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PUBLIC SERVICE  
COMMISSION

March 29, 2018

Ms. Gwen Pinson, Executive Director  
Kentucky Public Service Commission  
211 Sower Blvd.  
PO Box 615  
Frankfort, KY 40602

RE: Administrative Case No. 2011-00450

Dear Ms. Pinson:

Please find an original paper copy and an electronic version of Shelby Energy's 2017 Distribution Reliability Report as outlined in the May 30, 2013 Order and the April 1, 2014 Order pertaining to Administrative Case No. 2011-00450.

Please let me know should you have any questions or need further information.

Sincerely,

A handwritten signature in blue ink that reads "Rachel L. Wilson".

Rachel L. Wilson  
*Manager of Engineering*  
Work: 502-437-8170  
Rachel@ShelbyEnergy.com

Enclosures

# KENTUCKY PUBLIC SERVICE COMMISSION

## Electric Distribution Utility Annual Reliability Report

### SECTION 1: CONTACT INFORMATION

UTILITY NAME	Shelby Energy Cooperative, Inc
REPORT PREPARED BY	Rachel L. Wilson
E-MAIL ADDRESS OF PREPARER	<a href="mailto:Rachel@ShelbyEnergy.com">Rachel@ShelbyEnergy.com</a>
PHONE NUMBER OF PREPARER	502.437.8170

### SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2017
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### SECTION 3: MAJOR EVENT DAYS

	T <sub>MED</sub> 13.50
FIRST DATE USED TO DETERMINE T <sub>MED</sub>	1-Jan-12
LAST DATE USED TO DETERMINE T <sub>MED</sub>	31-Dec-16
NUMBER OF MED IN REPORT YEAR	5

NOTE: Per IEEE 1366 T<sub>MED</sub> should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

### SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information			
TOTAL CUSTOMERS	15,554	TOTAL CIRCUITS	45
Excluding MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	121.89	SAIDI	107.51
SAIFI	1.14	SAIFI	1.28
Including MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	242.06	SAIDI	405.88
SAIFI	1.44	SAIFI	2.68

Notes:

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of April of each year
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, and T<sub>MED</sub>

# KENTUCKY PUBLIC SERVICE COMMISSION

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## Electric Distribution Utility Annual Reliability Report

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### SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUITS NUMBERS SHOULD BE REPORTED EXCLUDING MED)

Circuit #

- 1 SUBSTATION NAME AND NUMBER
- 2 SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
- 3 CIRCUIT NAME AND NUMBER
- 4 CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
- 5 TOTAL CIRCUIT LENGTH (MILES)
- 6 CUSTOMER COUNT FOR THIS CIRCUIT
- 7 DATE OF LAST CIRCUIT TRIM (VM)
- 8 OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE
- 9 CIRCUIT 5 YEAR AVERAGE (SAIDI)
- 10 REPORTING YEAR (SAIDI)
- 11 CIRCUIT 5 YEAR AVERAGE (SAIFI)
- 12 REPORTING YEAR (SAIFI)
- 13 CORRECTIVE ACTION PLAN

REPEAT INFORMATION FOR EACH CIRCUIT EXCEEDING ITS 5 YEAR AVERAGE  
FOR SAIDI AND/OR SAIFI

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## Electric Distribution Utility Annual Reliability Report

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Additional pages may be attached as necessary

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional pages may be attached as necessary

Please see attachment

# KENTUCKY PUBLIC SERVICE COMMISSION

## Electric Distribution Utility Annual Reliability Report

### SECTION 7: UTILITY COMMENTS

SUB #	NAME	ADDRESS	Latitude DMS	Longitude DMS	Longitude DD	Latitude DD
5	Bedford	672 Cutshaw Lane, Bedford, KY 40006	38° 36' 8.324" N	85° 18' 19.225" W	-85.30534	38.602312
9	Bekaert #1	1950 Isaac Shelby Drive, Shelbyville, KY 40065	38° 12' 24.825" N	85° 16' 55.197" W	-85.281999	38.206896
12	Bekaert #2	1950 Isaac Shelby Drive, Shelbyville, KY 40065	38° 12' 24.449" N	85° 16' 55.213" W	-85.282004	38.206791
14	Bekaert #3	1950 Isaac Shelby Drive, Shelbyville, KY 40065	38° 12' 23.997" N	85° 16' 55.212" W	-85.282003	38.206666
8	Budd	1098 Old Brunerstown Road, Shelbyville, KY 40065	38° 11' 49.816" N	85° 16' 53.160" W	-85.281433	38.197171
4	Campbellsburg	235 Orem Lane, Turner Station, KY 40075	38° 31' 49.483" N	85° 11' 7.221" W	-85.185339	38.530412
2	Clay Village Dist.	3998 Benson Pike, Bagdad 40003	38° 13' 17.634" N	85° 8' 5.868" W	-85.134963	38.221565
11	Jericho	3667 Lake Jericho Road, Smithfield, KY 40068	38° 24' 14.507" N	85° 17' 24.320" W	-85.290089	38.40403
1	Logan #1	5561 Brunerstown Road, Shelbyville, KY 40065	38° 11' 36.001" N	85° 17' 12.298" W	-85.286749	38.193334
10	Logan #2	5561 Brunerstown Road, Shelbyville, KY 40065	38° 11' 36.038" N	85° 17' 13.330" W	-85.287036	38.193344
13	Long Run	8593 Aiken Road, Louisville, KY 40245	38° 16' 59.254" N	85° 25' 35.066" W	-85.426407	38.283126
7	Milton	268 Peck Pike, Milton, KY 40045	38° 42' 36.626" N	85° 22' 45.684" W	-85.379357	38.710174
3	New Castle	1323 S. Property Road, Eminence, KY 40019	38° 25' 28.483" N	85° 9' 8.740" W	-85.152428	38.424579
6	Southville	7791 Hempridge Road, Shelbyville, KY 40065	38° 6' 58.687" N	85° 10' 7.088" W	-85.168636	38.116302
15	Veechdale	I-64 Westbound, Simpsonville, KY 40067	38° 12' 19.813" N	85° 19' 44.587" W	-85.329050	38.205500
16	Defoe	6458 Cedarmore Road, Pleasureville, KY 40057	38° 20' 19.252" N	85° 2' 39.131" W	-85.044000	38.339000

**SECTION 5: CIRCUIT REPORTING**

1	SUBSTATION NAME AND NUMBER	<b>Logan #1 (1)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	5561 Brunerstown Road, Shelbyville, KY 40065
3	CIRCUIT NAME AND NUMBER	Finchville/ Olive Branch: #1-4
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Finchville/ Olive Branch
5	TOTAL CIRCUIT LENGTH (MILES)	46
6	CUSTOMER COUNT FOR THIS CIRCUIT	485
7	DATE OF LAST CIRCUIT TRIM (VM)	2015
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	22% Lightning 22% Trees 22% Misc. (Equipment Failure, Vehicles) 17% Small Animals 6% Scheduled Construction
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	115.23
10	REPORTING YEAR (SAIDI)	119.41
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.22
12	REPORTING YEAR (SAIFI)	1.02
13	CORRECTIVE ACTION PLAN	Right of way vegetation spraying in 2018

1	SUBSTATION NAME AND NUMBER	<b>Clay Village (2)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	3998 Benson Pike, Bagdad 40003
3	CIRCUIT NAME AND NUMBER	Beards Lane: #2-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Trammel / Dlago Warehouses
5	TOTAL CIRCUIT LENGTH (MILES)	54
6	CUSTOMER COUNT FOR THIS CIRCUIT	239
7	DATE OF LAST CIRCUIT TRIM (VM)	2014
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	38% Small Animals 13% Trees 13% Conductor 25% Scheduled Construction 13% Misc. (Equipment Failure/ Vehicles)
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	283.99
10	REPORTING YEAR (SAIDI)	108.39
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.29
12	REPORTING YEAR (SAIFI)	1.21
13	CORRECTIVE ACTION PLAN	Right of way sprayed in 2017

1	SUBSTATION NAME AND NUMBER	<b>Clay Village (2)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	3998 Benson Pike, Bagdad 40003
3	CIRCUIT NAME AND NUMBER	Knobs: 2-4
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Knobs, Shelby County
5	TOTAL CIRCUIT LENGTH (MILES)	35
6	CUSTOMER COUNT FOR THIS CIRCUIT	250
7	DATE OF LAST CIRCUIT TRIM (VM)	2012
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	47% Trees 24% Small Animals 6% Conductor 6% Electrical Overload 6% Lightening
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	258.1
10	REPORTING YEAR (SAIDI)	319.8
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	2.17
12	REPORTING YEAR (SAIFI)	3.34
13	CORRECTIVE ACTION PLAN	None at this time.

1	SUBSTATION NAME AND NUMBER	<b>Clay Village (2)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	3998 Benson Pike, Bagdad 40003
3	CIRCUIT NAME AND NUMBER	Rocket Lane/ Diageo: #2-5
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Rocket Lane/ Diageo Distillery
5	TOTAL CIRCUIT LENGTH (MILES)	36
6	CUSTOMER COUNT FOR THIS CIRCUIT	294
7	DATE OF LAST CIRCUIT TRIM (VM)	2017
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	25% Trees 25% Small Animals 25% Conductor 13% Scheduled Maintenance 13% Scheduled Construction
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	53.74
10	REPORTING YEAR (SAIDI)	117.26
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.07
12	REPORTING YEAR (SAIFI)	1.59
13	CORRECTIVE ACTION PLAN	Right of way vegetation to be sprayed in 2018.

1	SUBSTATION NAME AND NUMBER	<b>New Castle (3)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	1323 S. Property Road, Eminence, KY 40019
3	CIRCUIT NAME AND NUMBER	Bullitt Hill: #3-1
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Hwy 202/ Bullitt Hill
5	TOTAL CIRCUIT LENGTH (MILES)	60
6	CUSTOMER COUNT FOR THIS CIRCUIT	308
7	DATE OF LAST CIRCUIT TRIM (VM)	2016
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	26% Lightning 13% Trees 16% Small Animals 19% Misc. (Equipment Failure, Vehicles) 13% Conductor 10% Scheduled Construction 3% Wind
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	126.04
10	REPORTING YEAR (SAIDI)	429.14
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.21
12	REPORTING YEAR (SAIFI)	3.15
13	CORRECTIVE ACTION PLAN	Right of way vegetation to be sprayed in 2018

1	SUBSTATION NAME AND NUMBER	<b>New Castle (3)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	1323 S. Property Road, Eminence, KY 40019
3	CIRCUIT NAME AND NUMBER	Point Pleasant: 3-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Point Pleasant/ South Property
5	TOTAL CIRCUIT LENGTH (MILES)	50
6	CUSTOMER COUNT FOR THIS CIRCUIT	299
7	DATE OF LAST CIRCUIT TRIM (VM)	2016
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	32% Conductor 14% Trees 14% Wind 14% Small Animals 8% Misc.
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	175.48
10	REPORTING YEAR (SAIDI)	223.96
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.23
12	REPORTING YEAR (SAIFI)	4.86
13	CORRECTIVE ACTION PLAN	Rebalanced load from a new substation. Long term work plan to convert this line into a 3 phase circuit.

1	SUBSTATION NAME AND NUMBER	<b>New Castle (3)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	1323 S. Property Road, Eminence, KY 40019
3	CIRCUIT NAME AND NUMBER	Safety Kleen: 3-3
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Safety Kleen/ Heatt Ln.
5	TOTAL CIRCUIT LENGTH (MILES)	39
6	CUSTOMER COUNT FOR THIS CIRCUIT	499
7	DATE OF LAST CIRCUIT TRIM (VM)	2014
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	31% Lightning 23% Small Animals 15% Conductor 8% Scheduled Construction 8% Misc. (Equipment Failure, Vehicles)
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	175.48
10	REPORTING YEAR (SAIDI)	223.96
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.73
12	REPORTING YEAR (SAIFI)	1.57
13	CORRECTIVE ACTION PLAN	None at this time

1	SUBSTATION NAME AND NUMBER	<b>Campbellsburg (4)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	235 Orem Lane, Turner Station, KY 40075
3	CIRCUIT NAME AND NUMBER	Maddox Ridge: 4-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Maddox Ridge/ Perry Park
5	TOTAL CIRCUIT LENGTH (MILES)	96
6	CUSTOMER COUNT FOR THIS CIRCUIT	590
7	DATE OF LAST CIRCUIT TRIM (VM)	2014
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	24% Trees 14% Small Animals 24% Scheduled Construction 14% Lightning 10% Misc. (Equipment Failure, Vehicles) 7% Conductor
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	261.01
10	REPORTING YEAR (SAIDI)	231.17
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.55
12	REPORTING YEAR (SAIFI)	2.11
13	CORRECTIVE ACTION PLAN	Right of way cutting scheduled for 2019

1	SUBSTATION NAME AND NUMBER	<b>Bedford (5)</b>
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	672 Cutshaw Lane, Bedford, KY 40006
3	CIRCUIT NAME AND NUMBER	King's Ridge: 5-1
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	King's Ridge/ Fairview
5	TOTAL CIRCUIT LENGTH (MILES)	68
6	CUSTOMER COUNT FOR THIS CIRCUIT	636
7	DATE OF LAST CIRCUIT TRIM (VM)	2015
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	35% Trees 17% Small Animals 17% Conductor 9% Scheduled Construction 9% Lightning 4% Misc. (Failed Equipment, Vehicles)
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	211.17
10	REPORTING YEAR (SAIDI)	227.04
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.4
12	REPORTING YEAR (SAIFI)	2.03
13	CORRECTIVE ACTION PLAN	Right of way vegetation spraying scheduled for 2018

1	SUBSTATION NAME AND NUMBER	Bedford (5)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	672 Cutshaw Lane, Bedford, KY 40006
3	CIRCUIT NAME AND NUMBER	Mt. Pleasant: 5-4
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Mount Pleasant/ Wises Landing
5	TOTAL CIRCUIT LENGTH (MILES)	47
6	CUSTOMER COUNT FOR THIS CIRCUIT	292
7	DATE OF LAST CIRCUIT TRIM (VM)	2016
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	31% Trees 31% Lightning 31% Small Animals 25% Misc (Equipment Failure, Vehicles) 8% Conductor
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	57.86
10	REPORTING YEAR (SAIDI)	90.31
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.5
12	REPORTING YEAR (SAIFI)	0.69
13	CORRECTIVE ACTION PLAN	Right of way sprayed 2017. No further planned action at this time

1	SUBSTATION NAME AND NUMBER	Southville (6)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	7791 Hempridge Road, Shelbyville, KY 40065
3	CIRCUIT NAME AND NUMBER	Ken Acres: 6-1
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Ken Acres/ Scott Pike
5	TOTAL CIRCUIT LENGTH (MILES)	84
6	CUSTOMER COUNT FOR THIS CIRCUIT	1276
7	DATE OF LAST CIRCUIT TRIM (VM)	2011
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	38% Trees 33% Small Animals 13% Lightning 5% Wind 3% Scheduled Construction 3% Transmission/ Power Supplier 3% Electrical Overload 2% Accidents 2% Misc.
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	38.81
10	REPORTING YEAR (SAIDI)	63.19
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.39
12	REPORTING YEAR (SAIFI)	1.33
13	CORRECTIVE ACTION PLAN	Right of way cutting scheduled for 2018

1	SUBSTATION NAME AND NUMBER	Southville (6)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	7791 Hempridge Road, Shelbyville, KY 40065
3	CIRCUIT NAME AND NUMBER	Pea Ridge: 6-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Pea Ridge/ Backcreek
5	TOTAL CIRCUIT LENGTH (MILES)	40
6	CUSTOMER COUNT FOR THIS CIRCUIT	238
7	DATE OF LAST CIRCUIT TRIM (VM)	2011
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	42% Lightning 14% Trees 14% Small Animals 14% Scheduled Construction 14% Transmission/ Power Supplier
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	59.4
10	REPORTING YEAR (SAIDI)	195.6
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.54
12	REPORTING YEAR (SAIFI)	1.93
13	CORRECTIVE ACTION PLAN	Right of way scheduled cut in 2018.



1	SUBSTATION NAME AND NUMBER	Southville (6)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	7791 Hempridge Road, Shelbyville, KY 40065
3	CIRCUIT NAME AND NUMBER	Hwy 44: 6-3
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Hwy 44/Hwy 148
5	TOTAL CIRCUIT LENGTH (MILES)	55
6	CUSTOMER COUNT FOR THIS CIRCUIT	486
7	DATE OF LAST CIRCUIT TRIM (VM)	2012
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	24% Small Animals 18% Trees 18% Lightning 18% Scheduled Construction 6% Transmission/ Power Supplier 6% Conductor 6% Large Animals 6% Misc.
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	51.42
10	REPORTING YEAR (SAIDI)	54.07
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.62
12	REPORTING YEAR (SAIFI)	1.23
13	CORRECTIVE ACTION PLAN	Right of way cutting scheduled for 2019. No other planned actions

1	SUBSTATION NAME AND NUMBER	Milton (7)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	268 Peck Pike, Milton, KY 40045
3	CIRCUIT NAME AND NUMBER	Cooper's Bottom: 7-1
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Cooper's Bottom
5	TOTAL CIRCUIT LENGTH (MILES)	3
6	CUSTOMER COUNT FOR THIS CIRCUIT	92
7	DATE OF LAST CIRCUIT TRIM (VM)	2017
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	50% Lightning 25% Scheduled Maintenance 25% Wind
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	6.63
10	REPORTING YEAR (SAIDI)	95.01
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.07
12	REPORTING YEAR (SAIFI)	1
13	CORRECTIVE ACTION PLAN	Right of way vegetation scheduled to be sprayed 2018.

1	SUBSTATION NAME AND NUMBER	Milton (7)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	268 Peck Pike, Milton, KY 40045
3	CIRCUIT NAME AND NUMBER	Peck's Pike: 7-3
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Peck's Pike
5	TOTAL CIRCUIT LENGTH (MILES)	53
6	CUSTOMER COUNT FOR THIS CIRCUIT	229
7	DATE OF LAST CIRCUIT TRIM (VM)	2016
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	33% Trees 33% Accidents 17% Lightning 17% Misc. (Equipment Failure, Vehicles)
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	65.04
10	REPORTING YEAR (SAIDI)	203.58
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.83
12	REPORTING YEAR (SAIFI)	1.7
13	CORRECTIVE ACTION PLAN	Right of way vegetation scheduled to be sprayed 2018.

1	SUBSTATION NAME AND NUMBER	Milton (7)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	268 Peck Pike, Milton, KY 40045
3	CIRCUIT NAME AND NUMBER	Fishers Ridge: 7-4
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Fishers Ridge, Liberty Ridge
5	TOTAL CIRCUIT LENGTH (MILES)	60
6	CUSTOMER COUNT FOR THIS CIRCUIT	400
7	DATE OF LAST CIRCUIT TRIM (VM)	2017
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	47% Trees 20% Conductor 13% Lightning 13% Misc. (Equipment Failure, Vehicle damage) 7% Scheduled Maintenance
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	40.98
10	REPORTING YEAR (SAIDI)	295.29
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.45
12	REPORTING YEAR (SAIFI)	3.04
13	CORRECTIVE ACTION PLAN	Right of way vegetation scheduled to be sprayed 2018.

1	SUBSTATION NAME AND NUMBER	Bekaert #1 (9)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	1950 Isaac Shelby Drive, Shelbyville, KY 40065
3	CIRCUIT NAME AND NUMBER	Bemis: 9-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Industrial Area - Bemis
5	TOTAL CIRCUIT LENGTH (MILES)	4
6	CUSTOMER COUNT FOR THIS CIRCUIT	8
7	DATE OF LAST CIRCUIT TRIM (VM)	N/A Industrial Area with no foliage
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	100% UG Primary
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	52.26
10	REPORTING YEAR (SAIDI)	67.5
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.65
12	REPORTING YEAR (SAIFI)	0.13
13	CORRECTIVE ACTION PLAN	One outage due to deteriorated conductor. Issue was resolved in 2017.

1	SUBSTATION NAME AND NUMBER	Long Run (13)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	8593 Aiken Road, Louisville, KY 40245
3	CIRCUIT NAME AND NUMBER	Persimmon Ridge: 13-1
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Persimmon Ridge
5	TOTAL CIRCUIT LENGTH (MILES)	20
6	CUSTOMER COUNT FOR THIS CIRCUIT	398
7	DATE OF LAST CIRCUIT TRIM (VM)	2014
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	33% Lightning 33% Transmission/ Power Supplier 33% Misc. (Equipment Failure, Vehicles)
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	49.53
10	REPORTING YEAR (SAIDI)	76.54
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	1.22
12	REPORTING YEAR (SAIFI)	1.96
13	CORRECTIVE ACTION PLAN	None at this time.

1	SUBSTATION NAME AND NUMBER	Long Run (13)
2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	8593 Aiken Road, Louisville, KY 40245
3	CIRCUIT NAME AND NUMBER	Aiken Rd: 13-2
4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	Aiken/ Long Run Rd
5	TOTAL CIRCUIT LENGTH (MILES)	53
6	CUSTOMER COUNT FOR THIS CIRCUIT	432
7	DATE OF LAST CIRCUIT TRIM (VM)	2014
8	OUTAGE CAUSES W/ % OF TOTAL OUTAGE NUMBERS BY EACH CAUSE	22% Small Animals 13% Trees 17% Misc. (Equipment Failure, Vehicles) 17% Scheduled Maintenance 9% Conductor 4% Scheduled Construction 4% Transmission/ Power Supplier 4% Electrical Overload 4% Lightning 4% Fire
9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	189.12
10	REPORTING YEAR (SAIDI)	198.93
11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	2.02
12	REPORTING YEAR (SAIFI)	4.79
13	CORRECTIVE ACTION PLAN	None at this time.

Shelby Energy Cooperative, Inc.  
Operations & Engineering Department  
620 Old Finchville Rd  
Shelbyville KY, 40065  
502-633-4420

VEGETATION MANAGEMENT PLAN  
GUIDELINES, METHODS  
AND PROCEDURES  
2018

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**Section 1.0 Definitions**

- A. "SEC" shall mean Shelby Energy Cooperative.
- B. "Contractor" shall mean the successful Bidder to whom a Contract is awarded.
- C. "Work" shall refer to everything agreed to be done and furnished by the Contractor including all supervision, supplies, labor, transportation and equipment together with all responsibilities and obligations imposed by the Contract Documents.
- D. "Equipment" shall mean the trucks, trailers, tools, saws, and other apparatus which are owned and operated by the Contractor and which are required to be maintained by the Contractor for the performance of the Contract in accordance with the Specifications.
- E. "Specifications" shall mean all specifications pertaining to the Work to be performed.
- F. "Contract" shall mean the fully executed document which binds the interested parties in an agreement to fulfill all terms, conditions, and specifications.
- G. "Invitation for Bids" shall be the means by which SEC solicits bids from Pre-Qualified Contractors for Work which SEC may from time to time deem necessary to have performed.
- H. "Install", "Furnish", "Provide", or words of like import shall mean the Contractor shall install, furnish, or provide, and similarly the words "Approved", "Authorized", "Required", "Satisfactory", "Acceptable", or words of like import shall mean, as applicable, approved by, authorized by, required by, satisfactory to, or acceptable to SEC, unless otherwise expressly stated.
- I. "Prequalified Contractor" shall mean a contractor who is determined by SEC to be eligible to bid on the Work, subject to any of SEC's conditions, but such status shall not imply or infer compliance with any of the requirements of the Contract, Specifications or other Contract Documents.
- J. "Tree" shall mean any woody vegetation with a DBH (Diameter at Breast Height) of 4 inches or greater.
- K. "Brush" shall mean any vegetation with a DBH of less than 4 inches.

**Section 2.0 Bidder's Qualifications**

- 2.1 Bids will be accepted only from well established and qualified licensed contractors, trained and experienced in the clearing of power line rights of way and tree trimming that have been approved by SEC as a Pre-Qualified Contractor. No bid will be considered from any Contractor unless they are known to be skilled and were previously engaged in work of a character and scope consistent with these bid specifications.
- 2.2 Bidders must show that their equipment and facilities are sufficient and their workload so arranged as to meet the schedules called for by the Contract without the use of subcontractors. In order to aid SEC in determining the responsibility of any Bidder, the Bidder shall furnish evidence, satisfactory to SEC, of the Bidder's qualifications, experience and familiarity with work of the character specified and his or her financial ability to properly prosecute the proposed work to completion.
- 2.3 Unless previously approved, each Bidder shall submit to SEC a Contractor's Prequalification Application Form, available at SEC's office, and must be subsequently approved by SEC as a Pre-Qualified Contractor in order to receive a formal Invitation to Bid. SEC will only accept bids from Bidders who have been approved by SEC as a Pre-Qualified Contractor.

**Section 3.0 Instructions to Bidders**

- 3.1 Bids that are sent by U.S. Postal Service or private carrier shall be clearly marked "**BID ENVELOPE ENCLOSED**". The bid shall be sealed in a separate envelope and shall have the following information shown on the outside of the envelope:

**BID FOR: Power Line Right of Way Clearance and Tree Trimming**

**BID DUE: TBD**

**OWNER: Shelby Energy Cooperative, Inc.**

**BIDDER: \_\_\_\_\_**

Envelope must be addressed and submitted to:

Shelby Energy Cooperative  
Attn: Supervisor, Field Support Services  
620 Old Finchville Rd  
Shelbyville, KY 40065

Any bid not conforming to these requirements will not be considered.

- 3.2 Before submitting a bid, each Bidder must (a) examine the Contract Documents

thoroughly, (b) visit the system to become familiar with local conditions, that may in any manner, affect cost, progress, or performance of the work, (c) have knowledge of all federal, state and local laws, ordinances, rules and regulations affecting performance of the work, and (d) carefully correlate the Bidder's observations with the requirements of the Contract Documents.

- 3.3 Each bid shall be carefully prepared in accordance with the SEC Specifications referenced in the Contract Documents.
- 3.4 Each bid shall be signed by a representative of the Bidder who is authorized to make contractual obligations for the Bidder and shall give the Bidder's full business address. Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or other authorized representative.
- 3.5 Bids by a corporation shall be signed in the name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation. The name of all persons signing shall also be typed or printed.
- 3.6 Sealed bids will be opened in private the day the bids are due. Contractors will be notified of any awarded work after Board approval.
- 3.7 SEC reserves the right to reject any and all bids, waive any and all technicalities therein, disregard all nonconforming or conditional bids, and evaluate and award bids on other than a low bid basis. By submission of a bid, Bidder thereby agrees to these stipulations and will not challenge SEC's decisions.
- 3.8 SEC may conduct such investigations as it deems prudent to establish the responsibility, qualifications, and financial ability of the Bidders. SEC's final selection of the best overall bid submitted, as determined solely by SEC, shall be based upon factors such as: financial stability of bidder; personnel experience and training; surveys of current and previous employers and previous work history with SEC; overall quality of equipment and organization; ability to adequately serve SEC with full coverage, customer responsiveness and complaint processing; employee safety training, safety compliance and procedures, including drug-free workforce initiatives, etc.
- 3.9 When the Contract is awarded, SEC will provide the successful Bidder written notice of award after its Board of Directors meeting and final approval is obtained.
- 3.10 SEC may elect during the term of this Contract to award one (1) or more additional contracts for rights of way clearance and tree trimming via alternative contractual arrangements such as hourly rates, unit cutting, zone clearing, or lump sum cost for circuit trimming. Nothing contained herein shall be construed as



prohibiting SEC from awarding such additional contracts as it deems necessary for the continued safe operation and maintenance of its electric distribution system.

3.11 The term of the agreement will be decided upon and documented in the contract.

#### **Section 4.0 Introduction: Guidelines and Evaluation Methods**

In order to maintain line clearance for public safety and electrical reliability, SEC regularly undertakes tree trimming and herbicide activities. These activities are required in order to be compliant with NESC, as well as Kentucky Revised Statute, and guidelines promulgated by OSHA. This guide details the methods and guidelines which SEC uses to accomplish that goal.

##### **Goal:**

The goal of our right-of-way clearance program is to maintain line clearance for public safety and electric system reliability.

##### **Strategy:**

The strategy for clearing and maintaining line clearance is to arrange the entire system in operable units, defined by individual circuits or substations, and to operate line clearance activities on those units in a regular and scheduled manner.

##### **Tactics:**

The tactics involved are detailed in the following Guidelines. At the development stage of SEC's vegetation management plan, circuits were prioritized on the basis of last available date of trimming, and vegetation conditions found by onsite circuit inspections which occur periodically throughout the year as a part of normal activities to determine circuit condition. Reliability, measured by the number of tree related outages expressed on a per circuit mile basis was further used to identify circuits which should be cleared the soonest, with the highest going first and so on. Circuit outages due to trees are regularly reviewed to determine if any adjustment of the trimming cycle to address changing conditions on the circuit is warranted. Onsite inspection further allows adjustment of these time frames should extraordinary circumstances warrant such an adjustment. Examples of such circumstances are: insect infestation damage (Southern Pine Beetle, Emerald Ash Bore, etc), heavy forest fire damage which will result in tree losses throughout the circuit, or weather related instances.

The effectiveness of the plan is evaluated by the reduction of the frequency of tree related outages, and the duration of tree related outages on the treated circuit. This is monitored by the contribution of tree related outages to both customer and system average interruption indices (SAIDI, SAIFI, and CAIDI). Reports

generated by the dispatch Outage Management System (OMS) identify these circuits and the nature and frequency of outages.

SEC conducts clearing activity in each circuit feeder to one full circuit clearing, encompassing floor, side and shade tree trimming (ground to sky 30' wide) each five-year circuit cycle. Circuits and new construction units are then scheduled for chemical treatment to reduce floor vegetation. Below is an example of a typical 5-year circuit cycle:

- Year 1; the circuit will receive the first cutting and clearing of vegetation
- Year 2; the circuit will receive the first spraying of herbicide, after allowing approximately 1 year of growth to better control future development of vegetation
- Year 3; no cutting, clearing or spraying will be performed on the circuit
- Year 4; the circuit will receive the second spraying of herbicide, as needed.
- Year 5; no cutting, clearing or spraying will be performed on the circuit except for yard-tree trimming, as necessary
- Year 6; the circuit receives the next cutting and clearing of vegetation to maintain the 5-year circuit cycle.

## **Section 5.0 General Requirements**

- 5.1 Bidders bidding on herbicide treatment work shall be trained and licensed in the handling and use of chemicals and sprays, and shall furnish evidence of the same, for foliage, basal, and tree stump applications. Evidence shall include, without being limited to, the Bidder's Commercial Applicator's License Number certified in Category 6 - Right of Way from the Kentucky Department of Agriculture.
- 5.2 If a Contractor utilizes a non-English speaking work force they shall have a general foreman capable of communicating with their employees and SEC members. At least one member of every crew, ideally the working foreman shall be capable of speaking fluent English in order to answer any questions a landowner or a representative of SEC may have.
- 5.3 A contract crew shall consist of all necessary personnel and all necessary tools and equipment as outlined in the Contractor's Pre-Qualification Application Form, to safely and efficiently complete the work. SEC reserves the right to do any Work covered within this Contract by its own forces, to have such Work performed by other contractors, to cause such Work to be completed by other means, or to defer any Work to a future date.
- 5.4 Since Contractor(s) employees come in contact with SEC customers, they shall be completely dressed in suitable clothing which shall be clean at the beginning of each day. All clothing worn by contracting employees must conform to arc flash regulations as required by law if working within the minimum approach distance.

Each crew shall have a cell phone or some other method of communication that SEC can use to contact them at all times. In the case of cell phones, the phone numbers shall be given to SEC's Supervisor, Field Support Services and said phone numbers kept current.

The number and type of personnel and equipment making up each crew shall be agreed upon by the owner. The contractor understands and accepts the fact that the owner reserves the right to terminate the contract for any reason at any time and that there is no guarantee of any specific types or amounts of work.

Identification badges or other forms of identification which display the Company's name, contact information, position, etc. are required and must be shown to the customer upon request.

- 5.5 All trucks and other vehicles provided by the Contractor to perform the Work shall bear the Contractor's number and shall be well marked and identified with company insignia or name designating the vehicles as property of the Contractor and have "Contractor for Shelby Energy" magnets in place.
- 5.6 Contractor shall observe all generally recognized safety rules (including without limitation the provisions of the National Electrical Safety Code and ANSI Z133.1 - 2000 or latest edition thereof), regulations, and methods to prevent injury to all employees and other persons or damage to property of SEC or the public arising from its operations. Contractor shall observe all laws and regulations applicable to its operations including without limitation OSHA requirements, Kentucky Department of Transportation requirements, and Kentucky Department of Agriculture requirements.
- 5.7 Contractor shall secure from SEC information as to the nature of the electric circuits involved in all cases prior to commencement of Work in each area. Contractor acknowledges that SEC's electric circuits are to continue in normal operation during this Work, and Contractor shall provide and use all protective equipment necessary for the protection of its employees and to guard against interfering with the normal operation of these electric circuits. If a line is interrupted or damaged caused by work from this operation the Contractor will be responsible for cost of repairing and restoring that line.
- 5.8 Contractor shall immediately notify SEC of any irregular situations observed on SEC's system, including, without limitation, equipment or facility malfunctions, actual or potential safety problems, loose or sagging guy wires, damaged conductors, leaking transformers, damaged or defective poles, and any other seemingly unusual circumstance encountered by the Contractor.
- 5.9 If, during the term of the Contract, additional hourly crews or workers are needed to perform right of way clearing, tree trimming, chemical applications, SEC will first request such crews or workers from the Contractor then working for SEC. Should the Contractor fail to furnish additional crews or workers upon thirty (30)

days written notice, SEC shall have the right to obtain additional crews or workers from other resources.

- 5.10 Contractor shall promote a drug and alcohol free working environment.
- 5.11 Contractor(s) shall not perform or solicit any type of private tree trimming work on customer's property while actively engaged in performing work for SEC under this contract until all work on the circuit is completed.

**Section 6.0 Work**

- 6.1 Contractor shall perform all Work to the complete satisfaction of SEC and in accordance with all municipal, county, state and other local laws, ordinances, and regulations applicable to Work of this character and nature. All Work performed by the Contractor is subject to inspection and approval by SEC. Any Work not meeting the minimums as set forth in these Specifications, or generally accepted line clearance standards, or Work which has been falsely represented in any fashion by Contractor shall be redone by the Contractor at no (zero) cost to SEC. Failure by SEC to inspect Contractor's Work shall in no way relieve the Contractor from any obligations, liabilities, or responsibilities in connection with the Contract.
- 6.2 Contractor agrees to provide adequate notice and if possible, obtain consent, for the necessary work from the property owner or public authorities having ownership or control over each tree to be trimmed or removed and/or all property to be cleared or sprayed. Contractor shall discuss with the property owner the type of work to be performed, identifying any and all trees that need to be trimmed or removed, the disposal of brush, any areas that need to be sprayed, and the proposed route of all vehicles and equipment traveling over the owner's property. When property owners cannot be contacted, door hangers shall be left to inform them that Contractor was present to trim trees. Hangers (provided by SEC) shall contain information as Company Name, Phone Number, etc. Whenever permission to do any work cannot be obtained, SEC shall be informed of the situation.
- 6.3 Contractor shall certify that complaints of any nature received from property owners or public authorities resulting from this Work will receive immediate attention and that all efforts will be made to effect a prompt adjustment. If any damage is done to the property of others by Contractor's workforce, Contractor shall repair and restore at its sole expense any such property and correct any damage inflicted thereto, all to the complete satisfaction of the owner(s) of the injured property. All complaints, and any action taken by Contractor in connection with such complaints, shall be reported to SEC. If the repairs are not made in a timely manner SEC will make the repairs and invoice the said contractor.

- 6.4 Contractor shall secure all permits and licenses necessary for the Work to be performed and pay all charges and fees required for such permits and licenses.
- 6.5 Contractor(s) shall provide sufficient crews to complete the work in the specified time period. However, SEC expects that after work has begun on specified circuits, the Contractor's operation will progress on a continued basis with necessary staffing levels to complete the required circuit miles by the end of the term of the contract. Crew size, crew structure, crew equipment, and the need for any additional crews under this contract will be at the Contractor's sole discretion. Any work not completed by the specified date must still be completed by the Contractor. The inability to finish the work on time will also be considered and noted before any future bid work is granted to that Contractor.

**Section 7.0 Notification/Authorization to Trim or Remove Trees**

Shelby Energy's right-of-way easements allow for the maintenance of right-of-ways areas included within the easements; however, the contractor shall be required to use good judgment and take reasonable care when entering upon such areas. In all cases, respect for the property owner and other stakeholders shall be considered paramount by the contractor. In sensitive areas such as yards, subdivisions, highly maintained areas, posted lands, and similar circumstances, the contractor shall make a good faith effort (when reasonably possible) to inform property owners and/or other stakeholders of the contractor's presence and the general scope of the contractor's work before proceeding. Any situations in which a property owner or other stakeholder takes issue with the contractor's right to enter the property or complete the work shall be reported to SEC's designated representative immediately in order to help facilitate a resolution. All gates, fences and consumer property are to be left in the same condition as found.

SEC provided locks are installed on many locked-gates. The contractor should not cut locks or chains unless permission is granted by the SEC Field Supervisor. Crews will be provided a SEC key to gain access to areas where a SEC lock is present.

- 7.1 The Contractor shall provide the property owner(s) with notification of intent to conduct the required right-of-way clearance and cut stump herbicide application work. This contact shall precede any work done on any property. The work will then be scheduled for each crew. Any line clearance work done without proper notification must have specific approval by the authorized Shelby Energy representative.
- 7.2 Verbal notification of the property owner for routine line clearance work is sufficient. If the property owner is not home, a notification card may be left on the door. Notification cards shall not be placed in any U.S. mailboxes. Notification cards shall only be used where the owner is likely to be present on site on a regular basis. Absentee owners may be notified by mail or by phone.

- 7.3 In the case of the industrial, municipal, county, state, or large private estate type of properties, the caretakers or other designated individual in the employ of the owners who is responsible for the trees or brush to be cut or trimmed is considered to represent the interest of the owner. Notification of such caretakers or grounds maintenance supervisors is sufficient.
- 7.4 For both bid and hourly crews, the foreman shall email the designated SEC employees, daily concerning their working locations for their respective crews. Foreman's are also to email the information for any members that refuses to allow the crews to properly maintain their ROW. Contractor shall also keep appropriate maps marked to reflect current daily progress for all projects.
- 7.5 If landowner refuses access, Contractor shall notify authorized SEC representative immediately.

### **Section 8.0 Right of Way Clearing/Re-clearing Requirements**

- 8.1 Work within the boundaries of this project shall include clearing/re-clearing. The work may be performed on both urban/residential and rural sites where a specified or desired right-of-way shall be established, reestablished and maintained. Trimming shall adhere to ANSI A300 guidelines and OSHA Safety regulations. If the crown of a tree or any branches are within the right-of-way boundaries, even though the base of the tree is outside of the right-of-way boundary, this tree will be considered as part of the Bid Project and shall be removed or trimmed to meet the guidelines (i.e. overhang from a tree outside of right of way).
- 8.2 Techniques consistent with the practices of directional, natural, lateral, and drop crotch trimming should be utilized. Drop crotch pruning consists of reducing tops, sides, or individual limbs and avoids cutting back to small suckers. Directional pruning or trimming shall be used to direct or train future tree growth or sprouting away from the wires. Tree trimming required on coniferous trees (pine, spruce, hemlock, etc.), along the established tree edge shall involve the removal and/or trimming of limbs that are encroaching the right-of-way. Removal of the limbs will be back to the main stem, trunk, and/or to suitable live lateral branch.
- 8.3 The practices of "shearing", "flat-topping", "pollarding", "stubbing", and "rounding over" shall not be permitted anywhere along SEC's lines.
- 8.4 Right of way clearing and tree trimming shall be performed on all primary lines. All tree trimming on right-of-way boundaries shall be ground to sky. Tree removals will be concentrated to trees that may pose a threat to primary lines (i.e. danger trees), trees of a fast growing species (i.e. maples, and poplars) and trees requested by landowners to be removed within the Row. Trees that are outside of the Row will be trimmed to obtain proper clearance. Contractors are not responsible for tree removals requested by landowners that are outside of the Row unless such trees are hazard trees. Emphasis shall be placed on removing trees in

the 4-12-inch range, where approval is granted by the property owner. Trees larger than 4-12 inch shall be trimmed if reasonable clearance can be obtained to avoid contact with primary lines until the next trim cycle, unless otherwise requested by the landowner.

- 8.5 Where trimming only is permitted, the lateral or Directional pruning method shall be employed. Clearances following our right of way widths for single and three phase lines shall be obtained wherever possible.
- 8.6 As designated by the authorized SEC representative, fruit bearing trees that remain within the right-of-way shall be trimmed not removed in accordance to the Shelby Energy right-of-way clearing guidelines unless otherwise notified by the property owner.
- 8.7 Existing right of way consisting of primary lines shall be cleared to meet the clearance standards below. If the existing Right-of-Way is in such condition that the clearances below are already achieved, then no work is needed. In the event that the right-of-way clearance is not sufficient then work will progress in accordance with these specifications. Normal right of way widths are 30 ft wide for single and three phase lines.
- 8.8 Consumer services will not be the responsibility of the Contractor on Circuit bids. SEC circuits include all right-of-way between the SEC owned pole with transformer and the SEC meter on the residence or on a pole. If a landowner requests to remove a tree near a service wire, SEC will temporarily take down the wire while the landowner resolves the removal of the tree in question.
- 8.9 All overhead guy stubs, anchors, and riser poles, shall be cleared of all vines and vegetation to allow reasonable access to that facility for maintenance and serviceability. Generally, this would include the area within 10 feet of the pole or equipment.
- 8.10 Mechanical Clearing and Re-Clearing work will be permitted where applicable. After any mechanical operation, if any damages to property exist, the Contractor shall restore the land to the natural contour existing prior to the start of the work (i.e. ruts caused by machinery). This must be accomplished to the satisfaction of SEC and the landowner.
- 8.11 All work is to be performed under the supervision of the contractor. Work shall be conducted in a manner such that all phases of the clearing and/or reclearing work shall progress concurrently, (i.e., cutting, disposal and final cleanup). SEC has the sole authority to designate the class of right-of-way. If any recent right-of-way clearing/reclearing is encountered, and it does not conform to these specifications, it must be included in the bid.
- 8.12 Disposal of operation wood residue such as brush, wood, large sections of tree

trunks, large limbs, wood chips, and other such products produced or generated by this operation on the SEC system shall not obstruct roads, paths, or waterways. Disposal of said residue shall be the sole responsibility of the Contractor and at approved locations. All disposal costs shall be included in the cost submitted on the SEC bid. Logs and brush may be left "wind-rowed" along the outer edges of the right of way.

- 8.13 Disposal of wood from Yards will consist of the clean up of all brush and large wood will be cut and stacked. The Contractor will not be responsible for the removal of large wood. Cleanup of wood resulting from the removal of a tree will be the responsibility of the landowner. Disposal of wood and brush in Unmaintained Right of Ways will consist of wind rowing the brush and wood to the outer edge of the right of way.
- 8.14 Members requesting Timber of a merchantable size to be left will be cut in lengths of 100 inches unless otherwise specified by the landowner. The timber will be piled on the edge of the right of way and will become the responsibility of the landowner to remove.
- 8.15 Any dead trees or trees deemed to be a hazard even if beyond the right of way, which would strike the line in falling, shall be removed. Contractors are also responsible for any hazardous trees missed upon inspection and will be sent back to remove these hazards. (*Hazard trees may include but not limited to dead or dying trees, trees with visible cankers or rots, severe leaning trees, and trees with severe animal or mechanical damage showing signs of rot*).
- 8.16 Vines on poles, guy wires, and equipment shall be removed and cut off at ground level and the area surrounding the pole and/or equipment.

## **Section 9.0 Options for Refusals/Reluctance to Yield Right-of-Way**

- 9.1 Options to modify right-of-way clearing may be offered to individual landowners or groups of adjacent landowners that object to clearing according to the standards indicated by the SEC right-of-way program. In providing these options, SEC seeks to enable individual members to choose methods for right-of-way clearance that best address their concerns while preventing the burden of costs for use of non-standard procedures from being placed upon SEC members as a whole.

Because of varying site conditions, not all options will be offered in all locations. Options that may be available for a particular site include:

### **Stumps:**



Stump Grinding will not be used on the SEC system unless authorized by a representative of SEC. If any stump grinding is utilized by SEC, the Contractor will be compensated at an hourly rate.

All woody stem vegetation will be cut as close to the ground line as practicable and the cuts shall be made parallel with the ground, not at an angle.

**Relocation of lines:**

Where consistent with SEC standards for line maintenance/improvement, rerouting of lines or moving lines underground at the member's expense will be considered. Rerouting must follow SEC guidelines, and accessibility to the lines must be as good as or better than at the original location. In locations where groups of landowners must agree to rerouting, it is the responsibility of the interested landowners to negotiate agreement with adjacent landowners and obtain necessary easements before rerouting can proceed. If such agreement cannot be obtained within a time frame specified by SEC, right-of-way clearing will proceed unless other options are negotiated individually with SEC.

**Section 10.0 Use of Chemicals and Sprays**

- 10.1 The Contractor shall ensure that the on-site applicator be certified by the Kentucky Department of Agriculture, Division of Pesticides. Only certified applicator(s) may apply herbicide on Shelby Energy right-of-way. Copies of applicators licenses shall be given to Shelby Energy prior to starting any projects.
- 10.2 All herbicides used by the contractor shall be approved by Shelby Energy and used in accordance with the manufacturer's specifications on the label. Herbicides with a National Fire Protection Association (NFPA) health rating of 3 or greater shall not be used on Shelby Energy's system unless specifically approved by Shelby Energy. Contractor shall be responsible for purchasing, storing, and furnishing chemicals to its crews.
- 10.3 There will be no herbicide application on National Forest or other State or Federally owned lands unless authorized with proper permits and authorization from the proper manager of those lands.
- 10.4 All herbicide treatment crews will have the ability to perform foliar and basal chemical treatment where applicable.
- 10.5 Treatment Around Poles and Guy Wire Attachments - Cut off all vines ascending all poles and guy wires at the height of reach. Treat with herbicides all vines below cutting and other vegetation, which may interfere with SEC's facilities from all poles and guy wires. Should vines be in contact with SEC conductors or equipment the contractor shall notify the Supervisor, Field Support Services to have them safely removed.

- 10.6 Herbicide treatment of right of way may be done at various locations using suitable herbicides to control vegetation particular to that location. Prior to commencement of any Work involving the application of chemicals, the Contractor shall thoroughly familiarize and inform himself of all local conditions and other factors which could or might affect herbicide treatment.
- 10.7 Unless otherwise specified by SEC, the Contractor shall mix and apply the herbicides in accordance with the recommendations of the manufacturer's label and the following general specifications:
- (a) For Foliage Application: This method shall be used only on brush during the active plant growth period, generally between May 1 and September 1. Herbicide mixture shall be applied to completely wet the entire leaf, stem and trunk surface of each plant.
  - (b) For Basal Application: This method shall be used on brush of any size at any season of the year. Herbicide mixture shall be applied to completely wet the entire surface of the stem or trunk from the root-crown up the stem eighteen (18) inches, with emphasis on completely wetting the root-crown.
  - (c) For Stump Application: This method shall be used on all new stumps at any season of the year. Stumps shall be treated as soon as practical, but always on the same day that the cutting is performed. Herbicide mixture shall be applied in sufficient volume to completely wet the sapwood, the area around the outer edge of stump.
- 10.8 Contractor shall not be obligated to treat any portion of a line where damages to crops, orchards, or ornamental plants may result from chemical drift.
- 10.9 SEC will have the right to specify when and where herbicide application and/or herbicide treatment will be used in rural areas or otherwise.
- 10.10 Contractor's use of herbicides in connection with the Work shall be in strict compliance with all federal and state laws, rules and regulations which from time to time govern the use of herbicides. By undertaking to perform any part of the Work in which chemicals are used, the Contractor certifies that Contractor is familiar with, has complied with, and at all times will comply with all requirements (including but not limited to those relating to training and the giving and posting of all required notices) under all of the foregoing laws, rules and regulations and further, the Contractor shall indemnify and hold harmless Shelby Energy and its directors, officers, employees and agents from and against any liability, claim, demand, cause of action of every kind and description, damage, losses and expenses, including attorney's fees through appeals, arising or resulting from the Contractor's non-compliance with or violation of any of the foregoing laws, rules or regulations.
- 10.11 Chemical spills shall be immediately cleaned-up in a manner consistent with label restrictions, Federal and State regulations, and acceptable environmental

procedures mandated by law. Any and all notifications to proper authorities in connection with such spills shall be made by the Contractor. Each crew responsible for herbicide applications shall be supplied with a suitable spill response kit for cleaning-up and neutralizing spills of chemicals, all at the sole expense of the Contractor. Contractor shall insure that its employees are trained in the proper techniques for spill response, and are supplied with the necessary personal protective equipment required to perform spill mitigation duties.

- 10.12 Contractor shall at all times be solely responsible for the continuous safeguarding of its workforce, including compliance with all applicable Federal, State, and local laws, together with its responsibilities for training its employees in the proper methods and use of personal protective equipment required for handling herbicides used in connection with this Work.

### **Section 11.0 Safety to Employees and the Public**

Contractor shall at all times take all reasonable precautions for the safety of its employees and the public, and shall comply with all applicable provisions of federal, state and local laws, rules and regulations, including but not limited to the most current version of the National Electric Safety Code, all OSHA rules, and the Shelby Energy Safety Manual. Contractor shall have a Safety program in place and will produce documentation of Safety training, audits, or other necessary documents upon request.

SEC reserves the right to stop the contractor's work immediately if SEC becomes aware that the contractor is in violation of any of the above mentioned safety requirements, and SEC reserves the right to terminate the contract due to safety concerns at its sole discretion. SEC further reserves the right to inspect contractor work sites at its discretion.

The Contractor shall provide a safety person to check on the crews at no charge to the owner. The schedule for checking crews will be determined by the contractor.

The contractor is required to furnish SEC with all documentation in a timely manner (when and if requested by SEC) concerning safety requirements, investigations or any other information about the crews working on SEC's system. The contractor must provide a written report to SEC for any OSHA reportable injury or violation, and any "near-miss" incident or accident must be promptly reported to the SEC Field Supervisor.

- 11.1 The contractor shall obtain full information from Shelby Energy as to the voltage of its circuits before starting the various parts of the work.
- 11.2 The Contractor shall at all times conduct the work in a manner as to safeguard the public from injury to persons or property, and shall comply with the regulations set forth in OSHA 1910.269, OSHA 1910.331, OSHA 1910.266 Logging

Standard and ANSI Z133.1 – 1994. All provisions of Shelby Energy safety policy, as detailed in the Shelby Energy Safety Manual, further apply to all contractors on Shelby Energy.

- 11.3 The contractor shall use all necessary protection for its employees and to guard against interference with the normal operation of the circuits. If, in the judgment of the Contractor's General Foreman/Supervisor, it is hazardous to trim or remove trees with the circuits energized, the authorized Shelby Energy representative(s) shall be contacted. If deemed appropriate, the necessary protection or de-energizing the circuits will be provided by Shelby Energy to ensure the safe removal of the affected tree parts.
- 11.4 When applying herbicides, the contractor shall at all times take all reasonable precautions for the safety of employees on the work and of the public by utilizing safety equipment and methods in accordance with the manufacturer's specifications on the herbicide label. Contractor shall comply with all applicable provisions of Federal, State, and local laws specifically including 302 KAR Chapters 27, 28 and 29 relating to the use and application of herbicides. Contractor will furnish copies of any required licenses, certifications or permits to Shelby Energy upon request.

**Section 12.0     Work Assignments and Equipment**

- 12.1 The Contractor shall advise SEC on a daily basis as to the location of all crews, any and all crew movements throughout the day, the progress of the Work assigned, and any problems or unusual occurrences. SEC will furnish systems maps or digital aerial / GPS files to the contract ROW foreman or supervisor for the purpose of locating and recording all work done on SEC's system. After work has been completed in a particular area the paper maps or digital files should be returned to SEC's Field Supervisor.
- 12.2 Contractor shall make available its crews for emergency work as determined by SEC, day or night, weekends, holidays, or during any natural disasters such as ice or snow storms, tornadoes and other strong storms, etc. Contractor shall furnish an emergency work price list to SEC along with their bid. Contractor shall furnish SEC the name and telephone number of the person to contact for emergency crews. Contractor may be asked to assign additional crews to SEC's system if the emergency is severe or of long duration.
- 12.3 Contractor shall submit to SEC a progress report at the end of each week.
- 12.4 Reasonable working hours shall be utilized for lump sum cost for circuit work. Contractor shall be free to determine working days and hours to suit his needs with the following exceptions. There shall be no work on Saturday or Sunday and on SEC designated holidays without approval by a designated SEC representative. In general, the normal workweek for lump sum work should consist of forty (40)

productive hours between 7:00 a.m. and 6:00 p.m., Monday through Friday, unless otherwise approved by SEC. The workday shall begin at the designated assembly location and end at the work site.

- 12.5 SEC properties will not be made available for the Contractor for crew starting points or for storing/garaging tools or equipment, unless authorized by SEC. When convenient, the contractor may be given permission to park vehicles and equipment on SEC property. Contractors may not park at substation property owned by East Kentucky Power (EKP) without written permission from EKP. When parking equipment in the field the contractor is responsible for obtaining permission from the land owners.
- 12.6 SEC shall not be charged for time spent on maintenance of equipment, including without limitation fueling of vehicles, oil or antifreeze changes, changing and/or sharpening of chipper blades, and other similar maintenance and repair work. SEC will not render payment for equipment that is incapable of fully performing its intended function. Minor mechanical repairs such as sharpening and adjusting chain saws shall be permitted on SEC time.
- 12.7 Equipment must be maintained in above average condition and with little or no oil leaks. SEC shall have the right to request that equipment which does not meet the approval of SEC be replaced. The decision of SEC shall be final.

### **Section 13.0 Supervision of Work and Workmanship**

- 13.1 Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, and procedures.
- 13.2 Contractor is an independent contractor and neither Contractor nor any of its employees shall be deemed to be agents or employees of SEC.
- 13.3 The Contractor shall give prior notification of work start-up and when adding or changing crew. Complete the necessary reporting forms as needed. All reports, logs, timesheets, and paperwork shall be accurate, neat, and complete. Exaggerated, padded, or incorrect work report entries may result in the dismissal of the crew foreman and/or general foreman/supervisor. The crew foreman and/or supervisor shall maintain an up-to-date log of all property owner notification and/or refusals.
- 13.4 Contractor shall provide and maintain continually on the site of the Work during its progress and until its completion, adequate and competent supervision of all operations for and in connection with the Work being performed under this Contract, either personally or by a duly authorized representative. The General Foreman or other representative of the Contractor, who has charge of the Work thereof, shall be fully authorized to act for the Contractor and to receive whatever

orders as may be given for the proper execution of the Work or notices in connection therewith.

- 13.5 Contractor shall employ only workers who are competent to perform the Work assigned to them and who are adequately trained and experienced in performing first-class Work of the character and magnitude required by this Contract and expected of reputable Contractor's performing work similar to the Work necessary under this Contract.
- 13.6 SEC will periodically review and evaluate crew performance based upon factors such as, but not limited to, quality of work, quantity of work, clearances obtained, safety awareness and public relations efforts.
- 13.7 Contractor shall be required to attend regular progress meetings with SEC to discuss the Work of this Contract, review crew evaluations, receive information as to future work locations for planning purposes and discuss any problems in prosecuting the Work under this Contract.
- 13.8 SEC will furnish a designated employee to oversee all aspects of line clearing while contract crews are working on Shelby Energy's system. Any and all questions that may arise should be brought before this designated person for resolution. SEC's representative will strive to provide answers to contractor questions and/or requests in a timely manner (usually within two or three business days).

#### **Section 14.0 Contractor Caused Outages**

- 14.1 Anytime the Contractor feels that work can not be completed safely or an outage due to work associated with the clearing of the right of way is unavoidable he should ask for an outage to be scheduled by our line crews. We will have no problem with scheduling an outage to make the job safe.
- 14.2 Should the Contractor knock down or come in contact with SEC's conductors or equipment they must immediately contact the Supervisor, Field Support Services.
- 14.3 There will be a minimum charge of \$200 dollars for each Contractor caused outage for restoration costs. If the amount of restoration or damages costs exceeds \$200 then the total amount for restoration will be charged to the Contractor.
  - 14.3.1 If a Contract Crew causes an outage, that entire crew shall "Stand Down" and will not be permitted to work on the SEC system until the completion of an incident investigation. Upon completion of the investigation, the crew may return to work as determined by SEC and depending on the findings of the investigation. This will allow the contractor and SEC sufficient time to investigate and take any necessary actions to insure future outages will be avoided.

**Section 15.0 Payment for Work**

- 15.1 The Contractor will be required to utilize daily time sheets provided by or approved by Shelby Energy. Timesheets shall be accurate, neat and complete, and shall detail time charged to individual work and service orders.
- 15.2 In order to receive payment for any **Combination Lump Sum/Unit Price** bid work the Contractor must supply with invoices a weekly detailed list of units cleared or trimmed and the location of these units. Inspection for accuracy shall be done by a representative of SEC before payment.
- 15.3 When overtime is applicable, the rate will be 1.5 times the regular hourly rate for labor; however; overtime rates will not be charged for equipment prices. Overtime billed for emergency/storm work will be applicable for hours that exceed 40 hours in a week.

If the owner requests the contractor to bring in extra temporary workers or equipment for emergency situations such as additional work or storm restorations the owner and contractor shall negotiate rates and any special terms/conditions for those extra workers and equipment at the time the request is made. All other terms/conditions applying to temporary workers or equipment not changed by mutual agreement of the parties in writing shall be as stated in the contract.

It is understood that by both parties that the hourly rates included in this contract are complete charges and there is no extra charge per man (per Diem) charge.

**Section 16.0 Indemnification**

To the maximum extent permitted by law, Contractor shall defend, indemnify, and hold harmless Owner and Owner's directors, officers, and employees from all claims, causes of action, losses, liabilities, and expenses (including reasonable attorney's fees) for personal loss, injury, or death to persons (including but not limited to Contractor's employees) and loss, damage to or destruction of Owner's property or the property of any other person or entity (including but not limited to Contractor's property) in any manner arising out of or connected with the Contract, or the materials or equipment supplied or services performed by Contractor, its subcontractors and suppliers of any tier. But nothing herein shall be construed as making Contractor liable for any injury, death, loss, damage, or destruction caused by the sole negligence of Owner.

**Section 17.0 Hold Harmless**

Contractor agrees to defend, pay on behalf of, and hold harmless Shelby Energy and its directors, officer, agents, members and employees, from all claims, demands, causes of action, damages, costs, or liabilities, in law or in equity, of every kind and nature whatsoever, including but not limited to those brought by

employees of Contractor or its subcontractors, and those brought as a result of any interruption, discontinuance, or interference with Shelby Energy's service to any of its customers, arising out of or as a result of any act or failure to act, whether or not negligent, in connection with the performance of the work to be performed pursuant to this proposal by Contractor its directors, officers, agents, employees, and subcontractors. Contractor agrees to defend and pay all costs in defending these claims, demands, causes of action, damages, costs, or liabilities, including attorney's fees, and Contractor shall also reimburse Shelby Energy for any and all legal and other expenses incurred by Shelby Energy in connection therewith.

Furthermore, Contractor agrees to maintain public liability and property damage insurance (including automobile public liability and property damage insurance) to cover the obligations set forth above. The minimum insurance limits of liability shall be \$500,000.00 automobile public liability and property damage and \$1,000,000.00 for all other public liability and property damage.

The policy must state that Contractor has contractual liability coverage and that Shelby Energy has been added as an additional insured. Contractor and any subcontractor shall carry workers' compensation insurance as required by law. Shelby Energy shall receive a minimum thirty (30) day notice in the event of cancellation of insurance required by the agreement. Contractor shall furnish a certificate of insurance to Shelby Energy showing that the above obligations and requirements are provided for by a qualified insurance carrier, and showing Shelby Energy as an additional insured on such insurance annually prior January 1 of the insured calendar year. It shall be the contractor's responsibility to provide SEC with a new proof prior to the expiration of the current proof.

#### **Section 18.0 Independent Contractor**

Contractor hereby acknowledges that it is an independent contractor for Shelby Energy. Contractor shall be free to determine and control its time, energy and skill to perform the work in accordance with this Agreement.

Contractor acknowledges that Shelby Energy, in reliance upon this Agreement, is not withholding any taxes from sums paid to Contractor as compensation for services rendered under this Agreement. Additionally, Contractor acknowledges that Shelby Energy is not carrying worker's compensation coverage or unemployment insurance coverage on Contractor or Contractor's employees due to the independent Contractor nature of the relationship. In the event Contractor should be adjudged not to be an independent Contractor, Contractor will indemnify Shelby Energy for any additional expenses resulting from such ruling.