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April 4, 2023

Linda Bridwell Public Service Commission 211 Sower Blvd Frankfort KY 40602-0615

RE: 2023 Annual Distribution Reliability Report

Dear Honorable Executive,

Big Sandy RECC is filing this report in accordance with PSC requirements. Attached is Big Sandy's 2023 Annual Distribution Reliability Report. Pleas contact me with any questions.

Sincerely,

Jeff Prater

Interim President and General Manager

**Big Sandy RECC** 

**Enclosures** 

# Electric Distribution Utility Annual Reliability Report

### **SECTION 1: CONTACT INFORMATION**

UTILITY NAME BIG SANDY RECC

REPORT PREPARED BY

JEFF PRATER

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E-MAIL ADDRESS OF PREPARER PHONE NUMBER OF PREPARER

606-791-4095

### **SECTION 2: REPORTING YEAR**

CALENDAR YEAR OF REPORT 2023

### **SECTION 3: MAJOR EVENT DAYS (MED)**

**TMED** 

70.525

FIRST DATE USED TO DETERMINE

January 1,2023

LAST DATE USED TO DETERMINET

December 31, 2023

NUMBER OF MED IN REPORT YEAR

NOTE: Per IEEE 1366 TMED 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 12,595

\_TOTAL CIRCUITS 36

### **Excluding MED**

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	627.52	SAIDI	883.224
SAIFI	3.73	SAIFI	4.047

### Including MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	2093.40	SAIDI	1315.0
SAIFI	4.55	<b>SAIFI</b>	4.534

#### 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 TMED

### **SECTION 5: CIRCUIT REPORTING**

# (CIRCUITS WITH SADI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE) (CIRCUIT 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. 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 (SAFI)
- 12. REPORTING YEAR (SAIFI)
- 13. CORRECTIVE ACTION PLAN

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

#### SEE ATTACHMENTS

### SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN Additional page may be attached as needed.

SEE ATTACHMENTS:

ATTACHMENT A

SECTION 7: UTILITY COMMENTS



# BIG SANDY RECC 2018 REPORTING OUTAGE CAUSES FOR CIRCUIT AND PERCENTAGES

### SAIDI/ SAIFI

ARKANSAS #655	MILES-35 / MEMBERS-755	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Bill Wells-Substation(Floy	d County) US 23, Prestonsburg KY			
SAIDI 2356.89 SAIFI 4.6	57		2023	
Five Year Average: SAI	DI 771.31 SAIFI 2.44			
Maintenance		42%		42
Cause Unknown		24%		24
Other		10%		9
Public		9%		8
Equipment – Design		7%		6
CORRECTIVE ACTION:				

CORRECTIVE ACTION:

Trimming of this circuit was completed in December 2023.

S 1062 PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
	2018	
44%		41
14%		13
14%		13
8%		7
7%		6
	44% 14% 14% 8%	2018 44% 14% 14% 8%

CORRECTIVE ACTION:

No action planned at this time.

MOTEL #658	MILES-2/MEMBERS-39	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Bill Wells Substation (Floy	d County) US 23 Prestonsburg KY		7,500	
SAIDI 224.16 SAIFI 1.05			2018	
Five Year Average: SAIDI 1	12.92 SAIFI .67			
Weather		40%		2
Planned Outage		20%		1
Unknown		20%		1
Maintenance		20%		1

CORRECTIVE ACTION: This is a short distribution circuit. This circuit will be monitored, but no corrective action is planned at this time.

BEECH FORK #416	MILES-36/ MEMBERS-456	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Jenny Wiley Substation (Floy	d Co) KY Rt 3 Auxier KY			
SAIDI 766.40 SAIFI 6.19			2022	
Five Year Average: SAIDI 517	7.06 SAIFI 3.41			
Maintenance		33%		19
Unknown		21%		12
Other		16%		9
PUBLIC		9%		5
ANIMALS		9%		5

CORRECTIVE ACTION: All the trim work on this circuit wasn't completed until 2023 and helicopter trimming was done in 2023 also.

HOSPITAL #417	MILES-2/ MEMBERS 83	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Jenny Wiley Substation (F	Floyd Co) KY Rt 3 Auxier KY			
SAIDI 322.84 SAIFI 2.0	06		2023	
Five Year Average: SAIDI	66.18 SAIFI .48		2025	
POWER SUPPLY		67%		2
Unknown		33%		1

CORRECTIVE ACTION: This is a short circuit that had only 3 outages. No action required at this time.

MIDDLE CREEK #211	MILES-32/MEMBERS-406	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Jenny Wiley Substation (Flo	oyd Co) Rt 321 Prestonsburg			
SAIDI 1125.43 SAIFI 7.93			2023	
Five Year Average: SAIDI	629.67 SAIFI 5.10			
Maintenance		44%		24
Unknown		15%		8
Other		9%		5
Equipment - Design		6%		3
Public		6%		3

CORRECTIVE ACTION: Trimming on this circuit began in 2023 and is expected to be completed in 2024.

	DATE OF LAST CIRCUIT TRIM	OUTAGES
	2014	
	2014	
58%		28
13%		6
10%		5
8%		4
8%		4
	13% 10% 8%	2014 58% 13% 10% 8%

MILO #551	MILES-15 /MEMBERS-294	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin Co Substation (Johnson Co) R	at 40, Whitehouse KY	San Al Service Visit Service Service Service		
SAIDI 1228.19 SAIFI 4.35			2021	
Five Year Average: SAIDI 810.27 SAIFI	3.67			
Maintenance		33%		9
Unknown		26%		7
Planned Outage		19%		5
Power Supply		15%		4
CORRECTIVE ACTION: This circuit was cur	t out in 2021. No action at this time	P		120 <b>5</b> 2

WHITEHOUSE 550	MILES-51/MEMBERS-481	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Martin Co Substation (Johnson C	o) Rt 40, Whitehouse KY			
SAIDI 1757.80 SAIFI 8.1	1		2013	
Five Year Average: SAIDI 984.8	32 SAIFI 7.02			
Maintenance		35%		29
Unknown		17%		14
Power Supply		16%		13
Public		10%		8
Weather		6%		5

CORRECTIVE ACTION: This circuit is on our schedule to trim in 2024.

GLYNVIEW #234	MILES-1/MEMBERS-29	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek Substation (Floyd C	Co) Rt 114 Prestonsburg KY			
SAIDI 81.61 SAIFI 0.71			2018	
Five Year Average: SAID1 630	23 SAIFI 5.42			
Maintenance		68%		4
Weather		16%		1
Unknown		16%		1

Corrective Action: Short circuit to shopping center, not action at this time.

SALT LICK #308	MILES-52/ MEMBERS-895	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek Substation (F KY	loyd Co) Rt 114 Prestonsburg			
SAIDI 799.80 SAIFI 5.5	58		2015	
Five Year Average: SAIDI 6	330.23 SAIFI 5.42			
Maintenance		52%		53
Unknown		13%		13
Planned Outage		9%		9
Other		6%		6
Equipment-Design		5%		5

Corrective Action: : This circuit is on our schedule to trim in 2025. Current work project to relocate 1500' of line away from the creek area to underground by roadway.

SPURLOCK #311	MILES-18/	MEMBERS-285	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek Substation (Floy	yd Co) Rt 114 P	restonsburg KY			
SAIDI 1313.32 SAIFI 4	.43			2020	
Five Year Average: SAIDI 5	24.02 SAIFI	2.69			
Maintenance			65%		29
Equipment-Design			8%		4
Other			4%		2
Unknown			4%		2

Corrective Action: No action planned.

TIGER MART #287	MILES-12/MEMBERS-221	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek-Substation (Floyd C	o) Rt 114 Prestonsburg KY			
SAIDI 1384.50 /SAIFI 6.04			2015	
Five Year Average: SAIDI 594.2	1 SAIFI 3.81			
Maintenance		37%		11
Equipment-Design		20%		6
Unknown		10%		3
Planned Outage		6%		2
CORRECTIVE ACTION: Helicopter side trim	med and used topper saw on this circu	uit in 2023.		

WAL MART #591	MILES-3/ MEMBERS-48	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Middle Creek Substation (Floyd Co)	Rt 114 Prestonsburg KY			
SAIDI 82.91 SAIFI 0.28			2020	
Five Year Average: SAIDI 61.78 SAIFI	.55			
Maintenance		50%		1
Weather		50%		1

CORRECTIVE ACTION: The weather caused 50% of outage on this short circuit. No action planned.

DENVER/HARGUS #256	MILES-49/ MEMBERS-423	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Red Bush Substation (Johnson	County) Rt 469 Red Bush KY			I
SAIDI 1410.08 SAIFI 8.05			2012	
Five Year Average: SAIDI 113	3.30 SAIFI 7.66			
Maintenance		32%		10
Planned Outage		29%		9
Unknown		26%		8
Weather		3%		1
CORRECTIVE ACTION: This circuit	t is on our schedule to trim in 2024.			

DECOY #1173	MILES-42/ MEMBERS-660	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Salt Lick Substation (Knott Coun KY	ty) KY Hwy 2029 Hueysville			
SAIDI 3643.36 SAIFI 11.36			2016	
Five Year Average: SAIDI 1992.8	8 SAIFI 6.79	-		
Maintenance		61%		23
Unknown		13%		5
Other		11%		4
Planned Outage		8%		3

CORRECTIVE ACTION: We have cut out hot spots over the past three years. This circuit has large sections that is densely populated with foliage and trees.

ROCK FORK #679	MILES-22/ MEMBERS-378	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Salt Lick Substation (Knott Cou KY	inty) KY Hwy 2029 Hueysville			
SAIDI 748.91 SAIFI 3.13			2017	
Five Year Average: SAIDI 409.9	95 SAIFI 2.52	-		
Maintenance		59%		17
Planned Outage		14%		4
Other		7%		2
Unknown		7%		2

### **CORRECTIVE ACTION:**

No action is planned.

Rt Mine #169	MILES-9/ MEMBERS-84	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Salt Lick Substation (Knott County) KY Hwy 2029 Hueysville KY				
SAIDI 543.99 SAIFI 2.83			2017	
Five Year Average: SAIDI 315.65	SAIFI 2.04			
Power Supply		38%		5
Unknown		31%		4
Maintenance		23%		3
Weather		8%		2

CORRECTIVE ACTION: Main outage was due to power supply. We will monitor this circuit, but no additional action at this time.

Rehab #107	MILES-9/ MEMBERS-280	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Thelma Substation (Johnson Coun	ty) Thelma KY			
SAIDI 796.97 SAIFI 2.97			2016	
Five Year Average: SAIDI 363.47	SAIFI 1.92		3 = 5	
Maintenance		33%		7
Animals		24%		5
Equipment-Design		10%		2
Other		10%		2
Planned Outage		10%		2

CORRECTIVE ACTION:

No action is planned.

RIVER #62	MILES-39/ MEMBERS-547	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Thelma Substation (Johnson County	) Thelma KY			
SAIDI 1908.30 SAIFI 5.10			2019	
Five Year Average: SAIDI 652.74	SAIFI 3.32			
Maintenance		43%		28
Unknown		15%		10
Animals		15%		10
Planned Outage		8%		5
Equipment-Design		8%		5

CORRECTIVE ACTION: We have side trimmed with helicopter and cut out hot spots within the past 2 years. No additional action is planned at this time.

THELMA #392	MILES-76/ MEMBERS-1030	PERCENT	DATE OF LAST CIRCUIT TRIM	OUTAGES
Volga Substation (Johnson C	County) KY Rt 172 Stone Coal KY			
SAIDI 455.74 SAIFI 4.22	2		2019	
Five Year Average: SAIDI 37	79.73 SAIFI 3.26			
Maintenance		43%		37
Unknown		15%		13
Planned Outge		14%		12
Other		9%		8
Weather		4%		4

CORRECTIVE ACTION:

No action is planned.

#### ATTACHMENT A



# Big sandy RECC Right-of-Way Plan and Procedures February 2024

Big Sandy RECC has 968 GPS 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 based on the time since last circuit clearing, reliability numbers and complete system clearing. Spraying is scheduled with a goal of 4-year rotation.

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. <u>Pruning Guidelines for On-R/W Trees</u> - 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.

- 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.
- 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.
- Only trees that are directly involved with BIG SANDY's 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.
- 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.
- All stumps from manual clearing operations shall be treated with herbicides approved by BIG SANDY.

Jeff Prater,

**VP Operations**