



PPL companies

Jeff DeRouen, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

RECEIVED

DEC 06 2011

PUBLIC SERVICE
COMMISSION

LG&E and KU Energy LLC
State Regulation and Rates
220 West Main Street
PO Box 32010
Louisville, Kentucky 40232
www.lge-ku.com

Rick E. Lovekamp
Manager Regulatory Affairs
T 502-627-3780
F 502-627-3213
rick.lovekamp@lge-ku.com

December 6, 2011

RE: *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity and Site Compatibility Certificate for the Construction of a Combined Cycle Combustion Turbine at the Cane Run Generating Station and the Purchase of Existing Simple Cycle Combustion Turbine Facilities from Bluegrass Generation Company, LLC in LaGrange, Kentucky*
Case No. 2011-00375

Dear Mr. DeRouen:

Please find enclosed and accept for filing an original and ten copies of the Joint Response of Louisville Gas and Electric Company and Kentucky Utilities Company to the Commission Staff's Second Information Request dated November 22, 2011, in the above-referenced docket.

Should you have any questions regarding the enclosed, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Rick E. Lovekamp".

Rick E. Lovekamp

cc: Parties of Record

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

**JOINT APPLICATION OF LOUISVILLE GAS AND)
ELECTRIC COMPANY AND KENTUCKY UTILITIES)
COMPANY FOR A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY AND SITE)
COMPATIBILITY CERTIFICATE FOR THE)
CONSTRUCTION OF A COMBINED CYCLE) CASE NO. 2011-00375
COMBUSTION TURBINE AT THE CANE RUN)
GENERATING STATION AND THE PURCHASE OF)
EXISTING SIMPLE CYCLE COMBUSTION TURBINE)
FACILITIES FROM BLUEGRASS GENERATION)
COMPANY, LLC IN LaGRANGE, KENTUCKY)**

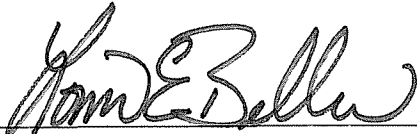
**JOINT RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
TO THE COMMISSION STAFF'S SECOND INFORMATION REQUEST
DATED NOVEMBER 22, 2011**

FILED -- DECEMBER 6, 2011

VERIFICATION

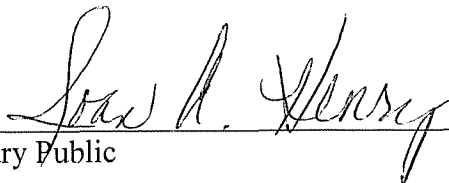
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Vice President, State Regulation and Rates for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of 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.



Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 6th day of December 2011.



Notary Public (SEAL)

My Commission Expires:

July 21, 2015

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Shannon L. Charnas**, being duly sworn, deposes and says that she is Director – Accounting and Regulatory Reporting 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.

Shannon L. Charnas
Shannon L. Charnas

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 6th day of December 2011.

Sean A. Henry (SEAL)
Notary Public

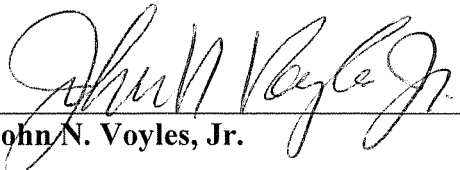
My Commission Expires:

July 21, 2015

VERIFICATION

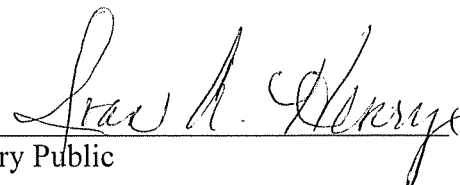
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **John N. Voyles, Jr.**, being duly sworn, deposes and says that he is Vice President, Transmission and Generation Services for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of 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.



John N. Voyles, Jr.

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of December 2011.



Notary Public (SEAL)

My Commission Expires:

July 21, 2015

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to the Commission Staff's Second Information Request
Dated November 22, 2011**

Question No. 1

Witness: Lonnie E. Bellar / Shannon L. Charnas

- Q-1. Refer to the Companies' response to Item 36 of Commission Staff's First Information Request.
- a. Using the September 30, 2011 net book value of \$133,934,933, explain whether the Companies have an estimate of what impact the net book values of the six generating units targeted for retirement will have on the calculation of plant production depreciation rates in their next depreciation study.
 - b. The note in part d. of the response reads, "[t]he Accumulated Depreciation amounts in Column 2 below do not include the cost of removal and salvage components segregated previously in past studies."
 - (1) Provide the amount of removal and salvage components for the six generating units which were segregated previously in the Companies' 2006 depreciation studies.
 - (2) Explain whether removal and salvage amounts for the six generating units were included in calculating the depreciation rates last approved by the Commission.
 - (3) If the removal and salvage amounts for the six generating units were excluded in calculating the depreciation rates last approved by the Commission, explain whether the amounts reflected in Column 2 "Accumulated Depreciation" would be lower or higher.
- A-1.
- a. The recovery of the estimated net book value of \$133,934,933 for the six generating units targeted for retirement by 2015 is expected to increase depreciation rates for those units in the next depreciation study which will be completed in 2012. A specific estimate cannot be provided until the depreciation study is completed.
 - b.
 - (1) In the 2006 depreciation study, the cost of removal and salvage components for the six generating units were segregated based on plant account averages for all units. These estimated amounts will be recalculated at the time of the next

depreciation study in order to represent recent and future expected changes in plant account activity.

The amounts as of September 30, 2011, which will be updated during the next depreciation study, are as follows:

<u>Unit</u>	<u>Cost of Removal</u>	<u>Gross Salvage</u>
Cane Run 4	\$ 5,048,862	\$(728,734)
Cane Run 5	6,402,388	(891,436)
Cane Run 6	11,021,742	(1,112,675)
Green River 3	1,668,627	(203,374)
Green River 4	7,676,210	(1,190,006)
Tyrone 3	<u>4,575,083</u>	<u>(306,544)</u>
Total	\$36,392,912	\$(4,432,769)

- (2) Yes, cost of removal and gross salvage amounts for all generating units, including the six units listed above, were included in the depreciation rates last approved by the Commission.
- (3) The amounts were not excluded.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to the Commission Staff's Second Information Request
Dated November 22, 2011**

Question No. 2

Witness: John N. Voyles, Jr.

- Q-2. It is planned for KU to own 78 percent of the proposed Natural Gas Combined Cycle ("NGCC") facility at the Cane Run generating station. Given that the E.W. Brown generating station appears to be more centrally located to the KU system, explain the extent to which the E.W. Brown location was considered for construction of the proposed NGCC facility and the reasons why the Cane Run location was chosen.
- A-2. The Companies jointly plan, own, operate and dispatch the generating assets necessary to serve customers in a least-cost manner. In doing such planning, the Companies do not consider the ownership percentage as a factor for selecting the location to site new supply side resources. This is consistent with all previous jointly owned units (Trimble County 2, Trimble County 5-10 Combustion Turbines, Brown 5-7 Combustion Turbines and Paddy's Run 13 Combustion Turbine)..

Factors that are considered in selecting a location for new units include environmental permitting requirements, site compatibility requirements, cooling water resources, fuel supply resources and electrical interconnection requirements for grid stability and reliability, as well as other infrastructure needs. In this application for siting the NGCC at Cane Run Station, these factors were key elements in the selection.

Adding the NGCC unit at the existing E.W. Brown location would present more complex environmental permitting as it would likely require Prevention of Significant Deterioration ("PSD") modeling that the Companies believe could lead to requirements for including additional controls, and therefore additional costs, to the NGCC unit. The E.W. Brown site would require at least as many significant infrastructure investments as the Cane Run site to accommodate the construction and operation of the proposed NGCC facility and the continued operation of the existing generating units, including increased gas supply facilities, transmission and possible acquisition of additional land. It is important to note that locating the NGCC at the E.W. Brown site would still require significant transmission investments in the vicinity of the Cane Run site as the generation resources at Cane Run are being retired and without investments in that area, grid reliability would be impacted (see footnote 2 to the response to Question No. 3 below). The NGCC location at E.W. Brown also adds risks associated with siting a significant amount of gas-fired capacity at a single location. The coal-fired units at the E.W. Brown facility continue to remain available for operation; and the Companies continue to believe

the operation of the units with new emission controls will be a reasonable, cost-effective method of serving native load. As such, the Companies do not believe siting the NGCC at the E.W. Brown location is reasonable or would be the most cost effective option at this time. The Cane Run location was chosen for these reasons.

The Companies' resource assessment for complying with the unprecedented number of air regulations being implemented by the EPA over the next several years resulted in a least-cost compliance plan that adds emission controls to the coal-fired units at the E.W. Brown location (Case No. 2011-00161) and retires the coal-fired units at Cane Run. The removal of generating resources from the Cane Run Station location or the E.W. Brown location will impact the reliability of the transmission system. The Companies expect removal of generation resources at either location will affect transmission reliability such that additional grid reliability projects will be required. In addition, while replacement of the coal-fired generation with the NGCC installation at Cane Run will require some additional transmission projects associated with its interconnection, siting the NGCC unit at any location other than Cane Run would require significantly more transmission modifications in the vicinity of Cane Run.

Additionally, as stated in Mr. Voyles' testimony on page 4, the Cane Run site provides many advantages from existing infrastructure and environmental permitting, the use of which helps lower the cost of the NGCC constructed at that site compared to other possible locations. Those advantages include, use of the water intake facilities, electrical interconnections, modifications to existing environmental permits, and other site infrastructure components in place today such as fencing, security, utilities and communications.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to the Commission Staff's Second Information Request
Dated November 22, 2011**

Question No. 3

Witness: John N. Voyles, Jr.

- Q-3. In the settlement proposed by all parties to the Companies' pending environmental compliance plan cases¹, KU agreed to withdraw and not refile until July 1, 2013 the portion of its application requesting a certificate to permit construction of a Particulate Matter Control System to serve Brown Units 1 and 2, with the exception of the sorbent injection systems related to protecting against sulfuric acid mist. Explain whether the terms of the proposed settlement agreement in any way affect the decision to construct the proposed NGCC facility at Cane Run, rather than at E.W. Brown. Include in the explanation a comparison of the capability of existing transmission facilities at Cane Run and at E.W. Brown to deliver power throughout the KU system at present, as well as in the event the Companies decide to retire Brown Units 1 and 2.
- A-3. The terms of the settlement do not affect the Companies' decision to locate the NGCC facility at Cane Run. While the decision to seek approval for the installation of a Particulate Matter Control System for Brown Units 1 and 2 has been deferred until July 1, 2013 (or sooner if required by new environmental standards), the terms of the settlement agreement also expressly recognize that KU will continue to dispatch, operate, and maintain Brown Units 1 and 2 as part of its generation fleet as long as, and to the extent to which, it is reasonable and cost-effective to do so while complying with all applicable environmental regulations. The Companies continue to believe the least-cost compliance plan for the air regulations being implemented by the EPA will lead to the installation of the additional controls prior to 2016 on Brown Units 1 and 2.

The existing transmission system facilities operated by the Companies are designed as a network to deliver generation for serving load throughout the KU and LG&E systems. Transmission design capability is impacted by the size of the load to be served and the location of available generation supply resources. Operation of the transmission network is impacted by unit availability, as well as electric flows across the network, at any given time. Currently, the winter generation capacities at E.W. Brown and Cane Run are 1,663

¹ Case No. 2011-00161, Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge, (Ky. PSC Jun 16, 2011); and Case No. 2011-00162, Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge, (Ky. PSC Jun 16, 2011).

MW and 577 MW respectively (Brown Units 1 and 2 have a rating of 275 MW combined). Changes in either the size of the load or the supply resources require studies to ultimately determine the specific changes, that would be necessary to the transmission network to maintain stability and reliability of the bulk electric system. The installation of the 640 MW NGCC at either site requires study to determine the specific upgrades that would be necessary to accommodate the generator capabilities. Likewise, the retirement of units, with or without direct replacement at the specific site, also must be studied to determine the specific transmission system upgrades.²

Should the Companies ultimately decide to retire E.W. Brown Units 1 and 2, transmission upgrades are likely to be necessary at the Brown site. Besides determining the electric transmission system upgrades that would be required by a retirement decision at the Brown site, the Companies would also need to assess the least-cost resource to replace the energy supplied by those units. The final cost estimate for transmission interconnection upgrades would be impacted by the replacement energy decision.³

² As discussed in Section 3 of the 2011 Resource Assessment, air regulations being implemented by the EPA have also led to the retirement of the Green River coal-fired units. In Section 3, the Companies note that preliminary reviews indicated that some transmission system upgrades will be necessary to maintain grid stability and reliability for the retirement of Cane Run and Green River (preliminarily rough order of magnitude cost estimates were \$42 million and \$35 million respectively). While the generation located at Green River will not be replaced at that site at this time, transmission upgrades will be required (at this time, the Companies do not believe CPCN's are required for these transmission upgrades).

³ It is also important to note that, should the decision be made to retire Brown Units 1 and 2, the timing of the ultimate replacement energy solution could drive generating unit dispatch decisions that would require the operation of the combustion turbines at the Brown site to satisfy varying transmission constraints until such time as permanent generation and transmission upgrades are implemented.