


Shelby Energy Cooperative, Inc.

Your Touchstone Energy® Partner 

January 10, 2007

Ms. Beth O'Donnell
Executive Director
KY Public Service Commission
211 Sower Blvd.
PO Box 615
Frankfort, KY 40602-0615

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JAN 16 2007

**PUBLIC SERVICE
COMMISSION**

Re: Administrative Case No. 2006-00494

Dear Ms. O'Donnell:

Please find enclosed the original and seven (7) copies of the information requested in Administrative Case No. 2006-00494 dated December 12, 2006.

Should you have any questions or need additional information, please contact our office.

Sincerely,

A handwritten signature in cursive script that reads "Debbie Martin".

Debbie Martin
President & CEO

Enclosures

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN INVESTIGATION OF THE RELIABILITY)	
MEASURES OF KENTUCKY'S)	ADMINISTRATIVE
JURISDICTIONAL ELECTRIC)	CASE NO. 2006-00494
DISTRIBUTION UTILITIES AND CERTAIN)	
RELIABILITY MAINTENANCE PRACTICES)	

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**PUBLIC SERVICE
COMMISSION**

SHELBY ENERGY COOPERATIVE, INC.

PSC ADMINISTRATIVE CASE 2006-00494

Shelby Energy Cooperative, Inc. (SEC) hereby submit responses to the Commission's request dated December 12, 2006. Each response with its associated supportive reference material is individually tabbed.

Q1. Does utility management measure, monitor, or track distribution reliability?

A1. Yes

a. If so, describe the measures used and how they are calculated.

Sustained interruptions are measured and recorded. Tabulation by the distribution component affected and the cause are documented for each outage. This information is analyzed and appropriate follow-up action is initiated to prevent future outages. Momentary interruptions are monitored by substation disturbance analyzers at most distribution substations.

b. If reliability is monitored, provide the results for the past 5 years for system wide reliability.

Reliability: Sustained interruptions – Form 7A (Refer to attachment 1 b)
Momentary interruptions – (Refer to attachment 1 b-1)

SHELBY ENERGY FORM 7A SERVICE INTERRUPTIONS

Attachment 1b	POWER SUPPLIER	EXTREME STORM	PREARRANGED	ALL OTHER	Pg. 2 of 3	
					TOTAL	TOTAL
YEAR: 2001						
CONSUMER HOURS	3,016.20	12,483.70	919.40	26,248.90		42,668.20
AVG. NO. OF CONSUMERS	13.021					
AVG. INTERRUPTION HOURS	0.231	0.958	0.070	2.015		3.276
YEAR: 2002						
CONSUMER HOURS	2,606.40	0.00	347.40	18,555.90		21,509.70
AVG. NO. OF CONSUMERS	13.383					
AVG. INTERRUPTION HOURS	0.194	0.000	0.025	1.386		1.607
YEAR: 2003						
CONSUMER HOURS	3,169.17	31,116.73	178.58	14,400.42		48,864.90
AVG. NO. OF CONSUMERS	13.699					
AVG. INTERRUPTION HOURS	0.231	2.271	0.013	1.051		3.567
YEAR: 2004						
CONSUMER HOURS	225.75	40,660.46	600.58	14,686.66		56,173.45
AVG. NO. OF CONSUMERS	14.069					
AVG. INTERRUPTION HOURS	0.016	2.890	0.042	1.043		3.992
YEAR: 2005						
CONSUMER HOURS	735.00	0.00	112.82	15,561.00		16,408.82
AVG. NO. OF CONSUMERS	14.443					
AVG. INTERRUPTION HOURS	0.050	0.000	0.007	1.077		1.136
FIVE YEAR PERIOD:						
CONSUMER HOURS	1,950.50	16,852.18	431.76	17,890.58		37,125.01
AVG. NO. OF CONSUMERS	13.723					
AVG. INTERRUPTION HOURS	0.142	1.228	0.031	1.303		2.705

Shelby Energy Cooperative
System Average RMS Frequency Index
SARFI (Voltage Sag Index)

Location ID	Date installed	Sub voltage	1P Fault MVA	2003		2004		2005	
				Distribution	Transmission	Distribution	Transmission	Distribution	Transmission
Bedford	5/19/2003	12.5	94.00	10	3	26	5	15	4
Bekaert 1	8/28/2002	25	126.00	4	4	2	2	1	4
Bekaert 2	4/2/2003	25	125.00	0	4	2	2	4	4
Campbellsburg	8/31/2004	12.5	0.00	n/a	n/a	2	1	3	0
Clay Village	3/24/2004	12.5	124.00	n/a	n/a	7	3	10	2
Jericho	8/29/2003	12.5	112.00	10	0	24	7	4	2
Logan 1	9/15/2005	25	0.00	n/a	n/a	n/a	n/a	2	1
Long Run	8/29/2003	25	67.00	13	0	63	8	26	2
New Castle	8/21/2002	12.5	114.00	9	0	9	3	7	2
Southville	8/31/2004	12.5	0.00	n/a	n/a	0	0	3	2

Notes:

An event is counted when the voltage at the substation bus goes below 70% of nominal for more than 1.1 cycles.
Numbers displayed in bold type are values for which a full year of data is available

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Dated December 12, 2006

Q2. Are any outages excluded from your reliability measurement? If so, what criteria are used to exclude outages?

A2. No

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Q3. Does the utility differentiate between momentary and sustained outages?

A3. Yes

c. What criteria are used to differentiate?

Sustained outage: An interruption greater than five (5) minutes.

Momentary outage: An interruption less than five (5) minutes.

d. Is information about momentary interruptions recorded?

Yes; Monthly substation momentary events are recorded by number and type from over 90% of substations.

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- Q4. At what level of detail does the utility record customer outages (individual customer, by re-closer, by circuit, by substation, etc.)?**
- A4. SEC reports all outages by individual, substation, circuit and line section. (Refer to attached detail report 4a)**

Interruption Detail for November-06

Date Off	Date On (if different)	Time Off	Time On	Elapsed Hours	No. Of Consumers	Consumer Hours	Map Reference	Sub	Fdr	Equip. Code	Cause Code	Comments
11/1/2006		9:20 AM	10:26 AM	1.10	1	1.10	33533019	10	1	36	51	
11/2/2006		6:35 AM	7:25 AM	0.83	2	1.66	33476173	13	2	36	60	
11/3/2006		4:35 AM	7:30 AM	2.92	5	14.60	32348003	4	1	36	30	
11/3/2006		4:30 AM	5:50 AM	1.33	30	39.90	34187008	6	3	37	32	LS 474
11/6/2006		1:35 PM	2:28 PM	0.88	2	1.76	33565101	10	1	36	60	
11/6/2006		8:40 PM	10:05 PM	1.42	10	14.20	34258040	2	3	36	99	
11/7/2006		8:23 AM	9:00 AM	0.62	9	5.58	32334107	5	2	36	99	
11/7/2006		3:30 AM	4:30 AM	1.00	2	2.00	34049006	1	3	36	51	
11/8/2006		9:55 PM	11:15 PM	1.33	1	1.33	33084016	3	2	51	30	
11/9/2006		1:37 AM	3:00 AM	1.38	3	4.14	34115036	10	1	35	30	
11/9/2006		12:01 PM	2:30 PM	2.48	1	2.48	34212007	2	1	36	99	
11/9/2006		4:26 PM	5:20 PM	0.90	3	2.70	32484107	4	2	36	60	
11/9/2006		5:00 PM	5:50 PM	0.83	1	0.83	32388004	4	3	36	60	
11/14/2006		1:27 PM	1:30 PM	0.05	8	0.40	3228979	4	4	39	11	
11/14/2006		11:24 AM	12:24 PM	1.00	10	10.00	32943442	11	2	36	99	
11/16/2006		8:10 AM	9:20 AM	1.17	8	9.36	32388801	4	3	36	60	
11/16/2006		12:15 PM	1:00 PM	0.75	1	0.75	31882017	4	1	51	30	
11/18/2006		11:20 AM	1:20 PM	2.00	10	20.00	31675006	4	3	36	60	
11/20/2006		1:10 PM	2:30 PM	1.33	3	3.99	33475409	13	2	40	10	
11/21/2006		1:26 PM	2:26 PM	1.00	3	3.00	32484010	4	2	36	60	
11/22/2006		7:30 PM	9:30 PM	2.00	4	8.00	32942355	11	2	51	30	
11/23/2006		6:15 PM	7:30 PM	1.25	2	2.50	33465013	13	2	36	99	
11/25/2006		11:30 AM	1:00 PM	1.50	3	4.50	33053128	3	1	51	60	
11/26/2006		9:05 AM	10:07 AM	1.03	4	4.12	32944006	11	1	36	70	
11/27/2006		3:31 PM	4:50 PM	1.32	8	10.56	32353008	5	3	36	60	
11/27/2006		12:15 PM	12:45 PM	0.50	1	0.50	33564031	10	1	51	60	
11/29/2006		9:30 AM	10:50 AM	1.33	6	7.98	34805002	6	1	30	11	
11/29/2006		2:46 PM	3:25 PM	0.65	1	0.65	33083011	3	2	36	51	
11/30/2006		8:08 AM	9:00 AM	0.87	1	0.87	34719018	6	1	51	99	

MONTH TOTALS

34.77 143 179.46

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Q5. How does the utility detect that a customer is experiencing an outage?

A5. The customer calls our office or after-hours answering and dispatch center to report an outage. Substation and substation circuit outages are monitored by our supervisory control and data acquisition system (SCADA). These outages are reported and dispatched when they occur.

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Q6. How does the utility know when a customer is restored?

A6. Line technicians call to report service restoration. SCADA dispatchers log substation and circuit service restoration.

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Q7. Are the causes of outages categorized and recorded? If they are, provide a list of the categories used.

A7. Yes, SEC tracks outages using the following categories(Refer to attachment 7a):

- Power Supplier
- Scheduled
- Major Storm
- Equipment or Installation
- Age
- Weather
- Birds and Animals
- Public
- Unknown

November-06	INTERRUPTIONS C				TO MATERIAL ITEMS				Pg. 2 of 3	
	(CONSUMER HOURS)								Attachment 7a	
All	Power Supplier	Scheduled	Major Storm	Equip. or Install.	Age	Weather	Birds and Animals	Public	Unknown	
	00	10-19	20	30-39	40-49	50-59	60-69	70-79	99	
00	Power Supplier									
Gen. and Transmission										
01	Generation									
02	Tower or Pole									
03	Conductor									
04	Substation									
09	Other									
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distribution Substation										
10	Transformer									
11	Regulator or Breaker									
12	Switch or Arrestor									
13	Source Fuse									
19	Other									
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poles and Fixtures										
20	Pole									
21	Crossarm or Brace									
22	Anchor or Guy									
29	Other									
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Overhead Devices										
30	Line Conductor									
31	Clamp, Conductor									
32	Splice, Deadend									
33	Jumper									
34	Insulator									
35	Lightning Arrestor									
36	Fuse Cutout									
37	OCR, Sectionalizer									
39	Other									
	Subtotal	159.52	0.00	8.38	0.00	58.64	0.00	4.12	49.87	34.76

		INTERRUPTIONS C TO MATERIAL ITEMS				Attachment 7a				Pg. 3 of 3
		(CONSUMER HOURS)								
		Power Supplier	Scheduled	Major Storm	Equip. or Install.	Age	Weather	Birds or Animals	Public	Unknown
All	00	10-19	20	30-39	40-49	50-59	60-69	70-79	99	
Underground Devices										
40	Primary Cable		3.99							
41	Splice or Fitting									
42	Switch									
43	Lightning Arrester									
44	Sec. Cable or Fittings									
49	Other									
	Subtotal	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Line Transformer										
50	Transformer Bad									
51	Transformer Fuse or Arrester			10.08			5.00			0.87
52	Transformer Lightning Arrester									
59	Transformer, Other									
	Subtotal	15.95	0.00	0.00	10.08	0.00	5.00	0.00	0.00	0.87
Secondaries and Services										
60	Sec. or Service Conductor									
61	Meter or Meter Loop									
62	Security or Street Light									
69	Other									
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	Unknown									
	Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	179.46	0.00	12.37	68.72	0.00	3.75	54.87	4.12	35.63

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Q8. Can the utility record outage information for each circuit in the system including for each customer outage:

A8. a. Length of each disruption?

Yes; information is customer generic/not tied to specific customer(s).

b. Number of customers affected by each disruption?

Yes; information is customer generic/not tied to specific customer(s).

c. Number of customers served by each circuit?

Yes; information is customer generic/not tied to specific customer(s).

d. Cause of each interruption?

Yes; information is customer generic/not tied to specific customer(s).

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Q9. 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?

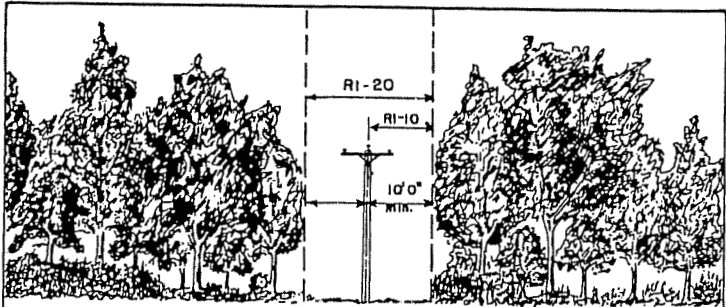
A9. An Automated Metering Information (AMI)/Outage Management system would be required to collect customer specific data. The estimated cost of these two systems would exceed \$5 million and take approximately five (5) years to implement. (This estimation does not include monitoring, day-to-day operations, or maintenance of these systems once installed.)

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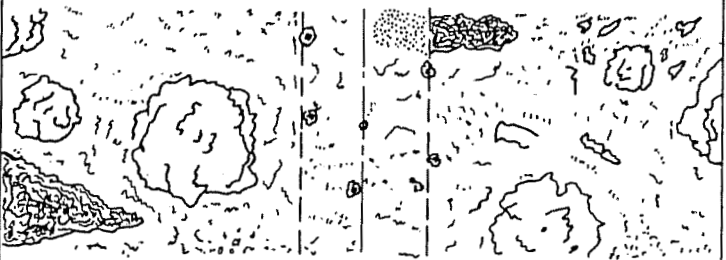
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Q10. Does the utility follow any type of standard (e.g. ANSI A300) for trimming trees in or near to the distribution right-of-way(Refer to attachments 10a and 10b)?

A10. SEC follows RUS specification R1-30, a thirty (30) foot wide easement and also NESC Rule 218 Tree Trimming.



ELEVATION



AFTER CLEARING



BEFORE CLEARING

CLEARING RIGHT-OF-WAY GUIDE

Apr., 1983

RI

EXCEPTION 2: This rule does not apply where access to the supporting structure is limited by a fence meeting the height requirements of Rule 110A1.

c. Standoff Brackets

Standoff brackets on supporting structures shall be arranged so that there is not less than 2.45 m (8 ft) between either:

- (1) The lowest bracket and ground or other accessible surface, or
- (2) The two lowest brackets.

EXCEPTION: This rule does not apply where supporting structures are isolated.

3. Identification

Supporting structures, including those on bridges, on which supply or communication conductors are maintained shall be so constructed, located, marked, or numbered so as to facilitate identification by employees authorized to work thereon.

4. Obstructions

Signs, posters, notices, and other attachments shall not be placed on supporting structures without concurrence of the owner. Supporting structures should be kept free from other climbing hazards such as tacks, nails, vines, and through bolts not properly trimmed.

5. Decorative Lighting

Attachment of decorative lighting on structures shall not be made without the concurrence of the owners and occupants.

B. Unusual Conductor Supports

Where line conductors are attached to structures other than those used solely or principally for their support, all rules shall be complied with as far as they apply. Such additional precautions as may be deemed necessary by the administrative authority shall be taken to avoid damage to the structures or injury to the persons using them. The supporting of conductors on trees and roofs should be avoided.

18. Tree Trimming

A. General

1. Trees that may interfere with ungrounded supply conductors should be trimmed or removed.

NOTE: Normal tree growth, the combined movement of trees and conductors under adverse weather conditions, voltage, and sagging of conductors at elevated temperatures are among the factors to be considered in determining the extent of trimming required.

2. Where trimming or removal is not practical, the conductor should be separated from the tree with suitable materials or devices to avoid conductor damage by abrasion and grounding of the circuit through the tree.

B. At Line Crossings, Railroad Crossings, and Limited-Access Highway Crossings

The crossing span and the adjoining span on each side of the crossing should be kept free from overhanging or decayed trees or limbs that otherwise might fall into the line.

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Q11. What criteria does the utility use to determine when vegetation maintenance or tree trimming is required?

A11. SEC trims right-of-way on four (4) year rotation, along with trimming areas that have been reported during Outages, Air patrol and Ground patrol.

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Q12. 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.

A12. SEC uses contractors for right-of-way and vegetation management. Monthly audits are performed to ensure that trimming is being performed to SEC requirements.

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Q13. Is any portion of the utility system subject to local codes or ordinances regarding tree trimming or vegetation management?

A13. None

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Q14. How often does the utility clear its distribution easements?

A14. SEC clears its system on a four (4) year rotation.

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Q15. How much has the utility spent on distribution easement clearing for each of the last 5 years? Include the cost per mile expended.

A15.

2005	\$485,855.10	@	\$1,145.89 per mile
2004	\$523,218.89	@	\$1,234.01 per mile
2003	\$430,792.29	@	\$1,018.43 per mile
2002	\$412,748.36	@	\$1,283.47 per mile
2001	\$314,757.00	@	\$1,234.35 per mile

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Q16. What annual amount of money is included in the current retail rates for distribution easement clearing?

A16. The amounts listed in question 15. are expensed for the applicable year and included in the retail rates.