



Jeff D. Cline, Manager – Annual Report Branch Public Service Commission of Kentucky Filings Division 211 Sower Boulevard P.O. Box 615 Frankfort, Kentucky 40602-0615 Kentucky Utilities Company State Regulation and Rates 220 West Main Street PO Box 32010 Louisville, Kentucky 40232 www.lge-ku.com

Robert M. Conroy Director - Rates T 502-627-3324 F 502-627-3213 robert.conroy@lge-ku.com

April 9, 2014

Re: Annual Resource Assessment Filing for Kentucky Utilities
Company Pursuant to Administrative Case No. 387

Dear Mr. Cline:

Enclosed, in accordance with Ordering Paragraph (2) of the Commission's Order in Administrative Case 387, dated October 7, 2005, are an original and five (5) copies of the 2013 Annual Resource Assessment Filing for Kentucky Utilities Company, along with a Petition for Confidential Protection regarding certain information provided in response to Item Nos. 11 and 14.

Sincerely,

Robert M. Conroy

**Enclosures** 

### COMMONWEALTH OF KENTUCKY

### BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

A REVIEW OF THE ADEQUACY OF	)	
KENTUCKY'S GENERATION CAPACITY	)	<b>ADMINISTRATIVE</b>
AND TRANSMISSION SYSTEM	)	<b>CASE NO. 387</b>

2013 ANNUAL RESOURCE ASSESSMENT FILING
OF
KENTUCKY UTILITIES COMPANY
PURSUANT TO APPENDIX G
OF THE COMMISSION'S ORDER
DATED DECEMBER 20, 2001
AS AMENDED BY THE
COMMISSION'S ORDER
DATED MARCH 29, 2004

FILED: APRIL 2014



2013 ANNUAL RESOURCE ASSESSMENT FILING
PURSUANT TO APPENDIX G OF THE COMMISSION'S ORDER
DATED DECEMBER 20, 2001, IN ADMINISTRATIVE CASE NO. 387
AS AMENDED BY THE COMMISSION'S ORDER DATED MARCH 29, 2004
FILED APRIL 2014

### ITEM NO. 1

The information originally requested in Item 1 of Appendix G of the Commission's Order dated December 20, 2001, in Administrative Case No. 387, is no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

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### ITEM NO. 2

The information originally requested in Item 2 of Appendix G of the Commission's Order dated December 20, 2001, in Administrative Case No. 387, is no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

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### ITEM NO.3

RESPONDENT: Greg Lawson/Stuart Wilson

3. Actual and weather-normalized monthly coincident peak demands for the just completed calendar year. Demands should be disaggregated into (a) native load demand (firm and non-firm) and (b) off-system demand (firm and non-firm).

### Response:

Please refer to the attached Table KU-3, which shows the actual and weather-normalized native KU peak demands. The normalized native KU stand-alone peak demands are available only on a seasonal (summer/winter) basis.

### TABLE KU-3 NATIVE AND OFF-SYSTEM DEMANDS BY MONTH FOR 2013

### **Kentucky Utilities**

Normal Weather Actual (Seasonal) Off-System (1) Native Peak... Time of Monthly Native Peak Non-Firm Native Peak Firm Non-Firm Firm Total 1/22/2013 7:00 4,153 4.153 0 101 101 0 2/1/2013 8:00 4,193 0 4,193 0 175 175 4.137 3/22/2013 6:00 3.723 0 3.723 0 0 0 2 3,143 3,143 0 2 4/3/2013 6:00 0 3.472 202 3,472 0 202 5/30/2013 15:00 3,847 3,847 0 100 100 6/12/2013 15:00 0 3.907 3,943 3,943 0 0 0 7/17/2013 14:00 0 3,819 0 8/28/2013 16:00 3,819 0 0 0 3,919 3,919 0 9/10/2013 14:00 0 543 543 3,246 151 151 3.246 10/4/2013 15:00 3,588 3.588 0 0 0 11/13/2013 7:00 0 3,978 203 203 12/12/2013 8:00 3.978

### Notes

(1) The allocation of off-system sales split between LG&E and KU is handled in the After-the-Fact Billing ("AFB") process in accordance with the Power Supply System Agreement between LG&E and KU. The individual company sales will include an allocation of the sales sourced with purchased power and allocated to the individual company based on each company's contribution to off-system sales.

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### ITEM NO. 4

### RESPONDENT: Greg Lawson

4. Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

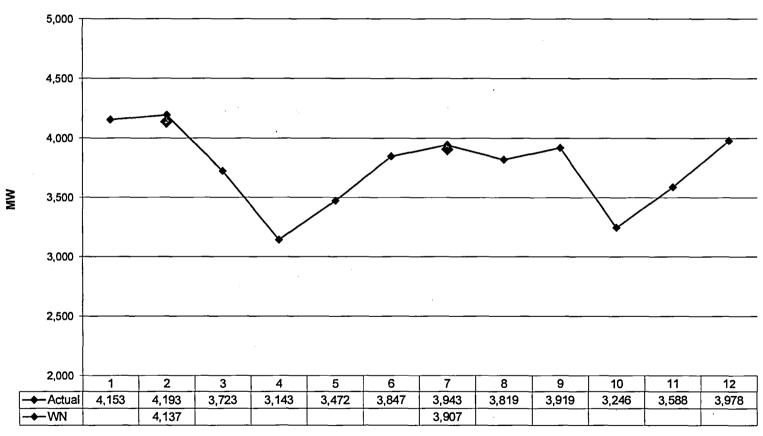
### Response:

Please refer to the attached Figure KU-4.

Figure KU-4

KU 2013

Actual and Weather Normalized Seasonal Peak



Month

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### ITEM NO. 5

The information originally requested in Item 5 of Appendix G of the Commission's Order dated December 20, 2001, in Administrative Case No. 387, is no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

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### ITEM NO. 6

RESPONDENT: Greg Lawson/Stuart Wilson

6. Based on the most recent demand forecast, the base case demand and energy forecasts and high case demand and energy forecasts for the current year and the following four years. The information should be disaggregated into (a) native load (firm and non-firm demand) and (b) off-system load (both firm and non-firm demand).

### Response:

- a) Please see the attached Table KU-6a. The values in Table KU-6a reflect the impact of the Companies' Energy Efficiency programs.
- b) Off-system sales ("OSS") projections for 2014-2018 contained in the attached Table KU-6b are based on the combined Companies' current plan. For OSS, only base case total sales energy projections exist for 2014-2018. The projections consist of the expected market sales, dubbed "Wholesale OSS". All OSS are non-firm.

TZ	Table KU-6a			•	
Kentucky Utilities	2014	2015	2016	2017	2018
Base Case Energy Sales (GWh)	21,774	21,860	22,016	22,159	22,340
High Case Energy Sales (GWh)	22,922	23,087	23,301	23,506	23,747
Base Case Energy Requirements (GWh)	23,122	23,213	23,377	23,530	2,3,723
High Case Energy Requirements (GWh)	24,342	24,515	24,742	24,961	25,217
Base Case Native Peak Demand (MW)	4,334	4,360	4,391	4,425	4,462
High Case Native Peak Demand (MW)	4,562	4,604	4,648	4,694	4,743

Table KU-6b
Total Base Case Off-System Sales Energy Projection

	2014	2015	2016	2017	2018
Existing OSS (GWH)	0	0	0	0	0
Wholesale OSS (GWH)	273	199	184	207	370
Total OSS (GWH)	273	199	184	207	370

# KENTUCKY UTILITIES COMPANY 2013 ANNUAL RESOURCE ASSESSMENT FILING PURSUANT TO APPENDIX G OF THE COMMISSION'S ORDER DATED DECEMBER 20, 2001, IN ADMINISTRATIVE CASE NO. 387 AS AMENDED BY THE COMMISSION'S ORDER DATED MARCH 29, 2004 FILED APRIL 2014

### ITEM NO. 7

**RESPONDENT: Stuart Wilson** 

7. The target reserve margin currently used for planning purposes, stated as a percentage of demand. If changed from what was in use in 2001, include a detailed explanation for the change.

### Response:

The reserve margin analysis is being performed as part of the 2014 Integrated Resource Plan ("2014 IRP"), to be filed with the Commission in April 2014. Please refer to this document for this information when it becomes available.

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### ITEM NO. 8

**RESPONDENT: Stuart Wilson** 

8. Projected reserve margins stated in megawatts and as a percentage of demand for the current year and the following 4 years. Identify projected deficits and current plans for addressing these. For each year identify the level of firm capacity purchases projected to meet native load demand.

### Response:

The reserve margin analysis is being performed as part of the 2014 Integrated Resource Plan ("2014 IRP"), to be filed with the Commission in April 2014. Please refer to this document for this information when it becomes available.

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### ITEM NO. 9

The information originally requested in Item 9 of Appendix G of the Commission's Order dated December 20, 2001, in Administrative Case No. 387, is no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

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### ITEM NO. 10

The information originally requested in Item 10 of Appendix G of the Commission's Order dated December 20, 2001, in Administrative Case No. 387, is no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

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### ITEM NO. 11

### **RESPONDENT: Stuart Wilson**

11. A list that identifies scheduled outages or retirements of generating capacity during the current year and the following four years.

### Response:

The planned maintenance outage schedule for 2014 through 2015 is being provided pursuant to a Petition for Confidential Protection. The schedule is regularly modified based on actual operating conditions, forced outages, changes in the schedule required to meet environmental compliance regulations, fluctuations in wholesale prices, and other unforeseen events.

The following KU coal units are scheduled to be retired in April 2015: Green River 3 and Green River 4. Tyrone 3 was retired in February 2013. Haefling 3 was retired in December 2013.

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### ITEM NO. 12

**RESPONDENT: Stuart Wilson** 

12. Identify all planned base load or peaking capacity additions to meet native load requirements over the next 10 years. Show the expected in-service date, size and site for all planned additions. Include additions planned by the utility, as well as those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

### Response:

The Companies are constructing a 640 MW 2x1 natural gas combined cycle ("NGCC") unit at their Cane Run site ("Cane Run 7" or "CR7") to be online in 2015. In January 2014, the Companies submitted an application for Certificates of Public Convenience and Necessity to the Kentucky Public Service Commission for the construction of (a) a 10 MW solar photovoltaic ("PV") facility at the E.W. Brown station in 2016 and (b) an approximately 700 MW NGCC unit at the Green River station in 2018. Cane Run 7 and the proposed solar PV and NGCC facilities complete the Companies' expansion plan through 2018. The analysis to update the Companies' expansion plan beyond 2018 is being performed as part of the 2014 Integrated Resource Plan ("2014 IRP"), to be filed with the Commission in April 2014. Please refer to this document for this information when it becomes available.

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### ITEM NO. 13

### **RESPONDENT:** Derek Rahn

- 13. The following transmission energy data for the just completed calendar year and the forecast for the current year and the following four years:
  - a. Total energy received from all interconnections and generation sources connected to the transmission system.
  - b. Total energy delivered to all interconnections on the transmission system.
  - c. Peak load capacity of the transmission system.
  - d. Peak demand for summer and winter seasons on the transmission system.

### Response:

Data exists for 2013. The Company does not forecast this type of data; therefore no forecast exists for 2013-2016.

a. LG&E and KU operate as a single NERC Control area that contains several generators not owned by LG&E and KU; the non-Company owned facilities are also included as sources below:

Tie Lines Received (MWH)	17,216,232
Net Generation-LG&E (MWH)	15,480,864
Net Generation-KU (MWH)	20,797,236
Net Received from OMU (MWH)	2,815,316
Net Generation-IPPs (MWH)	2
Total Sources (MWH)	56,309,650

- b. LG&E and KU operate as a single Control Area, the amount of energy delivered at the interconnections of the single Control area were 19,731,229 MWH(s).
- c. There is no set number for peak load capacity for the transmission system. The system is built to support Network Service and firm PTP customers as tested under the LGE/KU Transmission Planning Guidelines. Actual transmission capacity available for Network customers, import, export or thru-flow will vary depending on which facilities (generation, load or transmission) in the interconnected transmission system of the eastern interconnect are connected and operated at any given time.
- d. The maximum summer peak transmission load for the combined LG&E/KU transmission system was 6747 MW for the peak hour of 9/10/13 at 3PM.

The maximum winter peak transmission load for the combined LG&E/KU transmission system was 6129 MW for the peak hour of 2/1/13 at 9AM.

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### **ITEM NO. 14**

**RESPONDENT: Delyn Kilpack** 

14. Identify all planned transmission capacity additions for the next 10 years. Include the expected in-service date, size and site for all planned additions and identify the transmission need each addition is intended to address.

### Response:

The response to this item is being provided pursuant to a Petition for Confidential Protection.