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February 3, 2012

**HAND DELIVERED**

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RECEIVED

FEB 03 2012

PUBLIC SERVICE  
COMMISSION

RE: Case No. 2011-00450

Dear Mr. Derouen

Enclosed please find and accept for filing the original and ten copies of Kentucky Power Company's responses to the Staff January 11, 2012 data requests in this proceeding.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

STITES & HARBISON, PLLC

Mark R. Overstreet

MRO

cc: All Parties And Counsel On Attached List  
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COMMONWEALTH OF KENTUCKY  
BEFORE THE  
PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF

AN INVESTIGATION OF THE RELIABILITY )  
MEASURES OF KENTUCKY'S JURISDICTIONAL ) Administrative Case  
ELECTRIC DISTRIBUTION UTILITIES ) No. 2011-00450

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

February 03, 2012





**Kentucky Power Company**

**REQUEST**

The following questions relate to the data maintained by each utility.

- a. Identify the number of circuits currently maintained by the electric utility.
- b. Does the utility calculate separate SAIDI, SAIFI and CAIDI indices for each circuit? If no, explain why not and explain the degree to which the utility tracks the following:
  - (1) SAIDI;
  - (2) SAIFI; and
  - (3) CAIDI
- c. Identify any other reliability indicator or measure the utility uses to assess reliability. Explain the significance of each indicator or measure used. Does the utility maintain these indicators or measures for each circuit?

**RESPONSE**

- a. There are currently 222 distribution circuits which serve customers in Kentucky. Ten of these circuits originate in another state. Six of the 222 circuits are very short and serve only one customer.
- b. Yes. KPCo calculates separate SAIDI, SAIFI and CAIDI for each of its distribution circuits.
- c. KPCo does not use any other indicator or measurement to assess reliability on circuits.

WITNESS: Larry J Pemberton



## Kentucky Power Company

### REQUEST

The following questions refer to the manner in which each utility calculates and tracks the SAIDI, SAIFI and CAIDI indices.

- a. Identify the manner in which the indices are calculated and tracked; i.e., manually (Excel spread sheet), or an electronic or mechanized (outage reporting) system.
- b. If the response to Item 2.a. above is electronic or mechanized, provide a description of the system and explain whether it was developed internally or purchased from a third-party vendor. If purchased from a third-party vendor, provide the name of the vendor and an estimate of the original cost of the system.
- c. If the response in Item 2.a. above is manually, provide a description of the elements tracked. Discuss in detail any inquiry made into the internal development of an electronic or mechanized system or any consideration of the purchase of a system from a third-party vendor.

### RESPONSE

- a. The Company uses electronic systems to track outages and calculate reliability indices.
- b. The Company's reliability reporting procedure has three main components: an outage management system, an outage record review and edit system, and a reporting tool. Outage tracking begins with General Electric's PowerOn outage management system (OMS). The OMS, as deployed, would be considered a modified off-the-shelf product. The Company worked with GE to deploy an OMS that tracks and records outages utilizing the Company's other systems such as mapping, call-handling, work management, and customer information. Because the OMS is a real-time system, outage records are passed, after the outage is resolved, to another system for review and edit. The review and edit system was developed and is maintained internally. Business Objects is a third-party program that interfaces with the reviewed outage data to analyze and report outage data to both internal and external interests.



The original cost of PowerOn was approximately \$4.6 million in 2002, of which KPCo's portion was \$160,000.

c. N/A

WITNESS: Larry J Pemberton



**Kentucky Power Company**

**REQUEST**

Concerning SAIDI, SAIFI and CAIDI reporting: the Commission directed that the reporting be based on the criteria and definitions set forth in the IEEE Standard.

- a. If the utility does not follow the IEEE standard, explain why not. Explain what standard(s) the utility does follow in its calculation of SAIDI, SAIFI and CAIDI.
- b. Does the utility track and review SAIDI, SAIFI and CAIDI monthly, quarterly, or annually?
- c. Are SAIDI, SAIFI and CAIDI tracked on a rolling 12-month period or for a more discrete period of time; i.e., monthly, quarterly, or annually?
- d. Currently, in each annual report submitted pursuant to the Final Order in Case No. 2006-00494, each utility provides system-wide SAIDI, SAIFI and CAIDI calculated for a calendar year. Identify any other preferred 12-month reporting parameter, i.e., calendar year, fiscal year, or some other 12-month method.
- e. Does the utility review SAIDI, SAIFI, and CAIDI by any discrete fashion such as by division, district, region or some other method?

**RESPONSE**

- a. KPCo follows the IEEE standard for calculating SAIDI, SAIFI and CAIDI.
- b. KPCo reports verified indices on a monthly basis. However, KPCo tracks these indices, prior to verification, on a weekly basis.
- c. These indices are tracked on a rolling 12-month basis. The Company also verifies monthly and year-to-date indices.
- d. Reporting these indices on the 12-month calendar year is KPCo's preferred method.
- e. KPCo tracks and verifies these indices for each of its three districts.

WITNESS: Larry J Pemberton



## Kentucky Power Company

### REQUEST

The following questions relate to the requirement that each utility report the ten worst-performing circuits for each index in the annual report submitted pursuant to the Final Order in Case No. 2006-00494.

- a. If the utility does not track SAIDI, SAIFI and CAIDI for each circuit, explain how the ten worst-performing circuits are identified.
- b. Does the utility see benefit in expanding the reporting of the worst-performing circuits to the 15 or 20 worst-performing circuits for each index?
- c. Identify any alternative to reporting the ten worst-performing circuits that the utility utilizes to determine system reliability.

### RESPONSE

- a. KPCo tracks these indices for each of its distribution circuits.
- b. No. Ten circuits represent about 4.5% of all KPCo circuits. KPCo believes this is a good sample of its circuits and allows it to continue to accomplish the planned work for these circuits.
- c. System Reliability is best determined by the three indices and not simply by a list of worst-performing circuits. The worst-performing circuit list identifies the areas where improvements can make the biggest impact to the system reliability.

WITNESS: Larry J Pemberton



## Kentucky Power Company

### REQUEST

The following questions relate to the identification of the ten worst-performing circuits for each index.

- a. Provide an explanation of the actions taken by the utility once the ten worst-performing circuits for each index have been identified. Include the typical steps taken to correct the reliability issues relating to the ten worst-performing circuits for each index.
- b. Provide a timeline of the typical steps taken to correct reliability issues relating to the ten worst-performing circuits for each index.

### RESPONSE

- a. Once the ten worst-performing circuits (WPC), as measured by SAIDI and SAIFI, have been identified, a report is generated and sent to the district engineers. This report contains data on all circuits not just the WPC circuits. Outage causes and their impacts (number of outages, customers affected and customer minutes of interruption) for each circuit are shown in this report. The district engineer reviews and analyzes this data to determine the work to be undertaken to improve the circuit's performance. Details of the work plan are sent to engineering design, forestry, or to the line group as required for action.
- b. Mid January - reports are run on the previous year's data to identify circuits on the WPC list. This information is then sent to the district engineer.

Mid January to Mid March - the engineer reviews the data on each WPC in his area to determine the best course of action to improve the circuit's performance.

End of March - improvement plans for each WPC are filed with the Commission.

April through December - improvement plans are to be completed.

WITNESS: Larry J Pemberton