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January 12, 2007

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HAND DELIVERED

Ms. Beth O'Donnell
Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602-0615

RE: ***P.S.C. Case No. 2006-00494***

Dear Ms. O'Donnell:

Please find enclosed and accept for filing the original and seven copies of Kentucky Power Company's Responses to the Staff's Data Requests in this proceeding. A copy is being served by First Class Mail today on those persons identified on the attached list.

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

Very truly yours,

Mark R. Overstreet

cc: Persons on Attached List

KE057:00KE4:15144:1:FRANKFORT

CERTIFICATE OF SERVICE

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% Louisville Gas & Electric Co.
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Michael L. Kurtz
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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 ELECTRIC DISTRIBUTION UTILITIES AND CERTAIN RELIABILITY MAINTENANCE PRACTICES	))))	CASE NO. 2006-0494

KENTUCKY POWER COMPANY

RESPONSES TO COMMISSION'S FIRST SET DATA REQUESTS

January 12, 2007

Kentucky Power Company

REQUEST

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.

RESPONSE

Yes, the Company measures, monitors and tracks distribution reliability, as described below:

a. SAIFI is the System Average Interruption Frequency Index, which represents the number of interruptions an average Kentucky Power customer experiences during the period evaluated (usually one year). It is calculated by dividing the "total customers interrupted" by "total customers served".

CAIDI is the Customer Average Interruption Duration Index, which represents the average length of time (in hours) an interrupted customer is without power during the period. It is calculated by dividing the "total customer-hours of interruption" by "total customers interrupted".

SAIDI is the System Average Interruption Duration Index, which represents the total length of time (in hours) an average customer is without power in the period. It is calculated by dividing the "total customer-hours of interruption" by "total customers served".

	Includes all Sustained Interruptions*			Excludes Data on Major Event Days (MED)**		
Year	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI
2002	2.690	4.10	11.03	2.088	3.13	6.54
2003	2.880	7.10	20.45	1.946	2.88	5.60
2004	3.270	6.52	21.32	2.419	3.28	7.94
2005	2.580	2.66	6.86	2.576	2.66	6.84
2006***						

* Sustained interruption is an outage that exceeds five minutes in length.

** Kentucky Power is utilizing the major event day methodology that is outlined in IEEE Std. 1366™ - 2003, IEEE Guide for Electric Power Distribution Reliability Indices as its "major outage" definition for this response.

*** Note: 2006 data will be provided as soon as it is available.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

Are any outages excluded from your reliability measurement? If so, what criteria are used to exclude outages?

RESPONSE

No. Information historically provided to the Commission includes all sustained interruptions. Kentucky Power does produce management reports, which exclude outages incurred on "Major Event Days" for its own use. It is believed this data is more indicative of reliability trends. This information is included in the response to Item No. 1. For this purpose major event days are determined by the methodology outlined in IEEE Std 1366™-2003, IEEE Guide for Electric Power Distribution Reliability Indices.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

Does the utility differentiate between momentary and sustained outages?

a. What criteria are used to differentiate?
b. Is information about momentary interruptions recorded?

RESPONSE

Yes, the Company differentiates between momentary and sustained outages.

a. The Company uses the criteria outlined in the IEEE Std 1366™-2003, IEEE Guide for Electric Power Distribution Reliability Indices, §3.21 which states an outage is classified as a sustained outage if it exceeds 5 minutes in length.

b. No, information about momentary interruptions is not recorded on distribution line equipment. Some substations have supervisory control and data acquisition (SCADA) equipment that allows collecting the time stamp of transmission breaker operations or distribution feeder breaker operations. This momentary interruption data is not normally passed to the outage management system, which is used for reliability index reporting. Operation counters on certain distribution line protective devices record how many times the device has operated but no information on momentary outages is recorded.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

At what level of detail does the utility record customer outages (individual customer, by re-closer, by circuit, by substation, etc.)?

RESPONSE

Data is recorded for any customer sustained interruption although customer specific data (such as account number or address) is not routinely recorded. Detailed outage information is recorded by the isolating or clearing device. Outage records can be sorted and displayed in a variety of ways, including by station, circuit and isolating device. A list of the types of isolating devices is attached.

WITNESS: Everett G Phillips

CLEARING CODES FOR AEP		
CODE	**CODE NAME**	**DESCRIPTION**
80	BUSS BREAKER OR TOTALIZER BREAKER	DISTRIBUTION PRIMARY CLEARED BY "LOW SIDE" BUSS BREAKER PROTECTION
81	DIP FUSE, RISER	PRIMARY CLEARED BY MAIN FUSE TO UNDERGROUND PRIMARY
82	FEEDER BREAKER	DISTRIBUTION PRIMARY CLEARED BY FEEDER BREAKER
83	LINE FUSE	PRIMARY CLEARED BY ANY FUSE TAP
84	LINE REGULATOR	PRIMARY CLEARED BY REGULATOR MALFUNCTION
85	NO INTERRUPTION	SERVICE CALL WITH NO OUTAGE SUCH AS PHONE CABLE DOWN, OPEN NEUTRAL, ETC.
86	OCR's RECLOSERS	PRIMARY CLEARED BY OCR/LINE RECLOSER/BR
87	OTHER UTILITY	OTHER SOURCE UTILITY OUTSIDE THE SYSTEM
88	PRIMARY OPEN	PRIMARY CLEARED BY OPEN JUMPER/RISER/LINE/CONNECTOR/SWITCH
89	SECONDARY OPEN	SECONDARY CLEARED BY OPENED LINE/CONNECTOR/RACK/JUMPER
90	SECTIONALIZER	PRIMARY CLEARED BY SECTIONALIZER
91	SERVICE OUTAGES	SERVICE CLEARED BY OPENED SERVICE WIRES
92	TRANSFORMER FUSE	PRIMARY CLEARED BY DISTRIBUTION XFMR FUSE/BKR/CSP-OVERHEAD AND PADMOUNT
93	TRANSMISSION	DISTRIBUTION PRIMARY CLEARED BY "HIGH SIDE" CIRCUIT SWITCHER, FUSE OR BREAKER
94	UNDERGROUND PRIMARY OPEN	PRIMARY CLEARED BY OPEN CONDUCTOR/ELBOW/SWITCH
95	UNDERGROUND SECONDARY	SECONDARY CLEARED BY OPEN CONDUCTOR
96	TRANSFORMER HIGH SIDE DEVICE	DISTRIBUTION PRIMARY CLEARED BY POWER TRANSFORMER HIGH SIDE DEVICE
97	NONE	NONE
98	OTHER DEVICE NOT LISTED	OTHER DEVICE NOT LISTED

Kentucky Power Company

REQUEST

How does the utility detect that a customer is experiencing an outage?

RESPONSE

Primarily an outage is first detected from a phone call from a customer or other public entity, such as 911, Police or Fire Departments. We also have the ability to detect feeder outages on circuits equipped with SCADA on the feeder breaker.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

How does the utility know when a customer is restored?

RESPONSE

In general, it is AEP Kentucky's practice to confirm customers have been restored through either the line worker, a telephone call by a dispatcher or an automated call back system.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

Are the causes of outages categorized and recorded? If they are, provide a list of the categories used.

RESPONSE

Yes, outage causes are categorized in two ways. The "major cause" shows if it is related to distribution, generation or transmission. The "minor cause" indicates the actual cause of the outage, such as lightning or an animal. Please see the attached list.

WITNESS: Everett G Phillips

Kentucky Power Company
Cause of Outage List

Major Cause Description
Distribution Source
Distribution Line
Distribution Station
Generation
No Interruption
Partial Power
Subtransmission Line
Transmission Line
Transmission Station

Minor Cause Description	
Animal	Overvoltage
Animal Bus	Power Quality (Flickering, Dim, Bright Lights Etc>)
Animal Bushing Xfmr	Relay Mis-Operation
Animal - Other	Scheduled Company
Blast/Explosion (Non AEP)	Scheduled Outside Request > 1 Customer
No Customer Out - AEP Conductor	Switching Surge
Customer Equipment	No Customer Out - Tree Condition
Contamination/Flashover	Transmission Information Needed
No Customer Out - CATV Or Phone Conductor	Tree Inside RoW
Duplicate Outage Ticket	Tree Out Of RoW
Equipment Failure	Tree Removal (Non AEP)
Error - Field	Unknown (Non Weather)
Error - Operations	Unbalance
Fire - AEP, Or Affecting > 1 Customer	Ug Const. /Dig-Ins (Non AEP)
Fire - Customer, 1 Customer Out	Vandalism
Foreign Object (Non Animal)	Vehicle Accident (Non AEP)
Generation	Weather - Flood/Slide
Galloping Conductor	Weather - Hurricane
AEP - Outdoor/Street Lights	Weather - Ice (1/2" Or > 6" Snow)
Load Shed	Weather - Lightning
Other	Weather - Tornado
Overload	Weather - Unknown
Other Utility	Weather - High Winds (Exceeding 60 mph)

Kentucky Power Company

REQUEST

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?

RESPONSE

a. Yes.

b. Yes.

c. Yes.

d. Yes.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

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.

RESPONSE

Not applicable.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

Does the utility follow any type of standard (e.g., ANSI A300) for trimming trees in or near to the distribution right-of-way?

RESPONSE

KPCo's vegetation management practices are conducted in accordance with standards established by the American National Standards Institute (ANSI), the Occupational Safety and Health Administration (OSHA), the National Electrical Safety Code (NESC), the Tree Care Industry Association and the International Society of Arboriculture and include such things as pruning and removing trees; safety and worker protection; work clearances and training requirements; and safety clearance guidelines.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

What criteria does the utility use to determine when vegetation maintenance or tree trimming is required?

RESPONSE

KPCo's Distribution "Performance Based" Vegetation Management Program is a comprehensive, integrated vegetation management program designed to ensure that the vegetation along KPCo's distribution circuits is trimmed at the proper time to protect our lines in an environmentally sound and cost-effective manner. Each fall, vegetation work plans are developed for the following calendar year. Development of this plan is based upon visual inspections of the system; historical reliability data, operating history, customer complaints and time elapsed since vegetation management was last performed. The plan is kept dynamic and flexible to respond to local needs that may arise during the course of the year.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

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.

RESPONSE

Kentucky Power Company's tree trimming is performed by contractor personnel.

Kentucky Power foresters and contract foresters regularly audit the tree trimming contractors' work to evaluate their performance in safety, work quality, and line clearance. Up to 500 audits are performed each quarter. Please see the attached page for the Audit Form utilized.

Copies of each audit are provided to the contractor's local management. Information from each audit is entered into the RWM* Program and the results are compiled quarterly. The quarterly recap is forwarded to the tree trimming contractor's management for their review.

*RWM (Right-of-Way Maintenance) is an American Electric Power program used to capture line clearance activities and generate invoices for line clearance work.

WITNESS: Everett G Phillips

AEP FORESTRY CONTRACT (KPI) CREW AUDITS

No. 065001

PSC Case No. 2006-00494
~~Order dated December 12, 2006~~
Item No. 12
~~Page 2 of 2~~

Audit Date: ____/____/____ Audit Quarter: 1 2 3 4 (circle one)

Operating Co.: _____

Auditor Name: _____

State: _____

Crew Number: _____ District: _____

Forestry Region Number: _____

Circuit #: _____

Foreman/ General Foreman: _____

Circuit Name: _____

Pole Number: _____

Forestry Contract Crew Safety (KPI) Audit

CHECK ONE: PASS ☐ FAIL ☐

- Failure ratings for any single item will result in failure of this audit.
- Failure must be documented in comments fields and will require random periodic follow up observation.

		PASS	FAIL	COMMENTS
1	Personal Protective Equipment- Shall be worn as required. Includes but not limited to hard hats, safety glasses, ear protection, proper footwear.	☐	☐	
2	Property Maintained Safety Equipment- Fully stocked, removable first aid kit, fire extinguisher and wheel chocks.	☐	☐	
3	Traffic Control Devices- Approved and placed in accordance with applicable State and Federal regulations.	☐	☐	
4	Proper Fall Protection Procedures- All climbing practices must be in accordance with OSHA and ANSI Z-133 standards.	☐	☐	
5	Properly Barricade Work Areas- Barricade material available and used in accordance with safety rules.	☐	☐	
6	Properly Maintain and Store Work Tools	☐	☐	
7	Follow Proper Approach Distances- Follow OSHA 1910.269 minimum clearances for AC Live Work Minimum Approach Distances.	☐	☐	

Acceptable/Unacceptable on items below

- An Unacceptable ratings may result in failure of this audit dependent on magnitude and frequency of the violation.
- Any item found to be Unacceptable must be documented in the comments fields and will require random, periodic follow up observation.

	ACCEPTABLE	UNACCEPTABLE	COMMENTS
1 Hazardous material properly stored, labeled and documented	☐	☐	
2 MSDS and Herbicide Label information available	☐	☐	
3 Jobsite Housekeeping	☐	☐	

Forestry Clearance (KPI) Audit

CHECK ONE: PASS ☐ FAIL ☐

Pass / Fail	PASS	FAIL		PASS	FAIL	COMMENTS
Conductor Clearance	☐	☐	*Danger Trees*	☐	☐	
ROW Width	☐	☐				

Forestry Work Quality (KPI) Audits

CHECK ONE: PASS ☐ FAIL ☐

	PASS	FAIL		PASS	FAIL		PASS	FAIL	COMMENTS
Collar Cuts	☐	☐	Stump Height	☐	☐	Peels/Tears	☐	☐	
Directional Pruning	☐	☐	Hangers	☐	☐	Cleanup/Brush Disposal	☐	☐	
Drop Crotch Selection	☐	☐	Clearing around poles	☐	☐	Regard for property	☐	☐	

Reporting Accuracy (KPI) Audit

Week ending date: ____/____/____

	Timesheet Data		Audit Data		Variance	
	Cap	O&M	Cap	O&M	Cap	O&M
Number of trees trimmed						
Number of trees removed						
Footage/ Units/ Acres Re-cleared						
Footage/ Units/ Acres Ground Sprayed						

	YES	NO
Widening	☐	☐

Non - KPI Crew Audit Items

Equipment & Personnel	PASS	FAIL		PASS	FAIL		PASS	FAIL		PASS	FAIL
Truck Appearance/ID	☐	☐	Professional appearance	☐	☐	Crew Properly Equipped	☐	☐	Tree Knowledge	☐	☐
Number of Working Saws	☐	☐	Manpower utilization	☐	☐	Herbicide Equipment	☐	☐	Planning	☐	☐
ROW Equipment/Chipper	☐	☐	Customer Relations	☐	☐	AEP Guidelines	☐	☐	Use of Forms	☐	☐

ADDITIONAL COMMENTS: _____

AEP REPRESENTATIVE: _____ CONTRACTOR REPRESENTATIVE: _____

Please give a copy to each of the following: WHITE - AEP FORESTRY OFFICE YELLOW - CONTRACTOR SUPERVISION PINK - CREW FOREMAN
**** Forestry Office send copy to: SAFETY HEALTH MANAGER (SAFETY AUDIT ONLY) ****

33060C1106

Kentucky Power Company

REQUEST

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?

RESPONSE

Kentucky Power Company is subject to one local ordinance regarding tree trimming or vegetation management.

a. The area covered is within the limits of the City of Bellefonte.

b. The Company has the authority to do tree trimming within the city limits but the ordinance requires that no tree having a circumference at the base of two feet or more or a height in excess of 30 feet be cut or removed from any lot without the approval of the building inspector on a written request by the property owner.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

How often does the utility clear its distribution easements?

RESPONSE

KPCo's Vegetation Management Program is Performance-Based; therefore, the frequency of re-clearing activities on any given circuit is based upon reliability data, visual inspections, customer complaints and operational history.

WITNESS: Everett G Phillips

Kentucky Power Company

REQUEST

How much has the utility spent on distribution easement clearing for each of the last 5 years? Include the cost per mile expended.

RESPONSE

Please see the table below.

Kentucky Power Company					
Distribution Right-of-Way Maintenance					
Year	O&M*	Capital *	Col 2 + Col 3	Miles Completed	O&M Cost Per Mile
(1)	(2)	(3)	(4)	(5)	(6)
2002	$3,181,191	$11,738	$3,192,930	1,550.0	$2,052
2003	$4,444,878	$4,932	$4,449,810	1,558.3	$2,852
2004	$6,157,815	$1,108,973	$7,266,788	2,007.0	$3,068
2005	$6,872,934	$1,876,427	$8,749,361	1,711.2	$4,016
2006 **					

* The above O&M and Capital values include company labor, fringes, outside services, materials, transportation.

** 2006 Data will be provided when available.

WITNESS: Errol K Wagner and Everett Phillips

Kentucky Power Company

REQUEST

What annual amount of money is included in the current retail rates for distribution easement clearing?

RESPONSE

The annual amount of O&M money included in the Company's recent test year for distribution easement clearing is shown below:

Direct Cost for Outside Services & Materials	Labor, Transportation Expense, Fringes & Other	Total
$5,721,545	$137,359	$5,858,904

WITNESS: Errol Wagner and Everett Phillips