COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN EXAMINATION OF THE APPLICATION)	
OF THE FUEL ADJUSTMENT CLAUSE OF)	CASE NO.
KENTUCKY UTILITIES COMPANY FROM)	2017-00284
NOVEMBER 1, 2016 THROUGH APRIL 30, 2017)	

RESPONSE OF KENTUCKY UTILITIES COMPANY TO INFORMATION REQUESTED IN APPENDIX OF COMMISSION'S ORDER DATED AUGUST 30, 2017

FILED: SEPTEMBER 13, 2017

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.

at Billita

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 1/1 day of September 2017.

Judy Schoole (SEAL)

Notary Public

My Commission Expires:

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

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.

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this It day of September 2017.

Judy Schooler (SEAL)

Notary Public

My Commission Expires: JUDY SCHOOLER Notary Public, State at Large, KY My commission expires July 11, 2018

COMMONWEALTH OF KENTUCKY)) SS: COUNTY OF JEFFERSON)

The undersigned, **Derek Rahn**, being duly sworn, deposes and says that he is Manager - Revenue Requirement 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 Rahn

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this Ithe day of September 2017.

Judy Schooler (SEAL)

Notary Public

My Commission Expires: JUDY SCHOOLER Notary Public, State at Large, KY My commission expires July 11, 2018 Notary ID # 512743

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.

Unla R Delim

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this It day of September 2017.

Jaedy Schooler (SEAL)

Notary Public

My Commission Expires: JUDY SCHOOLER Notary Public, State at Large, KY My commission expires July 11, 2018 Notary ID # 512743

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 Forecast 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.

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 11th day of September 2017.

Hedy Schooler (SEAL)

Notary Public

My Commission Expires: JUDY SCHOOLER Notary Public, State at Large, KY My commission expires July 11, 2018 Notary ID # 512743

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-0284

Question No. 1

Witness: Delbert Billiter / Derek Rahn

- Q-1. For the period from November 1, 2016, through April 30, 2017, list each vendor from whom coal was purchased and the quantities and the nature of each purchase (e.g., spot or contract). For the period under review in total, provide the percentage of purchases that were spot versus contract. For contract purchases, state whether the contract has been filed with the Commission. If not, explain why it has not been filed.
- A-1. All contracts have been filed with the Commission. See the attachment for the list of vendors, associated quantities, and the nature of the coal purchases.

Kentucky Utilities Purchases November 2016 - April 2017

Note: ¹ Spot is a coal purchase with a duration of less than one year and contract is a coal purchase with a duration of one year or more.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 2

Witness: Charles R. Schram / Derek Rahn

- Q-2. For the period from November 1, 2016, through April 30, 2017, list each vendor from whom natural gas was purchased for generation and the quantities and the nature of each purchase (e.g., spot or contract). For contract purchases, state whether the contract has been filed with the Commission. If not, explain why it has not been filed.
- A-2. See the attachment for the list of vendors, associated quantities, and the nature of the natural gas purchases. KU has contracted with Texas Gas Pipeline for long-term firm gas transport for both LG&E and KU combustion turbine generation.

A portion of the natural gas used to fuel the Cane Run 7 combined cycle unit was purchased on a forward basis. Other than those forward purchases and the purchases made pursuant to the Special Contract referenced below, natural gas was purchased on an 'as-needed' spot market basis. The Special Contract and the contracts for long-term firm gas transport have been filed with the Commission.

Gas purchases from Louisville Gas and Electric Company are primarily for LG&E-owned coal and gas fired generation and are made in accordance with a Special Contract under 807 KAR 5:011 Section 13.¹ Additionally, purchases from Columbia Gas are for KU owned generation served by the local distribution company.

¹ The Special Contract for Firm Gas Sales and Firm Transportation Service dated April 9, 2014 and effective September 1, 2014, between Louisville Gas and Electric Company, on behalf of its Gas Distribution Business, and Louisville Gas and Electric Company and Kentucky Utilities Company, on behalf of their Electric Generation Business, was filed with the Kentucky Public Service Commission on June 12, 2014.

KU and LG&E have joint ownership in the following combustion turbine and combined cycle units:

Station	Units	KU Ownership	LG&E Ownership
Trimble County	5 and 6	71%	29%
Trimble County	7, 8, 9 and 10	63%	37%
Brown	5	47%	53%
Paddy's Run	13	47%	53%
Brown	6 and 7	62%	38%
Cane Run	7	78%	22%

Fuel expenses for actual commodity used and associated pipeline transport charges, if any, are allocated to the Companies based on their respective ownership percentages.

Attachment to Response to Question No. 2 Schram / Rahn Page 1 of 1

Vendor	<u>Tvpe</u> ¹	MMBtu
Anadarko Energy Services Company	Spot	38,000
Atmos Energy Marketing, LLC	Spot	18,500
BP Energy Company	Spot	1,873,904
Cargill, Inc.	Spot	21,000
Castleton Commodities Merchant Trading L.P.	Spot	10,000
CIMA Energy. LTD	Spot	129,100
Colonial Energy, Inc.	Spot	215,350
ConocoPhillips Company	Spot	22,400
Direct Energy Business Marketing, LLC	Spot	99,100
DTE Energy Trading, Inc.	Spot	437,600
Eco-Energy, LLC	Spot	56,408
EDF Trading North America. LLC	Spot	13,800
Exelon Generation Company, LLC	Spot	903,272
Columbia Gas of Kentucky, Inc.	GSO Customer ²	2 <u>12</u> 5
Laclede Energy Resources. Inc.	Spot	136,197
Macquarie Energy, LLC	Spot	20,000
Mercuria Energy America, Inc.	Spot	381,735
NextEra Energy Marketing, LLC	Spot	217,835
NextEra Energy Power Marketing, LLC	Spot	4,500
NJR Energy Services Company	Spot	187,209
Range Resources - Appalachia, LLC	Spot	264,125
Sequent Energy Management, L.P.	Spot	1,287,400
Shell Energy North America (US), L.P.	Spot	338,300
Spire Marketing Inc.	Spot	280,964
SWN Energy Services Company, LLC	Spot	26,500
Tenaska Marketing Ventures	Spot	4,587,900
Tennessee Valley Authority	Spot	50,000
Twin Eagle Resource Management, LLC	Spot	42,000
Uniper Global Commodities North America LLC	Spot	283,600
United Energy Trading, LLC	Spot	46,300
Vitol Inc.	Spot	583,199
LG&E Gas Supply	Special Contract 3	200,716
BP Energy Company	Forward	1,195,000
EDF Trading North America, LLC	Forward	1,173,361
Macquarie Energy, LLC	Forward	300,000
Mercuria Energy America, Inc.	Forward	900,000
Sequent Energy Management, L.P.	Forward	1,240,000

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.

Total Volume

17.585,275

² KU is a General Sales Other (GSO) customer of Columbia Gas of Kentucky for the Haefling Plant: no volume purchase commitments. Haefling did not run using natural gas as a fuel during the review period.

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

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 3

Witness: Charles R. Schram / Delbert Billiter

- Q-3. State whether KU engages in hedging activities for its coal or natural gas purchases used for generation. If so, describe the hedging activities in detail.
- A-3. KU does not engage in financial hedging activities for its coal or natural gas purchases.

KU does use forward procurement to physically hedge a portion of its projected coal requirement. KU uses the following guidelines for the minimum projected coal requirement under contract:

 1 year out
 95 - 100%

 2 years out
 80 - 90%

 3 years out
 40 - 90%

 4 years out
 30 - 70%

 5 years out
 10 - 50%

 6 years out
 0 - 30%

KU does use forward procurement to physically hedge a portion of its projected gas requirement. For the current year, the Company's practice targets purchasing no more than 50 percent of the forecasted burn at CR7. Longer-term, KU uses the following guidelines for the purchase of natural gas under contract for the minimum projected Cane Run 7 requirement:

1 year out 10 - 50%2 years out 0 - 30%3 years out 0 - 10%

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 4

Witness: Stuart Wilson / Delbert Billiter

Q-4. For each generating station or unit for which a separate coal pile is maintained, state, for the period from November 1, 2016, through April 30, 2017, the actual amount of coal burned in tons, the actual amount of coal deliveries in tons, the total kWh generated, and the actual capacity factor at which the plant operated.

A-4.	The information requested from November 1, 2016, to April 30, 2017, is shown in the table
	below:

	Coal Burn	Coal Receipts		Capacity Factor (Net MWh)/ (period hrs x
Plant	(Tons)	(Tons)	Net MWh	MW rating)
E. W. Brown	304,859	306,135	590,905	20.0%
Ghent	2,649,792	2,880,272	5,825,022	69.9%
Trimble County HS	N/A	1,296,087	N/A	N/A
Trimble County PRB	N/A	296,819	N/A	N/A
Trimble County 2	897,806	N/A	2,126,732	66.9%

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.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 5

Witness: Stuart Wilson

Q-5. List all firm power commitments for KU from November 1, 2016, through April 30, 2017, or (a) purchases and (b) sales. This list shall identify the electric utility, the amount of commitment in MW, and the purpose of the commitment (e.g., peaking, emergency).

A-5. 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:

	Companies'	KU Portion	
Utility	Amt (MW)	(MW)	Purpose
OVEC (Nov 2016)	~ 87	~ 27	Baseload
OVEC (Dec 2016)	~ 132	~ 41	Baseload
OVEC (Jan 2017)	~ 158	~ 49	Baseload
OVEC (Feb 2017)	~ 158	~ 49	Baseload
OVEC (Mar 2017)	~ 107	~ 33	Baseload
OVEC (Apr 2017)	~ 88	~ 27	Baseload

b. Sales

NONE

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 6

Witness: Derek Rahn

- Q-6. Provide a monthly billing summary of sales to all electric utilities for the period November 1, 2016, through April 30, 2017.
- A-6. See attached.



Power Transaction Schedule

				Billing Components							
		Type of				Fuel		Other		Total	
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)	
Sales											
CARGILL- ALLIANT, LLC	CARG	Economy	872,000		\$	21,103.89	\$	11,341.90	\$	32,445.79	
ETC ENDURE	ETC	Economy	136,000		\$	3,508.33	\$	1,885.49	\$	5,393.82	
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	66,000		\$	668.43	\$	359.23	\$	1,027.66	
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	758,000		\$	14,707.57	\$	7,904.30	\$	22,611.87	
ENERGY IMBALANCE	IMBL	Economy	67,000		\$	1,500.34	\$	806.33	\$	2,306.67	
MIDCONTINENT ISO	MISO	Economy	1,982,000		\$	52,347.54	\$	28,044.69	\$	80,392.23	
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	3,240,000		\$	69,322.56	\$	37,256.15	\$	106,578.71	
TENNESSEE VALLEY AUTHORITY	TVA	Economy	814,000		\$	18,744.98	\$	10,074.14	\$	28,819.12	
WESTAR ENERGY, INC.	WSTR	Economy	208,000		\$	4,889.49	\$	2,627.76	\$	7,517.25	
LOUISVILLE GAS & ELECTRIC	LGE	Economy	29,147,000		\$	655,434.47	\$	1,822.06	\$	657,256.53	
Total Sales			37,290,000	\$-	\$	842,227.60	\$	102,122.05	\$	944,349.65	

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

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



Power Transaction Schedule

				Billing Components							
		Type of				Fuel		Other		Total	
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)	
Sales											
CARGILL- ALLIANT, LLC	CARG	Economy	681,000		\$	15,326.34	\$	11,829.03	\$	27,155.37	
ETC ENDURE	ETC	Economy	88,000		\$	2,291.55	\$	1,768.63	\$	4,060.18	
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	33,000		\$	862.19	\$	665.45	\$	1,527.64	
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	150,000		\$	3,897.45	\$	3,008.09	\$	6,905.54	
ENERGY IMBALANCE	IMBL	Economy	37,000		\$	664.23	\$	520.50	\$	1,184.73	
MIDCONTINENT ISO	MISO	Economy	4,502,000		\$	103,264.35	\$	79,636.35	\$	182,900.70	
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	5,214,000		\$	119,285.43	\$	92,065.59	\$	211,351.02	
TENNESSEE VALLEY AUTHORITY	TVA	Economy	1,212,000		\$	26,622.61	\$	20,547.59	\$	47,170.20	
WESTAR ENERGY, INC.	WSTR	Economy	451,000		\$	11,359.23	\$	8,767.17	\$	20,126.40	
LOUISVILLE GAS & ELECTRIC	LGE	Economy	24,238,000		\$	577,256.58	\$	12,245.43	\$	589,502.01	
Total Sales			36,606,000	\$ -	\$	860,829.96	\$	231,053.83	\$	1,091,883.79	

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

Attachment to Response to Question No. 6 Page 2 of 6 Rahn



Power Transaction Schedule

				Billing Components							
		Type of				Fuel		Other		Total	
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)	
Sales											
CARGILL- ALLIANT, LLC	CARG	Economy	477,000		\$	13,138.49	\$	8,154.18	\$	21,292.67	
ETC ENDURE	ETC	Economy	38,000		\$	1,233.20	\$	765.36	\$	1,998.56	
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	102,000		\$	197.77	\$	135.10	\$	332.87	
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	189,000		\$	1,242.51	\$	771.15	\$	2,013.66	
ENERGY IMBALANCE	IMBL	Economy	16,000		\$	423.02	\$	262.53	\$	685.55	
MIDCONTINENT ISO	MISO	Economy	2,498,000		\$	66,771.83	\$	41,080.13	\$	107,851.96	
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	3,113,000		\$	87,498.59	\$	54,304.55	\$	141,803.14	
TENNESSEE VALLEY AUTHORITY	TVA	Economy	278,000		\$	7,787.40	\$	4,833.11	\$	12,620.51	
WESTAR ENERGY, INC.	WSTR	Economy	295,000		\$	8,001.39	\$	4,965.94	\$	12,967.33	
LOUISVILLE GAS & ELECTRIC	LGE	Economy	34,701,000		\$	863,963.50	\$	19,296.49	\$	883,259.99	
Total Sales			41,707,000	\$ -	\$	1,050,257.70	\$	134,568.54	\$	1,184,826.24	

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

Attachment to Response to Question No. 6 Page 3 of 6 Rahn



Power Transaction Schedule

					В	illing Component	s			
	Type of					Fuel		Other		Total
	Transaction	KWH	De	mand(\$)	C	Charges(\$)		Charges(\$)		Charges(\$)
IMEA	Economy	52,000			\$	-	\$	-	\$	-
IMPA	Economy	101,000			\$	-	\$	-	\$	-
MISO	Economy	-			\$	-	\$	(122.89)	\$	(122.89)
LGE	Economy	2,539,000			\$	59,383.23	\$	1,554.75	\$	60,937.98
		2,692,000	\$	-	\$	59,383.23	\$	1,431.86	\$	60,815.09
	IMPA MISO	TransactionIMEAEconomyIMPAEconomyMISOEconomy	TransactionKWHIMEAEconomy52,000IMPAEconomy101,000MISOEconomy-LGEEconomy2,539,000	TransactionKWHDeIMEAEconomy52,000IMPAEconomy101,000MISOEconomy-LGEEconomy2,539,000	TransactionKWHDemand(\$)IMEAEconomy52,000IMPAEconomy101,000MISOEconomy-LGEEconomy2,539,000	Type of TransactionKWHDemand(\$)CIMEAEconomy52,000\$IMPAEconomy101,000\$MISOEconomy-\$LGEEconomy2,539,000\$	Type of TransactionFuelIMEAEconomy52,000\$-IMPAEconomy101,000\$-MISOEconomy-\$-LGEEconomy2,539,000\$59,383.23	Transaction KWH Demand(\$) Charges(\$) IMEA Economy 52,000 \$ - \$ IMPA Economy 101,000 \$ - \$ MISO Economy - \$ - \$ LGE Economy 2,539,000 \$ 59,383.23 \$	Type of Transaction Fuel KWH Other Demand(\$) Other Charges(\$) IMEA Economy 52,000 \$ - \$ - IMPA Economy 101,000 \$ - \$ - MISO Economy - \$ - \$ - LGE Economy 2,539,000 \$ 59,383.23 \$ 1,554.75	Type of Transaction KWH Demand(\$) Fuel Charges(\$) Other Charges(\$) IMEA Economy 52,000 \$ - \$ IMPA Economy 101,000 \$ - \$ MISO Economy - \$ - \$ LGE Economy 2,539,000 \$ 59,383.23 \$ 1,554.75 \$

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

Attachment to Response to Question No. 6 Page 4 of 6 Rahn



Power Transaction Schedule

				Billing Components						
		Type of				Fuel		Other		Total
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
Sales										
CARGILL- ALLIANT, LLC	CARG	Economy	26,000		\$	622.44	\$	1,229.30	\$	1,851.74
ETC ENDURE	ETC	Economy	25,000		\$	632.46	\$	1,249.10	\$	1,881.56
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	1,000		\$	18.63	\$	42.99	\$	61.62
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	2,000		\$	38.10	\$	87.94	\$	126.04
ENERGY IMBALANCE	IMBL	Economy	5,000		\$	103.19	\$	238.14	\$	341.33
MIDCONTINENT ISO	MISO	Economy	225,000		\$	4,975.22	\$	9,825.97	\$	14,801.19
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	479,000		\$	11,584.77	\$	22,879.70	\$	34,464.47
TENNESSEE VALLEY AUTHORITY	TVA	Economy	75,000		\$	1,809.71	\$	3,574.16	\$	5,383.87
WESTAR ENERGY, INC.	WSTR	Economy	30,000		\$	740.51	\$	1,462.51	\$	2,203.02
LOUISVILLE GAS & ELECTRIC	LGE	Economy	29,409,000		\$	719,559.86	\$	25,633.26	\$	745,193.12
Total Sales			30,277,000	\$ -	\$	740,084.89	\$	66,223.07	\$	806,307.96

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

Attachment to Response to Question No. 6 Page 5 of 6 Rahn



Power Transaction Schedule

					Billing Component	S		
		Type of			Fuel		Other	Total
<u>Company</u>		Transaction	KWH	Demand(\$)	Charges(\$)		Charges(\$)	Charges(\$)
Sales					 			
CARGILL- ALLIANT, LLC	CARG	Economy	349,000		\$ 8,877.90	\$	4,630.30	\$ 13,508.20
ETC ENDURE	ETC	Economy	72,000		\$ 1,820.25	\$	949.35	\$ 2,769.60
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	5,000		\$ 102.43	\$	53.42	\$ 155.85
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	70,000		\$ 1,605.10	\$	837.14	\$ 2,442.24
ENERGY IMBALANCE	IMBL	Economy	352,000		\$ 7,658.72	\$	3,994.49	\$ 11,653.21
MIDCONTINENT ISO	MISO	Economy	3,445,000		\$ 80,907.85	\$	42,209.97	\$ 123,117.82
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	6,276,000		\$ 154,907.38	\$	80,792.59	\$ 235,699.97
TENNESSEE VALLEY AUTHORITY	TVA	Economy	1,177,000		\$ 27,452.04	\$	14,317.72	\$ 41,769.76
WESTAR ENERGY, INC.	WSTR	Economy	1,236,000		\$ 29,229.99	\$	15,245.03	\$ 44,475.02
LOUISVILLE GAS & ELECTRIC	LGE	Economy	46,443,000		\$ 1,065,523.23	\$	3,281.18	\$ 1,068,804.41
Total Sales			59,425,000	\$-	\$ 1,378,084.89	\$	166,311.19	\$ 1,544,396.08

Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.

Attachment to Response to Question No. 6 Page 6 of 6 Rahn

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 7

Witness: Michael P. Drake

- Q-7. List KU's scheduled, actual, and forced outages from November 1, 2016, through April 30, 2017.
- A-7. See attached.

Unit and Outage Type	Schedu		Act	ual*	HOURS OF	DURATION	REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
(F=Forced; S=Scheduled)	FROM	то	FROM	то	Scheduled	Actual*	OR REASON FOR FORCED OUTAGE AS APPROPRIATE
E. W. Brown Unit 1 - Coal - 106 MW	F		11/3/2016 17:16	11/4/2016 0:56		7:40	Generator Circuit Breaker (GCB) repair
n-service May 1957	S 11/30/2016 7:00	12/1/2016 14:02	11/30/2016 7:00	12/1/2016 14:02	31:02	31:02	Electrostatic Precipitator (ESP) inspection
	40/00/0046 5:00	40/00/0046 40:44	40/00/0040 5-00	40/00/0040 40:44	0.14	0.14	
	S 12/30/2016 5:00	12/30/2016 13:14	12/30/2016 5:00	12/30/2016 13:14	8:14	8:14	Flue Gas Desulfurization (FGD) duct inspection
	S 3/4/2017 0:00	3/12/2017 15:00	3/3/2017 7:00	3/13/2017 0:00	207:00	233:00	Minor boiler overhaul
	S 3/13/2017 0:00	3/18/2017 13:42	3/13/2017 0:00	3/18/2017 13:42	133:42	133:42	Minor boiler overhaul planned extension
. W. Brown Unit 2 - Coal - 166 MW	F		11/15/2016 12:21	11/16/2016 2:55		14:34	Boiler Feed Pump (BFP) leak repair
n-service June 1963	S 12/12/2016 7:00	12/13/2016 14:04	12/12/2016 7:00	12/13/2016 14:04	31:04	31:04	Boiler attemperator water supply line repair
	S 10/20/2010 5-00	12/20/2016 42:44	13/30/3010 5:00	12/20/2010 42:44	0.44	0.44	ECD dust imposition
	S 12/30/2016 5:00	12/30/2016 13:14	12/30/2016 5:00	12/30/2016 13:14	8:14	8:14	FGD duct inspection
	S 2/20/2017 7:00	2/21/2017 9:54	2/20/2017 7:00	2/21/2017 9:54	26:54	26:54	Reheat stop valve repair
	S 3/25/2017 0:00	4/9/2017 15:00	3/23/2017 23:55	4/9/2017 1:20	375:00	385:25	Minor boiler overhaul
. W. Brown Unit 3 - Coal - 409 MW	F		11/1/2016 6:56	11/10/2016 14:05		223.09	Removal of failed exciter and installation of temporary unit
			11/1/2010 0.00	11/10/2010 14:00		220.00	Removal of failed exoler and instantation of temporary unit
n-service July 1971	F		11/10/2016 14:34	11/11/2016 4:55		14:21	GCB inspection and repair
	S 12/30/2016 5:00	12/30/2016 13:14	12/30/2016 5:00	12/30/2016 13:14	8:14	8:14	FGD duct inspection
	S 1/10/2017 0:14	1/12/2017 13:25	1/10/2017 0:14	1/12/2017 13:25	61:11	61:11	Boiler waterwall tube leak
	S 1/19/2017 7:00	1/20/2017 11:49	1/19/2017 7:00	1/20/2017 11:49	28:49	28:49	Induced Draft (ID) fan vibration
	_		0/00/0017.0.11	0/00/0017 10 00		0.05	
	F		2/28/2017 3:41	2/28/2017 12:06		8:25	Fuel oil pump inspection and maintenance
	F		3/8/2017 8:58	3/9/2017 6:19		21:21	Boiler waterwall tube leak
	S 4/8/2017 0:00	4/30/2017 15:00	4/14/2017 23:01	5/6/2017 17:39	543:00	522:38	Minor boiler overhaul
Shent Unit 1 - Coal - 475 MW	S 1/10/2017 12:48	1/11/2017 1:38	1/10/2017 12:48	1/11/2017 1:38	12:50	12:50	Boiler waterwall tube leak
· · · · · · · · · · · · · · · · · · ·							
n-service February 1974	S 1/15/2017 22:19	1/17/2017 23:57	1/15/2017 22:19	1/17/2017 23:57	49:38	49:38	Boiler waterwall tube leak
			1/10/00/	1/00/00/17 5 5 5			
	F		1/18/2017 16:51	1/22/2017 0:04		79:13	Boiler superheater tube leak
	S 1/27/2017 13:13	1/29/2017 11:19	1/27/2017 13:13	1/29/2017 11:19	46:06	46:06	Boiler reheater tube leak
	S 2/1/2017 22:46	2/2/2017 10:33	2/1/2017 22:46	2/2/2017 10:33	11:47	11:47	Boiler waterwall tube leak
	F		2/7/2017 22:49	2/8/2017 15:47		16-59	Ash hopper inspection and maintenance
			2/1/2017 22:49	2/0/2017 15:47		10:08	
	S 3/11/2017 0:00	4/2/2017 15:00	3/11/2017 0:41	4/3/2017 0:27	543:00	551:46	Minor boiler overhaul

Unit and Outage Type	Sched	luled	Act	ual*	HOURS OF	DURATION	REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
(F=Forced; S=Scheduled)	FROM	то	FROM	то	Scheduled	Actual*	OR REASON FOR FORCED OUTAGE AS APPROPRIATE
	1						
Ghent Unit 2 - Coal - 485 MW	S 1/25/2017 9:53	1/26/2017 6:29	1/25/2017 9:53	1/26/2017 6:29	20:36	20:36	Condenser tube leak
In-service April 1977 Statements Sta	S 2/18/2017 11:29	2/19/2017 4:20	2/18/2017 11:29	2/19/2017 4:20	16:51	16:51	Boiler circulating water pump (BCWP) repair
	S 3/4/2017 10:54	3/5/2017 10:36	3/4/2017 10:54	3/5/2017 10:36	23:42	23:42	Condenser tube leak
	S 4/3/2017 22:56	4/4/2017 23:14	4/3/2017 22:56	4/4/2017 23:14	24:18	24:18	Condenser tube leak
	r		4/13/2017 10:15	4/4 4/0047 0:07		40.00	
r			4/13/2017 10.13	4/14/2017 2:37		10.22	Boiler waterwall tube leak
Ghent Unit 3 - Coal - 481 MW	S 10/29/2016 0:00	11/20/2016 15:00	10/29/2016 15:54	11/18/2016 19:57	543:00	484:03	Minor boiler overhaul
In-service May 1981 F			4/15/2017 16:24	4/19/2017 4:13		83:49	Boiler economizer tube leak
Ghent Unit 4 - Coal - 478 MW	-		2/12/2017 7:58	2/12/2017 23:26		15.00	BFP leak repair
Brienc Unit 4 - CUdi - 4/0 MWY	<u>+</u>		2/12/2017 7:58	2/12/2017 23:20		10:28	ріт ісактеран
In-service August 1984	S 4/8/2017 0:00	4/30/2017 15:00	4/7/2017 23:51	4/28/2017 5:38	543:00	485:47	Minor boiler overhaul
Trimble County Unit 2 - Coal - 549 MW	S 1/12/2017 5:43	1/15/2017 6:31	1/12/2017 5:43	1/15/2017 6:31	72:48	72:48	Air heater wash
In-service January 2011	F		2/14/2017 14:38	2/17/2017 2:05		59.27	Bottom ash conveyor cleaning
			2711/2011 11:00	2,11,2011 2.00		00.27	Bottom don controjon cicaming
75% ownership share of 732 MW jointly owned with LG&E	F		2/21/2017 22:30	2/25/2017 23:32		97:02	Excitation transformer failure and replacement
	S 2/25/2017 0:00	4/2/2017 15:00	2/25/2017 23:32	4/3/2017 0:00	879:00	864:28	Major boiler overhaul
	S 4/3/2017 0:00	4/9/2017 23:46	4/3/2017 0:00	4/9/2017 23:46	167:46	167:46	Major boiler overhaul planned extension
F	-		4/26/2017 18:30	5/3/2017 17:01		166:31	Boiler superheater tube leak
	10/00/0010 0.00	11/00/0010 15 00		11/10/0010 00 01	5 40 00	500.04	Heat Recovery Steam Generator (HRSG) inspection, Combustion turbine borescope
Cane Run Unit 7 - Gas CC - 662 MW	S 10/29/2016 0:00	11/20/2016 15:00	10/29/2016 0:03	11/18/2016 23:24	543:00	503:21	inspection
In-service June 2015	S 1/13/2017 23:08	2/6/2017 8:21	1/13/2017 23:08	2/6/2017 8:21	561:13	561:13	HRSG Hot Reheat (HRH) bypass valve
Jointly owned with LG&E F	-		2/13/2017 13:18	2/15/2017 8:30		43:12	HRSG HRH bypass valve
	S 2/15/2017 8:30	2/17/2017 17:03	2/15/2017 8:30	2/17/2017 17:03	56:33	56-33	HRSG HRH bypass valve
	2/10/2017 0.00	2/11/2017 11:00	2/10/2017 0.00	2/11/2011 11:00	00.00	00.00	
5	S 2/17/2017 17:03	3/9/2017 15:47	2/17/2017 17:03	3/9/2017 15:47	478:44	478:44	HRSG steam isolation valve
E. W. Brown Unit 5 - Gas CT - 130 MW	S 1/12/2017 7:02	1/12/2017 13:52	1/12/2017 7:02	1/12/2017 13:52	6:50	6:50	Instrumentation - lube oil system calibration
In-service June 2001	S 1/24/2017 6:55	1/24/2017 18:51	1/24/2017 6:55	1/24/2017 18:51	11:56	11:56	Instrumentation - gas fuel system repair/calibration
Jointly owned with LG&E	-		3/18/2017 16:24	3/19/2017 7:13		14:49	Instrumentation - lost communication to vibration monitoring
	0 10 7 /00 /	107/0016	10/7/00/10	107/0010			
E. W. Brown Unit 6 - Gas CT - 146 MW	S 12/7/2016 7:00	12/7/2016 14:33	12/7/2016 7:00	12/7/2016 14:33	7:33	7:33	Instrumentation - calibrate gas flow transmitter
In-service August 1999	S 1/16/2017 7:30	1/16/2017 14:33	1/16/2017 7:30	1/16/2017 14:33	7:03	7:03	Automatic voltage regulator (AVR) routine maintenance
Jointly owned with LG&E							

Unit and Outage Type	Sche	duled	Act	ual*	HOURS OF	DURATION	REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
(F=Forced; S=Scheduled)	FROM	то	FROM	то	Scheduled	Actual*	OR REASON FOR FORCED OUTAGE AS APPROPRIATE
			1				
E. W. Brown Unit 7 - Gas CT - 146 MW	S 11/16/2016 6:37	11/17/2016 13:01	11/16/2016 6:37	11/17/2016 13:01	30:24	30:24	Cooler gasket replacement
In-service August 1999	S 1/3/2017 7:19	1/3/2017 17:23	1/3/2017 7:19	1/3/2017 17:23	10:04	10:04	AVR routine maintenance
Jointly owned with LG&E	S 3/22/2017 6:57	3/22/2017 13:55	3/22/2017 6:57	3/22/2017 13:55	6:58	6:58	AVR maintenance
· · · · · · · · · · · · · · · · · · ·			1				
E. W. Brown Unit 8 - Gas CT - 121 MW	F		12/15/2016 19:17	12/16/2016 2:59		7:42	Instrumentation - speed probe repair
In-service February 1995	F		2/17/2017 7:10	2/17/2017 14:01		6:51	Compressor pressure relief valve repair
	S 3/25/2017 0:00	4/9/2017 15:00	4/10/2017 15:35	4/21/2017 12:54	375:00	261:19	Borescope inspection and controls upgrade
E. W. Brown Unit 9 - Gas CT - 121 MW	S 11/4/2016 5:00	11/4/2016 19:20	11/4/2016 5:00	11/4/2016 19:20	14:20	14:20	Cooler fan bearing maintenance
In-service January 1995	S 12/12/2016 7:00	12/12/2016 13:14	12/12/2016 7:00	12/12/2016 13:14	6:14	6:14	Lube oil pump inspection
	S 3/25/2017 0:00	4/9/2017 15:00	4/10/2017 6:30	4/22/2017 13:00	375:00	294:30	Borescope inspection and controls upgrade
E. W. Brown Unit 10 - Gas CT - 121 MW	S 4/8/2017 0:00	4/23/2017 15:00	3/25/2017 6:18	4/9/2017 10:22	375:00	364:04	Borescope inspection and controls upgrade
In-service December 1995							
E. W. Brown Unit 11 - Gas CT - 121 MW	F		3/2/2017 11:42	3/3/2017 12:12		24:30	Instrumentation - power supply failure and repair
L. W. BIOWHOMETT - Gas CT - 121 WW			3/2/2017 11.42	5/5/2017 12.12		24.30	
In-service May 1996	S 4/8/2017 0:00	4/23/2017 15:00	3/25/2017 6:18	4/10/2017 0:00	375:00	377:42	Borescope inspection and controls upgrade
	S 4/10/2017 0:00	4/10/2017 13:24	4/10/2017 0:00	4/10/2017 13:24	13:24	13:24	Borescope inspection planned extension
Heafling Unit 1 Cos CT 12 MW	No outogoo y or - 6 houro						
Haefling Unit 1 - Gas CT - 12 MW	No outages > or = 6 hours						
In-service October 1970							
			ľ				
Haefling Unit 2 - Gas CT - 12 MW	No outages > or = 6 hours						
In-service October 1970							
Paddys Run Unit 13 - Gas CT - 147 MW	S 10/29/2016 0:00	11/13/2016 15:00	10/24/2016 5:30	11/12/2016 10:11	375:00	460:41	Gas fuel system - connection to new pipeline
·			1				
In-service June 2001	S 10/29/2016 0:00	11/13/2016 15:00	11/12/2016 14:10	11/13/2016 10:37	375:00	20:27	Gas fuel system - connection to new pipeline testing
	10/00/07-17-5	11/10/0016		444400455555	075	c	
Jointly owned with LG&E	S 10/29/2016 0:00	11/13/2016 15:00	11/13/2016 17:03	11/14/2016 0:00	375:00	6:57	Gas fuel system - connection to new pipeline testing
	S 10/29/2016 0:00	11/13/2016 15:00	11/14/2016 0:00	11/14/2016 11:00	375:00	11:00	Gas fuel system - connection to new pipeline testing
					2. 5.00	. 1.00	
	F		11/30/2016 13:57	12/1/2016 2:15		12:18	Auxiliary instrument transformer repair
	F		1/3/2017 8:50	1/4/2017 16:38		31:48	Seal oil vacuum pump repair
	6 1/20/2047 0:00	1/00/0017 11:00	1/20/2047 0:00	1/00/0017 11:05	75-00	75-00	Transmission outgas related to Baddy's Run Station demolition
	S 1/20/2017 8:06	1/23/2017 11:35	1/20/2017 8:06	1/23/2017 11:35	75:29	/5:29	Transmission outage related to Paddy's Run Station demolition
	S 4/21/2017 0:00	4/24/2017 13:33	4/21/2017 0:00	4/24/2017 13:33	85:33	85:33	Transmission tower relocation related to Paddy's Run Station demolition

Unit and Outage Type	Sched	uled	Actu	ial*	HOURS OF	DURATION	REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
(F=Forced; S=Scheduled)	FROM	то	FROM	то	Scheduled	Actual*	OR REASON FOR FORCED OUTAGE AS APPROPRIATE
· · · · · · · · · · · · · · · · · · ·							
Frimble County Unit 5 - Gas CT - 159 MW	F		2/2/2017 15:03	2/3/2017 2:42		11:39	Line breaker air compressor repair
			222011 10:00	20/2011 2.12		11.00	
n-service May 2002	F		2/21/2017 12:54	2/21/2017 19:23		6.20	Gas fuel strainer inspection cover gasket repair
			2/21/2017 12:04	2/21/2017 13:20		0.23	
ointly owned with LG&E	S 3/17/2017 6:18	3/19/2017 12:55	3/17/2017 6:18	3/19/2017 12:55	54:37	E4:07	Gas fuel piping line maintenance - common cause with TC5, TC6, and TC7
onity owned with LORE	3 3/1//2017 0.18	3/13/2017 12.33	3/11/2017 0.10	3/13/2017 12.33	34.37	54.57	Gas ruei piping nine maintenance - common cause with 103, 100, and 107
	S 3/25/2017 0:00	5/7/2017 15:00	3/25/2017 2:00	5/7/2017 17:15	1047:00	1047-15	Hot gas path inspection
	0 0/20/2017 0.00	3/1/2011 13:00	3/23/2011 2:00	0/1/2011 11:10	1047.00	1047.10	
rimble County Unit 6 - Gas CT - 159 MW	-		12/9/2016 9:07	12/9/2016 16:24		7.17	Gas fuel system tuning
rimble County Onit 6 - Gas CT - 159 MW	F		12/9/2016 9:07	12/9/2016 16:24		7:17	Gas ruer system tuning
i M 2002	0 40/40/0040 7:00	40/40/0040 40:05	40/40/0040 7:00	40/40/0040 40:05	22.05	22.05	Con fuel surface unless an existing in the
n-service May 2002	S 12/12/2016 7:00	12/13/2016 16:05	12/12/2016 7:00	12/13/2016 16:05	33:05	33:05	Gas fuel system valve commissioning
ointly owned with LG&E	S 3/17/2017 6:18	3/19/2017 12:55	3/17/2017 6:18	3/19/2017 12:55	54:37	54:37	Gas fuel piping line maintenance - common cause with TC5, TC6, and TC7
	4/00/05	1/00/0047	1/00/004 = 5 5 5	54 004	007	045	
	S 4/22/2017 0:00	4/30/2017 15:00	4/22/2017 0:01	5/1/2017 0:00	207:00	215:59	Gas fuel system inspection/maintenance
rimble County Unit 7 - Gas CT - 159 MW	S 11/19/2016 0:47	11/20/2016 18:43	11/19/2016 0:47	11/20/2016 18:43	41:56	41:56	Borescope inspection and relay testing
-service June 2004	F		1/5/2017 1:12	1/5/2017 7:54		6:42	345kV breaker hydraulic system inspection
pintly owned with LG&E	S 1/24/2017 3:04	1/24/2017 17:34	1/24/2017 3:04	1/24/2017 17:34	14:30	14:30	345kV breaker hydraulic system repair
	S 3/17/2017 6:18	3/19/2017 12:55	3/17/2017 6:18	3/19/2017 12:55	54:37	54:37	Gas fuel piping line maintenance - common cause with TC5, TC6, and TC7
	F		4/7/2017 5:10	4/7/2017 12:49		7:39	Motor Control Center fault
	F		4/7/2017 22:43	4/8/2017 8:34		9:51	Starting system - load commutated inverter - TC 7/TC8 shared equipment
rimble County Unit 8 - Gas CT - 159 MW	S 11/18/2016 0:40	11/20/2016 9:51	11/18/2016 0:40	11/20/2016 9:51	57:11	57:11	Borescope inspection
•							
n-service June 2004	S 3/17/2017 8:50	3/19/2017 12:55	3/17/2017 8:50	3/19/2017 12:55	52:05	52:05	Gas fuel piping line maintenance - common cause with TC8, TC9, and TC10
ointly owned with LG&E	F		4/7/2017 22:43	4/8/2017 8:34		9:51	Starting system - load commutated inverter - TC 7/TC8 shared equipment
rimble County Unit 9 - Gas CT - 159 MW	S 12/13/2016 0:25	12/14/2016 17:49	12/13/2016 0:25	12/14/2016 17:49	41:24	41.24	Switchyard bus protection relay maintenance
million oounty offic 5 - Gas C1 - 135 mill	12/13/2010 0.25	12/14/2010 17.49	12/10/2010 0.20	12/14/2010 17.49	41.24	41.24	
n-service July 2004	-		1/6/2017 16:47	1/6/2017 23:43		6.50	Starting system - instrumentation repair
-sei vice suiy 2004			1/0/2017 10:47	1/0/2017 23:43		0:00	
	S 3/17/2017 8:50	0/40/0047 40 55	0/47/0047.0.50	0/40/0047 10 55	52:05	50.05	
ointly owned with LG&E	3 3/17/2017 8:50	3/19/2017 12:55	3/17/2017 8:50	3/19/2017 12:55	5∠:05	52:05	Gas fuel piping line maintenance - common cause with TC8, TC9, and TC10
rimble County Unit 10 - Gas CT - 159 MW	F		12/23/2016 11:22	12/24/2016 7:17		19:55	Fire protection system repair
n-service July 2004	S 3/17/2017 8:50	3/19/2017 13:06	3/17/2017 8:50	3/19/2017 13:06	52:16	52:16	Gas fuel piping line maintenance - common cause with TC8, TC9, and TC10
ointly owned with LG&E							

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 8

Witness: Delbert Billiter

- Q-8. List all existing fuel contracts categorized as long-term (i.e., one year or more in length). Provide the following information for each contract:
 - a. Supplier's name and address;
 - b. Name and location of production facility;
 - c. Date when contract was executed;
 - d. Duration of contract;
 - e. Date(s) of each contract revision, modification, or amendment;
 - f. Annual tonnage requirements;
 - g. Actual annual tonnage received since the contract's inception;
 - h. Percentage of annual requirements received during the contract's term;
 - i. Base price in dollars per ton;
 - j. Total amount of price escalations to date in dollars per ton; and
 - k. Current price paid for coal under the contract in dollars per ton (i + j).
- A-8. See attached.

Attachment to Response to Question No. 8 Page 1 of 38 Billiter

0 tons

424,733 tons

Alliance Coal, LLC / J12007

A. IVANIL/ADDRESS.	1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Hopkins County Coal, Warrior Coal and Webster County Coal Seller's Mines Western Kentucky
C. CONTRACT EXECUTED DATE:	December 9, 2011
D. CONTRACT DURATION:	January 1, 2012 – December 31, 2016
E. CONTRACT AMENDMENTS:	Amendment No. 1, effective January 1, 2013. Determine Base price for 2013 and 2014.
	Amendment No. 2, effective January 1, 2014. Determine Base price for 2014 and 2015.
	Amendment No. 3, effective January 1, 2015. Determine Base price for 2015 and 2016.
	Amendment No. 4, effective January 1, 2016. Determine Base price for 2016.
F. ANNUAL TONNAGE REQUIREMENTS:	20123,000,000 tons20133,000,000 tons20143,000,000 tons20153,000,000 tons20163,000,000 tons
G. ACTUAL TONNAGE RECEIVED:	LG&EKU20122,877,460 tons14,326 tons20133,065,353 tons0 tons20142,942,649 tons60,536 tons20153,027,379 tons0 tons

2016 2,509,865 tons

¹carryover tonnage

80,589 tons

2017¹

A. NAME/ADDRESS:

Attachment to Response to Question No. 8 Page 2 of 38 Billiter

H. PERCENT OF ANNUAL REQUIREMENTS:	201296%2013102%2014100%2015101%201698%2017carryover tonnage
I. BASE PRICE (FOB Railcar/Barge):	2012 - \$47.00 per ton FOB Railcar 2013 - \$48.00 per ton FOB Railcar 2014 - \$47.38 per ton FOB Railcar/Barge 2015 - \$46.88 per ton FOB Railcar/Warrior 2015 - \$47.13 per ton FOB Railcar/Dotiki 2016 - \$45.75 per ton FOB Railcar/Warrior 2016 - \$45.00 per ton FOB Railcar/Dotiki
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$45.75 per ton FOB Railcar/Warrior \$45.00 per ton FOB Railcar/Dotiki

Attachment to Response to Question No. 8 Page 3 of 38 Billiter

A. NAME/ADDRESS:	Alliance Coal, LLC / J16001B 1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	River View Coal, LLC River View Mine Union County, Kentucky
C. CONTRACT EXECUTED DATE:	December 29, 2014
D. CONTRACT DURATION:	January 1, 2016 – December 31, 2017
E. CONTRACT AMENDMENTS:	Amendment No. 1, effective October 10, 2014. Extend term to December 31, 2017. Increase Base Quantity tonnage. Update Annual Base Price for 2016 and 2017.
	Contract J16001 Assignment from Patriot Coal Sales to Alliance Coal, LLC.
F. ANNUAL TONNAGE REQUIREMENTS:	2016 960,000 tons 2017 480,000 tons
G. ACTUAL TONNAGE RECEIVED:	LG&E KU 2016 756,728 tons 130,145 tons 2017 145,138 tons 0 tons (through 4/30/17) 0 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 92% 2017 30% (through 4/30/17)
I. BASE PRICE (FOB Barge):	2016 - \$46.69 per ton 2017 - \$48.25 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$48.25 per ton

Attachment to Response to Question No. 8 Page 4 of 38 Billiter

A. NAME/ADDRESS:	Alliance Coal, LLC / J16004 1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	River View Coal, LLC River View Mine Union County, Kentucky
C. CONTRACT EXECUTED DATE:	February 9, 2015
D. CONTRACT DURATION:	March 1, 2015 – December 31, 2016
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2016 1,000,000 tons
G. ACTUAL TONNAGE RECEIVED:	$\begin{array}{ccc} \underline{LG\&E} & \underline{KU} \\ 2016 & 812,188 \ tons \\ 2017^1 & 62,155 \ tons \\ ^1 carryover \ tonnage \end{array} \qquad \begin{array}{c} \underline{KU} \\ 123,719 \ tons \\ 1,620 \ tons \end{array}$
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 94%2017 carryover tonnage
I. BASE PRICE (FOB Barge):	2016 - \$47.67 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$47.67 per ton

Attachment to Response to Question No. 8 Page 5 of 38 Billiter

A. NAME/ADDRESS:	Alliance Coal, LLC / J16008 1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Gibson County Coal, LLC River View Coal, LLC Gibson South River View Mine Gibson County, Indiana Union County, Kentucky
C. CONTRACT EXECUTED DATE:	March 1, 2015
D. CONTRACT DURATION:	January 1, 2016 – December 31, 2017
E. CONTRACT AMENDMENTS:	Amendment No.1, effective March 1, 2016 Adds FOB Barge Load Point Mount Vernon Terminal MP 828 Ohio River.
	Amendment No.2, effective December 2016 Adds FOB Barge Load Point River View Dock MI 843.0 Ohio River
F. ANNUAL TONNAGE REQUIREMENTS:	2016250,000 tons2017250,000 tons
G. ACTUAL TONNAGE RECEIVED:	LG&E KU 2016 0 tons 210,306 tons 2017 9,632 tons 116,052 tons (through 4/30/17) 116,052 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 84% 2017 50% (through 4/30/17)
I. BASE PRICE (FOB Railcar/Barge):	 2016 - \$47.00 per ton FOB Railcar \$54.50 per ton FOB Barge Mt. Vernon \$47.00 per ton FOB River View Dock 2017 - \$49.00 per ton FOB Railcar \$49.00 per ton FOB River View Dock

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J. ESCALATIONS TO DATE:	
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None

K. CURRENT CONTRACT PRICE:

\$49.00 per ton FOB Railcar \$49.00 per ton FOB Barge River View Dock

Attachment to Response to Question No. 8 Page 7 of 38 Billiter

A. NAME/ADDRESS:	Alliance Coal, LLC / J17002 1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886				
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	River View Coal, LLC River View Mine Union County, Kentucky				
C. CONTRACT EXECUTED DATE:	February 19, 2016				
D. CONTRACT DURATION:	February 19, 2016 – December 31, 2019				
E. CONTRACT AMENDMENTS:	None				
F. ANNUAL TONNAGE REQUIREMENTS:	20172,000,000 tons20182,000,000 tons20192,000,000 tons				
G. ACTUAL TONNAGE RECEIVED:	2017 <u>LG&E</u> <u>KU</u> 2017 380,224 tons (through 4/30/17) <u>KU</u> 218,055 tons				
H. PERCENT OF ANNUAL REQUIREMENTS:	2017 30% (through 4/30/17)				
I. BASE PRICE (FOB Barge):	2017 - \$41.00 per ton 2018 - \$42.50 per ton 2019 - \$44.50 per ton				
J. ESCALATIONS TO DATE:	None				
K. CURRENT CONTRACT PRICE:	\$41.00 per ton				

Attachment to Response to Question No. 8 Page 8 of 38 Billiter

A. NAME/ADDRESS:	Alliance Coal, LLC / J17005 1717 South Boulder Av., Suite 400 Tulsa, Oklahoma 74119-4886
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Warrior Coal, LLC Webster County Coal, LLC Cardinal Dotiki Hopkins and Webster Counties, Kentucky
C. CONTRACT EXECUTED DATE:	November 1, 2016
D. CONTRACT DURATION:	November 1, 2016 – December 31, 2018
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2017500,000 tons20181,000,000 tons
G. ACTUAL TONNAGE RECEIVED:	2017 <u>LG&E</u> <u>KU</u> 147,947 tons 0 tons (through 4/30/17)
H. PERCENT OF ANNUAL REQUIREMENTS:	2017 30% (through 4/30/17)
I. BASE PRICE (FOB Railcar):	WarriorWebsterLoadoutLoadout2017 - \$37.50 per ton\$37.00 per ton2018 - \$39.00 per ton\$38.50 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$37.50 per ton - Warrior \$37.00 per ton - Webster

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A. NAME/ADDRESS:	Arch Coal Sales Company, Inc. / J16012 1 CityPlace Drive, Suite 300 St. Louis, Missouri 63141
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Thunder Basin Coal Company, LLC Black Thunder Complex Campbell County, Wyoming
C. CONTRACT EXECUTED DATE:	June 2, 2015
D. CONTRACT DURATION:	January 1, 2016 - December 31, 2017
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2016 600,000 tons 2017 600,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&E KU 2016 0 tons 456,180 tons 2017 0 tons 183,889 tons (through 4/30/17)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 76% 2017 31% (through 4/30/17)
I. BASE PRICE (FOB Railcar)	2016\$11.50 per ton2017\$12.60 per ton
J. ESCALATIONS TO DATE:	\$0.00 per ton
K. CURRENT CONTRACT PRICE:	\$12.60 per ton

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A. NAME/ADDRESS:	Armstrong Coal Sales, LLC / J07032
	407 Brown Road
	Madisonville, Kentucky 42431

B. PRODUCTION FACILITY: OPERATOR MINES LOCATION

Armstrong Coal Company, Inc Various Muhlenberg County and Ohio County, Kentucky

C. CONTRACT EXECUTED DATE: December 20, 2007

D. CONTRACT DURATION:

E. CONTRACT AMENDMENTS:

January 1, 2008 - December 31, 2019

Amendment No. 1, effective July 1, 2008 amending base quantity and modifying diesel fuel adjustment to include explosives.

Amendment No. 2, effective December 22, 2009 amending term, base quantity, price and environmental force majeure.

Amendment No. 3, effective October 29, 2013 amending term, base quantity, price and payment.

Assignment and Assumption Agreement dated August 6, 2015 assigning Agreement from Armstrong Coal Company, Inc. to Armstrong Coal Sales, LLC.

F. ANNUAL TONNAGE REQUIREMENTS:

 2008
 600,000 tons

 2009
 2,200,000 tons

 2010
 1,800,000 tons

 2011 through 2013 - 2,100,000 tons per year

 2014 through 2016 - 1,000,000 tons per year

 2017 through 2019

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G. ACTUAL TONNAGE: RECEIVED:	2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	LG&E 511,414 tons 1,530,482 tons 1,180,206 tons 993,296 tons 904,254 tons 838,589 tons 346,954 tons 312,387 tons 394,989 tons 119,895 tons (through 4/30/17)	<u>KU</u> 82,623 tons 632,077 tons 657,930 tons 877,219 tons 1,211,495 tons 1,431,403 tons 634,044 tons 627,074 tons 667,975 tons 189,878 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	99% 98% 102% 89% 101% 108% 98% 94% 106% 41% (through 4/30	/17)
I. BASE PRICE (FOB Railcar/Barge)	2008	Quality 1 - \$27.31 pc Quality 2 - \$28.30 pc	er ton
	2009 2010	Quality 1 - \$27.60 pc Quality 2 - \$28.76 pc Quality 1 - \$28.18 pc	er ton
		Quality 2 – N/A	
	2011	Quality 1 - \$28.19 pe Quality 2 - \$29.61 pe	
	2012	Quality 1 - \$28.35 pc Quality 2 - \$29.77 pc	
	2013	Quality 1 - \$28.35 pc Quality 2 - \$29.77 pc	

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I. BASE PRICE (FOB Barge)	2014-2017	Quality 1 - \$28.50 per ton Quality 2 - \$29.92 per ton
	2018	Quality 1 - \$29.00 per ton Quality 2 - \$30.42 per ton
	2019	Quality 1 - \$30.25 per ton Quality 2 - \$31.67 per ton
J. ESCALATIONS TO DATE:	-\$0.77	per ton
K. CURRENT CONTRACT PRICE:	-	y 1 - \$27.73 per ton y 2 - \$29.15 per ton

Attachment to Response to Question No. 8 Page 13 of 38 Billiter

A. NAME/ADDRESS:	Armstrong Coal Sales, LLC / J14004 407 Brown Road Madisonville, Kentucky 42431
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Armstrong Coal Company, Inc. Various Muhlenberg County and Ohio County, Kentucky
C. CONTRACT EXECUTED DATE:	December 12, 2012
D. CONTRACT DURATION:	January 1, 2013 - December 31, 2017
E. CONTRACT AMENDMENTS:	Amendment No. 1, effective October 29, 2013 amending base quantity and price.
	Assignment and Assumption Agreement dated August 6, 2015 assigning Agreement from Armstrong Coal Company, Inc. to Armstrong Coal Sales, LLC.
F. ANNUAL TONNAGE REQUIREMENTS:	20141,300,000 tons20151,350,000 tons2016500,000 tons2017500,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&EKU2014647,205 tons579,440 tons2015323,703 tons861,959 tons2016400,149 tons318,078 tons2017181,482 tons0 tons(through 4/30/17)0
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 94% 2015 88% 2016 144% 2017 36% (through 4/30/17)

I. BASE PRICE (FOB Railcar/Barge)	2014 2015 2016 2017	<u>Railcar</u> \$44.60 per ton \$46.01 per ton \$46.75 per ton \$47.90 per ton	Barge \$45.60 per ton \$47.01 per ton \$47.75 per ton \$48.90 per ton
J. ESCALATIONS TO DATE:		<u>Railcar/Barge</u> -\$5.22 per ton	
K. CURRENT CONTRACT PRICE:		<u>Railcar</u> \$42.68 per ton	<u>Barge</u> \$43.68 per ton

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A. NAME/ADDRESS:	Armstrong Coal Sales, LLC / J14010 407 Brown Road Madisonville, Kentucky 42431
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Armstrong Coal Company, Inc. Various Muhlenberg County and Ohio County, Kentucky
C. CONTRACT EXECUTED DATE:	December 12, 2012
D. CONTRACT DURATION:	January 1, 2014 - December 31, 2019
E. CONTRACT AMENDMENTS:	Assignment and Assumption Agreement dated August 6, 2015 assigning Agreement from Armstrong Coal Company, Inc. to Armstrong Coal Sales, LLC.
F. ANNUAL TONNAGE REQUIREMENTS:	2014100,000 tons2015100,000 tons2016100,000 tons2017100,000 tons2018100,000 tons2019100,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&EKU201438,628 tons59,303 tons201528,826 tons75,097 tons201614,332 tons78,492 tons201732,085 tons27,174 tons(through 4/30/17)78,492 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 98% 2015 104% 2016 93% 2017 59% (through 4/30/17)

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I. BASE PRICE (FOB Barge/Railcar)	2014\$40.00 per ton2015\$41.00 per ton2016\$42.00 per ton2017\$43.00 per ton2018\$44.00 per ton2019\$45.00 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$43.00 per ton

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A. NAME/ADDRESS:	Armstrong Coal Sales, LLC / J16003
	407 Brown Road
	Madisonville, Kentucky 42431

B. PRODUCTION FACILITY: OPERATOR MINES LOCATION

Armstrong Coal Company, Inc. Various Muhlenberg County and Ohio County, Kentucky

- C. CONTRACT EXECUTED DATE: September 8, 2014
- D. CONTRACT DURATION:
- E. CONTRACT AMENDMENTS:
- F. ANNUAL TONNAGE REQUIREMENTS:
- G. ACTUAL TONNAGE: RECEIVED:
- H. PERCENT OF ANNUAL REQUIREMENTS:
- I. BASE PRICE (FOB Barge/Railcar)
- J. ESCALATIONS TO DATE:
- K. CURRENT CONTRACT PRICE:

Assignment and Assumption Agreement dated August 6, 2015 assigning Agreement from

January 1, 2016 - December 31, 2017

Armstrong Coal Company, Inc. to Armstrong Coal Sales, LLC.

- 2016 1,000,000 tons 2017 1,000,000 tons
- LG&E
 KU

 2016
 433,950 tons
 501,776 tons

 2017
 267,331 tons
 139,362 tons

 (through 4/30/17)
 139,362 tons
- 2016 94% 2017 41% (through 4/30/17)
- 2016 \$42.80 per ton 2017 \$44.00 per ton
- -\$5.30 per ton
- PRICE: \$38.70 per ton

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A. NAME/ADDRESS:	Armstrong Coal Sales, LLC / J16017 407 Brown Road Madisonville, Kentucky 42431
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Armstrong Coal Company, Inc. Various Muhlenberg County and Ohio County, Kentucky
C. CONTRACT EXECUTED DATE:	September 16, 2015
D. CONTRACT DURATION:	September 1, 2015 - December 31, 2018
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2016400,000 tons2017720,000 tons20181,000,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&E KU 2016 119,844 tons 252,963 tons 2017 249,053 tons 7,952 tons (through 4/30/17) 7,952 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 93% 2017 36% (through 4/30/17)
I. BASE PRICE (FOB Railcar/Barge)	RailcarBarge2016\$38.25 per ton\$39.25 per ton2017\$39.25 per ton\$40.25 per ton2018\$40.25 per ton\$41.25 per ton
J. ESCALATIONS TO DATE:	Railcar/Barge -\$2.23 per ton
K. CURRENT CONTRACT PRICE:	RailcarBarge\$37.02 per ton\$38.02 per ton

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A. NAME/ADDRESS:	6100 I	e Refined Coal LLC / H Dutchmans Lane, 11 th ville, Kentucky 40205	
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	BRC I	e Refined Coal LLC Estill County Facility County, Kentucky	
C. CONTRACT EXECUTED DATE:	Octob	er 6, 2014	
D. CONTRACT DURATION:		er 1, 2014 - December act not extended	31, 2016
E. CONTRACT AMENDMENTS:	None		
F. ANNUAL TONNAGE REQUIREMENTS:	2014 2015 2016	30,000 tons 120,000 tons 120,000 tons	
G. ACTUAL TONNAGE: RECEIVED:	2014 2015 2016	99,611 tons	
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 2015 2016		
I. BASE PRICE (FOB E.W. Brown)	2014 2015 2016	<u>120,000 lbs. GVW</u> \$58.50 per ton \$59.67 per ton \$60.84 per ton	80,000 lbs. GVW \$69.50 per ton \$70.67 per ton \$71.84 per ton
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:		<u>120,000 lbs. GVW</u> \$60.84 per ton	80,000 lbs. GVW \$71.84 per ton

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A. NAME/ADDRESS:	Contura Coal Sales, LLC / J17001 340 Martin Luther King Blvd. Bristol, Tennessee 37620
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Cumberland Coal Resources, LP Cumberland Mine Greene County, Pennsylvania
C. CONTRACT EXECUTED DATE:	March 2, 2016
D. CONTRACT DURATION:	February 1, 2016 - December 31, 2017
E. CONTRACT AMENDMENTS:	Effective July 26, 2016: Assignment of Alpha Coal Sales Co., LLC agreement J17001 to Contura Coal Sales, LLC
F. ANNUAL TONNAGE REQUIREMENTS:	2017 1,000,000 tons
G. ACTUAL TONNAGE: RECEIVED:	2017 <u>LG&E</u> <u>KU</u> 2017 0 tons 215,414 tons (through 4/30/17)
H. PERCENT OF ANNUAL REQUIREMENTS:	2017 22% (through 4/30/17)
I. BASE PRICE (FOB Barge)	2017 \$38.00 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$38.00 per ton

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A. NAME/ADDRESS:	Eagle River Coal, LLC / J16005 29 West Raymond St. Harrisburg, Illinois 62946
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Eagle River Coal, LLC Eagle River Surface Mine No.1 Saline County, Illinois
C. CONTRACT EXECUTED DATE:	November 11, 2014
D. CONTRACT DURATION:	January 1, 2016 - December 31, 2018
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2016300,000 tons2017420,000 tons2018420,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&E KU 2016 123,029 tons 159,811 tons 2017 5,024 tons 101,308 tons (through 4/30/17) 101,308 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 94% 2017 25% (through 4/30/17)
I. BASE PRICE (FOB Barge)	2016\$48.20 per ton2017\$49.30 per ton2018\$52.30 per ton
J. ESCALATIONS TO DATE:	-\$3.50 per ton
K. CURRENT CONTRACT PRICE:	\$45.80 per ton

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A. NAME/ADDRESS:	Foresight Coal Sales, LLC / J16009 46226 National Road St. Clairsville, Ohio 43950
B. PRODUCTION FACILITY: OPERATOR:	Macoupin Energy, LLC Sugar Camp Energy, LLC Hillsboro Energy, LLC
MINES:	Williamson Energy, LLC Shay Mine No. 1 Deer Run Mine MC#1
LOCATION:	Mach #1 Macoupin, Montgomery, Williamson and Franklin Counties, Illinois
C. CONTRACT EXECUTED DATE:	April 23, 2015
D. CONTRACT DURATION:	April 22, 2015 - December 31, 2016
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2016 1,000,000 tons
G. ACTUAL TONNAGE: RECEIVED:	$\begin{array}{ccc} \underline{LG\&E} & \underline{KU} \\ 2016 & 212,637 \ tons & 706,225 \ tons \\ 2017^1 & 12,271 \ tons & 69,244 \ tons \\ {}^1 \ carryover \ tonnage \end{array}$
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 92%2017 carryover tonnage
I. BASE PRICE (FOB Barge)	2016 \$40.10 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$40.10 per ton

Attachment to Response to Question No. 8 Page 23 of 38 Billiter

A. NAME/ADDRESS:	Foresight Coal Sales, LLC / J16018 46226 National Road St. Clairsville, Ohio 43950
B. PRODUCTION FACILITY: OPERATOR: MINES:	Macoupin Energy, LLC Sugar Camp Energy, LLC Hillsboro Energy, LLC Williamson Energy, LLC Shay Mine No. 1
LOCATION:	Deer Run Mine MC#1 Mach #1 Macoupin, Montgomery, Williamson and Franklin Counties, Illinois
C. CONTRACT EXECUTED DATE:	December 19, 2015
D. CONTRACT DURATION:	December 1, 2015 - December 31, 2019
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS	Total 3,000,000 tonsYearVolume Range2016 $0 - 500,000$ tons2017 $1,000,000 - 1,500,000$ tons2018 $1,000,000 - 1,500,000$ tons2019 $0 - 1,000,000$ tons
G. ACTUAL TONNAGE: RECEIVED:	LG&E KU 2016 0 tons 0 tons 2017 242,874 tons 111,528 tons (through 4/30/2017) 111,528 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 NA 2017 35% (through 4/30/2017 based on 1.0M tons)
I. BASE PRICE: (FOB Barge)	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$

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J. ESCALATIONS TO DATE:

None

K. CURRENT CONTRACT PRICE: \$38.95 per ton

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A. NAME/ADDRESS:	Kolmar Americas, Inc. / J16019 10 Middle Street, Penthouse Bridgeport, Connecticut 06851		
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Chafin Branch Coal Company, LLC Tams Management, Inc. Snap Creek No. 1 Surface Mine Tams No. 1 Surface Mine Logan and Raleigh Counties, West Virginia		
C. CONTRACT EXECUTED DATE:	November 25, 2015		
D. CONTRACT DURATION:	January 1, 2016 - December 31, 2016		
E. CONTRACT AMENDMENTS:	None		
F. ANNUAL TONNAGE REQUIREMENTS:	2016 100,000 tons		
G. ACTUAL TONNAGE: RECEIVED:	$\begin{array}{ccc} \underline{LG\&E} & \underline{KU} \\ 2016 & 40,610 \ tons & 55,794 \ tons \\ 2017^1 & 0 \ tons & 3,113 \ tons \\ {}^{1} carryover \ tonnage \end{array}$		
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 96%2017 carryover tonnage		
I. BASE PRICE (FOB Barge)	2016 \$30.15 per ton		
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	\$30.15 per ton		

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A. NAME/ADDRESS:

B. PRODUCTION FACILITY: OPERATOR

MINE

LOCATION

- C. CONTRACT EXECUTED DATE:
- D. CONTRACT DURATION:
- E. CONTRACT AMENDMENTS:
- F. ANNUAL TONNAGE REQUIREMENTS:
- G. ACTUAL TONNAGE RECEIVED:
- H. PERCENT OF ANNUAL REQUIREMENTS:
- I. BASE PRICE: (FOB Barge/Railcar)

Peabody COALSALES, LLC / J16007 701 Market Street St. Louis, Missouri 63101

Peabody Midwest Mining, LLC Peabody Wild Boar Mining, LLC Somerville Mine Complex Wild Boar Warrick & Gibson Counties, Indiana

1

April 6, 2015

April 1, 2015 – December 31, 2018

Amendment No. 1 effective September 1, 2015 Extend term to December 31, 2018 and add 250K tons to 2016, 750K tons to 2017 and 750K tons to 2018. Added new pricing for 2016 through 2018.

- 2016 750,000 tons 2017 750,000 tons 2018 750,000 tons
- 2018 750,000 tons
- LG&E
 KU

 2016
 17,804 tons
 690,075 tons

 2017
 57,096 tons
 198,068 tons

 (through 4/30/2017)
 198,068 tons
- 2016 94% 2017 34% (through 4/30/2017)
- 2016 1st 500,000 tons
 \$45.75 per ton FOB Barge Evansville
 \$45.75 per ton FOB Barge Warrick Co.
 \$42.75 per ton FOB Railcar
- 2016 Last 250,000 tons
 \$40.75 per ton FOB Barge Evansville
 \$40.75 per ton FOB Barge Warrick Co.
 \$37.75 per ton FOB Railcar

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I. BASE PRICE: (FOB Barge/Railcar)	2017	 \$41.75 per ton – FOB Barge Evansville \$41.75 per ton – FOB Barge Warrick Co. \$38.75 per ton – FOB Railcar
	2018	 \$42.75 per ton – FOB Barge Evansville \$42.75 per ton – FOB Barge Warrick Co. \$39.75 per ton – FOB Railcar
J. ESCALATIONS TO DATE:		 \$0.02 per ton – FOB Barge Evansville \$0.19 per ton – FOB Barge Warrick Co. \$0.19 per ton – FOB Railcar
K. CURRENT CONTRACT PRICE:		 \$41.77 per ton – FOB Barge Evansville \$41.94 per ton – FOB Barge Warrick Co. \$38.94 per ton – FOB Railcar

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A. NAME/ADDRESS:	Peabody COALTRADE, LLC / J16016 701 Market Street St. Louis, Missouri 63101-1826		
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Pritchard Mining Company, Inc. Four Mile Surface Mine Dry Branch Surface No. 1 Mine Kanawha County, West Virginia		
C. CONTRACT EXECUTED DATE:	August 27, 2015		
D. CONTRACT DURATION:	January 1, 2016 - December 31, 2016		
E. CONTRACT AMENDMENTS:	None		
F. ANNUAL TONNAGE REQUIREMENTS:	2016 120,000 tons		
G. ACTUAL TONNAGE: RECEIVED:	$\begin{array}{ccc} \underline{LG\&E} & \underline{KU} \\ 2016 & 40,701 \ \text{tons} & 49,827 \ \text{tons} \\ 2017^1 & 1,638 \ \text{tons} & 19,551 \ \text{tons} \\ ^1 \text{carryover tonnage} \end{array}$		
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 75%2017 carryover tonnage		
I. BASE PRICE (FOB Barge)	2016 \$22.00 per ton		
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	\$22.00 per ton		

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A. NAME/ADDRESS: B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Rhino Energy LLC and Pennyrile Energy LLC / J14001 424 Lewis Hargett Circle, Suite 250 Lexington, Kentucky 40503 Pennyrile Energy LLC Riveredge Mine Mclean County, Kentucky		
C. CONTRACT EXECUTED DATE:	December 11, 2012		
D. CONTRACT DURATION:	December 10, 2014 - December 31, 2020		
E. CONTRACT AMENDMENTS:	Amendment No. 1 effective July 1, 2017 Amend July 1, 2017 through December 31, 2017 price. Add tonnage and pricing for 2018 to 2020. Change monthly quality guarantee for moisture and sulfur effective January 1, 2018.		
F. ANNUAL TONNAGE REQUIREMENTS:	2014150,000 tons2015800,000 tons2016800,000 tons2017800,000 tons2018400,000 tons2019400,000 tons2020400,000 tons		
G. ACTUAL TONNAGE RECEIVED:	LG&EKU201443,582 tons70,647 tons2015121,084 tons580,770 tons201662,123 tons822,519 tons2017102,373 tons169,035 tons(through 4/30/17)169,035 tons		
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 76% 2015 88% 2016 111% 2017 34% (through 4/30/17)		

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I. BASE PRICE (FOB Barge):	2014	\$45.25 per ton
	2015	\$46.50 per ton
	2016	\$48.25 per ton
January 1, 2017 through June 30	, 2017	\$50.00 per ton
July 1, 2017 through December 31	, 2017	\$47.00 per ton
	2018	\$37.00 per ton
	2019	\$38.00 per ton
	2020	\$39.00 per ton
J. ESCALATIONS TO DATE:	None	
K. CURRENT CONTRACT PRICE:	\$50.00) per ton

Attachment to Response to Question No. 8 Page 31 of 38 Billiter

A. NAME/ADDRESS:	Sunrise Coal, LLC / J15002B 1183 East Canvasback Drive Terre Haute, Indiana 47802		
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	Sunrise Coal, LLC Oaktown Fuels Mine No.1 and No. 2 Knox County, Indiana		
C. CONTRACT EXECUTED DATE:	December 12, 2016		
D. CONTRACT DURATION:	December 12, 2016 - December 30, 2017		
E. CONTRACT AMENDMENTS:	Consent and Assignment and Assumption Agreement dated December 12, 2012. Whereas Triad Mining, LLC assigns Coal Supply Agreemen J15002 to Sunrise Coal, LLC.		
		dment No. 1, effective ge Source, Rail Deliver	
F. ANNUAL TONNAGE REQUIREMENTS:	2016 2017	34,870 tons 500,000 tons	
G. ACTUAL TONNAGE: RECEIVED:	2016 2017	LG&E 0 tons 0 tons (through 4/30/17)	<u>KU</u> 33,765 tons 127,559 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 2017	97% 26% (through 4/30/17	7)
I. BASE PRICE: (FOB Railcar)	2016 2017	\$36.31 per ton \$37.62 per ton	
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	\$37.62	2 per ton	

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A. NAME/ADDRESS:	The American Coal Company / J16002 46226 National Road St. Clairsville, Ohio 43950		
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	The American Coal Company New Era Mine New Future Mine Saline County, Illinois		
C. CONTRACT EXECUTED DATE:	July 22, 2014		
D. CONTRACT DURATION:	July 1, 2014 - December 31, 2016		
E. CONTRACT AMENDMENTS:	Amendment No.1 effective January 1, 2016, change FOB Barge Loading Point, weighing and sampling to Sitran Dock MP 817.5 Ohio River.		
F. ANNUAL TONNAGE REQUIREMENTS	2016 1,000,000 tons		
G. ACTUAL TONNAGE: RECEIVED:	$\begin{array}{cccc} \underline{LG\&E} & \underline{KU} \\ 2016 & 349,055 \ tons \\ 2017^1 & 12,314 \ tons \\ ^1 carryover \ tonnage \end{array}$		
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 96%2017 carryover tonnage		
I. BASE PRICE:	2016 \$48.50 per ton		
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	\$48.50 per ton		

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A. NAME/ADDRESS:	The American Coal Company / J16006 46226 National Road St. Clairsville, Ohio 43950
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	The American Coal Company New Era Mine New Future Mine Saline County, Illinois
MINE: LOCATION:	Ohio County Mine Marshall County, West Virginia
MINE: LOCATION:	Paradise #9 Mine Muhlenberg, Kentucky
MINES: LOCATIONS:	Shay #1 Mine, MC #1 Mine, Mach #1 Mine, Deer Run Mine Macoupin, Franklin, Williamson and Montgomery Counties, Illinois
C. CONTRACT EXECUTED DATE:	December 19, 2015
D. CONTRACT DURATION:	December 1, 2014 - December 31, 2020
E. CONTRACT AMENDMENTS:	Amendment No.1 effective January 1, 2016, change FOB Barge Loading Point to Sitran Dock MP 817.5 Ohio River.
	Amendment No. 2 effective September 1, 2016, reduce FOB Barge Price.
	Amendment No. 3 effective August 1, 2017 Extend term to December 31, 2020, Reduce tonnage to 2.95 million tons, Add new coal sources and FOB Barge prices, Change guarantee monthly sulfur specification for Ohio County Mine.

F. ANNUAL TONNAGE			
REQUIREMENTS	Year		
	2017	1,000,000 tons	
	2018	650,000 tons	
	2019	650,000 tons	
	2020	650,000 tons	
G. ACTUAL TONNAGE:		<u>LG&E</u>	<u>KU</u>
RECEIVED:	2017	117,554 tons	248,052 tons
		(through 4/30/17)	
H. PERCENT OF ANNUAL			
REQUIREMENTS:	2017	37% (through 4/30/17))
II. BASE PRICE:			
		uture Mine (FOB Barg	e/Sitran Dock)
Jan 1, 2017 through June 5,		\$43.50 per ton	
June 6, 2017 through Dec.31,		\$44.00 per ton	
	2018	\$44.92 per ton	
	2019	\$45.96 per ton	
	2020	\$46.85 per ton	
	G1 /		
	•	¹ Mine, MC #1 Mine, 1	
		Run Mine (FOB Barge/S	Sitran Dock)
Aug 1, 2017 through Dec 31,		\$38.59 per ton	
	2018	\$39.60 per ton	
	2019	\$39.86 per ton	
	2020	\$40.39 per ton	
	Ohia	Country Mine (EOD Don	as Ohio Country Dealy)
Aug 1, 2017 through Dec 31,		County Mine (FOB Bar	ge/Onio County Dock)
Aug 1, 2017 unough Dec 51,		\$37.59 per ton \$38.60 per ton	
	2018 2019	\$38.86 per ton	
	2019	-	
	2020	\$39.39 per ton	
	Daradi	se #9 Mine (FOB Barge	e/Island Dock)
Aug 1, 2017 through Dec 31,		\$37.69 per ton	C/ISIAIIA DOCK)
Tug 1, 2017 unough Dec 51,	2017	\$38.70 per ton	
	2018	\$38.96 per ton	
	2017	\$39.49 per ton	
	2020		

Attachment to Response to Question No. 8 Page 35 of 38 Billiter

J. ESCALATIONS TO DATE:	
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None

K. CURRENT CONTRACT PRICE:

\$43.50 per ton - New Future Mine

Attachment to Response to Question No. 8 Page 36 of 38 Billiter

A. NAME/ADDRESS:	The American Coal Company / J17004 46226 National Road St. Clairsville, Ohio 43950
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	The American Coal Company New Era Mine New Future Mine Saline County, Illinois
MINE: LOCATION:	Ohio County Mine Marshall County, West Virginia
MINES:	Shay #1 Mine, MC #1 Mine, Mach #1 Mine, Deer Run Mine
LOCATIONS:	Macoupin, Franklin, Williamson and Montgomery Counties, Illinois
C. CONTRACT EXECUTED DATE:	September 1, 2016
D. CONTRACT DURATION:	September 1, 2016 - December 31, 2022
E. CONTRACT AMENDMENTS:	Amendment No. 1 effective August 1, 2017, Add new coal sources and prices.
F. ANNUAL TONNAGE REQUIREMENTS	Total 7,000,000 tonsYearVolume Range2017 $0-500,000$ tons2018750,000 - 1,250,000 tons2019750,000 - 1,250,000 tons20201,750,000 - 2,250,000 tons20211,750,000 - 2,250,000 tons2022 $0-2,000,000$ tons
G. ACTUAL TONNAGE: RECEIVED:	LG&EKU20170 tons0 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2017 NA

Attachment to Response to Question No. 8 Page 37 of 38 Billiter

I.	BASE PRICE: (FOB Barge)	Sitran Dock	
		Volume Range (Cumulative)	Base Price
		0 - 1,000,000 tons	\$34.20 per ton
		1,000,001 - 2,000,000 tons	\$36.50 per ton
		2,000,001 – 3,000,000 tons	\$38.70 per ton
		3,000,001 – 4,000,000 tons	\$40.90 per ton
		4,000,001 – 5,000,000 tons	\$43.40 per ton
		5,000,001 – 7,000,000 tons	\$45.15 per ton
		Ohio County Dock	
		Volume Range (Cumulative)	Base Price
		0 - 1,000,000 tons	\$33.20 per ton
		1,000,001 - 2,000,000 tons	\$35.50 per ton
		2,000,001 – 3,000,000 tons	\$37.70 per ton
		3,000,001 – 4,000,000 tons	\$39.90 per ton
		4,000,001 – 5,000,000 tons	\$42.40 per ton
		5,000,001 – 7,000,000 tons	\$44.15 per ton
I EGGAI		N	
J. ESCA	LATIONS TO DATE:	None	
K. CURF	RENT CONTRACT PRICE:	\$34.20 per ton - Sitran Dock \$33.20 per ton - Ohio County Dock	
		1 2	

Attachment to Response to Question No. 8 Page 38 of 38 Billiter

A. 1	NAME/ADDRESS:	Triad Mining, LLC / J15002 3228 Summit Square Place, Suite 180 Lexington, Kentucky 40509				
B .]	PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	Triad Mining, LLC Log Creek Pike County, Indiana				
C. (CONTRACT EXECUTED DATE:	Januar	y 23, 2015			
D.	CONTRACT DURATION:	Januar	y 1, 2015 - Dec	cember 30, 2017		
E.	CONTRACT AMENDMENTS:	assign	ment of 22,000 LLC for test. T	er; memorialize tonnage tons on PO K16035/Sunrise onnage counts towards 2016		
		Agreen Triad I	ment dated Dec	ent and Assumption rember 12, 2012. Whereas ssigns Coal Supply Agreement al, LLC.		
	ANNUAL TONNAGE REQUIREMENTS:		Sunrise Coal, J15002B	(56,870 tons assigned to LLC under PO K16035 & (tonnage assigned to Sunrise		
	ACTUAL TONNAGE: RECEIVED:	2015 2016	LG&E 0 tons 0 tons	<u>KU</u> 362,200 tons 441,618 tons		
	PERCENT OF ANNUAL REQUIREMENTS:	2015 2016	101% 100%			
I. E	BASE PRICE: (FOB Railcar)	2015 2016	\$44.00 per ton \$46.00 per ton			
J .]	ESCALATIONS TO DATE:	-\$3.34	per ton			
K.	CURRENT CONTRACT PRICE:	\$42.66	per ton			

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

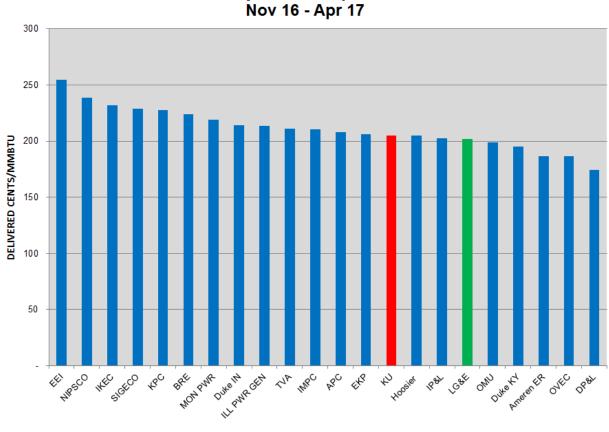
Case No. 2017-00284

Question No. 9

Witness: Delbert Billiter

- Q-9. a. State whether KU regularly compares the price of its coal purchases to those paid by other electric utilities.
 - b. If so, state:
 - (1) How KU's prices compare with those of other utilities. If the comparison includes months outside of the review period, a comparison limited to the review period should be provided separately. Provide a copy of the source documents and calculations used to support the amounts used in the comparison and include all prices used in the comparison in cents per MMbtu.
 - (2) The utilities that are included in this comparison and their locations.
- A-9. a. Yes.
 - b. KU compares pricing of its coal purchases with neighboring utilities from data that is compiled by the ABB Inc. Ventyx Velocity database from the EIA-923 Power Plant Operations Report. The utilities included in the comparison are shown on the Attachment list found on page 1 and the chart found of page 2 (the supporting data is contained in pages 3 6) of the Attachment to this response for the period of November 1, 2016 through April 30, 2017.

Utilities in Comparison List		
UTILITY	ABBREVIATED	PLANT LOCATIONS
AmerenEnergy Generating Co	Ameren ER	Illinois
Big Rivers Electric Corp	BRE	Kentucky
Appalachian Power Co	APC	Virginia, West Virginia
Dayton Power & Light Co (The)	DP&L	Ohio
Duke Energy Indiana	Duke IN	Indiana
Duke Energy Kentucky	Duke KY	Ohio
East Kentucky Power Coop	EKP	Kentucky
Electric Energy Inc	EEI	Illinois
Hoosier Energy Rural Electric Coop Inc	Hoosier	Indiana
Illinois Power Generating Co	ILL PWR GEN	Illinois
Indiana Kentucky Electric Corp	IKEC	Indiana
Indiana Michigan Power Co	IMPC	Indiana
Indianapolis Power & Light	IP&L	Indiana
Kentucky Power Co	KPC	Kentucky
Kentucky Utilities Co	KU	Kentucky
Louisville Gas & Electric Co	LG&E	Kentucky
Monongahela Power Co	MON PWR	West Virginia
Northern Indiana Public Service Co	NIPSCO	Indiana
Ohio Valley Electric Corp	OVEC	Ohio
Owensboro Municipal Utilities	OMU	Kentucky
Southern Indiana Gas & Electric Co	SIGECO	Indiana
Tennessee Valley Authority	TVA	Alabama, Kentucky, Tennessee



Utility Price Comparison Nov 16 - Apr 17

Plant Operator Name	Reported Source Name	Quantity (000s tons)	Btu/Ib	lbsSO2/mmBtu	Ash %	Delivered Fuel Price Cents/mmBtu
AmerenEnergy Resources Generating Co	PEABODY COAL SALES	713	8800	0.45	4.40	198.30
AmerenEnergy Resources Generating Co	ARCH	603	8964	0.49	4.77	173.48
]	1,315	8875	0.47	4.57	186.81
Appalachian Power Co	WISE ENERGY GROUPLLC	4.904	12017	1.40	13.73	235.20
Appalachian Power Co Appalachian Power Co	SOUTHERN COAL SALES CORP SOUTHEASTERN LAND LLC	58 35	11583 12302	1.42 1.18	13.59 11.38	234.87 268.15
Appalachian Power Co	RWE TRADING AMERICASINC	12	12350	1.49	11.60	257.10
Appalachian Power Co	PRITCHARD MINING	18	12112	1.18	12.15	234.92
Appalachian Power Co	ENGELHART COMMODITIES TRADIN(33	12608	0.93	8.89	261.13
Appalachian Power Co	EMERALD INTL CORP	19	11797	2.27	13.03	218.27
Appalachian Power Co	CONTURA ENERGY INC	72	13019	4.63	8.08	222.51
Appalachian Power Co	CONSOLIDATION COAL CO	928	12593	6.43	9.01	198.05
Appalachian Power Co Appalachian Power Co	BLACKHAWK MINING LLC ARCH	255 78	12211 12105	1.41 1.30	12.81 12.43	244.60 262.74
Appalachian Power Co	AMERICAN ENERGY	1,268	12103	6.70	9.08	184.68
Appalachian Power Co	ALPHA COAL	826	12072	1.33	12.04	231.38
	[3,608	12435	4.60	10.20	208.12
Big Rivers Electric Corp		142 167	11362 11058	4.55	8.36 8.88	226.29
Big Rivers Electric Corp Big Rivers Electric Corp	PEABODY COAL SALES KENAMERICA RESOURCES	223	11816	5.43 4.78	7.90	197.87 219.06
Big Rivers Electric Corp	FORESIGHT COAL SALES	82	10935	6.11	7.45	188.86
Big Rivers Electric Corp	ALLIANCE COAL	510	11870	5.52	8.60	238.56
-	[1,123	11606	5.28	8.39	223.94
					=	107.00
Dayton Power & Light Co (The)	WILLIAMSON ENERGY WILLIAMS	376 120	11980	4.56	7.80	187.63
Dayton Power & Light Co (The) Dayton Power & Light Co (The)	WHITE OAK RESOURCES LLC	215	11985 11858	4.67 4.52	7.80 7.87	211.70 193.37
Dayton Power & Light Co (The)	TRAFIGURA	89	11890	4.61	8.37	170.25
Dayton Power & Light Co (The)	MERCURIA	5	11898	4.55	8.20	177.80
Dayton Power & Light Co (The)	FORESIGHT COAL SALES	87	11911	4.66	8.03	183.91
Dayton Power & Light Co (The)	FIRSTENERGY	28	13064	4.61	7.75	162.19
Dayton Power & Light Co (The)	CONTURA ENERGY INC	50	13038	4.69	7.91	178.47
Dayton Power & Light Co (The) Dayton Power & Light Co (The)	AMERICAN COAL ALLIANCE COAL	278 748	11979 12238	4.65 4.87	8.13 8.75	146.07 166.19
Dayton Power & Light Co (The)	ALLIANCE	5	11515	5.47	8.30	146.20
= = =	[2,001	12097	4.70	8.25	174.17
	-					
Duke Energy Indiana	WISE ENERGY GROUPLLC	11	12222	0.93	12.06	221.00
Duke Energy Indiana Duke Energy Indiana	WHITE STALLION COALLLC SUNRISE COAL SALES	293 59	10872 11485	4.62 5.95	9.29 7.92	185.56 260.04
Duke Energy Indiana	SOUTHEASTERN LAND LLC	11	12059	1.12	13.21	256.26
Duke Energy Indiana	SOLAR SOURCES	585	11211	4.40	8.16	193.28
Duke Energy Indiana	PEABODY COAL SALES	2,076	11124	4.73	8.78	205.21
Duke Energy Indiana	FOSSIL COALLLC	24	11116	1.57	15.22	204.26
Duke Energy Indiana	EMERALD INTL CORP	3	11638	1.41	9.80	218.00
Duke Energy Indiana		15	11560	0.94	16.67	201.29
Duke Energy Indiana Duke Energy Indiana	COECLERICI COAL NETWORK BLACKHAWK MINING LLC	6 46	11556 12007	1.30 1.33	13.50 13.84	208.40 215.19
Duke Energy Indiana	BLACK BEAUTY COAL	125	11596	6.83	7.70	208.80
Duke Energy Indiana	BLACK BEAUTY	756	11628	6.07	7.87	213.54
Duke Energy Indiana	ALPHA COAL	8	12004	1.26	11.92	253.98
Duke Energy Indiana	ALLIANCE COAL	225	11549	2.33	6.84	372.21
	l	4,242	11269	4.76	8.58	214.14
Duke Energy Kentucky	RIVER VIEW COAL	129	11472	5.11	8.27	224.36
Duke Energy Kentucky	OXFORD MINING CO	26	12008	5.76	11.76	175.10
Duke Energy Kentucky	FORESIGHT COAL SALES	60	11146	5.77	7.66	201.69
Duke Energy Kentucky	CONTURA ENERGY INC	143	13039	4.51	7.95	198.65
Duke Energy Kentucky	CONSOL	144	12855	4.54	7.38	184.85
Duke Energy Kentucky Duke Energy Kentucky	CENTRAL COAL ARMSTRONG COAL	17 163	11198 11711	5.25 4.64	8.35 9.16	198.90 191.45
Duke Energy Kentucky	ALLIANCE COAL	133	12583	4.81	9.03	183.42
		815	12207	4.83	8.43	195.45

Plant Operator Name	Reported Source Name	Quantity (000s tons)	Btu/lb	lbsSO2/mmBtu	Ash %	Delivered Fuel Price Cents/mmBtu
	· ·	· · · ·				
East Kentucky Power Coop	WHITE OAK RESOURCES LLC	54	11714	4.89	7.95	254.20
East Kentucky Power Coop East Kentucky Power Coop	WHITE COUNTY COAL WESTERN KENTUCKY MINERALS	83 13	11451 11355	5.13 4.81	8.38 8.43	268.10 190.83
East Kentucky Power Coop	SUN ENERGY GROUP LLC	34	11152	5.76	11.35	190.08
East Kentucky Power Coop	RIVER VIEW COAL	161	11580	5.04	8.18	239.29
East Kentucky Power Coop	RIVER TRADING	49	11157	4.76	12.10	180.00
East Kentucky Power Coop East Kentucky Power Coop	PEABODY COAL SALES OXFORD MINING CO	66 461	11064 11437	5.46	8.75 14.29	241.49 174.94
East Kentucky Power Coop	NALLY & HAMILTON	30	12371	6.58 2.75	14.29	245.54
East Kentucky Power Coop	FORESIGHT COAL SALES	309	11971	4.63	7.87	220.99
East Kentucky Power Coop	BOWIE REFINED COAL	43	11680	4.03	10.82	227.33
East Kentucky Power Coop	B & W RESOURCES	40	11882	1.91	12.24	245.76
East Kentucky Power Coop East Kentucky Power Coop	B & N COAL ALLIANCE COAL	235 283	11073 11482	7.98 5.13	17.19 8.27	181.63 201.00
Last Renderly Fower Coop		1,860	11511	5.63	11.20	201.00
		.,				
Electric Energy Inc	BLACK THUNDER ARCH	272	8788	0.52	4.73	234.40
Electric Energy Inc	BELLAYRE	48	8682	0.51	4.00	218.74
Electric Energy Inc	ANTELOPE	443 763	8831 8806	0.52	5.39 5.06	270.37 254.37
		705	0000	0.32	5.00	254.57
Hoosier Energy Rural Electric Coop Inc	SUNRISE COAL SALES	446	11496	5.90	7.84	207.18
Hoosier Energy Rural Electric Coop Inc	PEABODY COAL SALES	409	11163	5.52	9.13	202.65
		855	11337	5.72	8.46	205.05
Illinois Power Generating Co	PEABODY COAL SALES	1,007	8760	0.46	4.44	208.56
Illinois Power Generating Co	CONTURA ENERGY INC	56	8784	0.40	4.44	208.50
Illinois Power Generating Co	BLACK THUNDER WEST	51	8800	0.71	4.57	213.17
Illinois Power Generating Co	BLACK THUNDER ARCH	618	8800	0.51	4.67	222.67
Illinois Power Generating Co	BELLAYRE	349	8740	0.48	4.44	209.59
Illinois Power Generating Co	ANTELOPE	51 2,133	8800 8771	0.51	5.40 4.53	226.95 213.52
		2,133	0//1	0.40	4.55	213.32
Indiana Kentucky Electric Corp	RESOURCE FUELS	481	11461	5.15	8.28	263.56
Indiana Kentucky Electric Corp	KNIGHTHAWK	516	11186	5.11	8.25	205.57
Indiana Kentucky Electric Corp	FORESIGHT COAL SALES	50	11448	5.37	7.80	189.67
		1,047	11325	5.14	8.24	231.77
Indiana Michigan Power Co	SOUTHEASTERN LAND LLC	18	12409	1.17	11.12	282.44
Indiana Michigan Power Co	RWE TRADING AMERICASINC	23	11926	1.59	10.72	245.28
Indiana Michigan Power Co	RIVER TRADING	18	12092	1.14	12.90	302.24
Indiana Michigan Power Co Indiana Michigan Power Co	PEABODY COAL SALES NOBLE ENERGY MARKETING	2,026 44	8770 12023	0.45 1.48	4.48 11.35	206.93 228.10
Indiana Michigan Power Co	ARCH	393	8940	0.66	5.07	190.60
Indiana Michigan Power Co	ALPHA COAL	127	12093	1.36	12.01	263.71
		2,648	9082	0.56	5.20	210.59
Indiananalia Dawaa 8 Liaht		20	44500	5.74	7.00	407.00
Indianapolis Power & Light Indianapolis Power & Light	WHITE STALLION COALLLC VIGO COAL	36 20	11520 11580	5.71 5.70	7.60 7.20	167.20 166.30
Indianapolis Power & Light	SUNRISE COAL SALES	467	11594	5.68	7.95	212.24
Indianapolis Power & Light	SOLAR SOURCES	433	11283	4.91	8.50	168.31
Indianapolis Power & Light	COALSALES LLC	417	11136	5.34	8.27	213.59
Indianapolis Power & Light	COAL SALES ALLIANCE COAL	540 264	11199 11558	5.30 2.45	8.24 6.83	216.50
Indianapolis Power & Light	ALLIANCE COAL	2,177	11330	4.98	8.05	205.62 202.84
		2,111	11041	4.00	0.00	202.04
Kentucky Power Co	SOUTHEASTERN LAND LLC	50	12361	1.17	10.74	268.87
Kentucky Power Co		31	12221	1.36	12.91	238.30
Kentucky Power Co Kentucky Power Co	RIVER TRADING NOBLE ENERGY MARKETING	28 58	12023 12341	1.53 1.32	11.06 9.41	283.98 228.94
Kentucky Power Co Kentucky Power Co	GOLDEN EAGLE INC	58 13	12341	1.52	10.90	228.94 253.49
Kentucky Power Co	EMBER ENERGY	25	12039	1.46	9.90	233.97
Kentucky Power Co	CONSOLIDATION COAL CO	507	12692	6.53	9.04	198.37
Kentucky Power Co	COECLERICI COAL NETWORK	7	11788	1.71	11.60	255.60
Kentucky Power Co	ALPHA COAL	402	12093 12386	1.33 3.69	12.09 10.45	254.61 227.65
		1,121	12300	3.09	10.45	221.00

Attachment to Response to Question No. 9 Billiter Page 5 of 6

		Quantity (000s				Delivered Fuel Price
Plant Operator Name	Reported Source Name	tons)	Btu/Ib	IbsSO2/mmBtu	Ash %	Cents/mmBtu
Kentucky Utilities Co	TRIAD	11	11775	6.73	8.20	259.20
Kentucky Utilities Co	SUNRISE COAL SALES	131	11507	5.88	7.60	259.47
Kentucky Utilities Co	RHINO ENERGY	319	11345	4.57	8.35	232.45
Kentucky Utilities Co	PEABODY COAL TRADE	16	9406	1.20	28.98	150.06
Kentucky Utilities Co	KOLMAR AMERICAS INC	11	9699	1.55	24.38	173.83
Kentucky Utilities Co	FORESIGHT COAL SALES	278	12481	4.76	8.56	195.45
Kentucky Utilities Co	EAGLE RIVER COAL	103	12694	5.11	7.89	200.37
Kentucky Utilities Co	CONTURA ENERGY INC	150	13028	4.58	7.90	181.49
Kentucky Utilities Co	COALSALES LLC	233	11105	5.46	8.59	220.97
Kentucky Utilities Co	ARMSTRONG COAL	514	11270	5.56	10.74	170.85
Kentucky Utilities Co	ARCH COAL SALES	10	11257	2.96	20.44	166.07
Kentucky Utilities Co	AMERICAN COAL	399	12593	5.00	9.15	211.62
Kentucky Utilities Co	ALLIANCE COAL	474	11482	5.07	8.24	213.09
		2,651	11780	5.07	9.11	205.26
Louisville Gas & Electric Co	RHINO ENERGY	71	11329	4.52	8.30	235.34
Louisville Gas & Electric Co	PEABODY COAL TRADE	8	9279	1.01	29.34	154.32
Louisville Gas & Electric Co	KOLMAR AMERICAS INC	9	9566	1.49	25.31	174.44
Louisville Gas & Electric Co	FORESIGHT COAL SALES	183	11891	4.46	7.79	187.47
Louisville Gas & Electric Co	EAGLE RIVER COAL	30	12814	5.05	7.71	194.88
Louisville Gas & Electric Co	COALSALES LLC	30 41	12014	5.48	8.94	194.88
Louisville Gas & Electric Co	ARMSTRONG COAL	929	11042	5.41	10.05	193.85
Louisville Gas & Electric Co	ARCH COAL SALES	929 34	9486	1.04	7.87	207.47
Louisville Gas & Electric Co	ARCH COAL SALES	228	9486 8993	0.70	5.39	207.47 218.60
Louisville Gas & Electric Co		228	12105			218.60
Louisville Gas & Electric Co	AMERICAN COAL ALLIANCE COAL	1,255	12105	4.62	8.89 8.62	203.66
Louisville Gas & Electric Co	ALLIANCE COAL		-	5.38		
		2,895	11311	4.84	8.87	202.23
Monongahela Power Co	TUNNEL RIDGE LLC	76	12618	4.77	8.92	348.96
Monongahela Power Co	MEPCO OPERATIONS	371	12058	3.93	14.10	222.17
Monongahela Power Co	FIRSTENERGY	389	12862	5.48	8.56	170.65
Monongahela Power Co	CONTURA ENERGY INC	140	13037	4.48	7.88	144.78
Monongahela Power Co	CONSOL	1,958	12666	5.73	11.54	224.97
Monongahela Power Co	AMERICAN ENERGY	1,215	12565	6.89	8.99	217.90
Monongahela Power Co	ALLIANCE COAL	324	12591	4.70	9.00	249.06
		4,473	12610	5.74	10.46	219.29
Northern Indiana Public Service Co	SUNRISE COAL SALES	146	11517	5.73	7.72	234.68
Northern Indiana Public Service Co	PEABODY COAL SALES	270	8796	0.45	4.59	234.00
Northern Indiana Public Service Co	CONSOL	166	12949	4.03	7.48	234.00
Northern Indiana Public Service Co	COALSALES LLC	693	12949	4.03	8.50	216.52
Northern Indiana Public Service Co	ARCH	387	8944	4.96 0.64	4.63	204.72
Northern Indiana Public Service Co	ALLIANCE COAL	387 131	8944 11841	4.26	4.63	219.22 198.65
Normern Indiana Public Service Co	ALLIANGE COAL		11841	4.20	6.92	
		1,793	10490	3.27	6.92	238.82
Ohio Valley Electric Corp	AMERICAN ENERGY	924	12551	6.75	8.95	186.77

Plant Operator Name	Reported Source Name	Quantity (000s tons)	Btu/lb	lbsSO2/mmBtu	Ash %	Delivered Fuel Price Cents/mmBtu
Owensboro Municipal Utilities	WEST KY MINERALS	97	11308	4.65	8.38	195.00
Owensboro Municipal Utilities	SUN ENERGY GROUP LLC	42	11149	4.83	9.82	195.00
Owensboro Municipal Utilities	PEABODY COAL SALES	89	11203	6.01	9.14	202.42
Owensboro Municipal Utilities	KENAMERICA RESOURCES	24	11801	4.86	8.23	201.08
Owensboro Municipal Utilities	ARMSTRONG	165	11787	4.65	8.88	199.55
		417	11488	4.97	8.88	198.76
Southern Indiana Gas & Electric Co	SUNRISE COAL SALES	659	11522	6.04	7.97	228.60
Tennessee Valley Authority	PEABODY COAL SALES	2,792	9802	1.78	5.69	201.34
Tennessee Valley Authority	KOPPER GLO	35	12897	2.14	8.24	235.35
Tennessee Valley Authority	KENAMERICA RESOURCES	580	11789	4.84	8.15	204.06
Tennessee Valley Authority	FORESIGHT COAL SALES	165	11888	4.57	8.04	221.27
Tennessee Valley Authority	COECLERICI COAL NETWORK	149	8953	0.65	5.02	221.32
Tennessee Valley Authority	CLOUD PEAK	975	8881	0.53	5.41	185.71
Tennessee Valley Authority	BLACKHAWK MINING LLC	58	12376	1.39	9.06	246.08
Tennessee Valley Authority	B & W RESOURCES	22	12269	1.73	9.96	263.25
Tennessee Valley Authority	ARMSTRONG COAL	549	11695	4.54	8.21	243.14
Tennessee Valley Authority	ARCH	2,475	8958	0.69	5.08	191.70
Tennessee Valley Authority	ALPHA COAL	23	12056	1.36	11.65	286.87
Tennessee Valley Authority	ALLIANCE ENERGY	26	11448	5.24	8.30	241.10
Tennessee Valley Authority	ALLIANCE COAL	624	11677	4.72	8.13	252.23
Tennessee Valley Authority	ALLIANCE COAL	635	12574	4.93	6.44	255.68
		9,106	10105	2.17	6.12	211.21

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 10

Witness: Delbert Billiter

- Q-10. State the percentage of KU's coal, as of the date of this Order, that is delivered by:
 - a. Rail;
 - b. Truck; or
 - c. Barge.

A-10. For the period under review, coal was delivered as follows:

- a. Rail 9%
- b. Truck 0%
- c. Barge 91%

Response to Question No. 11 Billiter Page 1 of 2

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 11

Witness: Delbert Billiter

- Q-11. a. State KU's coal inventory level in tons and in number of days' supply as of April 30, 2017. Provide this information by generating station and in the aggregate.
 - b. Describe the criteria used to determine number of days' supply.
 - c. Compare KU's coal inventory as of April 30, 2017, to its inventory target for that date for each plant and for total inventory.
 - d. If actual coal inventory exceeds inventory target by 10 days' supply, state the reasons for excessive inventory.
 - e. (1) State whether KU expects any significant changes in its current coal inventory target within the next 12 months.
 - (2) If so, state the expected change and the reasons for this change.

A-11. a. As of April 30,2017:

EW Brown	222,347 Tons; 35 Days	Target 30-55 Days
Ghent ¹	961,547 Tons; 46 Days	Target 20-38 Days
Trimble County ²	441,217 Tons; 68 Days	Target 21-43 Days
Total	1,625,111 Tons; 49 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. A combination of low load and low natural gas prices caused system coal consumption to be lower than budget. Inventory is projected to be within the target range for each plant by the end of 2017.
- 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.

Response to Question No. 12 Billiter Page 1 of 2

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 12

Witness: Delbert Billiter

- Q-12. a. State whether KU has audited any of its coal contracts during the period from November 1, 2016, through April 30, 2017.
 - b. If so, for each audited contract:
 - (1) Identify the contract;
 - (2) Identify the auditor;
 - (3) State the results of the audit; and
 - (4) Describe the actions that KU took as a result of the audit.
- A-12. a. No. KU has not conducted any financial audits of coal contracts. KU's current coal contracts either contain a fixed price or a portion of the base contract price is adjusted using government published indices to reflect the changes in the cost. These agreements thus do not require audits. 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.

As noted in previous filings, governmental impositions may be imposed on the mining industry. As claims for governmental impositions are received, KU reviews and may use consultants to review the claims.

Alliance Coal, LLC in accordance with the provisions of Section 8.3 New Impositions of Agreement J12007, requested a price increase for calendar year 2016. The Parties agreed to a settlement. A copy of the Settlement Agreement effective March 25, 2016

is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

Alliance Coal, LLC in accordance with the provisions of Section 8.4 New Impositions of Agreements J16008, J16004 and J16001, requested price increases for calendar year 2016. The Parties agreed to a settlement. A copy of the Settlement Agreement effective March 25, 2016 is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

b. Not applicable.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 13

Witness: Derek Rahn

- Q-13. a. State whether KU has received any customer complaints regarding its FAC during the period from November 1, 2016, through April 30, 2017.
 - b. If so, for each complaint, state:
 - (1) The nature of the complaint; and
 - (2) KU's response.
- A-13. a. No.
 - b. Not applicable.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 14

Witness: Delbert Billiter

- Q-14. a. State whether KU is currently involved in any litigation with its current or former coal suppliers.
 - b. If so, for each litigation:
 - (1) Identify the coal supplier;
 - (2) Identify the coal 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 coal suppliers.
- A-14. a. KU is not currently involved in any litigation with its coal suppliers.
 - b. Not applicable.
 - c. Not applicable.

Response to Information Requested in Appendix

of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 15

Witness: Delbert Billiter / Charles R. Schram

- Q-15. a. During the period from November 1, 2016, through April 30, 2017, have there 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-15. a. The Corporate Fuels and By-Products Procurement Procedures were updated during the review period. Although no changes were made during the period referenced above to the Power Supply Commodity Policy Natural Gas Fuel for Generation, this policy was updated on August 1, 2017.
 - b. Yes.
 - (1) The Corporate Fuels and By-Products Procurement Procedures were updated to reflect changes for reporting relationships Section A 26, Organizational Responsibility Section C. 2, Approval Authority Section C 3 and the signature page. The Power Supply Commodity Policy – Natural Gas Fuel for Generation was updated to reflect changes for reporting relationships under Organizational Responsibilities Section 1.2 and the signature page.

- (2) Attached is an executed copy of the updated Corporate Fuels and By-Products Procurement Procedures effective April 1, 2017 (see Attachment B(2)a) and a redline copy (see Attachment B(2)b) noting the changes. Also attached is an executed copy of the updated Power Supply Commodity Policy – Natural Gas Fuel For Generation effective August 1, 2017 (see Attachment B(2)c) and a redline copy (see Attachment B(2)d) noting the changes.
- (3) Changes to the Corporate Fuels and By-Product Procurement Procedures were made effective April 1, 2017. Changes made to the Power Supply Commodity Policy Natural Gas Fuel for Generation were made effective August 1, 2017.
- (4) See b (1) above.
- c. Not applicable.

A. Definitions:

- 1. "Agreement" means a legally binding document, in which one party agrees to sell and the other agrees to buy Fuel, fully executed by both Buyer and Seller.
- "Authority Limit Matrix" The Authority Limit Matrix (ALM) is a Company policy to be used in combination with these more detailed procedures, indicating the minimum authority required for specific transactions. Its purpose is to provide an easy accessible source of information with respect to the approval process of the Company (as defined below).
- 3. "Award Recommendation" means the Company's internal approval process for the review and approval by Management of a recommended Fuel purchase Agreement.
- 4. "Bulk Commodities/Services" means Bulk Commodities (including, but not limited to scrubber reagent, ammonia, hydrated lime, Trona and activated carbon) to be used by the Company's generating stations and Services (including, but not limited to laboratory services, weighing and sampling services, stockpile surveys, governmental imposition claims assessment and coal pricing information services).
- 5. "Chief Operating Officer" means the Company's principal officer responsible for business operations.
- "Company" LG&E and KU Energy LLC (LKE), including, its operating and service subsidiaries Louisville Gas and Electric Company (LG&E), Kentucky Utilities Company (KU) or LG&E and KU Services Company.
- 7. "Contract" is an Agreement for Fuel with a fixed term typically in excess of one year.
- 8. "Contract Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated in the Contract, typically more than one year's duration.
- 9. "Director" means the Company's Director of Corporate Fuels and By-Products.
- 10. "Department" means the Company's Corporate Fuels and By-Products Department.
- 11. "Distressed Coal" means a limited amount of coal which may be purchased at a price below the current market price of similar quality coal.
- 12. "Emergency" means extraordinary conditions affecting Fuel production, transportation, or usage; including, but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments, extreme market conditions and other problems affecting the production or transportation of Fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of Fuel to the Company.
- "Environmental Standards" mean the legal requirements for compliance with emission levels or other environmental protection requirements applicable to one or more of the Company's generating Units.

- 14. "Formal Solicitation" means the process of soliciting sealed bids for the supply of Fuel.
- 15. "Fuel" means coal, fuel oil, Transportation Services and Bulk Commodities/Services (the latter two as contemplated by Sections J and K) purchased in each case by the Corporate Fuels and By-Products Department for use by the Company at one of its generating stations.
- 16. "Informal Bid" means the process of considering unsolicited or solicited oral or written bids for Fuel purchases.
- 17. "Joint Agreement" is any agreement that is written to supply Fuel to both LG&E and KU. The allocation of fuel under a Joint Agreement should be made pursuant to Section D.8. below.
- "Long-Term Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated into a Contract with a fixed term typically in excess of one year.
- "Purchase Order" is an Agreement for the supply of Fuel with a term of typically one year or less.
- 20. "Sarbanes-Oxley" means the Sarbanes-Oxley Act of 2002 (also known as the Public Company Accounting Reform and Investor Protection Act).
- "Spot Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated into a Purchase Order or Contract with a term typically of one year or less.
- 22. "Station" means one of the Company's generating stations.
- 23. "Supplier" means the seller who is a party to an Agreement and is obligated to comply with the Agreement's terms.
- 24. "Transportation Services" means the mode(s) of moving Fuel from the point of purchase to the receiving station, including all related costs and activities (owned/leased equipment, maintenance and repair, barge fleeting services, blending, transloading, etc.).
- 25. "Unit" means a generating unit at a Station.
- 26. "Vice President Energy Supply and Analysis" means the Company's principal officer to whom the Director of Corporate Fuels and By-Products reports and who in turn reports to the Senior Vice President - Operations.

B. Fuel Procurement Procedures:

The Company's Corporate Fuels and By-Products Procurement Procedures define the process to obtain an adequate and reliable supply of Fuel of sufficient quality that yields the lowest possible cost of electrical energy delivered to the Unit bus bar, consistent with the Company's obligation to provide adequate and reliable service to its customers, to meet operational and Environmental Standards, and to meet any other applicable legal requirements. The Company will use its best efforts to secure its Fuel supply at competitive prices through the use of the Formal Solicitation, Informal Bid, and negotiation process as described in this document. The awarding of Contracts and Purchase Orders will comply with internal business controls including the Authority Limit Matrix, Sarbanes Oxley compliance and Internal Audit Services' recommendations. The Company has detailed internal control procedures covering Contract Management, Receipt of Goods and Payments (including weighing, sampling, and invoice payment), and Coal Inventory (includes Stockpile Surveys).

Implementation and oversight of the fuel procurement process is of highest priority to the Company. The Director of Corporate Fuels and By-Products will review the Company's Corporate Fuels and By-Products Procurement Procedures annually and update them as appropriate. The Corporate Fuels and By-Products Department shall be organized and staffed, and Corporate Fuels and By-Products procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with the Company's policies. Fuel shall be purchased at competitive prices considering all material factors, including, but not limited to, quantity needed to maintain an adequate inventory, quality required to meet operating characteristics and Environmental Standards, resulting bus bar energy costs, reliability of the Supplier, diversity of Suppliers, diversity of fuel transportation modes, and meeting Emergency or other unusual circumstances affecting market conditions.

C. Organization:

- 1. <u>Department Structure</u>. The Department shall be organized and staffed to effectively administer the Company's Fuel procurement function.
- 2. Organizational Responsibility. The Director is responsible for the operations of the Corporate Fuels and By-Products Department and reports to the Vice President Energy Supply and Analysis who is responsible for the Energy Marketing and Fuel Procurement functions. The Vice President Energy Supply and Analysis reports to the Senior Vice President Operatons who has the final responsibility for Fuel procurement. Other Departments may be utilized by the Corporate Fuels and By-Products Department to the extent the Director, Vice President Energy Supply and Analysis, and/or Senior Vice President Operations consider advisable in the execution of the functions of the Department.
- 3. <u>Approval Authority (Award Recommendation)</u>. An Award Recommendation will be prepared for all Agreements for the purchase of Fuel. The Award Recommendation will be signed (as a minimum) by the Department's Fuel Contract Administrator, Manager LG&E and KU Fuels, Director of Corporate Fuels and By-Products, Plant Manager(s) of the Plant(s) that is (are) to receive the Fuel, and the Vice President Power Production.

Additional signatures or approvals may be required in accordance with the following Authority Limit Matrix:

Position	Maximum Term	Maximum Tenor	Maximum Notional \$ Amount
Manager LG&E and KU Fuels	1 year	2 years	\$10,000,000
Director, Corporate Fuels and By - Products	1 year	2 years	,\$10,000,000
Vice President, Energy Supply and Analysis	3 years	4 years	\$20,000,000
Senior Vice President - Operations	5 years	6 years	\$25,000,000
Chief Financial Officer and President			\$125,000,000
Chief Executive Officer			\$180,000,000
LG&E and KU Energy LLC Investment Committee; LG&E and KU Energy LLC Board			Over \$180,000,000

- <u>Reports.</u> The Director will instruct the Department to prepare, maintain and distribute various reports to management and others as deemed necessary for business operations and regulatory requirements.
- 5. Records. The Department shall maintain the following records:
 - a. <u>Open Files.</u> The Department shall maintain within the Department's office area, the following files for at least one year or longer as the Agreement term or other conditions warrant:
 - (1) For each current Fuel Supplier, the files will contain:
 - (a) Contract documents, amendments, Purchase Orders, and escalation documentation;
 - (b) General correspondence;
 - (c) Invoices and invoice verification data;
 - (d) Delivery records and quality analyses data;
 - (e) Field inspection reports and other data.
 - (2) A record of transportation units (railroad cars, barges, etc.) owned or leased by the Company.
 - (3) A list containing current Suppliers and known potential Suppliers of Fuel.

b. <u>Closed Files.</u> The Department shall maintain its closed files in accordance with the Company's record management and retention policy.

6. General Administrative Duties.

The Department shall subscribe to trade and industry publications and reports of governmental agencies concerning Fuel, Transportation Services, Bulk Commodities/Services, market information and prices. The Department shall use its best efforts to keep current on Fuel market conditions, prices and availability, and other developments relating to Fuel procurement.

D. Fuel Supply Procedures:

- <u>Projections.</u> In conjunction with other departments of the Company, the Department shall prepare an annual projection of Fuel usage and delivered cost for each Station for the number of years required in the Company's planning process.
- 2. Long-Term/Spot Mix. Subject to the approvals as set forth herein, the Department shall recommend whether a Long-Term (Contract) or Spot Purchase (Purchase Order) is advisable, considering the following factors: (a) the availability of adequate Fuel from qualified Suppliers, (b) the need to have an adequate inventory committed for an existing Unit, changes to an existing Unit, or a planned new Unit, (c) the desire to maintain flexibility to market conditions and other factors affecting price and availability, (d) existing and anticipated Environmental Standards, and (e) such other factors as may reasonably affect the implementation of the Company's Corporate Fuels and By-Products Procurement Procedures.
- <u>Current Requirements.</u> The Department shall continually review and analyze the data available to the Department in order to purchase Fuel in a timely manner to meet the requirements of the Company.
- 4. <u>Supplier Qualifications.</u> The Company shall select potential suppliers on the basis of the current supplier list, performance on past and current Fuel Agreements, financial information, market intelligence from industry research, and general knowledge of the industry. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

The supplier list is periodically reviewed by the Department to eliminate any suppliers that are known to have gone out of business and to also add any new or existing suppliers that were previously not on the supplier list. The Department not only reviews the membership lists of several coal associations (for example the Kentucky Coal Association, the Lexington Coal Exchange, the Coal Institute, the American Coal Council, the National Mining Association, etc.) for new suppliers to add to the supplier

list, but also adds new suppliers based upon field inspection visits. If a supplier is identified that is not on the current supplier list, the Department will add the supplier to the list for the next RFQ. Suppliers can be added to the supplier list either by request of the supplier or by the Department.

A notice of a Request for Quotation (RFQ) is published in several Coal Industry Newsletters. The RFQ is initially sent to the suppliers on the current supplier list and posted on the Company website. If a supplier that has not received the RFQ calls and asks to be put on the Department's supplier list they are automatically added to that list and a copy of the RFQ is sent to that supplier. During the evaluation of the bids, if a new supplier has submitted a bid that is competitive, a new supplier evaluation will be performed to determine the capability of the supplier.

The supplier evaluation is done to determine if a supplier has the ability to deliver the quantity and quality of coal bid at the offered price. An actual site visit may be conducted. The information requested is based upon:

- The volume and term offered by the supplier in response to the RFQ
- Past experience the Company has with the supplier
- The size and financial stability of the supplier
- Past experience the Company has with the type coal being offered
- Previous knowledge the Company has concerning the source operation (possibly under a different source name)

The data requested may include coal reserve data such as property maps and drill logs, mining plans, listing of all production equipment, coal preparation facilities such as coal preparation plants, weighing, sampling and analysis capabilities on site, mine staffing and organization, past production records, and status of permits. In addition, financial data will be requested and a supplier credit assessment will be performed in accordance with company policy. If all operational information, financial data, and other results from the site visit evaluation are acceptable, the supplier is approved.

- 5. Solicitations.
 - a. <u>Formal Solicitations</u>. The Company shall purchase its Fuel through sealed-bid solicitations. However, the Company reserves the right to request or accept Informal Bids for Fuel purchases as described in Section 5.b., when in its judgment, market conditions or plant conditions provide an opportunity to obtain Fuel more advantageously or more quickly than through the formal sealed-bid procedures. When the Company foregoes the Formal Solicitation process in favor of the Informal Bid procedure (Section 5.b. below), documentation shall be included in the resulting Contract or Purchase Order file describing the conditions.

A Request for Quotation ("RFQ") number will be assigned to each quotation package. The quotation must be returned to the company address as indicated on or before the due date and time, noting on the mailing label the RFQ number. The RFQ number will identify the quotation and ensure the quotation is opened according to the Corporate Fuels and By-Products Procurement Procedures.

The RFQ package shall contain the following minimum requirements:

- Instructions to Suppliers on the submission of an RFQ, including time and date the bids are due, correct labeling of bid envelope, signatures required, etc.
- Scope of supply Agreement
- Listing of typical information required from Supplier

Quantity and quality of coal being offered

Bid Price

Length of purchase

Transportation capabilities

Mining capabilities

Company terms and conditions

RFQ's shall be opened on or after the established due date and time within the presence of one or more witnesses from another Department. A numbered log shall be kept for logging in the receipt of each sealed envelope. This numbered log shall be signed by the witnesses noting the bids were all sealed prior to opening and were received prior to the due date and time. Those bids received after the designated time will be returned unopened to the bidder, unless the Director waives this provision.

Upon opening the sealed envelopes, each bid shall be given the log number assigned to it and initialed by the witnesses attending the bid opening.

All candidates shall be given the same opportunity and time frame to respond to the RFQ. Information clarifications shall be shared with all candidates. A copy of the RFQ and the original of the Suppliers' bid documents with evidence of the witness signatures shall be maintained within the Department.

The Department's Fuel Administrator is responsible for entering the bid data into the bid evaluation spreadsheet. The spreadsheet contains data fields such as:

Supplier's name (from bid)

Mine name and location (from bid)

Fuel loading point, river milepost or rail loadout (from bid)

Annual price in dollars per ton and cents/MMBtu (from bid)

Transportation cost (assigned by the Fuel Administrator)

Calculated total delivered cost (calculated by the Fuel Administrator)

Fuel technical specifications (from bid), such as:

BTU per pound

Sulfur content

Moisture content

Ash content

Chlorine content

Size

Arsenic content

Hardgrove Index

Other technical specifications as appropriate

The bids are secured in the Department area.

The Department's Manager LG&E and KU Fuels will independently verify that all bid data is correctly entered into the bid evaluation spreadsheet.

- b. <u>Informal Bids</u>. When, in the Company's judgment, Fuel can be obtained more advantageously or quickly for a particular plant through the Informal Bid procedures, the Department may solicit offers or accept unsolicited offers from Suppliers by telephone, electronic mail, facsimile or otherwise. Although these bids are typically used for Spot Purchases, circumstances may arise that would justify the recommendation of a long-term Contract from an Informal Bid process. The award recommendation for all such Informal Bid purchases shall include the Department's Fuel Sole Source Award Recommendation form with appropriate signatures.
- Long-Term Purchases. The Department shall review and analyze each Contract offer. The evaluation will include, but not necessarily be limited to, the items required by the Company to satisfy operational, Environmental Standards and economic criteria. Based

upon the bid evaluation spreadsheet, the Department will evaluate and rank all auotations received by total delivered cost and lowest evaluated cost of electrical energy delivered to the Unit bus bar. Other factors may be considered, including but not limited to, ranking reports generated by a software model that evaluates the impact of different coal qualities on Unit bus bar costs, supplier credit assessment, supplier past performance, diversity of region of supply, diversity of transportation mode, and diversity of suppliers. From this ranking, a short list of bidders may be selected from which the Department intends to conduct further discussions and/or negotiations. The short list may include unsolicited offers. The size of the short list will be determined solely at the Department's discretion. The Department may engage in preliminary negotiations with Suppliers on the short list to determine which offers warrant further consideration. The objective of the negotiations shall be to reach Agreements with Suppliers that provide the Company with favorable terms and conditions, the lowest possible cost of electrical energy delivered to the Unit bus bar and reliable supply consistent with other gualifiers related to supplier reliability, existing and future Environmental Standards, transportation options, etc. A team may be formed to conduct negotiations with bidders on the short Generally, this team will consist of two or more representatives from the list. Department. The terms and conditions outlined in the quotation submitted to the Department by the bidder shall be the basis for beginning negotiations with each potential Supplier. A representative from the Legal Department shall review documents regarding terms and conditions.

The Department may in some instances perform investigations of the bidders to determine their ability to supply Fuel under the terms and conditions outlined in their proposals. These investigations may include site visits, mine operation audits, audits of financial information, test shipments, or other similar actions intended to determine the bidder's qualification as a Supplier. The Department shall verify the adequacy of the proposed source of supply for coal quantity and quality.

The recommended Supplier(s) shall be selected by the negotiating team based upon the evaluation criteria and the results of the negotiations. The Department's Fuel Contract Administrator will prepare the contract Award Recommendation for approval as detailed in Section C.3. This recommendation will document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.

- 7. <u>Spot Purchases.</u> Spot purchases, and resulting Purchase Orders or Contracts, may be made by the Company subject to the limit of authority stated in section C.3. In instances where there exists an opportunity to purchase Distressed Coal or other coal from an Informal Bid, the Manager LG&E and KU Fuels may recommend the purchase of such coal to the Director without soliciting proposals through the Formal Solicitation process. The Award Recommendation for all such Fuel purchases shall include the Department's Fuel Sole Source Award Recommendation form with appropriate signatures.
- Joint Agreements. Joint Agreements shall be made at the discretion of the Department in order to capture economic benefit from the combined purchasing power of LG&E and KU. Such discretion will be based upon the Company's operating requirements, Environmental Standards, inventory levels, and the ability of the Company's power plants to burn similar fuels.

9. <u>Documentation</u>. Contracts and Purchase Orders shall be signed by the Supplier and the Company.

The following documents must be maintained:

- The final list of bidders
- A copy of the bid package
- The bidders' responses with witnesses' signatures
- The bid evaluation summary

E. Agreement Administration:

- 1. <u>Compliance.</u> The Department shall review and analyze daily business and operational reports to properly administer all Agreements. Coal weighing and sampling is conducted at each individual power plant site. Coal weights are measured in accordance with industry-accepted methods. Coal sampling and analysis is performed in accordance with Generation Services' System Laboratory procedures. These procedures have been developed in accordance with ASTM standards and cover coal sampling, coal sample preparation, coal sample identification, handling and shipping, and coal analysis on a parameter-by-parameter basis. Coal quantity and quality are reported to the Department through the Fuels Management System.
- <u>Amendments.</u> A Contract/Purchase Order shall not be materially amended except after analysis by the Department, recommendation of the Director, review by the Legal Department and in accordance with the Authority Matrix in C.3.
- 3. <u>Agreement Administration.</u> The Department shall maintain the necessary data to administer the Agreements. Every Supplier's request for a change outside the existing terms, conditions, or prices must be written and supported by adequate data in conformity with the Agreement. Each request shall be analyzed by the Department against the Agreement provisions, and reported with recommendations to the Director. If the parties do not come to agreement on the new terms, negotiations between the Supplier and the Company, as dictated by the Agreement's terms, shall be the primary method of resolving the issue.
- 4. <u>Supplier's Relief.</u> Any Supplier's request or claim for relief from compliance with any provision of the Agreement's terms such as Force Majeure conditions, quality specifications, approval of alternate sources, etc., must be in writing with an adequate description of conditions warranting nonperformance. Each request or claim shall be reviewed by the Director and the Company's Legal Department.
- 5. <u>Inspections.</u> The Director shall cause inspections of mining and other facilities of a Supplier as part of Agreement Administration.

F. Agreement Enforcement:

- <u>General Enforcement Policy</u>. Supplier obligations under Agreements shall be enforced by the Company to ensure Supplier compliance with the Company's overall procurement policy and to provide for the continuing supply of Fuel.
- <u>Department Responsibility.</u> Whenever it is determined that a shipment does not meet the Agreement terms or a Fuel Supplier is not complying with the Agreement terms, the Department shall inform the Supplier and direct that subsequent shipments be in compliance.

G. Legal Assistance:

The Department shall have access to, and may receive advice from, the Legal Department on all matters relating to Fuel procurement, administration and enforcement.

H. Inventory Levels:

The Company has an obligation to ensure the availability of continuous reliable service to its customers. Decisions affecting Fuel inventory shall be responsive to this obligation.

The Company strives to maintain an adequate inventory to ensure service reliability while allowing for enough flexibility so inventory levels can be responsive to known and anticipated changes in conditions and minimize the risks of unforeseen conditions. Inventory ranges are established based upon forecasted plant utilization, deliverability risks related to availability of truck, rail and barge capacity and associated transportation infrastructure, fuel quality requirements of the plants, the position of the plant in the dispatch order, risk of market supply-demand imbalance, and the ability to conduct quick spot market transactions. The general level of inventory is adjusted to meet anticipated conditions (i.e. summer/winter peak load, river lock outages, Unit outages, fuel unloading system outages, etc.).

Coal inventories are reported monthly in the Department's Monthly Fuels Management Report. Regular inventory reports are made available quarterly to senior management and the Enterprise Risk Management Committee. An annual physical inventory survey is taken, in a timely manner, to ensure that the results of the physical inventory survey are booked by the end of the year in the Fuels Management System.

I. Emergency Procurement:

Any one or more of the procedures described herein may be waived by the Vice President - Energy Supply and Analysis, whenever, Fuel must be purchased due to extraordinary conditions such as strikes, lockouts or other labor problems affecting Fuel production or transportation, embargoes, mining or other problems affecting production or transportation, existing and/or forecast extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of Fuel to the Company. When such a purchase is made, documentation of circumstances will be included in the Contract or Purchase Order file.

J. Transportation Services:

Transportation Services bids shall be requested and Agreements negotiated whenever appropriate. A tariff may be used in lieu of an Agreement if conditions warrant. Consideration shall generally be given to the following factors when considering the need or desirability to make a Transportation Services Agreement:

- plant requirements;
- the locations of potential Fuel Suppliers;
- the most desirable transportation modes available;
- coal unloading and handling system constraints;
- existing transportation routes and transfer points between Suppliers and Company generating Stations;
- desirability of maintaining flexibility with different modes of transportation;
- economics;
- other factors which may affect the delivery of Fuel to the Company's generating Stations.

The process of selecting and contracting for Transportation Services will vary with the mode of transportation being sought. For barge and truck deliveries, the Department will generally use the Company's accepted competitive bidding procedures. In instances where only one rail carrier may serve a plant, direct negotiations with the rail carriers serving a particular coal source may be initiated.

The selections of a transportation Supplier will generally be based upon, but not necessarily limited to, cost, reliability, coal unloading and handling system constraints, and other factors. Transportation Service Agreements must be in writing and signed by all parties, unless provided under an approved tariff. The approval procedures set forth in Section C.3 shall be used for the approval of all Transportation Agreements.

K. Bulk Commodities/Services/Other Fuels:

Bulk Commodities/Services shall be requested and Agreements negotiated by the Department, whenever appropriate. Associated transportation services related to Section J. such as railcar leases, railcar maintenance and repair, barge maintenance and repair, barge fleeting services, coal blending, and coal transloading services shall also be requested and Agreements negotiated by the Department, whenever appropriate. All of these Bulk Commodities/Services Agreements will abide by the Approval Authority Limits as set forth in Section C.3. above.

<u>Natural Gas</u> The Power Supply Department is responsible for the purchase of natural gas and associated pipeline transportation for the Company's generating stations.

<u>Fuel Oil.</u> Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this Fuel and the nature of the oil market. The responsibility for fuel oil procurement varies. When the need for fuel oil arises, the Department and/or the Power Plants will solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost and the ability to fill the order. Solicitation results are documented in the Department for purchases made by the Department.

L. Affiliate Transactions:

Transactions and relationships between the Company and its unregulated affiliates are governed by three governmental agencies: the Kentucky Public Service Commission, the Federal Energy Regulatory Commission, and as regards Kentucky Utilities Company, the Virginia State Corporation Commission.

The Company may purchase Fuel from an affiliate only at a price permissible under applicable affiliated restriction rules of the above regulators, if such a transfer is reasonably required by the Company to meet an Emergency and the Company believes in good faith that, under the circumstances, the transaction will be to the advantage of the Company. At the time of the affiliate transaction, the Company will document through the award recommendation process, the pricing basis and the justification for the affiliate transaction. The Company shall report any such purchase in its next recurrent report due to the Commission (Form A or Form B filing, or their successor(s)). All such affiliate transactions must as a minimum, meet the requirements of the Affiliate Transaction Overview, dated May 26, 2003, including the requirements of Kentucky Revised Statutes Chapter 278, Kentucky Public Service Commission Sections 2201 through 2219; the Federal Energy Regulatory Commission, 18 CFR 35.44; and Virginia State Corporation Commission, Code of Virginia Title 56 – Chapter 4 and any other applicable affiliate transaction rules.

M. Ethics and Conduct:

The Company recognizes the importance of following the Company's Standards of Integrity to guide the conduct of the Corporate Fuels and By-Products Department in the performance of its duties and responsibilities:

The Department shall endeavor to serve the best interests of the Company and its customers in the performance of the Department's duties and responsibilities.

Fuels staff shall adhere to the ethical standards and policies of the Company.

Each employee involved with the procurement of Fuel will be required to promptly disclose, in writing, any actual or potential conflicts of interest to their supervisor and the LG&E/KU Compliance Department.

N. Penalties For Noncompliance:

All Fuels employees are required to familiarize themselves with the Fuels Procurement Procedures and acknowledge through a process established by management, that they have received, read, understand, accept, and will act in accordance with this document. Failure to comply with any term of the procedures may result in disciplinary action, up to and including discharge.

Key Contact: Manager - Fuels Accounting and Administration

References: Authority Limit Matrix, Records Management and Retention Policy, Standards of Integrity, Reliability Standards, and Affiliate Restriction Regulations

Administrative Responsibility: Director, Corporate Fuels and By- Products

Originally issued at Louisville, Kentucky, the 10th day of February, 2003.

Revised effective April 1, 2017.

Louisville Gas and Electric Company

Kentucky Utilities Company

By

Lonnie Bellar Senior Vice President - Operations

By

David Sinclair Vice President – Energy Supply and Analysis

A. <u>Definitions:</u>

- 1. "Agreement" means a legally binding document, in which one party agrees to sell and the other agrees to buy Fuel, fully executed by both Buyer and Seller.
- "Authority Limit Matrix" The Authority Limit Matrix (ALM) is a Company policy to be used in combination with these more detailed procedures, indicating the minimum authority required for specific transactions. Its purpose is to provide an easy accessible source of information with respect to the approval process of the Company (as defined below).
- 3. "Award Recommendation" means the Company's internal approval process for the review and approval by Management of a recommended Fuel purchase Agreement.
- 4. "Bulk Commodities/Services" means Bulk Commodities (including, but not limited to scrubber reagent, ammonia, hydrated lime, Trona and activated carbon) to be used by the Company's generating stations and Services (including, but not limited to laboratory services, weighing and sampling services, stockpile surveys, governmental imposition claims assessment and coal pricing information services).
- "Chief Operating Officer" means the Company's principal officer responsible for business operations.
- "Company" LG&E and KU Energy LLC (LKE), including, its operating and service subsidiaries Louisville Gas and Electric Company (LG&E), Kentucky Utilities Company (KU) or LG&E and KU Services Company.
- 7. "Contract" is an Agreement for Fuel with a fixed term typically in excess of one year.
- 8. "Contract Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated in the Contract, typically more than one year's duration.
- 9. "Director" means the Company's Director of Corporate Fuels and By-Products.
- 10. "Department" means the Company's Corporate Fuels and By-Products Department.
- 11. "Distressed Coal" means a limited amount of coal which may be purchased at a price below the current market price of similar quality coal.
- 12. "Emergency" means extraordinary conditions affecting Fuel production, transportation, or usage; including, but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments, extreme market conditions and other problems affecting the production or transportation of Fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of Fuel to the Company.
- "Environmental Standards" mean the legal requirements for compliance with emission levels or other environmental protection requirements applicable to one or more of the Company's generating Units.

- 14. "Formal Solicitation" means the process of soliciting sealed bids for the supply of Fuel.
- 15. "Fuel" means coal, fuel oil, Transportation Services and Bulk Commodities/Services (the latter two as contemplated by Sections J and K) purchased in each case by the Corporate Fuels and By-Products Department for use by the Company at one of its generating stations.
- 16. "Informal Bid" means the process of considering unsolicited or solicited oral or written bids for Fuel purchases.
- 17. "Joint Agreement" is any agreement that is written to supply Fuel to both LG&E and KU. The allocation of fuel under a Joint Agreement should be made pursuant to Section D.8. below.
- "Long-Term Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated into a Contract with a fixed term typically in excess of one year.
- 19. "Purchase Order" is an Agreement for the supply of Fuel with a term of typically one year or less.
- 20. "Sarbanes-Oxley" means the Sarbanes-Oxley Act of 2002 (also known as the Public Company Accounting Reform and Investor Protection Act).
- "Spot Purchase" means any purchase of Fuel by the Company where the terms and conditions are incorporated into a Purchase Order or Contract with a term typically of one year or less.
- 22. "Station" means one of the Company's generating stations.
- 23. "Supplier" means the seller who is a party to an Agreement and is obligated to comply with the Agreement's terms.
- 24. "Transportation Services" means the mode(s) of moving Fuel from the point of purchase to the receiving station, including all related costs and activities (owned/leased equipment, maintenance and repair, barge fleeting services, blending, transloading, etc.).
- 25. "Unit" means a generating unit at a Station.
- 26. "Vice President Energy Supply and Analysis" means the Company's principal officer to whom the Director of Corporate Fuels and By-Products reports and who in turn reports to the <u>Chief Operating OfficerSenior Vice President - Operations</u>.

B. Fuel Procurement Procedures:

The Company's Corporate Fuels and By-Products Procurement Procedures define the process to obtain an adequate and reliable supply of Fuel of sufficient quality that yields the lowest possible cost of electrical energy delivered to the Unit bus bar, consistent with the Company's obligation to provide adequate and reliable service to its customers, to meet operational and Environmental Standards, and to meet any other applicable legal requirements. The Company will use its best efforts to secure its Fuel supply at competitive prices through the use of the Formal Solicitation, Informal Bid, and negotiation process as described in this document. The awarding of Contracts and Purchase Orders will comply with internal business controls including the Authority Limit Matrix, Sarbanes Oxley compliance and Internal Audit Services' recommendations. The Company has detailed internal control procedures covering Contract Management, Receipt of Goods and Payments (including weighing, sampling, and invoice payment), and Coal Inventory (includes Stockpile Surveys).

Implementation and oversight of the fuel procurement process is of highest priority to the Company. The Director of Corporate Fuels and By-Products will review the Company's Corporate Fuels and By-Products Procurement Procedures annually and update them as appropriate. The Corporate Fuels and By-Products Department shall be organized and staffed, and Corporate Fuels and By-Products procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with the Company's policies. Fuel shall be purchased at competitive prices considering all material factors, including, but not limited to, quantity needed to maintain an adequate inventory, quality required to meet operating characteristics and Environmental Standards, resulting bus bar energy costs, reliability of the Supplier, diversity of Suppliers, diversity of fuel transportation modes, and meeting Emergency or other unusual circumstances affecting market conditions.

C. Organization:

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- 1. <u>Department Structure</u>. The Department shall be organized and staffed to effectively administer the Company's Fuel procurement function.
- 2. <u>Organizational Responsibility.</u> The Director is responsible for the operations of the Corporate Fuels and By-Products Department and reports to the Vice President Energy Supply and Analysis who is responsible for the Energy Marketing and Fuel Procurement functions. The Vice President Energy Supply and Analysis reports to the Chief Operating OfficerSenior Vice President Operatons who has the final responsibility for Fuel procurement. Other Departments may be utilized by the Corporate Fuels and By-Products Department to the extent the Director, Vice President Energy Supply and Analysis, and/or Chief Operating OfficerSenior Vice President Operations consider advisable in the execution of the functions of the Department.
- 3. <u>Approval Authority (Award Recommendation).</u> An Award Recommendation will be prepared for all Agreements for the purchase of Fuel. The Award Recommendation will be signed (as a minimum) by the Department's Fuel Contract Administrator, Manager LG&E and KU Fuels, <u>Manager Fuels Risk Management</u>, Director of Corporate Fuels and By-Products, Plant Manager(s) of the Plant(s) that is (are) to receive the Fuel, and the

Vice President – Power Production. Additional signatures or approvals may be required in accordance with the following Authority Limit Matrix:

Position	Maximum Term	Maximum Tenor	Maximum Notional \$ Amount
Manager LG&E and KU Fuels	1 year	2 years	\$10,000,000
Director, Corporate Fuels and By - Products	1 year	2 years	\$10,000,000
Vice President, Energy Supply and Analysis	3 years	4 years	\$20,000,000
Chief Operating OfficerSenior Vice President - Operations	5 years	6 years	\$25,000,000
Chief Financial Officer and President			\$125,000,000
LG&E and KU Energy LLC, Chief Financial Officer and Chief Executive Officer			\$180,000,000
LG&E and KU Energy LLC Investment Committee; LG&E and KU Energy LLC Board			Over \$180,000,000

- <u>Reports.</u> The Director will instruct the Department to prepare, maintain and distribute various reports to management and others as deemed necessary for business operations and regulatory requirements.
- 5. <u>Records.</u> The Department shall maintain the following records:
 - a. <u>Open Files.</u> The Department shall maintain within the Department's office area, the following files for at least one year or longer as the Agreement term or other conditions warrant:
 - (1) For each current Fuel Supplier, the files will contain:
 - (a) Contract documents, amendments, Purchase Orders, and escalation documentation;
 - (b) General correspondence;
 - (c) Invoices and invoice verification data;
 - (d) Delivery records and quality analyses data;
 - (e) Field inspection reports and other data.
 - (2) A record of transportation units (railroad cars, barges, etc.) owned or leased by the Company.

- (3) A list containing current Suppliers and known potential Suppliers of Fuel.
- b. <u>Closed Files.</u> The Department shall maintain its closed files in accordance with the Company's record management and retention policy.

6. General Administrative Duties.

The Department shall subscribe to trade and industry publications and reports of governmental agencies concerning Fuel, Transportation Services, Bulk Commodities/Services, market information and prices. The Department shall use its best efforts to keep current on Fuel market conditions, prices and availability, and other developments relating to Fuel procurement.

D. Fuel Supply Procedures:

- Projections. In conjunction with other departments of the Company, the Department shall prepare an annual projection of Fuel usage and delivered cost for each Station for the number of years required in the Company's planning process.
- 2. Long-Term/Spot Mix. Subject to the approvals as set forth herein, the Department shall recommend whether a Long-Term (Contract) or Spot Purchase (Purchase Order) is advisable, considering the following factors: (a) the availability of adequate Fuel from qualified Suppliers, (b) the need to have an adequate inventory committed for an existing Unit, changes to an existing Unit, or a planned new Unit, (c) the desire to maintain flexibility to market conditions and other factors affecting price and availability, (d) existing and anticipated Environmental Standards, and (e) such other factors as may reasonably affect the implementation of the Company's Corporate Fuels and By-Products Procurement Procedures.
- 3. <u>Current Requirements.</u> The Department shall continually review and analyze the data available to the Department in order to purchase Fuel in a timely manner to meet the requirements of the Company.
- 4. <u>Supplier Qualifications.</u> The Company shall select potential suppliers on the basis of the current supplier list, performance on past and current Fuel Agreements, financial information, market intelligence from industry research, and general knowledge of the industry. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

The supplier list is periodically reviewed by the Department to eliminate any suppliers that are known to have gone out of business and to also add any new or existing suppliers that were previously not on the supplier list. The Department not only reviews the membership lists of several coal associations (for example the Kentucky Coal

Association, the Lexington Coal Exchange, the Coal Institute, the American Coal Council, the National Mining Association, etc.) for new suppliers to add to the supplier list, but also adds new suppliers based upon field inspection visits. If a supplier is identified that is not on the current supplier list, the Department will add the supplier to the list for the next RFQ. Suppliers can be added to the supplier list either by request of the supplier or by the Department.

A notice of a Request for Quotation (RFQ) is published in several Coal Industry Newsletters. The RFQ is initially sent to the suppliers on the current supplier list and posted on the Company website. If a supplier that has not received the RFQ calls and asks to be put on the Department's supplier list they are automatically added to that list and a copy of the RFQ is sent to that supplier. During the evaluation of the bids, if a new supplier has submitted a bid that is competitive, a new supplier evaluation will be performed to determine the capability of the supplier.

The supplier evaluation is done to determine if a supplier has the ability to deliver the quantity and quality of coal bid at the offered price. An actual site visit may be conducted. The information requested is based upon:

- The volume and term offered by the supplier in response to the RFQ
- Past experience the Company has with the supplier
- The size and financial stability of the supplier
- Past experience the Company has with the type coal being offered

- Previous knowledge the Company has concerning the source operation (possibly under a different source name)

The data requested may include coal reserve data such as property maps and drill logs, mining plans, listing of all production equipment, coal preparation facilities such as coal preparation plants, weighing, sampling and analysis capabilities on site, mine staffing and organization, past production records, and status of permits. In addition, financial data will be requested and a supplier credit assessment will be performed in accordance with company policy. If all operational information, financial data, and other results from the site visit evaluation are acceptable, the supplier is approved.

- 5. Solicitations.
 - a. <u>Formal Solicitations</u>. The Company shall purchase its Fuel through sealed-bid solicitations. However, the Company reserves the right to request or accept Informal Bids for Fuel purchases as described in Section 5.b., when in its judgment, market conditions or plant conditions provide an opportunity to obtain Fuel more advantageously or more quickly than through the formal sealed-bid procedures. When the Company foregoes the Formal Solicitation process in favor of the Informal Bid procedure (Section 5.b. below), documentation shall be

included in the resulting Contract or Purchase Order file describing the conditions.

A Request for Quotation ("RFQ") number will be assigned to each quotation package. The quotation must be returned to the company address as indicated on or before the due date and time, noting on the mailing label the RFQ number. The RFQ number will identify the quotation and ensure the quotation is opened according to the Corporate Fuels and By-Products Procurement Procedures.

The RFQ package shall contain the following minimum requirements:

- Instructions to Suppliers on the submission of an RFQ, including time and date the bids are due, correct labeling of bid envelope, signatures required, etc.
- Scope of supply Agreement
- Listing of typical information required from Supplier

Quantity and quality of coal being offered

Bid Price

Length of purchase

Transportation capabilities

Mining capabilities

Company terms and conditions

RFQ's shall be opened on or after the established due date and time within the presence of one or more witnesses from another Department. A numbered log shall be kept for logging in the receipt of each sealed envelope. This numbered log shall be signed by the witnesses noting the bids were all sealed prior to opening and were received prior to the due date and time. Those bids received after the designated time will be returned unopened to the bidder, unless the Director waives this provision.

Upon opening the sealed envelopes, each bid shall be given the log number assigned to it and initialed by the witnesses attending the bid opening.

All candidates shall be given the same opportunity and time frame to respond to the RFQ. Information clarifications shall be shared with all candidates. A copy of the RFQ and the original of the Suppliers' bid documents with evidence of the witness signatures shall be maintained within the Department.

The Department's Fuel Administrator is responsible for entering the bid data into the bid evaluation spreadsheet. The spreadsheet contains data fields such as:

Supplier's name (from bid)

Mine name and location (from bid)

Fuel loading point, river milepost or rail loadout (from bid)

Annual price in dollars per ton and cents/MMBtu (from bid)

Transportation cost (assigned by the Fuel Administrator)

Calculated total delivered cost (calculated by the Fuel Administrator)

Fuel technical specifications (from bid), such as:

BTU per pound

Sulfur content

Moisture content

Ash content

Chlorine content

Size

Arsenic content

Hardgrove Index

Other technical specifications as appropriate

The bids are secured in the Department area.

The Department's Manager LG&E and KU Fuels will independently verify that all bid data is correctly entered into the bid evaluation spreadsheet.

b. <u>Informal Bids</u>. When, in the Company's judgment, Fuel can be obtained more advantageously or quickly for a particular plant through the Informal Bid procedures, the Department may solicit offers or accept unsolicited offers from Suppliers by telephone, electronic mail, facsimile or otherwise. Although these bids are typically used for Spot Purchases, circumstances may arise that would justify the recommendation of a long-term Contract from an Informal Bid process. The award recommendation for all such Informal Bid purchases shall include the

Department's Fuel Sole Source Award Recommendation form with appropriate signatures.

6. Long-Term Purchases. The Department shall review and analyze each Contract offer. The evaluation will include, but not necessarily be limited to, the items required by the Company to satisfy operational, Environmental Standards and economic criteria. Based upon the bid evaluation spreadsheet, the Department will evaluate and rank all guotations received by total delivered cost and lowest evaluated cost of electrical energy delivered to the Unit bus bar. Other factors may be considered, including but not limited to, ranking reports generated by a software model that evaluates the impact of different coal qualities on Unit bus bar costs, supplier credit assessment, supplier past performance, diversity of region of supply, diversity of transportation mode, and diversity of suppliers. From this ranking, a short list of bidders may be selected from which the Department intends to conduct further discussions and/or negotiations. The short list may include unsolicited offers. The size of the short list will be determined solely at the Department's discretion. The Department may engage in preliminary negotiations with Suppliers on the short list to determine which offers warrant further consideration. The objective of the negotiations shall be to reach Agreements with Suppliers that provide the Company with favorable terms and conditions, the lowest possible cost of electrical energy delivered to the Unit bus bar and reliable supply consistent with other qualifiers related to supplier reliability, existing and future Environmental Standards, transportation options, etc. A team may be formed to conduct negotiations with bidders on the short list. Generally, this team will consist of two or more representatives from the The terms and conditions outlined in the quotation submitted to the Department. Department by the bidder shall be the basis for beginning negotiations with each potential Supplier. A representative from the Legal Department shall review documents regarding terms and conditions.

The Department may in some instances perform investigations of the bidders to determine their ability to supply Fuel under the terms and conditions outlined in their proposals. These investigations may include site visits, mine operation audits, audits of financial information, test shipments, or other similar actions intended to determine the bidder's qualification as a Supplier. The Department shall verify the adequacy of the proposed source of supply for coal quantity and quality.

The recommended Supplier(s) shall be selected by the negotiating team based upon the evaluation criteria and the results of the negotiations. The Department's Fuel Contract Administrator will prepare the contract Award Recommendation for approval as detailed in Section C.3. This recommendation will document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.

7. <u>Spot Purchases.</u> Spot purchases, and resulting Purchase Orders or Contracts, may be made by the Company subject to the limit of authority stated in section C.3. In instances where there exists an opportunity to purchase Distressed Coal or other coal from an Informal Bid, the Manager LG&E and KU Fuels may recommend the purchase of such coal to the Director without soliciting proposals through the Formal Solicitation process. The Award Recommendation for all such Fuel purchases shall include the Department's Fuel Sole Source Award Recommendation form with appropriate signatures.

- Joint Agreements. Joint Agreements shall be made at the discretion of the Department in order to capture economic benefit from the combined purchasing power of LG&E and KU. Such discretion will be based upon the Company's operating requirements, Environmental Standards, inventory levels, and the ability of the Company's power plants to burn similar fuels.
- 9. <u>Documentation.</u> Contracts and Purchase Orders shall be signed by the Supplier and the Company.

The following documents must be maintained:

- The final list of bidders
- A copy of the bid package
- The bidders' responses with witnesses' signatures
- The bid evaluation summary

E. Agreement Administration:

- 1. <u>Compliance.</u> The Department shall review and analyze daily business and operational reports to properly administer all Agreements. Coal weighing and sampling is conducted at each individual power plant site. Coal weights are measured in accordance with industry-accepted methods. Coal sampling and analysis is performed in accordance with Generation Services' System Laboratory procedures. These procedures have been developed in accordance with ASTM standards and cover coal sampling, coal sample preparation, coal sample identification, handling and shipping, and coal analysis on a parameter-by-parameter basis. Coal quantity and quality are reported to the Department through the Fuels Management System.
- 2. <u>Amendments.</u> A Contract/Purchase Order shall not be materially amended except after analysis by the Department, recommendation of the Director, review by the Legal Department and in accordance with the Authority Matrix in C.3.
- 3. <u>Agreement Administration.</u> The Department shall maintain the necessary data to administer the Agreements. Every Supplier's request for a change outside the existing terms, conditions, or prices must be written and supported by adequate data in conformity with the Agreement. Each request shall be analyzed by the Department against the Agreement provisions, and reported with recommendations to the Director. If the parties do not come to agreement on the new terms, negotiations between the Supplier and the Company, as dictated by the Agreement's terms, shall be the primary method of resolving the issue.
- 4. <u>Supplier's Relief.</u> Any Supplier's request or claim for relief from compliance with any provision of the Agreement's terms such as Force Majeure conditions, quality specifications, approval of alternate sources, etc., must be in writing with an adequate description of conditions warranting nonperformance. Each request or claim shall be reviewed by the Director and the Company's Legal Department.

5. <u>Inspections.</u> The Director shall cause inspections of mining and other facilities of a Supplier as part of Agreement Administration.

F. Agreement Enforcement:

- <u>General Enforcement Policy.</u> Supplier obligations under Agreements shall be enforced by the Company to ensure Supplier compliance with the Company's overall procurement policy and to provide for the continuing supply of Fuel.
- 2. <u>Department Responsibility</u>. Whenever it is determined that a shipment does not meet the Agreement terms or a Fuel Supplier is not complying with the Agreement terms, the Department shall inform the Supplier and direct that subsequent shipments be in compliance.

G. Legal Assistance:

The Department shall have access to, and may receive advice from, the Legal Department on all matters relating to Fuel procurement, administration and enforcement.

H. Inventory Levels:

The Company has an obligation to ensure the availability of continuous reliable service to its customers. Decisions affecting Fuel inventory shall be responsive to this obligation.

The Company strives to maintain an adequate inventory to ensure service reliability while allowing for enough flexibility so inventory levels can be responsive to known and anticipated changes in conditions and minimize the risks of unforeseen conditions. Inventory ranges are established based upon forecasted plant utilization, deliverability risks related to availability of truck, rail and barge capacity and associated transportation infrastructure, fuel quality requirements of the plants, the position of the plant in the dispatch order, risk of market supply-demand imbalance, and the ability to conduct quick spot market transactions. The general level of inventory is adjusted to meet anticipated conditions (i.e. summer/winter peak load, river lock outages, Unit outages, fuel unloading system outages, etc.).

Coal inventories are reported monthly in the Department's Monthly Fuels Management Report. Regular inventory reports are made available quarterly to senior management and the Enterprise Risk Management Committee. An annual physical inventory survey is taken, in a timely manner, to ensure that the results of the physical inventory survey are booked by the end of the year in the Fuels Management System.

I. Emergency Procurement:

Any one or more of the procedures described herein may be waived by the Vice President - Energy Supply and Analysis, whenever, Fuel must be purchased due to extraordinary conditions such as strikes, lockouts or other labor problems affecting Fuel production or transportation, embargoes, mining or other problems affecting production or transportation, existing and/or forecast extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of Fuel to the Company. When such a purchase is made, documentation of circumstances will be included in the Contract or Purchase Order file.

J. Transportation Services:

Transportation Services bids shall be requested and Agreements negotiated whenever appropriate. A tariff may be used in lieu of an Agreement if conditions warrant. Consideration shall generally be given to the following factors when considering the need or desirability to make a Transportation Services Agreement:

- plant requirements;
- the locations of potential Fuel Suppliers;
- the most desirable transportation modes available;
- coal unloading and handling system constraints;
- existing transportation routes and transfer points between Suppliers and Company generating Stations;
- desirability of maintaining flexibility with different modes of transportation;
- economics;
- other factors which may affect the delivery of Fuel to the Company's generating Stations.

The process of selecting and contracting for Transportation Services will vary with the mode of transportation being sought. For barge and truck deliveries, the Department will generally use the Company's accepted competitive bidding procedures. In instances where only one rail carrier may serve a plant, direct negotiations with the rail carriers serving a particular coal source may be initiated.

The selections of a transportation Supplier will generally be based upon, but not necessarily limited to, cost, reliability, coal unloading and handling system constraints,

CORPORATE FUELS AND BY- PRODUCTS PROCUREMENT PROCEDURES Louisville Gas and Electric Company Kentucky Utilities Company

and other factors. Transportation Service Agreements must be in writing and signed by all parties, unless provided under an approved tariff. The approval procedures set forth in Section C.3 shall be used for the approval of all Transportation Agreements.

K. Bulk Commodities/Services/Other Fuels:

Bulk Commodities/Services shall be requested and Agreements negotiated by the Department, whenever appropriate. Associated transportation services related to Section J. such as railcar leases, railcar maintenance and repair, barge maintenance and repair, barge fleeting services, coal blending, and coal transloading services shall also be requested and Agreements negotiated by the Department, whenever appropriate. All of these Bulk Commodities/Services Agreements will abide by the Approval Authority Limits as set forth in Section C.3. above.

<u>Natural Gas</u> The Power Supply Department is responsible for the purchase of natural gas and associated pipeline transportation for the Company's generating stations.

<u>Fuel Oil.</u> Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this Fuel and the nature of the oil market. The responsibility for fuel oil procurement varies. When the need for fuel oil arises, the Department and/or the Power Plants will
 solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost and the ability to fill the order. Solicitation results are documented in the Department for purchases made by the Department.

L. Affiliate Transactions:

Transactions and relationships between the Company and its unregulated affiliates are governed by three governmental agencies: the Kentucky Public Service Commission, the Federal Energy Regulatory Commission, and as regards Kentucky Utilities Company, the Virginia State Corporation Commission.

The Company may purchase Fuel from an affiliate only at a price permissible under applicable affiliated restriction rules of the above regulators, if such a transfer is reasonably required by the Company to meet an Emergency and the Company believes in good faith that, under the circumstances, the transaction will be to the advantage of the Company. At the time of the affiliate transaction, the Company will document through the award recommendation process, the pricing basis and the justification for the affiliate transaction. The Company shall report any such purchase in its next recurrent report due to the Commission (Form A or Form B filing, or their successor(s)). All such affiliate transactions must as a minimum, meet the requirements of the Affiliate Transaction Overview, dated May 26, 2003, including the requirements of Kentucky Revised Statutes Chapter 278, Kentucky Public Service Commission Sections 2201 through 2219; the Federal Energy Regulatory Commission, 18 CFR 35.44; and Virginia State Corporation Commission, Code of Virginia Title 56 – Chapter 4 and any other applicable affiliate transaction rules.

M. Ethics and Conduct:

The Company recognizes the importance of following the Company's Standards of Integrity to guide the conduct of the Corporate Fuels and By-Products Department in the performance of its duties and responsibilities:

The Department shall endeavor to serve the best interests of the Company and its customers in the performance of the Department's duties and responsibilities.

Fuels staff shall adhere to the ethical standards and policies of the Company.

Each employee involved with the procurement of Fuel will be required to promptly disclose, in writing, any actual or potential conflicts of interest to their supervisor and the LG&E/KU Compliance Department.

N. Penalties For Noncompliance:

All Fuels employees are required to familiarize themselves with the Fuels Procurement Procedures and acknowledge through a process established by management, that they have received, read, understand, accept, and will act in accordance with this document. Failure to comply with any term of the procedures may result in disciplinary action, up to and including discharge.

Key Contact: Manager - Fuels Accounting and Administration

References: Authority Limit Matrix, Records Management and Retention Policy, Standards of Integrity, Reliability Standards, and Affiliate Restriction Regulations

Administrative Responsibility: Director, Corporate Fuels and By- Products

Originally issued at Louisville, Kentucky, the 10th day of February, 2003.

Revised effective AugustApril 1, 20157.

Louisville Gas and Electric Company

Kentucky Utilities Company

By_____

Paul ThompsonLonnie Bellar

Chief Operating OfficerSenior Vice President -Operations

By_____ David Sinclair Vice President – Energy Supply and Analysis

Attachment B(2)c to Question No. 15 Page 1 of 12 Schram/Billiter



Power Supply Commodity Policy – Natural Gas Fuel for Generation

Operating Policy for the Power Supply Group

Effective Date – August 1, 2017

Version 2 Effective Date – August 1, 2017 Confidential

Attachment B(2)c to Question No. 15 Page 2 of 12 Schram/Billiter

Signatures

Power Supply Commodity Policy – Natural Gas Fuel for Generation
Procedure Title
August 1, 2017
Effective Date

Preparer(s) Signatures

Γ

7/12/2017	7/14/2017
X Inn Either	X Duane A. Schrader
Linn Oelker	Duane Schrader
Manager - Market Compliance	Manager - Hourly Trading
Signed by: Linn Oelker	Signed by: LGETRADER3

Required Approval Signatures

7/17/2017

X Chuck Schram

Chuck Schram Director - Power Supply Signed by: Chuck Schram

7/20/2017

X Lonnie E Bellar

Lonnie Bellar Senior Vice President - Operations Signed by: Lonnie E. Bellar

X David Sinclair

David Sinclair VP - Energy Supply Signed by: David Sinclair

Version 2 Effective Date – August 1, 2017 Confidential 7/17/2017

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Revision History

Version No. 2.0 Effective – August 1, 2017

Summary of Changes

- 1. Moved information classification to the footer
- 2. Updated signatories to reflect organizational changes.

Version No. 1.0 Effective – February 1, 2016

Summary of Changes

1. Initial version.

Purpose

The purpose of this document is to outline a uniform standard operational policy related to commercial activity for all natural gas and natural gas related commodity transactions consummated for use as a power generation fuel by Louisville Gas and Electric Company (LG&E) or Kentucky Utilities Company (KU).

Scope

This policy applies to all employees in the Power Supply Group (PSG) which transacts on behalf of Louisville Gas and Electric Company (LG&E) or Kentucky Utilities Company (KU) (Company).

Definitions

The following terms and acronyms are used frequently in this document:

Agreement - A legally binding document fully executed by both buyer and seller in which

1) one party agrees to sell a Commodity and

2) the other agrees to

a) buy a Commodity or

b) the conditions under which a Commodity would be purchased.

<u>Authority Limit Matrix</u> - The Authority Limit Matrix (ALM) is a company policy that is to be used as a guide in combination with the more detailed policies and procedures covering specific topics. Its purpose is to provide an easily accessible source of information with respect to the approval process of LG&E and/or KU.

<u>Award Recommendation</u> - The Company's internal process for the review and approval by management of a recommended Long Term Commodity Transaction.

<u>**Commodity(ies)**</u> – In this document, commodities include physical natural gas and pipeline transportation, services, and storage.

<u>Commodity Transaction</u> – A unique Agreement or a confirmation under a master Agreement between a buyer and a seller involving Commodities.

<u>**Company</u>** - Louisville Gas and Electric Company (LG&E) or Kentucky Utilities Company (KU) or both.</u>

<u>Firm</u> – A Commodity sale or purchase which is not Non-Firm.

<u>Gas Day</u> – As defined by the North American Energy Standards Board (NAESB), which currently begins at 09:00 Central Clock Time (CCT) and runs for 24 hours.

Individual Contributor – The positions within the PSG of Scheduler and Trader job family.

Long Term Commodity Transactions – Any Commodity Transaction that exceeds the term, tenor, or notional amount of the authority granted to the Manager –Trading by the ALM.

<u>Non-Firm</u>– A Commodity sale or purchase for which receipt or delivery may be interrupted for any reason or no reason, without financial liability on the part of either the buyer or the seller.

PSG Real Time Personnel – Associate Dispatcher, Dispatcher, Senior Dispatcher, Associate Scheduler, Scheduler, Senior Scheduler, Associate Trader, Trader, Senior Trader, Manager – Trading, Manager - Generation Dispatch, Director – Power Supply.

<u>Records Management and Retention Policy</u> - The policy maintained by the Company's Corporate Compliance Group that outlines managing the life cycle of all company documents (which include all official records, data and information whether paper or electronic) while effectively balancing its legal and business obligations.

<u>Request for Proposal (RFP)</u> - A process for soliciting sealed bids from suppliers of a Commodity and is typically sent in the form of a written request to industry suppliers and may be published for distribution through media outlets.

<u>Short Term Commodity Transaction</u> – Any Commodity Transaction that is within the term, tenor, or notional amount of the Manager –Trading by the ALM.

<u>Training</u> - training of PSG employees that is (i) comparable to generally accepted practices in the energy trading industry, and (ii) commensurate and proportional in sophistication, scope and frequency to the volume of transactions and the nature and extent of the risk taken by the Company.

Section 1 Organization

1.1 Departmental Structure

The Power Supply Group shall be organized and staffed to effectively administer the PSG's commercial activities.

1.2 Organizational Responsibilities

The Director - Power Supply is responsible for the operations of the PSG and reports directly to the Vice President, Energy Supply and Analysis who is responsible for the Energy Supply and Analysis line of business including the PSG functions. The Vice President - Energy Supply and Analysis reports directly to the Senior Vice President - Operations who has the final responsibility for commercial activities of the PSG. Other Departments may be utilized by the PSG to the extent the Director - Power Supply, Vice President-Energy Supply and Analysis, and Senior Vice President - Operations consider advisable in the execution of the functions of the group.

1.3 Commodity Approval Authority

Short Term Commodity Transactions are executed by Power Supply personnel through the authority granted by the ALM.

Long Term Commodity Transaction are executed by Power Supply personnel through the authority granted by the approval of an Award Recommendation.

The execution of Commodity Transactions will comply with internal business controls including the Authority Limit Matrix, Sarbanes Oxley compliance and Internal Audit Services' recommendations. The Company has detailed internal control procedures covering Commodity Transactions, Contract Administration and Confirmations, and Credit.

Section 2 Reports

The Director - Power Supply will instruct the PSG to prepare, maintain, and distribute various reports to management and others as deemed necessary for business operations and regulatory requirements.

Section 3 Records

3.1 Commodity Accounting

All personnel must document Short Term Commodity Transactions in the Company's commodity accounting system no later than the end of their first work period after the end of the respective Gas Day. Long Term Commodity Transactions must be accurately reflected in the commodity accounting system in time to ensure appropriate financial accounting.

3.2 Recording of Telephone Calls

All Short Term Commodity Transactions must be executed on a recorded telephone line or on an electronic platform where the transaction is logged by the platform operator.

If the transaction is completed on the ICE electronic platform, a record of the transaction is electronically available to the Contract Administration department for confirmation against the Company's transaction records.

The phone recording will be maintained in accordance with the Records Management and Retention Policy. In the event the telephone recording system is out of service, personnel will promptly report the incident through the IT Service Desk.

3.3 Award Recommendations

An Award Recommendation will be prepared for all Long Term Commodity Transactions. All approved Award Recommendations will be retained by the PSG in accordance with the Records Management and Retention Policy.

3.4 Agreements

All executed Agreements will be sent to the Company's Contract Administration group who will be responsible for distribution within the Company and maintenance of the documents in accordance with the Records Management and Retention Policy.

Contract Administration will maintain active Agreements on site and the Agreements will be available in accordance with their departmental policies.

Section 4 Optimization Responsibilities

The Power Supply Group is responsible for purchasing natural gas and natural gas transport (the Commodities governed by this policy) to fuel the Company's generation assets consistent with the Company's fuel procurement strategy that is developed in concert with coal needs. In

Version 2 Effective August 1, 2017 Confidential executing these responsibilities, the Power Supply Group shall use best efforts to keep current on market conditions, prices, availability and other developments relating to Commodities.

Section 5 Reserved for Future Use.

Section 6 Short Term Commodity Transactions

The Power Supply Traders are responsible for surveying the market by phone, instant messaging, electronic platforms, and any other standard industry process with the objective of obtaining the best value for the Commodities when executing Short Term Commodity Transactions. Traders will take into account prices, availability of transport, Operational Flow Orders, transport alerts and/or restrictions, as well as other market developments for a particular Commodity when determining the best value.

Power Supply Traders may only execute Short Term Commodity Transactions in real time within their authority limits as provided in the ALM.

6.1 Natural Gas

Personnel may buy and sell Non-Firm natural gas. Individual Contributors may only buy or sell Firm natural gas after written approval provided by the Manager – Trading, Manager – Generation Dispatch, or the Director – Power Supply.

6.2 Natural Gas Transport

Personnel may buy Firm and Non-Firm natural gas transport to serve Company's generation assets. Firm transport may only be purchased after written approval of the Manager – Trading, Manager – Generation Dispatch, or the Director – Power Supply.

Section 7 Long Term Commodity Transactions

Power Supply personnel are responsible for surveying the market and obtaining the best value for the Commodities when recommending Long Term Commodity Transactions. Power Supply personnel will use the Award Recommendation process when recommending a Long Term Commodity Transaction to management.

7.1 Award Recommendation Process

An Award Recommendation will be prepared for all Long Term Commodity Transactions. The Award Recommendation will take into account prices, availability of transport and/or storage, operational flow orders, transport alerts and/or restrictions, as well as other market developments for a particular Commodity when determining the best value. Power Supply may rely on other groups within the Company, as well as external consultants, to develop market analysis for consideration during a Request for Proposal.

A proposed Award Recommendation must be signed (at a minimum) by the Legal Department, Credit Department, Financial Accounting and Analysis Department, Director – Power Supply, and the VP-Energy Supply and Analysis. Additional approvals may be necessary in accordance with the ALM.

7.2 Request for Proposal (RFP)

- 7.2.1 The Generation Planning department provides projections to the PSG of the Commodities needed for the company's long term planning horizons.
- 7.2.2 The Company may select potential suppliers on the basis of past performance of past and current Agreements, market intelligence from industry research, credit analysis, and general knowledge of the industry. Potential suppliers are periodically reviewed by the PSG to eliminate any suppliers that are known to have gone out of business and to also add any new or existing suppliers that may previously have not been considered.
- 7.2.3 A notice of the RFP is sent via a written request to industry suppliers and may be published for distribution through media outlets.
- 7.2.4 The RFP shall include at a minimum the following:
 - a. Instructions to Supplier on the submission of the response.
 - b. Response due date and time.
 - c. Scope of the commodity agreement request.
 - d. Company terms and conditions.
- 7.2.5 The RFP will be approved by the VP-Energy Supply and Analysis prior to issuance.
- 7.2.6 RFP will request that responses be returned in a sealed envelope.
- 7.2.7 Responses to the RFP shall be opened on or after the published due date and time and in the presence of one or more employees from outside the Power Supply group.

- 7.2.8 Those bids received after the designated time will be returned unopened to the bidder, unless the Director Power Supply waives this provision.
- 7.2.9 No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

7.3 Sole sourcing

- 7.3.1 A RFP process may not be appropriate for all Long Term Commodity Transactions. Sole-sourced transactions may be appropriate under any the following circumstances:
 - a. The goods or services being procured are a monopoly service.
 - b. An urgent situation does not allow adequate time for a Request For Proposal.
 - c. The lack of two or more qualified bidders is documented.
 - d. Management determines and clearly documents that there is only one acceptable supplier.
- 7.3.2 A Sole Source Authorization section must be included in a proposed Award Recommendation detailing the sole-source circumstances.

Section 8 Transaction Agreement Enforcement

The Power Supply Group is responsible for protecting the interests of the Company under the agreements with the counterparties. The Power Supply Group will work with other Company departments, such as the Legal Department, to enforce the Company's rights.

Section 9 Reliability Transactions

Consistent with NERC Reliability Standards (EOP-002-3.1 and PER-001-0.1 R1), PSG Real Time Personnel are authorized to take any actions necessary to enter into Short Term Commodity Transactions for natural gas that exceed their limits stated in the ALM if, and only if, such actions are necessary to maintain system reliability. Maintaining system reliability may be due to request from the Transmission Operator, Balancing Authority, or Reliability Coordinator, or required to meet NERC standards or that absent such actions, one could reasonably expect the Company would declare an Energy Emergency Alert (EEA). Any such Short Term Commodity Transaction entered into on this basis must be reported in writing to the Director – Power Supply and the Vice President – Energy Supply and Analysis within twelve (12) hours of the transaction with a detailed explanation as to the nature of the reliability issue and why it was not possible to enter into transactions in compliance with the ALM.

Section 10 Ethics and Conduct

The Company recognizes the importance of following the Company's Standards of Integrity to guide the conduct of the PSG in the performance of its duties and responsibilities. The group shall endeavor to serve the best interests of the Company and its customers in the performance of the group's duties and responsibilities. PSG personnel shall adhere to the ethical standards and policies of the Company.

Section 11 Affiliate Transactions

Transactions and relationships between the Company and its unregulated affiliates are governed by four governmental agencies: the Kentucky Public Service Commission, the Federal Energy Regulatory Commission, the Securities and Exchange Commission, and as regards Kentucky Utilities Company, the Virginia State Corporation Commission.

Power Supply personnel may only execute transactions with affiliates in accordance with the applicable affiliate restriction regulations.

Section 12 Training

Each PSG employee is expected to be familiar with all Company policies and procedures that are relevant to the PSG employee's activities, as well as the practices and protocols implemented by providers of natural gas and the pipeline entities transporting natural gas. Training for Individual Contributors includes initial supervised Training prior to independently conducting trading activities, as well as initial and refresher Training on certain regulatory and corporate policy issues. Training will be conducted by PSG employees and by the Company's Corporate Compliance Group.

Individual Responsibilities; Penalties For Noncompliance

All Power Supply employees are required to familiarize themselves with this Power Supply Commodity Policy – Natural Gas Fuel for Generation and acknowledge through a process established by management, that they have received, read, understood, accepted, and will act in accordance with this document. Failure to comply with any term of this policy may result in disciplinary action, up to and including discharge.

Key Contacts: Manager - Market Compliance

<u>References:</u> Authority Limit Matrix, Records Management and Retention Policy, Standards of Integrity-PPL, NERC Reliability Standards.

Administrative Responsibility: Director – Power Supply

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Power Supply Commodity Policy – Natural Gas Fuel for Generation

Operating Policy for the Power Supply Group

Effective Date – <u>August</u> 1, <u>2017</u>

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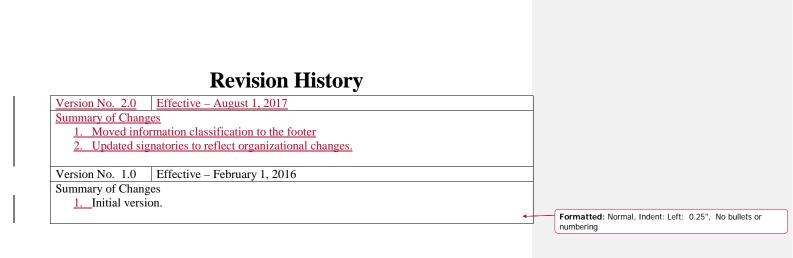
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Purpose

The purpose of this document is to outline a uniform standard operational policy related to commercial activity for all natural gas and natural gas related commodity transactions consummated for use as a power generation fuel by Louisville Gas and Electric Company (LG&E) or Kentucky Utilities Company (KU).

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Attachment (B)(2)d to Question No. 15 Page 6 of 12 Schram/Billiter

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Attachment (B)(2)d to Question No. 15 Page 7 of 12 Schram/Billiter

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Short Term Commodity Transactions are executed by Power Supply personnel through the authority granted by the ALM.

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Attachment (B)(2)d to Question No. 15 Page 8 of 12 Schram/Billiter

Section 3 Records

3.1 Commodity Accounting

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Power Supply Traders may only execute Short Term Commodity Transactions in real time within their authority limits as provided in the ALM.

6.1 Natural Gas

Personnel may buy and sell Non-Firm natural gas. Individual Contributors may only buy or sell Firm natural gas after written approval provided by the Manager – Trading, Manager – Generation Dispatch, or the Director – Power Supply.

6.2 Natural Gas Transport

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Section 7 Long Term Commodity Transactions

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7.1 Award Recommendation Process

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A proposed Award Recommendation must be signed (at a minimum) by the Legal Department, Credit Department, Financial Accounting and Analysis Department, Director – Power Supply, and the VP-Energy Supply and Analysis. Additional approvals may be necessary in accordance with the ALM.

7.2 Request for Proposal (RFP)

- 7.2.1 The Generation Planning department provides projections to the PSG of the Commodities needed for the company's long term planning horizons.
- 7.2.2 The Company may select potential suppliers on the basis of past performance of past and current Agreements, market intelligence from industry research, credit analysis, and general knowledge of the industry. Potential suppliers are periodically reviewed by the PSG to eliminate any suppliers that are known to have gone out of business and to also add any new or existing suppliers that may previously have not been considered.
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- 7.2.4 The RFP shall include at a minimum the following:
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 - b. Response due date and time.
 - c. Scope of the commodity agreement request.
 - d. Company terms and conditions.
- 7.2.5 The RFP will be approved by the VP-Energy Supply and Analysis prior to issuance.
- 7.2.6 RFP will request that responses be returned in a sealed envelope.
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- 7.2.8 Those bids received after the designated time will be returned unopened to the bidder, unless the Director Power Supply waives this provision.
- 7.2.9 No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

7.3 Sole sourcing

- 7.3.1 A RFP process may not be appropriate for all Long Term Commodity Transactions. Sole-sourced transactions may be appropriate under any the following circumstances:
 - a. The goods or services being procured are a monopoly service.
 - b. An urgent situation does not allow adequate time for a Request For Proposal.
 - c. The lack of two or more qualified bidders is documented.
 - d. Management determines and clearly documents that there is only one acceptable supplier.
- 7.3.2 A Sole Source Authorization section must be included in a proposed Award Recommendation detailing the sole-source circumstances.

Section 8 Transaction Agreement Enforcement

<u>The</u> Power Supply Group is responsible for <u>protecting</u> the interests of the Company under the agreements with the counterparties. The Power Supply Group will work with other Company departments, such as the Legal Department, to enforce the Company's rights.

Section 9 Reliability Transactions

Consistent with NERC Reliability Standards (EOP-002-3.1 and PER-001-0.1 R1), PSG Real Time Personnel are authorized to take any actions necessary to enter into Short Term Commodity Transactions for natural gas that exceed their limits stated in the ALM if, and only if, such actions are necessary to maintain system reliability. Maintaining system reliability may be due to request from the <u>Transmission</u> Operator, Balancing Authority, or <u>Reliability</u> Coordinator, or required to meet NERC standards or that absent such actions, one could reasonably expect the Company would declare an Energy Emergency Alert (EEA). Any such Short Term Commodity Transaction entered into on this basis must be reported in writing to the Director – Power Supply and the Vice President – Energy Supply and Analysis within twelve (12) hours of the transaction with a detailed explanation as to the nature of the reliability issue and why it was not possible to enter into transactions in compliance with the ALM.

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Section 10 Ethics and Conduct

The Company recognizes the importance of following the Company's Standards of Integrity to guide the conduct of the PSG in the performance of its duties and responsibilities. The group shall endeavor to serve the best interests of the Company and its customers in the performance of the group's duties and responsibilities. PSG personnel shall adhere to the ethical standards and policies of the Company.

Section 11 Affiliate Transactions

Transactions and relationships between the Company and its unregulated affiliates are governed by four governmental agencies: the Kentucky Public Service Commission, the Federal Energy Regulatory Commission, the Securities and Exchange Commission, and as regards Kentucky Utilities Company, the Virginia State Corporation Commission.

Power Supply personnel may only execute transactions with affiliates in accordance with the applicable affiliate restriction regulations.

Section 12 Training

Each PSG employee is expected to be familiar with all Company policies and procedures that are relevant to the PSG employee's activities, as well as the practices and protocols implemented by providers of natural gas and the pipeline entities transporting natural gas. Training for Individual Contributors includes initial supervised Training prior to independently conducting trading activities, as well as initial and refresher Training on certain regulatory and corporate policy issues. Training will be conducted by PSG employees and by the Company's Corporate Compliance Group.

Individual Responsibilities; Penalties For Noncompliance

All Power Supply employees are required to familiarize themselves with this Power Supply Commodity Policy – Natural Gas Fuel for Generation and acknowledge through a process established by management, that they have received, read, understood, accepted, and will act in accordance with this document. Failure to comply with any term of this policy may result in disciplinary action, up to and including discharge.

Key Contacts: Manager - Market Compliance

<u>References:</u> Authority Limit Matrix, Records Management and Retention Policy, Standards of Integrity-PPL, NERC Reliability Standards.

Administrative Responsibility: Director – Power Supply

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 16

Witness: Delbert Billiter / Charles R. Schram

- Q-16. a. State whether KU is aware of any violations of its policies and procedures regarding fuel procurement that occurred prior to or during the period from November 1, 2016, through April 30, 2017.
 - b. If so, for each violation:
 - (1) Describe the violation;
 - (2) Describe the action(s) that KU took upon discovering the violation; and
 - (3) Identify the person(s) who committed the violation.

A-16. a. No.

b. Not applicable.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 17

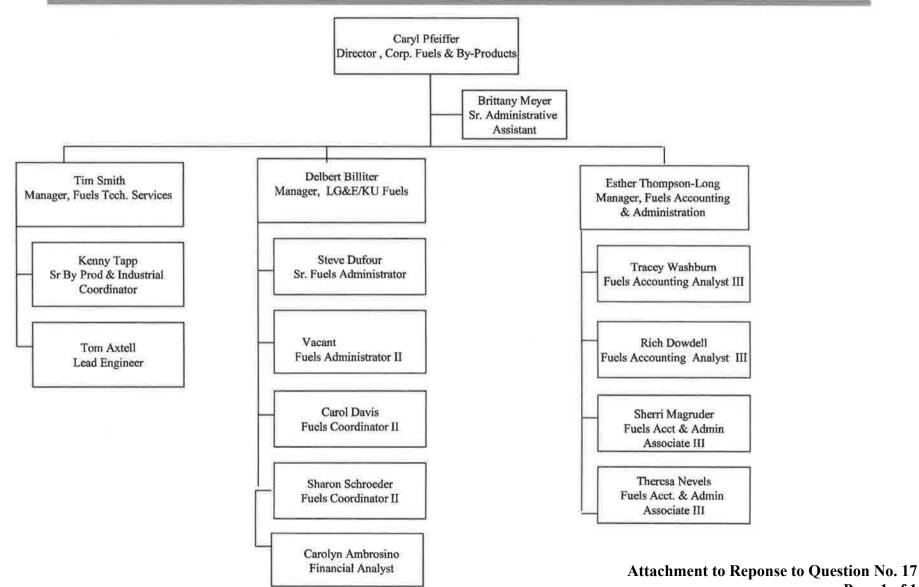
Witness: Delbert Billiter / Charles R. Schram

Q-17. Identify and explain the reasons for all changes in the organizational structure and personnel of the departments or divisions that are responsible for KU's fuel procurement activities that occurred during the period from November 1, 2016, through April 30, 2017.

A-17.

- a. The Corporate Fuels and By-Products Department:
 - (1) Mike Dotson, Manager LG&E/KU Fuels, retired April 1, 2017.
 - (2) Tedra Thomas, Fuels Administrator II, passed away March 31, 2017, and the position is currently vacant.
 - (3) Delbert Billiter moved to Manager LG&E/KU Fuels and the position of Manager Fuels Risk Management was eliminated effective April 1, 2017.
 - (4) See attached Corporate Fuels and By-Products Organization Chart as of April 2017.
- b. The Power Supply department has no organizational or personnel changes to report for this period.

Corporate Fuels and By-Products April, 2017



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Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 18

Witness: Michael P. Drake

- Q-18. a. Identify all changes that KU has made during the period under review to its maintenance and operation practices that also affect fuel usage at KU's generation facilities.
 - b. Describe the impact of these changes on KU's fuel usage.
- A-18. a. There have been no maintenance or operation practice changes that affect fuel usage during the period under review.
 - b. Not applicable.

Response to Question No. 19 Billiter Page 1 of 2

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 19

Witness: Delbert Billiter

- Q-19. List each written coal supply solicitation issued during the period from November 1, 2016, through April 30, 2017.
 - 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-19.

a. SOLICITATION 1

The final selection of the vendors who responded to the solicitation dated September 20, 2016 were not completed at the time the data responses were filed in Case No. 2017-00003. The requested information for the selected vendors is provided below for coal purchased for the period 2018 - 2020.

Date:	September 20, 2016
Contract/Spot:	Contract
Quantities:	No minimum or maximum specified
Quality:	Suitable for KU's Ghent Station and LG&E's Trimble County and
	Mill Creek Stations
Period:	2018 and beyond - Contract
Generating Units:	KU's Ghent Station and LG&E's Trimble County and Mill Creek
	Stations

b. Number of vendors sent a solicitation: 123

Number of vendors responded: 14 companies / 23 offers

Selected vendor(s): The vendor(s) selected were based upon the lowest evaluated delivered cost.

High Sulfur Coal - Contract Knight Hawk Coal, LLC – J18005 Western Kentucky Minerals – J18004

The bid analysis information is confidential and proprietary information and is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

a. SOLICITATION 2

Date:	March 23, 2017
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:	October 1, 2017 through September 30, 2018 – Spot
	2018 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: 127
 Number of vendors responded: 19 companies / 35 offers
 Selected vendor(s): The vendor(s) selected were based upon the lowest evaluated delivered cost.

<u>High Sulfur Coal - Contract</u> Alliance Coal, LLC – J18009 Rhino Energy, LLC – J14001 / Amendment No. 1

<u>PRB Coal - Contract</u> Arch Coal Sales Company – J18008

The bid analysis information is confidential and proprietary information and is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 20

Witness: Delbert Billiter

- Q-20. List each oral coal supply solicitation issued during the period from November 1, 2016, through April 30, 2017.
 - 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-20. KU did not issue any oral solicitation.
 - a. Not applicable
 - b. Not applicable

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 21

Witness: Derek Rahn

- Q-21. a. List all intersystem sales during the period under review in which KU used a third party's transmission system.
 - b. For each sale listed above:
 - (1) Describe the effect on the FAC calculation of line losses related to intersystem sales when using a third party's transmission system; and
 - (2) State the line-loss factor used for each transaction and describe how that line-loss factor was determined.
- A-21. a. There were no inter-system sales from November 1, 2016 through April 30, 2017, which required a third party's transmission system.
 - 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. KU continues to use a line loss factor of 0.5% to determine the cost of fuel associated with line losses incurred to make an inter-system sale and recovered from such sale consistent with the Commission's June 7, 2013, Amended Order in Case No. 2012-00552.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 22

Witness: Derek Rahn

- Q-22. a. Describe the effect on the FAC calculation of the line losses related to intersystem sales when not using a third party's transmission system.
 - b. Describe each change that KU made to its methodology for calculating intersystem sales line losses during the period under review.
- A-22. a. 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.
 - b. There have been no changes regarding the calculation of losses associated with intersystem sales. KU continues to use a line loss factor of 0.5% to determine the cost of fuel associated with line losses incurred to make an inter-system sale and recovered from such sale consistent with the Commission's June 7, 2013, Amended Order in Case No. 2012-00552.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 23

Witness: Delbert Billiter

- Q-23. State whether, during the period under review, KU has solicited bids for coal with the restriction that it was not mined through strip mining or mountaintop removal. If so, explain the reasons for the restriction on the solicitation, the quantity in tons and price per ton of the coal purchased as a result of this solicitation, and the difference between the price of this coal and the price it could have obtained for the coal if the solicitation had not been restricted.
- A-23. KU has not solicited bids with this restriction.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 24

Witness: Michael P. Drake

- Q-24. Provide a detailed discussion of any specific generation efficiency improvements KU has undertaken during the period under review.
- A-24. KU strives to maintain unit efficiency through routine cyclic planned outage maintenance. This maintenance work continues to focus on reestablishing expected turbine efficiency degraded since the previous outage. Additionally, KU maintains unit efficiency through continuous monitoring of all plant 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 issue 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.

Response to Information Requested in Appendix of Commission's Order Dated August 30, 2017

Case No. 2017-00284

Question No. 25

Witness: Derek Rahn

- Q-25. State whether all fuel contracts related to commodity and/or 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-25. Yes. All fuel contracts from November 1, 2016 through April 30, 2017 related to commodity and/or transportation have been filed with the Commission.