



FLEMING-MASON ENERGY  
COOPERATIVE, INC.

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January 5, 2007

Public Service Commission  
P O Box 615  
Frankfort Kentucky 40602

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JAN 8 2007

PUBLIC SERVICE  
COMMISSION

Dear Sirs:

Enclosed is the response of Fleming-Mason Energy to the Public Service Commission Order Regarding Administrative Case No. 2006-0494, an Investigation of Kentucky's Jurisdictional Electric Distribution Utilities and certain Reliability Maintenance Practice.

Sincerely,

A handwritten signature in black ink, appearing to read "Anthony P. Overbey".

Anthony P. Overbey, President and CEO

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JAN 8 2007

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION PUBLIC SERVICE  
COMMISSION

In the Matter of:

AN INVESTIGATION OF THE RELIABILITY	)	
MEASURES OF KENTUCKY'S	)	ADMINISTRATIVE
JURISDICTIONAL ELECTRIC	)	CASE NO. 2006-0494
DISTRIBUTION UTILITIES AND CERTAIN	)	
RELIABILITY MAINTENANCE PRACTICES	)	

ORDER

Upon its own motion, the Commission initiates this investigation into the measures used by Kentucky's jurisdictional electric utilities to assess the reliability of their distribution systems. In addition, the Commission will investigate the vegetation management practices related to the electric distribution system.

All utilities are required by statute to furnish adequate, efficient, and reasonable service.<sup>1</sup> Adequate service is generally defined as having sufficient capacity to meet maximum demand "and to assure such customers of reasonable continuity of service."<sup>2</sup> (emphasis added).

The Commission has established regulations that further refine these requirements for electric utilities. All electric utilities are required to provide adequate service according to their tariffs on file at the Commission.<sup>3</sup> They are required to "make

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<sup>1</sup> KRS 278.030(2).

<sup>2</sup> KRS 278.010(14).

<sup>3</sup> 807 KAR 5:041, Section 2.

all reasonable efforts to prevent interruptions of service, and when such interruptions occur shall endeavor to reestablish service with the shortest possible delay.”<sup>4</sup>

Utilities are required by regulation to report to the Commission any “loss of service for four (4) or more hours to ten (10) percent or 500 or more of the utilities’ customers, whichever is less.”<sup>5</sup> While this level of monitoring provides the Commission with information about major outages and is useful in times of emergency operations, it does not provide information regarding the day-to-day reliability experienced by ratepayers.

In the report prepared from the information provided in Administrative Case No. 2005-00090,<sup>6</sup> “Kentucky’s Electric Infrastructure: Present and Future” (“Infrastructure Report”), the Commission noted that more detailed reliability indices could provide more information regarding a system’s reliability programs and provide greater consistency when reporting the results of their reliability improvement programs to the Commission or other regulatory bodies.<sup>7</sup> In Case No. 2006-00090, each electric utility provided certain electric distribution reliability indices for each circuit in their system for the prior 5

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<sup>4</sup> 807 KAR 5:041, Section 5(1).

<sup>5</sup> 807 KAR 5:006, Section 26(1)(c).

<sup>6</sup> Case No. 2005-00090, An Assessment of Kentucky’s Electric Generation, Transmission and Distribution Needs, final Order issued September 15, 2005.

<sup>7</sup> “Infrastructure Report” at 45.

years.<sup>8</sup> Due to the variability in the electric utilities' ability to collect the data, inconsistencies in the level of detail, and their differing interpretations of "major event days," the Commission determined that it could not practically compare the results.<sup>9</sup>

Also in Case No. 2005-00090, the Commission reviewed the electric utilities' Right-of-Way Maintenance and Vegetation Management programs. The Commission found that right-of-way maintenance ("ROW") and vegetation management are important parts of distribution reliability management and that the establishment of a distribution ROW clearance requirement could help the utilities in preventing certain outages from occurring. The Commission further found consideration of "some practical distribution vegetation management clearing parameters for Kentucky's jurisdictional electric distribution utilities" was warranted.<sup>10</sup>

Therefore, the Commission will investigate the adequacy of the current reliability reporting requirements and whether there is a need to develop consistent standards for reporting reliability performance. In addition, the Commission intends to review the current ROW maintenance and vegetation management programs to determine the reasonableness of those activities and, if warranted, determine the need for minimum maintenance standards.

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<sup>8</sup> In response to the Commission's March 10, 2005 Order, Items 26-30, the electric utilities provided the System Average Interruption Duration Index ("SAIDI"), the System Average Interruption Frequency Index ("SAIFI"), Customer Average Interruption Duration Index ("CAIDI"), and the Customer Average Interruption Frequency Index ("CAIFI").

<sup>9</sup> Case No. 2005-00090 final Order dated September 15, 2005 Appendix B "Summary of Proceedings," at 56.

<sup>10</sup> "Infrastructure Report" at 45.

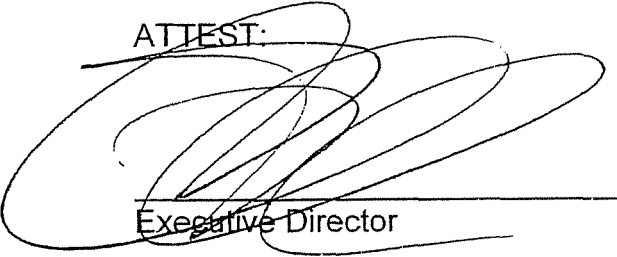
IT IS THEREFORE ORDERED that:

1. An investigation of the reliability measures of the jurisdictional electric distribution utilities and certain reliability practices is instituted. All jurisdictional electric distribution utilities shall be parties to this proceeding.
2. All jurisdictional electric distribution utilities shall file responses to each item in the information request contained in Appendix A. The original and 7 copies of the responses shall be filed with the Commission by the date specified in Appendix B.
3. The procedural schedule set forth in the attached Appendix B shall be followed.
4. All requests for intervention shall be made within 30 days of the date of this Order. Anyone who wishes to participate, but not intervene, will be given the opportunity to file written comments or to offer comments at the public hearing.

Done at Frankfort, Kentucky, this 12th day of December, 2006.

By the Commission

ATTEST:



Executive Director

## APPENDIX A

### APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN ADMINISTRATIVE CASE NO. 2006-00494

Dated December 12, 2006

1. Does utility management measure, monitor, or track distribution reliability?
  - a. If so, describe the measures used and how they are calculated.
  - b. If reliability is monitored, provide the results for the past 5 years for system wide reliability.
2. Are any outages excluded from your reliability measurement? If so, what criteria are used to exclude outages?
3. Does the utility differentiate between momentary and sustained outages?
  - a. What criteria are used to differentiate?
  - b. Is information about momentary interruptions recorded?
4. At what level of detail does the utility record customer outages (individual customer, by re-closer, by circuit, by substation, etc.)?
5. How does the utility detect that a customer is experiencing an outage?
6. How does the utility know when a customer is restored?
7. Are the causes of outages categorized and recorded? If they are, provide a list of the categories used.
8. Can the utility record outage information for each circuit in the system including for each customer outage:
  - a. Length of each disruption?
  - b. Number of customers affected by each disruption?
  - c. Number of customers served by each circuit:

- d. Cause of each interruption?
9. If the answer to any part of Item 8 is no, what would be required to enable the utility to collect this level of data?
- a. Provide an estimated cost to obtain this level of detail.
  - b. Provide an estimated timeline to implement such upgrades.
10. Does the utility follow any type of standard (e.g., ANSI A300) for trimming trees in or near to the distribution right-of-way?
11. What criteria does the utility use to determine when vegetation maintenance or tree trimming is required?
12. Is the tree trimming performed by utility personnel or by contractor? If by contractor, describe the controls management uses to ensure trees are trimmed per utility requirements.
13. Is any portion of the utility system subject to local codes or ordinances regarding tree trimming or vegetation management?
- a. Which areas of the system are covered by local codes or ordinances?
  - b. For each covered area, what do the local codes or ordinances require?
14. How often does the utility clear its distribution easements?
15. How much has the utility spent on distribution easement clearing for each of the last 5 years? Include the cost per mile expended.
16. What annual amount of money is included in the current retail rates for distribution easement clearing?

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN ADMINISTRATIVE CASE NO. 2006-00494

Dated December 12, 2006

- Commission information request to all jurisdictional electric distribution utilities..... 12/15/06
- All jurisdictional electric distribution utilities shall file responses to initial requests for information no later than .....01/12/07
- All supplemental requests for information to all jurisdictional electric distribution utilities shall be filed no later than.....02/09/07
- All jurisdictional electric distribution utilities shall file responses to supplemental requests for information no later than .....02/23/07
- Informal Conference is to begin at 9:00 a.m., Eastern Time, in Hearing Room 1 of the Commission's offices at 211 Sower Boulevard, Frankfort, Kentucky ..... 03/06/07
- Jurisdictional electric distribution utilities shall file testimony, if any, in verified prepared form no later than .....03/23/07
- Intervenor testimony, if any, in verified prepared form shall be filed no later than .....04/13/07
- Last day for all jurisdictional electric distribution utilities to publish notice of hearing .....05/11/07
- Public Hearing is to begin at 9:00 a.m., Eastern Time, in Hearing Room 1 of the Commission's offices at 211 Sower Boulevard, Frankfort, Kentucky, for the purpose of cross-examination of witnesses ..... 05/23-24/07
- Briefs, if any, shall be filed by.....06/29/07



1. Fleming-Mason Energy does measure and monitor distribution reliability.
  - a. The measures used are SAIDI, SAIFI, and CAIDI as described by the Institute of Electrical and Electronic Engineers (IEEE). They are used to track the reliability of the system as a whole as well as the ability to break the data down by substation and feeder.
  - b. The data is attached to this document. However, the current methodology has not been in place for five years, so the data will only be meaningful for the last three years. Prior to this, the data was collected and maintained according to RUS procedures.

<b>Year</b>	<b>SAIDI</b>	<b>SAIFI</b>	<b>CAIDI</b>
2004	3.61	2.07	1.75
2005	2.17	1.45	1.49
2006	1.88	1.28	1.47

All measurements are made in hours. In the future, these figures will be converted to minutes.

2. There are outages excluded from the measurements. The outages that are characterized by impacting 10% of the distribution system for a duration exceeding 24 hours will be excluded from the standard calculation. However, this criterion is going to change when adequate data is available to move to the Major Event Day (MED) criteria as set forth in the IEEE indices.
3. No. There is no clear methodology for performing this measure based on duration and location of an outage or momentary interruption.
4. The level of detail is by substation and circuit. The data can be manually interrogated to get a greater level of detail.
5. Fleming-Mason Energy does not have an AMR system yet or an Outage Management System. At this time, the customer phone call is the beginning of the outage. Line personnel often verify the outage in the field.
6. Restoration of the outage occurs when there is either field verification or phone verification of electric service.
7. Yes. The standard categories are used as described in the RUS literature.

Transformer Fuse	Transformer Failure
Transformer Jumper	Animal on Transformer
Animal on Line	Main Line Jumper
OCR Failure	OCR Open
Consumer Problem	Tree
Ice	Lightning
Human Error	Pole
Conductor	Insulator
Line Fuse Open	Connector
Fuse Cutout	Unknown
Wind	

This is the list that is used for entering outage causes. It is the standard RUS cause codes; however, RUS is going to be updating the bulletin for outage information this year and these codes will be updated to match the new information.

8. The details of each outage are recorded by substation, circuit, number of customers affected, and the cause of the outage. These details are kept in a database for archiving, retrieval, and later analysis.
  - a. Yes. The length of each disruption is recorded based on the time the customer reports the outage and the restoration is performed by line personnel.
  - b. The number of customers is entered into the outage information database.
  - c. The number of customers for each substation and circuit are available.
  - d. Causes are recorded for each interruption. The line personnel responding to the event determine the cause of the interruption.
9. N/A
10. Yes. The ANSI A300 and applicable RUS standards are used.
11. Fleming-Mason Energy a standard five-year cycle to trim, remove, and spray vegetation in the right-of-way. Also, Fleming-Mason Energy personnel are routinely inspecting the system for vegetation that potentially could cause outages

and damage before the five-year cycle is complete. Typically, three years after a cycle trimming on a circuit is performed, the “hot spot” activity is performed.

12. Contractors are used for all right of way management. Cooperative personnel inspects all tree trimming and related activities to ensure that proper widths and trimming methods are performed. A portion of payments are reserved until approval is authorized by cooperative personnel.
13. No.
14. A five-year cycle is used to clear the system. Refer to 11.
15. The following table lists the last five years of distribution clearing.

<b>Year</b>	<b>Cost</b>	<b>Miles</b>	<b>Cost per Mile</b>
2002	\$1,029,503	493	\$2,088
2003	\$944,054	355	\$2,659
2004	\$880,632	311	\$2,831
2005	\$1,792,891	653	\$2,745
2006	\$1,297,688	449	\$2,890

16. In the last rate case in 2001, the amount included for distribution easement clearing was \$739,693.

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