

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

In the Matter of:

**ELECTRONIC EXAMINATION OF THE)
APPLICATION OF THE FUEL ADJUSTMENT)
CLAUSE OF KENTUCKY UTILITIES) CASE NO. 2018-00218
COMPANY FROM NOVEMBER 1, 2017)
THROUGH APRIL 30, 2018)**

**RESPONSE OF
KENTUCKY UTILITIES COMPANY
TO
INFORMATION REQUESTED IN
APPENDIX OF COMMISSION'S ORDER
DATED AUGUST 10, 2018**

FILED: AUGUST 24, 2018

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 24th day of August 2018.



(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, **Michael P. Drake**, being duly sworn, deposes and says that he is Director, Generation Services 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.



Michael P. Drake

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21 day of August 2018.



(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, **Derek A. Rahn**, being duly sworn, deposes and says that he is Manager - Revenue Requirement COS 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.



Derek A. Rahn

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24th day of August 2018.



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 24th day of August 2018.



(SEAL)

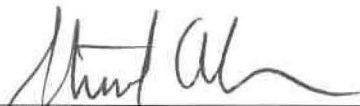
Notary Public

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, **Stuart Wilson**, being duly sworn, deposes and says that he is Director — Energy Planning, Analysis and Forecasting 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.



Stuart Wilson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24th day of August 2018.

 (SEAL)

Notary Public

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

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 1

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 KU purchased 3,224,742 tons.

Spot: 3% (90,193 tons)

Contract: 97% (3,134,549 tons)

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 2

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 KU under each contract and page 2 shows the actual combined quantity received by KU and LG&E under each contract. Several contracts were below ratable quantity for the period under review due to flooding in February and March on the Ohio River. However, as of the end of July these deficits were made up, and all contracts are at or above ninety-five percent of ratable.

In addition, Armstrong Energy and its affiliates filed for chapter 11 bankruptcy in the fourth quarter of 2017. Contract J07032B was rejected during the bankruptcy. Therefore, there will be no additional tonnage received under this contract. KU and LG&E were successful in negotiating concessions on the three Armstrong Coal contracts (J14010B, J16017, and J18002) transferred to Western Kentucky Consolidated Energy as part of the bankruptcy.

KU Coal Purchases (unloaded) under long-term contract						
November 1, 2017 thru April 30, 2018						
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Contract/PO	Supplier	Location of Production Facility	Delivery Method	Actual Quantity Received	Tonnage Requirement*	Current Price** (\$/ton)
J16001B	Alliance Coal LLC	W-KY	Barge	35,021	85,625	\$48.25
J16008	Alliance Coal LLC	IN, W-KY	Barge	25,020	43,132	\$49.00
J17002	Alliance Coal LLC	W-KY	Barge	369,647	1,000,000	\$42.50
J17005	Alliance Coal LLC	W-KY	Rail	-	416,667	\$38.50
J18003	Alliance Coal LLC	W-KY	Barge	193,931	333,333	\$38.00
J18009	Alliance Coal LLC	W-KY	Barge	229,376	639,273	\$36.00
J16012	Arch Coal Sales Company Inc.	WY	Barge	227,334	122,366	\$12.60
J07032B	Armstrong Coal Sales	W-KY	Barge, Rail	12,730	-	\$28.50
J14004B	Armstrong Coal Sales	W-KY	Barge, Rail		86,263	\$44.61-B, \$43.61-R
J14010B	Armstrong Coal Sales	W-KY	Barge	19,180	30,170	\$44.00
J16003	Armstrong Coal Sales	W-KY	Barge, Rail	140,240	172,527	\$39.62
J16017	Armstrong Coal Sales	W-KY	Rail	14,244	276,823	\$42.11-B, \$41.11-R
J18002	Armstrong Coal Sales	W-KY	Barge, Rail	123,192	168,983	Q1-\$44.64 B/R, Q2-\$41.74 B/R
J17001	Contura Energy	PA	Barge	79,599	166,474	\$38.00
J16005	Eagle River Coal LLC	IL	Barge	156,547	211,758	\$50.81
J16018	Foresight Coal Sales LLC	IL	Barge	242,840	666,667	\$40.45-IL, \$39.55-W-KY
J18005	Knight Hawk Coal, LLC	IL	Barge	123,107	166,667	\$34.68
J16007	Peabody COALSALES LLC	IN	Barge, Rail	312,167	378,557	\$44.74-B, \$44.67-B, \$41.67-R
J14001	Rhino Energy LLC	W-KY	Barge	169,680	271,355	\$37.00
J15002B	Sunrise Coal	IN	Rail	96,919	83,333	\$37.62
J16006	The American Coal Company	IL, WV, W-KY	Barge	274,313	383,333	\$39.60-IL, \$38.60-WV, \$38.70-W-KY
J17004	The American Coal Company	IL, WV, W-KY	Barge	151,794	250,000	\$34.20-IL, \$33.20-WV, \$33.30-W-KY
J18004	Western Ky Minerals, Inc	W-KY	Barge	20,932	67,750	\$38.00
J14010C	Western Ky Consolidated Resources, LLC	W-KY	Barge	17,596	20,718	\$42.00
J16017B	Western Ky Consolidated Resources, LLC	W-KY	Barge	4,764	70,362	\$39.50
J18002B	Western Ky Consolidated Resources, LLC	W-KY	Rail, Barge	94,376	257,400	\$41.78
				3,134,549		
*Tonnage Requirement is a ratable volume for combined LG&E and KU coal station shipments						
**Prices vary by source/transportation type						
						Attachment to Response to Question No. 2
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Combined LG&E and KU Coal Purchases (unloaded) under long-term contract						
November 1, 2017 thru April 30, 2018						
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Contract/PO	Supplier	Location of Production Facility	Delivery Method	Actual Quantity Received	Tonnage Requirement*	Current Price** (\$/ton)
J16001B	Alliance Coal LLC	W-KY	Barge	87,892	85,625	\$48.25
J16008	Alliance Coal LLC	IN, W-KY	Barge	31,726	43,132	\$49.00
J17002	Alliance Coal LLC	W-KY	Barge	897,060	1,000,000	\$42.50
J17005	Alliance Coal LLC	W-KY	Rail	630,282	416,667	\$38.50
J18003	Alliance Coal LLC	W-KY	Barge	317,864	333,333	\$38.00
J18009	Alliance Coal LLC	W-KY	Barge	613,330	639,273	\$36.00
J16012	Arch Coal Sales Company Inc.	WY	Barge	227,334	122,366	\$12.60
J07032B	Armstrong Coal Sales	W-KY	Barge, Rail	15,894	-	\$28.50
J14004B	Armstrong Coal Sales	W-KY	Barge, Rail	74,538	86,263	\$44.61-B, \$43.61-R
J14010B	Armstrong Coal Sales	W-KY	Barge	25,568	30,170	\$44.00
J16003	Armstrong Coal Sales	W-KY	Barge, Rail	145,052	172,527	\$39.62
J16017	Armstrong Coal Sales	W-KY	Barge, Rail	259,557	276,823	\$42.11-B, \$41.11-R
J18002	Armstrong Coal Sales	W-KY	Barge, Rail	168,983	168,983	Q1-\$44.64 B/R, Q2-\$41.74 B/R
J17001	Contura Energy	PA	Barge	79,599	166,474	\$38.00
J16005	Eagle River Coal LLC	IL	Barge	218,588	211,758	\$50.81
J16018	Foresight Coal Sales LLC	IL, W-KY	Barge	447,798	666,667	\$40.45-IL, \$39.55-W-KY
J18005	Knight Hawk Coal, LLC	IL	Barge	140,541	166,667	\$34.68
J16007	Peabody COALSLES LLC	IN	Barge, Rail	353,038	378,557	\$44.74-B, \$44.67-B, \$41.67-R
J14001	Rhino Energy LLC	W-KY	Barge	262,016	271,355	\$37.00
J15002B	Sunrise Coal	IN	Rail	96,919	83,333	\$37.62
J16006	The American Coal Company	IL, WV, W-KY	Barge	357,630	383,333	\$39.60-IL, \$38.60-WV, \$38.70-W-KY
J17004	The American Coal Company	IL, WV, W-KY	Barge	151,794	250,000	\$34.20-IL, \$33.20-WV, \$33.30-W-KY
J18004	Western Ky Minerals, Inc	W-KY	Barge	45,026	67,750	\$38.00
J14010C	Western Ky Consolidated Resources, LLC	W-KY	Barge	22,436	20,718	\$42.00
J16017B	Western Ky Consolidated Resources, LLC	W-KY	Barge	156,368	70,362	\$39.50
J18002B	Western Ky Consolidated Resources, LLC	W-KY	Barge	290,792	257,400	\$41.78
				6,117,623	6,369,536	
*Tonnage Requirement is a ratable volume for combined LG&E and KU coal station shipments						
**Prices vary by source/transportation type						

Attachment to Response to Question No. 2

BILLITER

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KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 3

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, 2018:

EW Brown	165,897 Tons; 26 Days	Target 30-55 Days
Ghent ¹	483,896 Tons; 23 Days	Target 20-38 Days
<u>Trimble County²</u>	<u>334,314 Tons; 51 Days</u>	<u>Target 21-43 Days</u>
Total	984,107 Tons; 30 Days	Target 23-44 Days

¹Inventory listed for Ghent does not include the 200,000 tons sold to the Refined Coal facility operator that remains in the onsite coal pile, as previously discussed in Case No. 2015-00264.

²Trimble County coal inventory includes KU's allocated ownership of both PRB and High Sulfur coals used for Trimble County 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) KU 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.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 4

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: December 18, 2017
Contract/Spot: Spot
Quantities: No minimum or maximum specified
Quality: Suitable for KU's E.W. Brown Station
Period: January, 2018 through March 31, 2018 – Spot
Generating Units: KU's E.W. Brown Station

- b. Number of vendors sent a solicitation: 6
Number of vendors responded: 3 companies / 4 offers
Selected vendor(s): The vendors selected were based upon the lowest evaluated delivered cost, operational and environmental requirements of the units and other factors impacting coal supply reliability as noted on the bid evaluation sheets attached.

High Sulfur Spot

Sunrise Coal, LLC – J18025

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

a. **SOLICITATION 2**

Date: February 14, 2018
Contract/Spot: Contract or Spot
Quantities: No minimum or maximum specified
Quality: Suitable for KU's Ghent and E.W. Brown Stations and LG&E's Trimble County and Mill Creek Stations
Period: April 1, 2018 through December 31, 2018 – Spot
2019 and beyond - Contract
Generating Units: KU's Ghent and E.W. Brown Stations and LG&E's Trimble County and Mill Creek Stations

- b. Number of vendors sent a solicitation: 119
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 units and other factors impacting coal supply reliability as noted on the bid evaluation sheets attached.

High Sulfur – Spot

Fire Star Energy Resources, LLC – K18027
Sunrise Coal, LLC – J18025 Amendment 1
Alliance Coal, LLC – J18028

High Sulfur – Contract

Peabody Coalsales, LLC – J19003
Alliance Coal, LLC – J19001
Western Kentucky Mineral, Inc. – J19004
White Stallion Energy/Eagle River Coal – J19002

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

The entire attachments
are Confidential and
provided separately
under seal.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 5

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 document that ranks 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.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 6

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.

Attachment to Response to Question No. 6
Page 1 of 1
Schram

<u>Vendor</u>	<u>Type</u> ¹	<u>MMBtu</u>
Anadarko Energy Services Company	Spot	98,958
BP Energy Company	Spot	1,393,126
Castleton Commodities Merchant Trading L.P.	Spot	1,000
CenterPoint Energy Service, Inc.	Spot	43,000
Cima Energy , LP	Spot	604,800
Colonial Energy, Inc.	Spot	263,514
ConocoPhillips Company	Spot	113,266
Direct Energy Business Marketing, LLC	Spot	179,300
DTE Energy Trading, Inc.	Spot	82,100
Eco-Energy, LLC	Spot	379,758
EDF Trading North America, LLC	Spot	26,900
Exelon Generation Company, LLC	Spot	547,746
J. Aron & Company LLC	Spot	20,200
Kaiser Marketing Appalachian, LLC	Spot	100,854
Macquarie Energy, LLC	Spot	791,996
Mercuria Energy America, Inc.	Spot	53,000
NextEra Energy Marketing, LLC	Spot	2,139,137
NJR Energy Services Company	Spot	224,590
Range Resources - Appalachia, LLC	Spot	574,121
Sequent Energy Management, L.P.	Spot	1,022,000
Shell Energy North America (US), L.P.	Spot	1,794,517
Spire Marketing Inc.	Spot	1,540,100
SWN Energy Services Company, LLC	Spot	260,663
Tenaska Marketing Ventures	Spot	7,679,000
Tennessee Valley Authority	Spot	20,000
Twin Eagle Resource Management, LLC	Spot	283,397
Uniper Global Commodities North America LLC	Spot	656,453
United Energy Trading, LLC	Spot	88,900
Wells Fargo Commodities, LLC	Spot	402,997
Columbia Gas of Kentucky, Inc.	GSO Customer ²	127
LGE-GAS SUPPLY	Special Contract ³	137,716
DTE Energy Trading, Inc.	Forward	300,000
Macquarie Energy, LLC	Forward	609,908
Mercuria Energy America, Inc.	Forward	894,740
Tenaska Marketing Ventures	Forward	2,110,000
Uniper Global Commodities North America LLC	Forward	899,050
Wells Fargo Commodities, LLC	Forward	1,804,826
	Total Volume	28,141,760

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.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 7

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.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 8

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. KU does not engage in financial hedging activities for its coal or natural gas purchases.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 9

Witness: Delbert Billiter / Charles R. Schram

- Q-9. a. State whether KU 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 KU took as a result of the audit.
- A-9. a. No. KU has not conducted any financial audits of fuel or transportation contracts.
- KU's Manager Fuels Technical Services or KU'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, KU employees may visit a vendor as needed to address problems and issues at any time.
- b. Not applicable.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 10

Witness: Delbert Billiter / Charles R. Schram

- Q-10. a. State whether KU is currently involved in any litigation with its current or former fuel suppliers or transportation vendors.
- b. If yes, for each litigation:
- (1) Identity the supplier or vendor;
 - (2) Identity the contract involved;
 - (3) State the potential liability or recovery to KU;
 - (4) List the issues presented; and
 - (5) Provide a copy of the complaint or other legal pleading 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. KU is not currently involved in any litigation with its fuel suppliers or transportation vendors.
- b. Not applicable.
- c. Not applicable.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 11

Witness: Delbert Billiter / Charles R. Schram

Q-11. a. For the period under review, state if there have been any changes to KU'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 KU'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. 2017-00284 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. 2018-00020 in response to Question No. 11.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 12

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. KU purchased its participation ratio (2.5%) of the OVEC released capacity for the months in question:

<u>Utility</u>	<u>Companies' Amt (MW)</u>	<u>KU Portion (MW)</u>	<u>Purpose</u>
OVEC (Nov 2017)	~ 132	~ 40	Baseload
OVEC (Dec 2017)	~ 158	~ 49	Baseload
OVEC (Jan 2018)	~ 158	~ 49	Baseload
OVEC (Feb 2018)	~ 158	~ 49	Baseload
OVEC (Mar 2018)	~ 158	~ 49	Baseload
OVEC (Apr 2018)	~ 122	~ 37	Baseload

b. Sales – NONE

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 13

Witness: Derek 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 2017 through April 2018 monthly Form B filings that were previously filed with the Commission.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 14

Witness: Derek 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. 2012-00552.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 15

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.

Kentucky Utilities Company
November 2017 through April 2018

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*		
E. W. Brown Unit 1 - Coal - 107 MW	F		11/6/2017 15:30	11/7/2017 9:14	17:44		Hydraulic system repair	
In-service May 1957	F		12/30/2017 17:27	1/1/2018 0:00	30:33		Switchgear/Breaker Failure	
	F		1/1/2018 0:00	1/1/2018 13:20	13:20		Switchgear/Breaker Failure	
	S	1/8/2018 19:51	1/9/2018 13:22	1/8/2018 19:51	1/9/2018 13:22	17:31	17:31	Electrostatic Precipitator (ESP) - Inspection
	S	1/23/2018 21:07	1/24/2018 21:55	1/23/2018 21:07	1/24/2018 21:55	24:48	24:48	Boiler waterwall tube leak repair
	F		1/31/2018 15:19	2/1/2018 19:39	28:20		Turbine lube oil system repair	
	F		3/9/2018 6:52	3/14/2018 10:24	123:32		Boiler waterwall tube leak repair	
	S	4/14/2018 0:00	4/29/2018 0:00	4/13/2018 5:30	5/1/2018 0:00	360:00	426:30	Minor boiler outage
E. W. Brown Unit 2 - Coal - 168 MW	F		3/12/2018 7:59	3/12/2018 19:28	11:29		Flue Gas Desulfurization (FGD) unit electrical feed outage	
In-service June 1963	S	4/14/2018 0:00	5/6/2018 0:00	4/13/2018 23:24	5/1/2018 0:00	528:00	408:36	Minor boiler outage
E. W. Brown Unit 3 - Coal - 413 MW	S	11/11/2017 0:00	11/26/2017 0:00	11/25/2017 0:00	12/8/2017 12:52	360:00	324:52	Boiler ash system repairs
In-service July 1971	F		12/27/2017 1:41	12/29/2017 21:50	68:09		Boiler economizer leak repair	
	F		1/4/2018 17:21	1/5/2018 19:29	26:08		Boiler waterwall tube leak repair	
	F		1/11/2018 16:30	1/15/2018 14:57	94:27		Boiler reheat tube leak repair	
	S	1/31/2018 11:06	2/2/2018 2:25	1/31/2018 11:06	2/2/2018 2:25	39:19	39:19	Low Pressure (LP) heater tube leaks
	F		3/12/2018 1:42	3/13/2018 5:45	28:03		Unit auxiliary transformer outage	
	S	4/14/2018 0:00	5/6/2018 0:00	4/14/2018 1:17	5/1/2018 0:00	528:00	406:43	Minor boiler outage
Ghent Unit 1 - Coal - 479 MW	F		2/24/2018 17:00	2/27/2018 3:43	58:43		Boiler waterwall tube leak repair	
In-service February 1974	S	3/3/2018 0:00	4/1/2018 0:00	3/2/2018 6:00	4/2/2018 0:00	696:00	738:00	Minor boiler outage
	S	4/2/2018 0:00	4/3/2018 18:55	4/2/2018 0:00	4/3/2018 18:55	42:55	42:55	Minor boiler outage planned extension
Ghent Unit 2 - Coal - 486 MW	S	10/21/2017 0:00	11/12/2017 0:00	10/20/2017 22:35	11/11/2017 16:43	528:00	522:08	Minor boiler outage
In-service April 1977	F		11/11/2017 20:55	11/12/2017 9:33	12:38		Feedwater heater inlet valve repair	
	S	2/19/2018 11:10	2/20/2018 2:59	2/19/2018 11:10	2/20/2018 2:59	15:49	15:49	Hydraulic system repair
	S	2/27/2018 10:22	2/27/2018 22:16	2/27/2018 10:22	2/27/2018 22:16	11:54	11:54	Pulverizer ductwork repair
Ghent Unit 3 - Coal - 476 MW	S	10/14/2017 0:00	11/12/2017 0:00	10/13/2017 20:49	11/13/2017 0:00	696:00	723:11	Minor boiler outage
In-service May 1981	S	11/13/2017 0:00	11/15/2017 10:07	11/13/2017 0:00	11/15/2017 10:07	58:07	58:07	Minor boiler outage extension

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

Kentucky Utilities Company
November 2017 through April 2018

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*	
	F		11/19/2017 10:36	11/23/2017 0:15		85:39	Boiler superheat tube leak
	F		11/15/2017 10:07	11/15/2017 21:32		11:25	Boiler drum gasket repair
	S	2/24/2018 7:46	2/24/2018 7:46	2/24/2018 18:02	10:16	10:16	Boiler reheat relief valve repair
	F		3/3/2018 11:30	3/4/2018 3:22		15:52	Circulating water line repair
Ghent Unit 4 - Coal - 478 MW	F		11/18/2017 17:32	11/21/2017 7:34		62:02	Cooling tower clean and repair
In-service August 1984	S	4/7/2018 0:00	4/6/2018 21:41	4/30/2018 23:59	696:00	578:18	Minor boiler outage
Trimble County Unit 2 - Coal - 570 MW	F		12/10/2017 0:17	12/13/2017 14:00		85:43	Boiler waterwall tube leak
In-service January 2011	S	12/20/2017 6:34	12/20/2017 6:34	12/22/2017 11:54	53:20	53:20	Boiler waterwall tube leak
75% ownership share of 732 MW jointly owned with LG&E	F		12/29/2017 19:31	1/1/2018 0:00		52:29	Boiler waterwall tube leak
	F		1/1/2018 0:00	1/1/2018 11:56		11:56	Boiler waterwall tube leak extension
	S	2/24/2018 0:00	2/23/2018 23:30	4/30/2018 0:00	1368:00	1560:30	Major turbine overhaul
	S	4/30/2018 0:00	4/30/2018 0:00	5/12/2018 23:11	311:11	311:11	Major turbine overhaul extension
Cane Run Unit 7 - Gas CC - 683 MW	S	10/30/2017 0:00	10/30/2017 0:00	11/17/2017 12:44	444:44	444:44	Repair Steam turbine after inspection
In-service June 2015	F		2/24/2018 13:15	2/25/2018 1:50		12:35	Gas valve Instrumentation repair
Jointly owned with LG&E							
E. W. Brown Unit 5 - Gas CT - 130 MW	S	9/23/2017 0:00	9/22/2017 9:56	11/14/2017 17:50	1368:00	1279:54	Major overhaul
In-service June 2001	S		11/14/2017 18:25	11/15/2017 8:26		14:01	Major overhaul extension
Jointly owned with LG&E	F		11/27/2017 5:37	11/27/2017 13:40		8:03	Gas line pressure instability
	F		12/26/2017 4:55	12/26/2017 11:11		6:16	Oil vapor extractor repair
	F		12/27/2017 4:01	12/27/2017 10:40		6:39	Cooling water system inspection
	F		3/4/2018 20:44	3/23/2018 12:53		448:09	Turbine control system repair
E. W. Brown Unit 6 - Gas CT - 171 MW	F		11/20/2017 5:27	11/21/2017 9:34		28:07	Startup System fault
In-service August 1999	S	11/30/2017 9:11	11/30/2017 9:11	11/30/2017 17:38	8:27	8:27	Main transformer - testing
Jointly owned with LG&E	F		12/26/2017 4:50	12/28/2017 17:31		60:41	Ignition system repair
	F		1/2/2018 19:24	1/3/2018 10:17		14:53	Turbine control system repair
	F		1/12/2018 15:07	1/14/2018 13:16		46:09	Ignition system inspection

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

Kentucky Utilities Company
November 2017 through April 2018

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*		
	S	1/19/2018 11:14	1/24/2018 19:47	1/19/2018 11:14	1/24/2018 19:47	128:33	128:33	Ignition system - Ignitor repair
	F			2/2/2018 6:43	2/2/2018 16:18		9:35	Cooling water system repair
	F			2/8/2018 6:15	2/8/2018 14:39		8:24	Ignition system failure to start
	S	2/21/2018 6:54	2/22/2018 0:00	2/21/2018 6:54	2/22/2018 0:00	17:06	17:06	Turbine Lube Oil System
	S	3/3/2018 0:00	3/11/2018 0:00	3/2/2018 8:04	3/6/2018 15:49	192:00	103:45	Generator and gas path inspection
	F			4/23/2018 5:26	4/23/2018 15:00		9:34	Ignition system failure to start
E. W. Brown Unit 7 - Gas CT - 171 MW	S	11/29/2017 7:48	11/29/2017 13:58	11/29/2017 7:48	11/29/2017 13:58	6:10	6:10	Annual calibration of gas flow meter
In-service August 1999	F			12/26/2017 4:50	12/26/2017 11:11		6:21	Starting system - excitation trip
Jointly owned with LG&E	F			12/27/2017 3:54	12/29/2017 18:29		62:35	Control system
	S	3/3/2018 0:00	3/11/2018 0:00	3/6/2018 16:27	3/9/2018 11:00	192:00	66:33	Borescope inspection
E. W. Brown Unit 8 - Gas CT - 128 MW	F			12/27/2017 2:01	12/27/2017 14:10		12:09	Starting system limit switch repair
In-service February 1995	S	4/21/2018 3:15	4/21/2018 14:10	4/21/2018 3:15	4/21/2018 14:10	10:55	10:55	Gas Turbine Inspection
E. W. Brown Unit 9 - Gas CT - 138 MW	F			3/5/2018 6:37	3/5/2018 14:37		8:00	water control valve repair
In-service January 1995	S	4/22/2018 5:32	4/24/2018 9:03	4/22/2018 5:32	4/24/2018 9:03	51:31	51:31	Gas Turbine Inspection
E. W. Brown Unit 10 - Gas CT - 138 MW	S	4/25/2018 7:39	4/29/2018 19:46	4/25/2018 7:39	4/29/2018 19:46	108:07	108:07	Borescope Inspection
In-service December 1995								
E. W. Brown Unit 11 - Gas CT - 128 MW	F			1/18/2018 10:19	1/31/2018 14:10		315:51	Gas turbine exhaust temperature limitation
In-service May 1996	F			4/11/2018 4:29	4/11/2018 12:59		8:30	Control System - instrumentation repair
	S	4/24/2018 9:04	4/25/2018 7:38	4/24/2018 9:04	4/25/2018 7:38	22:34	22:34	Gas turbine Inspection
Haefling Unit 1 - Gas CT - 14 MW	S	4/17/2018 8:56	4/17/2018 17:48	4/17/2018 8:56	4/17/2018 17:48	8:52	8:52	Breaker maintenance - Common with Haefling 2
In-service October 1970								
Haefling Unit 2 - Gas CT - 14 MW	S	4/17/2018 8:56	4/17/2018 17:48	4/17/2018 8:56	4/17/2018 17:48	8:52	8:52	Breaker maintenance - Common with Haefling 1
In-service October 1970								
Paddys Run Unit 13 - Gas CT - 175 MW	S	11/25/2017 0:00	12/3/2017 0:00	11/25/2017 7:00	12/2/2017 17:08	192:00	178:08	Gas Turbine Inspection
In-service June 2001	S	12/2/2017 22:34	12/5/2017 18:17	12/2/2017 22:34	12/5/2017 18:17	67:43	67:43	Gas turbine inlet filter replacement
Jointly owned with LG&E								

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

Kentucky Utilities Company
November 2017 through April 2018

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*	
Trimble County Unit 5 - Gas CT - 179 MW	F		1/4/2018 6:33	1/4/2018 17:07		10:34	Breaker operation failure
In-service May 2002	S	2/6/2018 6:41	2/6/2018 6:41	2/6/2018 14:21	7:40	7:40	Fire protection system maintenance
Jointly owned with LG&E	S	3/24/2018 0:00	3/23/2018 10:59	4/1/2018 17:18	192:00	222:19	Startup gas valve replacement
Trimble County Unit 6 - Gas CT - 179 MW	S	11/16/2017 10:00	11/16/2017 10:00	11/16/2017 21:15	11:15	11:15	Lube oil pump replacement
In-service May 2002	F		1/3/2018 9:22	1/4/2018 20:29		35:07	Breaker operation failure
Jointly owned with LG&E	S	3/24/2018 0:00	3/23/2018 10:59	3/29/2018 10:43	192:00	143:44	Startup gas valve replacement
Trimble County Unit 7 - Gas CT - 179 MW	F		1/1/2018 3:27	1/1/2018 12:45		9:18	Starting system - static start switch repair
In-service June 2004	F		12/30/2017 16:38	12/31/2017 6:14		13:36	Starting system - static start switch repair
Jointly owned with LG&E							
Trimble County Unit 8 - Gas CT - 179 MW	F		2/2/2018 7:08	2/2/2018 21:32		14:24	Breaker hydraulic system repair
In-service June 2004							
Jointly owned with LG&E							
Trimble County Unit 9 - Gas CT - 179 MW	S	11/18/2017 0:00	12/8/2017 8:11	12/10/2017 14:16	192:00	54:05	Hydraulic oil system maintenance
In-service July 2004							
Jointly owned with LG&E							
Trimble County Unit 10 - Gas CT - 179 MW	S	11/18/2017 0:00	12/8/2017 11:03	12/10/2017 11:41	192:00	48:38	Hydraulic oil system maintenance
In-service July 2004							
Jointly owned with LG&E							

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

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 16

Witness: Stuart Wilson

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

A-16. See attached.

Kentucky Utilities Company
Unit Capacity Factors by Month

	Capacity Factor (%)					
	(Net MWh)/(period hrs x Net MW rating)					
	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Brown 1	30.4	0.0	37.4	0.0	48.8	13.0
Brown 2	53.0	9.3	62.3	34.6	63.4	21.1
Brown 3	43.7	15.2	40.8	19.7	54.9	18.7
Brown 5	1.0	4.0	11.6	0.0	0.0	5.2
Brown 6	1.8	4.3	26.7	2.1	22.0	46.6
Brown 7	1.6	0.0	30.7	1.7	17.2	17.0
Brown 8	9.0	0.8	12.6	0.8	5.6	0.5
Brown 9	3.6	0.5	8.3	0.0	1.8	0.0
Brown 10	9.1	1.1	11.9	0.6	0.3	0.0
Brown 11	3.2	0.5	5.2	0.0	0.0	0.0
Brown Solar	14.1	10.9	10.9	12.2	19.0	24.6
Cane Run 7	41.3	95.7	72.6	89.2	97.7	96.3
Dix 1	31.4	21.2	11.7	79.7	92.9	102.7
Dix 2	39.3	30.8	55.4	96.5	95.1	102.7
Dix 3	23.7	30.5	21.7	77.9	93.8	100.4
Ghent 1	89.6	81.2	87.0	76.6	0.0	81.8
Ghent 2	51.8	75.0	83.1	74.3	81.2	87.3
Ghent 3	30.4	0.0	37.4	0.0	48.8	13.0
Ghent 4	82.8	69.8	81.8	71.5	78.2	15.5
Haefling 1-2	0.0	0.0	0.0	0.0	0.0	0.0
Paddy's Run 13	11.6	1.9	16.2	2.1	3.1	5.1
Trimble County 2	96.2	66.9	94.4	77.9	0.0	0.0
Trimble County 5	30.4	3.9	20.7	1.0	1.5	5.8
Trimble County 6	18.1	5.1	21.8	1.6	6.0	9.4
Trimble County 7	36.4	5.3	20.4	1.5	26.1	38.2
Trimble County 8	32.6	6.5	21.2	2.7	37.2	36.1
Trimble County 9	13.4	0.9	14.9	1.6	19.0	22.1
Trimble County 10	3.8	3.2	10.8	0.9	4.1	1.1

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 net 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.

4 – Dix Dam 1-3 operated at higher than normal capacity factors in February through April 2018. Heavy rains resulted in higher than normal run hours. Cool temperatures allowed the units to operate above their unit ratings, which are based on average ambient temperatures.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 17

Witness: Michael P. Drake

- Q-17. a. For the period under review, explain if KU made any changes to its maintenance and operation practices, or completed any specific generation efficiency improvements that affect fuel usage at KU's generation facilities.
- b. Describe the impact of these changes on KU'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. KU 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 plan systems during operation. KU 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, KU must balance any potential efficiency benefit associated with the project against both costs and potential implications under the Clean Air Act. KU has not realized any efficiency improvements through major component projects during this period.

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 18

Witness: Delbert Billiter / Charles R. Schram

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

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 19

Witness: Derek Rahn

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

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

KENTUCKY UTILITIES COMPANY

**Response to Information Requested in Appendix of
Commission's Order Dated August 10, 2018**

Case No. 2018-00218

Question No. 20

Witness: Derek 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.