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	)	2016-00232
NOVEMBER 1, 2015 THROUGH APRIL 30, 2016	)	

# RESPONSE OF KENTUCKY UTILITIES COMPANY TO INFORMATION REQUESTED IN APPENDIX OF COMMISSION'S ORDER DATED AUGUST 12, 2016

**FILED: AUGUST 26, 2016** 

**COMMONWEALTH OF KENTUCKY** ) SS: ) **COUNTY OF JEFFERSON** 

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

Charles R. Schram

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

and State, this <u>154</u> day of <u>August</u> 2016.

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, **Eileen L. Saunders**, being duly sworn, deposes and says that she is Director, Generation Services for LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

Even & Launders

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

and State, this <u>13th</u> day of <u>August</u> 2016.

Jedy 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.

Stuart Wilson

Stuart Wilson

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

and State, this 15th day of <u>August</u> 2016.

July Schooler (SEAL)

Notary Public

My Commission Expires:

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

**COMMONWEALTH OF KENTUCKY** ) ) SS: **COUNTY OF JEFFERSON** 

The undersigned, Mike Dotson, 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.

Mile Siter

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

and State, this 15th day of August 2016.

Juedy 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, **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.

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

and State, this 15th day of August 2016.

July Schorle (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 Question No. 1 Dotson Page 1 of 2

## **KENTUCKY UTILITIES COMPANY**

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

## Case No. 2016-00232

## **Question No. 1**

## Witness: Mike Dotson

- Q-1. For the period from November 1, 2015, through April 30, 2016, 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 no, explain why it has not been filed.
- A-1. All contracts have been filed with the Commission.

	PURCHASE		
VENDOR	TONNAGE		TYPE
Alliance Coal LLC - J09002	135,772	-	Contract
Alliance Coal LLC - J13004B	4,779		Contract
Alliance Coal LLC - J14011B	4,759		Contract
Alliance Coal LLC - J16001B	64,818		Contract
Alliance Coal LLC - J16004	77,450		Spot
Alliance Coal LLC - J16008	81,111		Contract
Arch Coal Sales Company Inc J14038	129,808		Contract
Arch Coal Sales Company Inc J15003	14,150		Spot
Arch Coal Sales Company Inc J16012	185,647		Contract
Armstrong Coal Company - J07032	365,292		Contract
Armstrong Coal Company - J12004	73,442		Contract
Armstrong Coal Company - J14004	365,185		Contract
Armstrong Coal Company - J14010	41,710		Contract
Armstrong Coal Company - J14040	74,938		Spot
Armstrong Coal Company - J16003	128,374		Contract
Armstrong Coal Company - J16017	116,850		Contract
Bowie Refined Coal LLC - K14037	38,658		Contract
Peabody COALSALES LLC - J12011	138,522		Contract
Peabody COALSALES LLC - J16007	227,137		Contract
Eagle River Coal LLC - J16005	42,553		Contract
Foresight Coal Sales LLC - J12005	94,618		Contract
Foresight Coal Sales LLC - J16009	217,505		Spot
Kolmar Americas - J19019	18,686		Spot
Peabody Coaltrade LLC - J16016	11,253		Spot
Rhino Energy LLC - J14001	324,646		Contract
River Trading Company - J15004	12,854		Spot
Triad Mining LLC - J15002	208,631		Contract
The American Coal Company - J16002	166,883	_	Spot
	3,366,030	-	
	2,772,311	82%	Contract
	593,719	82% 18%	Spot
		1070	Spor
	3,366,030		

Response to Question No. 2 Schram Page 1 of 2

## KENTUCKY UTILITIES COMPANY

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

Case No. 2016-00232

## **Question No. 2**

## Witness: Charles R. Schram

- Q-2. For the period from November 1, 2015, through April 30, 2016, 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 no, explain why it has not been filed.
- A-2. Please see the attachment for the list of vendors, associated quantities, and the nature of the natural gas purchases. During the period under review, natural gas purchases (other than purchases made pursuant to the Special Contract referenced below) were purchased solely on an as-needed, spot market basis. LG&E/KU (jointly) has executed Master Agreements with various natural gas suppliers that provide a contractual framework for potential spot purchase transactions. These Master Agreements include no specific price, volume, delivery period, or location information and therefore do not form a purchase transaction. As such, these Master Agreements have not been filed with the Commission. These Master Agreements enable spot purchases to occur as needed.

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.<sup>1</sup> Additionally, purchases from Columbia Gas are for KU-owned generation served by the local distribution company.

<sup>&</sup>lt;sup>1</sup> 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.

and combined-cycle combustion turbine: Station Units KU Ownership LG&E Ownership

KU and LG&E have joint ownership in the following simple-cycle combustion turbines

Station	emte	iie e mieisinp	
Simple Cycle Units			
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%
<b>Combined Cycle Unit</b>			
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 unit ownership percentages.

### Natural Gas for Generation Purchases 11/1/2015 - 4/30/2016

Vendor	Type	<u>MMBTU</u>
ANADARKO-TRA	Spot	16,700
ATMOSENERGY	Spot	20,000
BGENERGYMERCHANTS	Spot	3,461,247
BPENERGYCO	Spot	3,071,098
CARGILLINC	Spot	57,584
CIMAENERGY	Spot	961,123
COLGASKY	GSO Customer*	2,221
COLONIALENER	Spot	148,886
CONOCOPHILLIPS	Spot	96,600
DIRECTENERGYBUSMKT	Spot	161,500
DTEENERGY	Spot	518,602
ECOENERGY	Spot	314,700
EDFTRADINGNA	Spot	426,000
EXELONGEN	Spot	878,400
JARON&CO	Spot	76,439
LACLEDEENERGY	Spot	738,171
LGE-GAS SUPPLY	Special Contract**	170,230
MACQUARIECOOK	Spot	71,300
MERCURIAGAS	Spot	241,900
NEXTERA	Spot	54,500
NJRENERGYSVC	Spot	410,300
RANGERESOURCE	Spot	426,000
SEQUENTENRG	Spot	2,935,192
SHELLENERGYNA	Spot	688,900
SWENERGY	Spot	136,700
TENASKAMKTG	Spot	9,951,200
TVA	Spot	43,900
TWINEAGLERESOURCE	Spot	30,500
UNITEDENERGY	Spot	115,400
VITOLINC	Spot	784,700

Total Voume

27,009,993 MMBtu

\*KU is a General Sales Customer of Columbia Gas of Kentucky for the Haefling Plant; no volume purchase commitments. \*\*LG&E is the local gas distribution company; no volume purchase commitments.

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

## Case No. 2016-00232

## **Question No. 3**

## Witness: Charles R. Schram / Mike Dotson

- Q-3. State whether KU engages in hedging activities for its coal or natural gas purchases used for generation. If yes, 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 physical hedging in contracting for coal. KU uses the following guidelines in utilization of coal under contract for the minimum projected requirement:

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 did not engage in hedging activities for natural gas purchases during the period under review. However, KU began to purchase a portion of the natural gas for the Cane Run 7 combined cycle unit on a forward basis beginning in July 2016. 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 12, 2016

## Case No. 2016-00232

## **Question No. 4**

## Witness: Stuart Wilson / Mike Dotson

Q-4. For each generating station or unit for which a separate coal pile is maintained, state, for the period from November 1, 2015, through April 30, 2016, 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.

				Capacity Factor
				(Net MWh)/
	Coal Burn	Coal Receipts		(period hrs x
Plant	(Tons)	(Tons)	Net MWh	MW rating)
E. W. Brown	327,301	336,656	640,217	21.5%
Ghent	2,493,929	2,713,919	5,262,085	62.8%
Trimble County HS	N/A	1,471,902	N/A	N/A
Trimble County PRB	N/A	315,455	N/A	N/A
Trimble County 2	966,628	N/A	2,233,830	69.9%

A-4. The information requested from November 1, 2015 to April 30, 2016 is shown in the table below:

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 12, 2016

Case No. 2016-00232

## **Question No. 5**

# Witness: Stuart Wilson

Q-5. List all firm power commitments for KU from November 1, 2015, through April 30, 2016, 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 2015)	~ 87	~ 27	Baseload
OVEC (Dec 2015)	~ 132	<b>~</b> 41	Baseload
OVEC (Jan 2016)	~ 158	~ 49	Baseload
OVEC (Feb 2016)	~ 158	~ 49	Baseload
OVEC (Mar 2016)	~ 107	~ 33	Baseload
OVEC (Apr 2016)	~ 88	~ 27	Baseload

b. Firm Sales

None.

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

# Case No. 2016-00232

# **Question No. 6**

# Witness: Derek Rahn

- Q-6. Provide a monthly billing summary of sales to all electric utilities for the period November 1, 2015, through April 30, 2016.
- A-6. See attached.



### **Power Transaction Schedule**

			Billing Components							
		Type of				Fuel		Other		Total
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
AMERICAN ELECTRIC POWER SERVICE CORP.	AEP	Economy	26,000		¢	506.82	¢	386.35	\$	893.17
		-	,		ф ¢		ф Ф		+	
CARGILL- ALLIANT, LLC	CARG	Economy	295,000		2	6,206.21	Э	4,730.99	\$	10,937.20
EXELON GENERATION COMPANY, LLC	EXEL	Economy	155,000		\$	2,848.78	\$	2,171.62	\$	5,020.40
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	165,000		\$	9,067.95	\$	8,309.63	\$	17,377.58
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	258,000		\$	13,697.15	\$	13,064.09	\$	26,761.24
ENERGY IMBALANCE	IMBL	Economy	167,000		\$	3,016.97	\$	2,299.84	\$	5,316.81
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR	, I MISO	Economy	231,000		\$	4,587.67	\$	3,497.18	\$	8,084.85
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	728,000		\$	19,172.25	\$	14,615.01	\$	33,787.26
TENASKA POWER SERVICES CO.	TPS	Economy	58,000		\$	1,383.19	\$	1,054.41	\$	2,437.60
TENNESSEE VALLEY AUTHORITY	TVA	Economy	387,000		\$	7,896.83	\$	6,019.76	\$	13,916.59
WESTAR ENERGY, INC.	WSTR	Economy	129,000		\$	2,751.82	\$	2,097.72	\$	4,849.54
LOUISVILLE GAS & ELECTRIC	LGE	Economy	37,018,000		\$	787,810.01	\$	1,204.44	\$	789,014.45
Total Sales			39,617,000	\$-	\$	858,945.65	\$	59,451.04	\$	918,396.69
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Energy Imbalance is used to supply energy for mismatch between scheduled delivery and actual loads that have occurred over an hour.



				Billing Components						
		Type of				Fuel		Other		Total
<u>Company</u>		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
ASSOCIATED ELECT COOPERATIVE	AECI	Economy	686.000		\$	15.606.67	\$	9,529.01	\$	25,135.68
CARGILL- ALLIANT, LLC	CARG	Economy	1,228,000		\$	27,763.20	\$	16,951.47	\$	44,714.67
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	152,000		\$	8,418.32	\$	5,140.00	\$	13,558.32
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	317,000		\$	12,060.29	\$	7,363.69	\$	19,423.98
ENERGY IMBALANCE	IMBL	Economy	375,000		\$	7,054.60	\$	4,307.34	\$	11,361.94
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR	I MISO	Economy	2,030,000		\$	41,548.37	\$	25,364.04	\$	66,912.41
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	7,942,000		\$	202,555.69	\$	123,675.09	\$	326,230.78
TENASKA POWER SERVICES CO.	TPS	Economy	114,000		\$	2,903.40	\$	1,772.74	\$	4,676.14
WESTAR ENERGY, INC.	WSTR	Economy	915,000		\$	19,903.16	\$	12,152.34	\$	32,055.50
LOUISVILLE GAS & ELECTRIC	LGE	Economy	89,929,000		\$	2,005,424.67	\$	59.06	\$	2,005,483.73
Total Sales			103,688,000	\$ -	\$	2,343,238.37	\$	206,314.78	\$	2,549,553.15



			Billing Components							
		Type of				Fuel		Other		Total
Company		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
CARGILL- ALLIANT, LLC	CARG	Economy	91,000		\$	2,349,41	\$	1,401.32	\$	3,750.73
ETC ENDURE	ETC	Economy	1,000		\$	33.36	\$	20.76	\$	54.12
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	51,000		\$	57.44	\$	35.74	\$	93.18
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	108,000		\$	200.61	\$	124.81	\$	325.42
ENERGY IMBALANCE	IMBL	Economy	25,000		\$	1,108.39	\$	689.54	\$	1,797.93
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR,	MISO	Economy	81,000		\$	1,441.00	\$	859.50	\$	2,300.50
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	303,000		\$	7,872.55	\$	4,695.62	\$	12,568.17
THE ENERGY AUTHORITY	TEA	Economy	37,000		\$	900.82	\$	560.42	\$	1,461.24
TENASKA POWER SERVICES CO.	TPS	Economy	9,000		\$	233.45	\$	145.24	\$	378.69
TENNESSEE VALLEY AUTHORITY	TVA	Economy	75,000		\$	1,722.11	\$	1,027.14	\$	2,749.25
WESTAR ENERGY, INC.	WSTR	Economy	46,000		\$	1,147.35	\$	713.79	\$	1,861.14
LOUISVILLE GAS & ELECTRIC	LGE	Economy	7,641,000		\$	193,125.66	\$	11,607.20	\$	204,732.86
Total Sales			8,468,000	\$ -	\$	210,192.15	\$	21,881.08	\$	232,073.23
							_			



			Billing Components							
		Type of			Fuel		Other			Total
Company		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
	<b>a</b> + <b>b a</b>	-			<u>^</u>	100.01	¢		<b>^</b>	
CARGILL- ALLIANT, LLC	CARG	Economy	22,000		\$	489.21	\$	469.11	\$	958.32
ETC ENDURE	ETC	Economy	1,000		\$	17.04	\$	46.17	\$	63.21
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	98,000		\$	262.21	\$	251.44	\$	513.65
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	213,000		\$	125.93	\$	120.76	\$	246.69
ENERGY IMBALANCE	IMBL	Economy	(2,000)		\$	(44.09)	\$	57.91	\$	13.82
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	58,000		\$	1,262.59	\$	1,210.70	\$	2,473.29
TENASKA POWER SERVICES CO.	TPS	Economy	1,000		\$	28.52	\$	27.35	\$	55.87
TENNESSEE VALLEY AUTHORITY	TVA	Economy	2,000		\$	42.70	\$	40.94	\$	83.64
WESTAR ENERGY, INC.	WSTR	Economy	16,000		\$	365.56	\$	350.54	\$	716.10
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR	, I MISO	Economy	-		\$	-	\$	439.12	\$	439.12
LOUISVILLE GAS & ELECTRIC	LGE	Economy	1,959,000		\$	50,661.04	\$	1,074.14	\$	51,735.18
Total Sales			2,368,000	\$ -	\$	53,210.71	\$	4,088.18	\$	57,298.89



				Billing Components						
		Type of				Fuel		Other		Total
Company		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
CARGILL- ALLIANT. LLC	CARG	Economy	238,000		\$	5.413.16	\$	2,969,95	\$	8,383.11
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	53,000		\$	1,534.84	\$	842.09	\$	2,376.93
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	238,000		\$	4,255.30	\$	2,334.68	\$	6,589.98
ENERGY IMBALANCE	IMBL	Economy	232,000		\$	5,057.68	\$	2,774.92	\$	7,832.60
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR	I MISO	Economy	19,000		\$	504.41	\$	276.74	\$	781.15
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	263,000		\$	6,514.61	\$	3,574.28	\$	10,088.89
TENNESSEE VALLEY AUTHORITY	TVA	Economy	188,000		\$	3,853.33	\$	2,114.15	\$	5,967.48
WESTAR ENERGY, INC.	WSTR	Economy	19,000		\$	390.22	\$	214.09	\$	604.31
LOUISVILLE GAS & ELECTRIC	LGE	Economy	61,857,000		\$	1,336,771.32	\$	76.19	\$	1,336,847.51
Total Sales			63,107,000	\$ -	\$	1,364,294.87	\$	15,177.09	\$	1,379,471.96



					1	Billing Component	S			
		Type of				Fuel		Other		Total
Company		Transaction	KWH	Demand(\$)		Charges(\$)		Charges(\$)		Charges(\$)
	GLDG		506.000		٩	15 504 96	۴	0.175.00	<i><b></b></i>	
CARGILL- ALLIANT, LLC	CARG	Economy	586,000		\$	15,504.26	\$	8,175.20	\$	23,679.46
ETC ENDURE	ETC	Economy	30,000		\$	806.31	\$	425.15	\$	1,231.46
ILLINOIS MUNICIPAL ELECTRIC AGENCY	IMEA	Economy	76,000		\$	1,246.25	\$	657.13	\$	1,903.38
INDIANA MUNICIPAL POWER AGENCY	IMPA	Economy	65,000		\$	2,975.54	\$	1,568.96	\$	4,544.50
ENERGY IMBALANCE	IMBL	Economy	73,000		\$	1,558.89	\$	821.99	\$	2,380.88
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR,	I MISO	Economy	698,000		\$	17,773.12	\$	9,371.59	\$	27,144.71
PJM INTERCONNECTION ASSOCIATION	PJM	Economy	3,246,000		\$	83,790.19	\$	44,181.52	\$	127,971.71
THE ENERGY AUTHORITY	TEA	Economy	15,000		\$	393.48	\$	207.49	\$	600.97
TENASKA POWER SERVICES CO.	TPS	Economy	44,000		\$	1,239.93	\$	653.80	\$	1,893.73
WESTAR ENERGY, INC.	WSTR	Economy	539,000		\$	14,109.29	\$	7,439.66	\$	21,548.95
LOUISVILLE GAS & ELECTRIC	LGE	Economy	33,661,000		\$	839,447.15	\$	2,173.92	\$	841,621.07
Total Sales			39,033,000	\$ -	\$	978,844.41	\$	75,676.41	\$	1,054,520.82

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

Case No. 2016-00232

# **Question No. 7**

## Witness: Eileen Saunders

- Q-7. List KU's scheduled, actual, and forced outages from November 1, 2015, through April 30, 2016.
- A-7. See attached.

Unit and Outage Type		Scheduled	Actu		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	S	11/6/2015 14:11	11/7/2015 19:53	11/6/2015 14:11	11/7/2015 19:53	29:42	29:42	Electro Hydraulic (EH) fluid valve leak
In-service May 1957	S	1/13/2016 23:42	1/17/2016 1:21	1/13/2016 23:42	1/17/2016 1:21	73:39	73:39	Duct expansion joint replacement - BR1/2 shared
	S	3/12/2016 0:00	4/10/2016 15:00	3/14/2016 12:18	4/11/2016 22:06	711:00	681:48	Minor boiler overhaul
	F			4/14/2016 4:25	4/14/2016 21:27		17:02	Electro Hydraulic (EH) fluid valve leak
E. W. Brown Unit 2 - Coal - 166 MW	S	12/14/2015 7:00	12/14/2015 15:22	12/14/2015 7:00	12/14/2015 15:22	8:22	8:22	Air heater leak repair
In-service June 1963	S	1/13/2016 23:56	1/17/2016 4:57	1/13/2016 23:56	1/17/2016 4:57	77:01	77:01	Duct expansion joint replacement - BR1/2 shared
	S	1/30/2016 9:42	2/1/2016 14:48	1/30/2016 9:42	2/1/2016 14:48	53:06	53:06	Electrostatic precipitator 2-1 ground inspection
	S	2/17/2016 7:00	2/18/2016 14:20	2/17/2016 7:00	2/18/2016 14:20	31:20	31:20	Electrostatic precipitator inspection
	S	3/12/2016 0:00	4/10/2016 15:00	3/14/2016 12:18	4/10/2016 17:45	711:00	653:27	Minor boiler overhaul
	S	4/22/2016 21:00	4/23/2016 16:45	4/22/2016 21:00	4/23/2016 16:45	19:45	19:45	Induced draft (ID) fan vibration
E. W. Brown Unit 3 - Coal - 410 MW	S	10/3/2015 0:00	11/22/2015 15:00	10/2/2015 13:12	11/22/2015 18:01	1215:00	1228:49	Major boiler overhaul and Pulse Jet Fabric Filter (PJFF) tie-in
In-service July 1971	F			11/23/2015 12:09	11/23/2015 23:00		10:51	Repair De-Aerator (DA) instrumentation
	S	1/7/2016 12:00	1/10/2016 18:22	1/7/2016 12:00	1/10/2016 18:22	78:22	78:22	Turbine stop valve repair
	S	1/26/2016 12:34	1/30/2016 19:36	1/26/2016 12:34	1/30/2016 19:36	103:02	103:02	ID fan inspection due to vibration
	S	2/23/2016 7:00	2/23/2016 15:22	2/23/2016 7:00	2/23/2016 15:22	8:22	8:22	PJFF duct inspection
	S	3/19/2016 0:00	4/10/2016 15:00	3/21/2016 10:04	4/16/2016 17:15	543:00	631:11	Add additional layer of catalyst to SCR
	F			4/16/2016 17:15	4/18/2016 5:59		36:44	FGD shutoff damper repair
	F			4/18/2016 9:14	4/19/2016 8:41		23:27	Boiler lower mud drum gasket repair
Ghent Unit 1 - Coal - 479 MW	S	11/10/2015 22:27	11/13/2015 16:35	11/10/2015 22:27	11/13/2015 16:35	66:08	66:08	Boiler first reheater leak repair
In-service February 1974	F			11/13/2015 22:23	11/16/2015 8:28		58:05	Generator breaker failure and repair
	F			1/27/2016 15:12	1/28/2016 17:49		26:37	Boiler first reheater leak repair
	F			2/4/2016 10:48	2/6/2016 19:50		57:02	Boiler first reheater leak repair
	F			2/6/2016 19:50	2/7/2016 11:00		15:10	Circulating water pipe leak repair. Continuation from first reheater repair outag
	F			2/18/2016 2:00	2/18/2016 23:47		21:47	Boiler first superheater leak repair
	S	2/27/2016 0:00	3/20/2016 15:00	2/24/2016 8:07	3/19/2016 23:16	543:00	591:09	Boiler first reheater leak repair
Ghent Unit 2 - Coal - 495 MW	S	9/26/2015 0:00	12/13/2015 15:00	9/25/2015 9:50	11/27/2015 0:39	1887:00	1502:49	Minor boiler overhaul and Pulse Jet Fabric Filter (PJFF) tie-in
In-service April 1977								

Unit and Outage Type (F=Forced; S=Scheduled)		Scheduled		Act		HOURS OF DURATION		REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
		FROM	то	FROM	то	Scheduled	Actual*	OR REASON FOR FORCED OUTAGE AS APPROPRIATE
Ghent Unit 3 - Coal - 489 MW	s	10/17/2015 0:00	11/15/2015 15:00	10/16/2015 12:44	11/16/2015 1:15	711:00	732:31	Minor turbine overhaul
In-service May 1981	s	11/25/2015 11:21	11/26/2015 7:07	11/25/2015 11:21	11/26/2015 7:07	19:46	19:46	Boiler second superheater leak repair
	S	1/8/2016 22:19	1/9/2016 22:17	1/8/2016 22:19	1/9/2016 22:17	23:58	23:58	Boiler second superheater leak repair
	F			1/11/2016 11:50	1/13/2016 1:20		37:30	Generator iso-phase bus repair
	S	3/8/2016 14:26	3/9/2016 5:41	3/8/2016 14:26	3/9/2016 5:41	15:15	15:15	Boiler first reheater leak repair
Ghent Unit 4 - Coal - 469 MW	S	11/27/2015 12:16	11/29/2015 20:06	11/27/2015 12:16	11/29/2015 20:06	55:50	55:50	Air heater seal repair
n-service August 1984	F			3/14/2016 6:18	3/17/2016 13:19		79:01	Boiler economizer leak repair
	S	3/26/2016 0:00	4/24/2016 15:00	3/30/2016 23:02	4/23/2016 12:25	711:00	565:23	LP Heater Replacements and turbine chemical clean
	S	4/29/2016 22:06	4/30/2016 22:10	4/29/2016 22:06	4/30/2016 22:10	24:04	24:04	Air heater inspection
Trimble County Unit 2 - Coal - 549 MW	F			11/5/2015 16:17	11/9/2015 10:16		89:59	Boiler waterwall tube leak repair
In-service January 2011	F			11/16/2015 21:22	11/17/2015 6:42		9:20	Loss of turbine driven boiler feedwater pump
75% ownership share of 732 MW jointly owned with LG&E	F			11/30/2015 2:35	12/1/2015 4:12		25:37	Forced draft fan vibration inspection
	F			12/9/2015 3:38	12/9/2015 20:28		16:50	ID fan vibration instrumentation
	F			2/6/2016 12:49	2/9/2016 1:21		60:32	Boiler waterwall tube leak repair
	F			3/16/2016 11:50	3/18/2016 15:27		51:37	Boiler waterwall tube leak repair
	F			3/18/2016 15:27	3/20/2016 14:17		46:50	Boiler waterwall tube leak repair
	F			3/22/2016 6:22	3/23/2016 9:00		26:38	Boiler waterwall tube leak repair
	S	3/26/2016 0:00	4/24/2016 15:00	3/23/2016 9:00	4/28/2016 22:30	711:00	877:30	Minor Boiler Overhaul
	S	4/28/2016 22:30	4/30/2016 1:27	4/28/2016 22:30	4/30/2016 1:27	26:57	26:57	Electro Hydraulic (EH) seal repair
	S	4/30/2016 1:27	4/30/2016 9:59	4/30/2016 1:27	4/30/2016 9:59	8:32	8:32	Loss of flame scanner during startup
	S	4/30/2016 16:06	5/9/2016 6:47	4/30/2016 16:06	5/9/2016 6:47	206:41	206:41	High turbine bearing temperature
Cane Run Unit 7 - Gas CC - 642 MW	S	11/14/2015 0:00	11/22/2015 15:00	11/17/2015 20:28	11/25/2015 14:56	207:00	186:28	Boiler inspection
In-service June 2015	F			1/11/2016 13:46	1/12/2016 6:25		16:39	Heat Recovery Steam Generator (HRSG) economizer relief valve repair
Jointly owned with LG&E	S	2/19/2016 22:53	2/21/2016 14:30	2/19/2016 22:53	2/21/2016 14:30	39:37	39:37	HRSG economizer vent line leak
E. W. Brown Unit 5 - Gas CT - 112 MW	S	3/4/2016 8:02	3/4/2016 14:02	3/4/2016 8:02	3/4/2016 14:02	6:00	6:00	Annual calibration of gas flow meter
In-service June 2001	S	4/22/2016 5:27	4/22/2016 13:03	4/22/2016 5:27	4/22/2016 13:03	7:36	7:36	Inspect NOx water strainer instrumentation
Jointly owned with LG&E								
E. W. Brown Unit 6 - Gas CT - 146 MW	S	12/9/2015 7:42	12/9/2015 14:00	12/9/2015 7:42	12/9/2015 14:00	6:18	6:18	Annual calibration of gas flow meter
In-service August 1999	S	3/10/2016 7:21	3/10/2016 21:26	3/10/2016 7:21	3/10/2016 21:26	14:05	14:05	Lube oil system calibration
Jointly owned with LG&E								

Unit and Outage Type		Scheduled		Actual*		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 7 - Gas CT - 146 MW	F			1/6/2016 9:15	1/12/2016 13:48		148:33	Turbine inspection	
In-service August 1999	S	3/30/2016 13:30	3/31/2016 4:00	3/30/2016 13:30	3/31/2016 4:00	14:30	14:30	Lube oil system calibration	
Jointly owned with LG&E	S	4/28/2016 6:56	4/28/2016 13:21	4/28/2016 6:56	4/28/2016 13:21	6:25	6:25	Purge valve leak repair	
E. W. Brown Unit 8 - Gas CT - 102 MW	S	11/3/2015 8:02	11/3/2015 15:27	11/3/2015 8:02	11/3/2015 15:27	7:25	7:25	Gas control valve A repair	
In-service February 1995	S	12/31/2015 8:52	12/31/2015 15:36	12/31/2015 8:52	12/31/2015 15:36	6:44	6:44	Gas control valve B repair	
	S	3/29/2016 15:17	4/3/2016 11:17	3/29/2016 15:17	4/3/2016 11:17	116:00	116:00	NOx pump replacement	
E. W. Brown Unit 9 - Gas CT - 102 MW	S	3/1/2016 7:00	3/1/2016 13:01	3/1/2016 7:00	3/1/2016 13:01	6:01	6:01	Lube oil vapor extractor motor replacement	
In-service January 1995	F			4/17/2016 9:54	4/18/2016 14:14		28:20	Fire suppression system valve repair	
	S	4/25/2016 6:00	4/25/2016 19:39	4/25/2016 6:00	4/25/2016 19:39	13:39	13:39	Lube oil system instrument calibration	
E. W. Brown Unit 10 - Gas CT - 102 MW	F			1/10/2016 16:24	1/10/2016 23:01		6:37	Switchyard breaker repair	
In-service December 1995	S	3/2/2016 8:45	3/2/2016 15:30	3/2/2016 8:45	3/2/2016 15:30	6:45	6:45	Switchyard motor operated switch repair	
E. W. Brown Unit 11 - Gas CT - 102 MW	F			4/1/2016 8:44	4/1/2016 15:26		6:42	Hydraulic oil pump repair	
In-service May 1996									
Haefling Unit 1 - Gas CT - 12 MW	F			4/14/2016 13:31	4/15/2016 7:52		18:21	Turbine control system repair	
In-service October 1970									
Haefling Unit 2 - Gas CT - 12 MW	F			4/14/2016 9:13	4/15/2016 12:09		26:56	Turbine control system repair	
In-service October 1970									
Paddys Run Unit 13 - Gas CT - 147 MW	F			11/11/2015 7:26	11/17/2015 15:50		152:24	Gas line repair	
In-service June 2001	F			11/17/2015 16:30	11/19/2015 12:16		43:46	Gas compressor vibration inspection	
Jointly owned with LG&E	F			11/19/2015 13:06	11/20/2015 11:03		21:57	Gas compressor repair test	
	F			11/23/2015 3:03	11/25/2015 14:40		59:37	Gas compressor vibration trip	
	F			1/11/2016 0:00	1/11/2016 13:20		13:20	Low gas pressure	
	F							Low gas pressure	
	F							Low gas pressure	
	F			1/24/2016 0:00	1/24/2016 17:00		17:00	Low gas pressure	
	F			2/9/2016 7:30	2/11/2016 17:00		57:30	Low gas pressure	
	F							Low gas pressure	
	S	2/25/2016 8:00	2/25/2016 20:00	2/25/2016 8:00	2/25/2016 20:00	12:00	12:00	Gas line maintenance	
	S	3/5/2016 0:00	3/13/2016 15:00	2/27/2016 7:00	3/6/2016 12:00	207:00	197:00	Combustion chamber inspection	
	F			3/9/2016 6:55	4/21/2016 12:55		1038:00	Hydraulic pressure switch repair	

Unit and Outage Type		Scheduled			ıal*	HOURS OF DURATION		REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE
(F=Forced; S=Scheduled)		FROM TO		FROM TO		Scheduled Actual*		OR REASON FOR FORCED OUTAGE AS APPROPRIATE
Trimble County Unit 5 - Gas CT - 157 MW	F			11/8/2015 19:14	11/10/2015 15:10		43:56	Breaker air compressor replacement
In-service May 2002	S	12/12/2015 0:14	12/19/2015 16:28	12/12/2015 0:14	12/19/2015 16:28	184:14	184:14	Motor operated disconnect replacement
Jointly owned with LG&E	F			2/16/2016 11:34	2/17/2016 15:29		27:55	Starting System - Moisture in DC link reactor
	F			2/17/2016 17:30	2/18/2016 1:39		8:09	Generator Neutral Grounding Equipment - switch repair
Trimble County Unit 6 - Gas CT - 157 MW	S	12/14/2015 0:48	12/19/2015 18:15	12/14/2015 0:48	12/19/2015 18:15	137:27	137:27	Motor operated disconnect replacement
In-service May 2002	F			1/5/2016 5:44	1/5/2016 19:44		14:00	Starting System - LCI cooling water conductivity out of range
Jointly owned with LG&E	F			1/10/2016 18:16	1/11/2016 5:56		11:40	Generator Neutral Grounding Equipment - switch repair
	S	2/4/2016 0:00	2/4/2016 16:15	2/4/2016 0:00	2/4/2016 16:15	16:15	16:15	Gas valve hydraulic line repair
	S	2/15/2016 8:17	2/15/2016 20:14	2/15/2016 8:17	2/15/2016 20:14	11:57	11:57	Gas heater controller repair
	F			2/16/2016 11:34	2/17/2016 15:29		27:55	Starting System - Shared LCI with Unit 5 (see TC5 Event on 2/16)
	F			2/17/2016 17:30	2/18/2016 1:38		8:08	Generator neutral grounding equipment
	S	3/23/2016 7:40	3/23/2016 13:48	3/23/2016 7:40	3/23/2016 13:48	6:08	6:08	Exhaust compartment inspection
	S	4/22/2016 20:30	5/29/2016 14:56	4/22/2016 20:30	5/29/2016 14:56	882:26	882:26	Hot gas path inspection
Trimble County Unit 7 - Gas CT - 157 MW	S	12/14/2015 0:01	12/19/2015 17:25	12/14/2015 0:01	12/19/2015 17:25	137:24	137:24	Motor operated disconnect replacement
In-service June 2004	S	3/12/2016 8:00	3/16/2016 18:31	3/12/2016 8:00	3/16/2016 18:31	106:31	106:31	Generator Protection Upgrade
Jointly owned with LG&E								
Trimble County Unit 8 - Gas CT - 157 MW	S	3/12/2016 8:00	3/16/2016 20:43	3/12/2016 8:00	3/16/2016 20:43	108:43	108:43	Generator Protection Upgrade
In-service June 2004								
Jointly owned with LG&E								
Trimble County Unit 9 - Gas CT - 157 MW	S	2/5/2016 12:27	2/7/2016 11:29	2/5/2016 12:27	2/7/2016 11:29	47:02	47:02	Flux probe installation
In-service July 2004	S	3/21/2016 2:27	5/4/2016 0:00	3/21/2016 2:27	5/4/2016 0:00	1053:33	1053:33	Generator Rotor Rewind and Stator Re-Wedge
Jointly owned with LG&E								
Trimble County Unit 10 - Gas CT - 157 MW	F			3/16/2016 22:40	3/17/2016 4:47		6:07	Exciter control cabinet Inspection
In-service July 2004								
Jointly owned with LG&E								

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

Case No. 2016-00232

## **Question No. 8**

## Witness: Mike Dotson

- 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.

A. NAME/ADDRESS:	1717 S	ce Coal, LLC / J09002 South Boulder Av., Su Oklahoma 74119-48	ite 400		
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	River	View Coal, LLC View Mine County, Kentucky			
C. CONTRACT EXECUTED DATE:	November 10, 2008				
D. CONTRACT DURATION:	Noven	nber 3, 2008 – Decem	ber 31, 2015		
E. CONTRACT AMENDMENTS:	barge f Barge	dment No. 1 dated Ma fleeting demurrage ch Delivery. Added Bar Section 8.1.	-		
F. ANNUAL TONNAGE REQUIREMENTS:	2010 2011 2012 2013 2014 2015	2,000,000 tons 2,000,000 tons	28 tons)		
G. ACTUAL TONNAGE RECEIVED:	2010 2011 2012 2013 2014 2015 2016	, ,	<u>KU</u> 443,658 tons 771,648 tons 204,987 tons 408,370 tons 769,694 tons 719,295 tons 28,878 tons		
H. PERCENT OF ANNUAL REQUIREMENTS:	2010 2011 2012 2013 2014 2015	100% 97% 101% 101% 98% 100%			
H. PERCENT OF ANNUAL	2016	(carryover tonnage)			

REQUIREMENTS

I. BASE PRICE (FOB Barge):	\$41.00 per ton
J. ESCALATIONS TO DATE:	\$15.89 per ton
K. CURRENT CONTRACT PRICE:	\$56.89 per ton

A. NAME/ADDRESS:	Alliance Coal, LLC / J12007 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 tons2016950,192 tons0 tons(through 4/30/16)0					
H. PERCENT OF ANNUAL REQUIREMENTS:	2012 96% 2013 102% 2014 100% 2015 101% 2016 32% (through 4/30/16)					

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 - \$47.13 per ton FOB Railcar/Warrior 2015 - \$46.88 per ton FOB Railcar/Dotiki 2016 - \$45.75 per ton FOB Railcar/Warrior 2016 - \$45.00 per ton FOB Dotiki
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$45.75 per ton FOB Railcar/Warrior \$45.00 per ton FOB Railcar/Dotiki

A. NAME/ADDRESS:	Alliance Coal, LLC / J13004B 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, 2015 – December 31, 2015
E. CONTRACT AMENDMENTS:	Contract J13004 Assignment from Patriot Coal Sales to Alliance Coal, LLC
F. ANNUAL TONNAGE REQUIREMENTS:	2015 315,209 tons
G. ACTUAL TONNAGE RECEIVED:	LG&E         KU           2015         257,101 tons         58,588 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 100%
I. BASE PRICE (FOB Railcar/Barge):	2015 - \$49.75 per ton FOB Barge
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$49.75 per ton

A. NAME/ADDRESS:	Alliance Coal, LLC / J14011B 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, 2015 – December 31, 2015
E. CONTRACT AMENDMENTS:	Contract J14011 Assignment from Patriot Coal Sales to Alliance Coal, LLC
F. ANNUAL TONNAGE REQUIREMENTS:	2015 598,099 tons
G. ACTUAL TONNAGE RECEIVED:	$\frac{LG\&E}{275,753 \text{ tons}} \qquad \frac{KU}{322,930 \text{ tons}}$
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 100%
I. BASE PRICE (FOB Railcar/Barge):	2015 - \$43.75 per ton FOB Barge
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$43.75 per ton

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:	2016 LG&E KU 2016 143,714 tons 136,555 tons (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 29% (through 4/30/16)
I. BASE PRICE (FOB Barge):	2016 - \$46.69 per ton 2017 - \$48.25 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$46.69 per ton

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 Gibson South Gibson County, Indiana
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
F. ANNUAL TONNAGE REQUIREMENTS:	2016 250,000 tons 2017 250,000 tons
G. ACTUAL TONNAGE RECEIVED:	2016 <u>LG&amp;E</u> <u>KU</u> 44,507 tons 36,604 tons (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 32% (through 4/30/16)
I. BASE PRICE (FOB Railcar/Barge):	2016 - \$47.00 per ton FOB Railcar \$54.50 per ton FOB Barge
	2017 - \$49.00 per ton FOB Railcar
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	\$47.00 Railcar per ton \$54.50 Barge per ton

A. NAME/ADDRESS:	Arch Coal Sales Company, Inc. / J14038 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:	May 7, 2014
D. CONTRACT DURATION:	May 1, 2014 - December 31, 2015
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2014450,000 tons2015600,000 tons
G. ACTUAL TONNAGE: RECEIVED:	<u>KU</u> 2014 438,702 tons 2015 621,479
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 97% 2015 104%
I. BASE PRICE (FOB Railcar)	2014\$12.60 per ton2015\$13.40 per ton
J. ESCALATIONS TO DATE:	\$0.00 per ton
K. CURRENT CONTRACT PRICE:	\$13.40 per ton

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:	2016600,000 tons2017600,000 tons
G. ACTUAL TONNAGE: RECEIVED:	<u>KU</u> 2016 185,647 (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 31% (through 4/30/16)
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:	\$11.50 per ton

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:	January 1, 2008 - December 31, 2019
E.	CONTRACT AMENDMENTS:	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:	2008600,000 tons20092,200,000 tons20101,800,000 tons2011 through 2013 - 2,100,000 tons per year2014 through 2016 - 1,000,000 tons per year2017 through 2019 - 700,000 tons per year
G.	ACTUAL TONNAGE: RECEIVED:	LG&EKU2008511,414 tons82,623 tons20091,530,482 tons632,077 tons20101,180,206 tons657,930 tons2011993,296 tons877,219 tons2012904,254 tons1,211,495 tons2013838,589 tons1,431,403 tons2014346,954 tons634,044 tons

	2015 2016	<u>LG&amp;E</u> 312,387 tons 133,847 tons (through 4/30/16)	<u>KU</u> 627,074 tons 252,255 tons
H. PERCENT OF ANNUAL	2008	99%	
<b>REQUIREMENTS:</b>	2009	98%	
-	2010	102%	
	2011	89%	
	2012	101%	
	2013	108%	
	2014	98%	
	2015	94%	
	2016	39% (through 4/30/	16)
I. BASE PRICE (FOB Barge)	2008	Quality 1 - \$27.31 pe Quality 2 - \$28.30 pe	
	2009	Quality 1 - \$27.60 pe	or ton
	2009	Quality 2 - \$28.76 pe	
		Quanty 2 - \$28.70 pe	
	2010	Quality 1 - \$28.18 pe	er ton
		Quality 2 – N/A	
	2011	Quality 1 - \$28.19 pe	er ton
	_011	Quality 2 - \$29.61 pe	
	• • • •		
	2012	Quality 1 - \$28.35 pe	
		Quality 2 - \$29.77 pe	er ton
	2013	Quality 1 - \$28.35 pe	er ton
		Quality 2 - \$29.77 pe	
	2014 2015		
	2014-2017	Quality 1 - \$28.50 pe	
		Quality 2 - \$29.92 pe	er ton
	2018	Quality 1 - \$29.00 pe	er ton
		Quality 2 - \$30.42 pe	
		1	
	2019	Quality 1 - \$30.25 pe	
		Quality 2 - \$31.67 pe	er ton

J. ESCALATIONS TO DATE:

None

K. CURRENT CONTRACT PRICE:

Quality 1 - \$28.50 per ton

A. NAME/ADDRESS:	Armstrong Coal Company, Inc. / J12004 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 19, 2011
D. CONTRACT DURATION:	January 1, 2012 - December 31, 2015
E. CONTRACT AMENDMENTS:	Amendment No. 1, effective January 1, 2012 amending base quantity. Amendment No. 2, effective January 1, 2012 amending base quantity.
F. ANNUAL TONNAGE REQUIREMENTS:	2012355,873 tons2013500,000 tons20141,000,000 tons20151,000,000 tons
G. ACTUAL TONNAGE: RECEIVED:	LG&EKU2012351,344 tons-2013530,577 tons-2014488,729 tons477,639 tons2015501,847 tons502,893 tons20160 tons3,214 tons(carryover tonnage)
H. PERCENT OF ANNUAL REQUIREMENTS:	201299%2013106%201497%2015100%2016(carryover tonnage)

I. BASE PRICE (FOB Railcar/Barge)	2012\$45.00 per ton2013\$46.00 per ton2014\$48.00 per ton2015\$49.00 per ton
J. ESCALATIONS TO DATE:	-\$2.55 per ton
K. CURRENT CONTRACT PRICE:	\$46.45 per ton

A. NAME/ADDRESS:	407 B	rong Coal Sales, LLC rown Road onville, Kentucky 424	
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Vario	enberg County and Ohi	
C. CONTRACT EXECUTED DATE:	Decen	nber 12, 2012	
D. CONTRACT DURATION:	Januar	ry 1, 2013 - December	31, 2017
E. CONTRACT AMENDMENTS:	ameno Assign Augus		price. Agreement dated
F. ANNUAL TONNAGE REQUIREMENTS:	2014 2015 2016 2017	1,300,000 tons 1,350,000 tons 500,000 tons 500,000 tons	
G. ACTUAL TONNAGE: RECEIVED:	2014 2015 2016	LG&E 647,205 tons 323,703 tons 58,387 tons (through 4/30/16)	<u>KU</u> 579,440 tons 861,959 tons 191,418 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 2015 2016	94% 88% 50% (through 4/30/1)	6)
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	<u>Barge</u> \$45.60 per ton \$47.01 per ton \$47.75 per ton \$48.90 per ton

J. ESCALATIONS TO DATE:

Railcar/Barge -\$6.63 per ton

K. CURRENT CONTRACT PRICE:

Railcar \$40.12 per ton Barge \$41.12 per ton

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&E         KU           2014         38,628 tons         59,303 tons           2015         28,826 tons         75,097 tons           2016         9,605 tons         22,650 tons           (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 98% 2015 104% 2016 32% (through 4/30/16)
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 ton

2018\$44.00 per ton2019\$45.00 per ton

J. ESCALATIONS TO DATE:

None

K. CURRENT CONTRACT PRICE: \$42.00 per ton

A. NAME/ADDRESS:	407 B	rong Coal Sales, LLC rown Road onville, Kentucky 424	
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	Vario	enberg County and Ohi	
C. CONTRACT EXECUTED DATE:	Septer	mber 8, 2014	
D. CONTRACT DURATION:	Janua	ry 1, 2016 - December	31, 2017
E. CONTRACT AMENDMENTS:	Augus	<b>U</b>	
F. ANNUAL TONNAGE REQUIREMENTS:	2016 2017	1,000,000 tons 1,000,000 tons	
G. ACTUAL TONNAGE: RECEIVED:	2016	<u>LG&amp;E</u> 190,550 tons (through 4/30/16)	<u>KU</u> 117,098 tons
H. PERCENT OF ANNUAL REQUIREMENTS:	2016	31% (through 4/30/10	6)
I. BASE PRICE (FOB Barge/Railcar)	2016 2017	· 1	
J. ESCALATIONS TO DATE:	-\$6.70	) per ton	
K. CURRENT CONTRACT PRICE:	\$36.1	) per ton	

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:	2016 LG&E KU 2016 0 tons 116,850 tons (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 29% (through 4/30/16)
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 -\$4.38 per ton
K. CURRENT CONTRACT PRICE:	RailcarBarge\$33.87 per ton\$34.87 per ton

A. NAME/ADDRESS:	6100 I	Refined Coal LLC / H Dutchmans Lane, 11 <sup>th</sup> Ville, Kentucky 40205	
B. PRODUCTION FACILITY: OPERATOR MINES LOCATION	BRC F	Refined Coal LLC Estill County Facility County, Kentucky	
C. CONTRACT EXECUTED DATE:	Octob	er 6, 2014	
D. CONTRACT DURATION:	Octob	er 1, 2014 - December	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	<u>KU</u> 12,672 tons 99,611 tons 17,065 tons (through	4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2014 2015 2016	42% 83% 14% (through 4/30/16	6)
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> \$59.67 per ton	<u>80,000 lbs. GVW</u> \$70.67 per ton

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:	2016 <u>LG&amp;E</u> <u>KU</u> 43,945 tons 42,553 tons (through 4/30/16)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 29% (through 4/30/16)
I. BASE PRICE (FOB Barge)	2016\$48.20 per ton2017\$49.30 per ton2018\$52.30 per ton
J. ESCALATIONS TO DATE:	-\$4.78 per ton
K. CURRENT CONTRACT PRICE:	\$43.42 per ton

A. NAME/ADDRESS:	Foresight Coal Sales, LLC / J12005 211 North Broadway, Suite 2600 St. Louis, Missouri 63102
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	Macoupin Energy, LLC Sugar Camp Energy, LLC Shay Mine No. 1 Deer Run Mine Sugarcamp Mine Macoupin, Montgomery and Franklin Counties, Illinois
C. CONTRACT EXECUTED DATE:	March 14, 2012
D. CONTRACT DURATION:	April 1, 2012 - December 31, 2017
E. CONTRACT AMENDMENTS:	Amendment No. 1, effective September 10, 2013 amending, term, quantity and price.
F. ANNUAL TONNAGE REQUIREMENTS	2012500,000 tons20131,000,000 tons20141,000,000 tons20151,000,000 tons2016Reopener2017Reopener
G. ACTUAL TONNAGE: RECEIVED:	KULGE2012501,975 tons462,614 tons2013446,791 tons389,734 tons2014439,606 tons567,280 tons2015452,008 tons531,744 tons201617,381 tons27,702 tons(carryover tonnage)
H. PERCENT OF ANNUAL REQUIREMENTS:	2012100%201396%2014101%201598%2016(carryover tonnage)

I. BASE PRICE: (FOB Barge)	2012 2013 2014 2015 2016 2017	\$39.75 per ton
J. ESCALATIONS TO DATE:	None	
K. CURRENT CONTRACT PRICE:	\$43.50	) per ton

A. NAME/ADDRESS:	Foresight Coal Sales, LLC / J16018 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:	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:	KULGE20160 tons0 tons		
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 NA		
I. BASE PRICE: (FOB Barge)	Volume Range (Cumulative)Base Price0 - 1,000,000 tons\$38.95 per ton		
	0 - 1,000,000 tons\$38.95 per ton $1,000,001 - 2,000,000$ tons\$40.45 per ton $2,000,001 - 3,000,000$ tons\$42.35 per ton		
J. ESCALATIONS TO DATE:	1,000,001 – 2,000,000 tons \$40.45 per ton		

A. NAME/ADDRESS:	Peabody COALSALES, LLC / J12011 701 Market Street St. Louis, Missouri 63101				
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Peabody Midwest Mining, LLC Peabody Wild Boar Mining, LLC Somerville Mine Complex Wild Boar Warrick & Gibson Counties, Indiana				
C. CONTRACT EXECUTED DATE:	December 29, 2011				
D. CONTRACT DURATION:	January 1, 2012 – December 31, 2015				
E. CONTRACT AMENDMENTS:	Amendment No. 1 effective July 1, 2014 Extend term to December 31, 2015 and add 1.0M tons to 2015				
F. ANNUAL TONNAGE REQUIREMENTS:	20121,500,000 tons20131,500,000 tons20141,500,000 tons20151,000,000 tons				
G. ACTUAL TONNAGE RECEIVED:	KULGE2012995,669 tons510,080 tons20131,031,172 tons448,290 tons20141,088,584 tons453,789 tons2015932,143 tons66,287 tons20160 tons12,778 tons(carryover tonnage)				
H. PERCENT OF ANNUAL REQUIREMENTS:	2012100%201399%2014103%2015100%2016(carryover tonnage)				
I. BASE PRICE: (FOB Barge/Railcar)	<ul> <li>\$49.90 per ton – FOB Barge Evansville</li> <li>\$49.11 per ton – FOB Barge Warrick Co.</li> <li>\$44.50 per ton – FOB Railcar</li> </ul>				

- 2013 \$52.15 per ton FOB Barge Evansville \$51.36 per ton – FOB Barge Warrick Co. \$46.75 per ton – FOB Railcar
- 2014 \$54.15 per ton FOB Barge Evansville \$53.36 per ton – FOB Barge Warrick Co. \$48.75 per ton – FOB Railcar
- 2015 \$44.50 per ton FOB Barge Evansville \$44.50 per ton – FOB Barge Warrick Co. \$41.50 per ton – FOB Railcar
- J. ESCALATIONS TO DATE: -\$5.10 per ton – FOB Barge Evansville -\$4.30 per ton – FOB Warrick Co. -\$4.30 per ton – FOB Railcar
- K. CURRENT CONTRACT PRICE: \$39.40 per ton FOB Barge Evansville \$40.20 per ton – FOB Barge Warrick Co. \$37.20 per ton – FOB Railcar

A. NAME/ADDRESS:	Peabody COALSALES, LLC / J16007 701 Market Street St. Louis, Missouri 63101
B. PRODUCTION FACILITY: OPERATOR MINE LOCATION	Peabody Midwest Mining, LLC Peabody Wild Boar Mining, LLC Somerville Mine Complex Wild Boar Warrick & Gibson Counties, Indiana
C. CONTRACT EXECUTED DATE:	April 6, 2015
D. CONTRACT DURATION:	April 1, 2015 – December 31, 2018
E. CONTRACT AMENDMENTS:	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.
F. ANNUAL TONNAGE REQUIREMENTS:	2016750,000 tons2017750,000 tons2018750,000 tons
G. ACTUAL TONNAGE RECEIVED:	2016 <u>KU</u> <u>LGE</u> 227,137 tons 0 tons (through 4/30/2016)
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 30% (through 4/30/2016)
I. BASE PRICE: (FOB Barge/Railcar)	<ul> <li>2016 1<sup>st</sup> 500,000 tons</li> <li>\$45.75 per ton – FOB Barge Evansville</li> <li>\$45.75 per ton – FOB Barge Warrick Co.</li> <li>\$42.75 per ton – FOB Railcar</li> </ul>
	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

- 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

2016 1<sup>st</sup> 500,000 tons -\$8.42 per ton – FOB Barge Evansville -\$7.49 per ton – FOB Warrick Co. -\$7.49 per ton – FOB Railcar

2016 Last 250,000 tons -\$4.25 per ton – FOB Barge Evansville -\$3.85 per ton – FOB Warrick Co. -\$3.85 per ton – FOB Railcar

2016 1<sup>st</sup> 500,000 tons \$37.33 per ton – FOB Barge Evansville \$38.26 per ton – FOB Barge Warrick Co. \$35.26 per ton – FOB Railcar

2016 Last 250,000 tons
\$36.50 per ton – FOB Barge Evansville
\$36.90 per ton – FOB Barge Warrick Co.
\$33.90 per ton – FOB Railcar

J. ESCALATIONS TO DATE:

K. CURRENT CONTRACT PRICE:

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:	None		
F. ANNUAL TONNAGE REQUIREMENTS:	2014 150,000 tons 2015 800,000 tons 2016 800,000 tons 2017 800,000 tons 2018 – 2020 re-opener		
G. ACTUAL TONNAGE RECEIVED:	LG&E         KU           2014         43,582 tons         70,647 tons           2015         121,084 tons         580,770 tons           2016         29,555 tons         245,420 tons           (through 4/30/16)         100		
H. PERCENT OF ANNUAL REQUIREMENTS:	2014       76%         2015       88%         2016       34% (through 4/30/16)		
I. BASE PRICE (FOB Barge):	2014       \$45.25 per ton         2015       \$46.50 per ton         2016       \$48.25 per ton         2017       \$50.00 per ton         2018 - 2020 re-opener		
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	\$48.25 per ton		

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			
C. CONTRACT EXECUTED DATE:	December 19, 2015			
D. CONTRACT DURATION:	December 1, 2014 - December 31, 2019			
E. CONTRACT AMENDMENTS:	Amendment No.1 effective January 1, 2016, change FOB Barge Loading Point to Sitran Dock MP 817.5 Ohio River.			
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:	$\begin{array}{ccc} 2016 & \underline{KU} & \underline{LGE} \\ 0 \ tons & 0 \ tons \\ (through 4/30/2016) \end{array}$			
H. PERCENT OF ANNUAL REQUIREMENTS:	2016 NA			
I. BASE PRICE: (FOB Barge)	Volume Range (Cumulative) $0 - 500,000$ tonsBase Price \$48.50 per ton \$49.00 per ton \$49.00 per ton \$49.75 per ton \$49.75 per ton \$50,001 - 2,000,000 tons $2,000,001 - 2,500,000$ tons $2,500,001 - 3,000,000$ tonsBase Price \$48.50 per ton \$49.75 per ton \$50.50 per ton \$51.50 per ton \$52.00 per ton			
J. ESCALATIONS TO DATE:	None			
K. CURRENT CONTRACT PRICE:	\$48.50 per ton			

A. NAME/ADDRESS:	Triad Mining, LLC / J15002 3228 Summit Square Place, Suite 18 Lexington, Kentucky 40509			
B. PRODUCTION FACILITY: OPERATOR: MINES: LOCATION:	Triad Mining, LLC Log Creek Pike County, Indiana			
C. CONTRACT EXECUTED DATE:	January 23, 2015			
D. CONTRACT DURATION:	January 1, 2015 - December 30, 2017			
E. CONTRACT AMENDMENTS:	None			
F. ANNUAL TONNAGE REQUIREMENTS:	2015360,000 tons2016500,000 tons2017500,000 tons			
G. ACTUAL TONNAGE: RECEIVED:	KU           2015         362,200 tons           2016         110,691 tons           (through 4/30/16)			
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 101% 2016 22% (through 4/30/16)			
I. BASE PRICE: (FOB Railcar)	2015\$44.00 per ton2016\$46.00 per ton2017\$47.50 per ton			
J. ESCALATIONS TO DATE:	-\$4.03 per ton			
K. CURRENT CONTRACT PRICE:	\$41.97 per ton			

## **KENTUCKY UTILITIES COMPANY**

## Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

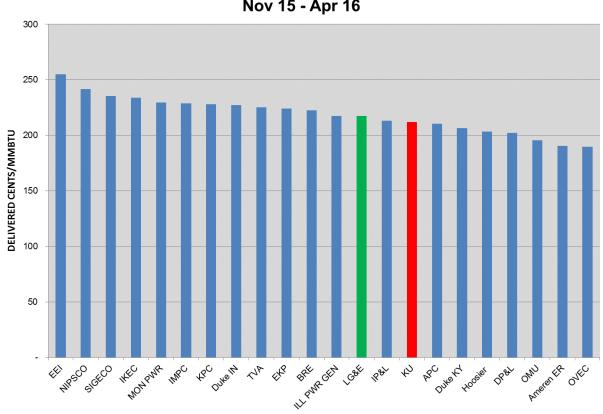
## Case No. 2016-00232

### **Question No. 9**

### Witness: Mike Dotson

- Q-9. a. State whether KU regularly compares the price of its coal purchases to those paid by other electric utilities.
  - b. If yes, 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 list found on page 1 and the chart found of page 2 of the Attachment to this response and for the period of November 1, 2015 through April 30, 2016.

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 15 - Apr 16

Plant Operator Name	Reported Source Name	Quantity (000s tons)	Btu/lb	lbsSO2/mmBtu	Delivered Fuel Price Cents/mmBtu
AmerenEnergy Resources Generating Co	PEABODY COAL SALES	602	8800	0.44	195.14
AmerenEnergy Resources Generating Co	ARCH	784	8820	0.52	186.92
		1,386	8811	0.49	190.49
Appalachian Power Co	SOUTHERN COAL SALES CORP	144	12148	1.35	230.40
Appalachian Power Co	PEABODY COAL TRADE	72	12264	1.38	229.12
Appalachian Power Co	MERCURIA ENERGY TRADING INC	46	12222	1.21	200.79
Appalachian Power Co	MAPLE COAL CO	39	12280	1.43	275.30
Appalachian Power Co	ERP COMPLIANT FUELS LLC	79	11983	1.26	233.11
Appalachian Power Co	EDF TRADING	27	12023	1.54	284.16
Appalachian Power Co	CONSOLIDATION COAL CO	811 164	12841 13005	5.60 3.94	227.76 161.97
Appalachian Power Co Appalachian Power Co	BLACKHAWK MINING LLC	253	12265	1.40	229.95
Appalachian Power Co	AMERICAN ENERGY	2,219	12485	6.68	190.55
Appalachian Power Co	ALPHA COAL	962	12231	1.80	234.25
		4,817	12472	4.70	210.26
Big Rivers Electric Corp	RHINO ENERGY	175	11755	4.36	208.21
Big Rivers Electric Corp	PEABODY COAL SALES	110	11048	5.44	193.45
Big Rivers Electric Corp Big Rivers Electric Corp	KENAMERICA RESOURCES FORESIGHT COAL SALES	211 132	11796 10991	4.81 5.63	214.68 177.89
Big Rivers Electric Corp	COECLERICI COAL NETWORK	47	11165	5.48	201.88
Big Rivers Electric Corp	ARMSTRONG COAL	131	11586	4.97	225.99
Big Rivers Electric Corp	ALLIANCE COAL	579	11971	5.41	244.43
-		1,385	11686	5.17	222.34
		005	44700	4.05	
Dayton Power & Light Co (The) Dayton Power & Light Co (The)	WILLIAMSON ENERGY WHITE OAK RESOURCES LLC	695 268	11703 11737	4.65 4.29	220.92 197.57
Dayton Power & Light Co (The)	VITOL	208 71	11620	4.29	202.72
Dayton Power & Light Co (The)	TRAFIGURA	171	11752	3.56	181.49
Dayton Power & Light Co (The)	PEABODY COAL TRADE	26	11554	1.49	174.37
Dayton Power & Light Co (The)	PEABODY COAL SALES	3	11945	1.34	173.50
Dayton Power & Light Co (The)	MERCURIA	27	11726	4.55	176.28
Dayton Power & Light Co (The)	KOLMAR AMERICAS INC	69	12009	1.83	192.47
Dayton Power & Light Co (The) Dayton Power & Light Co (The)	FORESIGHT COAL SALES CONSOL	346 50	11698 12963	4.94 4.07	208.34 177.30
Dayton Power & Light Co (The)	COLONA		12903	3.68	177.40
Dayton Power & Light Co (The)	AMERICAN COAL	722	11797	4.22	195.34
Dayton Power & Light Co (The)	ALPHA COAL	247	12720	3.88	197.76
Dayton Power & Light Co (The)	ALLIANCE COAL	158	11913	4.94	201.39
		2,863	11862	4.32	202.27
Duke Energy Indiana	SUNRISE COAL SALES	94	11428	5.94	260.87
Duke Energy Indiana	SOLAR SOURCES	522	11204	4.40	198.99
Duke Energy Indiana	PEABODY COAL TRADE	13	11639	1.39	181.60
Duke Energy Indiana	PEABODY COAL SALES	2,730	11080	4.90	203.01
Duke Energy Indiana	PATRIOT COAL SALES	44	12192	1.19	219.94
Duke Energy Indiana	MODELED - SOLAR SOURCES	470	11189	4.38	199.78
Duke Energy Indiana	FOSSIL COALLLC	23	11262	1.54	189.17
Duke Energy Indiana Duke Energy Indiana	DUKE ENERGY BLACK BEAUTY	30 1,202	11522 11486	5.19 6.10	312.20 218.89
Duke Energy Indiana	ALPHA COAL	1,202	12594	1.06	244.70
Duke Energy Indiana	ALLIANCE COAL	726	11523	2.53	360.44
		5,870	11260	4.73	227.31
		10	11100	F 10	047.45
Duke Energy Kentucky Duke Energy Kentucky	TRAFIGURA RIVER VIEW COAL	48 322	11499 12056	5.19 4.90	217.15 221.51
Duke Energy Kentucky	PEABODY COAL TRADE	21	12056	2.31	178.99
Duke Energy Kentucky	NOBLE AMERICAS GAS & POWER	73	12045	1.55	185.74
Duke Energy Kentucky	FORESIGHT COAL SALES	10	11198	5.37	201.90
Duke Energy Kentucky	CONSOL	87	12958	3.89	185.06
Duke Energy Kentucky	ARMSTRONG COAL	97	11601	4.72	211.60
Duke Energy Kentucky	ALPHA COAL	118	13010	4.33	195.15
Duke Energy Kentucky	ALLIANCE COAL	3	12562	4.82	181.30
		779	12198	4.32	206.65

					Delivered Fuel
		Quantity (000s			Price
Plant Operator Name	Reported Source Name	tons)	Btu/Ib	lbsSO2/mmBtu	Cents/mmBtu
East Kentucky Power Coop	WHITE OAK RESOURCES LLC	117	11594	4.43	252.77
East Kentucky Power Coop	WHITE COUNTY COAL	165	11496	5.13	266.41
East Kentucky Power Coop	RIVER VIEW COAL RIVER TRADING	148 32	11578 10702	5.05 2.31	239.41 174.56
East Kentucky Power Coop East Kentucky Power Coop	PEABODY COAL SALES	185	11028	5.55	239.64
East Kentucky Power Coop	OXFORD MINING CO	471	11200	6.44	199.15
East Kentucky Power Coop	JAMIESON CONSTRUCTION CO		13560	3.16	270.80
East Kentucky Power Coop	FORESIGHT COAL SALES	290	11699	4.59	229.00
East Kentucky Power Coop	BOWIE REFINED COAL	28	11659	3.23	225.33
East Kentucky Power Coop	BOWIE	47	11909	2.58	225.65
East Kentucky Power Coop	BLACKHAWK MINING LLC	33	12476	3.06	248.29
East Kentucky Power Coop	B & W RESOURCES B & N COAL	89 234	11936 10846	2.44 8.47	287.47 176.99
East Kentucky Power Coop East Kentucky Power Coop	ALLIANCE COAL	112	12548	4.52	223.11
East Renderly Fower Coop	ALLIANOL OOAL	1,951	11442	5.43	224.23
		1,551	11442	5.45	224.25
Electric Energy Inc	NORTH ANTELOPE	80	8734	0.45	241.04
Electric Energy Inc	BLACK THUNDER ARCH	79	8643	0.53	226.35
Electric Energy Inc	BELLAYRE	47	8793	0.56	216.55
Electric Energy Inc	ANTELOPE	843	8674	0.53	261.10
		1,049	8681	0.52	254.91
Hoosier Energy Rural Electric Coop Inc	SUNRISE COAL SALES	519	11522	5.50	213.27
Hoosier Energy Rural Electric Coop Inc	PEABODY COAL SALES	1,033	11086	5.51	197.99
		1,552	11231	5.51	203.23
Illinois Power Generating Co	PEABODY COAL SALES	1,244	8794	0.51	206.52
Illinois Power Generating Co	CLOUD PEAK	690	8800	0.52	223.02
Illinois Power Generating Co	BLACK THUNDER WEST	34	8800	0.72	231.85
Illinois Power Generating Co	BLACK THUNDER ARCH BELLAYRE	565 167	8800 8789	0.52 0.64	233.59
Illinois Power Generating Co Illinois Power Generating Co	ANTELOPE	313	8800	0.64	204.38 226.00
		3,012	8797	0.53	217.57
		· · · · ·			
Indiana Kentucky Electric Corp	WESTERN KENTUCKY MINERALS	30	11042	5.29	222.24
Indiana Kentucky Electric Corp	RESOURCE FUELS	523	11486	5.15	256.69
Indiana Kentucky Electric Corp	NOBLE AMERICAS GAS & POWER	35	11486	5.18	210.50
Indiana Kentucky Electric Corp Indiana Kentucky Electric Corp	KNIGHTHAWK FORESIGHT COAL SALES	492 149	11183 11265	5.12 5.26	224.37 190.81
	I OREGIGITI OOAE GALEG	1,228	11203	5.16	233.81
		.,		0.10	200.01
Indiana Michigan Power Co	RWE TRADING AMERICASINC	33	12060	1.59	242.64
Indiana Michigan Power Co	PEABODY COAL SALES	2,647	8778	0.46	222.28
Indiana Michigan Power Co	NOBLE ENERGY MARKETING	62	12011	1.56	227.29
Indiana Michigan Power Co	CLOUD PEAK	66	8880	0.50	205.82
Indiana Michigan Power Co Indiana Michigan Power Co	ARCH ALPHA COAL	539 328	8992 12046	0.53 1.28	221.80 279.25
Indiana Michigan Fower Co	ALF HA COAL	3,676	9187	0.57	279.25 228.94
		0,010	0101	0.01	220.04
Indianapolis Power & Light	TRIAD	428	11507	5.87	203.56
Indianapolis Power & Light	SUNRISE COAL SALES	704	11615	5.16	224.61
Indianapolis Power & Light	COALSALES LLC	547	11410	5.92	206.15
Indianapolis Power & Light	COAL SALES	222	11402	5.96	203.77
Indianapolis Power & Light	ALLIANCE COAL	68	11495	2.72	236.12
Indianapolis Power & Light	ALLIANCE	6 1,976	11465 11506	2.37 5.52	246.00 213.13
		1,570	11500	J.JZ	213.13
Kentucky Power Co	NOBLE ENERGY MARKETING	73	11998	1.59	224.86
Kentucky Power Co	KOLMAR AMERICAS INC	28	11944	1.60	210.16
Kentucky Power Co	KOCH	26	11883	1.54	264.68
Kentucky Power Co	CONSOLIDATION COAL CO	726	12540	6.80	216.43
Kentucky Power Co	BEECH FORK PROCESSING	3	12324	1.77	138.20
Kentucky Power Co	ALPHA COAL	670 1,525	12060 12281	1.31 <b>3.94</b>	241.08 227.97
		1,525	12201	5.94	221.91

		Quantity (000s			Delivered Fuel Price
Plant Operator Name	Reported Source Name	tons)	Btu/lb	lbsSO2/mmBtu	Cents/mmBtu
Kentucky Utilities Co	TRIAD	209	11542	6.22	261.37
Kentucky Utilities Co	RIVER TRADING	13	10630	1.82	201.14
Kentucky Utilities Co	RHINO ENERGY	325	11295	4.50	226.12
Kentucky Utilities Co	PEABODY COAL TRADE	10	9860	2.43	150.69
Kentucky Utilities Co	KOLMAR AMERICAS INC	19	10404	1.95	171.72
Kentucky Utilities Co	FORESIGHT COAL SALES	312	11765	4.43	202.05
Kentucky Utilities Co	EAGLE RIVER COAL	43	12603	5.83	197.03
Kentucky Utilities Co	COALSALES LLC	366	11027	5.55	197.50
Kentucky Utilities Co	COAL TRADE	2	10235	1.50	145.90
Kentucky Utilities Co	BOWIE	39	12326	3.84	255.00
Kentucky Utilities Co	ARMSTRONG COAL	1,166 6	11220	5.68	193.27
Kentucky Utilities Co Kentucky Utilities Co	ARCH COAL SALES ARCH	6 8	9655 9402	1.78 1.69	210.50 208.75
Kentucky Utilities Co	AMERICAN COAL	o 167	9402 11792	4.19	206.75
Kentucky Utilities Co	ALLIANCE COAL	369	11792	4.19 3.93	222.15
Kentucky Otimies Co	ALLIANCE COAL	3.051	11397	5.93 5.06	246.63 211.84
		3,051	11373	5.00	211.04
Louisville Gas & Electric Co	RHINO ENERGY	79	11269	4.63	221.02
Louisville Gas & Electric Co	PEABODY COAL TRADE	26	9957	1.90	147.73
Louisville Gas & Electric Co	KOLMAR AMERICAS INC	11	10340	2.05	173.15
Louisville Gas & Electric Co	FORESIGHT COAL SALES	176	11684	4.50	203.40
Louisville Gas & Electric Co	EAGLE RIVER COAL	44	12521	5.68	196.87
Louisville Gas & Electric Co	COALSALES LLC	8	11103	5.62	195.45
Louisville Gas & Electric Co	COAL TRADE	3	10913	2.31	146.80
Louisville Gas & Electric Co	ARMSTRONG COAL	563	11195	5.65	184.34
Louisville Gas & Electric Co	ARCH	315	8952	0.62	223.22
Louisville Gas & Electric Co	AMERICAN COAL	136	11823	4.20	219.71
Louisville Gas & Electric Co	ALLIANCE COAL	2,258	11871	5.51	226.66
		3,620	11474	4.95	217.29
Monongahela Power Co	TUNNEL RIDGE LLC	301	12587	4.59	347.81
Monongahela Power Co	MEPCO OPERATIONS	519	12068	3.73	218.16
Monongahela Power Co	FIRSTENERGY	312	12833	5.57	171.05
Monongahela Power Co		2,830	12557	5.59	235.69
Monongahela Power Co	AMERICAN ENERGY ALLIANCE COAL	1,142 72	12507 12834	7.26 3.83	203.99 220.83
Monongahela Power Co	ALLIANCE COAL	5,176	12034	5.69	220.83 229.37
		5,176	12519	5.09	229.37
Northern Indiana Public Service Co	SUNRISE COAL SALES	160	11357	5.86	231.65
Northern Indiana Public Service Co	PEABODY COAL SALES	315	8855	0.44	237.43
Northern Indiana Public Service Co	OAKTOWN FUELS MINELLC	106	11329	5.70	234.99
Northern Indiana Public Service Co	FORESIGHT COAL SALES	75	10897	6.32	185.32
Northern Indiana Public Service Co	CONSOL	74	12989	3.88	300.21
Northern Indiana Public Service Co	COALSALES LLC	592	10977	5.01	255.68
Northern Indiana Public Service Co	ARCH	513	8944	0.64	227.71
		1,834	10176	3.13	241.63
Ohio Valley Electric Corp	AMERICAN ENERGY	961	12522	7.21	189.65
		961	12522	7.21	189.65

	Duranta I Durana Nama	Quantity (000s	Dia (II)	1. 000/mm Dia	Delivered Fuel Price
Plant Operator Name	Reported Source Name	tons)	Btu/Ib	lbsSO2/mmBtu	Cents/mmBtu
Owensboro Municipal Utilities	YAGER MATERIALS	2	11029	4.19	124.00
Owensboro Municipal Utilities	WEST KY MINERALS	130	10891	5.57	196.54
Owensboro Municipal Utilities	SAMPSON COAL	0	9325	10.24	124.00
Owensboro Municipal Utilities	ROCKPORT RIVER TERMINAL	1	11419	3.53	124.00
Owensboro Municipal Utilities	PEABODY COAL SALES	101	11055	6.44	196.13
Owensboro Municipal Utilities	LR CHAPMAN	0	10396	6.98	124.00
Owensboro Municipal Utilities	KENAMERICA RESOURCES	11	11798	4.87	195.50
Owensboro Municipal Utilities	ARMSTRONG COAL	147	11589	5.20	195.39
Owensboro Municipal Utilities	ARMSTRONG	21	11863	4.74	199.00
		412	11256	5.58	195.63
Southern Indiana Gas & Electric Co	SUNRISE COAL SALES	725	11418	5.87	236.03
Southern Indiana Gas & Electric Co	ALLIANCE COAL	18	11584	4.78	216.10
		743	11422	5.84	235.54
	PEABODY COAL SALES	1 904	10492	2.59	217.08
Tennessee Valley Authority		1,804			
Tennessee Valley Authority	NOBLE ENERGY MARKETING KOPPER GLO	27 24	12120 12687	1.62 2.05	227.87 235.65
Tennessee Valley Authority			12687		
Tennessee Valley Authority	KENAMERICA RESOURCES FORESIGHT COAL SALES	685 283	11710	5.26 4.62	202.30 207.80
Tennessee Valley Authority	EMERALD	283 17	11620		207.80 246.24
Tennessee Valley Authority	CLOUD PEAK	239	8854	1.83 0.75	246.24
Tennessee Valley Authority	BLUE DIAMOND MINING LLC		13128	0.75	230.25
Tennessee Valley Authority	BLOE DIAMOND MINING LLC BLACKHAWK MINING LLC	35 118	13128	1.45	221.27
Tennessee Valley Authority					
Tennessee Valley Authority	ARMSTRONG COAL	769	11695	4.73	230.87
Tennessee Valley Authority	ARCH COAL SALES	1,416	8978	0.56	196.42
Tennessee Valley Authority	ARCH	2,119 11	8910 12261	0.66	196.83 226.47
Tennessee Valley Authority	ALPHA COAL				
Tennessee Valley Authority		1,402	11846	4.31	267.26
Tennessee Valley Authority	ALLIANCE COAL	878	12446	4.97	267.04
		9,827	10522	2.68	225.09

# KENTUCKY UTILITIES COMPANY

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

Case No. 2016-00232

## **Question No. 10**

## Witness: Mike Dotson

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. a. Rail 8%
  - b. Truck 2%
  - c. Barge 90%

Response to Question No. 11 Dotson Page 1 of 2

## KENTUCKY UTILITIES COMPANY

## Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

### Case No. 2016-00232

### Question No. 11

### Witness: Mike Dotson

- Q-11. a. State KU's coal inventory level in tons and in number of days' supply as of April 30, 2016. 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, 2016, 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 yes, state the expected change and the reasons for this change.

#### A-11. a. As of April 30, 2016:

EW Brown	254,362 Tons; 40 Days	Target 30-55 Days
Ghent	1,127,168 Tons; 53 Days	Target 20-39 Days
Trimble County*	426,125 Tons: 65 Days	Target 21-44 Days
Total	1,807,655; 54 Days	Target 23-44 Days

- \* Trimble County coal inventory includes both PRB and High Sulfur coals used for Trimble County Unit 2.
- 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 tons/day targeted inventory days were established for each plant taking into consideration each plant's operating parameters. Each plants "least cost" inventory range is established annually during the planning process based on historical coal burn/receipt variances, procurement reaction time for long-term fuel supply agreements, current coal and electricity prices offset by carrying and outage costs.

- c. See (a) above.
- d. A combination of low load and low gas prices caused system coal consumption to be lower than budget during the review period. Increased gas generation, primarily due to CR7, displaced coal-fired generation during the review period.
- e. (1) KU does not expect significant changes in 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 Dotson Page 1 of 2

## KENTUCKY UTILITIES COMPANY

## Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

#### Case No. 2016-00232

#### Question No. 12

#### Witness: Mike Dotson

- Q-12. a. State whether KU has audited any of its coal contracts during the period from November 1, 2015, through April 30, 2016.
  - b. If yes, 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 companies. 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. Either 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 2014. The Parties agreed to a settlement. A copy of the Settlement Agreement effective March 14, 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 12, 2016

#### Case No. 2016-00232

# 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, 2015, through April 30, 2016.
  - b. If yes, 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 12, 2016

Case No. 2016-00232

#### Question No. 14

#### Witness: Mike Dotson

- Q-14. a. State whether KU is currently involved in any litigation with its current or former coal suppliers.
  - b. If yes, 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 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 12, 2016

#### Case No. 2016-00232

#### Question No. 15

#### Witness: Mike Dotson / Charles R. Schram

- Q-15. a. During the period from November 1, 2015, through April 30, 2016, 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. No changes were made during the period referenced above to the Corporate Fuels and By-Products Procurement Procedures or to the Power Supply Commodity Policy – Natural Gas Fuel for Generation.
  - b. Not applicable.
  - c. The Corporate Fuels and By-Products Procurement Procedures were last changed effective August 1, 2015 and were provided to the Commission in response to Question No. 15 in Case No. 2016-00003. The Power Supply Commodity Policy Natural Gas Fuel for Generation was executed effective February 1, 2016, and was provided to the Commission in response to Question No. 15 in Case No. 2016-00003.

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

#### Case No. 2016-00232

#### Question No. 16

#### Witness: Mike Dotson / 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, 2015, through April 30, 2016.
  - b. If yes, 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 12, 2016

Case No. 2016-00232

# Question No. 17

#### Witness: Mike Dotson / 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, 2015, through April 30, 2016.
- A-17. Changes that occurred in the Corporate Fuels and By-Products Department:

Bill Gilbert, Sr. Fuels and Transportation Administrator retired December 31, 2015; Tedra Thomas joined the department on October 21, 2015 as Fuels Administrator II.

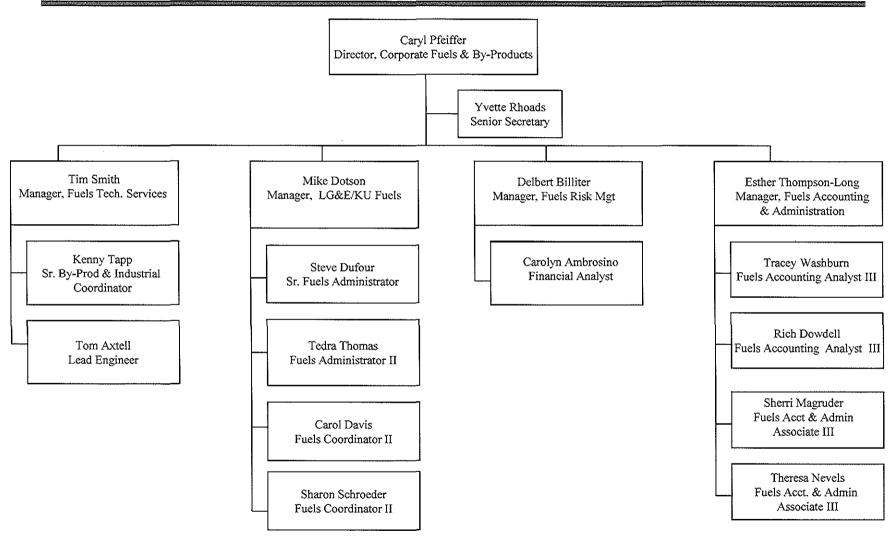
See attached Department Organization Chart as of May 2016.

Changes that occurred in the Power Supply Department:

Aaron Tolliver joined the department as Associate Trader on February 18, 2016. Wayne Jackson, Sr. Trader, retired February 29, 2016. Alexander Greenwell joined the department as Associate Trader on March 14, 2016. Ray Snyder, Sr. Trader, retired March 31, 2016. Charles Schram replaced Bob Brunner as Director Power Supply upon Brunner's retirement on April 30, 2016.

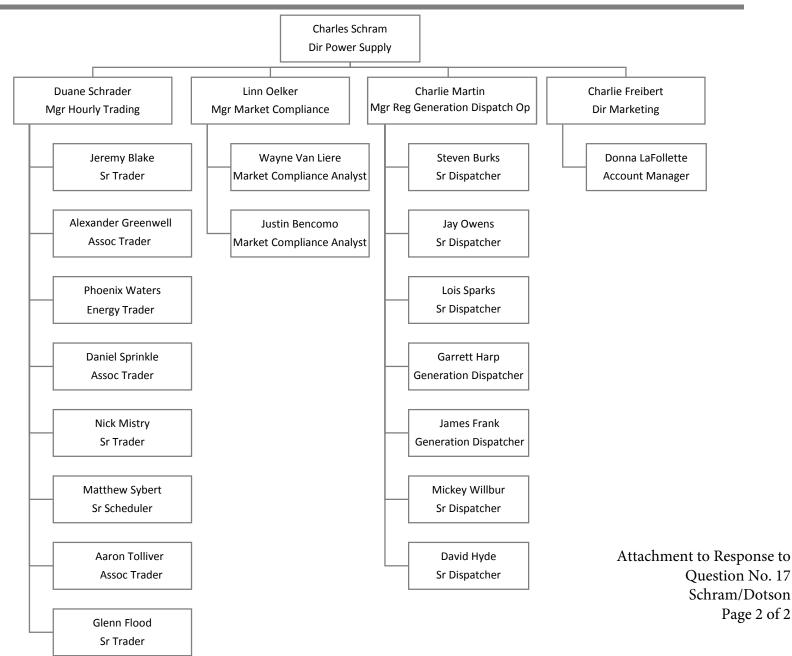
See attached Department Organization Chart as of April 2016.

# Corporate Fuels and By-Products May, 2016



Attachment to Response to Question No. 17 Schram / Dotson Page 1 of 2

# Power Supply April, 2016



# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

#### Case No. 2016-00232

# Question No. 18

# Witness: Eileen Saunders

- 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. None.
  - b. Not applicable.

Response to Question No. 19 Dotson Page 1 of 2

# KENTUCKY UTILITIES COMPANY

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

#### Case No. 2016-00232

# Question No. 19

# Witness: Mike Dotson

- Q-19. List each written coal supply solicitation issued during the period from November 1, 2015, through April 30, 2016.
  - 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. SOLICITATION 1

The final selection of the vendors who responded to the solicitation dated September 22, 2015 was completed for Middlings Spot Order for 2016 and was filed in Case No. 2016-00003. The responses for 2016 and beyond were not completed at the time the data responses were filed for high sulfur coal. The requested information for the selected vendors is provided below for the high sulfur purchases for 2017 -2019.

a.	Date:	September 22, 2015
	Contract/Spot:	Term or Spot
	Quantities:	No minimum or maximum specified
	Quality:	Suitable for KU's Ghent Station and LG&E's Trimble County and
		Mill Creek Stations
	Period:	2016 – Spot;
		2017 and beyond - Term
	Generating Units:	KU's Ghent Station and LG&E's Trimble County and Mill Creek
		Stations

b. Number of vendors receiving bids: 121
 Number of vendors responded: 15 companies / 20 offers
 Selected vendor(s): The vendor(s) selected were based upon the lowest evaluated delivered cost.

<u>High Sulfur Term</u> Alliance Coal Sales – J17002 Alpha Coal Sales – J17001

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.

# SOLICITATION 2

a.	Date:	March 2, 2016
	Contract/Spot:	Contract or Spot
	Quantities:	No minimum or maximum specified
	Quality:	Suitable for KU's Ghent Station and LG&E's Trimble County and
		Mill Creek Stations
	Period:	April through December 2016 – Spot
		2017 and beyond - Contract
	Generating Units:	KU's Ghent Station and LG&E's Trimble County and Mill Creek
		Stations

b. Number of vendors receiving bids: 122

Number of vendors responded: 22 companies / 46 offers Selected vendor(s): The vendor(s) selected were based upon the lowest evaluated delivered cost.

<u>Coal Middlings - Spot</u> Arch Coal Sales Company – J17003

The final selection of the vendor(s) for high sulfur coal for the period of 2017 -2022 from the bids are in negotiations and are still in progress. The name of the selected vendors and supporting bid tabulation will be provided to the Commission after the negotiations are completed and the agreements signed.

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 12, 2016

Case No. 2016-00232

# Question No. 20

# Witness: Mike Dotson

- Q-20. List each oral coal supply solicitation issued during the period from November 1, 2015, through April 30, 2016.
  - 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 12, 2016

#### Case No. 2016-00232

#### 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, 2015 through April 30, 2016, 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 12, 2016

# Case No. 2016-00232

#### 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 12, 2016

Case No. 2016-00232

#### Question No. 23

#### Witness: Mike Dotson

- 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 yes, 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 12, 2016

Case No. 2016-00232

#### Question No. 24

#### Witness: Eileen Saunders

- 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 12, 2016

Case No. 2016-00232

#### Question No. 25

# Witness: Charles R. Schram / Mike Dotson

- Q-25. State whether all long term 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. All long-term coal and coal transportation contracts, as well as all long-term gas transportation contracts, have been filed with the Commission.

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

Case No. 2016-00232

#### Question No. 26

#### Witness: Charles R. Schram

- Q-26. Refer to 807 KAR 5:056, Sections 1 (3)(a), 1 (3)(b), and 1 {4}, relating to forced outages. State whether KU interprets these sections of the regulation to mean that, during a forced outage (as defined by the regulation), the amount recoverable through the FAC is the lesser of the assigned cost of power (the cost of fuel that would have been used in plants suffering a forced outage) and the substitute cost of power. If yes, explain in detail how KU calculates the assigned cost of fuel during a forced outage. If no, explain in detail how KU interprets the regulation related to forced outages and how it calculates the assigned cost of fuel during a forced outage.
- A-26. KU calculates the amount recovered through FAC based on the cost of fuel that would have been used at the unit(s) during the outage period, but the recoverable amount each month is capped at the cost of substitute power in the event that the total cost of substitute power is less than the total cost of fuel that would have been used at the unit(s) on forced outage.

The assigned fuel cost for the unit on forced outage is calculated as the unit's fuel cost per MWh multiplied by the unit's lost MWh during the outage. The lost MWh equals the MWh the unit would have produced at that unit's typical production rate during the outage period. The MWh lost during the outage is calculated by obtaining the average MW/hr of generation over the prior seven days of typical operation for the unit multiplied by the number of outage hours.

# Response to Information Requested in Appendix of Commission's Order Dated August 12, 2016

#### Case No. 2016-00232

#### Question No. 27

#### Witness: Charles R. Schram

- Q-27. State whether KU had any firm natural gas transportation service to any of its generating units during the period under review.
  - a. If yes, state which, if any, of the following fees and/or adjustments are included for recovery through the FAC: Reservations fees; Transportation Cost Rate Adjustment; Electric Power Costs Adjustment; Operational Transaction Rate Adjustment; and, Capital Cost Recovery Mechanism.
  - b. If any of the fees listed in subpart a. are included for recovery through the FAC, provide the following:
    - (1) Whether the amount of the fees/adjustments differ if the generating unit supplied with firm natural gas transportation service operates or does not operate during the month.
    - (2) Whether these fees/adjustments are allocated to both native load and off-system sales.
- A-27. Yes. KU had firm natural gas transportation for Cane Run 7 and the Trimble County CTs. These units are jointly owned with LG&E.
  - a. The firm gas transportation costs (reservation fees) are recovered through the FAC.
  - b. (1) Natural gas transportation costs are recorded to inventory and are charged to expense based on each unit's generation and/or ownership percentage.

(2) Firm gas transportation services support reliability for native load customers. The transportation costs are allocated to native load sales based on the ownership percentage of the applicable unit(s). The fees are not translated to a cost per MWh of energy.