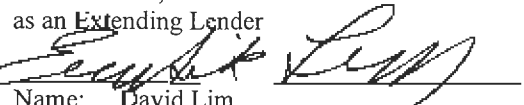
BARCLAYS BANK PLC
as an Extending Lender

By: Vanessa A. Kurbatskiy
Name: Vanessa Kurbatskiy
Title: Vice President

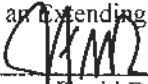
CITIBANK, N.A.,
as an Extending Lender

By: 
Name: Richard Rivera
Title: Vice President

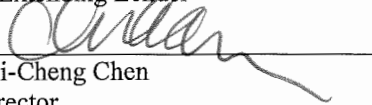
MIZUHO BANK, LTD.
as an Extending Lender

By: 
Name: David Lim
Title: Authorized Signatory

THE BANK OF NOVA SCOTIA
as an Extending Lender

By: 
Name: David Dewar
Title: Director

Arbough
THE BANK OF TOKYO-MITSUBISHI UFJ,
LTD., as an Extending Lender

By: 
Name: Chi-Cheng Chen
Title: Director

BNP PARIBAS

as an Extending Lender

By: 

Name: Francis DeLaney
Title: Managing Director

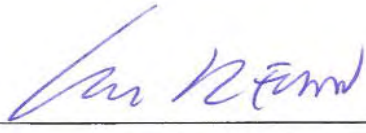
BNP PARIBAS


as an Extending Lender

By: 

Name: Karima Omar
Title: Vice President

CANADIAN IMPERIAL BANK OF
COMMERCE, NEW YORK BRANCH
as an Extending Lender

By: 
Name: _____
Title: **Gordon R. Eadon**
Authorized Signatory

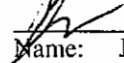
By: 
Name: _____
Title: **Anju Abraham**
Authorized Signatory

**CREDIT SUISSE AG, CAYMAN ISLANDS
BRANCH**
as an Extending Lender

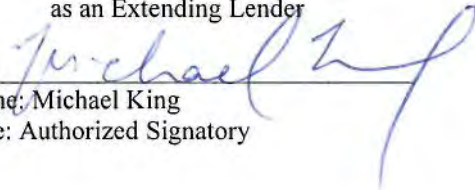
By: 
Name: Mikhail Faybusovich
Title: Authorized Signatory

By: 
Name: Lorenz Meier
Title: Authorized Signatory


GOLDMAN SACHS BANK USA
as an Extending Lender

By: 
Name: Josh Rosenthal
Title: Authorized Signatory

MORGAN STANLEY BANK, N.A. ,
as an Extending Lender

By: 
Name: Michael King
Title: Authorized Signatory

ROYAL BANK OF CANADA
as an Extending Lender

By: 
Name: Frank Lambrinos
Title: Authorized Signatory

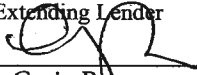
SUN TRUST BANK
as an Extending Lender

By: 

Name: Shannon Juhan

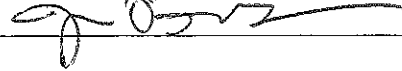
Title: Director

UBS AG, STAMFORD BRANCH
as an Extending Lender

By: 
Name: Craig Pearson
Title: Associate Director

By: 
Name: Darlene Arias
Title: Director

U.S. BANK NATIONAL ASSOCIATION
as an Extending Lender

By: _____

Name: James O'Shaughnessy
Title: Vice President

THE BANK OF NEW YORK MELLON
as an Extending Lender

By: Mark W. Rogers
Name: Mark W. Rogers
Title: Vice President

PNC BANK, NATIONAL ASSOCIATION

as an Extending Lender

By: 

Name: Thomas E. Redmond

Title: Managing Director

SCHEDULE I

COMMITMENTS AND APPLICABLE PERCENTAGES OF EXTENDING LENDERS

LENDERS	COMMITMENT	PERCENTAGE
Wells Fargo Bank, National Association	\$ 32,500,000	6.5%
Bank of America, N.A.	32,500,000	6.5%
JPMorgan Chase Bank, N.A.	32,500,000	6.5%
Barclays Bank PLC	32,500,000	6.5%
Citibank, N.A.	32,500,000	6.5%
Mizuho Bank, Ltd.	32,500,000	6.5%
The Bank of Nova Scotia	25,000,000	5.0%
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	25,000,000	5.0%
BNP Paribas	25,000,000	5.0%
Canadian Imperial Bank of Commerce	25,000,000	5.0%
Credit Suisse AG, Cayman Islands Branch	25,000,000	5.0%
Goldman Sachs Bank USA	25,000,000	5.0%
Morgan Stanley Bank, N.A.	25,000,000	5.0%
Royal Bank of Canada	25,000,000	5.0%
Suntrust Bank	25,000,000	5.0%
UBS AG, Stamford Branch	25,000,000	5.0%
U.S. Bank National Association	25,000,000	5.0%
The Bank of New York Mellon	15,000,000	3.0%
PNC Bank, National Association	15,000,000	3.0%
Total	\$ 500,000,000	100%



Ms. Gwen R. Pinson
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

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

February 8, 2018

Rick E. Lovekamp
Manager – Regulatory
Strategy/Policy
T 502-627-3780
rick.lovekamp@lge-ku.com

**RE: Application of Louisville Gas and Electric Company for an Order
Amending and Extending Existing Authority with Respect to
Revolving Line of Credit (Case No. 2016-00361)**

Dear Ms. Pinson:

Pursuant to Ordering Paragraph No. 6 of the Commission’s Order dated December 9, 2016 and amended December 14, 2016 in the above referenced case, Louisville Gas and Electric Company (“LG&E”) files an amendment (See Attached), to its Amended and Restated Revolving Credit Agreement (“Credit Agreement”) in connection with its multi-year revolving line of credit.

On January 26, 2018, LG&E extended the termination date of the Credit Agreement from January 27, 2022 to January 26, 2023. To date, LG&E has incurred \$350,000 of upfront and arrangement fees and \$30,208 of additional expenses, including legal fees, in connection with amending the Credit Agreement.

In accordance with 807 KAR 5:001, Section 8, I certify that the electronically filed documents are a true and accurate copy of the same documents being filed in paper medium; that the electronic filing has been transmitted to the Commission on February 8, 2018; that there are currently no parties in this proceeding that the Commission has excused from participation by electronic means; and that the filing in paper medium will be filed with the Commission within two business days from the date of the electronic filing.

Ms. Gwen R. Pinson
February 8, 2018

Case No. 2018-00335
Attachment to Response to PSC-1 Question No. 19
Page 29 of 54
Arbough

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

Sincerely,


Rick E. Lovekamp

**COMMITMENT EXTENSION AGREEMENT AND AMENDMENT NO. 3 TO CREDIT AGREEMENT
(Commitment Extension Pursuant to Section 2.08(d) of Credit Agreement and Amendment Pursuant to
Section 9.05 of Existing Credit Agreement)**

This **COMMITMENT EXTENSION AGREEMENT AND AMENDMENT NO. 3 TO CREDIT AGREEMENT** (this “*Agreement*”) dated as of January 26, 2018, is entered into by and among **LOUISVILLE GAS AND ELECTRIC COMPANY**, a Kentucky corporation (“*Borrower*”), the undersigned Lenders (as defined in the Credit Agreement) extending their Commitments (as defined in the Credit Agreement) (collectively, the “*Extending Lenders*”) and **WELLS FARGO BANK, NATIONAL ASSOCIATION**, as Administrative Agent (in such capacity, the “*Administrative Agent*”), Swingline Lender and Issuing Lender. Capitalized terms used and not otherwise defined herein shall have the meanings attributed to them in the Credit Agreement (as hereinafter defined).

RECITALS

A. Borrower, the Extending Lenders, the Lenders (as defined in the Existing Credit Agreement) and the Administrative Agent are parties to that certain Amended and Restated Revolving Credit Agreement dated as of July 28, 2014 (as amended, restated, or otherwise modified from time to time prior to the date hereof, the “*Existing Credit Agreement*” and as amended hereby, the “*Credit Agreement*”).

B. The Borrower desires to amend the Existing Credit Agreement (i) to change the existing Termination Date, effective as of the Extension Date (as defined below), from January 27, 2022 to January 26, 2023 and (ii) to amend the definition of “Change of Control” in Section 1.01 of the Existing Credit Agreement, and the Lenders party hereto agree to such amendments. Pursuant to Section 2.08(d) of the Credit Agreement, Borrower has requested an extension of the Termination Date (the “*Commitment Extension*”) of the Commitments from January 27, 2022 to January 26, 2023, effective on the date hereof (the “*Extension Date*”), provided that the Administrative Agent determines that the conditions specified in or pursuant to Section 2 of this Agreement have been satisfied.

C. Each of the undersigned Extending Lenders has agreed to extend its Commitment in accordance with Schedule I hereto.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Extension of Commitments. Effective as of the Extension Date, the Termination Date of the Commitment of each Extending Lender identified on Schedule I shall be extended to January 26, 2023, which, for purposes of Section 2.08(d)(ii) of the Credit Agreement, shall be the “*Current Termination Date*.”

2. Conditions Precedent to Effectiveness of Commitment Extension. Subject to the satisfaction of the following conditions, the Commitment Extension shall be effective as of the Extension Date:

1) Administrative Agent shall have received:

- a) counterparts of this Agreement, executed by Borrower and each Extending Lender;
- b) an Extension Letter;
- c) a certificate of the Borrower dated the Extension Date and signed by a Responsible Officer of the Borrower, certifying that:
 - i) on such date, no Default under the Credit Agreement has occurred and is continuing;
 - ii) the representations and warranties of the Borrower contained in the Credit Agreement are true and correct as of the Extension Date, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they were true and correct as of such earlier date

and except for the representations and warranties in Section 5.04(c), Section 5.05 and Section 5.13 of the Credit Agreement; and

- iii) any governmental, regulatory and third party approvals of any Governmental Authority, including, without limitation, the KPSC and/or FERC, required to authorize the Commitment Extension are attached thereto and remain in full force and effect.
 - d) Opinions of (i) Pillsbury Winthrop Shaw Pittman LLP, counsel to the Borrower, and (ii) in-house counsel of the Borrower, addressed to the Administrative Agent and each Lender, dated the Extension Date, in form and substance satisfactory to the Administrative Agent.
- 2) No action shall have been taken by any competent authority in connection with the approvals referred to in Section 2(1)(c)(iii) which could restrain or prevent the Commitment Extension or impose, in the reasonable judgment of the Administrative Agent, materially adverse conditions upon the consummation of the Commitment Extension.
 - 3) Borrower shall have paid all fees and expenses that are required to be paid as of the date set forth in that certain fee letter dated December 15, 2017, between the Borrower and Wells Fargo Securities, LLC;
 - 4) Lenders holding Commitments that aggregate at least 51% of the aggregate Revolving Commitments of the Lenders on or prior to the Election Date shall have agreed to extend the Current Termination Date.

3. Termination Date Amendment. Upon execution of this Agreement by the requisite Lenders under Section 9.05 of the Existing Credit Agreement, with effect from and including the Extension Date, Section 1.01 of the Existing Credit Agreement is amended by deleting the definition of “Termination Date” in its entirety and replacing it with the following:

““Termination Date” means the earlier to occur of (i) January 26, 2023 and (ii) the date upon which all Commitments shall have been terminated in their entirety in accordance with this Agreement.”

4. Change of Control Amendment. Upon execution of this Agreement by the requisite Lenders under Section 9.05 of the Existing Credit Agreement, with effect from and including the Extension Date, Section 1.01 of the Existing Credit Agreement is amended by amending the definition of “Change of Control” by inserting “,directly or indirectly,” immediately prior to “80% or more of the outstanding shares of the Voting Stock in the Borrower.” in clause (ii) thereof.

5. Miscellaneous.

- (a) (i) Headings and captions may not be construed in interpreting provisions; (ii) this Agreement shall be governed by, and construed in accordance with, the law of the State of New York; and (iii) this Agreement may be executed in any number of counterparts with the same effect as if all signatories had signed the same document, and all of those counterparts must be construed together to constitute the same document. This Agreement shall become effective when each party hereto shall have received a counterpart hereof signed by the other parties hereto.
- (b) Upon and after the execution of this Agreement by each of the parties hereto, each reference in the Credit Agreement to “this Agreement”, “hereunder”, “hereof” or words of like import referring to the Credit Agreement, and each reference in the other Loan Documents to “the Credit Agreement”, “thereunder”, “thereof” or words of like import referring to the Credit Agreement, shall mean and be a reference to the Credit Agreement as modified hereby. This Amendment shall constitute a Loan Document.

6. FULL FORCE AND EFFECT; RATIFICATION; ENTIRE AGREEMENT. EXCEPT AS EXPRESSLY MODIFIED HEREIN, ALL OF THE TERMS AND CONDITIONS OF THE EXISTING CREDIT AGREEMENT ARE UNCHANGED AND REMAIN IN FULL FORCE AND EFFECT, AND, AS MODIFIED HEREBY, THE BORROWER CONFIRMS AND RATIFIES ALL OF THE TERMS, COVENANTS AND CONDITIONS OF THE EXISTING CREDIT AGREEMENT. THIS AGREEMENT

Arbough

SHALL CONSTITUTE A LOAN DOCUMENT FOR ALL PURPOSES OF THE CREDIT AGREEMENT AND THE OTHER LOAN DOCUMENTS. THE EXECUTION, DELIVERY AND EFFECTIVENESS OF THIS AGREEMENT SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, OPERATE AS A WAIVER OF ANY RIGHT, POWER OR REMEDY OF ANY LENDER OR THE ADMINISTRATIVE AGENT UNDER ANY OF THE LOAN DOCUMENTS, NOR, EXCEPT AS EXPRESSLY PROVIDED HEREIN, CONSTITUTE A WAIVER OR AMENDMENT OF ANY PROVISION OF ANY OF THE LOAN DOCUMENTS. THE CREDIT AGREEMENT AND THE OTHER LOAN DOCUMENTS, TOGETHER WITH THIS AGREEMENT, REPRESENT THE FINAL AGREEMENT BETWEEN THE PARTIES AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES. THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES.

[Signature Pages to Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first above written.

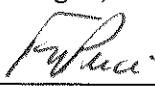
LOUISVILLE GAS AND ELECTRIC COMPANY
a Kentucky corporation

By: 

Name: Daniel K. Arbough


Title: Treasurer

WELLS FARGO BANK, NATIONAL ASSOCIATION
as Administrative Agent, Swingline Lender and
Issuing Lender

By: 

Name: **Frederick W. Price**
Title: **Managing Director**

WELLS FARGO BANK, NATIONAL ASSOCIATION
as an Extending Lender

By: 

Name:

Title:

Frederick W. Price
Managing Director

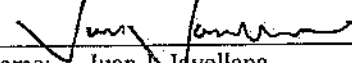
BANK OF AMERICA N.A.
as an Extending Lender

By:



Name: Maggie Halleland
Title: Vice President

JPMORGAN CHASE BANK, N.A.
as an Extending Lender

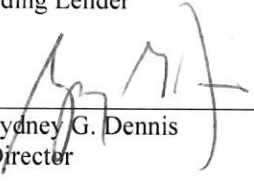
By: 
Name: Juan J. Javellana
Title: Executive Director

BARCLAYS BANK PLC
as an Extending Lender

By: _____


Name: Sydney G. Dennis

Title: Director

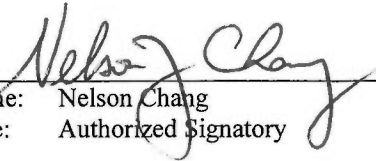


CITIBANK, N.A.

as an Extending Lender

By: 
Name: Richard Rivera
Title: Vice President

MIZUHO BANK, LTD.
as an Extending Lender

By: 
Name: Nelson Chang
Title: Authorized Signatory

THE BANK OF NOVA SCOTIA
as an Extending Lender

By: _____

Name: David Dewar

Title: Director

THE BANK OF TOKYO-MITSUBISHI UFJ, LTD.

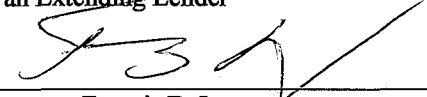
as an Extending Lender

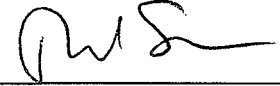
By: _____



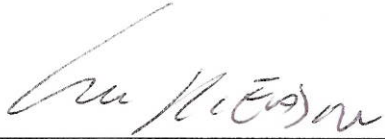
Name: Chi-Cheng Chen
Title: Director

BNP PARIBAS
as an Extending Lender

By: 
Name: Francis DeLaney
Title: Managing Director

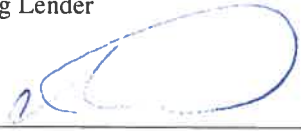
By: 
Name: Theodore Sheen
Title: Director

CANADIAN IMPERIAL BANK OF
COMMERCE, NEW YORK BRANCH
as an Extending Lender

By: 
Name: _____
Title: **Gordon R. Eadon**
Authorized Signatory


By: 
Name: **Anju Abraham**
Title: **Authorized Signatory**

CREDIT SUISSE AG, CAYMAN ISLANDS
BRANCH
as an Extending Lender

By: 
Name: **MIKHAIL FAYBUSOVICH**
Title: **AUTHORIZED SIGNATORY**

By: 
Name: **Christopher Zybrick**
Title: **Authorized Signatory**


GOLDMAN SACHS BANK USA
as an Extending Lender

By:  _____
Name: Rebecca Kratz
Title: Authorized Signatory

MORGAN STANLEY BANK, N.A.
as an Extending Lender

By: 
Name: Michael King
Title: Authorized Signatory

ROYAL BANK OF CANADA
as an Extending Lender

By: 
Name: Frank Lambrinos
Title: Authorized Signatory

SUNTRUST BANK
as an Extending Lender

By: _____
Name: Arize Agumadu
Title: Vice President

UBS AG, STAMFORD BRANCH

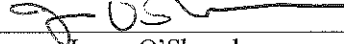
as an Extending Lender

By: 
Name: Craig Pearson
Title: Associate Director
Banking Product Services, US

By: 
Name: Darlene Arias
Title: Director

Arbough

U.S. BANK NATIONAL ASSOCIATION
as an Extending Lender

By: 
Name: James O'Shaughnessy
Title: Vice President

THE BANK OF NEW YORK MELLONArbough
as an Extending Lender

By: Mark W. Rogers
Name: Mark W. Rogers
Title: Vice President

PNC BANK, NATIONAL ASSOCIATION

as an Extending Lender

By:



Name: Thomas E. Redmond

Title: Managing Director

SCHEDULE I

COMMITMENTS AND APPLICABLE PERCENTAGES OF EXTENDING LENDERS

LENDERS	COMMITMENT	PERCENTAGE
Wells Fargo Bank, National Association	\$ 32,500,000	6.5%
Bank of America, N.A.	32,500,000	6.5%
JPMorgan Chase Bank, N.A.	32,500,000	6.5%
Barclays Bank PLC	32,500,000	6.5%
Citibank, N.A.	32,500,000	6.5%
Mizuho Bank, Ltd.	32,500,000	6.5%
The Bank of Nova Scotia	25,000,000	5.0%
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	25,000,000	5.0%
BNP Paribas	25,000,000	5.0%
Canadian Imperial Bank of Commerce	25,000,000	5.0%
Credit Suisse AG, Cayman Islands Branch	25,000,000	5.0%
Goldman Sachs Bank USA	25,000,000	5.0%
Morgan Stanley Bank, N.A.	25,000,000	5.0%
Royal Bank of Canada	25,000,000	5.0%
Suntrust Bank	25,000,000	5.0%
UBS AG, Stamford Branch	25,000,000	5.0%
U.S. Bank National Association	25,000,000	5.0%
The Bank of New York Mellon	15,000,000	3.0%
PNC Bank, National Association	15,000,000	3.0%
Total	\$ 500,000,000	100%

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 20

Responding Witness: Daniel K. Arbough

Q-20. Refer to LG&E's application at paragraph 17.

- a. Identify all material terms and conditions of the "existing Credit Agreement" that LG&E anticipates amending to exercise extensions of its revolving line of credit in 2019 and 2020.
- b. Explain why LG&E anticipates that it will be necessary to amend those material terms and conditions identified in response to Item 20(a).
- c. Explain what LG&E means by "if necessary" as used in paragraph 17 of the application.
- d. State whether LG&E is seeking approval to "amend and restate the Credit Agreement," as demanded by its creditors to extend the maturity date of the credit line, or as deemed necessary by LG&E.

A-20.

- a. The only material term that LG&E anticipates amending is the term (tenor) of the agreement. The commitment fee could change if market conditions change, but the fee is currently at market rates. Finally, the language referencing the London Interbank Offered Rate (LIBOR) may need to include an alternate reference rate.
- b. The term of the credit agreement would require modification in order to extend the agreement. As noted above, the commitment fee could change if market rates have changed. The LIBOR rate is being phased out by the Financial Conduct Authority (FCA). Accordingly, an alternative reference rate may need to be included in the Credit Agreement.
- c. LG&E used the phrase "if necessary" to indicate the uncertainty surrounding the need to amend and restate or simply extend the credit agreements. This determination would be made by the applicable attorneys at the time of the transaction.

- d. The need to amend and restate the Credit Agreement would be based upon an agreement between the banks and the Company. Amending and restating renewed and ongoing commercial agreements is considered to be a best practice verses allowing multiple amendments to accumulate over time.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's Initial Request for Information
Dated November 1, 2018**

Case No. 2018-00335

Question No. 21

Responding Witness: Daniel K. Arbough

Q-21. Refer to LG&E's application at paragraph 18 and 19.

- a. In the event LG&E's current credit service providers do not agree to extend the credit facility at the current individual or aggregate participation levels, explain what material terms and conditions LG&E would demand with any credit line it obtains to replace any non-extended portion of the credit facility.
- b. Explain why LG&E cannot return to the Commission to obtain approval for a specific line of credit sought to replace any non-extended portion of the credit facility once it has determined that that portion of the credit facility will not be extended.

A-21.

- a. The replacement credit agreement would contain the same terms and conditions as the credit agreement with the banks that agree to extend.
- b. LG&E seeks to be efficient in presenting applications to the Commission for approval, and as demonstrated in this case, combines requested relief where possible. As part of this effort, LG&E seeks contingent relief, consistent with previous applications and Commission orders, such as the authority to replace any non-extended portion of a credit facility, to avoid the need to file a second application over a minor issue. Moreover, LG&E may not learn of the need to replace a portion of the revolving credit facility in sufficient time to file an application and obtain the Commission's approval. In addition, any replacement agreement would be filed with the Commission pursuant to the requirements of this case.