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 COMMISSION STAFF'S POST HEARING
DATA REQUEST
DATED NOVEMBER 9, 2016

FILED: NOVEMBER 22, 2016

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

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

Charles R. Schram

Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21st day of November 2016.

Judy Schooler (SEAL)

Notary Public

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

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

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

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 18th day of November 2016.

(SEAL)

Notary Public

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

VERIFICATION

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.

Eileen L Saunders

Eileen L. Saunders

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21st day of November 2016.

Judy Schooler (SEAL)

Notary Public

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

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

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

Delbert Billiter

Delbert Billiter

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21st day of November 2016.

Judy Schooler (SEAL)

Notary Public

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

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Commission Staff's Post Hearing Data Request Dated November 9, 2016

Case No. 2016-00232

Question No. 1

Witness: Stuart Wilson

Q-1. Refer to the LG&E and KU responses to Question No. 4 of the Commission Staff's First Data Requests in these proceedings, and provide the same data for LG&E and KU's natural gas generating units.

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

Unit(s)	Gas Burn (MCF)	Gas Receipts (MCF)	Oil Burn (GAL)	Oil Receipts (GAL)	Net MWh	Capacity Factor (Net MWh)/ (period hrs x MW rating)
Cane Run 7	16,511,879	16,958,088	0	0	2,494,108	83.6%
Brown 5	357,509	N/A	0	N/A	27,709	4.9%
Brown 6	191,787	N/A	64,748	N/A	18,154	2.4%
Brown 7	180,687	N/A	30,868	N/A	16,911	2.3%
Brown 8	880,575	N/A	171,162	N/A	73,803	13.2%
Brown 9	799,372	N/A	7,082	N/A	65,147	10.8%
Brown 10	1,282,908	N/A	4,396	N/A	105,828	17.6%
Brown 11	335,012	N/A	6,653	N/A	25,356	4.5%
Total Brown 5-11	4,027,850	4,182,412	284,909	278,653	332,908	7.6%
Haefling	2,791	2,791	0	0	13	0.0%
Paddys Run 13	187,863	187,863	0	0	16,854	2.2%
Trimble Co 5	1,522,135	N/A	0	N/A	142,286	18.2%
Trimble Co 6	680,330	N/A	0	N/A	64,161	8.2%
Trimble Co 7	1,238,379	N/A	0	N/A	115,358	14.8%
Trimble Co 8	357,580	N/A	0	N/A	29,483	3.8%
Trimble Co 9	715,426	N/A	0	N/A	67,331	8.6%
Trimble Co 10	358,537	N/A	0	N/A	31,269	4.0%
Total Trimble Co 5-10	4,872,387	4,815,921	0	0	449,888	9.6%

Notes: 1 – Values for jointly owned units reflect 100% of the unit.
2 – Because gas and oil are purchased at the station level for all gas units and not for individual units, "Gas Receipts" are shown only in total for the Brown and Trimble CTs.
3 – 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.

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Commission Staff's Post Hearing Data Request Dated November 9, 2016

Case No. 2016-00232

Question No. 2

Witness: Stuart Wilson

Q-2. Refer to the LG&E and KU responses to Question No. 5 of the Commission Staff's First Data Requests in these proceedings, and provide the basis for the percentages of OVEC participation for LG&E (5.63%) and KU (2.5%).

A-2. OVEC was formed in 1952 by LG&E, KU, and a number of other investor-owned utilities. LG&E owns 5.63% of OVEC; KU owns 2.5%. LG&E's and KU's percentages of OVEC participation are based on their respective stock ownership in OVEC.

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Commission Staff's Post Hearing Data Request Dated November 9, 2016

Case No. 2016-00232

Question No. 3

Witness: Eileen Saunders

Q-3. Refer to the LG&E and KU responses to Question No. 7 of the Commission Staff's First Data Request.

a. Refer to the outages reported for Paddy's Run 11 in January and February 2016. Why weren't there similar outages caused or impacted by the low gas pressure in January 2016 as there were for Paddy's Run 12 and Paddy's Run 13?

b. Refer to the outage reported for Trimble County 8 and the explanation for the outage was for generator protection upgrade. A similar outage with the same explanation was reported in the previous review period. Were there two generator protection upgrades on the same unit so close together and if so, why?

A-3. a. Paddy's Run 11 was not impacted due to a turning gear motor repair forced outage event which began on 11/21/2015 and extended through the low gas pressure events until 1/29/2016. If not for that preceding event, Paddy's Run 11 would have had the same forced outage events as Paddy's Run 12 and Paddy's Run 13.

b. The outage descriptions and dates for Trimble County 8 are correct. Both outages were related to generator protection. The 9/14/2015 event was for installation of sudden load rejection protective relaying. The 3/12/2016 event was for the modernization upgrade of existing generator protective relays.

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Commission Staff's Post Hearing Data Request Dated November 9, 2016

Case No. 2016-00232

Question No. 4

Witness: Delbert Billiter

Q-4. Refer to the LG&E and KU responses to Question No. 8 of the Commission Staff's First Data Request.

a. For the Alliance contract J16008, the contract is listed in the KU responses but the contract is not listed in the LG&E responses, yet the receipts show tons received by both KU and LG&E. Why?

b. Please provide the percentage of purchases under contract where there are annual price escalations built into the contracted base price.

c. Why would the Company agree to accept such provisions in a coal procurement contract?

A-4. a. The tonnage for LG&E was reported by mistake. The total tonnage of 81,111 tons should have been listed under KU. The 44,507 tons reported under LG&E were actually shipped to KU's E. W. Brown Station and the 36,604 tons reported under KU were shipped to KU's Ghent Station.

b. The Companies received 6,670,888 tons of coal under thirty coal supply agreements during the review period. Twenty-one of these agreements were term agreements (greater than one year) and nine were spot agreements (one year or less). Of the twenty-one term agreements, nineteen had an annual escalation of the base price, one had a two year term with a constant price and one had a base price that was renegotiated each year. Sixty percent (3,975,337 tons) of the total purchases for the review period were purchased under the nineteen agreements that have an annual increase in the base price.

c. All coal contracts are the result of a competitive solicitation process and it is the Companies' experience that coal suppliers do not offer multi-year contracts with prices that decline over time. The Companies seek to negotiate the best terms that they can while ensuring that sufficient fuel will be available to reliably meet the energy needs of our customers. If the Companies were to be unwilling to enter into multi-year contracts with escalating prices, it is extremely likely they would have no multi-year contracts and they would be forced to procure all of their coal needs annually. Such a procurement strategy would expose customers to increased price volatility and diminished generation reliability. While the prices of multi-year contracts may be escalating, they are the best forward prices that are available at that time, and thus represent the view of what is fair value to both the buyer and seller for entering into a forward contract today at a known price for future delivery.

While coal is considered a commodity, it has unique characteristics that distinguish it from other energy commodities like natural gas and oil. Coal quality, transportation logistics, consolidated coal market and generation unit specific operational and environmental requirements expose the coal consumer to risk not associated with other commodities such as natural gas. The Companies developed a Fuel Procurement Strategy to mitigate these unique risks as well as price risk. The most effective and transparent way to mitigate these risks is through forward physical contracts.

To manage short-term reliability risks, the Companies maintain onsite coal inventory and have nearly one hundred percent of the current year's projected coal need under contract. To address the longer term security of supply, the Companies enter into multi-year, forward fuel contracts for a portion of their projected coal requirements. The Companies have established guideline ranges for the percent of the minimum projected coal requirement they desire to have under contract for future years. These guideline ranges are identified in the Fuel Procurement Strategy and have been provided in this Case No. 2016-00232 in response to Question No. 3 in the Information Requested in Appendix of Commission's Order Dated August 12, 2016.

To achieve the established guideline for future physical supply, the Companies perform a minimum of two major coal solicitations each year (one in the spring and one in the fall). The offers received on these solicitations are evaluated to determine the least cost viable options to fulfill the needed volume. It is typical that the offers from these solicitations show a coal market that is in contango (future market prices are higher than current prices). This is also typical for long-term future market prices for other energy commodities such as natural gas and oil. A review of the past four coal solicitations was performed and the results show this market contango. No bids were received in which the supplier offered a declining price. Therefore, contracts negotiated from these solicitations reflect the overall coal market and provide the lowest cost alternative to procure future coal supply. Monitoring the market and performing frequent coal solicitations provides valuable market intelligence and allows the Companies' coal supply to be priced near the current market. The range of the guidelines allow some discretion to be used in the procurement process. When market intelligence suggests that coal prices are likely to increase above the available offers, the Companies procure volumes to achieve the higher end of the ranges. Conversely, when it is perceived that prices are likely to decrease from the current market offers the Companies procure volumes to achieve the lower end of the ranges.

KENTUCKY UTILITIES COMPANY

Response to Information Requested in Commission Staff's Post Hearing Data Request Dated November 9, 2016

Case No. 2016-00232

Question No. 5

Witness: Charles R. Schram / Eileen Saunders

Q-5. Refer to the KU response to Question No. 7 of the Commission Staff's First Data Request. In March 2016, both Brown unit 1 and Brown unit 2 were out of service on scheduled spring maintenance outages. During portions of that same time period, Ghent unit 1 and Brown unit 3 were also on outages. Did the company purchase power during this time period?

A-5. The planned outage for Brown unit 3 began on March 21 and did not overlap the Ghent unit 1 outage that ended on March 19. The planned outages for Ghent unit 1, Brown unit 1, and Brown unit 2, overlapped on March 14-19. During the March 14-19 period, KU purchased 350 MWh of energy from the power markets at an average cost of $11.98/MWh. The planned outages for all three of the Brown units overlapped from March 21 through April 10. During the March 21 - April 10 period, KU purchased 24 MWh from the power markets at an average cost of $17.42/MWh. The power purchases during both of these periods were economy purchases (the cost was less than KU's cost of production at that time), not purchases to support system reliability in the absence of the units on planned outage.

KU evaluates forecasted load and available generating capacity when scheduling and initiating planned outages, and does not rely on the availability of power purchased from the market to ensure reliability.