

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF AMERICAN)
ELECTRIC POWER COMPANY, INC., KENTUCKY POWER)
COMPANY AND LIBERTY UTILITIES CO. FOR)
APPROVAL OF THE TRANSFER OF OWNERSHIP AND)
CONTROL OF KENTUCKY POWER COMPANY)

Case No. 2021-00481

REBUTTAL TESTIMONY OF
BRIAN K. WEST
ON BEHALF OF KENTUCKY POWER COMPANY

**REBUTTAL TESTIMONY OF
BRIAN K. WEST ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2021-00481

TABLE OF CONTENTS

I. INTRODUCTION	1
II. BACKGROUND	1
III. KENTUCKY POWER DISTRIBUTION CAPITAL INVESTMENT	2
IV. KENTUCKY POWER OPERATION AND MAINTENANCE EXPENSE	12
V. KENTUCKY POWER RELIABILITY.....	15

EXHIBITS

<u>EXHIBIT</u>	<u>DESCRIPTION</u>
BKW-R1	Ref 2021 KPCo Annual Vegetation Management Plan
BKW-R2	Ref EGP-3 Forest Density Map of Kentucky
BKW-R3	2020 Kentucky Power Company Annual Reliability Report
BKW-R4	Reliability Metrics for Comparable Utilities

**REBUTTAL TESTIMONY OF
BRIAN K. WEST ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2021-00481

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.**

2 A. My name is Brian K. West. My position is Vice President, Regulatory & Finance for
3 Kentucky Power Company (“Kentucky Power” or the “Company”). My business
4 address is 1645 Winchester Avenue, Ashland, Kentucky 41101.

II. BACKGROUND

5 **Q. ARE YOU THE SAME BRIAN K. WEST WHO FILED DIRECT TESTIMONY**
6 **AND SPONSORED DISCOVERY RESPONSES IN THIS PROCEEDING?**

7 A. Yes.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

9 A. The purpose of my rebuttal testimony is to clarify and rebut several issues raised by
10 Lane Kollen on behalf of the Kentucky Industrial Utility Customers, Inc. (“KIUC”)
11 and the Office of the Attorney General, regarding the Company’s historic capital
12 investment, operations and maintenance (“O&M”) expense, and distribution reliability.
13 Mr. Kollen’s narrative is contrary to the extensive record from cases previously filed
14 before the Public Service Commission of Kentucky (“Commission”) that support the
15 historic levels of capital investment and O&M expense that were approved by this
16 Commission to maintain and improve reliability for Kentucky Power customers.

1 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

2 A. Yes, I am sponsoring the following exhibits:

<u>Exhibit</u>	<u>Description</u>
BKW-R1	Ref 2021 KPCo Annual Vegetation Management Plan
BKW-R2	Ref EGP-3 Forest Density Map of Kentucky
BKW-R3	2020 Kentucky Power Company Annual Reliability Report
BKW-R4	Reliability Metrics for Comparable Utilities

III. KENTUCKY POWER DISTRIBUTION CAPITAL INVESTMENT

3 **Q. IS MR. KOLLEN CORRECT IN HIS CONTENTION THAT KENTUCKY**
4 **POWER UNDERINVESTED IN ITS DISTRIBUTION SYSTEM DURING THE**
5 **PERIOD 2011-2020?**

6 A. No. To the contrary, Kentucky Power made reasonable and appropriate capital
7 investments totaling \$425,262,063 in its distribution system during the period
8 examined by Mr. Kollen. In addition, during the same period, the Company expended
9 \$234,522,799, capital and O&M, through its distribution system vegetation
10 management program to improve and maintain distribution system reliability.

11 **Q. WHAT SUPPORT DOES MR. KOLLEN OFFER FOR HIS ARGUMENT THAT**
12 **THE COMPANY HAS UNDERINVESTED IN ITS DISTRIBUTION SYSTEM?**

13 A. Mr. Kollen first calculates the ratio of the Company's annual distribution system capital
14 investment to its annual depreciation expense. He then compares the calculated values
15 to similar values for other Kentucky investor-owned electric companies.

1 **Q. IS MR. KOLLEN'S METRIC A REASONABLE MEASURE IN THE CASE OF**
2 **KENTUCKY POWER FOR WHETHER THE COMPANY ADEQUATELY**
3 **INVESTED IN ITS DISTRIBUTION SYSTEM DURING THE PERIOD 2011-**
4 **2020?**

5 A. It is one piece of information that should not be taken out of context or used in exclusion
6 to other relevant information. If depreciation rates reflected the useful life of the
7 utility's distribution plant, and there was no new distribution plant being constructed,
8 a ratio of 1.0 would indicate that the utility was investing only enough in its distribution
9 system to replace distribution facilities in accordance with the level of depreciation
10 expense.

11 **Q. HOW DOES THIS AFFECT MR. KOLLEN'S CONTENTION THAT THE**
12 **COMPANY HISTORICALLY HAS UNDER-INVESTED IN ITS**
13 **DISTRIBUTION SYSTEM?**

14 A. Mr. Kollen's use of his calculation in support of his argument suffers two fundamental
15 errors. First, because the metric serves as a proxy for growth or decline in a company's
16 rate base, it is directly affected by changes in customer counts. Second, because capital
17 investments ultimately are paid for by customers through increased depreciation
18 expense and return on and of capital, both of which are recovered in rates, a ratio greater
19 than 1.0 can exert upward pressure on rates, particularly where customer count is
20 declining. The Company's ability to invest the amount of distribution capital Mr.
21 Kollen argues for is affected by the ability of the Company's customers to afford the
22 resulting increased rates.

1 **Q. HOW DOES THE CHANGE IN KENTUCKY POWER’S CUSTOMER COUNT**
2 **COMPARE TO THE CHANGE IN CUSTOMER COUNT FOR THE OTHER**
3 **UTILITIES MR. KOLLEN USED IN HIS COMPARISON?**

4 A. In contrast to each of the other three investor-owned utilities in the Commonwealth,
5 Kentucky Power lost customers during the period 2017-2020. It is no secret to the
6 Commission, and Mr. Kollen presumably is equally aware, that Kentucky Power’s
7 service territory, along with eastern Kentucky as a whole, saw a precipitous decline in
8 population, employment, and electrical load over the past 15 years. Unemployment
9 and declining economic activity in Kentucky Power's service territory has resulted in a
10 concomitant population decline between 2010 and 2016 in 18 of the 20 counties
11 comprising the Company's service territory. Kentucky Power's total customers
12 declined by approximately four percent from approximately 173,400 customers to
13 approximately 166,000 customers between 2011 and 2019. As Company Witness Brad
14 Hall testified five years ago in Case No. 2017-00179, these declines were driven by the
15 collapse of the coal and steel industries in eastern Kentucky. For example, between
16 2009 and 2021, the number of employed coal miners in eastern Kentucky dropped 83
17 percent from 15,572 in 2009 to 2,702 in 2021. Coal production fell 86 percent from
18 74,337,886 tons to 10,294,661 tons over a like period. AK Steel shuttered its operations
19 in December 2015 with the loss of over 600 jobs and closed permanently in 2020.
20 These changes led to the loss of 9,577 customers (5.5 percent) and a 28 percent (7.068
21 GWh to 5.093 GWh) decline in annual sales from 2009 to 2021.

22 Large portions of the service territories of the other three investor-owned
23 utilities by contrast are located in the so-called “Golden Triangle” lying between

1 Lexington, Louisville, and northern Kentucky. The economy of the Golden Triangle
 2 continued to grow during the 2008-2020 period. As a result, the customer count of the
 3 three other Kentucky investor-owned utilities grew during the period of decline in
 4 eastern Kentucky.

5 **Q. HAS THE CONDITION OF THE COMPANY'S SERVICE TERRITORY**
 6 **IMPROVED?**

7 A. No. Kentucky Power's customer count declined an additional three percent from
 8 approximately 168,000 customers in 2017 to approximately 165,000 customers in
 9 February 2022.

10 **Q. HOW DOES THIS DECLINE IN CUSTOMER COUNT COMPARE TO THE**
 11 **CUSTOMER COUNT FOR THE OTHER THREE INVESTOR-OWNED**
 12 **UTILITIES IN KENTUCKY?**

13 A. **Table 1** below shows the year-over-year percentage change in total customer count for
 14 each of the four investor-owned utilities in Kentucky.

15 **Table 1 – Customer Growth¹**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total (2010- 2020)
Duke Energy Kentucky	0.3%	0.6%	0.5%	0.5%	0.5%	1.0%	0.9%	0.8%	0.7%	1.8%	7.9%
Kentucky Power Co	-0.5%	-0.5%	-0.4%	-0.7%	-0.6%	-0.7%	-0.7%	-0.6%	-0.7%	0.2%	-5.1%
Kentucky Utilities Co	N/A	N/A	N/A	5.0%	0.4%	0.5%	0.7%	0.4%	0.6%	0.9%	8.5%
Louisville Gas & Electric Co	N/A	N/A	N/A	0.7%	0.8%	0.8%	1.0%	0.7%	1.0%	1.4%	6.4%

¹ This information was sourced from the respective companies' FERC Form 1 data. The Company could not calculate the customer growth rates for Kentucky Utilities Co. and Louisville Gas & Electric Co. from 2011 to 2013 due to changes in those companies' FERC Form 1 customer account data associated with PPL's acquisition of them.

1 **Q. HOW DO THESE DIFFERING CHANGES IN CUSTOMER COUNTS**
2 **AFFECT MR. KOLLEN'S RATIO?**

3 A. Growing customer population requires the construction of new distribution facilities,
4 which in turn increases the ratio of a utility's annual distribution system capital
5 investment to its annual depreciation expense, particularly when compared with a
6 utility that has flat or declining customer counts. Conversely, construction of new
7 distribution system facilities to serve new customers is limited where customer counts
8 are declining. At bottom, comparisons of the ratio of annual distribution system capital
9 investment to the annual depreciation expense among utilities with growing customer
10 counts and a utility with a declining customer count is probative of little.

11 **Q. DOES MR. KOLLEN ATTEMPT TO ACCOUNT FOR THESE DIFFERING**
12 **CUSTOMER COUNT TRENDS AMONG THE FOUR INVESTOR-OWNED**
13 **UTILITIES IN KENTUCKY?**

14 A. No.

15 **Q. PUTTING ASIDE MR. KOLLEN'S FLAWED USE OF THIS SINGLE**
16 **METRIC, HAS KENTUCKY POWER'S DISTRIBUTION PLANT BEEN**
17 **GROWING OVER THE PAST TEN YEARS?**

18 A. Yes. The Company has added distribution capital in excess of depreciation expense
19 *every year for the past ten years*. In the past two years, Kentucky Power spent *more*
20 *than twice as much* on distribution capital when compared to the annual distribution
21 depreciation expense. It is important to note, though, Kentucky Power invested capital
22 in its distribution plant is based on the need to replace existing infrastructure that is

1 near end-of-life and to invest in new technologies to modernize the distribution grid
2 and not an arbitrary metric.

3 **Q. PLEASE DESCRIBE THE COMPANY'S DISTRIBUTION CAPITAL**
4 **INVESTMENTS DURING THE PERIOD 2011 THROUGH 2020.**

5 A. In addition to the replacement of distribution facilities approaching the end of life or
6 otherwise requiring replacement, Kentucky Power has invested capital to upgrade its
7 distribution facility by adding new distribution substations and feeders to reconfigure
8 and reduce the length of existing distribution feeders. The Company also has added
9 new technologies such as Distribution Automation – Circuit Reconfiguration
10 (“DACR”) to automatically isolate and restore circuit sections during power outages.
11 Supervisory Control and Data Acquisition (“SCADA”) capital investments have also
12 occurred to support the new technologies, which allow for operational changes to be
13 made automatically or remotely. All of these investments were made to improve
14 customer reliability.

15 **Q. DOES KENTUCKY POWER REGULARLY REPORT ON ITS**
16 **DISTRIBUTION CAPITAL INVESTMENTS?**

17 A. Yes. Kentucky Power reports on its distribution capital investments in connection with
18 each rate case filing. Since 2016, the Company also provides information regarding its
19 “Smart Grid” investments in connection with each rate case filing. Finally, since 2010
20 the Company has filed annual reports on its planned distribution vegetation
21 management capital investments and its actual distribution vegetation management
22 capital investments. Beginning in 2021, the two annual reports were consolidated into
23 a single report.

1 **Q. IS INFORMATION REGARDING VEGETATION MANAGEMENT CAPITAL**
2 **INVESTMENT PROVIDED IN THE COMPANY'S ANNUAL PROPOSED**
3 **DISTRIBUTION VEGETATION MANAGEMENT PLANS AND ANNUAL**
4 **DISTRIBUTION VEGETATION MANAGEMENT REPORTS?**

5 A. Yes. The Company's proposed vegetation management plans, for example, provide on
6 a circuit-by-circuit basis the Company's proposed distribution vegetation management
7 capital investment. Prior to 2015, the Attorney General received a paper copy of each
8 report. Beginning in 2015, the Attorney General and KIUC, along with other parties
9 to each of the Company's rate cases, have received links to the electronic versions of
10 the reports. To date, neither the KIUC nor the Attorney General have indicated that
11 they share Mr. Kollen's newly-minted concern regarding the Company's distribution
12 system capital investment.

13 **Q. HAVE MR. KOLLEN'S CLIENTS, THE ATTORNEY GENERAL AND KIUC,**
14 **CHALLENGED THE LEVEL OF DISTRIBUTION MANAGEMENT**
15 **CAPITAL INVESTMENT AS BEING INADEQUATE IN ANY OF KENTUCKY**
16 **POWER'S PREVIOUS RATE CASE PROCEEDINGS BEFORE THIS**
17 **COMMISSION?**

18 A. No. In fact, Mr. Kollen urged the Commission on behalf of KIUC in Case No. 2005-
19 00341 to reject the Company's proposed vegetation management plan that included
20 increased vegetation management capital investment.² Similarly, in Case No. 2009-
21 00459, Mr. Kollen, again testifying on behalf of KIUC, urged the Commission to reject

² Direct Testimony of Lane Kollen at 24-28.

1 the Company's proposed vegetation management plan and concomitant vegetation
2 management capital investment.³

3 **Q. HAS THE COMMISSION INDICATED A CONCERN REGARDING ANY**
4 **ASPECT OF THE LEVEL OF THE COMPANY'S CAPITAL INVESTMENT?**

5 A. No. The Commission has provided continuous oversight on reliability and capital
6 investments throughout Kentucky Power's existence. The Commission has monitored
7 reliability, capital investment, and O&M spending for decades. In addition to being
8 supportive of the Company's efforts to implement its distribution vegetation
9 management plan in Case No. 2009-00459, as well as subsequent amendments to the
10 plan, the Commission has never suggested that the Company should be investing more
11 capital in connection with its distribution vegetation management plan or the reliability
12 of its distribution system generally.

13 **Q. WHAT OTHER FACTOR AFFECTS THE COMPANY'S ABILITY TO MAKE**
14 **CAPITAL INVESTMENTS?**

15 A. Every utility is entitled to recover through its rates a return on and of its capital
16 investments. The fact is that nearly all distribution spending is allocated to the
17 Company's residential and small commercial customers. These Kentucky Power
18 customers are some of the most economically challenged in the entire country.
19 Electricity bills make up a large portion of the kitchen table budgets of the Company's
20 customers – and they depend on the Company's electric service not only for lighting
21 and cooking, but also for heating their homes. The Company is mindful of *every single*

³ Direct Testimony of Lane Kollen at 47-49.

1 *dollar* it spends, and is always striving to find the right balance between overall cost
2 and reliability while always maintaining an unwavering focus on safety.

3 **Q. WOULD DISTRIBUTION SYSTEM INVESTMENT AT THE LEVELS**
4 **SUGGESTED BY MR. KOLLEN HAVE RESULTED IN HIGHER RATES FOR**
5 **KENTUCKY POWER'S CUSTOMERS?**

6 A. In my opinion, the answer is unequivocally yes. Distribution capital investment at the
7 average level calculated by Mr. Kollen on page 52 of his testimony for the other three
8 Kentucky investor-owned utilities for the period 2011-2020 would require a 50 percent
9 increase in the Company's annual distribution capital investment. Based on Mr.
10 Kollen's recommendation for additional investment over that ten year period, there
11 would have been an additional \$230.6 million in capital investment made which in turn
12 would have higher rates, a large portion of which would have been allocated to
13 residential and small commercial customers.

14 **Q. IS MR. KOLLEN'S APPROACH CONSISTENT WITH GOOD**
15 **REGULATORY POLICY?**

16 A. No. It would be bad policy to make decisions based on target levels of capital spend
17 while ignoring other important factors that determine the need for a project and the
18 associated capital cost. As previously indicated, one such factor is customer growth.
19 Utilities experiencing growth in the number of customers or increased demand will
20 need to invest capital in additional infrastructure and receive cost recovery for those
21 prudent investments through appropriate rates. Utilities experiencing customer loss
22 and load declines do not need to invest in growth-type projects and should not do so
23 just to hit a target. Other factors such as aging infrastructure may necessitate the need

1 to replace existing facilities to maintain service or address reliability issues, which
2 Kentucky Power has relentlessly pursued.

3 Regulatory Commissions – including this Commission – take a holistic view based on
4 need, overall cost, customer benefits, rate impact and a host of other factors in setting
5 rates. To my knowledge, the Commission has never used a sole metric to measure
6 whether a utility was spending the appropriate amount of capital; it has also never
7 suggested that Kentucky Power was underspending on its distribution system.

8 **Q. IS IT APPROPRIATE TO PENALIZE KENTUCKY POWER AS MR. KOLLEN**
9 **SUGGESTS FOR FAILING TO MEET HIS ARBITRARY METRIC?**

10 A. No. To provide customers with a retroactive rate credit for an infrastructure investment
11 that was never made makes no sense. An investment strategy going forward that relies
12 on hitting Mr. Kollen’s suggested investment metric and a corresponding penalty for
13 failing to do so would misalign incentives. Whether an investment is actually needed
14 or has substantial customer rate impact could become a secondary consideration. The
15 fear of being penalized for not spending enough to meet Mr. Kollen’s arbitrary metric
16 could hinder the Company’s ability to make prudent investment decisions.

17 **Q. HAVE ANY INTERVENORS OR THE COMMISSION SUGGESTED THAT**
18 **KENTUCKY POWER SPEND LESS ON DISTRIBUTION CAPITAL IN THE**
19 **PAST 10 YEARS?**

20 A. Yes. Most recently, in Case No. 2020-00174, both the Office of the Attorney General
21 and KIUC recommended the Commission deny this investment even though
22 approximately ninety percent of the utilities in the United States have replaced AMR
23 meters with AMI meters. This was needed investment to proactively replace Automatic

1 Meter Reading (“AMR”) meters that were fast approaching or had reached the end of
2 their service life and, as explained in detail by Company Witness Stephen D.
3 Blankenship in that filing, would have provided significant reliability benefits.

4 Specifically as it relates to the reliability benefits, AMI deployment would have
5 help improved reliability in the Company’s service territory by providing greater
6 information to evaluate the extent of an outage without waiting for additional customers
7 to call the Company, decrease the amount of time between when an outage occurs and
8 the Company becoming aware of the outage and, often, allow the Company to pinpoint
9 the isolation device such as a lateral or transformer fuse affecting the outage.
10 Additionally, the Company AMI infrastructure would have provided the Company with
11 the ability to identify distribution line transformers that are approaching failure and
12 replace them proactively before the failure causes an outage. The AMI meters can
13 monitor and report the health of the meter itself. Finally, AMI technology would have
14 supported equipment automation, energy efficiency programs, equipment failure
15 prediction, phasing identification, and gathering load information for devices and
16 network systems in order to design for future load increases, all of which would have
17 provided additional reliability benefits to the Company’s customers.

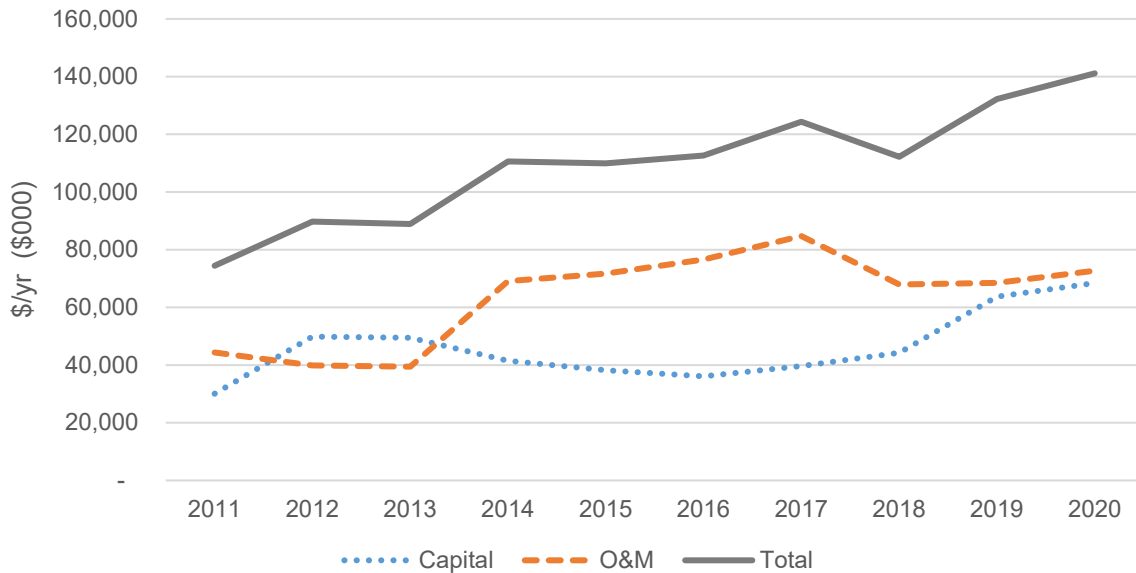
IV. KENTUCKY POWER OPERATION AND MAINTENANCE EXPENSE

18 **Q. MR. KOLLEN ARGUES BEGINNING AT PAGE 50, LINE 5 OF HIS**
19 **TESTIMONY THAT THE LEVEL OF THE COMPANY’S DISTRIBUTION**
20 **O&M EXPENSE IS A RESULT OF CAPITAL UNDERINVESTMENT. IS THIS**
21 **A FACTUAL ASSESSMENT?**

1 A. No. There are many problems with Mr. Kollen's assessment, and he clearly does not
2 understand the nature of the O&M expenses, the geographic characteristics of the
3 Company's service territory, or Kentucky Power's customer base. First, let me address
4 the claim of excessive O&M expense. The higher O&M expense level is not a result
5 of inadequate capital spending. Instead, the historic and current O&M levels reflect in
6 part the Commission approved Vegetation Management Program for the Company. In
7 2010 and 2014, the Commission approved increased O&M spending to transition from
8 a reliability-based tree trimming program to a 5-year, cycle-based tree trimming
9 program. The transition required approximately eight years to complete and yielded
10 marked improvements (75 percent) in Customer Minutes of Interruption as a result of
11 trees inside the right-of-way. The distribution vegetation management levels of O&M
12 have been reported annually. See **Exhibit BKW-R1 Ref 2021 KPCo Annual**
13 **Vegetation Management Plan**. These increased O&M expenses were significant but
14 required to address distribution reliability issues associated with the heavily forested
15 and mountainous service territory that is largely unique to Kentucky Power in the
16 Commonwealth of Kentucky. Adjustments to the level of O&M expenses were
17 reviewed and approved by the Commission most recently in the Company's 2020 base
18 rate case in Case No. 2020-00174.

19 **Table 2** below shows the historical levels of both capital and O&M spending on the
20 Kentucky Power distribution system.

1

Table 2 – Annual Kentucky Power Distribution Spending

2

3

4

5

6

7

8

9

10

11

12

13 **Q.**

14

The increased Vegetation Management Program expenditures, which constitute approximately 50 percent of the Company's distribution O&M expense, are immediately apparent in the O&M levels over time. Furthermore, the increase in capital spending can be clearly seen as the level of vegetation management O&M was returning to sustainable levels. The total of both expenditures shows the steady increases in spending to serve our customers. Put simply, Mr. Kollen's false narrative on "chronic underinvestment" does not hold up when context is added to his cherry-picked data. It should also be noted that as far back as 2005 in Case No. 2005-00341, Mr. Kollen on behalf of KIUC recommended the Commission reject changes to the Vegetation Management Plan proposed by the Company to improve reliability.

DO THE GEOGRAPHIC CHARACTERISTICS OF KENTUCKY POWER'S SERVICE TERRITORY IMPACT THE COMPANY'S O&M SPEND?

1 A. Yes. In the 2017 base rate case (Case No. 2017-00179), Company Witness Everett
2 Phillips provided Exhibit EGP-3, **Exhibit BKW-R2 Ref EGP-3 Forest Density Map**
3 **of Kentucky**, which illustrates the Forest Land Distribution for the State of Kentucky.
4 The Company's service territory has the highest forest density of any other utility in
5 the state. In addition, much of the service territory is mountainous. These geographic
6 characteristics also explain the rural nature of Kentucky Power and the low customer
7 density. The Company's distribution lines traverse dense forests and mountains to
8 serve customers. Access to the distribution line rights-of-ways can be challenging,
9 especially during inclement weather. The predominance of these conditions in its
10 service territory is largely unique to Kentucky Power and requires additional
11 consideration when comparing the O&M expenses to other utilities in the western two-
12 thirds of the state that are uniquely different.

V. **KENTUCKY POWER RELIABILITY**

13 **Q. BEGINNING ON PAGE 48, LINE 12 OF HIS TESTIMONY, MR. KOLLEN**
14 **CLAIMS THE COMPANY'S RELIABILITY PERFORMANCE IS**
15 **REMARKABLY POOR AS MEASURED BY STANDARD RELIABILITY**
16 **INDICES REPORTED TO THE COMMISSION BY THE INVESTOR-OWNED**
17 **ELECTRIC UTILITIES AND COOPERATIVE ELECTRIC UTILITIES IN**
18 **THE COMMONWEALTH. MR. KOLLEN ATTRIBUTES THE COMPANY'S**
19 **RELIABILITY PERFORMANCE TO ITS ALLEGED CAPITAL**
20 **UNDERINVESTMENT. IS HIS ASSESSMENT CORRECT?**

1 A. No. Understanding the Kentucky Power reliability metric results requires a thorough
2 knowledge and evaluation of the outage causes. Each year, the Company files a
3 comprehensive Electric Distribution Utility Annual Reliability Report as required by
4 the Commission. The report provides extensive details of the outage causes for each
5 distribution circuit. The leading causes of outages are primarily due to trees outside
6 the rights-of-way, equipment failure, and weather. These three outage causes are
7 highly correlated. For example, specific to a correlation between outages related to
8 trees outside the rights-of-way and weather, weather causes trees outside the rights-of-
9 way to fall across the distribution lines, which damages conductor, poles and cross-
10 arms. The current level of reliability of the Kentucky Power distribution system is not
11 due to underinvestment, but due to the challenging geographical characteristics
12 described earlier. There has never been a finding by the Commission that the outages
13 were caused by capital underinvestment.

14 **Q. ARE THE COMPANY'S DISTRIBUTION LINES AND RIGHTS-OF-WAY**
15 **INSPECTED ON A ROUTINE BASIS?**

16 A. Yes. As required by the Commission's regulations, Kentucky Power inspects all
17 distribution facilities every two years. These inspections determine if facilities need to
18 be repaired or replaced.

19 **Q. HAS THE VEGETATION MANAGEMENT PROGRAM APPROVED BY THE**
20 **COMMISSION IMPROVED RELIABILITY?**

21 A. Yes, as shown in **Table 3** below. Over the life of the program, customer minutes of
22 interruption caused from trees inside the Rights-of-Way have been steadily reduced
23 from over 16 million customer minutes of interruption in 2011 to approximately 1.8

1 million in 2021. The number of incidents of customer interruptions as a result of vines
 2 and trees in the Company's rights-of-way declined 79 percent from a high of 2,427 in
 3 the year ended December 2011 to 518 in the year ended December 2021.

Table 3 – Summary Of Inside Rights-Of-Way-Related Outages

Year	Number of Interruptions	Total Customers Affected	Veg Inside ROW - Customer Minutes of Interruptions (CMI)
2011	2,427	72,076	16,388,594
2012	1,674	43,934	11,369,680
2013	1,555	48,099	8,866,856
2014	1,462	36,471	8,617,318
2015	1,102	30,040	6,236,943
2016	943	28,713	5,949,862
2017	660	18,911	4,098,559
2018	645	12,391	2,539,186
2019	544	13,218	2,072,958
2020	599	12,227	3,011,960
2021	518	9,037	1,820,992

4 See **Exhibit BKW-R3 2020 Kentucky Power Company Annual Reliability**
 5 **Report**. Also, consistent with this trend, the number of customers affected by trees and
 6 vines within the rights-of-way improved 87 percent with a reduction from 72,076 in
 7 2011 to 9,037 in 2021.

8 **Q. WHEN COMPARING THE RELIABILITY METRICS FOR MULTIPLE**
 9 **UTILITIES, IS IT IMPORTANT TO SELECT UTILITIES WITH SIMILAR**
 10 **CHARACTERISTICS FOR COMPARISON?**

1 A. Yes. Reliability metrics vary widely among utilities across the United States. Each
2 utility will have unique operating conditions based on their geographic characteristics,
3 size, and operating environment as related to climate and weather conditions. These
4 factors along with customer base, economic conditions, percent of underground lines,
5 redundancies through feeder looping far more economic in urban settings given
6 customer density and regulatory oversight will establish the basis for capital investment
7 and O&M expense. See **Exhibit BKW-R4 Reliability Metrics for Comparable**
8 **Utilities** for a table of reliability metrics for utilities that have similar geographic
9 characteristics and forest densities similar to Kentucky Power. Mr. Kollen fails to
10 account for, or even recognize, this fact.

11 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

12 A. Yes, it does.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION



Perry County, Kentucky

Bluegrass Station – Hazard Circuit

Photo Taken September 2020, illustrating a long span attached to a 40-foot pole and a 60 to 70 foot right-of-way at top of hill. The photo also illustrates the typical relationship between tree heights of trees outside rights-of-way in comparison of pole height in Eastern Kentucky.

September 30, 2020

Kentucky Power Company 2021 Vegetation Management Plan (Five-Year Cycle)

Overview

Kentucky Power began its five-year distribution vegetation management cycle January 1, 2019, in accordance with the Commission’s Order in Case No. 2017-00179. For 2020, planned operations and maintenance (“O&M”) expenditures for targeted distribution vegetation management are \$21.473 million. For 2021 and 2022, planned O&M expenditures are \$21.733 million and \$21.578 million, respectively. The three-year average annual O&M expenditures for the period 2020-2022 is \$21,594,611. The amount of O&M embedded in base rates for vegetation management expenditures is \$21,465,163 as provided by the Commission’s Order in Case No. 2017-00179.

2020 Vegetation Management Activities through August 31, 2020

The Company’s 2020 distribution vegetation management O&M expenditures through August 31 were \$14,358,252, 66.9% of the 2020 budget of \$21,472,777. Through August 31, 2020, the Company completed 1,103.2 miles, 67.2% of the 2020 distribution vegetation management work schedule of 1,642.0 miles.

Table 1 compares by district the expenditures through August 31, 2020 to the targeted year-end expenditures.

Table 1: 5-Year Cycle 2020 Expenditures by District			
District	Year-End 2020 Targeted Expenditures	Year-to-Date 2020 Actual Expenditures (Jan - Aug)	Year-End 2020 Percent Expenditures
Ashland	\$6,772,133	\$3,851,815	56.9%
Hazard	\$7,051,450	\$4,322,048	61.3%
Pikeville	\$7,649,194	\$6,184,389	80.9%
Total	\$21,472,777	\$14,358,252	66.9%

Note: Certain regional support expenditures (e.g., supervisor and administrative costs) are spread, after the fact, to the three districts based on each district’s share of total expenditures.

Table 2 compares by district the targeted circuit miles through August 31, 2020 to the targeted 2020 year-end circuit miles.

Table 2: 5-Year Cycle 2020 Circuit Miles by District			
District	Year-End 2020 Targeted Miles	Year-to-Date 2020 Actual Mileage (Jan - Aug)	Year-End 2020 Percent Complete
Ashland	497.0	333.7	67.1%
Hazard	546.0	338.3	62.0%
Pikeville	599.0	431.2	72.0%
Total	1,642.0	1,103.2	67.2%

Kentucky Power anticipates reaching the 2020 circuit miles and expenditure targets by December 31, 2020. The average years of vegetation growth for the Company's distribution circuits is estimated to be 5.00 years at year-end 2020.

Table 3 compares the actual miles and expenditures through August 31, 2020 to targeted 2020 year-to-date miles and expenditures.

Table 3: 2020 Year-to-Date Targeted Miles and Expenditures				
District	Year-to-Date 2020 Targeted Miles (Jan - Aug)	Year-to-Date 2020 Actual Percent Complete (Jan - Aug)	Year-to-Date 2020 Targeted Expenditures (Jan - Aug)	Year-to-Date 2020 Actual Percent Expenditures (Jan - Aug)
Ashland	314.8	106.0%	\$4,514,755	85.3%
Hazard	345.8	97.8%	\$4,700,967	91.9%
Pikeville	379.4	113.7%	\$5,099,463	121.3%
Total	1,039.9	106.1%	\$14,315,185	100.3%

Note: Targeted miles are not spread equally across the four calendar quarters. Spraying and non-vegetation management distribution activities (e.g., new customer service requests, storm restoration activity, etc.) are more directed to the second and third quarters. The first and fourth quarters, when there are relatively lower amounts of spraying and non-vegetation management work, are allocated 30 percent of the annual mileage target; the second and third quarters each are assigned 20 percent of the annual mileage target.

The number of vegetation-related service interruptions for tree inside rights-of-way decreased by 10.8% from 621 (twelve-month period ended June 30, 2019) to 554 (twelve-month period June 30, 2020). The number of customer minutes interrupted due to trees inside rights-of-way remained essentially flat, increasing from 2,477,959 to 2,499,309 (a 0.8% increase) when comparing the same two twelve-month periods.

Vine-related outages are included in the reported total inside rights-of-way outages. For the 12-months ending June 30, 2020, vine-related outages constituted 9.4% of inside the rights-of-way customer minutes interrupted and approximately 51.4% of inside the rights-of-way interruptions.

2021 Vegetation Management Plan – 5-Year Cycle Overview

1. Targeted Mileage and Expenditures

Table 4 below provides the projected distribution vegetation management mileage for the remaining three years of the first five-year cycle (calendar years 2021-2023). Table 5 below provides the projected annual O&M expenditures to achieve the targeted miles.

Table 4: 5-Year Cycle Miles of Reclear			
5 Year Cycle	2021	2022	2023
Year 3	1,643		
Year 4		1,642	
Year 5			1,643
Targeted Miles	1,643	1,642	1,643

Table 5: 5-Year Cycle Funding Requirements			
5 Year Cycle	2021	2022	2023
Year 3	\$21,733,094		
Year 4		\$21,577,961	
Year 5			\$21,447,083
Targeted Miles	\$21,733,094	\$21,577,961	\$21,447,083

2. Average Vegetation Growth

With the establishment of a five-year distribution vegetation management cycle beginning January 1, 2019, the Company reports the average years of system vegetation growth in addition to the projected miles to be maintained and projected expenditures. Table 6 below provides the projected average years of tree growth for each year of the Company's first five-year cycle (2019-2023).

Table 6: Average Year Tree Growth for Vegetation Management Program		
5-Year Cycle		Average Years of Growth
Year	Targeted Miles	
2019	1,543	4.88
2020	1,642	5.00
2021	1,643	5.10
2022	1,642	5.05
2023	1,642	5.00
Average Years Growth for 2019 to 2023 = 5.01		

2021 Vegetation Management Plan – Operational Developments

As Kentucky Power progresses through its initial five-year cycle program, and remains on schedule to re-clear its more than 8,000 miles of primary distribution rights-of-way, inside the rights-of-way service interruptions continue to decrease. However, the number of interruptions caused by trees outside the Company's rights-of-way increased in both absolute numbers and as a percentage of vegetation-related outages. Table 7 below provides, for each of the 20 months ended August 31, 2020, Kentucky Power's twelve-month rolling total SAIDI resulting from trees inside the rights-of-way, vines, and trees outside the rights-of-way, as well as total vegetation-related outages.

Table 7: Reliability for all Vegetation Indices (12-Month Rolling for all Month Ending) - SAIDI Minutes												
2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tree Inside ROW	11.90	12.72	11.79	11.85	10.57	11.71	9.47	8.50	7.05	9.65	9.48	9.41
Vines	3.64	3.62	3.55	3.54	3.69	3.39	3.24	3.18	3.21	3.27	3.24	3.23
Tree Outside ROW	235.88	244.41	236.60	251.97	267.20	278.52	268.68	263.97	234.52	236.16	252.16	250.03
Total SAIDI Veg Min	251.42	260.75	251.94	267.36	281.46	293.62	281.39	275.65	244.78	249.08	264.88	262.67
2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Tree Inside ROW	10.05	9.66	11.13	14.44	15.90	13.81	14.17	14.63				
Vines	3.22	3.21	3.18	3.18	1.66	1.43	1.42	1.49				
Tree Outside ROW	240.54	221.32	222.93	232.63	232.05	220.30	215.19	223.81				
Total SAIDI Veg Min	253.81	234.19	237.24	250.25	249.61	235.54	230.78	239.93				

The total SAIDI vegetation minutes (tree inside rights-of-way, vines, and tree outside rights-of-way) have decreased 11.49 minutes for a 12-month rolling total between January 2019 and August 2020. The 12-month rolling average SAIDI minutes related to trees inside the rights-of-way, including vines, increased slightly by approximately 0.58 minutes for the same 20-month time period. Trees inside the rights-of-way outages and vines constituted approximately 16.12 minutes or 6.7% of the Company's total vegetation-related SAIDI minutes at the end of August 2020. The 12-month rolling total SAIDI minutes for outages related to trees outside the rights-of-way decreased over the last 20 months by approximately 12.07 minutes but still represent nearly 93% of the Company's total vegetation-related SAIDI minutes.

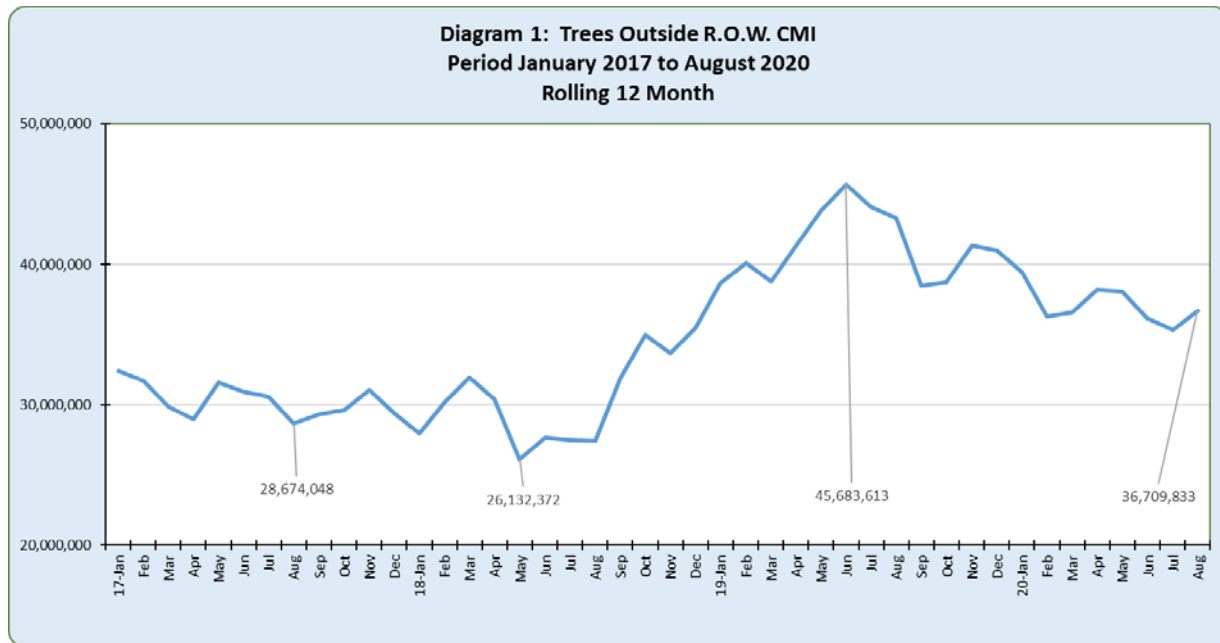
Rainfall between January 2019 and August 2020 was 14.2 inches above the 30-year average ending 2010. See Table 8 below based on National Weather Service records for Jackson, KY.

Table 8: Recorded Data from National Weather Service for Jackson, KY														
30 Yr Normal Precip (1981 - 2010) Jackson, KY Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Norm	
	3.61	3.75	4.12	3.83	5.20	4.70	4.65	3.69	3.46	3.19	3.96	4.18	48.34	
Monthly Total Inches Precipitation for Jackson, KY Area	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
	2001	2.50	3.72	2.17	1.69	4.39	4.19	6.43	2.41	1.09	1.41	1.82	2.55	34.37
	2002	4.09	1.24	7.96	4.11	5.23	4.98	5.50	1.72	3.48	6.39	3.61	4.28	52.59
	2003	2.10	7.88	1.47	5.14	5.98	7.54	3.95	5.12	4.33	2.20	5.49	3.78	54.98
	2004	4.23	3.77	3.87	4.01	10.78	6.18	7.02	2.39	7.55	4.96	4.37	3.27	62.40
	2005	5.12	3.03	3.52	7.47	2.50	2.78	4.08	3.92	0.51	1.57	2.66	3.18	40.34
	2006	5.57	1.85	2.89	4.57	3.61	3.24	3.87	3.69	6.39	5.49	2.43	2.03	45.63
	2007	2.83	1.20	2.71	3.22	1.82	2.15	4.05	2.64	2.49	3.80	3.37	5.18	35.46
	2008	2.46	3.41	4.14	4.00	3.24	3.94	6.13	1.16	0.67	1.46	3.03	6.86	40.50
	2009	5.80	1.73	3.52	3.64	9.22	7.03	6.40	3.55	4.88	3.54	0.80	5.96	56.07
	2010	4.27	3.11	2.43	2.61	7.92	5.60	3.34	3.51	2.05	1.68	5.77	2.97	45.26
	2011	2.72	3.97	4.74	10.20	6.69	5.49	6.02	3.07	3.20	4.25	5.48	4.18	60.01
	2012	4.86	3.90	4.07	2.67	4.20	1.91	7.39	4.75	6.77	4.24	0.84	6.39	51.99
	2013	5.73	1.91	4.63	3.70	4.23	6.36	6.62	10.04	1.27	2.13	3.01	7.09	56.72
	2014	3.15	4.47	5.51	5.43	2.30	3.12	5.77	8.55	2.35	7.77	2.97	2.49	53.88
	2015	2.12	4.06	6.26	10.29	1.74	7.42	8.87	5.02	2.09	2.40	2.41	4.64	57.32
	2016	3.29	6.27	2.38	3.82	7.04	5.01	6.35	6.83	1.32	1.51	2.91	6.16	52.89
	2017	4.71	2.86	4.42	4.02	7.41	6.21	4.13	4.56	3.33	5.29	1.30	3.28	51.52
	2018	1.92	8.00	6.97	4.12	6.18	4.63	5.06	4.43	9.17	5.12	4.91	7.47	67.98
	2019	4.26	8.87	2.40	2.80	4.90	8.01	6.97	1.25	T	6.01	5.80	6.30	57.57
2020	3.37	7.12	9.42	4.69	4.98	5.38	5.45	6.21					46.62	
20 Yr Mean (through Aug 2020)	3.76	4.12	4.27	4.61	5.22	5.06	5.67	4.24	3.50	3.75	3.31	4.63	51.21	
3 Yr Mean ('17 - '19)	3.63	6.58	4.60	3.65	6.16	6.28	5.39	3.41	6.25	5.47	4.00	5.68	59.02	
5 Yr Mean ('15 - '19)	3.26	6.01	4.49	5.01	5.45	6.26	6.28	4.42	3.98	4.07	3.47	5.57	57.46	

This above-average rainfall continues to elevate the risk of outside the rights-of-way related outages in two ways. First, heavy rainfalls can impact soil stability to the extent that trees from outside the rights-of-way slide or fall into the distribution structures and lines. Second, periods of above-average rainfall in the Company’s service territory enhance threats created by pathogens and/or fungal diseases (Oak Wilt, White Pine Blister Rust, root rot – multiple species), and insects (Emerald Ash Borer, Hemlock Woolly Adelgid, various bark beetles). Pathogens and insects are a contributing factor of outages due to diseased and dead trees falling from outside the Company’s rights-of-way. The Company conservatively estimates approximately 5.1 million trees outside the Company’s rights-of-way threaten Kentucky Power’s distribution structures and lines from stem counts provided by the United States Forestry Service.

The Company began a targeted approach to address these issues with its rights-of-way widening and outside of rights-of-way dead tree abatement programs in January 2018. Initial widening and abatement efforts were focused on the Hazard District for approximately 18 months, and transitioned to the Pikeville District in August 2019. By the end of July 2020, the

Company completed widening approximately 430 miles of rights-of-way and removed over 61,500 trees from outside its rights-of-way. Diagram 1 illustrates the vegetative threat from outside the rights-of-way (74.8% increase from May 2018 until the peak in June 2019) and the improvements provided by the widening of rights-of-way and dead tree abatement program (19.6% improvement from June 2019 through August 2020). The lag for improvements is attributable to the rolling 12-month view.



2021 Distribution Vegetation Management Plan – by District

The 2021 distribution vegetation management plan expenditures by district are shown below in Table 9.

Table 9: 2021 Kentucky Power Distribution Vegetation Management Plan for 5-Year Cycle								
Area	Planned Miles 5-Year Cycle	Unscheduled Reactive O&M Funding	Scheduled O&M Funding	Herbicide Spray (Ground & Aerial)	Internal Forestry Staff	Total O&M Funding	Forestry Capital Associated with 5-Year Cycle	Forestry Capital Associated with Reliability Performance
Ashland	499.1	\$75,000	\$5,741,471.50	\$462,300	\$214,062	\$6,492,834	\$736,206	\$110,000
Hazard	545.2	\$165,750	\$6,242,729.00	\$529,300	\$214,062	\$7,151,841	\$810,931	\$90,000
Pikeville	599.1	\$118,250	\$6,852,607.50	\$903,500	\$214,062	\$8,088,420	\$917,130	\$6,300,000
Totals	1,643.4	\$359,000	\$18,836,808	\$1,895,100	\$642,186	\$21,733,094	\$2,464,266	\$6,500,000

Internal Forestry Staff expenses for 2021, which will be allocated after-the-fact based on the percentage of total distribution vegetation expenditures made in each district, are shown in Table 9 as being evenly divided between the three districts. Unscheduled hot spot maintenance

and herbicide spray expenditures are allocated at the district level but cannot be allocated to individual circuits.

1. Unscheduled/Reactive Funding

The Company will continue to budget \$359,000 in Unscheduled/Reactive funding to address reliability issues that develop during the year. These expenditures also include tree replacement, stump grinding, and removal of vines that return before the next trim cycle. This level of funding represents 1.65% of the total 2021 Vegetation Management O&M budget.

2. Spray Plan

Kentucky Power's service territory includes some of the most heavily forested areas in the Commonwealth. The Company's spray program is a vital component of controlling cost, achieving targeted miles in future cycles, and maintaining reliability. The spray plan includes ground based and aerial application techniques that are dependent on brush conditions. Kentucky Power projects treating 2,780 acres of brush in 2021 at a cost of \$1,895,100. This represents 8.72% of the total Vegetation Management O&M budget.

3. Forestry Capital Plan

The Company projects \$2,464,266 in 2021 forestry capital expenditures associated with its projected distribution vegetation management O&M expenditures. This funding will be utilized to remove trees larger than 18 inches in diameter inside rights-of-way and to widen rights-of-way.

Kentucky Power also proposes to invest \$6.5 million in widening rights-of-way. This \$6.5 million investment is in addition to the \$2.4 million in capital investment directly associated with the 2021 distribution vegetation maintenance work across the three districts. The Company proposes to invest \$6.3 million of the \$6.5 million targeted for additional rights-of-way widening in the Pikeville District. This work also will include the removal of dead trees from outside the rights-of-way, particularly where a large number of customers might be affected by an outage caused by such a tree coming into contact with the Company's facilities.

Exhibit Description

The following exhibits are attached to and incorporated in this report:

Exhibit 1 – A circuit-level listing of scheduled 2021 work. The accompanying projected O&M and associated forestry capital expenditures for each circuit to be worked as part of the 2021 Distribution Vegetation Management Plan also is provided.

Exhibit 2 – The 2021 spray plan by district.

Exhibit 3 – Summary by district and activity type for 2021 O&M expenditures and capital investment.

Exhibit 4 – Kentucky Power forestry plan terminology/glossary

Exhibit 1

2021 Kentucky Power Distribution VM Plan 5-Year Cycle						Costs that are not allocated to a circuit include: Internal labor & fleet costs, unscheduled hotspot maintenance, ground & aerial spray, and aerial saw				
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Cleaning	Total Cost	Comments
ASH	South Neal	Whites Creek	2206403	38.8	38.8	\$11,504	\$446,342	\$57,233	\$503,574	Full Circuit Reclear
ASH	Big Sandy	Burnaugh North	3000202	85.1	1.0	\$11,504	\$11,504	\$1,475	\$12,979	Finish Full Circuit Reclear, from 2020
ASH	Big Sandy	Yatesville	3000203	62.3	62.3	\$11,504	\$716,677	\$91,897	\$808,574	Full Circuit Reclear
ASH	Bellefonte	Westwood	3000301	23.0	23.0	\$11,504	\$264,584	\$33,927	\$298,510	Full Circuit Reclear
ASH	Bellefonte	Flatwoods	3000302	3.1	3.1	\$11,504	\$35,661	\$4,573	\$40,234	Full Circuit Reclear, deferred from 2020
ASH	Bellefonte	Town Center	3000304	2.7	2.7	\$11,504	\$31,060	\$3,983	\$35,043	Full Circuit Reclear, deferred from 2020
ASH	Grays Branch	Grays Branch	3000701	69.0	69.0	\$11,504	\$793,752	\$101,780	\$895,531	Full Circuit Reclear
ASH	Hitchens	Denton	3001001	46.4	9.3	\$11,504	\$106,984	\$13,718	\$120,702	Begin Full Circuit Reclear
ASH	Hitchens	Grayson	3001003	48.0	48.0	\$11,504	\$552,175	\$70,803	\$622,978	Full Circuit Reclear
ASH	Hoods Creek	Rural	3001102	47.2	15.0	\$11,504	\$172,555	\$22,126	\$194,681	Begin Full Circuit Reclear
ASH	Howard Collins	29th Street	3001202	13.2	13.2	\$11,504	\$151,848	\$19,471	\$171,319	Full Circuit Reclear
ASH	Howard Collins	Summit	3001204	25.4	25.4	\$11,504	\$292,193	\$37,467	\$329,659	Full Circuit Reclear
ASH	Busseyville	Torchlight	3007904	97.4	25.4	\$11,504	\$292,193	\$37,467	\$329,659	Finish Full Circuit Reclear, from 2020
ASH	Busseyville	Mattie	3007905	92.5	92.5	\$11,504	\$1,064,088	\$136,444	\$1,200,531	Full Circuit Reclear
ASH	47th Street	39th Street	3008002	12.9	6.4	\$11,504	\$73,623	\$9,440	\$83,064	Begin Full Circuit Reclear
ASH	Wurtland	Route 503	3110903	46.3	46.3	\$11,504	\$532,619	\$68,296	\$600,915	Full Circuit Reclear
ASH	Grayson	Dixie Park	3116102	33.1	2.0	\$11,504	\$23,007	\$2,950	\$25,957	Finish Full Circuit Reclear, from 2020
ASH	Belhaven	Argillite	3116703	27.7	15.7	\$11,504	\$180,607	\$23,159	\$203,766	Finish Full Circuit Reclear, from 2020
Ashland District Totals					499.1		\$5,741,471	\$736,206	\$6,477,677	
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Cleaning	Total Cost	Comments
HAZ	Bluegrass	Walkertown	3300601	28.7	28.7	\$11,450	\$328,625	\$42,688	\$371,313	Full Circuit Reclear
HAZ	Combs	Combs	3301401	9.6	9.6	\$11,450	\$109,923	\$14,279	\$124,202	Full Circuit Reclear
HAZ	Combs	Airport Gardens	3301402	42.1	42.1	\$11,450	\$482,060	\$62,620	\$544,679	Full Circuit Reclear
HAZ	Leslie	Hyden	3303901	89.4	34.7	\$11,450	\$397,327	\$51,613	\$448,940	Finish Full Circuit Reclear, from 2020
HAZ	Jeff	Boone Ledge	3309001	5.0	5.0	\$11,450	\$57,252	\$7,437	\$64,689	Full Circuit Reclear
HAZ	Whitesburg	Whitesburg	3309101	8.7	8.7	\$11,450	\$99,618	\$12,940	\$112,558	Full Circuit Reclear
HAZ	Whitesburg	Hospital	3309102	7.1	7.1	\$11,450	\$81,297	\$10,561	\$91,858	Full Circuit Reclear
HAZ	Whitesburg	Crafts Colley	3309104	28.0	28.0	\$11,450	\$320,610	\$41,647	\$362,257	Full Circuit Reclear
HAZ	Vicco	Jeff	3309302	89.0	25.0	\$11,450	\$286,259	\$37,185	\$323,444	Full Circuit Reclear
HAZ	Slemp	Defeated Creek	3309901	13.5	13.5	\$11,450	\$154,580	\$20,080	\$174,660	Full Circuit Reclear
HAZ	Slemp	Leatherwood	3309902	70.8	50.0	\$11,450	\$572,517	\$74,370	\$646,887	Begin Full Circuit Reclear
HAZ	Slemp	Beech Fork	3309903	1.7	1.4	\$11,450	\$16,030	\$2,082	\$18,113	Finish Full Circuit Reclear, from 2020
HAZ	Slemp	Royal Diamond	3309904	2.3	2.3	\$11,450	\$26,336	\$3,421	\$29,757	Full Circuit Reclear
HAZ	Haddix	Troublesome	3310503	91.4	53.8	\$11,450	\$616,029	\$80,022	\$696,051	Begin Full Circuit Reclear
HAZ	Stinnett	Redbird	3311101	117.5	57.3	\$11,450	\$656,105	\$85,228	\$741,333	Begin Full Circuit Reclear
HAZ	Stinnett	Beech Fork	3311102	9.6	9.6	\$11,450	\$109,923	\$14,279	\$124,202	Full Circuit Reclear
HAZ	Reedy	Dean	3311401	43.2	43.1	\$11,450	\$493,510	\$64,107	\$557,617	Full Circuit Reclear
HAZ	Mayking	Millstone	3314402	53.5	22.5	\$11,450	\$257,633	\$33,467	\$291,099	Finish Full Circuit Reclear, from 2020
HAZ	Fleming	Neon	3401301	20.2	20.2	\$11,450	\$231,297	\$30,045	\$261,342	Full Circuit Reclear
HAZ	Fleming	McRoberts	3401302	28.6	28.6	\$11,450	\$327,480	\$42,540	\$370,020	Full Circuit Reclear
HAZ	Softshell	Vest	3420001	54.0	54.0	\$11,450	\$618,319	\$80,320	\$698,638	Full Circuit Reclear
Hazard District Totals					545.2		\$6,242,729	\$810,930	\$7,053,659	
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Cleaning	Total Cost	Comments
PKV	Stanville	Tram	3120102	33.0	33.0	\$11,438	\$377,460	\$50,518	\$427,978	Full Circuit Reclear
PKV	Barrenshe	Vulcan	3200202	41.3	11.4	\$11,438	\$130,395	\$17,452	\$147,847	Begin Full Circuit Reclear
PKV	Allen	Distribution	3400101	27.2	4.8	\$11,438	\$54,903	\$7,348	\$62,251	Finish Full Circuit Reclear, from 2020
PKV	Elwood	Dorton	3401001	43.4	43.4	\$11,438	\$496,417	\$66,439	\$562,855	Full Circuit Reclear
PKV	Elwood	Virgie	3401002	80.4	80.4	\$11,438	\$919,629	\$123,080	\$1,042,709	Full Circuit Reclear
PKV	Henry Clay	Ashcamp	3401703	42.2	42.2	\$11,438	\$482,691	\$64,602	\$547,292	Full Circuit Reclear
PKV	Index	West Liberty	3401801	55.7	5.6	\$11,438	\$64,054	\$8,573	\$72,626	Begin Full Circuit Reclear
PKV	McKinney	Maytown	3402204	35.6	35.6	\$11,438	\$407,199	\$54,498	\$461,697	Full Circuit Reclear
PKV	Middle Creek	Distribution	3402501	5.8	5.8	\$11,438	\$66,341	\$8,879	\$75,220	Full Circuit Reclear
PKV	Pikeville	Cedar Creek	3403003	9.9	2.0	\$11,438	\$22,876	\$3,062	\$25,938	Finish Full Circuit Reclear, from 2020
PKV	Prestonsburg	City	3403301	6.9	6.9	\$11,438	\$78,923	\$10,563	\$89,486	Full Circuit Reclear
PKV	Topmost	Dema	3407101	36.2	36.2	\$11,438	\$414,062	\$55,417	\$469,478	Full Circuit Reclear
PKV	Topmost	Caney	3407102	3.1	3.1	\$11,438	\$35,458	\$4,746	\$40,204	Full Circuit Reclear
PKV	Topmost	Kite	3407103	25.4	25.4	\$11,438	\$290,530	\$38,883	\$329,413	Full Circuit Reclear
PKV	W. Paintsville	Staffordsville	3409002	47.0	5.0	\$11,438	\$57,191	\$7,654	\$64,845	Finish Full Circuit Reclear, from 2020
PKV	Kenwood	West Vanlear	3409301	18.8	18.8	\$11,438	\$215,038	\$28,780	\$243,817	Full Circuit Reclear
PKV	Kenwood	Hager Hill	3409303	49.4	49.4	\$11,438	\$565,046	\$75,624	\$640,669	Full Circuit Reclear
PKV	East Prestonsburg	Prestonsburg	3410601	7.4	7.4	\$11,438	\$84,642	\$11,328	\$95,971	Full Circuit Reclear
PKV	Dewey	Inez	3411401	170.8	143.9	\$11,438	\$1,645,953	\$220,289	\$1,866,241	Full Circuit Reclear, to complete in 2022
PKV	Johns Creek	Raccoon	3411802	85.1	3.0	\$11,438	\$34,315	\$4,593	\$38,907	Finish Full Circuit Reclear, from 2020
PKV	Garrett	Garrett	3413401	38.1	1.0	\$11,438	\$11,438	\$1,531	\$12,969	Finish Full Circuit Reclear, from 2020
PKV	Garrett	Lackey	3413402	34.8	34.8	\$11,438	\$398,048	\$53,273	\$451,322	Full Circuit Reclear
Pikeville District Totals					599.1		\$6,852,608	\$917,130	\$7,769,737	
Kentucky Power Totals					1,643.4		\$18,836,808	\$2,464,266	\$21,301,074	

Exhibit 2

Kentucky Power 2021 Distribution Vegetation Management Spray Plan		
District	Acres	O&M Budget
Ashland	690	\$462,300
Hazard (Ground & Aerial)	790	\$529,300
Pikeville	1,300	\$903,500
Total	2,780	\$1,895,100

Exhibit 3

Kentucky Power Company 2021 Distribution VM O&M Forestry Plan - Summary				
Activity	Total O&M	Ashland	Hazard	Pikeville
Reclear 5-Year Cycle	\$18,836,808	\$5,741,471	\$6,242,729	\$6,852,608
Spray - Ground and Aerial	\$1,895,100	\$462,300	\$529,300	\$903,500
Internal - Existing KY Forestry Staff	\$642,186	\$214,062	\$214,062	\$214,062
Unscheduled / Reactive Maintenance	\$359,000	\$75,000	\$165,750	\$118,250
O&M Expenditures	\$21,733,094	\$6,492,833	\$7,151,841	\$8,088,420

Kentucky Power Company 2021 Distribution VM Capital Forestry Plan - Summary				
Activity	Total Capital	Ashland	Hazard	Pikeville
Capital associate with Reclear	\$2,464,266	\$736,206	\$810,930	\$917,130
Reliability Capital - Piloted Program	\$6,500,000	\$110,000	\$90,000	\$6,300,000
O&M Expenditures	\$8,964,266	\$846,206	\$900,930	\$7,217,130

Exhibit 4

Kentucky Power Forestry Plan Terminology

Feeder Breaker Zone

Synonymous with Station Zone. Segment of line extending from the circuit station breaker to the first operating device. This zone includes unfused taps, but does not include fused taps.

Full Circuit Re-clear

Entire circuit from the station breaker to the end of the circuit.

Recloser Zone

Line segment extending from a specific recloser to the next operating device. This zone includes unfused taps, but does not include fused taps.

Partial Re-clear

A portion of the circuit is planned for re-clearing.

BID JOB

Planned re-clearing work released as an open, lump-sum bid for competing contractors.

Finish Full Circuit Re-clear

Re-clearing scheduled to complete Full Circuit Re-clear that began in the previous year.

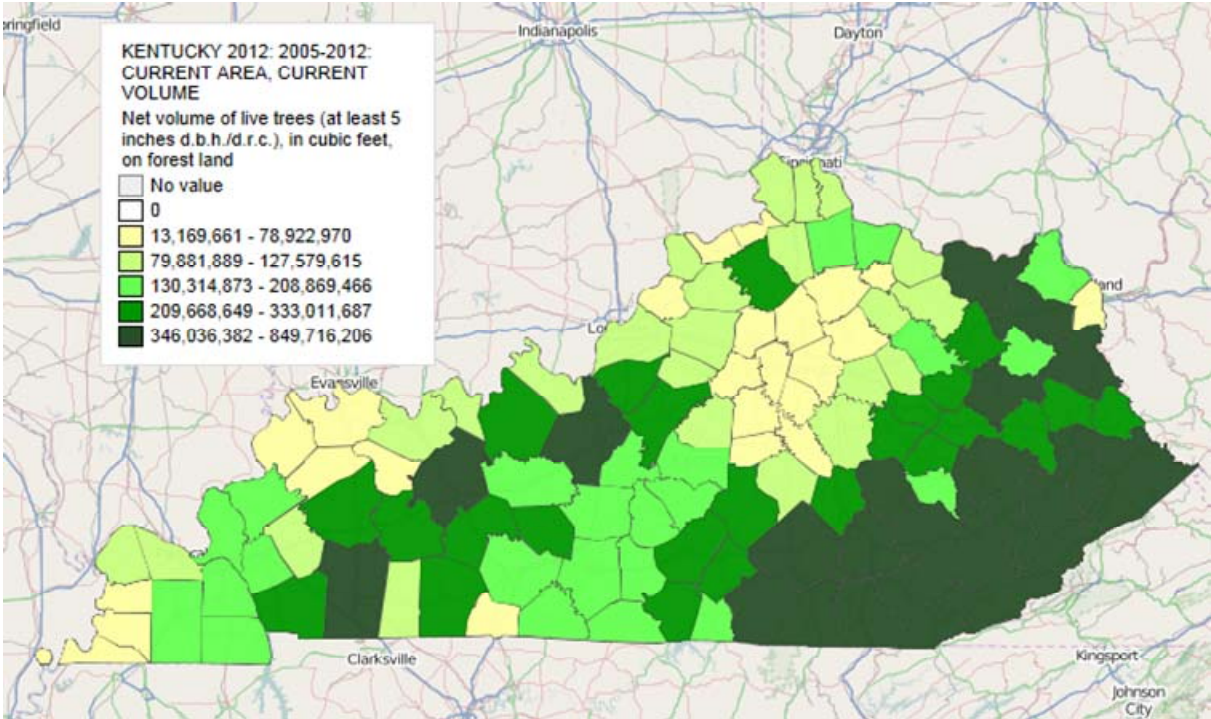
2nd Recloser Zone

Line segment beginning at the second operating device beyond the station circuit breaker extending to the next operating device. This zone includes unfused taps, but does not include fused taps.

Quality of Service Work

Tree trimming or removal work scheduled for a line segment to address reliability issues. This work does not conform to re-clearing cycle (e.g. Hot-spotting).

Exhibit EGP-3: Forest Land Distribution for State of Kentucky



Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	Kentucky Power Company
REPORT PREPARED BY	Everett G. Phillips
E-MAIL ADDRESS OF PREPARER	egphillips@aep.com
PHONE NUMBER OF PREPARER	(606) 327-2610

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2020
-------------------------	------

SECTION 3: MAJOR EVENT DAYS

TMED	24.6748
FIRST DATE USED TO DETERMINE TMED	1-Jan-15
LAST DATE USED TO DETERMINE TMED	31-Dec-19
NUMBER OF MED IN REPORT YEAR	7

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	165,077	Total Circuits	230
-----------------	---------	----------------	-----

Excluding MED

5 Year Average		Reporting Year	
SAIDI	443.62	SAIDI	396.83
SAIFI	2.223	SAIFI	2.003

Including MED

5 Year Average		Reporting Year	
SAIDI	856.39		1910.46
SAIFI	2.52		2.63

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

Electric Distribution Utility Annual Reliability Report

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
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

Please see Attachment 1 for Section 5: Circuit Reporting

Note: Circuits sorted according to reporting year SAIDI

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

See attached copy of Kentucky Power Company 2020 Vegetation Management Report in conformity with Paragraph 8(d) of the Settlement Agreement, Appendix A to the Commission's June 22, 2015 order in Case No. 2014-00396.

SECTION 7: UTILITY COMMENTS

The year ending SAIDI of 396.83 minutes was the best performance for Kentucky Power Company since 2013. The reduced SAIDI resulted principally from reductions in outages caused by trees outside of the rights-of-way (“Tree Out of ROW”) and reductions in scheduled outages, as well increased deployment of distribution automation.

Tree Out of ROW in 2019 contributed to 51% of the Company’s SAIDI. The percentage of the Company’s SAIDI resulting from Tree Out of ROW declined ten percent in 2020 to 46%. The reduction reflected the Company’s aggressive capital project targeting circuits with high customer minutes of interruption caused by Tree Out of ROW. The project began in the Hazard District in 2018 and transitioned to the Pikeville and Ashland Districts in 2020. It is continuing in 2021.

Prior to 2020 total customer minutes of interruption (CMI) had been increasing since 2017 due to an increase in Tree Out of ROW outages. The increase in Tree Out of ROW CMI resulted from multiple factors: a mature forest with natural large tree mortality, pathogens, and above average rainfall with associated storms. Also, Tree Out of ROW outages cause more damage to the distribution facilities and require longer repair times. The 2020 reduction in Tree Out of ROW customer minutes of interruption similarly indicates that the Company’s capital project trees outside of the rights-of-way is effective in improving reliability for Company customers.

Scheduled outages accounted for 12% and 7% of the Company’s SAIDI in 2019 and 2020 respectively. The 2020 reduction in scheduled outages reflects the effect of COVID-19 considerations.

The addition of distribution automation also reduced the Company’s SAIDI. SAIDI-related reductions in customer minutes of interruption reduced the Company’s SAIDI by 18 minutes in 2019 and 26 minutes in 2020. Additional investment in distribution automation is planned for 2021.

Including Major Event Days (“MED”) in the calculation of the Five Year Average and Reporting Year SAIDI significantly the 2020 values for both calculations. The Five Year Average SAIDI including MED increased from 639.71 in 2019 to 856.39 in 2020. The Reporting Year SAIDI including MED for 2020 increased to 1910.46 from the 2019 report value of 531.16.

There were seven MED storms in 2020 compared to one MED storms in 2019. The Five Year Average and Reporting Year SAIFI including MED nevertheless did not change significantly in 2020 from the 2019 report values. The Five Year Average and Reporting Year SAIFI including MED for 2020 were 2.52 and 2.63 respectively. The 2019 report values for the same indices were 2.57 and 2.59 respectively. The flat reporting year and five year average SAIFI, coupled with the increased SAIDI for the same periods, indicates that although the frequency with which the average customer experienced outages did not change significantly, the duration of the outages increased. A major event that occurred on Easter of 2020, for example, resulted in the second most significant restoration event in Kentucky Power’s history.

Kentucky Power Company remains committed to its reliability and vegetation management programs as a means to provide and improve reliable service to its customers. In addition to the capital project to address Tree Out of ROW outages, the company continued its multi-year project to increase the penetration of Distribution Automation and Circuit Reconfiguration on its distribution grid.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION



Single-phase right-of-way of the Hayward – Lawton circuit that serves approximately 60 customers in Elliott County.

The Hayward – Lawton was fully recleared in year 2017. This photo was taken January 13, 2020.

2020 DISTRIBUTION VEGETATION MANAGEMENT

REPORT OF KENTUCKY POWER COMPANY

April 1, 2021

In accordance with the Public Service Commission's June 22, 2015 Order in Case No. 2014-00396, as modified by its January 18, 2018 Order in Case No. 2017-00179, Kentucky Power Company provides the following report regarding the operation of its 2020 Distribution Vegetation Management Program.

Introduction and Background

Kentucky Power began its five-year distribution vegetation management cycle January 1, 2019, in accordance with the Commission's Order in Case No. 2017-00179. Vegetation growth in the Company's rights-of-way as of January 1, 2021 averages 5.03 years.

Kentucky Power is now performing cycle-based vegetation management maintenance work on its distribution rights-of-way. The principal characteristics of the Company's current distribution rights-of-way vegetation management program are:

- Vegetation within Kentucky Power's distribution system rights-of-way is re-cleared on a five-year cycle. The Company on average will re-clear approximately one fifth of the total miles of rights-of-way each year.
- Annual O&M expenditures for the five-year cycle will average approximately \$21.465 million.
- Kentucky Power will notify the Commission and obtain approval for any deviations from the filed work plan that equal or exceed ten percent of the aggregate planned O&M expenditures; and
- The one-way balancing account established by the Commission's June 22, 2015 order in Case No. 2014-00396 remains in place. Expenditures are credited against the annual budget. Any annual shortfall or excess in expenditures is to be applied to the account balance. There was a positive balance of \$127,957 as of December 31, 2020.

For 2020, planned operations and maintenance ("O&M") expenditures for targeted distribution vegetation management were \$21.473 million. For 2021 and 2022, planned O&M expenditures are \$21.733 million and \$21.578 million, respectively. The three-year average annual O&M expenditures for the period 2020-2022 is \$21,594,611. The amount of O&M embedded in base rates for vegetation management expenditures is \$21,465,163 as provided by the Commission's Order in Case No. 2017-00179.

2020 Distribution Vegetation Management Expenditures
And Rights-of-Way Work Performed

The Company’s 2020 distribution vegetation management O&M expenditures were \$21,347,446 or 0.58% percent below (\$125,331) the 2020 budget of \$21,472,777.

The Company’s 2020 distribution vegetation management capital expenditures were \$10,716,045. This includes capital investment made in connection with O&M expenditures as well as a right-of-way widening pilot program in the Pikeville district to combat established threats (*i.e.*, Oak Wilt disease, multiple species Root Rot, Emerald Ash Borer, White Pine Blister Rust, and Hemlock Woolly Adelgid) to Eastern Kentucky forests to limit outages caused by trees located outside the Company’s rights-of-way. The total Customer Minutes of Interruption (CMI) due to Trees Outside Rights-of-Way was reduced by 28.3% in 2020 as compared to 2019 on those Pikeville District circuits where targeted widening was performed.

2020 Vegetation Management Mileage Cleared, Expenditures, and Cost / Unit

Kentucky Power’s 2020 Work Plan is broken down into four major actions: cycle maintenance (field personnel completing cycle maintenance), internal personnel (provide planning and oversight), spray (future control of regrowth brush and population density of trees within Rights-of-way), and reactive maintenance (field personnel completing maintenance to circuits outside plan to address immediate vegetation-reliability issues). Table 1 below provides a comparison of the 2020 work completed, actual expenditures, and Cost / Unit to the projections contained for each of its actions in Kentucky Power’s 2020 Vegetation Work Plan.

Table 1: 2020 Vegetation Work Plan						
Action Description	Targeted			Actual		
	Miles/Acres	Expenses	Cost/Unit	Miles/Acres	Expenses	Cost/Unit
Cycle Maint. (Miles)	1,642.0	\$18,535,827	\$11,289	1,597.7	\$18,465,764	\$11,558
Internal	-	\$817,500	\$498	-	\$456,089	\$285
Spray (Acres)	2,710.0	\$1,762,250	\$650	3,966.4	\$1,617,000	\$408
Reactive Maint.	-	\$357,200	\$218	-	\$154,894	\$97
TOTALS	-	\$21,472,777	\$12,654	-	\$20,693,747	\$12,348

Kentucky Power targeted 1,642.0 miles of annual cycle maintenance; it completed 1,597.7 miles (97.3%) of the 2020 targeted miles. Associated O&M expenditures were

\$18,465,764 or \$70,063 or 0.38% below the 2020 budget target of \$18,535,827. The Company's cost per unit for cycle maintenance was approximately \$269 (2.4%) more per mile than budgeted. The slightly elevated cost per unit resulted from increases in contracts for forestry vegetation (contract labor and material cost increases), as well as increased costs of roadside flagging and traffic control. Flagging expenditures increased by 13.0% in 2020 over 2019 as the Company incorporated enhanced safety measures in proximity to busy roadways. Contract labor and material costs also increased approximately 1.8% from year 2019 into 2020.

The Company targeted 2,710.0 acres of spray in 2020 and completed 2,350.8 acres (86.7% of the target) using a foliar application. An additional 1,615.6 acres of brush were treated using a cut stubble application that follows cycle maintenance clearing with a lower cost of treatment. The total acres sprayed in 2020 (3,966.4) was 46 percent above the Company's target. Integrating these two distinct approaches allows the Company to target brush regrowth inside its rights-of-way throughout the year instead of treating brush only during the growing season.

Kentucky Power's 2020 expenditures for reactive maintenance totaled (\$202,306) less than the targeted work plan. As a product of cycled maintenance clearing, reactive costs decreased nearly 45%, or \$125,976, as compared to the 2019 reactive maintenance costs. This reduction permitted the Company to direct the funds to other vegetation maintenance actions.

Internal Forestry Staff O&M expenditures totaled (\$361,411) less than the targeted work plan of \$817,500 for year 2020.

The 2020 O&M cost per unit of \$12,348 was \$306 or (2.4%) below the targeted cost per unit of \$12,654.

In 2020 Kentucky Power trimmed 61,901 trees, removed 216,903 trees, and cleared 3,947.3 acres of brush as part of its vegetation management plan work.

2020 Distribution Vegetation Management Work by District

Table 2 below details the Company's 2020 O&M vegetation management expenditures by district. Certain aspects of O&M expenditures, such as Internal Labor and Fleet costs, unscheduled hotspot maintenance, trouble restoration work, tree ticket investigation, auditor

expenses, third party flagging expenditures, and tree contractor’s field supervision, are not reflected below.

Table 2: 2020 District Level O&M Expenditures by District				
Nature of Expense	Ashland	Hazard	Pikeville	Total
Annual Cycle Maintenance	\$5,245,095	\$5,827,184	\$7,530,826	\$18,603,105
Internal	\$124,159	\$147,577	\$184,353	\$456,089
TOTALS	\$5,369,254	\$5,974,761	\$7,715,179	\$19,059,194

Table 3 below provides the 2020 vegetation management work by district in terms of miles cleared and acres sprayed.

Table 3: 2020 District Level Cycle Work Performed				
Work Performed	Ashland	Hazard	Pikeville	Total
Annual Cycle Miles Cleared	471.7	538.0	588.0	1,597.7
Acres Sprayed	1,334.2	1,888.3	743.9	3,966.4

Attachment 1 to this report provides detail of the 2020 annual cycle vegetation management work and expenditures per district and by circuit. The attachment provides the associated cost for the miles completed during scheduled maintenance, as well as the number of trees trimmed, number of trees removed, acres of brush cut, acres of brush sprayed, and amount of tree growth regulator (soil injection) applied on a per circuit basis.

Measures of Improvement in System Reliability

(SAIFI, CAIDI, SAIDI, and CMI)

Table 4 below provides total system reliability indices for Kentucky Power’s distribution system from year 2010 (when the Vegetation Management Program began), through December 31, 2020.

Table 4: Eleven Year Reporting Indices for all Outage Cause Codes			
Year	SAIFI	CAIDI	SAIDI
2010	2.470	169.4	418.4
2011	3.085	195.4	602.8
2012	2.417	189.5	458.0
2013	2.144	178.5	382.7
2014	2.373	212.9	505.3
2015	2.467	189.8	468.1
2016	2.167	205.7	445.8
2017	2.169	187.3	406.3
2018	2.342	206.8	484.2
2019	2.485	195.2	485.0
2020	2.003	198.1	396.8

Table 5 below provides reliability indices limited to Tree Inside Rights-of-Way outages for the same eleven year period.

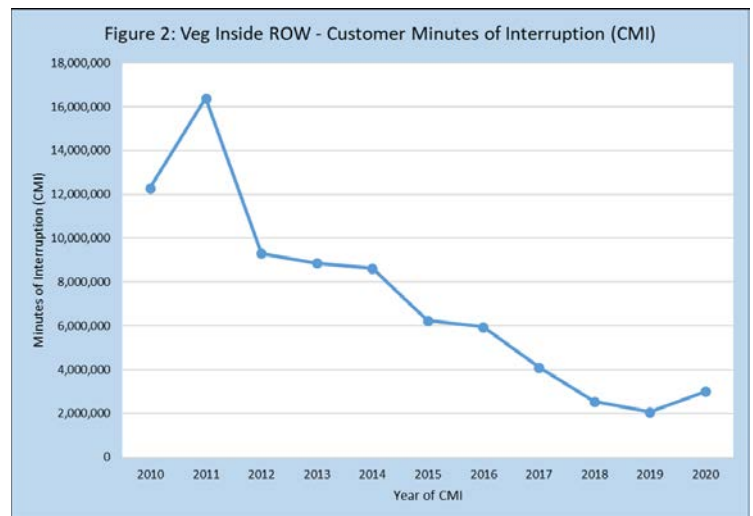
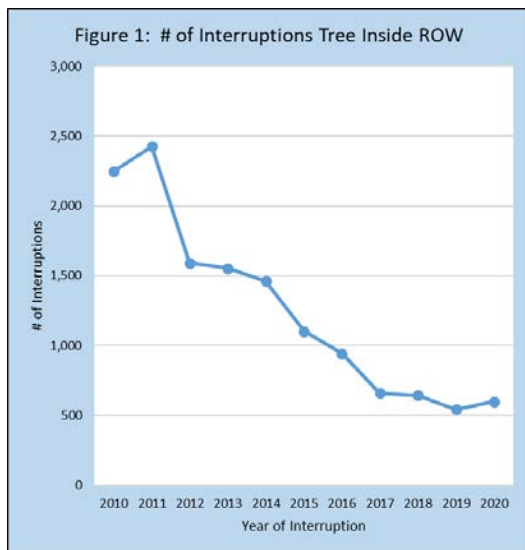
Table 5: Eleven Year Reporting Indices for Tree Inside Rights-of-Way Outage Cause Codes			
Year	Tree Inside Rights-of-Way SAIFI	Tree Inside Rights-of-Way CAIDI	Tree Inside Rights-of-Way SAIDI
2010	0.371	190.8	70.9
2011	0.419	227.4	95.3
2012	0.256	258.8	66.3
2013	0.281	184.3	51.9
2014	0.215	236.3	50.9
2015	0.178	207.6	37.0
2016	0.172	207.2	35.6
2017	0.114	216.7	24.6
2018	0.075	204.9	15.4
2019	0.081	156.8	12.6
Average (2010-2019)	0.216	209.1	46.1
2020	0.074	246.3	18.2

Excluded from the calculation of the indices in both Tables 4 and 5 are major events as defined by IEEE Standard 1366.

Table 5 highlights the improvements driven by the Company's Distribution Vegetation Management Program. The 2020 Tree Inside Rights-of-Way SAIFI and SAIDI are respectively 65.8 % and 60.4 % below the average Tree Inside Rights-of-Way SAIFI and SAIDI metrics for the previous ten year period of 2010 through 2019. The CAIDI values increased to 246.3

(17.8%) in 2020 from the ten year period average duration of 209.1. CAIDI measures the time for crews to respond, assess and identify the trouble, remove any debris that may have caused the outage, perform repairs, and restore service.

Since Kentucky Power’s Distribution Vegetation Management Program began in July 2010, the annual number of Tree Inside Rights-of-Way Interruptions (excluding major event days) has declined by approximately 75.3% from a peak of 2,427 to 599. The annual number of customer minutes of interruption (CMI) associated with these events declined by approximately 81.6% from a peak of 16,388,594 to 3,011,960 over the same period (Figure 1 and Figure 2).



The number of vegetation-related service interruptions for tree inside rights-of-way increased by 10.1 percent from 544 in year 2019, to 599 in year 2020. Despite the increase in tree inside rights-of-way interruptions, the year 2020 value remains 2.8 percent below the previous three-year average of 616 interruptions. The number of customer minutes interrupted due to trees inside rights-of-way increased from 2,072,958 in year 2019 to 3,011,960 in year 2020. Total number of customer minutes interrupted due to trees inside rights-of-way during year 2020 has increased 3.7% above the previous three-year average of 2,903,062 minutes of interruption.

Tree Inside Rights-of-Way interruptions are expected to remain mostly unchanged for the following reasons:

- The Company has completed end-to-end maintenance clearing for the entire primary distribution system and maintains control of its rights-of-way
- Refusals of customers to allow the Company to clear rights-of-way to the Company's vegetation specifications are not expected to decline; and
- Outages on secondary distribution lines constitute a greater portion of the remaining total outages, limiting a reduction in the total number of outages beyond the current numbers. The Company's distribution vegetation management work has less effect on secondary distribution lines because secondary lines, including service to home attachments, are positioned lower on the poles and are subject to interference from customer planted trees and tall shrubs that become overgrown.

Vine-related outages are included in the reported inside rights-of-way outages. For year 2020, vine-related outages constituted 7.0% of inside the rights-of-way customer minutes interrupted, and approximately 50.9% of inside the rights-of-way interruptions.

Vegetation Management Program-to-Date Expenditures

Kentucky Power filed vegetation management plans projecting expenditures of \$219,619,767 in Vegetation Management O&M from the beginning of the program on July 1, 2010 through December 31, 2020. In that period, the Company spent \$221,398,009, or \$1,778,242 (0.08%) more than planned.

Kentucky Power has trimmed 768,901 trees; removed 2,636,774 trees; cleared 28,199 acres (44.06 square miles) of brush; and sprayed 31,181 acres of brush (48.70 square miles) since the Company's vegetation management program began July 1, 2010.

Balancing Account

Paragraph 8 (e)(ii) of the Settlement Agreement in Case No. 2014-00396 established a one-way balancing account beginning July 1, 2015. Any regulatory liability associated with the balancing account would "continue to be recorded on the Company's books until the

Commission set base rates in the Company’s next base rate case.” The Commission’s January 18, 2018 order in Case No. 2017-00179 continued the balancing account. The required annual expenditures were modified to reflect the amounts detailed in Table 9 of Mr. Phillips’ direct testimony in the case.

The December 31, 2020 balancing account balance of \$127,957 (expenditures in excess of the targeted amounts) is shown in Table 6 below:

Table 6: Kentucky Power Balancing Account Vegetation Management Program Dollars			
Year	Required Expenditure	Actual Expenditure	Variance
2015	\$13,830,530	\$13,620,717	-\$209,813
2016	\$27,661,060	\$27,774,546	\$113,486
2017	\$27,661,060	\$27,840,992	\$179,932
2018	\$21,638,766	\$21,779,501	\$140,735
2019	\$21,283,946	\$21,312,894	\$28,948
2020	\$21,472,777	\$21,347,446	-\$125,331
Total	\$133,548,139	\$133,676,096	\$127,957

Future Reports

The Commission’s January 13, 2021 Order in Case No. 2020-00174 authorized Kentucky Power to combine its annual work plan and prior year’s annual report into a single report to be filed by April 1 of each year. Kentucky Power will file its combined Vegetation Management Program 2022 work plan and 2021 annual report by April 1, 2022. The 2022 work plan will not be filed on October 1, 2021.

Attachment Description

The following attachments are incorporated in this report:

Attachment 1 – provides a detailed summary of annual cycle maintenance work completed in 2020 at a circuit level within each district.

Attachment 2 – provides the annual cycle maintenance plan for 2021 at circuit level by district reflecting circuit level updates to the Company’s previous Vegetation Management Plan filed September 30, 2020.

Attachment 3 – provides the annual spray plan for 2021 at the district level.

Attachment 4 – provides the planned 2021 O&M expenditures (including amounts that cannot be allocated on a circuit basis) by district and projected 2021 capital expenditures by district. The 2021 capital expenditures include, as was detailed in the Company’s 2021 Vegetation Management Plan, a pilot capital investment program to widen the Company’s existing rights-of-way to address outside of the rights-of-way causes of outages, including particularly the mitigation of threats posed by diseased and dead trees.

Attachment 1 – 2020 Annual Maintenance Cycle History

2020 KY POWER FORESTRY CIRCUIT HISTORY Five Year Cycle Maintenance Clearing				Costs that were not allocated to a circuit number include: Internal labor & fleet costs, some unscheduled hotspot maintenance, trouble restoration work, tree ticket investigation, and tree contractors field supervision							
Ashland District											
Circuit Number	Circuit Name	Cost (Includes O&M and Capital)	Total Line Miles	Reclearing Miles Planned	Reclearing Miles Complete	Trees Trimmed	Trees Removed	Brush Cut (Acres)	Brush Sprayed (Acres)	Tree Growth Regulator	Comments
3000101	Ashland - 25th Street	\$5,873.86	1.3	1.3	1.3	29	3	0.1	0.0	0.0	Full Circuit Clearing
3000102	Ashland - 29th Street	\$40,632.74	6.8	6.8	6.8	233	88	2.9	0.0	0.0	Full Circuit Clearing
3000103	Ashland - 14th Street	\$5,489.94	1.4	1.4	1.4	17	33	1.1	0.0	0.0	Full Circuit Clearing
3000104	Ashland - 3rd Street	\$0.00	0.2	0.2	0.2	0	0	0.0	0.0	0.0	Full Circuit Clearing
3000105	Ashland - 1st Street	\$1,814.30	1.7	1.7	1.7	0	5	0.9	0.0	0.0	Full Circuit Clearing
3000202	Big Sandy - Burnaugh North	\$741,441.13	85.1	56.7	59.3	2,716	6,273	167.4	43.0	0.0	Begin Full Circuit Clearing
3000302	Bellefonte - Flatwoods	\$0.00	3.1	3.1	0.0	0	0	0.0	0.0	0.0	Full Circuit Clearing - Deferred
3000304	Bellefonte - Town Center	\$0.00	2.7	2.7	0.0	0	0	0.0	0.0	0.0	Full Circuit Clearing - Deferred
3000901	Highland - Russell	\$195,597.19	24.6	24.6	24.6	806	545	29.2	0.0	0.0	Full Circuit Clearing
3000902	Highland - Flatwoods	\$235,250.52	20.0	20.0	20.0	1,132	970	33.9	6.3	0.0	Full Circuit Clearing
3000903	Highland - Wurtland	\$175,533.57	15.3	15.3	15.3	626	672	14.3	7.0	0.0	Full Circuit Clearing
3001201	Howard Collins - 13th St.	\$148,570.36	13.0	13.0	13.0	755	237	8.3	0.0	0.0	Full Circuit Clearing
3001203	Howard Collins - Floyd St.	\$167,970.79	11.1	11.1	11.1	1,066	568	9.5	4.2	0.0	Full Circuit Clearing
3001402	Louisa - High Bottom	\$56,120.79	13.4	1.0	1.0	231	363	3.3	16.3	0.0	Finish Full Circuit Clearing, from 2019
3003701	Coalton - US 60 West	\$0.00	87.1	0.1	0.1	0	0	0.0	0.0	0.0	Finish Full Circuit Clearing, from 2019
3004301	Siloam - Distribution	\$0.00	18.1	0.1	0.1	0	0	0.0	0.0	0.0	Finish Full Circuit Clearing, from 2019
3007904	Busseyville - Torchlight	\$1,594,779.94	97.4	97.4	94.8	6,533	18,226	258.4	280.4	0.0	Full Circuit Clearing
3008701	Cannonsburg - Cannonsburg	\$2,718.92	62.6	0.6	0.6	1	0	0.0	7.0	0.0	Finish Full Circuit Clearing, from 2019
3010602	Russell - Bear Run	\$172,829.62	12.0	12.0	12.0	483	920	22.3	31.2	0.0	Full Circuit Clearing
3010603	Russell - Ashland Oil	\$15,449.75	0.8	0.8	0.8	39	53	2.3	4.7	0.0	Full Circuit Clearing
3103101	Olive Hill - Globe	\$506,707.69	121.1	69.8	69.8	1,807	3,573	96.9	152.2	0.0	Finish Full Circuit Clearing, from 2019
3116101	Grayson - Lansdowne	\$387,696.28	35.4	35.4	35.4	1,590	2,202	43.9	44.9	0.0	Full Circuit Clearing
3116102	Grayson - Dixie Park	\$283,121.65	33.1	33.1	33.1	1,065	1,219	22.9	23.3	0.0	Full Circuit Clearing
3116701	Belhaven - Diedrich	\$190,484.32	8.9	8.9	8.6	593	564	8.8	3.0	0.0	Full Circuit Clearing
3116702	Belhaven - Indian Run	\$96,478.26	19.1	19.1	12.4	364	375	5.4	0.0	0.0	Full Circuit Clearing
3116703	Belhaven - Argillite	\$0.00	27.7	12.5	0.0	0	0	0.0	0.0	0.0	Begin Full Circuit Clearing - Deferred
3117601	Princess - Meade Station	\$286,470.10	46.0	25.0	25.0	2,026	1,554	58.9	20.2	0.0	Finish Full Circuit Clearing, from 2019
3117602	Princess - Route 180	\$129,001.80	23.3	23.3	23.3	346	1,228	51.4	35.7	0.0	Full Circuit Clearing
2206403	South Neal - Whites Creek Road	\$51,464.62	0.0	0.0	0.0	0	39	0.0	100.5	0.0	Ground Spray and Capital Work
3000303	Bellefonte - Bellefonte	\$29,187.00	0.0	0.0	0.0	0	0	0.0	62.4	0.0	Ground Spray
3001003	Hitchins - Grayson	\$73,648.66	0.0	0.0	0.0	0	544	0.0	0.0	0.0	Capital Work
3001102	Hoods Creek - Rural	\$2,009.50	0.0	0.0	0.0	0	0	0.0	4.1	0.0	Ground Spray
3001204	Howard Collins - Summitt	\$8,280.00	0.0	0.0	0.0	0	0	0.0	20.7	0.0	Ground Spray
3001401	Louisa - City	\$6,275.51	0.0	0.0	0.0	0	0	0.6	19.0	0.0	Ground Spray
3003703	Coalton - Trace Creek	\$39,197.84	0.0	0.0	0.0	0	0	0.0	97.8	0.0	Ground Spray
3007903	Busseyville - Louisa	\$8,802.20	0.0	0.0	0.0	0	0	0.0	8.6	0.0	Ground Spray
3007906	Busseyville - Walbridge	\$77,736.00	0.0	0.0	0.0	0	0	0.0	194.3	0.0	Ground Spray
3008001	47th Street - 49th Street	\$5,768.04	0.0	0.0	0.0	0	2	0.0	13.0	0.0	Ground Spray and Capital Work
3008002	47th Street - 39th Street	\$2,512.00	0.0	0.0	0.0	0	0	0.0	6.3	0.0	Ground Spray
3008003	47th Street - Catlettsburg	\$9,104.00	0.0	0.0	0.0	0	0	0.0	22.8	0.0	Ground Spray
3008702	Cannonsburg - Route 3	\$3,923.52	0.0	0.0	0.0	15	2	0.2	0.0	0.0	Capital Work and
3110902	Wurtland - Greenup	\$30,533.28	0.0	0.0	0.0	3	0	0.0	61.5	0.0	Ground Spray and Quality of Service Work
3110903	Wurtland - Rt. 503	\$34,382.69	0.0	0.0	0.0	0	21	0.0	44.0	0.0	Ground Spray and Capital Work
Ashland District Totals		\$5,822,858.38		497.0	471.7	22,476	40,279	842.9	1,334.2	0.0	

2020 KY POWER FORESTRY CIRCUIT HISTORY Five Year Cycle Maintenance Clearing				Costs that were not allocated to a circuit number include: Internal labor & fleet costs, some unscheduled hotspot maintenance, trouble restoration work, tree ticket investigation, and tree contractors field supervision								
Hazard District												
Circuit Number	Circuit Name	Cost (Includes O&M and Capital)	Total Line Miles	Reclearing Miles Planned	Reclearing Miles Complete	Trees Trimmed	Trees Removed	Brush Cut (Acres)	Brush Sprayed (Acres)	Tree Growth Regulator	Comments	
3300602	Bluegrass - Hazard	\$130,810.58	11.1	11.1	11.1	477	1,856	34.0	5.8	0.0	Full Circuit Clearing	
3302701	Hazard - Black Gold	\$302,097.51	30.3	30.3	30.3	571	5,555	104.1	113.9	0.0	Full Circuit Clearing	
3302703	Hazard - Hazard	\$151,669.57	11.1	11.1	11.1	892	654	17.4	0.0	0.0	Full Circuit Clearing	
3303901	Leslie - Hyden	\$700,720.72	89.4	89.4	65.2	2,212	12,758	205.1	125.9	0.0	Full Circuit Clearing	
3303902	Leslie - Wooton	\$1,484,258.88	129.9	109.9	109.9	4,579	30,509	400.8	290.6	0.0	Finish Full Circuit Clearing, from 2019	
3308001	Jackson - South Jackson	\$62,496.35	26.6	2.0	2.0	118	405	2.8	1.2	0.0	Finish Full Circuit Clearing, from 2019	
3308002	Jackson - Panbowl	\$10,925.10	31.4	0.2	0.2	0	5	0.0	6.9	0.0	Finish Full Circuit Clearing, from 2019	
3308502	Bonnyman - Hazard	\$3,197.24	65.5	0.2	0.2	3	18	0.0	2.3	0.0	Finish Full Circuit Clearing, from 2019	
3308601	Collier - Upper Rockhouse	\$366,287.32	37.3	37.3	37.3	1,890	4,921	76.6	45.4	0.0	Full Circuit Clearing	
3309103	Whitesburg - Cowan	\$572,762.61	43.9	43.9	43.8	1,791	7,239	100.7	37.5	0.0	Full Circuit Clearing	
3309301	Vicco - Red Fox	\$503,177.50	47.8	47.8	47.8	2,287	7,199	113.9	180.8	0.0	Full Circuit Clearing	
3309902	Slemp - Leatherwood	\$6,307.46	70.8	0.3	0.3	2	62	1.2	8.2	0.0	Begin Full Circuit Clearing	
3309903	Slemp - Beech Fork	\$8,914.24	1.7	1.7	0.3	56	306	1.3	0.0	0.0	Begin Full Circuit Clearing	
3309904	Slemp - Royal Diamond	\$0.00	2.3	2.3	0.0	0	0	0.0	0.0	0.0	Deferred to 2021	
3311401	Reedy - Deane	\$3,079.20	45.4	0.1	0.1	0	0	0.0	4.8	0.0	Begin Full Circuit Clearing	
3311701	Shamrock - Shamrock	\$4,084.32	28.7	0.2	0.2	0	0	0.0	12.5	0.0	Finish Full Circuit Clearing, from 2019	
3312202	Engle - Grapevine	\$682,872.37	99.6	57.7	57.7	1,930	13,750	185.9	136.0	0.0	Finish Full Circuit Clearing, from 2019	
3314401	Mayking - Ermine	\$293,411.57	28.1	28.1	28.1	1,384	4,964	71.5	44.6	0.0	Full Circuit Clearing	
3314402	Mayking - Millstone	\$407,064.43	53.5	22.7	42.7	1,921	6,927	115.6	53.1	0.0	Begin Full Circuit Clearing	
3420002	Softshell - Leburn	\$907,564.31	49.7	49.7	49.7	1,697	7,433	152.9	60.4	0.0	Full Circuit Clearing	
3300601	Bluegrass - Walkertown	\$3,989.77	0.0	0.0	0.0	0	1	0.0	4.8	0.0	Ground Spray and Capital Work	
3301101	Chaves - Chaves	\$4,007.63	0.0	0.0	0.0	0	0	0.0	9.0	0.0	Ground Spray	
3301401	Combs - Combs	\$908.24	0.0	0.0	0.0	0	0	0.0	1.6	0.0	Ground Spray	
3301402	Combs - Airport Garden	\$1,448.00	0.0	0.0	0.0	0	1	0.0	0.0	0.0	Capital Work	
3301701	Daisy - Leatherwood	\$56,974.31	0.0	0.0	0.0	15	29	0.4	147.2	0.0	Ground Spray, Capital, Quality of Service Work	
3302704	Hazard - Kenmont	\$1,320.02	0.0	0.0	0.0	0	0	0.0	2.3	0.0	Ground Spray	
3303903	Leslie - Hals Fork	\$82,840.65	0.0	0.0	0.0	0	0	0.0	234.5	0.0	Ground Spray	
3307301	Bulan - Ary-Heiner	\$2,272.96	0.0	0.0	0.0	0	0	0.0	3.9	0.0	Ground Spray	
3307302	Bulan - Ajax-Dwarf	\$619.12	0.0	0.0	0.0	0	0	0.0	0.9	0.0	Ground Spray	
3307303	Bulan - Lotts Creek	\$1,189.20	0.0	0.0	0.0	0	0	0.0	2.0	0.0	Ground Spray	
3308401	Beckham - Hindman	\$25,023.86	0.0	0.0	0.0	38	227	1.7	3.2	0.0	Capital and Quality of Service Work	
3308402	Beckham - Carr Creek	\$4,758.82	0.0	0.0	0.0	10	13	0.0	1.2	0.0	Capital and Quality of Service Work	
3308404	Beckham - Pippa Passes	\$38,203.59	0.0	0.0	0.0	0	0	0.0	91.3	0.0	Ground Spray	
3308503	Bonnyman - Big Creek	\$2,823.88	0.0	0.0	0.0	8	15	0.2	1.6	0.0	Quality of Service Work	
3308602	Collier - Lower Rockhouse	\$9,218.28	0.0	0.0	0.0	5	37	0.4	4.3	0.0	Capital and Quality of Service Work	
3308603	Collier - Smoot Creek	\$19,435.91	0.0	0.0	0.0	12	226	1.7	3.4	0.0	Capital and Quality of Service Work	
3309001	Jeff - Boone Ledge	\$1,996.26	0.0	0.0	0.0	0	0	0.0	5.0	0.0	Ground Spray and Quality of Service Work	
3309002	Jeff - Jeff	\$17,772.52	0.0	0.0	0.0	0	0	0.0	49.0	0.0	Ground Spray	
3309003	Jeff - Viper	\$40,878.85	0.0	0.0	0.0	0	0	0.0	92.6	0.0	Ground Spray and Quality of Service Work	
3309104	Whitesburg - Crafts Colley	\$4,894.12	0.0	0.0	0.0	3	24	0.0	1.6	0.0	Capital and Quality of Service Work	
3309302	Vicco - Jeff	\$9,624.06	0.0	0.0	0.0	2	396	0.7	1.0	0.0	Capital and Quality of Service Work	
3310501	Haddix - Quicksand	\$6,783.23	0.0	0.0	0.0	0	5	0.0	14.5	0.0	Capital and Quality of Service Work	
3310502	Haddix - Canoe	\$9,550.10	0.0	0.0	0.0	0	216	0.0	6.0	0.0	Capital and Quality of Service Work	
3310503	Haddix - Troublesome Creek	\$5,603.33	0.0	0.0	0.0	0	41	0.0	3.5	0.0	Capital and Quality of Service Work	
3311101	Stinnett - Redbird	\$2,539.76	0.0	0.0	0.0	0	0	0.0	6.1	0.0	Ground Spray	
3311103	Stinnett - Wendover 35kV	\$21,651.94	0.0	0.0	0.0	0	0	0.0	60.6	0.0	Ground Spray	
3312902	Jenkins - Jenkins	\$884.72	0.0	0.0	0.0	0	0	0.0	0.6	0.0	Ground Spray	
3401301	Fleming - Neon	\$1,239.22	0.0	0.0	0.0	0	0	0.0	1.7	0.0	Ground Spray	
3401302	Fleming - McRoberts	\$5,393.40	0.0	0.0	0.0	6	35	0.3	2.5	0.0	Ground Spray and Quality of Service Work	
3420001	Softshell - Vest	\$12,725.86	0.0	0.0	0.0	0	65	0.0	1.4	0.0	Ground Spray and Capital Work	
3451202	Beelhide - Dunham	\$1,288.72	0.0	0.0	0.0	0	0	0.0	1.6	0.0	Ground Spray	
Hazard District Totals		\$6,999,561.61		546.0	538.0	21,909	105,892	1,589.1	1,888.3	0.0		

2020 KY POWER FORESTRY CIRCUIT HISTORY Five Year Cycle Maintenance Clearing				Costs that were not allocated to a circuit number include: Internal labor & fleet costs, some unscheduled hotspot maintenance, trouble restoration work, tree ticket investigation, and tree contractors field supervision								
Pikeville District												
Circuit Number	Circuit Name	Cost (Includes O&M and Capital)	Total Line Miles	Reclearing Miles Planned	Reclearing Miles Complete	Trees Trimmed	Trees Removed	Brush Cut (Acres)	Brush Sprayed (Acres)	Tree Growth Regulator	Comments	
3400101	Allen - Distribution	\$202,950.60	27.2	27.2	27.2	684	2,731	51.9	0.0	0.0	Full Circuit Clearing	
3401102	Falcon - Salyersville	\$401,076.66	45.0	45.0	45.0	1,544	2,843	54.3	0.0	0.0	Full Circuit Clearing	
3401103	Falcon - Burning Fork	\$722,310.96	72.6	72.6	72.6	2,543	6,657	132.3	0.0	0.0	Full Circuit Clearing	
3402003	Keyser - Mullins	\$418,175.29	29.6	29.6	29.6	1,115	2,948	73.1	0.0	0.0	Full Circuit Clearing	
3403001	Pikeville - City	\$353,114.65	20.0	20.0	20.0	515	2,854	48.4	0.0	0.0	Full Circuit Clearing	
3403003	Pikeville - Cedar Creek	\$582,100.59	28.0	28.0	26.5	515	2,842	53.3	0.0	0.0	Full Circuit Clearing	
3403201	Beaver Creek - Ligon	\$446,685.19	80.2	31.2	31.2	919	3,513	57.6	0.0	0.0	Finish Full Circuit Clearing, from 2019	
3404002	Spring Fork - Single-Phase	\$175,222.55	8.2	8.2	8.2	82	2,157	42.6	0.0	0.0	Full Circuit Clearing	
3404302	Sidney - Coburn Mtn.	\$515,860.59	40.9	40.9	40.9	1,424	3,188	102.7	0.0	0.0	Full Circuit Clearing	
3409002	West Paintsville - Staffordsville	\$875,133.50	47.0	47.0	25.2	1,157	8,384	133.7	0.0	0.0	Full Circuit Clearing	
3409302	Kenwood - Auxier	\$1,163,974.72	40.2	40.2	40.2	1,942	9,316	141.9	0.1	0.0	Full Circuit Clearing	
3409401	Feds Creek - Feds Creek	\$535,125.05	41.0	41.0	41.0	618	4,729	122.6	0.0	0.0	Full Circuit Clearing	
3409402	Feds Creek - Lick Creek	\$196,237.69	17.0	17.0	17.0	281	2,697	65.6	0.0	0.0	Full Circuit Clearing	
3410602	E. Prestonsburg - Lancer	\$426,311.50	25.0	25.0	25.0	1,194	2,561	41.7	0.0	0.0	Full Circuit Clearing	
3411401	Dewey - Inez	\$485,256.09	170.8	15.3	32.3	624	2,358	107.5	0.0	0.0	Begin Full Circuit Clearing	
3411802	Johns Creek - Raccoon	\$724,356.88	84.0	67.5	62.8	1,558	5,164	151.9	0.0	0.0	Begin Full Circuit Clearing	
3413401	Garrett - Garrett	\$546,674.53	38.4	38.4	38.4	707	2,686	95.4	0.0	0.0	Full Circuit Clearing	
3451201	Beehide - Beehide	\$58,227.90	4.0	4.0	4.0	0	1,348	24.7	0.0	0.0	Full Circuit Clearing	
3974101	Big Rock - Conaway		0.9	0.9	0.9					0.0	Full Circuit Clearing	
3120101	Starville - Mud Creek	\$37,252.82	0.0	0.0	0.0	4	17	0.1	40.9	0.0	Ground Spray	
3200204	Barrenshe - Pounding Mill	\$77,159.76	0.0	0.0	0.0	0	0	0.0	97.0	0.0	Ground Spray	
3201001	Tom Watkins-Upper Pond Creek	\$2,219.30	0.0	0.0	0.0	0	2	0.0	0.0	0.0	Capital Work	
3400301	Betsy Layne - Mud Creek	\$1,128.90	0.0	0.0	0.0	0	1	0.0	0.0	0.0	Capital Work	
3400302	Betsy Layne - Tram 12 KV	\$6,233.85	0.0	0.0	0.0	1	2	0.1	0.0	0.0	Capital Work	
3400601	Burton - Bevinsville	\$11,569.00	0.0	0.0	0.0	0	30	0.0	0.0	0.0	Capital Work	
3400602	Burton - Wheelwright	\$5,531.60	0.0	0.0	0.0	5	3	0.0	0.0	0.0	Capital Work and	
3400701	Draffin - Belcher	\$70,348.79	0.0	0.0	0.0	0	0	0.0	62.7	0.0	Ground Spray	
3400702	Draffin - Yellow Hill	\$35,557.49	0.0	0.0	0.0	0	31	0.0	21.0	0.0	Ground Spray and Capital Work	
3401002	Elwood - Virgie	\$662.60	0.0	0.0	0.0	0	4	0.0	0.0	0.0	Quality of Service Work	
3401101	Falcon - Oil Springs	\$106,633.48	0.0	0.0	0.0	0	93	10.2	97.6	0.0	Ground Spray and	
3401801	Index - Distribution	\$33,986.23	0.0	0.0	0.0	2	417	0.0	0.0	0.0	Capital Work and	
3401802	Index - Hospital	\$16,406.69	0.0	0.0	0.0	0	465	0.8	0.0	0.0	Capital Work	
3402202	McKinney - Gibson	\$133,087.99	0.0	0.0	0.0	0	31	0.0	167.5	0.0	Ground Spray and Capital Work	
3403202	Beaver Creek - Price	\$3,971.16	0.0	0.0	0.0	3	2	0.0	0.0	0.0	Capital Work and	
3403302	Prestonsburg - University	\$36,725.52	0.0	0.0	0.0	0	0	2.7	34.3	0.0	Ground Spray	
3407101	Topmost - Derna	\$1,802.24	0.0	0.0	0.0	1	1	0.0	0.0	0.0	Quality of Service Work	
3408101	Salisbury - Printer	\$839.30	0.0	0.0	0.0	0	2	0.0	0.0	0.0	Capital Work	
3408304	Coleman - Calloway	\$111,070.86	0.0	0.0	0.0	0	0	0.0	136.1	0.0	Ground Spray	
3409003	West Paintsville - Plaza	\$3,562.50	0.0	0.0	0.0	0	32	0.0	0.0	0.0	Capital Work	
3409303	Kenwood - Hagerhill	\$3,404.70	0.0	0.0	0.0	4	28	0.4	0.0	0.0	Quality of Service Work	
3409502	Burdine - Levisa Stone	\$5,116.32	0.0	0.0	0.0	0	8	0.0	0.0	0.0	Capital Work	
3410502	So. Pikeville - Island Creek	\$18,339.10	0.0	0.0	0.0	0	339	0.0	0.0	0.0	Capital Work	
3410601	E. Prestonsburg - Prestonsburg	\$22,379.47	0.0	0.0	0.0	68	139	0.0	0.0	0.0	Capital Work and	
3411801	Johns Creek - Meta	\$1,225.00	0.0	0.0	0.0	0	10	0.0	0.0	0.0	Capital Work	
3411902	Fords Branch - Robinson Ck	\$13,686.79	0.0	0.0	0.0	0	3	0.0	12.7	0.0	Ground Spray and Capital Work	
3412901	Weeksbury - Distribution	\$1,281.92	0.0	0.0	0.0	0	1	0.0	0.0	0.0	Quality of Service Work	
3413402	Garrett - Lackey	\$31,938.57	0.0	0.0	0.0	6	68	0.1	0.0	0.0	Quality of Service Work	
3417602	New Camp - Arh- W Wmsn	\$5,581.30	0.0	0.0	0.0	0	26	0.0	0.0	0.0	Capital Work	
3421001	Breaks - City	\$80,952.52	0.0	0.0	0.0	0	1	0.0	73.9	0.0	Ground Spray and Capital Work	
Pikeville District Totals		\$9,708,450.71	820.0	599.0	588.0	17,516	70,732	1,515.4	743.9	0.0		
Kentucky Power 2020 Totals		\$22,530,870.70	1,642.0	1,597.7	61,901	216,903	3,947.3	3,966.4	0.0			

Attachment 2 – 2021 Annual Maintenance Cycle Plan

2021 Kentucky Power Distribution Five Year Cycle VM Plan						Costs that are not allocated to a circuit include: internal labor & fleet costs, unscheduled hotspot maintenance, ground & aerial spray, and aerial saw				
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Clearing	Total Cost	Comments
ASH	South Neal	Whites Creek	2206403	38.9	38.9	\$11,028	\$428,997	\$55,009	\$484,006	Full Circuit Reclear
ASH	Big Sandy	Burnaugh North	3000202	85.0	25.8	\$11,028	\$284,528	\$36,484	\$321,011	Finish Full Circuit Reclear, from 2020
ASH	Big Sandy	Yatesville	3000203	62.3	62.3	\$11,028	\$686,726	\$88,056	\$774,782	Full Circuit Reclear
ASH	Bellefonte	Westwood	3000301	22.9	22.9	\$11,028	\$252,325	\$32,355	\$284,680	Full Circuit Reclear
ASH	Bellefonte	Flatwoods	3000302	3.1	3.1	\$11,028	\$34,187	\$4,384	\$38,571	Full Circuit Reclear, deferred from 2020
ASH	Bellefonte	Town Center	3000304	2.7	2.7	\$11,028	\$29,225	\$3,747	\$32,972	Full Circuit Reclear, deferred from 2020
ASH	Grays Branch	Grays Branch	3000701	69.0	69.0	\$11,028	\$760,505	\$97,516	\$858,021	Full Circuit Reclear
ASH	Hitchens	Denton	3001001	46.4	9.3	\$11,028	\$102,562	\$13,151	\$115,713	Begin Full Circuit Reclear
ASH	Hitchens	Grayson	3001003	47.6	47.6	\$11,028	\$524,722	\$67,283	\$592,005	Full Circuit Reclear
ASH	Hoods Creek	Rural	3001102	47.9	17.1	\$11,028	\$188,582	\$24,181	\$212,763	Begin Full Circuit Reclear
ASH	Howard Collins	29th Street	3001202	13.2	13.2	\$11,028	\$145,131	\$18,610	\$163,741	Full Circuit Reclear
ASH	Howard Collins	Summit	3001204	24.3	24.3	\$11,028	\$267,765	\$34,334	\$302,099	Full Circuit Reclear
ASH	Busseyville	Torchlight	3007904	96.2	2.6	\$11,028	\$28,673	\$3,677	\$32,350	Finish Full Circuit Reclear, from 2020
ASH	Busseyville	Mattie	3007905	92.0	92.0	\$11,028	\$1,015,036	\$130,154	\$1,145,190	Full Circuit Reclear
ASH	47th Street	39th Street	3008002	12.9	3.3	\$11,028	\$36,393	\$4,667	\$41,060	Begin Full Circuit Reclear
ASH	Wurland	Route 503	3110903	46.3	46.3	\$11,028	\$510,937	\$65,515	\$576,452	Full Circuit Reclear
ASH	Belhaven	Diedrich	3116701	8.9	0.3	\$11,028	\$3,308	\$424	\$3,733	Finish Full Circuit Reclear, from 2020
ASH	Belhaven	Indian Run	3116702	19.1	6.7	\$11,028	\$73,889	\$9,474	\$83,363	Finish Full Circuit Reclear, from 2020
ASH	Belhaven	Argillite	3116703	27.7	27.7	\$11,028	\$305,040	\$39,114	\$344,154	Full Circuit Reclear, deferred from 2020
Ashland District Totals					514.9		\$5,678,531	\$728,135	\$6,406,667	

2021 Kentucky Power Distribution Five Year Cycle VM Plan						Costs that are not allocated to a circuit include: internal labor & fleet costs, unscheduled hotspot maintenance, ground & aerial spray, and aerial saw				
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Clearing	Total Cost	Comments
HAZ	Bluegrass	Walkertown	3300601	28.7	28.7	\$11,183	\$321,392	\$41,749	\$363,141	Full Circuit Reclear
HAZ	Combs	Combs	3301401	1.0	9.6	\$11,183	\$107,354	\$13,945	\$121,300	Full Circuit Reclear(8.6mi on BonnymanBigCr)
HAZ	Combs	Airport Gardens	3301402	42.1	42.1	\$11,183	\$470,794	\$61,156	\$531,950	Full Circuit Reclear
HAZ	Leslie	Hyden	3303901	89.4	24.2	\$11,183	\$270,623	\$35,154	\$305,777	Finish Full Circuit Reclear, from 2020
HAZ	Jeff	Boone Ledge	3309001	5.0	5.0	\$11,183	\$55,466	\$7,205	\$62,672	Full Circuit Reclear
HAZ	Whitesburg	Whitesburg	3309101	8.7	8.7	\$11,183	\$97,737	\$12,696	\$110,433	Full Circuit Reclear
HAZ	Whitesburg	Hospital	3309102	7.1	7.1	\$11,183	\$79,621	\$10,343	\$89,964	Full Circuit Reclear
HAZ	Whitesburg	Crafts Colley	3309104	27.8	27.8	\$11,183	\$310,992	\$40,398	\$351,390	Full Circuit Reclear
HAZ	Vicco	Jeff	3309302	89.0	25.0	\$11,183	\$279,569	\$36,316	\$315,885	Begin Full Circuit Reclear
HAZ	Slemp	Defeated Creek	3309901	13.5	13.5	\$11,183	\$150,855	\$19,596	\$170,451	Full Circuit Reclear
HAZ	Slemp	Leatherwood	3309902	70.7	70.4	\$11,183	\$787,713	\$102,324	\$890,037	Finish Full Circuit Reclear, from 2020
HAZ	Slemp	Beech Fork	3309903	1.7	1.4	\$11,183	\$15,880	\$2,063	\$17,942	Finish Full Circuit Reclear, from 2020
HAZ	Slemp	Royal Diamond	3309904	2.3	2.3	\$11,183	\$25,720	\$3,341	\$29,061	Full Circuit Reclear
HAZ	Haddix	Troublesome	3310503	91.4	53.8	\$11,183	\$601,073	\$78,079	\$679,152	Begin Full Circuit Reclear, HWY 476 segment
HAZ	Stinnett	Redbird	3311101	117.5	61.4	\$11,183	\$686,621	\$89,192	\$775,813	Begin Full Circuit Reclear
HAZ	Stinnett	Beech Fork	3311102	9.6	9.6	\$11,183	\$107,578	\$13,974	\$121,552	Full Circuit Reclear
HAZ	Reedy	Dean	3311401	43.2	43.1	\$11,183	\$481,977	\$62,609	\$544,586	Finish Full Circuit Reclear, from 2020
HAZ	Mayking	Millstone	3314402	53.5	10.8	\$11,183	\$120,326	\$15,630	\$135,957	Finish Full Circuit Reclear, from 2020
HAZ	Fleming	Neon	3401301	20.2	20.2	\$11,183	\$225,668	\$29,314	\$254,982	Full Circuit Reclear
HAZ	Fleming	McRoberts	3401302	28.6	28.6	\$11,183	\$320,050	\$41,575	\$361,625	Full Circuit Reclear
HAZ	Softshell	Vest	3420001	54.0	54.0	\$11,183	\$603,669	\$78,443	\$682,311	Full Circuit Reclear
Hazard District Totals					547.4		\$6,120,881	\$795,102	\$6,915,983	

2021 Kentucky Power Distribution Five Year Cycle VM Plan						Costs that are not allocated to a circuit include: internal labor & fleet costs, unscheduled hotspot maintenance, ground & aerial spray, and aerial saw				
District	Station Name	Circuit Name	Circuit Number	Circuit Line Miles	Miles Planned	Projected O&M Cost per Mile	O&M Cost	Capital Assoc. with Clearing	Total Cost	Comments
PKV	Starville	Tram	3120102	33.0	33.0	\$11,828	\$390,193	\$52,222	\$442,415	Full Circuit Reclear
PKV	Barrenshe	Vulcan	3200202	41.3	6.0	\$11,828	\$70,966	\$9,498	\$80,463	Begin Full Circuit Reclear
PKV	Elwood	Dorton	3401001	43.4	43.4	\$11,828	\$513,436	\$68,717	\$582,153	Full Circuit Reclear
PKV	Elwood	Virgie	3401002	80.4	80.4	\$11,828	\$950,703	\$127,239	\$1,077,942	Full Circuit Reclear
PKV	Henry Clay	Ashcamp	3401703	42.2	42.2	\$11,828	\$499,361	\$66,833	\$566,194	Full Circuit Reclear
PKV	Index	West Liberty	3401801	55.7	4.7	\$11,828	\$55,708	\$7,456	\$63,164	Begin Full Circuit Reclear
PKV	McKinney	Maytown	3402204	35.6	35.6	\$11,828	\$421,063	\$56,354	\$477,416	Full Circuit Reclear
PKV	Pikeville & Cedar Creek	Cedar Creek & Ivy Court	3403003	23.6	1.5	\$11,828	\$17,741	\$2,374	\$20,116	Finish Full Circuit Reclear, from 2020
PKV	Prestonsburg	City	3403301	6.9	6.9	\$11,828	\$82,084	\$10,986	\$93,069	Full Circuit Reclear
PKV	Topmost	Dema	3407101	36.2	36.2	\$11,828	\$427,686	\$57,240	\$484,926	Full Circuit Reclear
PKV	Topmost	Caney	3407102	3.1	3.1	\$11,828	\$36,192	\$4,844	\$41,036	Full Circuit Reclear
PKV	Topmost	Kite	3407103	25.4	5.4	\$11,828	\$63,869	\$8,548	\$72,417	Begin Full Circuit Reclear
PKV	W. Paintsville	Staffordsville	3409002	47.1	21.8	\$11,828	\$257,842	\$34,509	\$292,350	Finish Full Circuit Reclear, from 2020
PKV	Kenwood	West Vanlear	3409301	18.8	18.8	\$11,828	\$221,768	\$29,681	\$251,448	Full Circuit Reclear
PKV	Kenwood	Hager Hill	3409303	49.4	49.4	\$11,828	\$584,047	\$78,167	\$662,214	Full Circuit Reclear
PKV	East Prestonsburg	Prestonsburg	3410601	7.4	7.4	\$11,828	\$87,643	\$11,730	\$99,372	Full Circuit Reclear
PKV	Dewey	Inez	3411401	170.8	138.5	\$11,828	\$1,637,886	\$219,209	\$1,857,096	Full Circuit Reclear
PKV	Johns Creek	Raccoon	3411802	85.0	22.2	\$11,828	\$263,046	\$35,205	\$298,251	Finish Full Circuit Reclear, from 2020
PKV	Garrett	Lackey	3413402	34.8	34.8	\$11,828	\$411,009	\$55,008	\$466,017	Full Circuit Reclear
PKV	Consol	Coal	3414501	3.8	3.8	\$11,828	\$44,708	\$5,984	\$50,692	Full Circuit Reclear
Pikeville District Totals					595.0		\$7,036,951	\$941,801	\$7,978,752	
Kentucky Power Totals					1,657.2		\$18,836,363	\$2,465,039	\$21,301,402	

Attachment 3 – 2021 Annual Spray Plan

Kentucky Power 2021 Distribution VM Spray Plan - Cycle Based		
District	Acres	O&M Budget
Ashland	690	\$462,300
Hazard	790	\$529,300
Pikeville	1,300	\$903,500
KY Total	2,780	\$1,895,100

Attachment 4 –Expenditures by District

Kentucky Power Company 2021 Distribution VM O&M Forestry Plan - Summary				
Activity	Total O&M	Ashland	Hazard	Pikeville
5 Year Cycle Maintenance	\$18,836,363	\$5,678,531	\$6,120,881	\$7,036,951
Spray - Ground and Aerial	\$1,895,100	\$462,300	\$529,300	\$903,500
Internal - KY Forestry Staff	\$642,631	\$214,210	\$214,210	\$214,210
Unscheduled/Reactive Maintenance	\$359,000	\$75,000	\$165,750	\$118,250
2021 Total 5 yr. Cycle O&M Budget	\$21,733,094	\$6,430,041	\$7,030,141	\$8,272,911

Kentucky Power Company 2021 Distribution VM Capital Forestry Plan - Summary				
Activity	Total O&M	Ashland	Hazard	Pikeville
Capital Assoc. w/ 5 Yr. Cycle Maintenance	\$2,465,038	\$728,135	\$795,102	\$941,801
Internal - KY Forestry Staff	\$168,000	\$56,000	\$56,000	\$56,000
Capital Reliability Pilot Program	\$6,500,000	\$110,000	\$90,000	\$6,300,000
Internal - KY Forestry Staff	\$200,000	\$3,000	\$3,000	\$194,000
2021 Total Capital Budget	\$9,333,038	\$897,135	\$944,102	\$7,491,801

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
1	PIKEVILLE	3404002	SPRING FORK	SINGLE PHASE	3173 Mine Shaft Road, Lambric, KY 41339	Ky Route 542, Mine Shaft Road	8.02	20	3/27/2020	2065.7	4291.9	3.49	6.20	Scheduled Company, Tree Out Of ROW, Vine, Other Utility, Equipment Failure	54.55%, 18.18%, 9.09%, 9.09%, 9.09%	No further actions planned for 2021.	Two Tree Outside of ROW outages accounted for 49% of the total SAIDI and 33% of the total SAIFI. One Scheduled Company outage accounted for 16% of the total SAIDI and 16% of the total SAIFI.
2	HAZARD	3309901	SLEMP	DEFEATED CREEK	SR 699, Slemp	Defeated Creek Hwy 1103	7.84	33	4/11/2016	1744.1	3001.3	5.00	10.06	Tree Out Of ROW, Equipment Failure, Scheduled Company, Abnormal Feed, Other, Weather - High Winds (Exceeding 60 Mph), Facilitation Of Work	21.43%, 21.43%, 14.29%, 14.29%, 14.29%, 7.14%, 7.14%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 39% of the total SAIDI, and 30% of the total SAIFI.
3	PIKEVILLE	3200204	BARRENSHE	POUNDING	Near State Highway 194 E, Freeburn	State Highway 194 E, Stopover; Woodman Creek Rd, Stopover	15.64	310	3/5/2019	1614.4	2208.6	6.13	6.99	Equipment Failure, Tree Out Of ROW, Scheduled Company, Weather - Unknown, Facilitation Of Work, Animal - Bird, Vine, Vehicle Accident (Non Aep), Corrosion	25.00%, 25.00%, 17.86%, 10.71%, 7.14%, 3.57%, 3.57%, 3.57%, 3.57%	No further actions planned for 2021.	Four Tree Out of ROW outages accounted for 44% of the total SAIDI and 42% of the total SAIFI.
4	PIKEVILLE	2150103	SPRIGG	MATEWAN	Lobata, KY	Sprigg, Lobata, Matewan, McCarr, Thacker	8.96	132	2/24/2018	1270.1	2041.3	5.25	4.69	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Vine, Scheduled Company	50.00%, 25.00%, 12.50%, 6.25%, 6.25%	No further actions planned for 2021.	One Tree Out of ROW outage accounted for 66% of the total SAIDI and 46% of the total SAIFI.
5	HAZARD	3309902	SLEMP	LEATHERWOOD	SR 699, Slemp	Cornettsville, Slemp, Yeaddiss Road	70.39	793	11/18/2017	1019.7	1929.0	3.94	5.53	Tree Out Of ROW, Equipment Failure, Scheduled Company, Weather - High Winds (Exceeding 60 Mph), Unknown (Non Weather), Tree Inside ROW, Weather - Unknown, Weather - Ice (1/2 Inch Or > 6 " Snow), Vine, Foreign Object (Non Animal),Facilitation Of Work, Overload, Ug Const. /Dig-Ins (Non Aep), Vehicle Accident (Non Aep), Weather - Lightning, Error - Field, Tree Removal (Non Aep)	29.70%, 13.86%, 11.88%, 10.89%, 9.90%, 4.95%, 3.96%, 2.97%, 1.98%, 1.98%, 1.98%, 0.99%, 0.99%, 0.99%, 0.99%, 0.99%, 0.99%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 28% of the total SAIDI, and Equipment Failure accounted for 31% of the total SAIFI.
6	PIKEVILLE	3403202	BEAVERCREEK	PRICE	17475 Ky Route 122, Hi Hat, KY 41636	Rt 122, Spewing Camp Branch	25.79	400	12/20/2019	837.7	1585.2	3.90	6.57	Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Vine, Other, Facilitation Of Work, Tree Removal (Non Aep), Weather - Lightning, Animal - Non Bird, Other Utility,Weather - Unknown, Scheduled Company, Tree Inside ROW	28.57%, 20.00%, 17.14%, 8.57%, 2.86%, 2.86%, 2.86%, 2.86%, 2.86%, 2.86%, 2.86%, 2.86%	Circuit Reconfiguration and Coordination Changes planned for 2021.	Three Tree Outside of ROW outages accounted for 63% of the total SAIDI and 42% of the total SAIFI.
7	PIKEVILLE	3202201	LOVELY	LOVELY	Hwy 292, Lovely, KY 41649	Beauty, Hode, Stepptown, Greyeagle, Warfield, Kermit	42.92	942	12/17/2016	1324.9	1517.3	5.73	7.89	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Weather - Unknown, Vine, Scheduled Company, Animal - Bird, Other, Tree Inside ROW, Animal - Non Bird	30.00%, 15.00%, 15.00%, 13.33%, 8.33%, 8.33%, 3.33%, 3.33%, 1.67%, 1.67%	No further actions planned for 2021.	Four Tree Out of ROW outages accounted for 50% of the total SAIDI and 36% of the total SAIFI.
8	HAZARD	3302701	HAZARD	BLACKGOLD	East Main Street, Hazard	Viper, Hazard (downtown area)	32.93	412	10/21/2020	844.5	1394.1	4.91	8.95	Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Equipment Failure, Vandalism, Weather - High Winds (Exceeding 60 Mph), Weather - Unknown, Tree Out Of ROW, Weather - Flood/Slide, Cust. Equipment > 1 Customer,Tree Inside ROW	28.57%, 22.86%, 8.57%, 8.57%, 5.71%, 5.71%, 5.71%, 5.71%, 2.86%, 2.86%, 2.86%	No further actions planned for 2021.	Tree Out of Row outages accounted for 29% of the total SAIDI and Unknown (Non Weather) accounted for 40% of the total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
9	HAZARD	3303901	LESLIE	HYDEN	Azalea Dr, Wooten	Parts of Hyden, Confluence, Thousandsticks	89.92	903	3/11/2021	888.0	1301.6	3.81	4.18	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Scheduled Company, Weather - Unknown, Animal - Non Bird, Facilitation Of Work, Tree Inside ROW, Vine, Weather - High Winds (Exceeding 60 Mph), Fire - Aep, Or Affecting > 1 Customer, Weather - Ice (1/2 Inch Or > 6 " Snow), Vehicle Accident (Non Aep), Cust. Equipment > 1 Customer, Other	32.48%, 11.11%, 10.26%, 8.55%, 6.84%, 5.98%, 5.98%, 5.98%, 5.13%, 3.42%, 0.85%, 0.85%, 0.85%, 0.85%, 0.85%	Tree clearing scheduled for 2021.	Tree Out of Row outages accounted for 45% of the total SAIDI and 36% of the total SAIFI.
10	PIKEVILLE	3200202	BARRENSHE	VULCAN	Near State Highway 194 E, Freeburn	State Highway 194 E, Stopover; Woodman Creek Rd, Stopover	41.35	666	6/18/2016	1184.2	1239.8	4.27	4.05	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Animal - Bird, Weather - Unknown, Tree Inside ROW, Facilitation Of Work, Tree Removal (Non Aep), Vine	31.58%, 23.68%, 13.16%, 7.89%, 5.26%, 5.26%, 5.26%, 2.63%, 2.63%, 2.63%	Tree clearing scheduled for 2021.	Five Tree Out of ROW outages accounted for 84% of the total SAIDI and 69% of the total SAIFI.
11	HAZARD	3401302	FLEMING	MCRROBERTS	SR 343, Fleming Rd, off Arlie Hall Dr	Cromona, McRoberts, Neon, Seco	28.58	888	7/30/2016	584.4	1219.8	2.48	2.72	Unknown (Non Weather), Tree Out Of ROW, Facilitation Of Work, Equipment Failure, Tree Inside ROW, Scheduled Company, Vine, Weather - Unknown, Weather - Ice (1/2 Inch Or > 6 " Snow), Other, Animal - Non Bird, Animal - Bird	26.00%, 24.00%, 12.00%, 10.00%, 8.00%, 8.00%, 2.00%, 2.00%, 2.00%, 2.00%, 2.00%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 91% of the total SAIDI, and 71% of the total SAIFI.
12	ASHLAND	3000203	BIG SANDY	YATESVILLE	23000 US Highway 23, Louisa, KY 41230	Route 3, Hwy 1185, Morgan Creek, Bells Trace	65.59	703	1/23/2016	536.1	1219.1	2.20	5.35	Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Scheduled Company, Animal - Non Bird, Weather - Lightning, Vine, Weather - Unknown, Animal - Bird, Tree Inside ROW	30.51%, 27.12%, 16.95%, 8.47%, 6.78%, 3.39%, 1.69%, 1.69%, 1.69%, 1.69%	Tree clearing scheduled for 2021.	One Tree out of ROW outage responsible for 30% of total SAIDI and 19% of total SAIFI.
13	PIKEVILLE	3202202	LOVELY	WOLFCREEK	Hwy 292, Lovely, KY 41649	Pilgrim, Threefork, Laura	60.52	749	11/10/2018	913.7	1185.0	3.54	5.80	Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Equipment Failure, Vine, Weather - Unknown, Facilitation Of Work, Animal - Non Bird, Tree Inside ROW, Animal - Bird, Other, Weather - Lightning	24.66%, 17.81%, 16.44%, 13.70%, 9.59%, 5.48%, 2.74%, 2.74%, 2.74%, 1.37%, 1.37%, 1.37%	No further actions planned for 2021.	Two Tree Out of ROW outages accounted for 25% of the total SAIDI and 18% of the total SAIFI. One Tree Scheduled Company outages accounted for 13% of the total SAIDI and 10% of the total SAIFI.
14	PIKEVILLE	3409402	FEDSCREEK	LICKCREEK	US Route 460, Lick Creek	Mikegrady, Honey Fork	17.56	328	5/30/2020	630.4	1181.3	2.37	1.80	Unknown (Non Weather), Tree Out Of ROW, Weather - High Winds (Exceeding 60 Mph), Equipment Failure, Weather - Unknown, Facilitation Of Work	50.00%, 16.67%, 11.11%, 11.11%, 5.56%, 5.56%	No further actions planned for 2021.	One Weather - High Winds (Exceeding 60 MPH) outage accounted for 56% of the total SAIDI and 57% of the total SAIFI.
15	PIKEVILLE	3421002	BREAKS	LITTLE GRASSY	63 Lower Branch Road, Elkhorn City, KY 41522	Breaks, Elkhorn City	3.47	38	3/23/2018	355.0	1176.1	1.39	2.58	Tree Out Of ROW, Equipment Failure, Scheduled Company	50.00%, 25.00%, 25.00%	No further actions planned for 2021.	One Tree Out of ROW outage accounted for 86% of the total SAIDI and 39% of the total SAIFI.
16	HAZARD	3308603	COLLIER	SMOOTCRK	Cinnamon Rd, Collier	Premium, Smoot Creek	79.29	913	12/13/2019	765.7	1174.5	4.26	6.37	Scheduled Company, Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Facilitation Of Work, Weather - High Winds (Exceeding 60 Mph), Tree Inside ROW, Other, Vehicle Accident (Non Aep), Weather - Ice (1/2 Inch Or > 6 " Snow), Weather - Lightning, Animal - Non Bird, Tree Removal (Non Aep)	31.58%, 19.55%, 14.29%, 12.03%, 11.28%, 3.01%, 2.26%, 1.50%, 1.50%, 0.75%, 0.75%, 0.75%, 0.75%	No further actions planned for 2021.	Trees Out of ROW accounted for 54% of the total SAIDI, and Equipment Failure accounted for 37% of the total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
17	PIKEVILLE	3407102	TOPMOST	CANEY	7429 South Highway 7, Topmost, KY 41862	Huff & Sloan Branch	3.06	3	4/15/2016	728.0	1152.7	1.77	2.33	Tree Out Of ROW, Scheduled Company	66.67%, 33.33%	Tree clearing scheduled for 2021.	One Tree Outside of ROW outage accounted for 61% of the total SAIDI and 33% of the total SAIFI.
18	HAZARD	3303902	LESLIE	WOOTON	Azalea Dr, Wooton	Cutshin, Smilax, Cinda	129.32	1,467	12/10/2020	967.5	1120.4	5.44	5.46	Scheduled Company, Tree Out Of ROW, Equipment Failure, Facilitation Of Work, Weather - Unknown, Animal - Non Bird, Unknown (Non Weather), Weather - High Winds (Exceeding 60 Mph), Weather - Ice (1/2 Inch Or > 6 " Snow), Vine, Tree Inside ROW, Vandalism, Animal - Bird, Vehicle Accident (Non Aep), Abnormal Feed, Tree Removal (Non Aep), Corrosion, Cust. Equipment > 1 Customer, Scheduled Outside Request > 1 Customer	28.71%, 20.79%, 11.88%, 10.40%, 6.93%, 5.45%, 4.46%, 1.49%, 1.49%, 1.49%, 1.49%, 0.99%, 0.99%, 0.99%, 0.50%, 0.50%, 0.50%, 0.50%	No further actions planned for 2021.	Tree Out of Row outages accounted for 38% of the total SAIDI and 21% of the total SAIFI.
19	HAZARD	3309903	SLEMP	BEECH FORK	SR 699, Slemp	SR 699, Old Beech Fork Road	1.72	3	12/17/2016	416.7	1097.0	1.07	3.00	Equipment Failure, Vehicle Accident (Non Aep), Other	33.33%, 33.33%, 33.33%	Tree clearing scheduled for 2021.	Equipment Failure accounted for 74% of the total SAIDI and 33% of the total SAIFI.
20	PIKEVILLE	3403701	RUSSELL FORK	LITTLE BEAVER	3354 Beaver Creek Road, Elkhorn, KY 41522	Elkhorn City	12.28	131	12/16/2017	854.9	1095.5	3.32	3.66	Tree Out Of ROW, Equipment Failure, Vine, Scheduled Company, Tree Inside ROW	71.43%, 7.14%, 7.14%, 7.14%, 7.14%	No further actions planned for 2021.	One Tree Out of ROW outage accounted for 33% of the total SAIDI and 34% of the total SAIFI.
21	HAZARD	3303903	LESLIE	HALSFORK	Azalea Dr, Wooton	Parts of Hyden, Sizerock, Thousandsticks	76.68	993	5/9/2019	866.8	1058.0	4.49	3.68	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Weather - Unknown, Animal - Bird, Animal - Non Bird, Facilitation Of Work, Weather - Flood/Slide, Scheduled Outside Request > 1 Customer, Error - Field, Weather - Ice (1/2 Inch Or > 6 " Snow)	27.54%, 15.94%, 15.94%, 8.70%, 7.25%, 5.80%, 5.80%, 4.35%, 1.45%, 1.45%, 1.45%, 1.45%, 1.45%, 1.45%	No further actions planned for 2021.	Tree Out of Row outages accounted for 79% of the total SAIDI.
22	HAZARD	3308503	BONNYMAN	BIG CREEK	Typo Rd, Bonnyman	Typo, Bigcreek	95.90	1,787	9/4/2019	840.7	1039.1	2.59	1.99	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Vine, Facilitation Of Work, Animal - Bird, Weather - Unknown, Weather - High Winds (Exceeding 60 Mph), Tree Inside ROW, Animal - Non Bird, Error - Field, Foreign Object (Non Animal), Ug Const. /Dig-Ins (Non Aep), Vandalism, Other	27.18%, 18.45%, 18.45%, 7.77%, 3.88%, 3.88%, 3.88%, 2.91%, 2.91%, 2.91%, 0.97%, 0.97%, 0.97%, 0.97%	No further actions planned for 2021.	Equipment Failure accounted for 47% of the total SAIDI.
23	ASHLAND	3008001	47TH STREET	49TH STREET	US 23 and 47th St, Catlettsburg	47th St, 48th St, 49th St, Ridgeway Rd, Blackburn Ave, Shadowland Dr	27.24	1,543	12/27/2018	367.8	1030.3	1.62	2.80	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Vine, Animal - Non Bird, Tree Inside ROW, Scheduled Company, Vehicle Accident (Non Aep), Tree Removal (Non Aep), Other	27.12%, 25.42%, 22.03%, 6.78%, 5.08%, 5.08%, 3.39%, 1.69%, 1.69%, 1.69%	Station transformer bushings replaced in 2021.	Equipment Failure related outages accounted for 72% of total SAIDI and 41% of total SAIFI. Tree out of ROW accounted for 25% of total SAIDI and 50% of total SAIFI.
24	HAZARD	3309904	SLEMP	ROYAL DIAMOND	SR 699, Slemp	SR 463, Stony Fork Road	2.30	2	12/15/2015	307.3	968.0	0.90	3.00	Equipment Failure, Vehicle Accident (Non Aep), Other	33.33%, 33.33%, 33.33%	Tree clearing scheduled for 2021.	Equipment Failure accounted for 56% of the total SAIDI and 33% of the total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
25	HAZARD	3312202	ENGL	GRAPEVINE	Coalfield Industrial Dr, Engle	Manuel, Krypton, Dunraven	101.18	1,300	4/10/2020	1027.9	960.2	3.68	4.60	Equipment Failure, Tree Out Of ROW, Unknown (Non Weather), Scheduled Company, Vehicle Accident (Non Aep), Weather - Unknown, Facilitation Of Work, Weather - Ice (1/2 Inch Or > 6" Snow), Animal - Bird, Weather - Flood/Slide, Weather - Lightning, Foreign Object (Non Animal), Animal Bus, Animal - Non Bird, Vine, Tree Inside ROW	22.22%, 18.89%, 18.89%, 16.67%, 4.44%, 3.33%, 3.33%, 2.22%, 2.22%, 1.11%, 1.11%, 1.11%, 1.11%, 1.11%, 1.11%, 1.11%	No further actions planned for 2021.	Equipment Failure accounted for 35% and an Animal Bus contact accounted for 22% of the total SAIFI.
26	PIKEVILLE	3401801	INDEX	DISTRIBUTION	6075 Liberty Rd., West Liberty, KY 26074	West Liberty, Harper Branch, Hwy 460E, May Branch, Elsie, Long Branch	56.12	629	8/5/2017	475.1	941.7	2.19	3.49	Equipment Failure, Animal - Non Bird, Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Tree Inside ROW, Facilitation Of Work, Cust. Equipment > 1 Customer, Vandalism, Animal - Bird	33.33%, 17.78%, 15.56%, 13.33%, 4.44%, 4.44%, 4.44%, 2.22%, 2.22%, 2.22%	Tree clearing scheduled for 2021.	One Tree Outside of ROW outage accounted for 39% of the total SAIDI and 29% of the total SAIFI. One Equipment Failure outage accounted for 28% of the total SAIDI and 56% of the total SAIFI.
27	PIKEVILLE	3411801	JOHNSCREEK	META	3697 State Highway 194E, Kimber, KY 41539	McCombs, Gulnare, Mayflowe, Varney, Meta	160.63	1,993	4/30/2019	997.5	910.9	4.54	5.19	Tree Out Of ROW, Scheduled Company, Equipment Failure, Unknown (Non Weather), Animal - Non Bird, Vine, Weather - Unknown, Facilitation Of Work, Other, Vehicle Accident (Non Aep), Tree Inside ROW, Ug Const./Dig-Ins (Non Aep), Weather - Flood/Slide, Foreign Object (Non Animal), Unbalance, Error - Field, Other Utility, Animal - Bird	22.73%, 22.08%, 16.88%, 13.64%, 5.84%, 3.90%, 3.25%, 2.60%, 1.95%, 1.30%, 1.30%, 0.65%, 0.65%, 0.65%, 0.65%, 0.65%, 0.65%, 0.65%	No further actions planned for 2021.	One Equipment Failure outage accounted for 12% of the total SAIDI and 19% of the total SAIFI. One Tree Out of ROW outage accounted for 10% of the total SAIDI and 9% of the total SAIFI.
28	HAZARD	3311401	REEDY STATION	DEANE	HWY 1469 Virgie, KY	Hwy 1469 Long Fork Hwy 7	39.49	404	3/18/2017	587.6	839.4	3.13	2.41	Unknown (Non Weather), Equipment Failure, Tree Out Of ROW, Scheduled Company, Vine, Tree Inside ROW, Weather - Ice (1/2 Inch Or > 6" Snow), Other, Weather - Unknown, Facilitation Of Work, Animal - Non Bird	24.39%, 21.95%, 19.51%, 12.20%, 4.88%, 4.88%, 2.44%, 2.44%, 2.44%, 2.44%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 50% of the total SAIDI.
29	PIKEVILLE	3413402	GARRETT	LACKEY	611 Stonecoal Road, Garrett, KY 41630	Hwy 550, Jones Fork, Waylon	34.13	525	1/28/2017	614.7	805.7	2.88	5.27	Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Equipment Failure, Facilitation Of Work, Vine, Animal - Non Bird, Tree Removal (Non Aep), Tree Inside ROW, Weather - Flood/Slide, Animal - Bird, Scheduled Outside Request > 1 Customer, Vehicle Accident (Non Aep)	26.53%, 24.49%, 8.16%, 8.16%, 8.16%, 4.08%, 4.08%, 4.08%, 4.08%, 2.04%, 2.04%, 2.04%, 2.04%	Tree clearing scheduled for 2021.	One Tree Outside of ROW outage accounted for 33% of the total SAIDI and 19% of the total SAIFI. One Vehicle Accident (Non AEP) outage accounted for 18% of the total SAIDI and 16% of the total SAIFI. One Weather - Flood/Slide outage accounted for 15% of the total SAIDI and 11% of the total SAIFI.
30	PIKEVILLE	3201001	TOM WATKINS	DISTRIBUTION	3271 Pond Creek Road, McAndrew, KY 4155	Huddy, McAndrew, McVeigh, Pinsonfork, Stone	28.11	809	1/21/2017	905.8	762.0	3.31	3.72	Equipment Failure, Tree Out Of ROW, Scheduled Company, Vine, Unknown (Non Weather), Facilitation Of Work, Weather - Unknown, Animal - Non Bird, Other, Foreign Object (Non Animal), Error - Field, Tree Inside ROW	27.91%, 25.58%, 11.63%, 4.65%, 4.65%, 4.65%, 4.65%, 4.65%, 2.33%, 2.33%, 2.33%	No further actions planned for 2021.	Four Tree Out of ROW outages accounted for 53% of the total SAIDI and 29% of the total SAIFI.
31	HAZARD	3308601	COLLIER	UPPERROCK	Cinnamon Rd, Collier	Elkhorn, Camp Branch	37.44	694	7/6/2020	460.8	759.2	2.57	4.70	Scheduled Company, Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Vehicle Accident (Non Aep), Tree Inside ROW, Weather - High Winds (Exceeding 60 Mph), Facilitation Of Work, Weather - Ice (1/2 Inch Or > 6" Snow), Weather - Unknown, Fire - Aep, Or Affecting > 1 Customer, Cust. Equipment > 1 Customer	30.00%, 18.33%, 16.67%, 11.67%, 5.00%, 5.00%, 3.33%, 3.33%, 1.67%, 1.67%, 1.67%, 1.67%	No further actions planned for 2021.	Vehicle Accident accounted for 54% of the total SAIDI, and 57% of the total SAIFI.
32	PIKEVILLE	3400601	BURTON	BEVINSONVILLE	85 Upper Burton, Bypro, KY 41612	Jacks, Creek, Orchard Fork, Riley's Branch	19.57	331	12/20/2019	419.0	722.4	2.49	4.21	Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Facilitation Of Work, Vine, Animal - Non Bird, Tree Inside ROW, Scheduled Company, Scheduled Outside Request > 1 Customer	26.09%, 26.09%, 13.04%, 8.70%, 8.70%, 4.35%, 4.35%, 4.35%, 4.35%	No further actions planned for 2021.	One Tree Inside of ROW outage accounted for 53% of the total SAIDI and 45% of the total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
33	HAZARD	3308602	COLLIER	LOWERROCK	Cinnamon Rd, Collier	Van, Roxana	63.26	1,407	11/30/2018	521.5	705.0	2.87	2.44	Scheduled Company, Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Weather - High Winds (Exceeding 60 Mph), Facilitation Of Work, Weather - Ice (1/2 Inch Or > 6 " Snow), Weather - Unknown, Tree Inside ROW, Cust. Equipment > 1 Customer, Vehicle Accident (Non Aep), Animal - Non Bird, Vine	26.37%, 20.88%, 16.48%, 9.89%, 6.59%, 4.40%, 3.30%, 3.30%, 2.20%, 2.20%, 2.20%, 1.10%, 1.10%	No further actions planned for 2021.	Trees Out of ROW accounted for 53% of the total SAIDI.
34	HAZARD	3308001	JACKSON	S.JACKSON	Cripple Creek Rd, Jackson	City of Jackson	26.74	935	1/18/2020	250.4	692.2	1.79	5.61	Tree Out Of ROW, Equipment Failure, Facilitation Of Work, Foreign Object (Non Animal), Unknown (Non Weather), Scheduled Company, Tree Removal (Non Aep), Animal - Bird, Animal - Non Bird	26.47%, 26.47%, 11.76%, 11.76%, 11.76%, 8.82%, 5.88%, 2.94%, 2.94%, 2.94%	No further actions planned for 2021.	Equipment Failure accounted for 85% of the total SAIDI and 89% of the total SAIFI.
35	HAZARD	3309003	JEFF	VIPER	HWY 7, Jeff	Maces Creek Upper River Rd.	67.39	1,000	8/23/2019	631.0	688.8	2.69	2.72	Tree Out Of ROW, Unknown (Non Weather), Scheduled Company, Weather - High Winds (Exceeding 60 Mph), Equipment Failure, Fire - Aep, Or Affecting > 1 Customer, Vine, Facilitation Of Work, Weather - Ice (1/2 Inch Or > 6 " Snow), Other, Weather - Unknown, Animal - Non Bird, Tree Inside ROW, Vehicle Accident (Non Aep)	34.15%, 13.41%, 12.20%, 7.32%, 7.32%, 4.88%, 3.66%, 3.66%, 2.44%, 2.44%, 2.44%, 2.44%, 2.44%, 1.22%	No further actions planned for 2021.	Trees Out of ROW accounted for 40% of the total SAIDI, and 29% of the total SAIFI.
36	HAZARD	3420001	SOFT SHELL	VEST	Raymond Smith Dr, Leburn	Soft Shell, Vest, Tina	56.92	540	4/6/2016	515.6	685.1	2.25	2.87	Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Animal - Non Bird, Tree Inside ROW, Weather - Unknown, Equipment Failure, Facilitation Of Work, Weather - High Winds (Exceeding 60 Mph), Weather - Flood/Slide/Vine	25.00%, 22.22%, 13.89%, 8.33%, 5.56%, 5.56%, 5.56%, 5.56%, 2.78%, 2.78%, 2.78%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 38% of the total SAIDI and 48% of the total SAIFI.
37	HAZARD	3310502	HADDIX	CANOE	HWY 1110, Haddix	Buckhorn, Canoe	122.82	1,117	12/9/2017	1073.9	682.8	4.21	4.56	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Scheduled Company, Facilitation Of Work, Weather - Unknown, Tree Inside ROW, Scheduled Outside Request > 1 Customer, Vine, Weather - Ice (1/2 Inch Or > 6 " Snow), Vehicle Accident (Non Aep), Vandalism	25.58%, 19.77%, 16.28%, 15.12%, 5.81%, 4.65%, 3.49%, 3.49%, 2.33%, 1.16%, 1.16%, 1.16%	No further actions planned for 2021.	Equipment Failure accounted for 38% of the total SAIFI.
38	ASHLAND	3000202	BIG SANDY	BURNAUG-North	23000 US Highway 23, Louisa, KY 41230	North of station along US23 including Blain Creek, Mill Creek, Bear Creek and Rush Creek	87.36	798	3/13/2021	583.1	675.8	2.01	3.25	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Scheduled Company, Tree Inside ROW, Animal - Non Bird, Vine, Vehicle Accident (Non Aep), Weather - Lightning, Facilitation Of Work, Weather - Unknown, Animal - Bird, Unbalance	28.74%, 27.59%, 14.94%, 8.05%, 6.90%, 4.60%, 2.30%, 1.15%, 1.15%, 1.15%, 1.15%, 1.15%	Tree clearing completed in 2021.	One Animal - Bird outage accounted for 31% of total SAIDI and 30% of total SAIFI. Tree out of ROW accounted for 25% of total SAIDI and 18% of total SAIFI.
39	PIKEVILLE	3420101	MAYO TRAIL	NIPPA	632 Ponderosa Drive, Paintsville, KY 41240	KY Route 581, Main Camp Branch, Whippoorwill Road, US Highway 23, KY Route 993	22.97	489	10/7/2017	276.6	668.2	1.49	2.92	Tree Out Of ROW, Animal - Non Bird, Vine, Equipment Failure, Scheduled Company, Facilitation Of Work, Animal - Bird, Error - Operations	23.81%, 23.81%, 14.29%, 14.29%, 9.52%, 4.76%, 4.76%, 4.76%	No further actions planned for 2021.	Two Tree Outside of ROW outages accounted for 87% of the total SAIDI and 60% of the total SAIFI.
40	PIKEVILLE	3401702	HENRYCLAY	REGINA	6949 Marrowbone Creek Road, Marrowbone, KY 41522	Lookout, Rockhouse, Dry Fork, Ratliff, Venter	116.00	2,550	9/16/2017	602.8	636.8	3.59	3.37	Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Scheduled Company, Vine, Tree Inside ROW, Weather - Unknown, Animal - Non Bird, Tree Removal (Non Aep), Facilitation Of Work, Animal - Bird, Vandalism	26.43%, 17.86%, 17.86%, 10.00%, 9.29%, 7.86%, 3.57%, 2.86%, 1.43%, 1.43%, 0.71%, 0.71%	No further actions planned for 2021.	One Equipment Failure outage accounted for 31% of the total SAIDI and 29% of the total SAIFI. One Tree Out of ROW outages accounted for 28% of the total SAIDI and 29% of the total SAIFI.
41	HAZARD	3309301	VICCO	REDFOX	Rowdy Hollow, Vicco	Sassafras, Big Branch, Hwy 155	47.86	530	7/11/2020	458.1	607.1	2.60	3.68	Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Weather - Unknown, Equipment Failure, Tree Inside ROW, Tree Removal (Non Aep), Animal - Bird, Facilitation Of Work, Fire - Aep, Or Affecting > 1 Customer, Weather - High Winds (Exceeding 60 Mph)	26.42%, 18.87%, 11.32%, 9.43%, 9.43%, 7.55%, 5.66%, 3.77%, 3.77%, 1.89%, 1.89%	No further actions planned for 2021.	A wind storm accounted for 23% of the total SAIDI and a Tree Removal (Non AEP) accounted for 39% of the total SAIFI.
42	ASHLAND	3000901	HIGHLAND	Russell	437.5 Greenup Avenue, Raceland, KY 41169	Riverside Dr, Prospect Ave, Vernon St, Caroline Rd, SR 693	26.73	1,357	3/27/2020	171.2	603.1	1.01	1.95	Equipment Failure, Unknown (Non Weather), Scheduled Company, Tree Out Of ROW, Weather - Lightning, Weather - Unknown, Facilitation Of Work, Tree Inside ROW, Animal - Bird, Vine, Vehicle Accident (Non Aep)	25.00%, 23.44%, 18.75%, 15.63%, 4.69%, 3.13%, 3.13%, 1.56%, 1.56%, 1.56%, 1.56%	No further actions planned for 2021.	Equipment Failure outages accounted for 70% of total SAIDI and 50% of total SAIFI. One Equipment Failure outage (circuit breaker) accounted for 57% of total SAIDI and 29% of total SAIFI.

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
43	PIKEVILLE	3410501	S.PIKEVILLE	PIKEVILLE	332 South Mayo Trail, Pikeville KY 41501	City of Pikeville	13.83	688	4/8/2017	346.8	595.0	1.31	1.84	Tree Out Of ROW, Scheduled Company, Equipment Failure, Vine, Unknown (Non Weather), Weather - Unknown, Tree Inside ROW, Other Utility, Error - Field	25.81%, 19.35%, 16.13%, 9.68%, 9.68%, 6.45%, 6.45%, 3.23%, 3.23%	No further actions planned for 2021.	One Tree Out of ROW outage accounted for 74% of the total SAIDI and 34% of the total SAIFI.
44	HAZARD	3300602	BLUEGRASS	HAZARD	Messer Branch, Hazard	Hazard, Gorman Hollow	11.19	630	5/29/2020	316.9	589.4	1.68	1.06	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Tree Inside ROW, Animal - Bird, Facilitation Of Work, Scheduled Company	42.11%, 26.32%, 10.53%, 5.26%, 5.26%, 5.26%, 5.26%	No further actions planned for 2021.	Equipment Failure accounted for 72% of the total SAIDI.
45	HAZARD	3311103	STINNETT	WENDOVER	Greasy Creek Road, Stinnett	HWY 421 Stinnett Cr Muncy Cr.	36.05	518	11/9/2018	462.4	569.9	3.24	3.07	Unknown (Non Weather), Scheduled Company, Animal - Non Bird, Weather - Unknown, Tree Out Of ROW, Weather - High Winds (Exceeding 60 Mph), Equipment Failure, Facilitation Of Work, Fire - Aep, Or Affecting > 1 Customer	21.28%, 19.15%, 14.89%, 12.77%, 12.77%, 6.38%, 6.38%, 4.26%, 2.13%	No further actions planned for 2021.	Trees Out of ROW accounted for 30% of the total SAIDI.
46	HAZARD	3310503	HADDIX	TROUBLESOME CRK	SR 1110, Haddix	Clayhole, Hardshell, Lost Creek, Rowdy	92.12	990	3/29/2018	575.7	564.1	2.59	2.61	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Weather - Unknown, Scheduled Outside Request > 1 Customer, Vine, Tree Removal (Non Aep), Facilitation Of Work, Tree Inside ROW, Weather - Ice (1/2 Inch Or > 6" Snow), Fire - Aep, Or Affecting > 1 Customer, Other Utility, Vehicle Accident (Non Aep)	27.50%, 22.50%, 8.75%, 7.50%, 7.50%, 3.75%, 3.75%, 3.75%, 3.75%, 3.75%, 2.50%, 2.50%, 1.25%, 1.25%	Tree clearing scheduled for 2021.	Equipment Failure accounted for 42% of the total SAIFI.
47	HAZARD	3314402	MAYKING	MILLSTONE	HWY 119, Mayking	Mayking, Thornton	53.52	924	12/15/2015	576.6	549.2	2.62	4.31	Unknown (Non Weather), Equipment Failure, Tree Out Of ROW, Scheduled Company, Facilitation Of Work, Weather - Unknown, Animal - Non Bird, Tree Inside ROW, Vine, Other Utility, Overload	25.00%, 19.44%, 18.06%, 15.28%, 5.56%, 4.17%, 4.17%, 2.78%, 2.78%, 1.39%, 1.39%	Tree clearing scheduled for 2021.	Equipment Failure accounted for 69% of the total SAIFI.
48	PIKEVILLE	3403001	PIKEVILLE	CITY	144 Williams Drive, Pikeville, KY 41501	Northmonte Woods, N Bypass Rd, Town Mountain Rd and Chloe Rd	23.73	1,218	8/15/2020	332.5	512.5	2.31	2.55	Scheduled Company, Equipment Failure, Tree Out Of ROW, Weather - Unknown, Vine, Weather - Flood/Slide, Vehicle Accident (Non Aep), Contamination/Flashover, Error - Field, Animal - Non Bird, Tree Inside ROW	40.35%, 26.32%, 14.04%, 5.26%, 3.51%, 1.75%, 1.75%, 1.75%, 1.75%, 1.75%, 1.75%	No further actions planned for 2021.	One Equipment Failure outage accounted for 39% of the total SAIDI and 98% of the total SAIFI.
49	HAZARD	3401301	FLEMING	NEON	SR 343, Fleming Rd, off Arlie Hall Dr	SR 343, Fleming Rd, SR 317, Fleming Neon	20.30	709	11/12/2016	407.1	511.4	1.83	1.52	Tree Out Of ROW, Unknown (Non Weather), Scheduled Company, Equipment Failure, Weather - Unknown, Tree Inside ROW	44.00%, 16.00%, 16.00%, 16.00%, 4.00%, 4.00%	Tree clearing scheduled for 2021.	Trees Out of ROW accounted for 98% of the total SAIDI.

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
50	PIKEVILLE	3120101	STANVILLE	MUDCREEK	Williams Dr, Stanville, KY 41659	Big Mud Creek, Little Mud Creek, Prater Creek	85.24	1,693	3/18/2019	334.0	498.9	1.81	2.65	Equipment Failure, Tree Out Of ROW, Unknown (Non Weather), Scheduled Company, Weather - Unknown, Tree Inside ROW, Vine, Animal - Non Bird, Other, Vehicle Accident (Non Aep)	24.05%, 21.52%, 21.52%, 15.19%, 5.06%, 5.06%, 2.53%, 2.53%, 1.27%, 1.27%	No further actions planned for 2021.	One Equipment Failure outage accounted for 18% of the total SAIDI and 37% of the total SAIFI. One Tree Inside of ROW outage accounted for 19% of the total SAIDI and 12% of the total SAIFI..
51	HAZARD	3312901	JENKINS	KONA	Gateway Industrial Park Rd, Jenkins	Hwy 119 Hwy 113	27.26	491	12/15/2017	313.1	473.8	2.02	2.96	Unknown (Non Weather), Tree Out Of ROW, Scheduled Company, Equipment Failure, Animal - Non Bird, Weather - High Winds (Exceeding 60 Mph), Weather - Ice (1/2 Inch Or > 6 " Snow), Other, Vehicle Accident (Non Aep), Tree Removal (Non Aep)	29.73%, 24.32%, 8.11%, 8.11%, 8.11%, 5.41%, 5.41%, 5.41%, 2.70%, 2.70%	No further actions planned for 2021.	Trees Out of ROW accounted for 51% of the total SAIDI, and 46% of the total SAIFI.
52	PIKEVILLE	3414302	SIDNEY	COBURN MTN	482 North Big Creek Road, Sidney, KY 41564	Canada, Sidney	41.30	868	2/20/2020	245.3	456.4	0.92	1.74	Tree Out Of ROW, Unknown (Non Weather), Equipment Failure, Scheduled Company, Animal - Non Bird, Vine, Tree Inside ROW, Cust. Equipment > 1 Customer, Facilitation Of Work, Tree Removal (Non Aep), Unbalance	23.26%, 20.93%, 20.93%, 9.30%, 6.98%, 4.65%, 4.65%, 2.33%, 2.33%, 2.33%, 2.33%	No further actions planned for 2021.	Two Tree Out of ROW outages accounted for 72% of the total SAIDI and 70% of the total SAIFI.
53	ASHLAND	3008002	47TH STREET	39TH STREET	US 23 and 47th St, Catlettsburg	39th st and Belmont, Ashland	13.02	1,148	8/20/2016	168.1	444.1	1.32	3.36	Tree Out Of ROW, Scheduled Company, Equipment Failure, Unknown (Non Weather), Facilitation Of Work, Animal - Non Bird, Weather - Unknown, Vine, Vehicle Accident (Non Aep), Tree Inside ROW	25.58%, 18.60%, 18.60%, 16.28%, 6.98%, 4.65%, 2.33%, 2.33%, 2.33%, 2.33%	Station transformer bushings replaced in 2021. Tree clearing scheduled for 2021. Tie line project for increased capacity scheduled for 2021.	Equipment Failure outages accounted for 67% of total SAIDI and 62% of total SAIFI. One Equipment failure outage (transmission) accounted for 53% of total SAIDI and 43% of total SAIFI.
54	PIKEVILLE	3401703	HENRYCLAY	ASHCAMP	6949 Marrowbone Creek Road, Marrowbone, KY 41522	Ashcamp, Elkhorn City Hellier, Lookout, Regina, Rockhouse	42.22	767	10/15/2016	485.0	425.6	2.66	2.68	Unknown (Non Weather), Scheduled Company, Vine, Equipment Failure, Tree Out Of ROW, Tree Inside ROW, Weather - Unknown, Tree Removal (Non Aep), Vehicle Accident (Non Aep), Animal - Non Bird, Cust. Equipment > 1 Customer	16.67%, 16.67%, 14.58%, 14.58%, 8.33%, 4.17%, 4.17%, 2.08%, 2.08%, 2.08%	Tree clearing scheduled for 2021.	One Equipment Failure outage accounted for 43% of the total SAIDI and 37% of the total SAIFI.
55	ASHLAND	3001003	HITCHINS	GRAYSON	3655 State Highway 773, Hitchins, KY 41146	SR 1, Beech Grove, Canoe Run, Stinson Rd, US 60	47.59	997	4/15/2017	339.0	424.7	1.82	2.44	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Scheduled Company, Tree Removal (Non Aep), Facilitation Of Work, Animal - Non Bird, Tree Inside ROW, Vine, Animal - Bird, Cust. Equipment > 1 Customer	32.76%, 20.69%, 13.79%, 12.07%, 5.17%, 5.17%, 1.72%, 1.72%, 1.72%, 1.72%, 1.72%	Tree clearing scheduled for 2021.	Tree out of ROW accounted for 56% of total SAIDI and 46% of total SAIFI. Equipment failure accounted for 40% of total SAIDI and 41% of total SAIFI. One Equipment Failure outage accounted for 39% of total SAIDI and 41% of total SAIFI. One Tree out of ROW outage accounted for 32% of total SAIDI and 29% of total SAIFI.
56	PIKEVILLE	3408103	SALISBURY	MARTIN	2241 Ky Rt 122, Printer, KY 41655	City of Martin, Alphoretta, Hite, Ky Route 80, Bucks Branch, Hite	46.59	1,061	5/17/2018	320.9	424.6	2.06	1.90	Equipment Failure, Scheduled Company, Tree Out Of ROW, Unknown (Non Weather), Tree Removal (Non Aep), Weather - High Winds (Exceeding 60 Mph), Tree Inside ROW, Animal - Non Bird, Vine, Weather - Unknown, Animal - Bird, Vandalism, Vehicle Accident (Non Aep), Facilitation Of Work	21.82%, 21.82%, 21.82%, 7.27%, 5.45%, 3.64%, 3.64%, 3.64%, 1.82%, 1.82%, 1.82%, 1.82%, 1.82%, 1.82%	No further actions planned for 2021.	One Tree Inside of ROW outage accounted for 42% of the total SAIDI and 53% of the total SAIFI.

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
57	ASHLAND	3117602	PRINCESS	RT 180	Off Paul Coffey Blvd, along Mackey Ln, Ashland	SR 5, Straight Creek Road, Buena Vista Dr, East Park Industrial Sites	25.50	295	2/6/2021	345.5	403.0	2.21	1.51	Unknown (Non Weather), Equipment Failure, Tree Out Of ROW, Scheduled Company, Weather Unknown	29.41%, 23.53%, 23.53%, 17.65%, 5.88%	No further actions planned for 2021.	Tree out of ROW accounted for 97% of total SAIDI and 93% of total SAIFI. One Tree out of ROW outage accounted for 65% of total SAIDI and 44% of total SAIFI.
58	HAZARD	3308404	BECKHAM	PIPPA PASSES	SR 899, Beckham	Hollybush, Mallie, Pippa Passes, Pine Top	55.99	1,048	7/31/2019	298.6	402.8	1.66	1.42	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Scheduled Company, Animal - Non Bird, Animal - Bird, Tree Inside ROW, Vine, Tree Removal (Non Aep), Weather - Unknown, Error - Field, Vehicle Accident (Non Aep)	38.78%, 20.41%, 10.20%, 8.16%, 4.08%, 4.08%, 4.08%, 2.04%, 2.04%, 2.04%, 2.04%	No further actions planned for 2021.	Tree Out of Row outages accounted for 80% of the total SAIDI.
59	ASHLAND	3003703	COALTON	TRACE CREEK	2449 South Big Run Rd, Meads, KY 41101	Trace Road, Four Mile Rd, SR 3, SR 854, Rush	85.41	858	10/21/2017	380.1	394.7	2.46	1.84	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Scheduled Company, Tree Inside ROW, Tree Removal (Non Aep), Vine, Weather - Unknown, Weather - Ice (1/2 Inch Or > 6 " Snow)	34.38%, 28.13%, 15.63%, 10.94%, 3.13%, 3.13%, 1.56%, 1.56%	No further actions planned for 2021.	Tree out of ROW outages accounted for 82% of total SAIDI and 87% of total SAIFI. One Tree out of ROW outage accounted for 35% of total SAIDI and 54% of total SAIFI.
60	HAZARD	3302704	HAZARD	KENMONT	East Main Street, Hazard	Hazard, Forseam, Storm King	20.14	738	11/29/2018	330.9	373.3	2.12	2.61	Scheduled Company, Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Vine, Tree Inside ROW, Weather - Flood/Slide, Weather - Unknown, Weather - Lightning, Facilitation Of Work, Fire - Aep, Or Affecting > 1 Customer, Animal - Bird	24.24%, 15.15%, 15.15%, 15.15%, 6.06%, 6.06%, 3.03%, 3.03%, 3.03%, 3.03%, 3.03%	No further actions planned for 2021.	Scheduled outages accounted for 52% of the total SAIDI and Unknown(Non Weather) accounted for 61% of the total SAIFI.
61	ASHLAND	3004301	SILOAM	DISTRIBUTION	203 Dunaway Lane, South Shore, KY 41175	Siloam and Graf Brothers	18.28	434	9/6/2019	220.1	366.4	1.43	1.24	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Scheduled Company, Fire - Aep, Or Affecting > 1 Customer, Animal - Bird, Weather - Lightning, Facilitation Of Work, Tree Removal (Non Aep)	26.32%, 21.05%, 15.79%, 10.53%, 5.26%, 5.26%, 5.26%, 5.26%	No further actions planned for 2021.	One Equipment Failure outage (switch) accounted for 83% of total SAIDI and 79% of total SAIFI.
62	PIKEVILLE	3411802	JOHNSCREEK	RACCOON	3697 State Highway 194E, Kimper, KY 41539	Kimper, Raccoon	85.38	1,672	5/31/2016	517.1	364.7	2.34	2.42	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Vine, Tree Removal (Non Aep), Weather - Unknown, Tree Inside ROW, Vandalism, Animal - Non Bird	26.83%, 21.95%, 13.41%, 13.41%, 7.32%, 6.10%, 3.66%, 3.66%, 1.22%, 1.22%, 1.22%	Tree clearing scheduled for 2021.	Three Tree Out of ROW outages accounted for 48% of the total SAIDI and 25% of the total SAIFI.
63	ASHLAND	3000801	HAYWARD	HALDEMAN	Near 6876 SR 174	SR 174, US 60, and SR 377	119.70	1,679	10/18/2019	289.3	361.9	1.40	1.64	Tree Out Of ROW, Equipment Failure, Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Weather - Unknown, Tree Inside ROW, Vehicle Accident (Non Aep), Animal - Other, Weather - Lightning, Tree Removal (Non Aep), Fire - Aep, Or Affecting > 1 Customer, Scheduled Outside Request > 1 Customer	21.25%, 21.25%, 20.00%, 17.50%, 6.25%, 3.75%, 2.50%, 1.25%, 1.25%, 1.25%, 1.25%, 1.25%	No further actions planned for 2021.	Animal - Other accounted for 49% of total SAIDI and 60% of total SAIFI. Tree out of ROW accounted for 43% of total SAIDI and 24% of total SAIFI.

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
64	ASHLAND	3001002	HITCHINS	WILLARD	3655 State Highway 773, Hitchins, KY 41146	SR 773, SR 1, Cherokee, and Bells Trace	151.20	1,211	3/9/2018	325.7	343.9	1.62	2.33	Unknown (Non Weather), Tree Out Of ROW, Scheduled Company, Equipment Failure, Weather - Unknown, Facilitation Of Work, Vehicle Accident (Non Aep), Tree Removal (Non Aep), Vine	29.79%, 25.53%, 17.02%, 13.83%, 4.26%, 4.26%, 2.13%, 2.13%, 1.06%	No further actions planned for 2021.	Tree out of ROW accounted for 67% of total SAIDI and 57% of total SAIFI. Scheduled Company outages accounted for 7% of total SAIDI and 25% of total SAIFI.
65	PIKEVILLE	3420103	MAYO TRAIL	DAVIS BRANCH	632 Ponderosa Drive, Paintsville, KY 41240	Ky Route 40E, Ky Route 1107, Buffalo Road	32.85	1,012	2/11/2017	318.0	343.7	2.01	1.88	Scheduled Company, Animal - Non Bird, Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Vine, Tree Inside ROW, Facilitation Of Work, Weather - Lightning, Cust. Equipment (Non Aep),Animal - Bird	21.54%, 21.54%, 15.38%, 13.85%, 10.77%, 4.62%, 4.62%, 3.08%, 1.54%, 1.54%, 1.54%	No further actions planned for 2021.	One Equipment Failure outage accounted for 37% of the total SAIDI and 20% of the total SAIFI.
66	ASHLAND	3000902	HIGHLAND	FLATWOODS	437.5 Greenup Avenue, Raceland, KY 41169	Pond Run Rd, Raceland Ave, Bellefonte Rd	20.60	1,205	5/16/2020	117.5	323.4	0.72	1.44	Equipment Failure, Tree Out Of ROW, Unknown (Non Weather), Scheduled Company, Weather - Unknown, Weather - Lightning, Cust. Equipment > 1 Customer, Weather - High Winds (Exceeding 60 Mph)	35.48%, 25.81%, 16.13%, 9.68%, 3.23%, 3.23%, 3.23%, 3.23%	No further actions planned for 2021.	Tree out of ROW accounted for 65% of total SAIDI and 54% of total SAIFI. One Tree out of ROW outage accounted for 59% of total SAIDI and 25% of total SAIFI.
67	HAZARD	3420002	SOFT SHELL	LEBURN	Raymond Smith Dr, Leburn	Possum Trot Wiley Fork Upper Mill Cr	49.85	929	10/29/2020	299.1	316.9	1.40	1.89	Scheduled Company, Tree Out Of ROW, Facilitation Of Work, Equipment Failure, Weather - Unknown, Unknown (Non Weather), Vehicle Accident (Non Aep), Weather - High Winds (Exceeding 60 Mph), Weather - Ice (1/2 Inch Or > 6 " Snow), Vine,Animal - Non Bird, Error-Field, Cust. Equipment > 1 Customer, Scheduled Outside Request > 1 Customer, Tree Inside ROW	28.41%, 28.41%, 14.77%, 12.50%, 3.41%, 2.27%, 1.14%, 1.14%, 1.14%, 1.14%, 1.14%, 1.14%, 1.14%	No further actions planned for 2021.	Trees Out of ROW accounted for 55% of the total SAIDI, and 48% of the total SAIFI.
68	PIKEVILLE	3414901	FISHTRAP	DISTRIBUTION	Left Fork Island Creek, Phyllis	Phyllis	4.48	3	1/28/2017	207.8	316.0	0.95	1.00	Equipment Failure	100.00%	No further actions planned for 2021.	One Equipment Failure outage accounted for 100% of the total SAIDI and 100% of the total SAIFI.
69	ASHLAND	3010602	RUSSELL	BEAR RUN	990 Ashland Drive, Russell, KY 41169	US23, Riverview Rd, Diederich Blvd	11.61	678	11/30/2020	182.4	313.8	1.75	2.24	Equipment Failure, Tree Inside ROW, Unknown (Non Weather), Other, Tree Out Of ROW, Vehicle Accident (Non Aep), Weather - Unknown, Vine, Scheduled Company, Facilitation Of Work,Scheduled Outside Request > 1 Customer	29.17%, 16.67%, 12.50%, 8.33%, 8.33%, 4.17%, 4.17%, 4.17%, 4.17%, 4.17%, 4.17%	No further actions planned for 2021.	Other outages accounted for 51% of total SAIDI and 23% of total SAIFI. Equipment Failure outages accounted for 34% of total SAIDI and 62% of total SAIFI.
70	PIKEVILLE	3410502	S.PIKEVILLE	ISLAND CREEK	332 South Mayo Trail, Pikeville KY 41501	City of Pikeville	41.96	908	4/27/2019	257.0	312.5	1.44	1.96	Equipment Failure, Weather - Unknown, Scheduled Company, Tree Out Of ROW, Vine, Tree Inside ROW, Unknown (Non Weather), Weather - High Winds (Exceeding 60 Mph), Facilitation Of Work, Scheduled Outside Request > 1 Customer,Tree Removal (Non Aep), Weather - Flood/Slide	21.74%, 17.39%, 17.39%, 15.22%, 8.70%, 4.35%, 4.35%, 2.17%, 2.17%, 2.17%, 2.17%, 2.17%	No further actions planned for 2021.	One Weather-Unknown outage accounted for 29% of the total SAIDI and 50% of the total SAIFI. One Weather-Flood/landslide outage accounted for 23% of the total SAIDI and 16% of the total SAIFI.
71	ASHLAND	3001101	HOODS CREEK	SUMMIT	Rt 5 and Inheritance Dr, Ashland	West Summit Rd, Hoenig Dr, Hatchery Rd	23.20	889	7/31/2018	353.4	303.4	2.48	2.92	Unknown (Non Weather), Tree Out Of ROW, Vehicle Accident (Non Aep), Animal - Non Bird, Equipment Failure, Scheduled Company, Weather - Unknown, Facilitation Of Work, Tree Inside ROW	52.94%, 11.76%, 9.80%, 7.84%, 5.88%, 5.88%, 1.96%, 1.96%, 1.96%	No further actions planned for 2021.	Vehicle Accident (non AEP) accounted for 88% of total SAIDI and 85% of total SAIFI. One Vehicle Accident (non AEP) outage accounted for 61% of total SAIDI and 34% of total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
72	ASHLAND	3000903	HIGHLAND	WURLAND	437.5 Greenup Avenue, Raceland, KY 41169	Wurtland Ave and Riverside	16.48	597	7/21/2020	148.6	279.2	0.86	1.01	Unknown (Non Weather), Equipment Failure, Tree Out Of ROW, Vine, Animal - Non Bird, Weather - Unknown, Scheduled Company, Vehicle Accident (Non Aep), Animal - Bird, Tree Inside ROW	21.88%, 21.88%, 9.38%, 9.38%, 9.38%, 6.25%, 6.25%, 3.13%, 3.13%	No further actions planned for 2021.	Weather - Unknown accounted for 53% of total SAIDI and 25% of total SAIFI. Equipment failure accounted for 20% of total SAIDI and 30% of total SAIFI. One Weather - Unknown outage accounted for 46% of total SAIDI and 17% of total SAIFI.
73	HAZARD	3308002	JACKSON	PANBOWL	Cripple Creek Rd, Jackson	Part of Jackson, Part of Quicksand, Lick Branch	32.29	1,030	1/18/2020	233.9	272.7	1.52	3.24	Equipment Failure, Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Cust. Equipment > 1 Customer, Vehicle Accident (Non Aep), Weather - Flood/Slide, Weather - Unknown, Animal - Non Bird, Tree Removal (Non Aep)	23.81%, 19.05%, 14.29%, 9.52%, 4.76%, 4.76%, 4.76%, 4.76%, 4.76%, 4.76%, 4.76%	No further actions planned for 2021.	Equipment Failure accounted for 85% of the total SAIDI and 63% of the total SAIFI.
74	ASHLAND	3000102	ASHLAND	29 STREET	2431 Greenup Ave., Ashland, KY 41101	South Ashland, along US 23, 29th St to 39th St	6.94	585	3/28/2020	149.0	271.4	1.57	4.56	Equipment Failure, Unknown (Non Weather), Tree Inside ROW, Tree Out Of ROW, Weather - Lightning, Scheduled Company	38.89%, 33.33%, 11.11%, 5.56%, 5.56%	No further actions planned for 2021.	Equipment Failure accounted for 42% of the total SAIDI and 24% of the total SAIFI. Unknown (non-weather) accounted for 32% of total SAIDI and 66% of total SAIFI.
75	ASHLAND	3000304	BELLEFONT	ASHLAND TOWN CT	Off US 23 between SR 5 and A K Steel entrance, Russell	Armco Rd and Russell Rd US23	3.32	265	3/13/2021	175.7	271.2	0.92	0.91	Equipment Failure	100.00%	Tree clearing completed in 2021.	Equipment failures accounted for 100% of total SAIDI and 100% of total SAIFI. One Equipment Failure (crossarms) outage accounted for 99% of total SAIDI and 97% of total SAIFI.
76	HAZARD	3301402	COMBS	AIRPORTGARDEN	Combs Road, Combs	Combs, Air Port Garden, Lotts Creek, Darfork	43.08	1,009	12/9/2017	245.3	268.7	0.92	1.10	Tree Out Of ROW, Equipment Failure, Scheduled Company, Vine, Unknown (Non Weather), Animal - Non Bird, Tree Inside ROW, Weather - Flood/Slide, Tree Removal (Non Aep), Other, Scheduled Outside Request > 1 Customer, Weather - Ice (1/2 Inch Or > 6 " Snow), Weather - Unknown, Animal - Bird, Corrosion	29.31%, 17.24%, 12.07%, 6.90%, 6.90%, 5.17%, 5.17%, 3.45%, 3.45%, 1.72%, 1.72%, 1.72%, 1.72%, 1.72%	No further actions planned for 2021.	Tree Out of Row outages accounted for 72% of the total SAIDI and Scheduled Outages accounted for 50% of the total SAIFI.
77	ASHLAND	3000802	HAYWARD	LAWTON	Near 6876 SR 174	SR 174, SR 955, SR 1620	37.54	362	11/20/2017	243.6	267.2	0.81	1.37	Equipment Failure, Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Weather - Lightning, Vine, Weather - Unknown, Animal Bushing Xfmr, Overload	25.93%, 22.22%, 14.81%, 11.11%, 7.41%, 3.70%, 3.70%, 3.70%, 3.70%	No further actions planned for 2021.	One Animal Bushing XFRM related outage accounted for 65% of total SAIDI and 72% of total SAIFI.
78	PIKEVILLE	3120103	STANVILLE	HAROLD	Williams Dr, Stanville, KY 41659	Harold, Hurricane Creek, Pike Floyd Hollow	57.11	1,620	10/27/2018	155.1	258.1	1.03	2.34	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Scheduled Company, Animal - Non Bird, Vine, Weather - Unknown, Other, Tree Inside ROW, Facilitation Of Work, Weather - Lightning, Error - Field, Cust. Equipment > 1 Customer	23.68%, 23.68%, 13.16%, 10.53%, 5.26%, 5.26%, 3.95%, 3.95%, 3.95%, 2.63%, 1.32%, 1.32%	No further actions planned for 2021.	Two Equipment Failure outages accounted for 68% of the total SAIDI and 84% of the total SAIFI.
79	ASHLAND	3008701	CANNONSBURG	CANNONSBURG	16400 Ponderosa Dr., Catlettsburg, KY 41129	Bear Cr Rd, SR 3, SR 180, Midland Trail Rd, Laurel Ridge, US 60	34.49	462	12/31/2019	251.5	234.6	1.39	1.55	Unknown (Non Weather), Scheduled Company, Equipment Failure, Tree Out Of ROW, Animal - Bird, Weather - High Winds (Exceeding 60 Mph), Animal - Non Bird	32.56%, 23.26%, 18.60%, 18.60%, 2.33%, 2.33%, 2.33%	No further actions planned for 2021.	Equipment Failure outages accounted for 46% of total SAIDI and 72% of total SAIFI. Tree out of ROW accounted for 34% of total SAIDI and 13% of total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
80	PIKEVILLE	3409302	KENWOOD	AUXIER	980 Industrial Park, Hager Hill, KY 41222	Van Lear, Ky Route 321, East Point, Hager Branch, George Branch, Davis Branch	41.41	1,045	10/30/2020	289.2	220.0	1.66	1.68	Tree Out Of ROW, Scheduled Company, Unknown (Non Weather), Facilitation Of Work, Animal - Non Bird, Equipment Failure, Vine, Weather - Unknown, Tree Removal (Non Aep), Other	32.84%, 22.39%, 11.94%, 7.46%, 7.46%, 7.46%, 4.48%, 2.99%, 1.49%, 1.49%	No further actions planned for 2021.	One Tree Inside of ROW outage accounted for 15% of the total SAIDI and 3% of the total SAIFI.
81	ASHLAND	3010601	RUSSELL	KENWOOD	990 Ashland Drive, Russell, KY 41169	Poplar Ln, Seaton Dr, Kenwood Dr	24.64	1,495	11/24/2018	96.3	214.9	1.04	1.82	Unknown (Non Weather), Equipment Failure, Scheduled Company, Tree Out Of ROW, Vehicle Accident (Non Aep), Weather - Lightning, Facilitation Of Work, Ug Const. /Dig-Ins (Non Aep), Error - Field	33.33%, 26.19%, 11.90%, 11.90%, 4.76%, 4.76%, 2.38%, 2.38%, 2.38%	No further actions planned for 2021.	Equipment Failure accounted for 34% of total SAIDI and 66% of total SAIFI. Tree out of ROW accounted for 23% of total SAIDI and 13% of total SAIFI. Unknown (non weather) accounted for 24% of total SAIDI and 6% of total SAIFI.
82	ASHLAND	3002105	10TH STREET	MIDTOWN	Greenup Ave and 10th St, Ashland	Winchester and Greenup Ave, Downtown Ashland	3.94	529	5/4/2019	99.5	208.7	0.60	1.70	Weather - Unknown, Unknown (Non Weather), Equipment Failure, Scheduled Company	25.00%, 25.00%, 25.00%, 25.00%	No further actions planned for 2021.	One Weather - Unknown accounted for 95% of total SAIDI and 96% of total SAIFI.
83	ASHLAND	3003702	COALTON	CANNONSBURG	2449 South Big Run Rd, Meads, KY 41101	US 60, Big Run, City of Cannonsburg	23.45	514	6/17/2017	167.4	200.1	1.59	1.86	Weather - Unknown, Unknown (Non Weather), Equipment Failure, Scheduled Company	25.00%, 25.00%, 25.00%, 25.00%	No further actions planned for 2021.	Scheduled company related outages accounted for 39% total SAIDI and 16% of total SAIFI. Tree out of ROW related outages accounted for 17% of total SAIDI and 6% of total SAIFI. Vine related outages accounted for 19% of total SAIDI and 31% of total SAIFI. Weather- Unknown related outages accounted for 10% of total SAIDI and 32% of total SAIFI.
84	PIKEVILLE	3409002	W.PAINTSVILLE	STAFFORDSVILLE	48 William Henry Dixon Blvd, Paintsville, KY 41240	KY Route 321, US HWY 23, KY Route 40, Little Mud Road, Hurricane Branch	51.83	1,149	2/10/2021	238.4	197.7	1.46	1.52	Animal - Non Bird, Equipment Failure, Scheduled Company, Tree Out Of ROW, Unknown (Non Weather), Vehicle Accident (Non Aep), Animal - Bird, Facilitation Of Work, Scheduled Outside Request > 1 Customer	27.27%, 25.45%, 21.82%, 14.55%, 3.64%, 1.82%, 1.82%, 1.82%, 1.82%	First phase on West Paintsville - Staffordsville and Falcon - Oil Springs tie line to be completed in 2021.	One Equipment Failure outage accounted for 49% of the total SAIDI and 71% of the total SAIFI.
85	HAZARD	3312201	ENGLE	INDUSTRIAL PARK	Coalfield Industrial Dr, Engle	Coal Fields Industrial Park	4.56	26	2/15/2019	54.6	194.2	0.53	1.19	Scheduled Company, Unknown (Non Weather), Animal Bus, Equipment Failure	40.00%, 20.00%, 20.00%, 20.00%	No further actions planned for 2021.	An Animal Bus contact accounted for 93% of the total SAIDI, and 84% of the total SAIFI.
86	HAZARD	3309002	JEFF	JEFF	HWY 7, Jeff	Jeff, Kenmont	5.69	117	9/4/2019	231.0	178.6	0.90	1.73	Tree Out Of ROW, Facilitation Of Work, Unknown (Non Weather), Scheduled Company, Tree Inside ROW, Equipment Failure	25.00%, 25.00%, 16.67%, 16.67%, 8.33%, 8.33%	No further actions planned for 2021.	Facilitation of Work accounted for 49% of the total SAIFI.

Section 5 - Circuit Report
Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
87	PIKEVILLE	3402003	KEYSER	MULLINS	3249 North Mayo Trail, Pikeville 41501	Pikeville	30.65	1,101	6/20/2020	111.6	170.7	0.90	1.39	Tree Out Of ROW, Unknown (Non Weather), Weather - Unknown, Equipment Failure, Scheduled Company, Tree Inside ROW, Cust. Equipment > 1 Customer	38.89%, 16.67%, 13.89%, 13.89%, 8.33%, 5.56%, 2.78%	No further actions planned for 2021.	Two Tree Out of ROW outages accounted for 54% of the total SAIDI and 41% of the total SAIFI.
88	ASHLAND	3110903	WURLAND	RT.503	50 Wurtland Avenue, Wurtland, KY 41144	Rt 503 and Wurtland Ave	46.23	966	3/18/2017	414.8	157.0	1.79	1.87	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Scheduled Company, Animal - Non Bird, Weather - Unknown, Vine, Facilitation Of Work, Tree Removal (Non Aep), Tree Inside ROW	26.67%, 20.00%, 13.33%, 13.33%, 13.33%, 4.44%, 2.22%, 2.22%, 2.22%, 2.22%	Tree clearing completed in 2021. Tie line project scheduled to start by end of 2021.	Equipment Failure outages accounted for 69% of total SAIDI and 82% of total SAIFI. Tree out of ROW accounted for 19% of total SAIDI and 12% of total SAIFI.
89	ASHLAND	3001004	HITCHINS	EK ROAD	3655 State Highway 773, Hitchins, KY 41146	N Hwy 773 and Ek Railroad, Hitchins/Grayson	31.87	526	3/9/2018	160.8	154.3	1.22	1.55	Scheduled Company, Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Other Utility, Vehicle Accident (Non Aep), Tree Inside ROW	33.33%, 30.95%, 19.05%, 9.52%, 2.38%, 2.38%, 2.38%	No further actions planned for 2021.	Tree out of ROW accounted for 69% of total SAIDI and 77% of total SAIFI. One Tree out of ROW outage accounted for 33% of total SAIDI and 34% of total SAIFI.
90	PIKEVILLE	3408101	SALISBURY	PRINTER	2241 Ky Rt 122, Printer, KY 41655	KY Route 122, Fisher Hollow, KY Route 2030, Shop Branch	19.64	306	7/12/2018	170.8	149.0	0.59	1.01	Tree Out Of ROW, Scheduled Company, Equipment Failure, Facilitation Of Work, Unknown (Non Weather), Tree Inside ROW	42.11%, 26.32%, 15.79%, 5.26%, 5.26%, 5.26%	No further actions planned for 2021.	One Tree Outside of ROW outage accounted for 18% of the total SAIDI and 11% of the total SAIFI. Two Scheduled Company outages accounted for 9% of the total SAIDI and 40% of the total SAIFI.
91	PIKEVILLE	3409303	KENWOOD	HAGER HILL	980 Industrial Park, Hager Hill, KY 41222	KY Route 321, KT Route 1428, Lick Fork, Middle Fork	49.95	954	1/7/2017	198.8	148.8	1.41	2.04	Scheduled Company, Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Animal - Non Bird, Facilitation Of Work, Vehicle Accident (Non Aep), Tree Inside ROW, Weather - Unknown, Vine	25.86%, 18.97%, 18.97%, 13.79%, 8.62%, 3.45%, 3.45%, 3.45%, 1.72%, 1.72%	Tree clearing scheduled for 2021.	One Animal - Non Bird outage accounted for 13% of the total SAIDI and 47% of the total SAIFI.
92	ASHLAND	3008003	47TH STREET	CATLETTSBURG	US 23 and 47th St, Catlettsburg	US 23, City of Catlettsburg	27.63	1,270	3/16/2019	90.3	147.5	0.72	2.06	Unknown (Non Weather), Equipment Failure, Tree Out Of ROW, Scheduled Company, Facilitation Of Work, Vehicle Accident (Non Aep), Tree Removal (Non Aep), Weather - Unknown, Weather - High Winds (Exceeding 60 Mph), Animal - Non Bird, Animal - Bird, Tree Inside ROW	22.22%, 18.52%, 14.81%, 11.11%, 7.41%, 3.70%, 3.70%, 3.70%, 3.70%, 3.70%, 3.70%, 3.70%	Station transformer bushings replaced in 2021.	Equipment Failure accounted for 57% of total SAIDI and 18% of total SAIFI. Animal - non bird accounted for 29% of total SAIDI and 20% of total SAIFI. Scheduled company accounted for 5% of total SAIDI and 41% of total SAIFI.
93	PIKEVILLE	3409301	KENWOOD	W VANLEAR	980 Industrial Park, Hager Hill, KY 41222	Industrial Park, KY Route 1107, KY Route 302, Millers Creek	18.82	474	10/22/2016	78.4	139.7	0.94	1.42	Animal - Non Bird, Scheduled Company, Equipment Failure, Unknown (Non Weather), Tree Out Of ROW, Vine, Facilitation Of Work	20.69%, 20.69%, 17.24%, 17.24%, 17.24%, 3.45%, 3.45%	Tree clearing scheduled for 2021.	Three Tree Outside of ROW outages accounted for 47% of the total SAIDI and 9% of the total SAIFI. Two Equipment Failure outages accounted for 30% of the total SAIDI and 65% of the total SAIFI. Two Scheduled Company outages accounted for 23% of the total SAIDI and 8% of the total SAIFI.
94	ASHLAND	3001203	HOWARD COLLINS	FLOYD	3600 Floyd Street, Ashland, KY 41101	Crooks and Moore St	11.63	1,428	5/30/2020	118.2	110.6	1.12	1.13	Equipment Failure, Unknown (Non Weather), Tree Out Of ROW, Animal - Non Bird, Weather - Unknown, Facilitation Of Work, Scheduled Company	38.10%, 28.57%, 14.29%, 4.76%, 4.76%, 4.76%	No further actions planned for 2021.	Equipment Failure related outages accounted for 85% of total SAIDI and 93% of total SAIFI. One Equipment Failure (pole fire) related outage accounted for 82% of total SAIDI and 90% of total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
95	HAZARD	3309101	WHITESBURG	WHITESBURG	HWY 931, Whitesburg	City of Whitesburg	9.76	615	4/21/2017	110.9	98.4	0.83	1.30	Equipment Failure, Scheduled Company, Unknown (Non Weather), Vehicle Accident (Non Aep), Tree Out Of ROW, Vine, Error - Field, Cust. Equipment > 1 Customer, Scheduled Outside Request > 1 Customer	33.33%, 23.81%, 14.29%, 4.76%, 4.76%, 4.76%, 4.76%, 4.76%	Tree clearing scheduled for 2021.	Scheduled outages accounted for 80% of the total SAIFI.
96	PIKEVILLE	3120102	STANVILLE	TRAM	Williams Dr, Stanville, KY 41659	Tram, Mare Creek, Ivy Creek	33.34	840	9/24/2016	94.9	89.3	0.27	0.40	Equipment Failure, Tree Out Of ROW, Unknown (Non Weather), Tree Inside ROW, Animal - Non Bird, Scheduled Company, Facilitation Of Work, Vine, Other	35.29%, 23.53%, 14.71%, 5.88%, 5.88%, 5.88%, 2.94%, 2.94%, 2.94%	Tree clearing scheduled for 2021.	One Tree Inside of ROW outage accounted for 24% of the total SAIDI and 23% of the total SAIFI.
97	ASHLAND	3116702	BELHAVEN STATION	INDIAN RUN	260 Thompson Road, Russell, KY 41169	Reed St and Route 207, Flatwoods	19.78	1,031	2/6/2021	75.7	89.0	0.55	0.35	Unknown (Non Weather), Tree Out Of ROW, Equipment Failure, Tree Inside ROW, Weather - Unknown, Facilitation Of Work, Animal - Non Bird, Scheduled Company	41.38%, 27.59%, 13.79%, 3.45%, 3.45%, 3.45%, 3.45%	Tree clearing completed in 2021. Tie line project scheduled to start by end of 2021.	Tree out of Row accounted for 37% of total SAIDI and 34% of total SAIFI. Equipment Failure outages accounted for 31% of total SAIDI and 30% of total SAIFI. Tree inside ROW accounted for 17% of total SAIDI and 34% of total SAIFI.
98	PIKEVILLE	3410503	S.PIKEVILLE	HOSPITAL	332 South Mayo Trail, Pikeville KY 41501	Pikeville	6.09	171	10/20/2018	65.5	85.9	0.50	1.15	Unknown (Non Weather), Equipment Failure, Scheduled Company	60.00%, 20.00%, 20.00%	No further actions planned for 2021.	Unknown Non Weather-Unknown outage accounted for 82% of the total SAIDI and 88% of the total SAIFI.
99	ASHLAND	3000302	BELLEFONT	FLATWOODS	Off US 23 between SR 5 and A K Steel entrance, Russell	Diedrich Blvd	3.47	88	2/5/2021	78.9	66.3	0.71	0.85	Unknown (Non Weather), Cust. Equipment > 1 Customer, Foreign Object (Non Animal)	50.00%, 25.00%, 25.00%	Tree clearing completed in 2021.	One Unknown (non weather) outage accounted for 54% of total SAIDI and 48% of total SAIFI.
100	ASHLAND	3001401	LOUISA	CITY	Town Hill Rd off Hwy 32, Louisa	Town Hill Rd and N of Highway 3, Louisa	9.56	834	11/27/2019	52.9	55.0	0.88	1.20	Equipment Failure, Unknown (Non Weather), Scheduled Company, Vine, Tree Out Of ROW	41.18%, 35.29%, 11.76%, 5.88%, 5.88%	No further actions planned for 2021.	Equipment Failure accounted for 85% of total SAIDI and 89% of total SAIFI. One Equipment Failure outage (pole fire) accounted for 67% of total SAIDI and 83% of total SAIFI.
101	ASHLAND	3002103	10TH STREET	12TH STREET	Greenup Ave and 10th St, Ashland	12th St, Oakview Rd and Pollard, Ashland	7.63	588	5/4/2019	38.9	49.4	0.45	0.30	Tree Out Of ROW, Equipment Failure, Unknown (Non Weather), Vehicle Accident (Non Aep), Tree Removal (Non Aep), Scheduled Company, Facilitation Of Work, Weather - Unknown, Animal - Non Bird	42.11%, 15.79%, 10.53%, 5.26%, 5.26%, 5.26%, 5.26%, 5.26%	No further actions planned for 2021.	Tree out of ROW accounted for 50% of total SAIDI and 30% of total SAIFI. Scheduled Company outages accounted for 31% of total SAIDI and 39% of total SAIFI.

Section 5 - Circuit Report
 Reporting Year : 2020

	District	Station/ Circuit Number	Station Name	Circuit Name	Station Location	Area Served	Circuit Length (Mi)	Number of Customers Served	Last Circuit R/W Trim Date Completed	Reliability Data For Reporting Year				Circuit Outage Causes for Report Year		List of Corrective Actions	Comments
										Circuit 5 Year Avg SAIDI	Reporting Year SAIDI	Circuit 5 Year Avg SAIFI	Reporting Year SAIFI	Outage Causes	% of Outages Due to Causes Listed in Previous Column		
102	ASHLAND	3010603	RUSSELL	ASHLAND OIL	990 Ashland Drive, Russell, KY 41169	Ashland Dr	1.09	7	11/4/2020	18.1	38.3	0.29	0.29	Unknown (Non Weather)	100.00%	No further actions planned for 2021.	One Unknown (non-weather) outage accounted for 100% of total SAIDI and 100% of total SAIFI.
103	ASHLAND	3000301	BELLEFONT	WESTWOOD	Off US 23 between SR 5 and A K Steel entrance, Russell	Main St, Westwood Area, Ashland	23.47	1,601	8/20/2016	101.0	38.1	0.62	0.88	Equipment Failure, Unknown (Non Weather), Scheduled Company, Vine, Tree Out Of ROW, Animal - Non Bird, Weather - Unknown, Error-Field, Vehicle Accident (Non Aep), Tree Inside ROW	23.33%, 23.33%, 21.67%, 11.67%, 8.33%, 5.00%, 1.67%, 1.67%, 1.67%, 1.67%	Tree clearing scheduled for 2021.	One Scheduled outage (pole replacement) accounted for 45% of total SAIDI and 68% of total SAIFI.
104	ASHLAND	3000101	ASHLAND	25TH STREET	2431 Greenup Ave., Ashland, KY 41101	25th St and King's Daughters Hosp.	1.32	111	3/21/2020	28.3	27.4	0.15	0.16	Equipment Failure	100.00%	No further actions planned for 2021.	One Equipment Failure outage (broken cutout) accounted for 100% of total SAIDI and 100% of total SAIFI
105	PIKEVILLE	3411701	CEDAR CREEK	HOOPWOOD	Cedar Creek Road, Pikeville, KY	Pikeville	1.70	43	2/5/2021	9.6	19.2	0.21	0.42	Animal - Non Bird, Unknown (Non Weather), Equipment Failure	33.33%, 33.33%, 33.33%	Tree clearing scheduled for 2021.	One Equipment Failure outage accounted for 80% of the total SAIDI and 89% of the total SAIFI.
106	ASHLAND	3002101	10TH STREET	6TH STREET	Greenup Ave and 10th St, Ashland	8th St and Ashland Town Mall	1.04	93	5/4/2019	9.5	9.8	0.12	0.03	Equipment Failure	100.00%	No further actions planned for 2021.	One Equipment Failure outage (bad xfrm) accounted for 100% of total SAIDI and 100% of total SAIFI.
107	ASHLAND	3000105	ASHLAND	1ST STREET	2431 Greenup Ave., Ashland, KY 41101	2431 Greenup Ave., Ashland, KY 41101	1.89	123	3/21/2020	43.7	8.9	0.11	0.12	Equipment Failure, Weather - Lightning, Facilitation Of Work	33.33%, 33.33%, 33.33%	No further actions planned for 2021.	One Equipment failure outage (cutout) accounted for 51% of total SAIDI and 13% of total SAIFI. One Facilitation of Work outage accounted for 35% of total SAIDI and 68% of total SAIFI. One Weather - Lightning outage accounted for 15% of total SAIDI and 20 % of total SAIFI.

**Reliability Metrics for
 Comparable Utilities**

Reliability Metrics		2016	2016	2016	2017	2017	2017	2018	2018	2018	2019	2019	2019	2020	2020	2020
Utility	State	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
Appalachian Power Co	VA	314.7	1.615	194.9	293.5	1.422	206.4	426.5	1.786	238.8	382.9	1.705	224.575	310.2	1.510	205.43
Appalachian Power Co	WV	596.3	2.564	232.6	597.9	2.513	237.9	693.9	2.705	256.5	650.8	2.883	225.737	618.2	2.517	245.61
Big Sandy Rural Electric Coop Corp	KY	322.6	2.400	134.4	373.8	2.530	147.8	448.8	3.770	119.0	452.3	3.660	123.571	680.8	3.620	188.061
Craig Botetourt Electric Coop	VA	596.7	3.690	161.7	477.1	3.760	126.9	656.6	3.020	217.4	610.4	3.160	193.171	N/A	N/A	N/A
Craig Botetourt Electric Coop	WV	327.9	3.720	88.1	832.2	4.680	177.8	386.5	4.000	96.6	731.4	2.730	267.927	N/A	N/A	N/A
Haywood Electric Member Corp	NC	397.3	3.052	130.2	464.4	3.780	122.9	490.7	3.399	144.4	599.8	4.918	121.953	446.2	3.703	120.507
Kentucky Power Co	KY	445.7	2.166	205.8	406.3	2.169	187.3	484.2	2.342	206.7	485.0	2.485	195.171	410.7	2.060	199.369
Monongahela Power Co	WV	368.5	1.918	192.1	378.3	1.878	201.5	423.3	2.322	182.3	373.3	2.170	172.017	406.8	2.182	186.445
Wheeling Power Co	WV	458.7	2.307	198.8	690.9	2.551	270.8	695.6	2.798	248.6	524.6	2.441	214.912	601.3	2.255	266.652

VERIFICATION

The undersigned, Brian K. West, being duly sworn, deposes and says he is the Vice President, Regulatory & Finance for Kentucky Power Company, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief.



Brian K. West

Commonwealth of Kentucky)
)
County of Boyd)

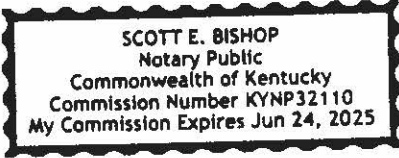
Case No. 2021-00481

Subscribed and sworn before me, a Notary Public, by Brian K. West this 16th day of March, 2022.



Notary Public

My Commission Expires June 24, 2025



Notary ID Number: KYNP32110