

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

**AN EXAMINATION OF THE APPLICATION)
OF THE FUEL ADJUSTMENT CLAUSE OF)
LOUISVILLE GAS AND ELECTRIC) CASE NO. 2019-00229
COMPANY FROM NOVEMBER 1, 2018 TO)
APRIL 30, 2019**

**RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
DATED AUGUST 12, 2019**

FILED: AUGUST 26, 2019

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Delbert Billiter**, being duly sworn, deposes and says that he is Manager — LG&E and KU Fuels for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Delbert Billiter

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 26th day of August 2019.

 (SEAL)

Notary Public

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
~~State at Large, Kentucky~~
Commission Expires 7/11/2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, being duly sworn, deposes and says that he is Director — Power Supply, for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 26th day of August 2019.

 (SEAL)

Notary Public

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
~~State at Large, Kentucky~~
Commission Expires 7/11/2022

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 1

Responding Witness: Delbert Billiter

Q-1. For the period under review, provide the amount of coal purchased in tons, and the percentage of purchases that were spot versus contract.

A-1. During the review period LG&E purchased 3,563,261 tons.

Spot: 0% (0 tons)

Contract: 100% (3,563,261 tons)

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 2

Responding Witness: Delbert Billiter

- Q-2. For the period under review, list each coal purchase made under a long-term contract (one year or greater). For each purchase, list:
- a. Contract or purchase order number;
 - b. The supplier's name;
 - c. The location(s) of production facilities from which the coal is sourced;
 - d. The method of delivery, (i.e., barge, truck, rail, other);
 - e. The actual quantity received during the review period;
 - f. The tonnage requirement for the review period; and
 - g. Current price paid per ton.
- A-2. See attached. Page 1 of the attachment shows only the actual quantity received by LG&E under each contract and page 2 shows the actual combined quantity received by KU and LG&E under each contact.

LG&E Coal Purchases (unloaded) under long-term contract						
November 1, 2018 thru April 30, 2019						
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Contract/PO	Supplier	Location of Production Facility	Delivery Method	Actual Quantity Received	Tonnage Requirement*	Current Price** (\$/ton)
J17002	Alliance Coal LLC	W-KY	Barge	672,240	1,000,000	\$44.50
J17005	Alliance Coal LLC	W-KY	Rail	52,896		\$38.50
J18003	Alliance Coal LLC	W-KY	Barge	224,907	500,000	\$40.00
J18009	Alliance Coal LLC	W-KY	Barge	479,501	650,000	\$37.25
J19001	Alliance Coal LLC	W-KY	Rail	580,329	433,333	\$40.00
J18008	Arch Coal Sales Company Inc.	WY	Barge	-	312,500	\$12.65
J17001	Contura Energy	PA	Barge	-	-	\$38.00
J16005	Eagle River Coal LLC	IL	Barge	41,135	70,000	\$51.81
J16018	Foresight Coal Sales LLC	IL	Barge	322,062	458,333	\$42.35-IL, \$41.45-W-KY
J18005	Knight Hawk Coal, LLC	IL	Barge	84,915	250,000	\$36.55
J16007	Peabody COALSALES LLC	IN	Barge, Rail	-	125,000	\$45.55-B, \$45.40-B, \$42.31-R
J19003	Peabody COALSALES LLC	IN	Barge, Rail	-	168,000	\$40.00-B, \$37.75-R
J14001	Rhino Energy LLC	W-KY	Barge	64,590	193,594	\$38.00
J16006	The American Coal Company	IL, WV, W-KY	Barge	3,613	325,000	\$39.86-IL, \$38.86-WV, \$38.96-W-KY
J17004	The American Coal Company	IL, WV, W-KY	Barge	285,242	583,333	\$36.50-IL, \$35.50-WV, \$35.60-W-KY
J18004	Western Ky Minerals, Inc	W-KY	Barge	18,779	26,125	\$38.00
J19004	Western Ky Minerals, Inc	W-KY	Barge	12,919	60,000	\$38.50
J14010C	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	32,134	49,908	\$42.00
J16017B	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	64,316	122,956	\$40.25
J18002B	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	589,028	705,920	\$44.74
J19002	White Stallion	IL	Barge	34,655	140,000	\$41.91
				3,563,261		
*Tonnage Requirement is a ratable volume for combined LG&E and KU coal station shipments						
**Prices vary by source/transportation type. Prices as of 4.30.19						

Attachment to Response to Question No. 2

BILLITER

Page 1 of 2

Combined LG&E and KU Coal Purchases (unloaded) under long-term contract						
November 1, 2018 thru April 30, 2019						
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Contract/PO	Supplier	Location of Production Facility	Delivery Method	Actual Quantity Received	Tonnage Requirement*	Current Price** (\$/ton)
J17002	Alliance Coal LLC	W-KY	Barge	1,071,968	1,000,000	\$44.50
J17005	Alliance Coal LLC	W-KY	Rail	52,896		\$38.50
J18003	Alliance Coal LLC	W-KY	Barge	536,404	500,000	\$40.00
J18009	Alliance Coal LLC	W-KY	Barge	758,088	650,000	\$37.25
J19001	Alliance Coal LLC	W-KY	Rail	580,329	433,333	\$40.00
J18008	Arch Coal Sales Company Inc.	WY	Barge	297,702	312,500	\$12.65
J17001	Contura Energy	PA	Barge	44,354	-	\$38.00
J16005	Eagle River Coal LLC	IL	Barge	86,381	70,000	\$51.81
J16018	Foresight Coal Sales LLC	IL	Barge	599,334	458,333	\$42.35-IL, \$41.45-W-KY
J18005	Knight Hawk Coal, LLC	IL	Barge	231,366	250,000	\$36.55
J16007	Peabody COALSALLES LLC	IN	Barge, Rail	207,396	125,000	\$45.55-B, \$45.40-B, \$42.31-R
J19003	Peabody COALSALLES LLC	IN	Barge, Rail	159,421	168,000	\$40.00-B, \$37.75-R
J14001	Rhino Energy LLC	W-KY	Barge	176,542	193,594	\$38.00
J16006	The American Coal Company	IL, WV, W-KY	Barge	273,947	325,000	\$39.86-IL, \$38.86-WV, \$38.96-W-KY
J17004	The American Coal Company	IL, WV, W-KY	Barge	617,332	583,333	\$36.50-IL, \$35.50-WV, \$35.60-W-KY
J18004	Western Ky Minerals, Inc	W-KY	Barge	28,355	26,125	\$38.00
J19004	Western Ky Minerals, Inc	W-KY	Barge	29,027	60,000	\$38.50
J14010C	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	32,134	49,908	\$42.00
J16017B	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	64,316	122,956	\$40.25
J18002B	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	772,472	705,920	\$44.74
J19002	White Stallion	IL	Barge	61,318	140,000	\$41.91
				6,681,080	6,174,002	
*Tonnage Requirement is a ratable volume for combined LG&E and KU coal station shipments						
**Prices vary by source/transportation type. Prices as of 4.30.19						

Attachment to Response to Question No. 2

BILLITER

Page 2 of 2

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff’s First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 3

Responding Witness: Delbert Billiter

Q-3.

- a. As of the last day of the review period, state the coal inventory level in tons, and in number of days' supply. Provide this information by generating station and in the aggregate.
- b. Describe the criteria used to determine number of days' supply.
- c. State the target coal inventory level for each generating station, and for the total system.
- d. If actual coal inventory exceeds the target inventory by ten days' supply, state the reasons for the excess inventory.
- e. (1) State whether any significant changes in the current coal inventory target are expected within the next 12 months.

(2) If so, state the expected change, and the reasons for this change.

A-3. a. As of April 30, 2019:

Mill Creek ¹	582,517 Tons; 40 Days	Target 20-39 Days
<u>Trimble County^{2,3}</u>	<u>248,171 Tons; 44 Days</u>	<u>Target 21-43 Days</u>
Total	830,688 Tons; 40 Days	Target 19-38 Days

¹Inventory listed for Mill Creek does not include the 75,000 tons sold to the Refined coal facility operator that remains in the onsite coal pile, as previously discussed in Case No. 2015-00264.

²Inventory listed for Trimble County does not include the 32,400 tons sold to the Refined coal facility operator that remains in the onsite coal pile, as previously discussed in Case No. 2015-00264.

³Trimble County coal inventory tons is LG&E’s allocated ownership of both high sulfur coal, which is used in Unit 1 and Unit 2, and PRB coal, which is

used only in Unit 2. The days in inventory and target range are calculated on a combined basis regardless of ownership.

- b. The method of calculating days in inventory is based on each plant's coal burn capability (coal tons in inventory divided by 90% of each generating unit's heat input description from its air permit to operate).

Upper and lower days of inventory targets were established for each plant taking into consideration the plant's operating parameters. Each plant's "least cost" inventory range is established annually during the planning process taking into account the risk of coal delivery disruptions, potential coal burn volatility, procurement reaction time for short term coal supply, cost of unserved energy, and current coal and electricity prices.

- c. See (a) above.
- d. Not applicable.
- e. (1) LG&E does not expect significant changes to its current coal inventory target levels; however, during the Companies' planning cycle minor adjustments may be made to the inventory targets if warranted.

(2) Not applicable.

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 4

Responding Witness: Delbert Billiter

Q-4. List each written coal-supply solicitation issued during the period under review.

a. For each solicitation, provide the date of the solicitation, the type of solicitation (contract or spot), the quantities solicited, a general description of the quality of coal solicited, the time period over which deliveries were requested, and the generating unit(s) for which the coal was intended.

b. For each solicitation, state the number of vendors to whom the solicitation was sent, the number of vendors who responded, and the selected vendor. Provide the bid tabulation sheet or corresponding document that ranked the proposals. (This document should identify all vendors who made offers.) State the reasons for each selection. For each lowest-cost bid not selected, explain why the bid was not selected.

A-4. a. **SOLICITATION 1**

Date: March 21, 2019
Contract/Spot: Contract or Spot
Quantities: No minimum or maximum specified
Quality: Suitable for KU's Ghent and E.W. Brown Stations, LG&E's Mill Creek Station and KU's and LG&E's Trimble County Station
Period: April 1, 2019 through December 31, 2019 – Spot
2020 and beyond - Contract
Generating Units: all units at Ghent, E.W. Brown, Trimble Count, and Mill Creek Stations.

b. Number of vendors sent a solicitation: 122
Number of vendors responded: 17 companies / 30 offers
Selected vendor(s): The vendors selected were based upon the lowest evaluated delivered cost, operational and environmental requirements of the unit and other factors impacting coal supply reliability as noted on the bid evaluation sheets attached.

Powder River Basin Coal - Contract

Arch Coal Sales Company, Inc. – J20002

High Sulfur Coal - Spot

Foresight Coal Sales/The American Coal Co. – J17004/Amendment No. 4

High Sulfur Coal – Contract

Contura Coal Sales, LLC – J20001

Knight Hawk Coal, LLC – J21001

Western Kentucky Consolidated Resources, LLC – J21002

The bid analysis information is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

The entire attachment is
Confidential and
provided separately
under seal.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 5

Responding Witness: Delbert Billiter

- Q-5. List each oral coal-supply solicitation issued during the period under review.
- a. For each solicitation, state why the solicitation was not written, the date(s) of the solicitation, the quantities solicited, a general description of the quality of coal solicited, the time period over which deliveries were requested, and the generating unit(s) for which the coal was intended.
 - b. For each solicitation, identify all vendors solicited and the vendor selected. Provide the tabulation sheet or other documents that rank the proposals. (This document should identify all vendors who made offers.) State the reasons for each selection. For each lowest-cost bid not selected, explain why the bid was not selected.
- A-5. There were no oral coal-supply solicitations during the period under review.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 6

Responding Witness: Charles R. Schram

- Q-6. For the period under review, list each vendor from whom natural gas was purchased for generation and the quantities and the nature of each purchase (i.e., spot or contract).
- A-6. See attached for the list of vendors, associated quantities, and the nature of each natural gas purchase.

<u>Vendor</u>	<u>Type</u> ¹	<u>MMBTU</u>
BP Energy Company	Spot	1,420,364
Castleton Commodities Merchant Trading L.P.	Spot	20,000
CenterPoint Energy Services, Inc.	Spot	78,000
CIMA Energy, LP	Spot	553,501
Colonial Energy, Inc.	Spot	357,104
ConocoPhillips Company	Spot	291,002
Direct Energy Business Marketing, LLC	Spot	67,100
DTE Energy Trading, Inc.	Spot	60,000
Eco-Energy Natural Gas, LLC	Spot	297,927
EDF Trading North America, LLC	Spot	206,900
Engie Energy Marketing NA, Inc.	Spot	37,600
Exelon Generation Company, LLC	Spot	283,100
J. Aron & Company LLC	Spot	34,300
Macquarie Energy, LLC	Spot	92,135
Mercuria Energy America, Inc.	Spot	30,000
NextEra Energy Marketing, LLC	Spot	976,990
NJR Energy Services Company	Spot	168,600
Range Resources - Appalachia, LLC	Spot	173,000
Sequent Energy Management, L.P.	Spot	545,094
Shell Energy North America (US), L.P.	Spot	1,868,115
Spire Marketing Inc.	Spot	367,565
SWN Energy Services Company, LLC	Spot	10,000
Tenaska Marketing Ventures	Spot	5,553,300
Tennessee Valley Authority	Spot	406,699
Texla Energy Management, Inc.	Spot	187,300
TrailStone Energy Marketing, LLC	Spot	21,200
Twin Eagle Resource Management, LLC	Spot	215,400
Uniper Global Commodities North America LLC	Spot	77,192
United Energy Trading, LLC	Spot	482,900
Wells Fargo Commodities, LLC	Spot	58,700
Columbia Gas of Kentucky, Inc.	GSO Customer ²	372
LG&E Gas Supply	Special Contract ³	200,366
ENI Trading & Shipping Inc.	Forward	900,000
J. Aron & Company LLC	Forward	2,119,025
NextEra Energy Marketing, LLC	Forward	300,000
Sequent Energy Management, L.P.	Forward	2,245,567
Uniper Global Commodities North America LLC	Forward	3,607,656
	Total Volume	24,314,074

¹ Spot refers to gas purchases delivered during the next gas day following the transaction. Friday transactions include Sat, Sun, & Mon (holiday weekends can cover four days). Forward refers to gas purchased for delivery periods typically starting after the current month.

² KU is a General Sales Other (GSO) customer of Columbia Gas of Kentucky for the Haefling Plant; no volume purchase commitments.

³ LG&E is the local gas distribution company; no volume purchase commitments.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 7

Responding Witness: Charles R. Schram

- Q-7. For the period under review, state if there were any instances in which a natural gas generating unit could not be operated when it otherwise would have run, due to pipeline constraints or natural gas being unavailable.
- A-7. There were no instances of generating unit restrictions due to pipeline constraints or natural gas unavailability.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 8

Responding Witness: Delbert Billiter / Charles R. Schram

- Q-8. State if there have been any changes to hedging activities for coal or natural gas purchases used for generation since the previous FAC review proceeding. If so, describe the changes in detail.
- A-8. There have been no changes to the physical hedging practices or guidelines since the previous review proceeding. LG&E does not engage in financial hedging activities for its coal or natural gas purchases.

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 9

Responding Witness: Delbert Billiter / Charles R. Schram

Q-9.

- a. State whether LG&E has audited any of its fuel or transportation contracts during the period under review.
- b. If so, for each audited contract:
 - (1) Identify the contract;
 - (2) Identify the auditor; and
 - (3) State the results of the audit and describe the actions that LG&E took as a result of the audit.

A-9.

- a. No. LG&E has not conducted any financial audits of its fuel or transportation contracts.

LG&E's Manager Fuels Technical Services or LG&E's Mining Engineer conducts scheduled on-site reviews and inspections of the mining operations, scales and sampling systems of each vendor up to twice a year, and likewise may conduct unscheduled visits. Additionally, LG&E employees may visit a vendor as needed to address problems and issues at any time.

- b. Not applicable.

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 10

Responding Witness: Delbert Billiter / Charles R. Schram

Q-10.

- a. State whether LG&E is currently involved in any litigation with its current or former fuel suppliers or transportation vendors.
- b. If yes, for each litigation:
 - (1) Identify the supplier or vendor;
 - (2) Identify the contract involved;
 - (3) State the potential liability or recovery to LG&E;
 - (4) List the issues presented; and
 - (5) Provide a copy of the complaint or other legal pleadings that initiated the litigation and any answers or counterclaims. If a copy has previously been filed with the Commission, provide the date on which it was filed and the case in which it was filed.
- c. State the current status of all litigation with suppliers or vendors.

A-10. a. LG&E is not currently involved in any litigation with its fuel suppliers or transportation vendors.

- b. Not applicable.
- c. Not applicable.

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 11

Responding Witness: Delbert Billiter / Charles R. Schram

Q-11.

- a. For the period under review, state if there have been any changes LG&E's written policies and procedures regarding its fuel procurement.
- b. If yes:
 - (1) Describe the changes;
 - (2) Provide the written policies and procedures as changed;
 - (3) State the date(s) the changes were made; and
 - (4) Explain why the changes were made.
- c. If no, provide the date LG&E's current fuel procurement policies and procedures were last changed, when they were last provided to the Commission, and identify the proceeding in which they were provided.

A-11. a-c. During the period under review, there were no changes to The Corporate Fuels and By-Products Procurement Procedures for coal. The Corporate Fuels and By-Products Procurement Procedures were last updated April 1, 2017 and were provided to the Commission in Case No. 2017-00285 in response to Question No. 15.

During the period under review, there were no changes to the Power Supply Commodity Policy – Natural Gas Fuel for Generation. The Power Supply Commodity Policy – Natural Gas Fuel for Generation was last updated August 1, 2017 and was provided to the Commission in Case No. 2018-00021 in response to Question No. 11.

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 12

Responding Witness: Stuart Wilson

Q-12. For the period under review, list all firm power commitments for (a) purchases and (b) sales. This list shall identify the electric utility, the amount of commitment in MW, and the purpose of the commitment (i.e., peaking, emergency).

A-12. a. Firm Purchases

The firm purchases from Ohio Valley Electric Corporation (OVEC) for the review period are shown in the table below. LG&E purchased its participation ratio (5.63%) of the OVEC released capacity for the months in question:

Utility	Companies' Amt (MW)	LG&E Portion (MW)	Purpose
OVEC (Nov 2018)	~ 146	~ 101	Baseload
OVEC (Dec 2018)	~ 158	~ 109	Baseload
OVEC (Jan 2019)	~ 158	~ 109	Baseload
OVEC (Feb 2019)	~ 158	~ 109	Baseload
OVEC (Mar 2019)	~ 158	~ 109	Baseload
OVEC (Apr 2019)	~ 119	~ 82	Baseload

In addition, LG&E had a capacity purchase and tolling agreement with Bluegrass Generation through April 2019 for 165 MW of peaking capacity from a simple cycle combustion turbine.

b. Sales – NONE

LOUISVILLE GAS AND ELCTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 13

Responding Witness: Derek A. Rahn

- Q-13. Provide a monthly billing summary of sales to all electric utilities for the period under review.
- A-13. See Page 2, Sheet 1 of 3 of the November 2018 through April 2019 monthly Form B filings that were previously filed with the Commission.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 14

Responding Witness: Derek A. Rahn

Q-14. Describe the effect on the FAC calculation of line losses related to:

- a. Intersystem sales when using a third-party transmission system, and
- b. Intersystem sales when not using a third-party transmission system.

A-14.

- a-b. Line losses related to inter-system sales are calculated using a loss factor of 0.5% whether the inter-system sale requires a third-party transmission system or not. This practice is consistent with the Commission's June 7, 2013, Amended Order in Case No. 2012-00553.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 15

Responding Witness: Michael P. Drake

- Q-15. Provide a list, in chronological order, showing by unit, any scheduled, actual, and forced outages for the period under review.
- A-15. See attached.

Unit and Outage Type (F=Forced; S=Scheduled)	Scheduled		Actual*		HOURS OF DURATION Scheduled	Actual*	REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
	FROM	TO	FROM	TO			
Mill Creek Unit 1 - Coal - 300 MW In-service August 1972	S	11/22/2018 1:31	11/26/2018 0:00	11/22/2018 1:31	94:29	94:29	Maintenance Outage to clean air heaters and deslag boiler
	F			1/18/2019 15:38		100:37	Hot Reheat Steam Leak
	S	3/9/2019 0:00	5/5/2019 23:59	3/8/2019 15:39	1391:59	1400:21	Planned outage for ash handling conversion
	S	11/29/2018 22:15	12/3/2018 0:00	11/29/2018 22:15	73:45	73:45	Maintenance Outage to wash air heaters
	F			12/3/2018 2:27		25:27	Startup Failure due to ID Fan VFD fault
	S	12/16/2018 14:25	12/18/2018 0:00	12/16/2018 14:25	33:35	33:35	Maintenance outage to deslag boiler lower slope
	S	12/18/2018 0:00	12/19/2018 20:48	12/18/2018 0:00	44:48	44:48	Extension of maintenance outage to deslag lower slope
	S	3/9/2019 0:12	3/10/2019 3:03	3/9/2019 0:12	26:51	26:51	Maintenance outage to repair FDG isolation dampers
	S	3/30/2019 0:00	4/7/2019 0:00	3/28/2019 22:25	192:00	241:35	Flue gas desulfurization (FGD) maintenance
	S	4/8/2019 0:00	4/8/2019 15:37	4/8/2019 0:00	15:37	15:37	FGD maintenance
Mill Creek Unit 3 - Coal - 394 MW In-service August 1978	S	12/20/2018 20:52	12/24/2018 0:00	12/20/2018 20:52	75:08	75:08	Maintenance outage due to air heater fouling
	S	12/24/2018 0:00	12/24/2018 22:47	12/24/2018 0:00	22:47	22:47	Air heater wash
	F			2/18/2019 13:04		10:14	Generator cooling system repair
	S	4/13/2019 0:00	4/21/2019 0:00	4/12/2019 22:29	192:00	182:05	FGD maintenance
	F			4/20/2019 12:39		103:51	Condenser Water Box Leakage
	F			4/25/2019 15:01		51:15	Boiler secondary superheater tube leak
	S	9/29/2018 0:00	11/25/2018 23:59	9/29/2018 0:00	1391:59	1342:57	Planned outage for ash handling conversion
	F			11/25/2018 22:16		53:47	Boiler feedwater pump/turbine lube oil system
	F			1/27/2019 7:55		28:55	Boiler economizer tube leak repair
	S	2/1/2019 23:59	2/5/2019 0:00	2/1/2019 23:59	72:01	72:01	Main stop valves
Trimble County Unit 1 - Coal - 370 MW In-service December 1990 75% ownership share of 511 MW	S	2/5/2019 0:00	2/5/2019 15:05	2/5/2019 0:00	15:05	15:05	Main stop valves
	S	11/3/2018 0:00	11/11/2018 23:59	11/5/2018 0:28	215:59	215:32	Boiler tube replacement
	S	11/1/2018 0:00	11/14/2018 11:00	11/14/2018 0:00	11:00	11:00	Exciter controls
	F			11/14/2018 21:53		10:53	Exciter controls
	F			4/2/2019 9:33		24:14	Instrumentation
	F			11/1/2018 0:42		17:42	Circuit breakers
	F			11/1/2018 23:23		28:59	Air Heater motor trip
	F			12/16/2018 21:52		43:07	Boiler reheat tube leak repair
	S	12/18/2018 16:59	12/20/2018 9:06	12/18/2018 16:59	40:07	40:07	Air Heater - Wash
	F			1/9/2019 6:10		20:17	Stator cooling line repair
Cane Run Unit 7 - Gas - 683 MW In-service June 2015 Jointly owned with KU	S	3/16/2019 0:00	4/28/2019 0:00	3/15/2019 19:31	1032:00	1060:29	Major turbine overhaul
	S	4/29/2019 0:00	5/6/2019 0:00	4/29/2019 0:00	168:00	168:00	Major turbine overhaul
	S	10/13/2018 0:00	11/4/2018 0:00	10/13/2018 0:00	528:00	552:00	Planned outage for normal maintenance and warranty repairs
	S	11/9/2018 0:00	11/9/2018 13:37	11/5/2018 0:00	109:37	109:37	Maintenance outage extension to warranty repair CT exhaust struts
	S	1/3/2019 23:54	1/6/2019 9:23	1/3/2019 23:54	57:29	57:29	Unit outage for steam turbine control valve maintenance
	S			4/4/2019 11:24		0:00	Bore-scope Inspection
	F			2/19/2019 6:03		6:02	Ignition system
	S	3/25/2019 6:38	3/25/2019 14:16	3/25/2019 6:38	7:38	7:38	Compressor wash and gas meter replacement
E. W. Brown Unit 6 - Gas CT - 171 MW In-service August 1999 Jointly owned with KU	F			4/1/2019 3:16		10:02	Combustion Controls
	S	4/13/2019 0:00	5/26/2019 0:00	4/11/2019 5:07	1032:00	1050:53	Combustion turbine overhaul
E. W. Brown Unit 7 - Gas CT - 171 MW In-service August 1999							

*Actual outage dates and hours of duration include scheduled and forced outages.

Unit and Outage Type (F=Forced; S=Scheduled)	Scheduled		Actual*		HOURS OF DURATION		REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
	FROM	TO	FROM	TO	Scheduled	Actual*	
Jointly owned with KU							
Cane Run Unit 11 - Gas CT - 14 MW	12/27/2018 1:00	12/27/2018 17:00	12/27/2018 1:00	12/27/2018 17:00	16:00	16:00	Maintenance outage for Substation Testing
In-service June 1968	12/27/2018 17:00	12/28/2018 8:42	12/27/2018 17:00	12/28/2018 8:42	15:42	15:42	Extension of maintenance outage for Substation Testing
Paddys Run Unit 11 - Gas CT - 13 MW	11/21/2018 9:12	11/21/2018 15:20	11/21/2018 9:12	11/21/2018 15:20	6:08	6:08	Substation maintenance
In-service June 1968			3/20/2019 14:08	5/20/2019 13:54		1463:46	Starting system repair
Paddys Run Unit 12 - Gas CT - 28 MW							
In-service July 1968							
Paddys Run Unit 13 - Gas CT - 175 MW	10/27/2018 0:00	11/18/2018 0:00	10/27/2018 4:50	11/17/2018 11:43	528:00	270:53	Planned unit outage for Combustion Inspection, Generator
In-service June 2001	11/26/2018 9:34	11/27/2018 13:58	11/26/2018 9:34	11/27/2018 13:58	28:24	28:24	Maintenance outage for switchyard equipment
Jointly owned with LG&EKU	3/28/2019 7:41	3/28/2019 16:43	3/28/2019 7:41	3/28/2019 16:43	9:02	9:02	Maintenance outage on switchyard system protection devices
Trimble County Unit 5 - Gas CT - 179 MW	3/8/2019 6:11	3/9/2019 0:00	3/8/2019 6:11	3/9/2019 0:00	17:49	17:49	Turbine Inspection
In-service May 2002	3/2/2019 0:00	3/10/2019 23:59	3/9/2019 0:00	3/16/2019 14:02	215:59	182:02	Turbine Inspection and relay upgrades
Jointly owned with KU							
Trimble County Unit 6 - Gas CT - 179 MW	11/29/2018 8:45	11/29/2018 18:00	11/29/2018 8:45	11/29/2018 18:00	9:15	9:15	Generator Relay Protection Testing
In-service May 2002	3/8/2019 6:11	3/9/2019 0:00	3/8/2019 6:11	3/9/2019 0:00	17:49	17:49	Turbine Inspection and relay upgrades
Jointly owned with KU	3/2/2019 0:00	3/10/2019 23:59	3/9/2019 0:00	3/16/2019 11:10	215:59	179:10	Turbine Inspection and relay upgrades
Trimble County Unit 7 - Gas CT - 179 MW	10/6/2018 0:00	11/18/2018 23:59	10/10/2018 7:04	11/17/2018 19:03	1055:59	923:59	Gas Turbine Inspection
In-service June 2004	11/17/2018 20:28	11/18/2018 14:31	11/17/2018 20:28	11/18/2018 14:31	18:03	18:03	Exciter controls
Jointly owned with KU	11/19/2018 0:53	11/19/2018 19:27	11/19/2018 0:53	11/19/2018 19:27	18:34	18:34	Exciter controls
			12/19/2018 13:57	12/23/2018 11:00		93:03	Turning Gear
	2/14/2019 21:06	2/22/2019 3:00	2/14/2019 21:06	2/22/2019 3:00	173:54	173:54	Generator Cooling System - Seal Replacement
	2/22/2019 3:00	2/24/2019 11:12	2/22/2019 3:00	2/24/2019 11:12	56:12	56:12	Generator Cooling System - Seal Replacement
	10/20/2018 0:00	11/4/2018 0:00	10/20/2018 0:17	11/3/2018 7:42	360:00	343:25	Gas turbine control system upgrades
	1/18/2019 6:00	1/18/2019 14:22	1/13/2018 12:53	11/14/2018 5:30	8:22	16:37	Fuel piping and valves
	2/3/2019 3:00	2/7/2019 1:09	1/18/2019 6:00	1/18/2019 14:22	8:22	8:22	lube oil system instrumentation
	11/16/2018 3:20	11/28/2018 20:00	2/3/2019 3:00	2/7/2019 1:09	94:09	94:09	Exhaust stack liner
	1/4/2019 8:00	1/4/2019 17:34	11/16/2018 3:20	11/28/2018 20:00	304:40	304:40	Exhaust stack liner
	1/25/2019 11:32	1/25/2019 19:34	11/28/2018 20:00	12/2/2018 0:22	76:22	76:22	Hydraulic oil system
	3/17/2019 5:34	3/17/2019 12:38	1/4/2019 8:00	1/4/2019 17:34	9:34	9:34	Hydraulic oil system
			1/25/2019 11:32	1/25/2019 19:34	8:02	8:02	Hydraulic oil system
			3/17/2019 5:34	3/17/2019 12:38	7:04	7:04	lube oil piping
Zorn Unit 1 - Gas CT - 16 MW			5/8/2018 11:04	1/1/2019 0:00		5700:56	Control System Power Supply Repair
In-service May 1969			1/1/2019 0:00	8/14/2019 11:54		5411:54	Control System Power Supply Repair

*Actual outage dates and hours of duration include scheduled and forced outages.

LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Commission Staff's First Request for Information
Dated August 12, 2019

Case No. 2019-00229

Question No. 16

Responding Witness: Stuart Wilson

Q-16. For the period under review, provide the monthly capacity factor at which each generating unit operated.

A-16. See table below.

Louisville Gas and Electric Company
Unit Capacity Factors by Month

Unit	Capacity Factor (%) (Net MWh)/(period hrs. x MW rating)					
	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
Brown 5	25.6	3.2	10.0	0.0	6.5	10.4
Brown 6	0.0	7.3	11.9	1.4	12.1	1.8
Brown 7	2.0	2.8	11.8	0.4	2.1	0.5
Brown Solar	10.7	9.2	9.9	12.3	20.3	23.8
Cane Run 7	59.9	85.1	84.2	87.0	94.0	89.0
Cane Run 11	0.0	0.0	0.0	0.0	0.0	0.0
Mill Creek 1	69.2	84.0	63.3	71.2	20.8	0.0
Mill Creek 2	79.1	65.6	80.8	74.2	73.5	61.8
Mill Creek 3	84.5	55.5	68.0	62.8	78.7	45.0
Mill Creek 4	9.8	83.6	73.3	62.6	79.8	81.4
Ohio Falls 1	0.1	9.6	4.6	2.3	5.9	9.1
Ohio Falls 2	0.0	10.7	4.5	3.7	11.2	12.1
Ohio Falls 3	0.9	13.0	9.1	6.6	17.2	20.1
Ohio Falls 4	0.9	12.7	9.1	6.6	19.7	23.9
Ohio Falls 5	0.7	11.7	9.3	6.6	18.1	19.6
Ohio Falls 6	0.4	12.7	10.5	7.6	29.6	32.2
Ohio Falls 7	0.4	14.0	10.7	7.7	29.8	34.5
Ohio Falls 8	1.1	13.9	8.0	6.8	24.7	32.6
Paddy's Run 11	0.0	0.0	0.0	0.0	0.0	0.0
Paddy's Run 12	0.0	0.0	0.0	0.0	0.0	0.0
Paddy's Run 13	2.1	2.2	4.5	0.5	1.1	4.8
Trimble County 1	60.5	92.4	89.9	88.8	93.9	90.9
Trimble County 2	89.1	83.6	89.3	93.3	44.3	0.0
Trimble County 5	27.0	20.6	13.0	7.1	7.3	24.0
Trimble County 6	26.2	15.7	8.0	2.5	0.9	6.1
Trimble County 7	8.2	10.2	8.9	4.3	6.4	13.8
Trimble County 8	15.0	0.0	7.5	0.9	0.5	6.3
Trimble County 9	10.0	0.3	6.8	1.8	0.2	2.8
Trimble County 10	4.5	0.1	5.3	5.5	4.8	19.0
Zorn	0.0	0.0	0.0	0.0	0.0	0.0

Notes: 1 – Trimble County values reflect 100% of the unit. Trimble County 2 is owned by KU (60.75%), LG&E (14.25%), IMPA (12.88%), and IMEA (12.12%).

2 – The North American Electric Reliability Council Generation Availability Data System defines capacity factor as the value equal to the net MWh produced divided by the product of the hours in the period and the unit rating.

3 – Jointly owned units are shown for both LG&E and KU and include Brown 5-7, Cane Run 7, Paddy's Run 13, Trimble County 2, and Trimble County 5-10.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 17

Responding Witness: Michael P. Drake

Q-17.

- a. For the period under review, explain if LG&E made any changes to its maintenance and operation practices, or completed any specific generation efficiency improvements that affect fuel usage at LG&E's generation facilities.
- b. Describe the impact of these changes on LG&E's fuel usage.

A-17.

- a-b. There have been no maintenance or operation practice changes that affect fuel usage during the period under review. LG&E strives to maintain unit efficiency through routine cyclic planned outage maintenance. This maintenance work continues to focus on reestablishing expected turbine efficiency through continuous monitoring of all plant systems during operation. LG&E contracts Black and Veatch to provide this monitoring on larger units to identify trends which indicate a potential efficiency loss of any system component. Black and Veatch sends notification to the generating stations which track the potential issues through resolution. In evaluating potential major component projects or replacements that may impact efficiency, LG&E must balance any potential efficiency benefit associated with the project against both costs and potential implications under the Clean Air Act. LG&E has not realized any efficiency improvements through major component projects during this period.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 18

Responding Witness: Delbert Billiter / Charles R. Schram

- Q-18. State whether LG&E is aware of any violations of its policies and procedures regarding fuel procurement that occurred prior to or during the period under review.
- A-18. LG&E is not aware of any violations of its policies and procedures regarding fuel procurement that occurred prior to or during the period under review.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 19

Responding Witness: Derek A. Rahn

Q-19. State whether LG&E is aware of any violations of 807 KAR 5:056 that occurred prior to or during the period under review.

A-19. LG&E is not aware of any violations of 807 KAR 5:056 that occurred prior to or during the period under review.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Commission Staff's First Request for Information
Dated August 12, 2019**

Case No. 2019-00229

Question No. 20

Responding Witness: Derek A. Rahn

- Q-20. State whether all fuel contracts related to commodity and transportation have been filed with the Commission. If any contracts have not been filed, explain why they have not been filed, and provide a copy.
- A-20. For the period under review, all fuel contracts related to commodity and/or transportation have been filed with the Commission.