DATA REQUEST

KPSC 1_1 Refer to the Application, generally.
a. Provide a copy of the PJM RTEP analysis results showing the contingency and double contingency problems that will be alleviated by the transmission line and substation upgrades. Include in the response whether there were any alternate solutions evaluated but not selected as a cost-effective solution.
b. Explain whether the projects were at some point considered as separate or in smaller bundles in the RTEP process, and then combined into the proposed bundle as presented in the Application.

RESPONSE

a. This project is not intended to address single or double contingency problems, and therefore the requested analysis is not available. However as part of the M-3 process PJM performed a Do No Harm (DNH) analysis to identify whether or not the project caused any criteria violations prior to posting the project to the local plan. There were no violations identified by PJM.

The Company considered one alternative to the proposed project. See Company witness Koehler's testimony at page 18. The alternative would have involved rebuilding the Beaver Creek – McKinney 46 kV #1 circuit, approximately 25 miles, and keeping the system configuration as is. In order to provide comparable benefits of the project, the Company also would be required to construct approximately 6.5 miles of 138 kV line from the Stanville station, and rebuild approximately 3.5 miles of 138 kV existing single circuit to double circuit 138 kV line in order to provide the looped 1 service to the load served out of Hays Branch substation. This alternative was not selected because it was estimated to be about 20% more expensive than the proposed project. Additional disadvantages of this alternative are described in Company Witness Koehler's testimony at page 19-20.

b. The project was at all times considered in its entirety, as it is an overall holistic solution that addresses multiple needs in the area.

This project addresses 46 kV needs as well as provides looped service to multiple radial loads in the area by establishing 15 miles of new greenfield 138 kV line, installing one new greenfield substation (Eastern), converting the Garrett 46 kV substation to a 138 kV substation, and establishing 138 kV Snag Fork service and retiring the 46 kV facilities.

All the pieces of this solution are required to address the identified needs in the most cost effective manner. A piecemeal approach would have resulted in inefficiencies by addressing each need through individual projects.

Witness: Nicolas C. Koehler

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_2 Refer to the Application, page 6, paragraph 16. Explain whether an environmental impact assessment is required or has been completed for the proposed line. If so, provide a copy of the assessment.

RESPONSE

No environmental impact assessment was completed for the proposed line and one is not anticipated to be required for federal regulatory approvals.

Witness: George T. Reese

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_3 Refer to the Application, generally. Explain what will happen to the material that is retired.

RESPONSE

Retired line material that has any value, such as wire, is accumulated and hauled for recycling by a scrap dealer. The same applies for any station material with value. Materials with no scrap value are properly disposed of. The disposal will be accounted for in accordance with FERC Electric Plant Instruction No. 10.B.(2).

Witness: Brian K. West

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_4 Refer to the Application, page 7, paragraph 22. Explain whether the 4.131-acre tract has already been acquired.

RESPONSE

Yes. The additional 4.131 acres for the expansion of Garrett Substation has been acquired.

Witness: George T. Reese

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_5 Refer to the Application, page 11, paragraph 40.
a. Explain what is meant by the following statement: "Kentucky Power projects the Company's share of the annual operating cost will be approximately $96,400."
b. Explain what other entities will share in the operating costs of the project and state the total annual operating cost.

RESPONSE

a.-b. Kentucky Power Company will be the sole owner of this proposed project, and thus its "share" of the annual operating costs is 100%. No other entities will share in the operating cost or ownership of the project, and the total annual operating cost will be approximately $96,400.

Witness: Brian K. West

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_6 Refer to the Application, page 11, paragraph 41. Explain whether the 4.373-acre tract has already been acquired.

RESPONSE

Yes. The 4.373 acre tract has been acquired for the Eastern Substation.

Witness: George T. Reese

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_7 Refer to the Direct Testimony of George T. Reese (Reese Testimony), page 26, lines 1–5. Provide the bat portal studies conducted relative to the expansion of the Garrett Substation.

RESPONSE

Please see KPCO_R_KPSC_1_7_Attachment1 for the requested information.

Witness: George T. Reese

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Bat Survey Report

American Electric Power
Garrett Substation Expansion
Floyd County, Kentucky

GAI Project Number: C190264.37
October 2021

BOUNDLESS ENERGY℠

Prepared by: GAI Consultants, Inc.
Northern Kentucky Office
11 Spiral Drive, Suite 8
Florence, Kentucky 41042

Prepared for: Appalachian Power Company
P.O. Box 2021
Roanoke, Virginia 24022

Bat Survey Report

American Electric Power
Garrett Substation Expansion
Floyd County, Kentucky

GAI Project Number: C190264.37

October 2021

Prepared for:
Appalachian Power Company
P.O. Box 2021
Roanoke, Virginia 24022

Prepared by:
GAI Consultants, Inc.
Northern Kentucky Office
11 Spiral Drive, Suite 8
Florence, Kentucky 41042

Report Authors:

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Assistant Environmental Manager

Priya Kudlu, MS
Senior Project Environmental Specialist

Adam M. Mann, MS
Environmental Manager

Table of Contents

1.0 Introduction

American Electric Power (AEP) is proposing the Garrett Substation Expansion (Project) in Floyd County, Kentucky (KY). The Project involves expanding the existing Garrett Substation in the Village of Garrett, north of State Route 777 (Figure 1). Based on the Project design, no tree clearing is expected.

To comply with Section 7 of the Endangered Species Act (ESA), AEP is informally consulting with the United States Fish and Wildlife Service (USFWS) Kentucky Field Office (KFO) regarding potential effects of the Project on federally-listed bat species. Based on a Project review conducted on the USFWS's Information for Planning and Consultation (IPaC) system (last accessed March 17, 2021), the Project is within the ranges of the federally-endangered Indiana bat (*Myotis sodalis*), the federally-endangered gray bat (*Myotis grisescens*), and the federally-threatened northern long-eared bat (*Myotis septentrionalis*). Based on the IPaC results, and the latest habitat mapping available on the KFO website (dated August 2019), it is presumed the Project is not within known-use areas for these species.

2.0 Suitable Portal

In December 2020, during an environmental field review within a 2.8-acre Project Study Area, GAI biologists identified an abandoned mine portal potentially suitable for use by bats. The portal location is shown on the Wayland, KY topographic map with a mine tunnel or cave entrance symbol (Figure 1), and was found at coordinates 37.47826, -82.82364.

In January 2021, GAI dispatched a permitted bat biologist to evaluate the portal's suitability based on a Phase I Habitat Assessment, as described in the *Range-wide Indiana Bat Survey Guidelines, March 2020* (USFWS Guidelines; USFWS 2020). The permitted bat biologist determined the portal met the minimum criteria for being considered suitable for bats. The portal opening is closed by a wall of cement blocks, but gaps and holes (greater than six inches in diameter) around the edges of the wall are enough to allow bats to fly through. In addition, the passage appeared to continue deep (greater than 50 feet) to provide a good thermal regime for hibernation and was blowing cold air at the time of the assessment. The cement-block wall is likely facilitating the thermal stability of the passage. Temperatures within the portal (measured using an infrared thermometer) were approximately 4° degrees Celsius (39° F), compared to outside temperatures of approximately 10° Celsius (50° F). The entrance did not show evidence of flooding or recent collapse. Photographs of the abandoned mine portal are included in Appendix A. A Portal Assessment Data Sheet is included in Appendix B.

The portal is at the base of a hill on the edge of the Study Area (Figure 1), with associated internal mine workings appearing to extend into the hill and away from the Project. It is unknown if the Project will affect the portal; therefore, AEP chose to conduct a spring presence/absence survey at the portal to determine if it is used by listed bats.

3.0 Methods

GAI performed a spring harp trap survey based on the latest protocols as provided USFWS Guidelines (USFWS 2020). The surveys were conducted in accordance with GAI's Federal Fish and Wildlife Permit (#TE03494B-2) and a Kentucky Department of Fish and Wildlife Resources (KDFWR) Scientific Collecting Permits issued separately to each federally-permitted GAI bat biologist (#2111177, #2111178, and #2111179). Permitted bat biologists were present at the portal during the survey and responsible for overseeing all aspects of the survey, including adherence to the USFWS Guidelines (USFWS 2020). All captured bats were identified by a permitted bat biologist. GAI obtained approval of a spring portal sampling study plan from the KFO and submitted a Project Proposal Form to the KDFWR prior to conducting the survey (Appendix C). The study plan included provisions for implementing the COVID-19 Hierarchy of Controls to prevent/abate spreading of the SARS-CoV-2 coronavirus to native bats.

3.1 Spring Portal Trapping

The USFWS Guidelines for spring portal trapping require surveys be conducted for three complete sampling nights per week for three weeks (nine complete nights of sampling) during the timeframe of April 1 through April 21. Survey weeks are April 1 – 7, 8 – 14, and 15 – 21 rather than calendar weeks. The complete sampling nights each week may or may not be sequential. A total of 45 hours of sampling are required for a spring mine/cave survey to be approved. Based on conversations with the KFO, warm weather in the spring of 2021 allowed the survey to begin prior to April 1. Accordingly, GAI began trapping for three sampling nights per week for three weeks on March 29, 2021. Table 1 shows portal survey dates. Appendix A contains portal survey photographs. Appendix B contains a Survey Site Habitat data sheet.

3.1.1 Bat Captures

Bat biologists identified captured bats to species, recorded various morphometric data, and released the bats unharmed at the capture site. The bat biologists recorded time of capture, species, age, sex, reproductive phase, mass, length of right forearm, and wing condition for each captured bat prior to release. Capture data were recorded on GAI's Bat Captures data sheets (Appendix B).

3.1.2 White-nose Syndrome and COVID-19

The latest White-nose Syndrome (WNS) protocol, the *National White-nose Syndrome Decontamination Protocol – October 2020* (WNS Disease Management Group 2020) was followed. Wing damage as a result of WNS was categorized with the *Wing Damage Index Used for Characterizing Wing Condition of Bats Affected by White-nose Syndrome* (Reichard 2008) and recorded on GAI's Bat Captures data sheets (Appendix B).

GAI implemented COVID-19 protocols required by the USFWS and KDFWR as well as current Centers for Disease Control and Prevention (CDC) COVID-19 general recommendations. Control measures applied on the Project included:

- all surveyors use appropriate PPE, including N95 or KN95 masks;
- minimize survey crew size, minimize bat handling to one person per team, and minimize handling/processing time for any captured bats;
- refrain from purposely blowing on captured bats to aid in determining reproductive condition, discourage biting, etc.;
- conduct daily self-performed health checks (document normal body temperature, lack of COVID-19 symptoms, etc.);
- surveyors with fever, COVID-19 symptoms, etc. should not participate in surveys; and
- surveyors that have tested positive for COVID-19 or have been near someone who has tested positive for COVID-19 should not conduct any bat surveys until passing two negative tests.

All measures were implemented, and no biologists showed COVID-19 symptoms.

3.1.3 Weather

Weather conditions were monitored and recorded during the survey to ensure compliance with the UFWS Guidelines (USFWS 2020). Ambient temperatures must be at or above 10° Celsius (50° F) for the first two hours of the survey and not drop below 4.4° Celsius (40° F) for the remainder of the survey, with no precipitation lasting longer than 30 minutes, and no strong winds more than 50 percent of the time. Temperature, wind speed, and sky condition were recorded on GAI's Bat Captures data sheets (Appendix B).

3.1.4 Bat Detector

An acoustic bat detector (Wildlife Acoustics Song Meter SM2BAT+) was placed in the portal entrance during portal sampling to monitor general bat activity at or within the portal entrance. Call files were recorded for the duration of the five-hour survey each night and tallied hourly. Analysis of recorded bat calls to attempt species identification was not completed because the calls were not expected to be high quality foraging calls. Biologists verified detector functioning by continuous monitoring of the status light on the SM2BAT+ during trap checks and confirming a complete log file was produced during each night of the survey. The detector recorded noise files produced by the biologists during equipment take-down at the end of each survey night, confirming the microphone functionality (Table 2).

3.1.5 Forested Habitat Conditions

Outside of winter hibernation, Indiana bats and northern long-eared bats usually roost in trees. Roost trees are highly variable in their characteristics, including size, height, species, health, and solar exposure; however, they generally possess features such as exfoliating bark, cracks, cavities, hollows, and/or crevices that offer structures for roosting. Depending on the conditions, these roosting features can support one individual to hundreds of individuals.

Because Project construction will occur in an existing open area, no tree clearing is proposed; however, certain forested habitat conditions surrounding the portal were recorded to gain a generalized view of forested bat habitat suitability in the vicinity of the portal. Bat biologists described site features and summer habitat conditions (topography, vegetation, and general habitat description) within approximately 150 meters (500 feet) of the portal and recorded them on GAI's Survey Site Habitat data sheet (Appendix B).

4.0 Results

4.1 Bat Captures

One tri-colored bat was captured on April 5, 2021, during the fourth night of the survey. No federally-listed bats were captured. Appendix A contains a photograph of the captured bat.

4.2 White-nose Syndrome

The bat received a Wing Damage Index (WDI) score of 0, indicating no signs of WNS wing damage.

4.3 Weather

Temperature, precipitation, wind, and other weather factors were within acceptable limits during complete nights of the survey. Survey temperatures ranged from 20.1° to 7.4° Celsius (68.2° to 45.3°F) during the survey period of March 29 through April 14, 2021 with no extended precipitation or sustained high winds during complete survey nights. Temperatures remained at or above 10° Celsius (50° F) for the first two hours of the survey each night and did not drop below 4.4° Celsius (40° F) on any night (Table 1, Figure 2).

4.4 Bat Detector

The bat detector recorded bat calls on one night. Seven calls were recorded during the third and fourth hours of the survey on April 13, 2021. Table 2 contains summaries of recorded files by hour and day.

4.5 Forested Habitat Conditions

Forested habitat around the portal was primarily composed of young deciduous upland forest (Table 3) and characterized as low roosting potential. Common canopy tree species at the site included white oak (*Quercus alba*), red maple (*Acer rubrum*), black locust (*Robinia pseudoacacia*), sweet birch (*Betula lenta*), and American sycamore (*Platanus occidentalis*).

5.0 Conclusions

During the harp trap survey, one tri-colored bat was captured. The spring sampling effort completed for the Project complied with the USFWS Guidelines (USFWS) to survey abandoned mine portals for federally-endangered bats. The survey provided no evidence that federally-endangered bats use the portal.

Based on the lack of federally-listed bat captures, these species are either absent, or present at such reduced capacity that effects from Project activities are expected to be insignificant (do not rise to levels where take occurs) and discountable (extremely unlikely or not expected to occur). Based on the Guidelines, the negative results of this survey are valid for a minimum of five years, through April 21, 2026.

6.0 References

Reichard, J. D. 2008. Wing-damage Index Used for Characterizing Wing Condition of Bats Affected by White-nose Syndrome. Center for Ecology and Conservation Biology, Boston University, Boston, Massachusetts. 10 pp.

USFWS. 2020. Revised Range-wide Indiana Bat Survey Guidelines, March 2020. U.S. Department of Interior, Fish and Wildlife Service, Fort Snelling, Minnesota. 65 pp.

White-nose Syndrome Disease Management Group. 2020. National White-Nose Syndrome Decontamination Protocol – October 2020. www.whitenosesyndrome.org. 7 pp.

TABLES

Table 1

Portal Sampling Dates and Ambient Temperatures

Survey Week	Dates Completed (2021)	Survey Temperatures (°C)		
		Beginning	After Two Hours	End
1	March 29	15.0	10.0	8.0
	March 30	19.0	12.5	11.3
	April 3	13.7	10.2	8.4
2	April 5	16.8	10.8	7.4
	April 6	17.1	12.6	9.1
	April 7	20.1	15.3	11.0
3	April 12	14.8	10.7	7.4
	April 13	17.5	13.5	11.3
	April 14	11.9	11.4	10.5

Table 2

Acoustic File Summary by Hour

Survey Week	Dates Completed (2021)	Bat Call Files by Hour					Total Bat Call Files	Noise Files
		1st	2nd	3rd	4th	5th		
1	March 29						0	2
	March 30						0	6
	April 3						0	4
2	April 5						0	6
	April 6	1					0	7
	April 7						0	6
3	April 12						0	4
	April 13			1	6		7	13
	April 14						0	7

Table 3

Forested Habitat Conditions

Site	Water Source		Tree Species[1]		Canopy Closure[2]	Subcanopy[2]		Roost Potential[3]		Habitat Type[4]
	Type	Distance (m)	Canopy	Subcanopy		Clutter	Type	Rank	Type	
Garrett Portal	Stream	75	*Quercus alba, Acer rubrum, Robinia pseudoacacia, Betula lenta, Platanus occidentalis*	*Acer rubrum, Robinia pseudoacacia, Cornus florida, Cercis canadensis*	M	M	Saplings	L	Dead/ Partial	D, Y, U, C/M, E

Notes:

1 Tree Species: red maple (*Acer rubrum*), sweet birch (*Betula lenta*), eastern redbud (*Cercis canadensis*), flowering dogwood (*Cornus florida*), American sycamore (*Platanus occidentalis*), white oak (*Quercus alba*), black locust (*Robinia pseudoacacia*).

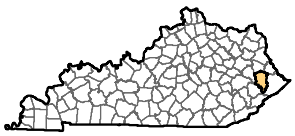
2 Canopy Closure/Subcanopy Clutter: C = Closed; M = Moderate; and O = Open.

3 Roost Potential Rank: H = High; M = Moderate; L = Low; and N = None.

4 Habitat Type: D = Deciduous; C = Coniferous; MD/C = Mixed Deciduous/Coniferous; YS = Young Stand; MS = Mature Stand; L = Lowland Forest; U = Upland Forest; S = Stream; P = Pond; E = Edge; C/M = Cave/Mine; O = Other; and C = Corridor.

FIGURES

PROJECT LOCATION



FLOYD COUNTY, KENTUCKY

LEGEND

Portal

Study Area

0 500 1,000 2,000 Feet

FIGURE 1
PORTAL LOCATION

GARRETT SUBSTATION
EXPANSION PROJECT
AMERICAN ELECTRIC POWER

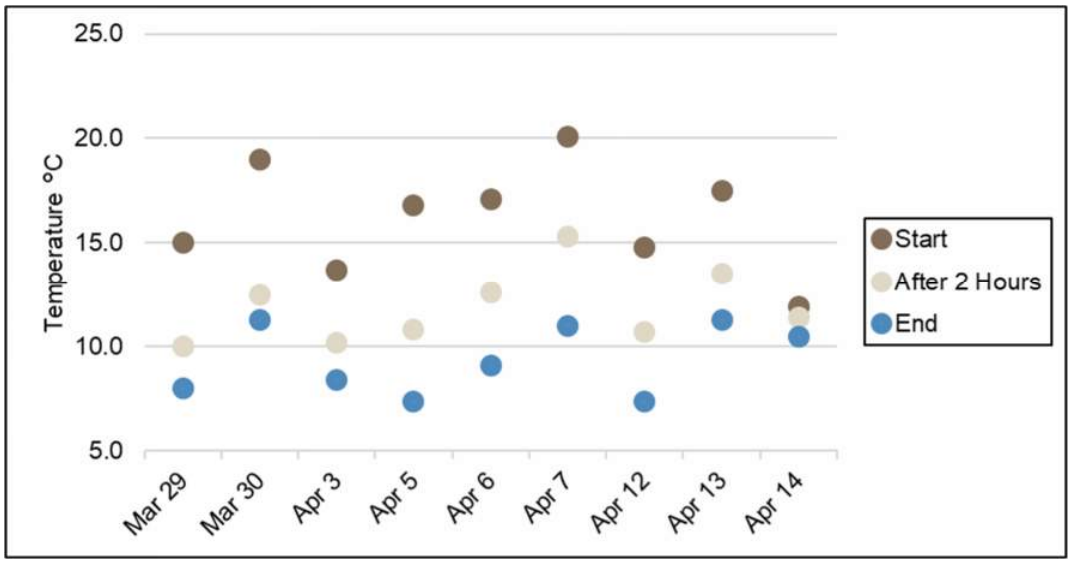
DRAWN BY: PK DATE: 9/29/2021
CHECKED: EFJ APPROVED: AMM

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE: WAYLAND (1979), KENTUCKY, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 09/2021.

G:\C190264.37 - GIS\MXD\USFWS\Portal Location Map.mxd

Figure 2

Ambient Temperatures during Portal Survey



APPENDIX A
Photographs

Photograph 1
Portal Location behind Existing Garrett Substation

Photograph 2
Portal Entrance

Photograph 3
Gaps in Portal Wall

Photograph 4
Larger Hole with IR Thermometer for Scale

Photograph 5
Opening at Edge of Portal

Photograph 6
Passage inside Entrance

Photograph 7
Harp Trap Position during Sampling

Photograph 8
Bat Detector Microphone Position during Sampling

Photograph 9
Tri-colored Bat Captured on April 5, 2021

APPENDIX B
Data Sheets

PORTAL ASSESSMENT DATA

(based on USFWS Phase I Cave/Mine Portal Assessment Data Sheet)

Project No:	C190264.37	Project Name:	Garrett Substation			Photos:	132356-135207
Date:	14-Jan-21	Site:	Portal 1	State:	KY	County:	Floyd
Latitude:	37.47826		Longitude:	-82.82364		Camera No.:	AMM S1OE
Biologists:	Adam Mann					GPS No.:	-

Characteristics	Data	Comments
Opening type (cave, portal, shaft, etc.)	Portal	
Opening size, height x width (or diameter) in feet	4 x 20	Wall closing off most.
Opening horizontal or vertical	H	
Entrance stable?	Y	
Percent canopy cover at portal entrance	25	Very few successional trees surrounding. No PRTs
Slope (up or down from entrance)	O	
Internal dimensions: height x width in feet	3 x 8	Passageway continues back into hillside.
Connected portals or side passages? (describe)	None seen	
Direction of airflow (in or out)	Out	
Amount of airflow (none, slight, heavy)	Slight	Feel cold air blowing out from holes and gaps in wall
Outside air temp (estimated)	10 C	Warm day for mid-January
Portal air temp (warmer or cooler than outside)	4 C	Wall probably makes it more thermally stable
Evidence of collapse? (at entrance or internal)	Yes	Some chunks of ceiling fallen
Internal ceiling stable?	Yes, mostly	
Amount of water in opening	None	
Evidence of past flooding?	No	
Observed length of portal	50 +	Due to limited viewpoint, can't see further inside
Distance to nearest water source	75 m	Stream across the road
Foraging signs? (e.g., moth wings)	No	
Guano present?	No	

Portal Suitable for Bats?	Yes	If yes, explain below:
Suitable thermal environment. Undeterminable passage depth. Places where bats can fly in and out. Three major holes in the wall, one 8" x 6", one 10" x 8", and one 24" x 6". One 15" x 15" with grate in front.		
Portal Survey Recommended?	Yes	If yes, explain below:
Portal can safely be surveyed. Easily accessible and able to isolate entrances.		
Method Recommended:	Harp Trap	
Additional Comments:		
Close up small side entrance holes and trap main holes. Very few trees near entrance. Very disturbed landscape. A lot of trash outside and inside portal.		

SURVEY SITE HABITAT

Project No:	C190264.37	Project Name:	Garrett Substation				
Date:	3-Apr-21	Site:	Garrett Portal	State:	KY	County:	Floyd
Biologists:	Adam Mann, Jason Duffey			Camera No:	AMM/JAD	GPS No:	GAI-2

Roost Potential	
Rank:	Low
Roost Type(s):	Dead/Partial
Describe:	One snag seen east of the project, a few snags across the road and up the hill

Water Source		
Type:	Stream	
Distance (m):	75	

Site Sketch ↑N

Habitat Types		
Forest:	Deciduous	
Age:	Young Stand	
Upland / Lowland:	Upland	
Other Habitats:	Cave/mine	Edge
	-	-

Canopy Species		
DBH Range:	Large (cm)	Small (cm)
	45	20
Percent >40cm DBH:	10	
Closure:	Moderate	
Quercus alba		
Acer rubrum		
Robinia pseudoacacia		
Betula lenta		
Platanus occidentalis		

Subcanopy Species	
Type:	Saplings
Clutter:	Moderate
Acer rubrum	
Robinia pseudoacacia	
Cornus florida	
Cercis canadensis	

Habitat Description

Residential/industrial mix where portal is on edge of forest facing the developed area.

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	29-Mar-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Adam Mann, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1950	0050	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
1930	15.0	0	0	-
2000	14.0	0	0	-
2030	13.0	0	0	-
2100	12.0	0	0	-
2130	11.0	0	0	-
2200	10.0	0	0	-
2230	9.5	0	0	-
2300	9.0	0	0	-
2330	9.0	0	0	-
0000	8.5	0	0	-
0030	8.5	0	0	-
0100	8.0	0	0	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No Bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	30-Mar-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Adam Mann, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9. Mic positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1952	0052	N/A	191957-192058

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
1930	19.0	1-3	0	-
2000	17.5	1-3	0	-
2030	15.0	1-3	0	-
2100	14.0	1-3	0	-
2130	13.5	1-3	0	-
2200	12.5	1-3	0	-
2230	12.3	0	0	-
2300	12.1	1-3	1	-
2330	11.9	0	2	-
0000	11.7	1-3	3	-
0030	11.4	1-3	3	-
0100	11.3	1-3	3	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No Bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	3-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Adam Mann, Jason Duffey				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1956	0056	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
2000	13.7	1-3	0	-
2030	12.5	1-3	0	-
2100	11.8	0	0	-
2130	10.6	0	0	-
2200	10.2	0	0	-
2230	9.8	0	0	-
2300	9.3	0	0	-
2330	9.1	0	0	-
0000	8.8	0	0	-
0030	8.5	0	0	-
0100	8.4	0	0	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No Bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	5-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Jason Duffey, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1958	0058	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
2000	16.8	1-3	1	-
2030	14.1	1-3	1	-
2100	13.0	0	0	-
2130	12.1	0	0	-
2200	10.8	0	0	-
2230	9.8	0	0	-
2300	9.7	0	0	-
2330	8.5	0	0	-
0000	8.1	0	0	-
0030	7.6	0	0	-
0100	7.4	0	0	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
1	HT	N/A	2030	*Perimyotis subflavus*	A	F	NR	35.8	5.2	0	-	203642-204004	-

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	6-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Jason Duffey, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1959	0059	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
2000	17.1	1-3	1	-
2030	15.8	1-3	2	-
2100	14.7	1-3	2	-
2130	13.8	1-3	2	-
2200	12.6	0	1	-
2230	11.8	0	1	-
2300	11.1	0	1	-
2330	10.1	0	1	-
0000	9.8	0	1	-
0030	9.2	0	1	-
0100	9.1	0	1	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	7-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Adam Mann, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9. Mic positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	1956	0056	N/A	191957-192058

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
1930	20.1	1-3	1	-
2000	19.2	1-3	1	-
2030	17.2	1-3	1	-
2100	16.1	1-3	1	-
2130	15.3	1-3	0	-
2200	14.4	1-3	0	-
2230	13.6	1-3	0	-
2300	13.2	1-3	0	-
2330	12.5	1-3	0	-
0000	12.0	1-3	0	-
0030	11.4	1-3	0	-
0100	11.0	1-3	0	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No Bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	12-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Jason Duffey, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	2004	0104	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
2000	14.8	0	0	-
2030	14.1	0	0	-
2100	12.6	0	0	-
2130	11.7	0	0	-
2200	10.7	0	0	-
2230	10.4	0	0	-
2300	9.3	0	0	-
2330	9.4	0	0	-
0000	9.0	0	0	-
0030	7.9	0	0	-
0100	7.4	0	0	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	13-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Jason Duffey, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9, positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	2005	0105	N/A	191643-191901

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
2000	17.5	1-3	3	-
2030	16.3	1-3	3	-
2100	14.6	1-3	3	-
2130	13.9	1-3	2	-
2200	13.5	1-3	2	-
2230	14.4	1-3	3	-
2300	14.0	0	3	-
2330	13.2	0	2	-
0000	12.0	0	1	-
0030	11.7	1-3	2	-
0100	11.3	1-3	2	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No bats									

BAT CAPTURES

Project #:	C190264.37	Project Name:	Garrett Substation		
Date:	14-Apr-2021	Site:	Garrett Portal	Camera #:	AMM S10e
State:	KY	County:	Floyd	GPS #:	GAI-4
Biologists:	Adam Mann, Bethany Gregory				

Description of Net Sets:

Detector #9, Microphone #8 on Cord #9. Mic positioned just inside portal wall at the opening. Harp trap set up in front of opening. Exclusion netting blocking smaller holes.

Net	Length (m)	Height (m)	Latitude (Degree Decimals)	Longitude (Degree Decimals)	Time Up (0000 h)	Time Down (0000 h)	Waypoint	Photo #
1	HT	HT	37.478260	-82.823640	2006	0106	N/A	191957-192058

Time (0000 h)	Temp (°C)	Wind (mph)	Sky Code	Comments
1930	11.9	1-3	3	-
2000	11.5	1-3	3	-
2030	11.6	1-3	5	Approximately 20 mins of drizzle
2100	11.3	1-3	3	-
2130	11.4	1-3	3	-
2200	11.5	1-3	3	-
2230	11.5	1-3	3	-
2300	11.5	1-3	3	-
2330	11.4	1-3	3	-
0000	11.2	1-3	3	-
0030	10.6	1-3	3	-
0100	10.5	1-3	3	-

Capt #	Net	Height in Net (m)	Time (0000 h)	Species	Age (Ad/Jv)	Sex (M/F)	Repro (P/L/PL/ TD/NR)	RFA (mm)	Mass (g)	Wing (0 - 3)	Band / Transmitter #	Photo #	Comments
				No Bats									

APPENDIX C
Correspondence

Jason Duffey

From: Armstrong, Mike <mike_armstrong@fws.gov>
Sent: Monday, March 22, 2021 1:55 PM
To: Adam Mann
Cc: Allison, Carrie; Couch, Zach L (FW); Jason Duffey; Darren W Kidwell; Leah Jackson
Subject: Re: [EXTERNAL] Study Plan for Spring Portal Trapping at Garrett Substation in Floyd County, KY

Thanks Adam.

I have reviewed your proposal and approve of your study plan. Given the warm temps we have had over the last week or so, You are authorized to begin sampling a week earlier than what is outlined in the Survey Guidance. You may begin sampling March 25th.

Please keep me informed of what you are capturing after each week of sampling so that we may make any necessary adjustments.

Be safe,
Mike

Mike Armstrong
Southeast Region Bat Recovery Biologist
U.S. Fish & Wildlife Service
Kentucky Field Office
330 W. Broadway, Room 265
Frankfort, KY 40601
Cell: 502-229-4632

From: Adam Mann <A.Mann@gaiconsultants.com>
Sent: Thursday, March 18, 2021 5:42 PM
To: Armstrong, Mike <mike_armstrong@fws.gov>
Cc: Allison, Carrie <Carrie_Allison@fws.gov>; Couch, Zach L (FW) <zach.couch@ky.gov>; Jason Duffey <J.Duffey@gaiconsultants.com>; Darren W Kidwell <dwkidwell@aep.com>; Leah Jackson <L.Jackson@gaiconsultants.com>
Subject: [EXTERNAL] Study Plan for Spring Portal Trapping at Garrett Substation in Floyd County, KY

Mike,

As we discussed informally in previous emails, please find enclosed (for your review and approval) a study plan to conduct spring portal trapping for bats at an abandoned mine portal in Floyd County.

Please let me know if you have any questions.

Thanks,

Adam

Adam M. Mann
Endangered Species Biologist / Environmental Manager

GAI Consultants, Inc.
Cincinnati / Northern Kentucky Office
11 Spiral Drive, Suite 8 | Florence, KY 41042

Headquarters / Pittsburgh Office
385 East Waterfront Drive | Homestead, PA 15120

859.444.7734

Jason Duffey

From: Carr, Sunni (FW) <Sunni.Carr@ky.gov>
Sent: Monday, March 22, 2021 1:50 PM
To: Jason Duffey
Subject: Re: AEP Garrett Substation Project Proposal Form

Jason,
Thank you for your notification. If there are any concerns Zach will reach out to you.
Thank you,
Sunni

Sent via the Samsung Galaxy S9, an AT&T 5G Evolution capable smartphone
Get Outlook for Android

From: Jason Duffey <J.Duffey@gaiconsultants.com>
Sent: Tuesday, March 16, 2021 3:49:30 PM
To: Carr, Sunni (FW) <Sunni.Carr@ky.gov>
Cc: Adam Mann <A.Mann@gaiconsultants.com>
Subject: AEP Garrett Substation Project Proposal Form

Hello Ms. Carr,

Please find attached a Project Proposal Form and map for the AEP Garrett Substation Project in Floyd County. GAI Consultants proposes to conduct harp trapping at an abandoned mine portal beginning April 1, 2021. Survey methods will follow the USFWS Guidelines, so trapping will be conducted three nights per week for three weeks.

KDFWR collecting permit applications were sent to Meagan Houston on March 8.

We (Adam Mann, CC'd) have been in touch with Mike Armstrong and Zach Couch regarding harp trapping as it relates to bat handling COVID restrictions. We will be sending them a full Study Plan that includes COVID protocols.

I can forward you any of these documents as they become available.

Please let me know if you have any questions or would like any additional information.

Thanks!

Jason A. Duffey
Assistant Environmental Manager

GAI Consultants, 11 Spiral Drive, Suite 8, Florence, KY 41042
T 859.647.6647 **D** 859.692.4152 **M** 937.554.8488

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GAI Consultants
ENGINEERING, PLANNING, AND ENVIRONMENTAL CONSULTING SINCE 1958

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_8 Refer to the Direct Testimony of Nicholas C. Koehler (Koehler Testimony), page 10, lines 11–21.
a. Provide the inspection reports that indicate 142 open conditions have been observed along the Beaver Creek-McKinney 46 kV #1 Circuit.
b. Provide the final reports of all investigations conducted by Kentucky Power in relation to the 36 momentary and 6 permanent outages that occurred on the Beaver Creek-McKinney 46 kV #1 Circuit in the last five years.

RESPONSE

a. Please see KPCO_R_KPSC_1_8_Attachment1 which provides open condition data pulled on 9/8/21. Original condition submission data included open conditions reported up to 1/28/19. Two of these open conditions have been remediated. Since 1/28/19, 69 additional conditions have been identified on the circuit.

b. Please see KPCO_R_KPSC_1_8_Attachment2 which includes outage data from 2015 to 2021 YTD. Please see KPCO_R_KPSC_1_8_Attachment3 which includes dispatch log and investigation information for outages from 2015 to 2021 YTD. The Company initially submitted outage data from 2015 through May 4, 2020. After further review of that outage data, it was identified that there were only four permanent outages, instead of six as noted above during that time period. The four permanent outages were attributed to lightning (2) and vegetation fall-in (2). Since May 4, 2020, there have been five additional momentary outages and one additional permanent outage. The momentary outages were attributed to lightning (3) and weather – ice/snow (2), while the single permanent outage was attributed to customer/other utility.

Witness: Nicolas C. Koehler

Dispatcher Operating Log - Roanoke All

Monday, Dec 06 2021

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1128865** **Event ID: 756676** ***State:*** **KY**

Date Out	*Date In*
07/01/2021 14:32	07/01/2021 14:32

Comments: Circuit reclosed successfully

Information:

Operating Arrangements:

Event Log

07/01/2021 14:32 1432 - The Beaver Creek - McKinney No. 1 46kV circuit operated successfully

Distance To Fault from Beaver Creek: 17.1 miles

1440 - Notified Craig Walters, TFS Line
1440 - Notified Alan Newman, KY DDC
1448 - Notified EKPC, Taylor Osborne

Weather Conditions: Storms in area

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1078645** **Event ID: 743103** ***State:*** **KY**

Date Out	*Date In*
12/25/2020 20:40	12/25/2020 20:40

Comments: Successful Operation

Information:

Operating Arrangements:

Event Log

12/25/2020 20:44 The Beaver Creek - McKinney No. 1 circuit operated and successfully reclosed.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1078481** **Event ID: 742803** ***State:*** **KY**

Date Out	*Date In*
12/25/2020 00:16	12/25/2020 00:16

Comments: Successful operation

Information:

Operating Arrangements:

Event Log

12/25/2020 00:16 The Beaver Creek - McKinney 46kv ckt operated and closed successfully.

Notified Jason Napier EKPC

Notified Andrew Delph KYDDC

Spring Fork **Case#: 1022684** **Event ID: 722876** ***State:*** **KY**

Date Out	*Date In*
05/28/2020	

18:47

Comments: -Customer Equipment failure at Spring Fork

Line Amp Imbalance Alarms
Beaver Creek - McKinney No. 1 46kV Ckt locked out
SOS 20-165709 Rev 4 - Restore

Information: Ky Fuels customer unable to return to service at this time. Customer equipment failure. Shaun Sumner, CAM will notify the RoTDC with an updated ERT.
-The 46kV AB 11 at Spring Fork is Open with tag placed, pending customer repairs.

Operating Arrangements:

Event Log

05/28/2020 18:47 At McKinney, received Line Amp 46kV Beaver Creek #1 Line Apms PH1 Imbalance Alarm

At Allen, received Line Amp 46kV McKinney Line PH1 Amps Imbalance Alarm

1852 - Notified Alan Newman, KYDDC, and asked if he had received any customer calls about low voltage or part power in the area. Alan reports he has not received any customer calls.

1901 - Notified Craig Walters, who reports it is too late to have a helicopter patrol the line, but can have one ready to go first thing in the morning 5/29/20.

1920 - Notified Scott Fry, ROTDC Supervisor, who advises to get ROTDC Engineer, Glenn Echols' input before taking further actions.

1957 - Attempted to notify Glenn Echols, ROTDC Engineer

05/28/2020 20:11 Beaver Creek - McKinney No. 1 46kV Ckt operated and locked out between Shepherd and Spring Fork.

2015 - At McKinney, Line Amp 46kV Beaver Creek #1 Line Amps PH1 Imbalance Alarm cleared

At Allen, Line Amp 46kV McKinney Line PH1 Amps Imbalance Alarm cleared

2015 - Notified:
Craig Walters, T-Line
Alan Newman, KYDDC
Shaun Sumner, CAM
Andrew Harrison, EKPC
Joey Day, Station Servicer, and requested he report to Shepherd

2024 - Notified Scott Fry, ROTDC Supervisor

2122 - Joey Day reports from Shepherd, 46kV MOLDLR W open, locked out. No targets.

Requested Joey Day perform the following at Shepherd:

46kV MOLDLR W	supv	local	tag
46kV MOLDLR W	recl	off	tag
46kV MOLDLR W	ctrl sw	after trip/GF	tag
46kV MOLDLR W	mech	dgage	tag
Spring Fork 46kV Line Pot TR	sec	remove	tag

2134 - Complete

2156- Requested Harvey Martin, Distribution Servicer, perform the following at Spring Fork:

46kV AB 11 open tag

2201 - Complete

2206 - Jeff Everidge requests a fault finder at Spring Fork, first thing in the morning, due to likelihood that weather will not permit helicopter flight.

2215 - Notified Tim Parsons, Pikeville Station Crew Supervisor, and requested he have a fault finder at Spring Fork in the morning.

2220 - Per Joey Day: Harvey Martin, Distribution Servicer, found the remains of a fire on the Kentucky Fuels tap at Spring Fork, large amounts of burnt oil.

2241 - Discussed above findings with Alan Newman, KYDDC, and possibility of test energizing Spring Fork from Shepherd.

2243 - Notified Craig Walters, T-Line. Craig reports ok to test energize Spring Fork.

2244 - Notified Scott Fry, ROTDC Supervisor. Ok to proceed energizing Spring Fork Tap from MOLDLR W at Shepherd.

2254 - Notified Andrew Harrison, EKPC.

2302 - Joey Day reports Harvey Martin has found 2 blown high side fuses and a middle phase insulator blown off and fallen on Kentucky Fuels TR at Spring Fork.

2355 - Requested Joey Day perform the following at Shepherd

Spring Fork 46kV Line Pot TR	sec	replace	remove
46kV MOLDLR W	mech	engage	remove
46kV MOLDLR W	recl	man	remove
46kV MOLDLR W	ctrl sw	close	remove
46kV MOLDLR W	recl	norm	
46kV MOLDLR W	supv	remote	remove

0003 (5/29/20) - Complete. Ckt re-tripped.

05/29/2020 00:08 Notified Andrew Harrison, EKPC.

Requested Joey Day perform the following at Shepherd:

46kV MOLDLR W	supv	local	tag
46kV MOLDLR W	recl	off	tag
46kV MOLDLR W	ctrl sw	after trip/GF	tag
46kV MOLDLR W	mech	dgage	tag
Spring Fork 46kV Line Pot TR	sec	remove	tag

0014 - Complete.

0017 - Notified Alan Newman, KYDDC.

0020 - Notified Craig Walters, T-Line.

05/29/2020 00:21 **ALAN NEWMAN, KENTUCKY DDC, ISSUED ROANOKE NORTH TDC A HOLD ORDER ON TR 1 46KV AB AT SPRING FORK, REPORTING SWITCHING WAS PERFORMED TO**

OPEN, ISOLATE & TAG THIS EQUIPMENT AND IT WILL REMAIN IN THIS STATE UNTIL HOLD ORDER IS RELEASED.

05/29/2020 00:24 **AFTER REVIEWING ALL ISOLATION POINTS AND WORK TO BE PERFORMED: ISSUED JEFF EVERIDGE CLEARANCE ON BEAVER CREEK - MCKINNEY NO. 1 46KV CKT BETWEEN SHEPHERD AND SPRING FORK AND DIRECTED PERSONNEL TO PERFORM THEIR OWN NECESSARY DE-ENERGIZED TESTING AND GROUNDING.**

05/29/2020 06:34 Nathaniel Blankenship reports that a Fault finder is en route to Spring Fork.

05/29/2020 09:42 Jeff Everidge, reports that conductor is down between STRs 24 and 25, it burnt in two.

Note: Ryan Lucas, RoTDC pointed out that an outage to replace STRs 23 and 25 is scheduled for next week. Discussed this with Jeff Everidge, he reports they will replace the STRs during that outage, today they will just repair the conductor. ERT 1400.

Notified Greg Hall, Sta Crew Supv

05/29/2020 11:31 **Jeff Everidge RELEASED CLEARANCE ON Beaver Creek - McKinney No. 1 46kV CKT between Shepherd and Spring Fork, REPORTING ALL GROUNDS REMOVED, PERSONNEL AND EQUIPMENT IN THE CLEAR AND THIS EQUIPMENT CAN BE RETURNED TO SERVICE.**

THE WORK THAT WAS PERFORMED AFFECTS/COULD AFFECT THE RATING OF THIS EQUIPMENT:
[ ] YES* [x] NO
(* IF YES, CHECK "FACILITY RATING AFFECTED" BOX TO NOTIFY FRC)

Jeff Everidge reports he replaced 25' of conductor and used two high tension sleeves to repair the left phase conductor that had "burned Open" between STRs 24 and 25.

05/29/2020 13:03 1303- Shawn Sumner, CAM, reports that Kentucky Fuels will remain out until repairs are made to their equipment. Do not energize their feed. ERT unknown at this time.

1310 - Began switching SOS 20-165709-4 to restore.

Note: This delay in switching was due to emergency switching on the Culloden - Wyoming 765kV CKT. See Event ID: 722925 for more information.

KyDDC reports that they want to perform their switching at Spring Fork deenergized.

1323- Opened 46kV MOLDLR W at Shepherd via SCADA, for the KyDDC to perform their switching deenergized.

05/29/2020 16:44 **1325 - Craig Barber, Roanoke North TDC, released Hold Order to Brent Woods, Kentucky DDC, on TR 46kV AB at Spring Fork and reports switching can be performed to restore equipment normal.**

Notifed Brent Woods, KyDDC that the 46kV MOLDLR W at Shepherd was Open and would remain Open until informed by them that we may close it.

1343- Brent Woods, KyDDC reports that switching to close their Tr 46kV AB at Spring Fork deenergized is complete and we may energize Spring Fork station.

1344- Closed the 46kV MOLDLR W at Shepherd via SCADA.

Note: ***Shawn Sumner, CAM, reports that Kentucky Fuels will remain out until repairs are made to their equipment. ERT unknown at this time.*

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1021129** **Event ID: 722418** ***State:*** **KY**

Date Out	*Date In*
05/23/2020 20:04	05/23/2020 20:04

Comments: Reclosed successfully

Information:

Operating Arrangements:

Event Log

05/23/2020 20:04 SCADA indicated the Beaver Creek - McKinney No. 1 46KV Ckt operated and reclosed successfully.

Notified Alan Newman, Kentucky DDC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1017294** **Event ID: 721282** ***State:*** **KY**

Date Out	*Date In*
05/10/2020 19:26	05/10/2020 19:26

Comments: Ckt operated and reclosed successfully

Information:

Operating Arrangements:

Event Log

05/10/2020 19:26 SCADA indicates Beaver Creek - McKinney No 1 46kV Ckt operated and reclosed successfully.

Notified Allen Jordan, KYDDC.
Homer Wells, EKPC.
Shaun Sumner, CAM.

Beaver Creek-McKinney No 1 46kv ckt between Shepherd and Spring Fork **Case#: 1011773** **Event ID: 719917** ***State:*** **KY**

Date Out	*Date In*
04/21/2020 17:55	04/22/2020 23:35

Comments: 46kV AB 11 at Spring Fork to remain open for customer repairs.

Information: 46kV AB 11 at Spring Fork to remain open for customer repairs.

Operating Arrangements:

Event Log

04/21/2020 17:55 Beaver Creek - McKinney 46kV Ckt operated and locked out between Spring Fork and Shepherd.

Notified:
Andrew Delph, KYDDC
Jeff Polly, SCC
Shaun Sumner, CAM
Keaton Terry, EKPC
Joey Day, Station Servicer
Craig Walters, T-Line
Scott Fry, ROTDC Supervisor

1822 **- Logged Jeff Everidge onto the Spring Fork Tap of Beaver Creek - McKinney No. 1 46kV Ckt for foot patrol.**

1926 - Jeff Everidge reports str 23 of Beaver Creek - McKinney No. 1 46kV Ckt down, and line down between strs 23 and 24.

1943 - Joey Day reports Kentucky Fuels' insulator blown loose and hanging down on line at Spring Fork. Kentucky Fuels is requesting we open 46kV AB 11 at Spring Fork so they can make repairs.

Notified Shaun Sumner, CAM.

1946- Requested Joey perform the following at Spring Fork:

46kV AB 11 open tag

1958 - Complete

Joey reports, per Craig Walters, T-Line, the Spring Fork - Shepherd section of Beaver Creek - McKinney No. 1 46kV Ckt can not be returned to service tonight due to multiple cases of trouble.

04/21/2020 20:39 **Alan Jordan, Kentucky DDC, issued Nathaniel Blankenship, Roanoke North TDC a Hold Order on TR 1 46kV AB at Spring Fork. Reporting switching was performed to open, isolate & tag this equipment and it will remain in this state until Hold Order is released.**

04/21/2020 21:20 Began switching on SOS 20-158837 Rev 8 to isolate 46kV MOLDLR W at Shepherd.

04/21/2020 21:29 Craig Walters, T-lines, reports via email:

The emergency ground based inspection concludes that a tree from outside the ROW has fallen and broken structures K335-23/24. Good-One Excavating will start on the road access in the morning, and the TFS line crews will gather the necessary materials to replace structure K335-24, tomorrow. Temporary repairs will be made to structure K335-23 until the road access and work pad can be completed, and then replaced at a later date. ETR 2000 on 4/22/2020.

04/21/2020 21:45 **AFTER REVIEWING ALL ISOLATION POINTS AND WORK TO BE PERFORMED: ISSUED JEFF EVERIDGE CLEARANCE ON BEAVER CREEK - MCKINNEY NO. 1 46KV CKT BETWEEN SHEPHERD AND SPRING FORK AND DIRECTED PERSONNEL TO PERFORM THEIR OWN NECESSARY DE-ENERGIZED TESTING AND GROUNDING.**

04/21/2020 21:49 **Logged Jeff Everidge off the Beaver Creek - McKinney No. 1 46kV Ckt between Shepherd and Spring Fork.**

04/22/2020 22:56 **JEFF EVERIDGE RELEASED CLEARANCE ON BEAVER CREEK - MCKINNEY 46KV CKT BETWEEN SHEPHERD AND SPRING FORK, REPORTING ALL GROUNDS REMOVED, PERSONNEL AND EQUIPMENT IN THE CLEAR AND THIS EQUIPMENT CAN BE RETURNED TO SERVICE.**

Jeff Everidge reports the following repairs: Replaced str 24. Removed pole top of str 23. Between strs 23 and 24, removed tree fallen from outside ROW; removed left phase static wire; replaced 50' of 3/0 ACSR on left phase.

04/22/2020 23:05 **Roanoke North TDC released Hold Order to Dave May, Kentucky DDC, on TR 1 46kV AB at Spring Fork areporting switching can be performed to restore equipment normal.**

04/22/2020 23:23 Began switching on SOS 20-158837 Rev 8 to restore.

Note: 46kV AB 11 at Spring Fork to remain open for customer repairs.

04/23/2020 09:36 46KV AB 11 at Spring Fork will be tracked on case # **1012436**

04/29/2020 11:50 Mike Smith reports the following targets **at Beaver Creek:**

46kV CB A - 4 ops, 321A: neut time IOC, neut IOC 2, gnd
21A: gnd time OC

BEAVER CREEK - MCKINNEY NO. 1 (46 KV)

Case#: 1008148 **Event ID: 719033** ***State:*** **WV**

Date Out	*Date In*
04/09/2020 07:38	04/09/2020 07:38

Comments: Ckt operated and reclosed successfully.

Information:

Operating Arrangements:

Event Log

04/09/2020 07:38 Ckt operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 1007862** **Event ID: 718967** ***State:*** **KY**

Date Out	*Date In*
04/08/2020 16:35	04/08/2020 16:35

Comments: Reclosed successfully

Information:

Operating Arrangements:

Event Log

04/08/2020 16:35 SCADA indicated the Beaver Crek Mckinney No. 1 46KV Ckt operated and reclosed successfully.

1638 - Notified Brett Woods, KYDDC.

1640 - Notified Dave Owens, EKPC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 996912** **Event ID: 716780** ***State:*** **KY**

Date Out	*Date In*
03/02/2020 00:45	03/02/2020 00:45

Comments: Reclosed successfully

Information: Notified Craig Walters, T-line.

Operating Arrangements:

Event Log

03/02/2020 00:45 SCADA indicated Beaver Creek - McKinney No. 1 46KV Ckt operated and reclosed successfully.

0047 - Notified John Ritter, EKPC.

0050 - Notified Allen Newman, KYDDC.

Will notify T-Line during normal working hours on 3/2/2020. This is the fifth operation since 1/11/2020.

Notified Craig Walters, T-Line, via email.

03/03/2020 15:41 Craig Walters reports the aerial inspection found tall brush near str 10 between Garrett and McKinney. Brush appears to have already been treated at some point; unsure if it is cause of repeated operations. Only other find were tree tops blown out by high winds. Nothing else out of the ordinary. Craig will turn these findings over to Forestry.

See also cases 996020, 995346, 992329, and 983854

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 996020** **Event ID: 716599** ***State:*** **KY**

Date Out	*Date In*
02/26/2020 16:41	02/26/2020 16:41

Comments: Ckt operated and reclosed successfully

Information:

Operating Arrangements:

Event Log

02/26/2020 16:41 Beaver Creek - McKinney No. 1 46kv ckt operated and reclosed succesfully.

Notified Dave May, KYDDC

Notified John Razor, EKPC

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 995346** **Event ID: 716455** ***State:*** **KY**

Date Out	*Date In*
02/24/2020 18:00	02/24/2020 19:41

Comments: Ckt operated and reclosed successfully.

Information:

Operating Arrangements:

Event Log

02/24/2020 18:00 The Beaver Creek - McKinney No. 1 46kV ckt operated and reclosed successfully.

At **Beaver Creek**: Received 46kV McKinney No. 1 S1 - Relay System NonCrt Alarm.

1803 - Notified Mike Reems, EKPC.
1804 - Notified Ken Porter, KYDDC.

Notify personnel during normal working hours 02/25/2020.

02/24/2020 18:48 Notified Mike Hollifield (in area) of alarm. Mike will try to reset remotely.

02/24/2020 19:41 Mike Hollifield, P&C, reported 46kV McKinney 1 S1 Relay Sys Noncrt alarm at Beaver Creek was associated with Abnormal Oscillography Trigger. Mike was able to reset alarm remotely.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 992329** **Event ID: 714976** ***State:*** **KY**

Date Out	*Date In*
02/12/2020 21:21	02/12/2020 21:21

Comments: Successful Operation

Information:

Operating Arrangements:

Event Log

02/12/2020 21:21 2121
The Beaver Creek - McKinney 46kv ckt successfully operated.

2124
Notified Brent Woods, KyDDC.

02/12/2020 21:29 2129
Shannon Johnson, EKPC, notified.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 983854** **Event ID: 707839** ***State:*** **KY**

Date Out	*Date In*
01/11/2020 23:04	01/11/2020 23:06

Comments: Ckt operation and reclose

Information:

Operating Arrangements:

Event Log

01/11/2020 23:04 Received indication of Beaver Creek - McKinney No. 1 46kV Ckt operation and reclose.

Notified Dave May, Ky DDC.

2321- Shannon Johnson, EKPC, has been notified.

BEAVER CREEK - MCKINNEY NOs 1 & 2 (46 KV) **Case#: 960687** **Event ID: 695556** ***State:*** **KY**

Date Out	*Date In*
10/08/2019 01:21	10/08/2019 01:21

Comments: Double Circuit Operation

Information:

Operating Arrangements:

Event Log

10/08/2019 01:21 The Beaver Creek - McKinney 1 and the Beaver Creek - McKinney 2 46kV circuits operated successfully

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BEAVER CREEK - MCKINNEY NO. 1 (46 KV)
BEAVER CREEK - MCKINNEY NO. 2 (46 KV) **Case#: 942606** **Event ID: 681717** ***State:*** **KY**

Date Out	*Date In*
07/30/2019 19:24	07/30/2019 19:24

Comments: Circuit successfully reclosed

Information:

Operating Arrangements:

Event Log

07/30/2019 19:24 The Beaver Creek - McKinney No. 1 46kV ckt and the Beaver Creek - McKinney No. 2 46kV ckt both operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 936317** **Event ID: 676056** ***State:*** **KY**

Date Out	*Date In*
07/06/2019 09:22	07/06/2019 09:22

Comments: Circuit operated successfully

Information: Lightening/T-storms

Operating Arrangements:

Event Log

07/06/2019 10:57 SCADA indicates Beaver Creek - McKinney No.1 69kV circuit operated and reclosed successfully.

ALLEN - PRESTONSBURG NO. 1 (46 KV) **Case#: 927193** **Event ID: 672420** ***State:*** **KY**

Date Out	*Date In*
06/03/2019 07:28	06/03/2019 08:53

Comments: KYDDC - Loss of East Prestonsburg station

Information: Notified Tod Coleman, P&C of misoperation at McKinney station

Operating

Arrangements:

Event Log

06/03/2019 07:28 SCADA indicates the Allen - Prestonburg No. 1 46kV circuit operated and reclosed. SCADA indicates 46kV CB's G and H at McKinney operated at this time.

Notified Alan Newman, KYDDC.
Notified Tod Coleman, P&C of misoperation at McKinney station

0734
Alan Newman, KYDDC, reports no power at East Prestonsburg station and has notified Joey Day to report to station for checks.

06/03/2019 08:32 Ky DDC, Ken Porter reports that a squirrel caused their transformer to trip from service at East Prestonsburg station. They will be restoring the tr in the next ten minutes.

06/03/2019 08:53 Alan Newman, KYDDC, reports they have restored East Prestonsburg station to service. Alan Newman, KYDDC, reports servicer found a squirrel had climbed onto the 12kV side of Tr 1 at East Prestonsburg.

06/03/2019 10:27 Doug Williams, P&C, reports the relays on the 46kV system in the McKinney area are set up to be instantaneous over-reaching for ground faults and that circuit breakers at McKinney operated as expected with ground fault at East Prestonsburg this morning.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) between Garrett and McKinney **Case#: 918901** **Event ID: 669256** ***State:*** **KY**

Date Out	*Date In*
05/04/2019 20:53	05/05/2019 16:52

Comments: Lockout
tree damaged str from outside of right of way

Information:

Operating Arrangements:

Event Log

05/04/2019 20:53 The Beaver Creek - McKinney 1 46kV circuit locked out with:

- Fault 16.8 miles from Beaver Creek
- 46kV McKinney 1 S1 -Relay Sys Noncrt at Beaver Creek

- Notified Joey Day, Pikeville Station Servicer
- Notified Craig Walters, Pikeville Transmission Field Services Coordinator
- Notified Dave McDaniel, Kentucky DDC
- Notified Shannon Johnson, East Kentucky Power Cooperative
- Notified Roman Titenok, SCC

21:52 - Requested Joey Day perform the following at **Lackey Switching Structure**:

McKinney 46kV LR 22 Open Tag
Complete: 22:10

- Notified Shannon Johnson, EKPC
- Notified Dave McDaniel, Kentucky DDC

22:25 - Closed McKinney #1 46kV CB A at **Beaver Creek** via ADXfg restoring Salt Lick
22:26 - Spring Fork 46kV MOLDLR W at **Shepherd** Closed restoring Consolidation Metering and Spring Fork

- Notified Shannon Johnson, EKPC
- Notified Dave McDaniel, Kentucky DDC

22:40 - Requested Joey Day perform the following at **Garrett**:

McKinney 46kV AB 22 Open Tag
Complete: 22:55

22:56 - Closed Beaver Creek #1 46kV CB G at **McKinney** via ADXfg, it tripped

- Notified Dave McDaniel, Kentucky DDC

23:11 - Requested Joey Day perform the following at **Lackey Switching Structure**:

McKinney 46kV LR 22 Close Remove Tag
Complete: 23:15, Restoring Garrett

- Notified Craig Walters, Pikeville Transmission Field Services Coordinator
- Notified Dave McDaniel, Kentucky DDC
- Notified Roman Titenok, SCC

23:53 - Joey Day reported the following at McKinney:

- 5 Operations
- 167XGLS Ground instantaneous overcurrent target with direction
- 167XGHS Ground instantaneous overcurrent target with direction

Requested Joey Day perform the following at **McKinney**:

Beaver Creek #1 46kV CB G	Supervisory Control Switch	Local Position	Tag
Beaver Creek #1 46kV CB G	Reclose Switch	Off Position	Tag
Beaver Creek #1 46kV CB G	Control Switch	After Trip Position Green Flag	Tag
Beaver Creek #1 46kV CB G		Check Open at CB	
Beaver Creek #1 46kV CB G	Bus Disconnects	Open	Tag
Beaver Creek #1 46kV CB G	Line Disconnects	Open	Tag

Complete: 00:13

05/05/2019 07:07 **0707-Issued Jeff Everidge clearance on the Beaver Creek-McKinney#1 46kv ckt between McKinney and Garrett**

05/05/2019 13:00 Jeff Everidge reported that they found a broken cross arm on St 7, 1 mile from McKinney and there was a tree from outside of the right of way which fell in to the bottom phase conductor. Jeff said that unfortunately there is no way to get to the damage other than packing in all of the gear. He gave an estimated return time of 1900.

Notified Joey Day that we should restore this tonight due to the weather.

05/05/2019 16:16 **1616-Jeff Everidge released clearance on the Beaver Creek- McKinney No 1 46kv ckt between McKinney and Garrett.**

Jeff reported that a 70 foot tall tree fell into the conductor from outside of the right of way and broke the cross arm of structure 17. They replaced the broken cross arm with a post insulator and restrung the conductor which wasnt broken.

05/07/2019 08:09 Joey Day reports the following targets on 46KV CB A at Beaver Creek:

321A, trip, current, N-gnd, N-TOC, N-IOC, Abnl OSC trigger.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 900144** **Event ID: 664338** ***State:*** **KY**

Date Out	*Date In*
02/24/2019 12:35	02/24/2019 12:35

Comments: Ckt Operated and Reclosed Successfully

Information:

Operating Arrangements:

Event Log

02/24/2019 12:35 The Beaver Creek - McKinney No. 1 46kV ckt operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 900127** **Event ID: 664333** ***State:*** **KY**

Date Out	*Date In*
02/24/2019 12:09	02/24/2019 12:09

Comments: Ckt Operated and Reclosed Successfully

Information:

Operating Arrangements:

Event Log

02/24/2019 12:09 The Beaver Creek - McKinney No. 1 46kV ckt operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) AT BEAVER CREEK **Case#: 899964** **Event ID: 664278** ***State:*** **KY**

Date Out	*Date In*
02/23/2019 21:25	02/26/2019 10:35

Comments: 46kV McKinney 1 S1 Relay Sys Noncrit Alarm from Beaver Creek

Ckt operated and reclosed successfully

Information: Notified Tod Coleman.

Operating Arrangements:

Event Log

02/23/2019 21:25 Beaver Creek - McKinney No. 1 46kV Ckt operated and reclosed successfully.

Notified Ken Porter, KYDDC, and Mike Reams, EKPC.

Received 46kV McKinney 1 S1 Relay Sys Noncrit Alarm from Beaver Creek at time of operation which did not clear. Notifiy personnel during normal work hours 2/25/19.

02/25/2019 07:26 Notified Tod Coleman, P&C.

02/26/2019 09:55 Craig Walters, T-Line, reports he will be scheduling an outage next week on this ckt to remove trees, replace insulators and cut ground lead bonds in the clear on Strs. 30, 32, 34, 35, 44 & 52.

02/26/2019 10:34 46kV McKinney 1 S1 Relay Sys Noncrit Alarm from Beaver Creek cleared.

1035 Doug Williams, P&C, reports the alarm was due to an oscillography trigger and he reset the alarm.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 869118** **Event ID: 658579** ***State:*** **KY**

Date Out	*Date In*
10/20/2018 22:29	10/20/2018 22:29

Comments: Ckt operated and reclosed successfully

Information:

Operating

Arrangements:

Event Log

10/20/2018 22:29 Beaver Creek - McKinney 46kv ckt operated and reclosed successfully

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BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 869113** **Event ID: 658578** ***State:*** **KY**

Date Out	*Date In*
10/20/2018 22:06	10/20/2018 22:06

Comments: Reclosed successfully.

Information:

Operating Arrangements:

Event Log

10/20/2018 22:06 The Beaver Creek-McKinney No. 1 46kV ckt operated and reclosed successfully. Only received indication at McKinney.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 855866** **Event ID: 656246** ***State:*** **KY**

Date Out	*Date In*
08/31/2018 16:41	08/31/2018 16:41

Comments: Ckt operation and reclose

Information:

Operating Arrangements:

Event Log

08/31/2018 16:41 Received indication of Beaver Creek - McKinney No. 1 46kV Ckt operation and reclose.

Discussed operation with Keaton Terry, EKPC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 855865** **Event ID: 656245** ***State:*** **KY**

Date Out	*Date In*
08/31/2018 16:39	08/31/2018 16:39

Comments: Ckt operation and reclose

Information:

Operating Arrangements:

Event Log

08/31/2018 16:39 Received indication of Beaver Creek - McKinney No. 1 46kV Ckt operation and reclose.

Discussed operation with Keaton Terry, EKPC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) - SHEPARD TO SPRING FORK **Case#: 849495** **Event ID: 654762** ***State:*** **KY**

Date Out	*Date In*
08/07/2018 14:40	08/07/2018 21:03

Comments: locked out

BEAVER CREEK - MCKINNEY NO. 1 46KV CKT BTWN SHEPARD AND SPRING FORK

Information: CONDUCTORS WRAPPED OUTSIDE OF SPRING FORK

Operating

Arrangements:

Event Log

08/07/2018 14:40 Beaver Creek - McKinney No. 1 46kv ckt operated and locked out between Shepard and Spring Fork.

Notified Steve Blankenship, KYDDC
Notified Joey Day: on vacation
Notified Greg Hall: answering machine
Notified Tim Parsons: Hall in route to Spring Fork
Notified Roman Titenok, SCC
Notified Ken Borders, CAM

08/07/2018 15:42 Logged Greg Shenefield onto the Beaver Creek - McKinney No.1 46kv ckt, patrolling for trouble btwn
Shepard and Spring Fork.

Logged off at 1713

Greg Shenefield reported he found conductor wrapped together, 2-3 spans out of Spring Fork.

08/07/2018 15:56 Requested Steve Blankenship perform the switching to open isolate their 46kv Tr AB at Spring Fork for a Hold Order.

08/07/2018 16:14 Greg Hall at Shepard reported 46kv MOLDLR W is open, no targets, requested he perform the following:

46kv MOLDLR W	supv ctrl sw	local pos	place
46kv MOLDLR W	recl sw	off pos	place
46kv MOLDLR W	ctrl sw	ATGF	place
46kv MOLDLR W	mech	dgage	place
46kv Spring Fork line pot Tr	sec	open	place

complete at 1625

08/07/2018 16:47 **Steve Blankenship, KYDDC issued Roanoke North TDC, Bryon Joyce, a Hold Order on 46kv Tr AB at Spring Fork, switching was performed to open, isolate & tag this equipment and it will remain in this state until Hold Order is released.**

08/07/2018 16:52 Requested Joshua Cornett perform the following at Spring Creek:

46kv AB 11	OPEN	PLACE	ok at 1652

08/07/2018 17:14 **AFTER REVIEWING ALL ISOLATION POINTS AND WORK TO BE PERFORMED: ISSUED GREG SHENEFIELD CLEARANCE ON BEAVER CREEK - MCKINNEY NO. 1 46KV CKT BTWN SHEPARD AND SPRING FORK AND DIRECTED PERSONNEL TO PERFORM THEIR OWN NECESSARY DE-ENERGIZED TESTING AND GROUNDING. REPAIRS ERT 3-4 HOURS**

08/07/2018 19:03 **1916- Greg Shenefield RELEASED CLEARANCE ON BEAVER CREEK - MCKINNEY NO. 1 46KV CKT BTWN SHEPARD AND SPRING FORK , REPORTING ALL GROUNDS REMOVED, PERSONNEL AND EQUIPMENT IN THE CLEAR AND THIS EQUIPMENT CAN BE RETURNED TO SERVICE.**

Greg Shenefield reports that the bottom and middle phases of conductor have been untangled with a hotstick.

Notified Josh Cornett for switching at Spring Fork.

1921- RoTDC North released Hold Order to Dave McDaniel, KyDDC on 46kv Tr AB at Spring Fork and reports switching can be performed to restore equipment normal.

2007- Notified Bill Johnson, Kentucky Fuels.

2052- At Spring Fork requested Josh Cornett perform the following:

46kv AB 11	Close	Remove

2056- Complete

2058- KyDDC reports that 46kv Tr AB at Spring Fork has been closed deenergized and we

may proceed with switching to energize Spring Fork.

2058- At Shepherd requested Greg Hall perform the following:

46kv Spring Fork line pot Tr	sec	Close	Remove
46kv MOLDLR W	mech	Engage	Remove
46kv MOLDLR W	recl sw	Man pos	Remove
46kv MOLDLR W	ctrl sw	Close	Remove
46kv MOLDLR W	recl sw	Norm Pos	
46kv MOLDLR W	supv ctrl sw	Remote Pos	Remove

2103- Complete

Notified Dave McDaniel, KyDDC

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 839429** **Event ID: 652787** ***State:*** **WV**

Date Out	*Date In*
07/01/2018 20:46	07/01/2018 20:46

Comments: Reclosed successfully

Information:

Operating Arrangements:

Event Log

07/01/2018 20:46 SCADA indicates the Beaver Creek - McKinney No. 1 46kV circuit operated and reclosed successfully.

Note: McKinney RTU is down at time of operation.
2051
SCADA indicates McKinney RTU up and Beaver Creek 46kV CB G closed.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV)
BEAVER CREEK - MCKINNEY NO. 2 **Case#: 804949** **Event ID: 646219** ***State:*** **KY**

Date Out	*Date In*
02/19/2018 11:39	02/19/2018 11:39

Comments: Reclosed successfully

Information: Notified Mickey Chapman

Operating Arrangements:

Event Log

02/19/2018 11:39 Scada indicates that the Beaver Creek - McKinney No. 1 and No. 2 46kv ckts operated and reclosed. It also appears that the Beaver Creek - Elwood 46kv ckt operated as well.

Notified:
Andrew Harrison, EKPC
Alan Newman, KYDDC, who reports that his 34kv CB J at Beaver Creek remained open.

Attempted to contact the contractor that is logged into Beaver Creek station, Domingo Herrera, on his cell # and all station #s with no answer.

Called Mike Lilly, who advised that this is Joey Day's station and to call him. Notified Joey Day who reports that he is about an hour away and will respond. Joey added that the weather in his area is clear and sunny.

02/19/2018 12:06 Alan Newman, KYDDC reports that his DDC personnel spoke to the contractor at Beaver Creek and everyone is ok. He requested the contractor call the ROTDC.

02/19/2018 13:16 Joey Day reports that at Beaver Creek he had operations from both McKinney Cb's but no ops from the Elwood 46kv CB G

McKinney No. 1 46kv CB A - 1 op with a 321A Trip, neutral IOC 2 I/C
McKinney No. 2 46kv CB F - 2ops with a 321F Trip, current, other ph C, Neut-GND, Gnd Dist Z1, Neutral IOC , line P/U, N-IOC 2 HS
21F Trip Ph C-gnd, Gnd IOC, Gnd Dist Z1

02/19/2018 14:15 Joey Day reports the following targets and ops from McKinney:

Beaver Creek 46kv CB G - 2 ops - 167XGH Gnd, 167XGH LS
Allen 46kv CB H - 2 ops - 167XGH Gnd, 167XGH LS

02/20/2018 13:04 Notified Mickey Chapman

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 757221** **Event ID: 635772** ***State:*** **KY**

Date Out	*Date In*
07/14/2017 21:16	07/14/2017 21:16

Comments: Circuit Operation

Information:

Operating Arrangements:

Event Log

07/14/2017 21:16 The Beaver Creek - McKinney 1 46kV circuit operated

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BEAVER CREEK - MCKINNEY NO. 1 (46 KV)
McKinney #2 46kV CB F at Beaver Creek **Case#: 746243** **Event ID: 633553** ***State:*** **KY**

Date Out	*Date In*
05/31/2017 17:41	05/31/2017 17:41

Comments: Reclosed successfully.

Information: McKinney #2 46kV CB F at Beaver Creek misopeated; notified Mickey Chapman.

Operating Arrangements:

Event Log

05/31/2017 17:41 The Beaver Creek - McKinney #1 46kV circuit operated and reclosed successfully. McKinney #2 46kV CB F at Beaver Creek misoperated for this line operation.

06/01/2017 13:09 Notified Mickey Chapman, North Charleston Protection & Control Supervisor

06/12/2017 13:37 Joey Day reported the following from **Beaver Creek**:

- McKinney #1 46kV CB A: 1 Operation
- 321A
  - Trip
  - Phase Distance Zone 2 High Speed
- McKinney #2 46kV CB F: 1 Operation
- 321F
  - Trip
  - Phase Distance Zone 2 High Speed

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 743126** **Event ID: 632857** ***State:*** **KY**

Date Out	*Date In*
05/19/2017 09:43	05/19/2017 09:43

Comments: Successful operation

Information: Weather - Lightning/Tstorm

Operating Arrangements:

Event Log

05/19/2017 09:43 Beaver Creek - McKinney No. 1 46kv ckt successfully operated.
Notified EKPC

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 724343** **Event ID: 628412** ***State:*** **KY**

Date Out	*Date In*
03/01/2017 09:39	03/01/2017 09:39

Comments: Operated and reclosed successfully

Information:

Operating Arrangements:

Event Log

03/01/2017 09:39 Beaver Creek - McKinney No. 1 46kv ckt operated and reclosed successfully

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BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 724341** **Event ID: 628411** ***State:*** **KY**

Date Out	*Date In*
03/01/2017 09:36	03/01/2017 09:36

Comments: Operated and reclosed

Information:

Operating Arrangements:

Event Log

03/01/2017 09:33 BEAVER CREEK - MCKINNEY NO. 1 (46 KV) operated and reclosed

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BEAVER CREEK - MCKINNEY NO. 1 (46 KV) at Beaver Creek **Case#: 724339** **Event ID: 628335** ***State:*** **KY**

Date Out	*Date In*
03/01/2017 09:29	03/06/2017 17:21

Comments: Opened and successfully reclosed
Relay System Noncritical alarm from Beaver Creek

Information: Mickey Chapman, P&C, notified.

Operating Arrangements:

Event Log

03/01/2017 09:29 DAS indicates the Beaver Creek-McKinney #1 46KV circuit opened and successfully reclosed.
Notified Amber Hatfield, Kentucky DDC notified.

03/01/2017 09:30 ALR indicates 46kV McKinney 1 S1 -Relay Sys Noncrit Alarm at Beaver Creek

03/02/2017 16:52 Notified Mickey Chapman, North Charleston Protection & Control Supervisor

03/06/2017 17:26 Chris Elia reports resetting the alarm at Beaver Creek. Reports it was from a trip target from the ckt operation on 3/1/17.

Alarm cleared at 1721

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 680713** **Event ID: 620223** ***State:*** **KY**

Date Out	*Date In*
08/17/2016	08/17/2016

15:26 15:26

Comments: successfully operated

Information:

Operating Arrangements:

Event Log

08/17/2016 15:35 Operation due to storms.

08/17/2016 15:43 Notified Dave May of Kentucky DDC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 668765** **Event ID: 618068** ***State:*** **KY**

Date Out *Date In*
07/04/2016 18:38 07/04/2016 18:38

Comments: Reclosed Successfully

Information:

Operating Arrangements:

Event Log

07/04/2016 18:38 SCADA indicated that the Beaver Creek - McKinney No. 1 46KV Ckt operated and reclosed successfully.

Notified Dave McDaniel, KYDDC
Notified John, EKPC
Notified Shaun Sumner, CSE (voicemail)

BEAVER CREEK - MCKINNEY NO. 2 (46 KV) **Case#: 667193** **Event ID: 617755** ***State:*** **WV**

Date Out *Date In*
06/27/2016 15:39 06/27/2016 15:39

Comments: Reclosed successfully

Information: Weather - Lightning/Tstorm

Operating Arrangements:

Event Log

06/27/2016 15:39 SCADA indicates the Beaver Creek McKinney No. 2 46kV Ckt operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 and NO. 2 (46 KV) **Case#: 666231** **Event ID: 617546** ***State:*** **WV**

Date Out *Date In*
06/23/2016 19:26 06/23/2016 19:26

Comments: Circuits operated and reclosed successfully

Information:

Operating Arrangements:

Event Log

06/23/2016 19:26 Beaver Creek-McKinney #1 and #2 46kv ckts operated and reclosed successfully.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) between Shepherd and Spring Fork **Case#: 666229** **Event ID: 617545** ***State:*** **KY**

Date Out *Date In*

06/23/2016 19:14 — 06/26/2016 04:20

Comments: Locked out between Shepherd and Spring Fork, interrupting Spring Fork and Consolidated Metering.

Information:

Operating Arrangements:

Event Log

06/23/2016 19:14 The Beaver Creek-McKinney No. 1 46kV ckt operated and locked out between Shepherd and Spring Fork, interrupting Spring Fork and Consolidated Metering.

Notified Tommy, EKPC, Tommy reports Salt Lick station saw the interruption. Notified Tommy that Salt Lick station is normal.

Notified Pam Scott, SCC.

06/23/2016 19:36 Notified Mike Lilly, requested switchperson at Spring Fork station. Mike reports he will send Joey Day to Spring Fork.

06/23/2016 21:14 Notified Shaun Sumner that Springfork tap is out and Shaun reported that the customers out of Consolidated metering are only running a water pump and he will touch base with them.

06/23/2016 23:44 Joey Day reported that he could not find any trouble at Spring Fork. Requested Joey Day perform the following at Springfork:

46kv AB 11 open tag
2355-complete

Requested Joey Day work with KYDDC to isolate their equipment at Spring Fork for a hold order.

24 June 2016;0015-Allen Newman KYDDC issued a hold order on their equipment (46kv Tr AB sw) at Spring Fork reported that switching has been performed to isolate this equipment and it will remain in this state until the hold order has been released.

24 June 2016;0111- Requested Joey Day perform the following at Shepard SS

46kv MOLDLR W supv ctrl loc pos tag
46kv MOLDLR W recl sw off pos tag
46kv MOLDLR W ctrl sw green flag tag
46kv MOLDLR W mech dgage tag
46kv line pot sec knife sw open tag
0119- complete

06/24/2016 07:03 ISSUED JEFF EVERIDGE CLEARANCE ON BEAVER CREEK-MCKINNEY NO.1 46KV CKT BETWEEN CONSOLIDATED METERING, SHEPHERD, AND SPRING FORK, REMIND PERSONNEL TO DO THEIR OWN NECESSARY DE-ENERGIZED TESTING AND GROUNDING.

06/25/2016 07:40 Jeff Everidge reported tree from outside the ROW knocked down static wire and broke a crossarm. He had to build a road to the trouble site, ERT: 14:00

06/25/2016 16:13 **Jeff Everidge released clearance on the Beaver Creek-McKinney #1 46kv ckt between Consolidated metering, Shepherd and Spring Fork.**

Jeff reports he has repaired static wire and replaced broken crossarm on str 26.

06/25/2016 18:19 **Released Hold Order to Ken Porter, KyDDC, on Tr 1 46KV AB at Spring Fork.**

06/25/2016 19:22 Per SOS 5741 Rev 13, gave steps to Joey Day to close 46KV AB 11 at Spring Fork.

1926- SCADA indicates Beaver-Creek Mckinney #1 46KV ckt operated and reclosed.

1931- Joey Day reports when he closed 46KV AB 11 at Spring Fork, the line operated. He

reports Ph1 to insulator going down to CT to consolidated metering is broke and will require the section between Consolidated Metering, Shepherd and Spring Fork isolated for clearance for repairs.

Notified Sean Sumner, CSE, Sean reports ok to energize when repairs are made and to notify him during daylight hours when work is complete.
Jeff Everidge, T-line.

06/25/2016 19:50 At Spring Fork, Joey Day reports when he closed 46kV AB 11 to Consolidated Metering, a post insulator on the switch pole, securing the line from the switch to the metering broke, allowing the conductor to contact the pole, operating the line. The broken insulator and loop are currently in the clear and allowed the 46kV MOLDLR W at Shepherd to reclose energizing Consolidated Metering. Joey reports the conductor and broken insulator are very close to the pole and are probably within the minumum approach distance of 46kV AB 11 at Spring Fork, so we will need to isolate back at Shepherd for safety clearance.

Joey reports the only load at Spring Fork is just a pump and would be ok to open at Shepherd de-energizing Spring Fork station. Requested Joey stay in the clear while we performed the following:

46kV MOLDLR W at Shepherd SCADA Ctrl Open (opened at 1956).

Requested Joey Day perform the following at Spring Fork:
46kV AB 11 Open Place Tag
Complete at 1959.
Masked open on SCADA.

Requested Joey report to Shepherd for switching.

06/25/2016 19:58 **Allen Newman KYDDC issued a hold order on their equipment (46kv Tr AB sw) at Spring Fork reported that switching has been performed to isolate this equipment and it will remain in this state until the hold order has been released.**

06/25/2016 21:04 **At Shepherd**:

Requested Joey Day to perform the following:

46kv MOLDLR W supv ctrl loc pos tag
46kv MOLDLR W recl sw off pos tag
46kv MOLDLR W ctrl sw After trip green flag tag
46kv MOLDLR W mech dgage tag
46kv line pot sec knife sw open tag

Ok and complete at 2118.

06/26/2016 00:45 Brandon Muncy reports trouble is from 46KV AB 11 at Spring Fork towards the bus and no switching on customer side will be necessary.

0051- After reviewing isolation points and work to be performed issued Brandon Muncy clearance on the Beaver Creek-McKinney #1 46KV ckt section between Shepherd, Spring Fork and Consolidated Metering, remind personnel to perform their own necessary de-energized testing and grounding.

06/26/2016 03:56 **Brandon Muncy released clearance on the Beaver Creek-McKinney #1 46KV ckt section between Shepherd, Spring Fork and Consolidated Metering.**

Brandon reports he has replaced insulator on phase 1.

Started switching on SOS 5741 Rev 13 to restore above mentioned ckt.

0425- Released hold order to Allen Newman, KyDDC, on Tr 1 46KV AB at Spring Fork.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 647017** **Event ID: 613891** ***State:*** **KY**

Date Out *Date In*
03/31/2016 03/31/2016

16:30 16:30

Comments: Reclosed successfully

Information:

Operating Arrangements:

Event Log

03/31/2016 16:30 Scada indicates that the Beaver Creek - McKinney No. 1 46kv ckt operated and reclosed.

Notified:
Timm Maynard, KYDDC
Barry Warner, EKPC

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 646992** **Event ID: 613830** ***State:*** **KY**

Date Out	*Date In*
03/31/2016 14:13	03/31/2016 14:13

Comments: Operated and reclosed

Information:

Operating Arrangements:

Event Log

03/31/2016 14:13 Beaver Creek-McKinney #1 69kV Ckt operated and reclosed due to wind.

Tommy Maiden of EKPC notified.

Larry Kersey of Kentucky DDC notified.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 643599** **Event ID: 613038** ***State:*** **KY**

Date Out	*Date In*
03/14/2016 15:17	03/14/2016 15:17

Comments: Operated and reclosed

Information:

Operating Arrangements:

Event Log

03/14/2016 15:17 BEAVER CREEK - MCKINNEY NO. 1 (46 KV) operated and reclosed due to weather.

Notified Tim Maynard of Kentucky DDC.

Notified Dave Owens of EKPC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#: 589801** **Event ID: 599441** ***State:*** **KY**

Date Out	*Date In*
06/26/2015 01:26	06/26/2015 01:26

Comments: Circuit operation

Information: Weather - Lightning/Tstorm

Operating Arrangements:

Event Log

06/26/2015 01:26 Received indication of Beaver Creek - McKinney No. 1 46kV Ckt operation and successful reclose.

John, East Kentucy power, inquired of circuit operation.
Notified Alan Newman, Ky DDC.

BEAVER CREEK - MCKINNEY NO. 1 (46 KV) **Case#:** **Event ID:** ***State:*** **KY**
Dorton- Elkhorn City-Elwood 46kv cb A **589754** **599423**

Date Out	*Date In*
06/25/2015 19:51	06/25/2015 19:51

Comments: Circuit operation

Elkhorn City-Elwood 46kv cb A at Dorton operated at time of event.

Information: Weather - Lightning/Tstorm

Notified Mickey Chapman, P&C

Operating Arrangements:

Event Log

06/25/2015 19:51 Received indication of Beaver Creek - McKinney No. 1 46kV Ckt operation and successful reclose.

Notified Alan Newman, Ky DDC.

Elkhorn City - Elwood 46kv cb A at Dorton operated at this time.

06/26/2015 16:30 Notified Micky Chapman, P&C

DATA REQUEST

KPSC 1_9 Refer to the Koehler Testimony, page 11, lines 1-4, and page 13, lines 4-9.
a. Explain why looping is preferred over radial feed.
b. Explain how providing looped service to radially fed customers improves service to customers.
c. Explain how many radially fed customers will be provided looped service under Kentucky Power's proposal.
d. Explain how Kentucky Power determines whether looping or radial feed is appropriate for a given line.
e. Explain why the 8.25-mile-long radial line out of Morgan Fork Station was not constructed using looping.

RESPONSE

a. Radial transmission feeds are not preferred as radial feeds require outages to customers served from the radial feed for any maintenance activities or unplanned outages associated with the equipment or the line serving the customer. See Company witness Koehler's testimony on pages 11 and 16.

Moreover the looped service improves reliability as it adds a redundant source for the load served. Without the redundant source and limited load transferability during outages, it is nearly impossible to pick up the load in the area from another source. There were approximately 329,000 Customer Minutes of Interruptions (CMI on the Beaver Creek – McKinney #1 46 kV circuit between 2015-2020, and Morgan Fork – Hays Branch has experienced 5.95 hours of outage duration from 2015 - 2020. Hays Branch customer would experience an outage when this line is out of service as there is no other source to pick up the load.

b. An outage or interruption to a radial line propagates to the customers served at the end of the radial line who do not have redundant transmission service. A looped transmission system provides better continuity of service than the radial system. Please also see the response to 9a.

c. The proposed project will provide loop service to the Salt Lick delivery point, which provides service to EKPC's Big Sandy Rural Electric Cooperative (RECC) that serves 4.75 MVA of load. While the company considers this delivery point a single "customer", the EKPC Coop serves multiple customers from the RECC owned distribution system.

Spring Fork substation which serves 0.3 MVA of radial load and about 20 residential customers will receive looped transmission service by being served from Haddix substation.

In addition, adding the new 138 kV Eastern substation reduces the length of the radial line, which serves a large 32 MW load at Hays Branch substation (serving Markwest Hydrocarbon's gas compressing operation), to approximately 1 mile, which is as close as physically feasible to the load. This reduces the exposure to a radial outage by approximately 7 miles, thus satisfying the 75 MW/mi guideline for looping radial loads. It was not possible to add a second line from a source directly at Hays Branch as Hays Branch is a customer owned substation with limited AEP access. See Company Exhibit 20.

Finally, the proposed work not only maintains looped service to Garrett but adds new 138 kV breakers that provide new sectionalizing. Sectionalizing allows for quicker power restoration and minimal power interruptions for any outage on the transmission line. Adding breakers at Breakers and switches at Salt Lick will improve restoration time as it is possible to provide service via one or the other source. Similarly, installing a switch to serve the Salt Lick delivery point to replace the existing hard tap service will allow for quicker restoration in case of any transmission line outage.

d. Generally, the Company prefers to provide looped transmission service to load whenever cost effective and reasonable for the reasons listed in the responses to Question 10 a and b. For this Project, the needs identified on the 46 kV network and the need identified for the load served via a radial at Hays Branch were both able to be addressed with a single project to holistically solve all identified needs in the area. See also the response to Q1 part b. Providing looped transmission service indicates that there are two independent sources from which the load can be served.

e. There was no opportunity to loop Hays Branch to a second source at the time of the original filing.

Witness: Nicolas C. Koehler

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_10 Refer to the Application page 17, paragraph 67.
a. Provide support for the statement that the operation and maintenance (O&M) costs associated with the Beaver Creek-McKinney 46 kV #1 Circuit are higher than the O&M costs with a comparable 138 kV transmission line.
b. Compare the required frequency of inspection for the Beaver Creek-McKinney 46 kV #1 Circuit to the required frequency of the 138 kV line proposed to replace it in this proposal.

RESPONSE

a.-b. The 46 kV wood lines such as Beaver Creek – McKinney in Kentucky are comprehensively inspected from the ground every 2 years, whereas 138 kV steel lines in Kentucky are comprehensively inspected from the ground every 12 years. All voltages are aerially patrolled at intervals not to exceed 6 months. See Company witness Koehler's testimony at page 16.

Therefore, 46 kV wood lines in Kentucky, such as Beaver Creek - McKinney have 5 more inspections than the proposed 138 kV steel line, resulting in less O&M costs overall for the 138 kV steel line. In alignment with 807 KAR 5:006, Section 26, AEP performs comprehensive inspections on 46 kV circuits comprised of wood poles such as Beaver Creek – McKinney every 2 years. AEP performs comprehensive inspections on 138 kV steel pole lines every 12 years. All transmission line facilities in Kentucky are aerially patrolled at intervals not to exceed 6 months.

Witness: Nicolas C. Koehler

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_11 Refer to the Application, page 12, paragraphs 43 and 44.
a. State how wide Kentucky Power expects a widened right-of-way to be.
b. State what methodology Kentucky Power will use to determine when a widened right-of-way is appropriate.

RESPONSE

a. A widened right-of-way may be required for certain longer spans and in steep terrain to permit the safe and efficient operation of the transmission line. These areas of wider right-of-way will be identified during detailed engineering design and will be included during the right-of-way negotiations with landowners. In those limited instances, unusually steep terrain and very long spans may require the total width of the right-of-way to be expanded to as much as 350 to 400 feet (175 feet to 200 feet on each side of the centerline) to accommodate conductor movement due to wind events.

b. A widened right-of-way is determined based on the terrain and conductor movement in connection with NESC prescribed wind events. Steep terrain may require widened right-of way to accommodate tree clearing on the up-hill side in order to prevent trees from falling down hill and into the conductors and structures. The conductor is analyzed utilizing specified NESC wind loads to determine conductor movement. In long span construction conductor movement may be up to 200' from centerline. These studies are performed to determine the optimal right-of-way width to allow for the safe and efficient operation of the transmission line by ensuring that trees do not fall onto the structures or conductor, and that the conductors do not encroach on trees and other structures.

Witness: George T. Reese

DATA REQUEST

KPSC 1_12 Refer to Reese Testimony, page 8, lines 17–22. The following projects with the same methodology for identifying and evaluating alternative routes are referenced:
Hays Branch-Morgan Fork (Case No. 2007-00155), Bonnyman-Soft Shell (Case No. 2011-00295), Hazard-Wooton (Case No. 2017-00328), East Park (Case No. 2018-00072), Leeco (Case No. 2009-00235) and Kewanee-Enterprise Park (Case No. 2020-00062).
a. State the width of the right-of-way for each project and how much authority was given to Kentucky Power to move the centerline and right-of-way within the Filing Corridor.
b. Explain any differences with the present Case No. 2021-00346.

RESPONSE

a.
Hays Branch-Morgan Fork (Case No. 2007-00155)
100-foot wide ROW, no filing corridor.

Bonnyman-Soft Shell (Case No. 2011-00295)
100-foot wide ROW, 500-foot filing corridor.

Hazard-Wooton (Case No. 2017-00328)
120-foot wide ROW, varying filing corridor:
(a) 150 feet in either direction (300-foot corridor) in the portion of the Proposed Rebuild from the Hazard Substation to Kentucky Route 15;
(b) 250 feet in either direction (500-foot corridor) in the portion of the Proposed Rebuild from Kentucky Route 15 to the Wooton Substation; and
(c) 250 feet in either direction (500-foot corridor) on the Hazard-Jackson 69 kV Reconfiguration.

East Park (Case No. 2018- 00072)
100-foot wide ROW, 500-foot filing corridor.

Leeco (Case No. 2009-00235)
100-foot wide ROW, no filing corridor.

Kewanee-Enterprise Park (Case No. 2020- 00062)
100-foot wide ROW, varying filing corridor:
(a) 500 feet to the northeast for that portion of the centerline that begins at the tap point on the existing Beaver Creek—Cedar Creek 138 kV circuit of the Sprigg—Beaver Creek 138 kV Transmission Line and that parallels the route of the Big Sandy—Broadford 765 kV Transmission Line (approximately 1.3 miles);
(b) Generally, 500 feet in either direction (1,000-foot corridor) from the end of the route paralleling the Big Sandy — Broadford 765 kV Transmission Line to the proposed Kewanee 138 kV Substation (approximately 3.7 miles); and
(c) To mitigate known mining risks and allow for added design flexibility in rugged topography, the Filing Corridor was expanded an additional 500 feet between proposed structures 6 and 8 (near the crossing of Left Fork Island Creek Road). For this 2,000-foot section of centerline, the Filing Corridor is 1,500 feet wide (about 500 feet to the south of the centerline and 1,000 feet to the north of the centerline).

b. A filing corridor allows Kentucky Power to obtain all necessary approvals from the Commission in a single proceeding. The width of the proposed filing corridor depends on the degree of uncertainty connected with the location of the final transmission centerline at the time the application is filed. Using a filing corridor conserves the Commission's resources and avoids the additional costs to the Company, and burdens on adjoining landowners, attendant to reopening Commission proceedings to amend the granted authority to construct a transmission line when later developments during construction necessitate moving it.

The greater the uncertainty the wider in general the requested filing corridor. Factors leading to uncertainty regarding the location of the final transmission centerline include the amount of topographic variation along the proposed centerline route, the likelihood of unmarked cemeteries and natural gas pipelines in the area, and other natural and manmade constraints on the Company's ability to construct the transmission line along the proposed centerline. These, and other unknowns that can affect the final centerline, may not emerge until the completion of ground surveys, final engineering of the line, geotechnical investigation of the proposed structure sites, and landowner requests to move the centerline that emerge during right-of-way negotiations.

Witness: George T. Reese

Kentucky Power Company
KPSC Case No. 2021-00346
Commission Staff's First Set of Data Requests
Dated November 29, 2021

DATA REQUEST

KPSC 1_13 Refer to the Application, Exhibit 3. There are several parcels with the Map ID of 027, 172, and 149 in Knott County and the owners are not on the list in Exhibit 15.
State the owners of these parcels.

RESPONSE

Exhibit 15 consists of two lists. Pages 1-6 list those parcels within the proposed right-of-way. Pages 7-19 list those parcels within the 1,000 foot filing corridor. Parcels 27 (page 8 of 19), 149 (page 17 of 19), and 172 (page 8 of 19) lie within the filing corridor but not the proposed right-of-way. The owners as listed on the records of the Knott County PVA are provided below. Please note that the Knott County PVA lists "UNK" (unknown) as the owner of parcel 172.

MAP ID	PARCEL ID	COUNTY	OWNER	ADDRESS	CITY	STATE	ZIP CODE
027	046-00 00 005.03	Knott	CAMBELL JIMMY D & DONNA	PO BOX 15	HINDMAN	KY	41822
149	046-00 00 005.06	Knott	SMITH JOHN C & AMBER	99 RAYMOND SMITH DR	LEBURN	KY	41831
172	046-00 00 005.04	Knott	UNK	UNK	UNK	UNK	UNK

Witness: George T. Reese

docVerify

Koehler Garrett CPCN Verification_Discovery.docx

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E-Signature 1: Nicolas C Koehler (NCK)
December 06, 2021 13:06:45 -8:00 [4F1DA7893147] [167.239.221.105]
nckoehler@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)
December 06, 2021 13:06:45 -8:00 [619371417184] [167.239.221.103]
srsmithhisler@aep.com
I, S. Smithhisler, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Nicolas C. Koehler, being duly sworn, deposes and says he is the Director of Transmission Planning for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the forgoing responses, and the information contained therein is true and correct to the best of his information, knowledge and belief after reasonable inquiry.

Nicolas C Koehler

Nicolas C. Koehler

STATE OF OHIO)
) Case No. 2021-00346
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Nicolas C. Koehler, on 12/06/2021.

Notarial act performed by audio-visual communication

S Smithhisler

Notary Public

Notary ID Number: 2019-RE-775042

VERIFICATION

The undersigned, George T. Reese, being duly sworn, deposes and says he is the Vice President, Business Sector Manager for Power Delivery – Environmental for GAI Consultants, Inc., that he has personal knowledge of the matters set forth in the forgoing responses, and the information contained therein is true and correct to the best of his information, knowledge and belief after reasonable inquiry.

George T. Reese

STATE OF PENNSYLVANIA)
) Case No. 2021-00346
COUNTY OF ALLEGHENY)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by George T. Reese, on 6th December 2021.

Notary Public

Notary ID Number: 1185072

Commonwealth of Pennsylvania - Notary Seal
Donna J. Zeno, Notary Public
Allegheny County
My commission expires April 17, 2022
Commission number 1185072
Member, Pennsylvania Association of Notaries

VERIFICATION

The undersigned, Brian K. West, being duly sworn, deposes and says he is Vice President, Regulatory & Finance for Kentucky Power Company, that he has personal knowledge of the matters set forth in the foregoing responses 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. 2021-00346

Subscribed and sworn before me, a Notary Public, by Brian K. West this 6th day of December, 2021.

Scott E. Bishop
Notary Public

SCOTT E. BISHOP
Notary Public
Commonwealth of Kentucky
Commission Number KYNP32110
My Commission Expires Jun 24, 2025

My Commission Expires June 24, 2025

Notary ID Number: KYNP 32110