



Big Sandy RECC

A Touchstone Energy® Cooperative



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May 17, 2021

Kent Chandler
Executive Director PSC
Public Service Commission
211 Sower Blvd.
Frankfort, Kentucky 40602-0615

RECEIVED

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**PUBLIC SERVICE
COMMISSION**

RE: 2019 Annual Distribution Reliability Report.

Dear Honorable Executive Director,

Big Sandy RECC is filing this report in accordance with Case No. 2020-00085. Attached is Big Sandy's 2019 Annual Distribution Reliability Report. As a result of the Covid-19 Pandemic, Big Sandy had emailed the 2019 Annual Distribution Reliability Report, however it was not properly submitted electronically. Please contact me with any questions.

Sincerely,

Jeff Prater
VP Operations
Big Sandy RECC



Touchstone Energy® Cooperatives
The power of human connections®

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	BIG SANDY RECC
REPORT PREPARED BY	JEFF PRATER
E-MAIL ADDRESS OF PREPARER	jprater@bigsandyrecc.com
PHONE NUMBER OF PREPARER	606-791-4095

SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT	2019
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SECTION 3: MAJOR EVENT DAYS (MED)

	T_{MED}	40.289
FIRST DATE USED TO DETERMINE T_{MED}		January 1, 2019
LAST DATE USED TO DETERMINE T_{MED}		31-Dec-19
NUMBER OF MED IN REPORT YEAR		2

NOTE: Per IEEE 1366 T_{MED} 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	12,759	TOTAL CIRCUITS	36
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Excluding MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	381.84	SAIDI	452.702
SAIFI	3.18	SAIFI	3.783

Including MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	774.7	SAIDI	562.612
SAIFI	3.81	SAIFI	4.095

Notes:

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of May 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_{MED}

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SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1:

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. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE N
NUMBERS REPRESENTED 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

SEE ATTACHMENTS

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SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional page may be attached as needed.

SEE ATTACHMENTS

SECTION 7: UTILITY COMMENTS

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BIG SANDY RECC 2019 REPORTING OUTAGE CAUSES FOR CIRCUIT AND PERCENTAGES

SAIDI/ SAIFI

BEECH FORK #416	MILES- 36/MEMBERS 450	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Jenny Wiley Substation (Floyd County) Prestonburg RT 3			2009	
SAIDI- 583.81/SAIFI 3.19				
Five year Average SAIDI- 461.38/SAIFI-3.02				
Maintenance		97%		30
Unknown		2%		10
Equipment Installation Design		1%		3

CORRECTIVE ACTION: Extended outage times resulting from large out of ROW trees.
 Evaluate relocation/additional ROW clearing

BOONSCAMP #552	MILES- 31/MEMBERS 323	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin Co Substation (Johnson/Martin Co) Whitehouse RT3390			2014	
SAIDI-99.25/ SAIFI 1.03				
Five year Average SAIDI-374.11/SAIFI-3.75				
Maintenance		60%		13
Equipment Installation Design		30%		5
Unknown		7%		1
Weather		2%		4
Planned Outage		1%		2

CORRECTIVE ACTION: This circuit is currently being considered for
 hardening during our 2021-2024 construction work plan.

DENVER # 466	MILES- 33/ MEMBERS- 682	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Volga-substation (Johnson County) Stone Coal KY RT 460			2016	
SAIDI-666.17/ SAIFI 5.99				
Five year Average SAIDI-559.52 /SAIFI-4.62				
Maintenance		92%		49
Planned Outage		6%		15
Weather		1%		2
Unknown		1%		11

CORRECTIVE ACTION: This circuit is currently being considered for
 hardening during 2021-2024 construction work plan.

ST.HIGHWAY #497	MILES-12 / MEMBERS-153	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Volga-substation (Johnson County) Staffordsville RT 172			2011	
SAIDI-678.19/ SAIFI-2.93				
Five year Average SAIDI-524.56 /SAIFI-2.84				
Maintenance		96%		9
Planned Outage		2%	3	
Public		1%	3	
Equipment Installation Design		1%	1	
CORRECTIVE ACTION:				
No Actions deemed necessary				

Thelma #392	MILES-76/ MEMBERS- 988	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Volga-substation (Johnson County) KY RT 201 Sitka			2019	
SAIDI-335.66/SAIFI-3.00				
Five year Average SAIDI-429.23 /SAIFI-4.99				
Maintenance		90%		40
Equipment Installation Design		5%	7	
Unknown		5%	15	
CORRECTIVE ACTION: Circuit cut and trimmed. No further actions planned at this time.				

CALLAWAY #756	MILES- 35/MEMBERS- 529	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin Co Substation (Johnson/Martin Co) WhitehouseRT3390				
SAIDI-390.16/ SAIFI-3.15				
Five year Average SAIDI-388.00 /SAIFI-2.76				
Maintenance		99%		35
Unknown		1%	8	
Weather		1%	5	
Equipment Installation Design		1%	2	
CORRECTIVE ACTION: Plan to cut and trim this circuit in 2020.				

OILFIELD # 34	MILES- 12/ MEMBERS-49	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Red Bush-substation (Johnson County) Keaton KY RT 1092			2009	
SAIDI-625.39/SAIFI-6.20				
Five year Average SAIDI- 534.83 /SAIFI-4.03				
Maintenance		88%		4
Unknown		12%	5	
CORRECTIVE ACTION: Helicopter trim of remote areas.				

HARGUS # 256	MILES-49/MEMBERS-173	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Redbush-substation (Johnson County) Flatgap RT 172				
SAIDI-554.70/SAIFI-5.37			2012	
Five year Average SAIDI-875.27/SAIFI-6.17				
Maintenance		90%		10
Equipment Installation Design		7%		2
Planned Outages		2%		3
Weather		1%		4

CORRECTIVE ACTION: This line has heavy out ROW tree exposure and remote location. No current action deemed necessary.

VOLGA # 225	MILES- 29/ MEMBERS-272	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Redbush-substation (Johnson County) Flatgap RT 172				
SAIDI-321.30/SAIFI-2.42			2014	
Five year Average SAIDI-398.83 /SAIFI-3.75				
Maintenance		99%		19
Weather		1%		2
Unknown		1%		1

CORRECTIVE ACTION: No actions deemed necessary

SALT LICK # 308	MILES-52/ MEMBERS-856	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek-substation(Floyd County)Prestonsburg RT114				
SAIDI-625.63/SAIFI-6.63			2015	
Five year Average SAIDI-405.68 /SAIFI-3.93				
Maintenance		95%		41
Equipment Installation Design		3%		10
Unknown		1%		18
Planned Outages		1%		6

CORRECTIVE ACTION: Evaluate out of ROW trees removed.

MILO # 551	MILES-15/ MEMBERS-261	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin County-substation(Johnson County)TomahawkRT40				
SAIDI-769.99/SAIFI-5.65			2013	
Five year Average SAIDI-540.60 /SAIFI-2.95				
Maintenance		99%		15
Animals		1%		3
Equipment Installation Design		1%		3

CORRECTIVE ACTION: No actions deemed necessary. Heavy exposure to out of ROW trees.

WHITEHOUSE # 550	MILES-51/MEMBERS-460	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin Co-substation(Johnson/Martin Co)WhitehouseRT3390				
SAIDI-980.15/SAIFI-6.83			2013	
Five year Average SAIDI-796.13 /SAIFI-6.04				
Maintenance		97%		44
Unknown		2%		8
Equipment installation Design		1%		6
Animals		1%		7
CORRECTIVE ACTION: Plan to relocate ^a section of three phase line to reduce tree exposure.				

DECOY SUB SWITCH #1173	MILES-32/MEMBERS-144	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Salt Lick Substation (Floyd County) Hueysville RT 7				
SAIDI-1189.71SAIFI-7.58				
Five year Average SAIDI- 848.03 /SAIFI-3.92				
Maintenance		99%		13
Planned Outages		1%		2
Power Supply		1%		1
CORRECTIVE ACTION: This line section has heavy out ROW tree exposure No actions deemed necessary at this time.				

COW CREEK # 992	MILES-62/MEMBERS-1015	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Bill Wells-substation (Floyd County) Prestonsburg RT 1035				
SAIDI-320.22 /SAIFI-3.62			2018	
Five year Average SAIDI-394.95 /SAIFI-4.30				
Unknown		58%		14
Maintenance		36%		48
Weather		3%		5
Equipment installation Design		1%		7
CORRECTIVE ACTION: This circuit is currently being considered for harding durning 2021-2024 Construction work plan.				



Big Sandy RECC Right-of-Way Plan and Procedures

Big Sandy RECC has 968 miles of distribution line.

Big Sandy's Right-of-Way plan is designed to establish a systematic and sustainable maintenance schedule. Right-of-Way clearing is being scheduled on individual feeder circuits from each substation with clearing to the end of each feeder.

Circuit cutting is being scheduled with a goal of development of a 7-year rotations. Spraying is scheduled with a goal of 4-year rotations.

Spraying of vines that overtake poles and guys is a part of Big Sandy's vegetation Plan.

Big Sandy RECC plans to utilize hourly paid and firm price contracts for all right of way cutting and herbicide application.

Circuit Prioritization

Big Sandy's staff is responsible for establishing a preventative maintenance strategy, identifying an appropriate routine maintenance cycle, prioritizing, scheduling and completing routine maintenance systematically and on the desired cycle.

Vegetation maintenance records, service interruption data, detailed Line Worker Reports, ground patrols and member-customer input all contribute to assigning priorities for vegetation maintenance each year.

There are several factors the Big Sandy's staff must consider when evaluating vegetation management needs. These include the frequency of service interruptions, vegetation quantities and characteristics, time elapsed since last treatment and member-customer requests.

Right-of-Way Clearance Standards

1. Pruning Guidelines for On-R/W Trees - Effective tree clearance for line reliability is dependent on the voltage of the conductor, the type of tree, its growth rate and habit. Clearance shall be accomplished by ground cutting and removing all tall-growing tree species from within the R/W, whenever approved. Where pruning of residential or landscape trees become necessary, prune so as to provide a minimum of three (3) years of clearance. The guidelines for tree clearances apply at the time of pruning and clearing and are intended to protect the wires under normal operating conditions. Special clearances may be needed at times because of field conditions. Additional allowance should be made for wires with excess sag.
2. Pruning Along Distribution R/W Edge or Off-R/W Trees - Every tree shall be trimmed ground-to-sky in accordance with ANSI A-300. To the extent practicable, these limbs shall be trimmed back to the trunk of the tree except on species that are susceptible to sun scald.

Clear the R/W of all trees or brush thirty-five (35) feet wide for three phase lines and thirty (30) feet wide for single phase lines.

3. Shaping or rounding-over trees beyond the extent required to achieve the desired conductor/vegetation clearance shall not be performed, unless specifically approved by BIG SANDY or it's REPRESENTATIVE.
4. Only trees that are directly involved with BIG SANDY' overhead lines, as defined by this specification shall be pruned. Pruning trees for privately owned lines, other utility lines, or consumer lines or wiring is not permitted.
5. On all secondary lines and service drops, as directed by BIG SANDY or its REPERSENTATIVE, drops shall be cleared to the extent that the conductor can swing free of obstructions.
6. Big Sandy shall not prune trees solely for area lighting illumination.
7. All low growing desirable species, if present, may be left unless:
 - a. they create clearance problems,
 - b. mechanical, non-selective equipment (e.g. mowing) is used, or
 - c. they block access to the rights-of-way or prevent facilities maintenance.
8. Ingested wilting foliage of wild cherry is poisonous to livestock. Remove all wild cherry foliage from fields where livestock graze.
9. All stumps from manual clearing operations shall be treated with herbicides approved by BIG SANDY.

Jeff Prater

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VP Operations