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JAN 22 2013

PUBLIC SERVICE  
COMMISSION

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January 22, 2013

**HAND DELIVERED**

Jeff R. Derouen  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, Kentucky 40602-0615

R. Benjamin Crittenden  
(502) 209-1216  
(502) 223-4388 FAX  
rcrittenden@stites.com

Re: Case No. 2012-00224

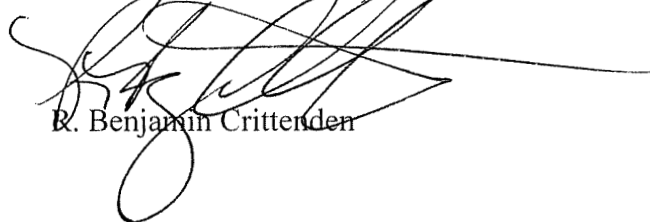
Dear Mr. Derouen:

Please find enclosed and accept for filing the original and ten copies of Kentucky Power Company's responses to the supplemental data requests propounded by the Commission Staff.

Copies of the responses are being served on counsel for Grayson along with a copy of this letter.

Very truly yours,

STITES & HARBISON, PLLC



R. Benjamin Crittenden

cc: W. Jeffrey Scott

COMMONWEALTH OF KENTUCKY  
BEFORE THE  
PUBLIC SERVICE COMMISSION OF KENTUCKY

RECEIVED

JAN 22 2013

PUBLIC SERVICE  
COMMISSION

IN THE MATTER OF

PETITION AND COMPLAINT OF KENTUCKY POWER )  
COMPANY FOR A DECLARATION OF ITS )  
RIGHT PURSUANT TO KRS 278.018(1) TO SERVE )  
THOSE PORTIONS OF THE SAND GAP ESTATES ) CASE NO. 2012-00224  
GREENUP COUNTY, KENTUCKY LYING WITHIN )  
ITS CERTIFIED TERRITORY IN LIEU OF )  
GRAYSON RURAL ELECTRIC COOPERATIVE )  
CORPORATION )

KENTUCKY POWER COMPANY RESPONSES TO COMMISSION STAFF'S  
SECOND SET OF DATA REQUESTS

January 22, 2013





## KENTUCKY POWER COMPANY

### REQUEST

In response to Item 14(b)(3) from Kentucky Power Company's Response to Commission Staff's First Request for Information, Kentucky Power stated that it was aware that the Horizontal Positional Accuracy Explanation (<horizpar> in the xml file), of the electric service area boundaries provided by the Public Service Commission was +/- 100 feet. Revise Map 1 (from Kentucky Power Company's Response to Commission Staff's First Request for Information, Response to Item 8) by overlaying a 100-foot buffer around the electric service area boundary line provided by the Kentucky Public Service Commission. (+/- 100 feet means that the buffer area extends 100 feet on each side of the line). Does the blue line compiled by Kentucky Power from the signed U.S. Geological Survey ("USGS") map filed with the Kentucky Public Service Commission, as shown on Map 1, fall within the +/- 100 foot buffer that surrounds the electric service area boundary line provided by the Kentucky Public Service Commission?

### RESPONSE

Please see the attached map (Map 1) that has been revised as requested to show a 100 foot buffer around the electric service area boundary line provided by the Kentucky Public Service Commission.

The blue line does lie within the +/- 100 foot buffer.

**WITNESS:** Richard Howerton

**CASE NO: 2012-00224**

**CONTAINS**

**LARGE OR OVERSIZED**

**MAP(S)**

**RECEIVED ON: January 22, 2013**



## Kentucky Power Company

### REQUEST

Taking into account the accuracy of the original USGS topographic map, the distortion in the paper, the width of the electric service area boundary line, and any inherent errors in the original compilation of the boundary line on the USGS map:

- a. What is Kentucky Power's estimate of the horizontal positional accuracy on the ground of the blue line (compiled by Kentucky Power from the signed USGS map filed with the Kentucky Public Service Commission) as shown on Map 1?
- b. If the estimate of horizontal positional accuracy of the boundary line compiled by Kentucky Power as described in a. above is different from  $\pm 100$  feet, explain how Kentucky Power arrived at a different value.
- c. Illustrate this as an overlay to Map 1 (from Kentucky Power Company's Response to Commission Staffs First Request for Information, Response to Item 8).

### RESPONSE

- a. The width of the line shown on the USGS topographic map scales approximately 80 feet. Using the geometric centerline of the blue line provides for a precise centerline location. Therefore, it is estimated that the location creates a precise positional accuracy.
- b. When attempting to recreate or reconstruct line work or features that were manually created on a USGS survey map, these locations can be recreated with relative precision. A USGS survey map is a paper map with four definitive corners of latitude and longitude thus creating a perfectly re-creatable geometric shape. Any features that were drawn on this map have a distinct location in reference to the four corners of the map. Therefore, the centerline of manually drawn line work on this reference plane can be projected with functional accuracy. The location of manually drawn lines are indeed drawn in their exact location, and we can project them with certainty. Please see illustration on Page 3 of this response.



In measuring the width of the line by the map scale, Kentucky Power has found that it is 80 feet in width. Consistent with surveying practice, the centerline of the boundary line was determined. Given the width of the line the tolerance would be +/- 40 feet.

- c. The blue centerline shown in Map 1 of Kentucky Power's response to Item 8 of the Commission Staff's First Set of Data Requests is the geometric centerline of the boundary.

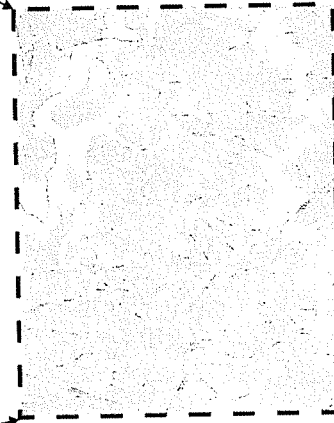
**WITNESS:** Richard Howerton

**DATA RESPONSE**

**2b.**

LAT.: 38-30-00  
LONG.: 82-52-30

LAT.: 38-30-00  
LONG.: 82-45-00



**USGS ARGILLITE, KY QUAD**

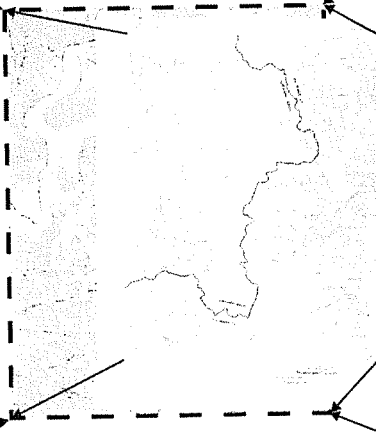
LAT.: 38-22-30  
LONG.: 82-52-30

LAT.: 38-22-30  
LONG.: 82-45-00



LAT.: 38-30-00  
LONG.: 82-52-30

LAT.: 38-30-00  
LONG.: 82-45-00



**SCANNED MAP  
DIGITALLY REPRODUCED**

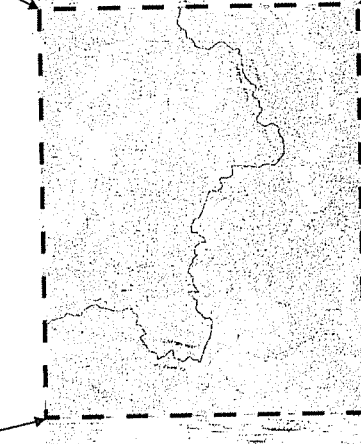
LAT.: 38-22-30  
LONG.: 82-52-30

LAT.: 38-22-30  
LONG.: 82-45-00



LAT.: 38-30-00  
LONG.: 82-52-30

LAT.: 38-30-00  
LONG.: 82-45-00



**RECTIFIED MAP WITH  
EXACT GEOMETRIC  
LOCATION**

LAT.: 38-22-30  
LONG.: 82-52-30

LAT.: 38-22-30  
LONG.: 82-45-00



## Kentucky Power Company

### REQUEST

In response to Item 14(c) from Kentucky Power Company's Response to Commission Staff's First Request for Information, Kentucky Power stated that the aerial imagery is from Google Maps dated 4/14/2011. Statewide imagery available from the Commonwealth of Kentucky's Division of Geographic Information through the Kentucky Geography Network has a known pedigree and accuracy.

- a. Make a map at 1 inch = 200 feet scale using the Kentucky imagery as the background for the electric service area boundaries and the 100-foot buffer.
- b. Is the position of the electric service area boundary different with respect to the residences on this map from its position on the original Map 1? <sup>1</sup>

### RESPONSE

- a. Please see Map 1 of the response to Item 1 of this set of data requests.
- b. No.

**WITNESS:** Richard Howerton

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<sup>1</sup>The Kentucky imagery is available on the internet. Go to the Kentucky Geography Network (<http://www.kygenonet/ky.gov/>). In the upper right corner of the web page, there is the statement: "Kentucky's 2012 1-Meter NAIP Imagery from the USDA is now available for download by 20k tile and be accessed via an Image Service." Clicking on "download" provides the metadata for the 2012 imagery. Note that the information provided describes the accuracy and the projection history of the imagery. To download the imagery for the Sand Gap area, click on the link [ftp://ftp.kymartian.ky.gov/FSA\\_NAIP\\_2012\\_1M/](ftp://ftp.kymartian.ky.gov/FSA_NAIP_2012_1M/), then find and save the file [ky\\_1m\\_naip\\_2012\\_N016E100.zip](ftp://ftp.kymartian.ky.gov/FSA_NAIP_2012_1M/ky_1m_naip_2012_N016E100.zip). The tile system is found in [fsa\\_grid\\_shapefile.zip](ftp://ftp.kymartian.ky.gov/FSA_NAIP_2012_1M/fsa_grid_shapefile.zip) at <ftp://ftp.kymartian.ky.gov/fsa/>.