COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Investigation of the Service, Rates and Facilities of Kentucky Power Company	)))	Case No. 2021-00370

REBUTTAL TESTIMONY OF

STEPHEN D. BLANKENSHIP

ON BEHALF OF KENTUCKY POWER COMPANY

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I. INTRODUCTION

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

A. My name is Stephen D. Blankenship. My business address is 12333 Kevin Avenue, Ashland, Kentucky 41102. I am the Region Support Manager for Kentucky Power Company ("Kentucky Power" or the "Company"). Kentucky Power Company is a subsidiary of American Electric Power Company, Inc. ("AEP").

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I earned a bachelor's degree in Industrial Relations in 1995 from the West Virginia Institute of Technology, and an associate degree in Electronics and Computer Engineering Technology in 2019 from Grantham University. Throughout my 25-year career, I have held positions of increasing responsibility within the AEP family of companies, which have focused primarily on distribution operations. I began my career in 1998 as a Customer Service Representative in Hurricane, WV for American Electric Power Service Corporation ("AEPSC"), a subsidiary of AEP. From 2002 to 2016, I held distribution dispatching positions of increasing responsibility in locations that included Ft. Wayne, Indiana; Columbus, Ohio; and Ashland, Kentucky. In 2016, I was promoted to Distribution Dispatch Supervisor for Kentucky Power. In

2019, I was promoted to Meter Revenue Operations Manager for Kentucky Power and in 2020, I was promoted to Region Support Manager.

Q. WHAT ARE YOUR RESPONSIBILITIES AS REGION SUPPORT MANAGER?

A. I am responsible for the Company's distribution system operations, meter operations, and storm review coordination. My duties also include the management of the safe and reliable restoration of the Company's distribution facilities following disruptions, proper implementation of normal and emergency procedures, and overall real time operation of the Company's distribution system. I am also responsible for coordination of the Company's storm response and Planning Section of the Incident Command System ("ICS") when implemented.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Yes. I testified before this Commission in Case No. 2020-00174 and Case No. 2023-00159.

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will respond to Attorney General-Kentucky Industrial Utility Customers ("AG-KIUC") Witness Kollen's assertion that the Company has underinvested in the distribution system and that this has made the distribution system "more vulnerable to extensive damage from severe weather events." As I detail in my rebuttal testimony, Kentucky Power has made appropriate investments in its distribution system, as confirmed by the Commission's recent decision finding the Company's restoration costs following Major Events to be prudent. Below, I will:

- Give an overview of the Company's service territory and the challenges it faces from damage caused by Major Events;
- Describe the Major Events that the Company experienced from January of 2020 through April of 2023, highlighting the severity of these storms;
- Demonstrate that the severity of the Major Events themselves, coupled with impacts from trees outside of the rights-of-way, were the major causes of damage to the Company's distribution system; and
- Show that absent three catastrophic and highly unusual Major Events, restoration costs for 2020 through April of 2023 have generally been comparable to historical averages.

Q. ARE YOU SPONSORING ANY EXHIBITS AS PART OF YOUR TESTIMONY?

A. Yes. I am sponsoring the following exhibits attached to my testimony:

Exhibit	Description
EXHIBIT SDB-R1	Map of Kentucky Power Service Territory
EXHIBIT SDB-R2	Map of Kentucky Vegetation Density

IV. KENTUCKY POWER DISTRIBUTION SYSTEM

Q. PLEASE DESCRIBE KENTUCKY POWER'S SERVICE TERRITORY AND DISTRIBUTION SYSTEM.

A. Kentucky Power serves about 162,000 retail customers in Kentucky in a service area covering roughly 3,787 square miles and 20 counties. Kentucky Power's distribution system includes approximately 233 distribution circuits comprised of approximately 9,919 miles of overhead distribution primary and secondary lines, and approximately

189 miles of underground distribution primary and secondary lines. Kentucky Power's distribution system consists largely of long 34.5 kV and 12.47 kV circuits that average 62.1 and 34.0 line miles, respectively. Kentucky Power's longest distribution circuit covers 173 overhead primary line miles.

Q. DESCRIBE THE OPERATING CHALLENGES THAT IMPACT KENTUCKY POWER'S DISTRIBUTION SYSTEM DURING A MAJOR EVENT.

A. The nature of Kentucky Power's service territory exacerbates the challenges the Company experiences during and after Major Events in four ways.

First, Kentucky Power's large service territory with low population density naturally exposes customers to outages more than a densely populated service territory would. With its rural area and long lines, the Company serves only about 16 customers per distribution line mile. By contrast, the Company's Kentucky investor-owned utility peers serve between 34 and 65 customers per distribution line mile. As a result, Kentucky Power customers have significantly greater exposure to outages because it takes much more line to serve them. This also presents greater opportunity for trees outside of the rights-of-way ("ROW") to fall on the lines serving the Company's customers during Major Events.

Second, Kentucky Power's service territory consists of heavily forested and mountainous terrain that includes steep, rocky, heavily forested hill sides and narrow valleys. Because of the difficult topography and tree cover, when an outage occurs, it can often take personnel hours to patrol the lines to find the problem, and potentially longer to bring in the equipment necessary to correct it. Many of the circuits are not accessible by vehicle, meaning that personnel must complete a foot patrol of the

affected line section. In some cases, assessments can be expedited by air, which typically cannot occur until storm conditions relent. In other instances, such as the July 28, 2022 Historic Flood Event, the Company had to wait until the flood waters receded before it could access its distribution facilities.

Third, approximately 75% of Kentucky Power's overhead primary miles are exposed to interruption due to trees outside and/or inside the ROW. The forests consist of mostly large, mature trees that fall naturally over time, compounded by invasive species of disease and insects. Due to their size and weight, these trees can cause severe damage to the Company's distribution assets when they fall. In other instances, ice can weigh down limbs, which can then make contact with the Company's facilities and cause outages. Exhibit SDB-R2 is a map showing the vegetation density in the Company's service territory.

In recent years, outages caused by trees outside the ROW have increased because of rainfall exceeding the 30-year average. Excess rainfall contributes to the spread of insects, forest pathogens, and root disease, and also loosens the soil. Collectively, these factors destabilize root structures, making trees more susceptible to falling during wind events.

Fourth, the nature of the Company's distribution system limits Kentucky Power's ability to reduce outage durations while conducting restoration work. The Company has limited ability to transfer load to other sources because of limited capacity of step-up or step-down transformers feeding the normal open points or connection points. Kentucky Power also operates 39 circuits that have no three-phase connection to another circuit. As a result, in many cases, Kentucky Power cannot

isolate faults and serve customers through alternative paths. Instead, customers often cannot be restored until the circuit is repaired.

Q. IS THE COMPANY TAKING STEPS TO REDUCE DISTRIBUTION OUTAGES?

A. Absolutely. Recognizing the unique operating challenges of its service territory, the Company has made and continues to make the necessary distribution system upgrades to serve its customers and address the most prevalent outage causes on its system. In doing so, the Company has targeted investments in mitigating outages related to vegetation (both trees inside and outside ROW) and equipment failures.

For example, the Company has a trees inside ROW program that is a cycle-based maintenance program that completes vegetation clearing of all distribution circuit ROW once every five years. The Company is in the fifth year of the current five-year cycle and is approximately 60 miles ahead of target. Activities associated with the program include ROW inspections, customer communications, brush removal, trimming of trees, tree removals, certain herbicide applications, and post-clearing audits and inspections. Since launching its trees inside ROW program in June of 2010, customer minutes of interruption ("CMI") due to trees inside ROW have decreased substantially: from 2010-2022, CMI related to trees inside ROW outages has been reduced by approximately 83%.

The Company also seeks to mitigate outages caused by trees outside ROW, which are now the Company's principal cause of outages. In its 2018 Vegetation Management Plan, Kentucky Power established a program to widen the Company's existing ROW to address outside of ROW causes of outages, including the removal

of danger trees from outside the ROW. The Company began the program on a provisional pilot basis in the Company's Hazard District and has seen reliability improvements due to a reduction in customer minutes of interruption caused by trees outside the ROW. At the end of 2022, the Company had completed portions of targeted widening on 65 of the 233 distribution circuits, or 28% of the Company's distribution circuits. This targeted approach represents approximately 6.6% of the Company's overhead primary distribution miles. Comparing the average for 2018-2020 versus 2020-2022, there was a 15% reduction in CMI on those circuits where some widening was completed.

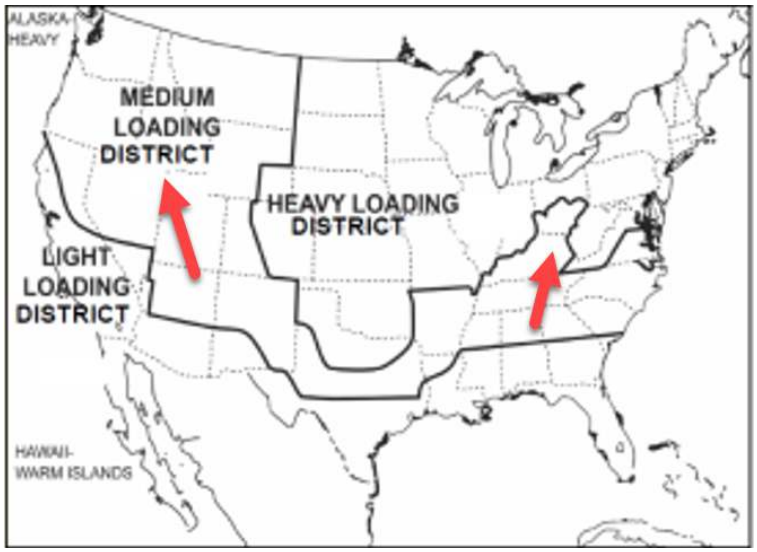
To reduce equipment failures, the Company has been analyzing equipment failures using historical outage data to target investments and improve reliability. For example, between 2008 and 2022, cutouts were the leading cause of equipment failures. Based on a review of outage causes, the Company began a targeted cutout replacement program, which has resulted in a reduction in CMI of 72% related to cutout-caused outages.

Q. IN ADDITION TO THE COMPANY'S VEGETATION MANAGEMENT PROGRAM, WHAT OTHER STEPS IS KENTUCKY POWER TAKING TO REDUCE DISTRIBUTION OUTAGES?

A. Kentucky Power, where applicable (including new installations), is upgrading overhead distribution lines to heavy loading standards that meet National Electrical Safety Code ("NESC"). The 2023 NESC contains safety rules for overhead distribution lines, including detailed strength ("loading") requirements and clearance

rules for the support structures, such as poles and cross arms.[1] Section 250 in the 2023 NESC describes the structural loadings for the United States. Figure SDB-R1 below shows that the NESC requires medium loading in the Company's service territory.

Figure SDB-R1



In accordance with NESC requirements, the Company's overhead distribution lines were initially built to medium loading standards. However, to improve reliability, the Company has been upgrading its distribution facilities over the past decade to heavy loading standards where feasible, enabling them to withstand up to a half inch of ice.

[1] Lawrence M. Slavin, "NESC® Requirements (Strength and Loading)," in Overhead Distribution Lines: Design and Applications, IEEE, 2021, pp.45-61, doi: 10.1002/9781119699170.ch6.

V. MAJOR EVENTS' IMPACT ON KENTUCKY POWER'S SYSTEM

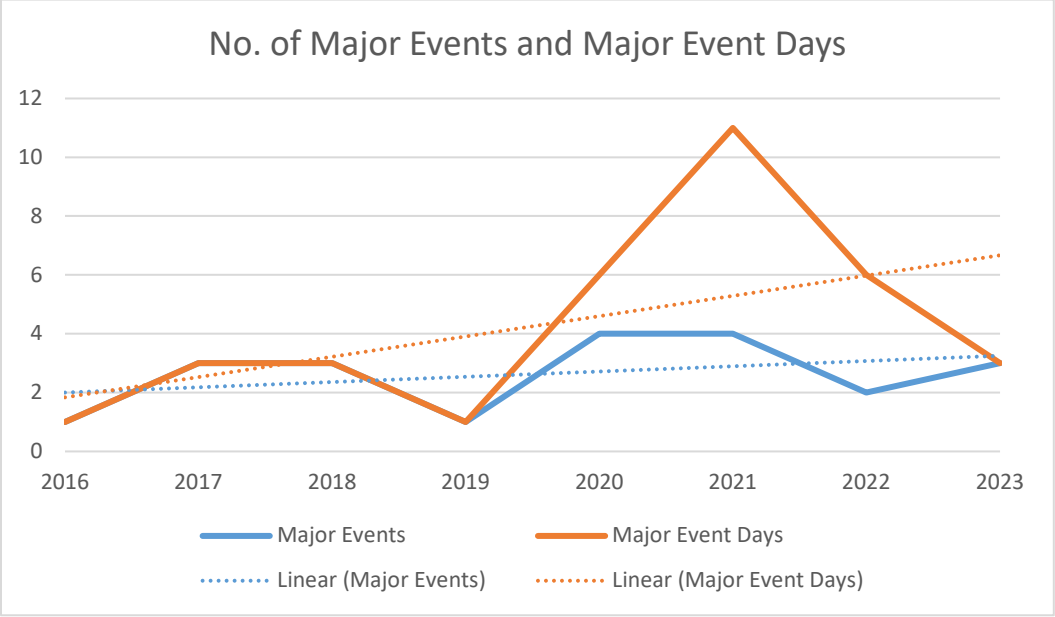
Q. WHAT ARE MAJOR EVENTS AND MAJOR EVENT DAYS?

A. "Major Events" are defined by IEEE 1366-2022, the "IEEE Guide for Electric Power Distribution Reliability Indices," as any "event that exceeds reasonable design and or operational limits of the electric power system." A Major Event includes at least one Major Event Day, which is "a day in which the daily system SAIDI exceeds a threshold value, T_{MED}." The IEEE standard uses an accepted statistical approach to determine when it is appropriate to exclude a major event.

Q. HAS KENTUCKY POWER BEEN EXPERIENCING A GROWING NUMBER OF MAJOR EVENTS AND MAJOR EVENT DAYS?

A. Yes. Figure SDB-R2 shows that over the last several years, Kentucky Power has experienced a trend of an increasing number of Major Events and Major Event Days as compared to the four preceding years (2016-2019).

Figure SDB-R2



Between 2020 and 2023, Kentucky Power experienced 11 Major Events alone, several of which were historic in their severity. These 11 Major Events included 26 Major Event Days. Collectively, these storms caused $79.3 million in damage. Figure SDB-R3 summarizes the dates, type, and customer impacts of the Major Events.

Figure SDB-R3

Major Event	Outages	Total Customers Impacted	CMI
January 11, 2020 High Wind Storm	189	10,673	4,507,240
April 8-9, 2020 Thunderstorms	153	10,656	5,206,342
April 12, 2020 Straight-Line Wind Storm	909	72,459	200,900,139
December 24-25, 2020 Snow Storm	105	8,531	9,343,938
February 2021 Ice and Snow Storms (February 10, 15, and 17)	1,950	110,365	381,441,588
February 28, 2021 Major Flood Event	194	19,108	18,268,339
June 17, 2022 Thunderstorms and High Winds Event	437	27,794	28,828,056
July 28, 2022 Historic Flood Event	669	60,954	168,832,446
March 3, 2023 High Winds Event	349	28,049	21,744,501
March 25, 2023 High Winds Event	244	17,139	8,297,558
April, 2023 High Winds Event	516	35,318	32,241,177

Q. YOU INDICATED THAT SEVERAL OF THE MAJOR EVENTS BETWEEN 2020 AND 2023 WERE HISTORIC IN THEIR SEVERITY. CAN YOU PLEASE ELABORATE ON THEM?

A. Three of the Major Events that occurred between 2020 and 2023 were among the most significant weather challenges faced in the Company's recent history, both in terms of the scope of the damage and the cost of restoration:

- April 12, 2020 Straight-Line Wind Storm (the "Gravity Wave"). This storm, known as a meteorological "gravity wave," produced prolonged winds exceeding

40 mph and gusts as high as 79 mph. A gravity wave is a phenomenon where strong winds of one to two hours' duration occur along with a rapid fall and rise in surface pressure.[2] The sustained winds led to extensive damage across eastern Kentucky, including downed trees, power lines, and structural damage. During this Major Event, portions of 13 counties (out of 20) within the Company's service territory were impacted. As many as 70,000 to 75,000 power outages were reported across eastern Kentucky.

- February 2021 Ice and Snow Storms – During these three winter storms, Kentucky Power's service territory was faced with up to one inch of ice accumulation and four to six inches of snow. Many roads became impassable due to downed trees and electrical lines, as well as ice and snow. During this Major Event, portions of 17 counties (out of 20) within the Company's service territory were impacted. These storms were so severe and destructive that Governor Beshear declared a State of Emergency across Kentucky on February 11, 2021.
- July 28, 2022 Historic Flood Event – This event was a historic 1,000-year probability flooding event that included heavy rain, deadly flash flooding, mudslides, and landslides. Flash flooding is the most dangerous kind of flooding, as it combines destructive power with incredible speed. There were times during this event that rainfall rates exceeded four inches an hour, with an estimated 14-16 inches of rainfall during the five-day event. Restoration crews faced serious access issues as some roads and bridges were entirely washed away, flooded, or blocked by debris. During this Major Event, portions of 6 counties (out of 20)

[2] https://www.weather.gov/jkl/041220_Gravity_Wave (last accessed February 15, 2024).

within the Company's service territory were impacted. Governor Beshear declared a State of Emergency across Kentucky on July 28, 2022. The event led to 39 deaths and widespread catastrophic damage.

Q. WHAT HAS BEEN THE PRIMARY DRIVER OF OUTAGES DURING RECENT MAJOR EVENTS?

A. The nature of the damage varies with the type of a Major Event. Consider the following Major Events during this period (2020-2023):

- During the April 2020 Gravity Wave, the sustained 40 mph and higher winds and gusts as high as 79 mph felled numerous trees into the Company's distribution lines. The combination of falling trees outside Company ROW and strong winds damaging conductor and other equipment were responsible for approximately 97% of the customer minutes of interruption during the event.
- During the February 2021 Ice and Snow Storms, ice accumulations of more than one inch on parts of the Company's system exceeded even the NESC heavy loading guidelines – the highest distribution structure strength requirements. The Company could not have avoided outages even applying the highest industry standard for hardening. Furthermore, the ice storm damaged countless trees outside of Kentucky Power's ROW, leading to significant damage to the Company's distribution facilities. No amount of hardening can protect the system from falling trees. Additionally, ice weighed down limbs to the point where they made contact with the Company's facilities and caused outages. The combination of trees outside ROW and ice were responsible for approximately 94% of the customer minutes of interruption experienced.

- During the July 28, 2022 Historic Flood, floods, mudslides, and landslides in some areas completely swept away some of the Company's distribution facilities and uprooted many trees outside of ROW, which were then swept into the Company's distribution facilities. As another example, the flood waters washed away soil from the Company's distribution poles, completely exposing the base of the poles. For a 40-foot pole, that equates to six feet of soil being completely removed. In some instances, flood waters reached near the distribution pole's system neutral. Again, even with NESC heavy loading, these types of outages could not have been prevented. The combination of trees outside ROW and the flood were responsible for approximately 95% of the customer minutes of interruption the Company experienced.

Q. WHAT WERE THE COSTS OF THE MAJOR EVENT BETWEEN 2016 AND 2019?

A. The costs for Major Events for the period of 2016-2019 are summarized in Figure SDB-R4:

Figure SDB-R4

Year	Total Major Event Costs	Number of Major Events	Number of Major Event Days	Average Major Event Cost
2016	$1,488,615	1	1	$1,488,615
2017	$4,675,503	3	3	$1,558,501
2018	$2,172,671	3	3	$724,224
2019	$1,625,661	1	1	$1,625,661
2016-2019 Totals	**$9,962,449**	**8**	**8**	**$1,245,306**

As Figure SDB-R4 shows, between 2016-2019, the Company experienced eight Major Events that coincided with eight Major Event Days, with the average cost of

approximately $1.24M per event. Although these storms qualified as Major Events, the scope of the damage was not sufficiently severe to require Kentucky Power to seek a regulatory deferral.

Q. WHAT COSTS DID THE COMPANY INCUR FOR MAJOR EVENTS BETWEEN 2020-2023?

A. Figure SDB-R5 summarizes the actual costs of the Major Events incurred from 2020 through April of 2023.

Figure SDB-R5

Year	Total Major Event Costs	Number of Major Events	Number of Major Event Days	Average Major Event Cost
2020	$21,803,537	4	6	$5,450,884
2021	$78,439,824	4	11	$19,609,956
2022	$25,365,212	2	6	$12,682,606
2023	$13,981,323	3	3	$4,660,441
2020-2023 Totals	$139,589,896	13	26	$10,737,684

Although Figure SDB-R5 appears to show a significant increase in Major Event Costs, this figure is largely driven by the three historic storms that I described earlier in my testimony—the April 12, 2020 Gravity Wave; February 2021 Ice and Snow Storms; and the July 28, 2022 Historic Flood. Again, the scope of the damage and cost of the restoration for these storms were among the most significant in the Company's recent history. Figure SDB-R6 shows the costs of Major Events between 2020 and 2023 without these three historic events.

Figure SDB-R6

Year	Total Major Event Costs	Number of Major Events	Number of Major Event Days	Average Major Event Cost
2020	$3,618,520	3	3	$1,206,173
2021	$2,006,759	1	3	$2,006,759
2022	$5,409,015	1	1	$5,409,015
2023	$13,981,323	3	3	$4,660,441
2020-2023 Totals	$25,015,617	8	10	$3,126,952

Figure SDB-R6 shows that total Major Event costs went from approximately $139.6M down to approximately $25.0M, once the April 12, 2020 Straight-Line Wind Storm ($18.2M), February 2021 Ice and Snow Storms ($76.4M), and the July 28, 2022 Historic Flood Event ($20.0M) are removed—a difference of approximately of $114.6M. Figure SDB-R7 summarizes the three historic Major Events.

Figure SDB-R7

Year	Total Major Event Costs	Number of Major Events	Number of Major Event Days	Average Major Event Cost
2020	$18,185,017	1	3	$18,185,017
2021	$76,433,065	3	8	$76,433,065
2022	$19,956,197	1	5	$19,956,197
2020-2023 Totals	$114,574,279	5	16	$38,191,426

Q. HOW DO 2015-2019 MAJOR EVENT COSTS COMPARE TO THE 2020-2023 MAJOR EVENT COSTS?

A. Figure SDB-R6 confirms that without the three extraordinary Major Events, average storm event costs between 2020 and 2023 are in line with, though slightly higher, than historical average Major Event costs, as the recent Major Events have been more severe. Of course, there is still some variation year to year, but this is entirely

expected because no two storms are the same. For example, the three Major Events in 2018 caused comparatively less damage on average than the three Major Events in 2023.

Q. HAS THE COMMISSION HAD AN OPPORTUNITY TO REVIEW THE COMPANY'S MAJOR EVENT COSTS EXPERIENCED BETWEEN 2020 AND 2023?

A. Yes. In the Commission's Financing Order in Case No. 2023-00159, the Commission stated that:

> The Tariff P.P.A. Under-Recovery Regulatory Asset represents an under recovery that Kentucky Power would be authorized to true-up pursuant to its purchase power adjustment tariff, and the storm damage expense regulatory assets are extraordinary expenses, beyond those included in base rates, that Kentucky Power incurred to recover from and repair its system following severe weather. Thus, the costs from which the regulatory assets arose were prudently incurred such that recovery of the regulatory assets in rates would be fair, just and reasonable in the absence of the proposed securitization.[3]

VI. CONCLUSION

Q. ARE ANY OF THE COMPANY'S STORM COSTS A RESULT OF UNDERINVESTMENT IN THE COMPANY'S DISTRIBUTION SYSTEM?

A. No. The damage sustained to the Company's distribution system during storms is in no way attributable to the Company's level of distribution investment. As discussed earlier in my testimony, Kentucky Power's service territory experienced particularly severe Major Events over the last several years. While the Company's distribution system was originally built to recommended NESC medium loading standards, the

[3] *See* Financing Order at 48, *In the Matter of: Electronic Application of Kentucky Power Company for (1) A General Adjustment of Its Rates For Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, (Ky. P.S.C. January 11, 2024).

Company has been upgrading to higher NESC heavy loading standards where applicable. However, in the February 2021 Ice and Snow Storms, the ice was thicker than even the thickness accommodated by heavy loading standards, and so still would have caused considerable outages and damage even if the Company's entire distribution system met NESC heavy loading standards. Additionally, trees outside of the Company's ROW can either fall, be blown, or weighed down into the Company's distribution facilities during Major Events and cause outages. Despite the Company's prudent investment in its distribution system, it was necessary for the Company to incur the costs to restore service as safely and quickly as reasonably possible after each of the Major Events described in this testimony—as the Commission itself found in approving recovery of those costs.

Beyond this, Company Witness Shlatz's rebuttal testimony further demonstrates that the damage to the Company's distribution system due to these severe Major Events is not attributable to the Company's level of distribution investment. Company Witness Shlatz has performed a benchmarking analysis that establishes that the Company's distribution investments and reliability performance are comparable to a peer group of electric utilities. In fact, Company Witness Shlatz concludes that the Company provides adequate, efficient, and reasonable service to customers and confirms that the Company's reliability performance during both normal weather and Major Events is consistent with the performance of peer utilities.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Electric Distribution Service Areas

PSC Regulated Rural Electric Utilities

Members of East Kentucky Power Cooperative, Inc. (transmission cooperative)

- Big Sandy RECC
- Blue Grass Energy Cooperative
- Clark Energy Cooperative
- Cumberland Valley Electric
- Farmers RECC
- Fleming-Mason Energy Cooperative
- Grayson RECC
- Inter-County Energy Cooperative
- Jackson Energy Cooperative
- Licking Valley RECC
- Nolin RECC
- Owen Electric Cooperative
- Salt River Electric Cooperative
- Shelby Energy Cooperative
- South Kentucky RECC
- Taylor County RECC

Members of Big Rivers Electric Corporation (transmission cooperative)

- Jackson Purchase Energy
- Kenergy Corporation
- Meade County RECC

Municipal Utilities

Barbourville, Bardstown, Bardwell, Benham, Benton, Berea, Bowling Green, Corbin, Falmouth, Frankfort, Franklin, Fulton, Glasgow, Henderson, Hickman, Hopkinsville, Jellico (TN), Madisonville, Mayfield, Murray, Nicholasville, Olive Hill, Owensboro, Paducah, Paris, Princeton, Providence, Russellville, Vanceburg, Williamstown

PSC Regulated Investor Owned Utilities

- Duke Energy Kentucky, Inc.
- Kentucky Power Company
- Kentucky Utilities Company (KU)
- Louisville Gas and Electric Company (LG&E)

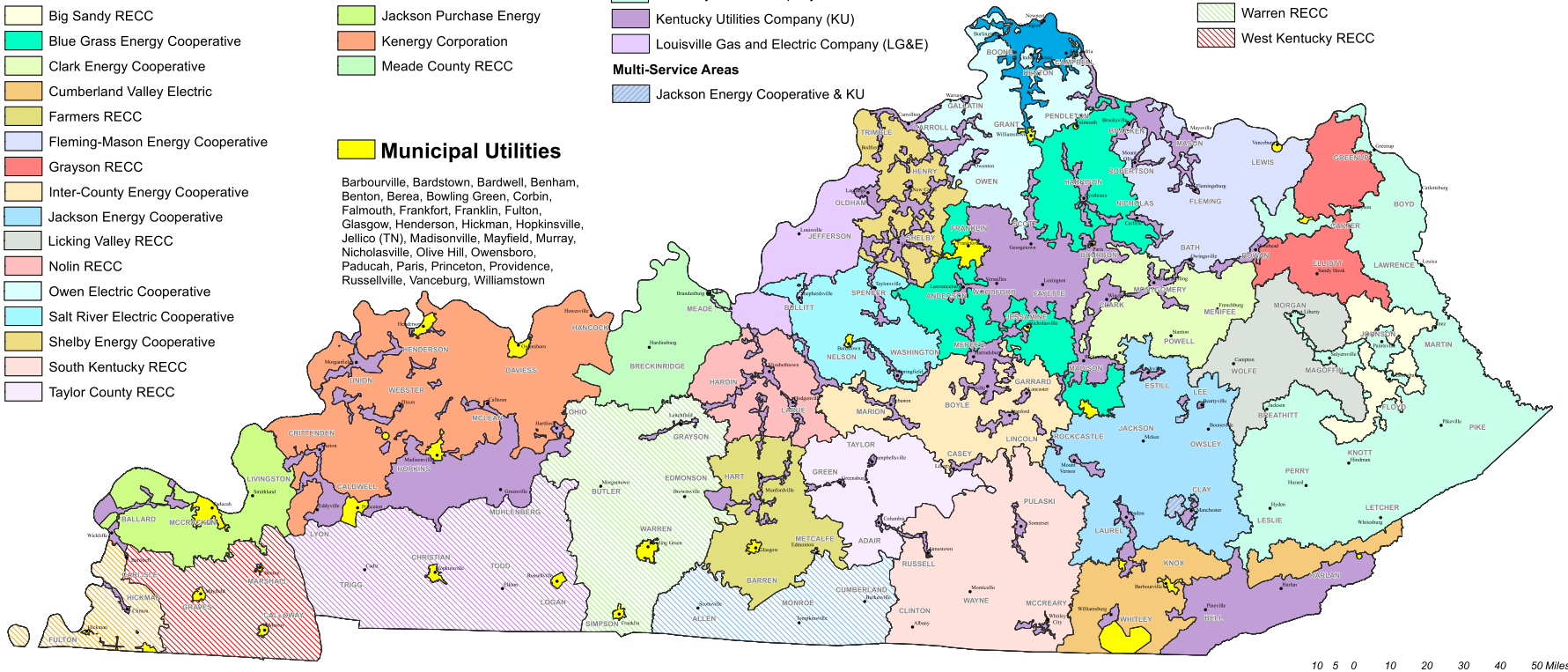
Multi-Service Areas

- Jackson Energy Cooperative & KU

- County Seats
- County Boundaries

TVA Regulated Utilities

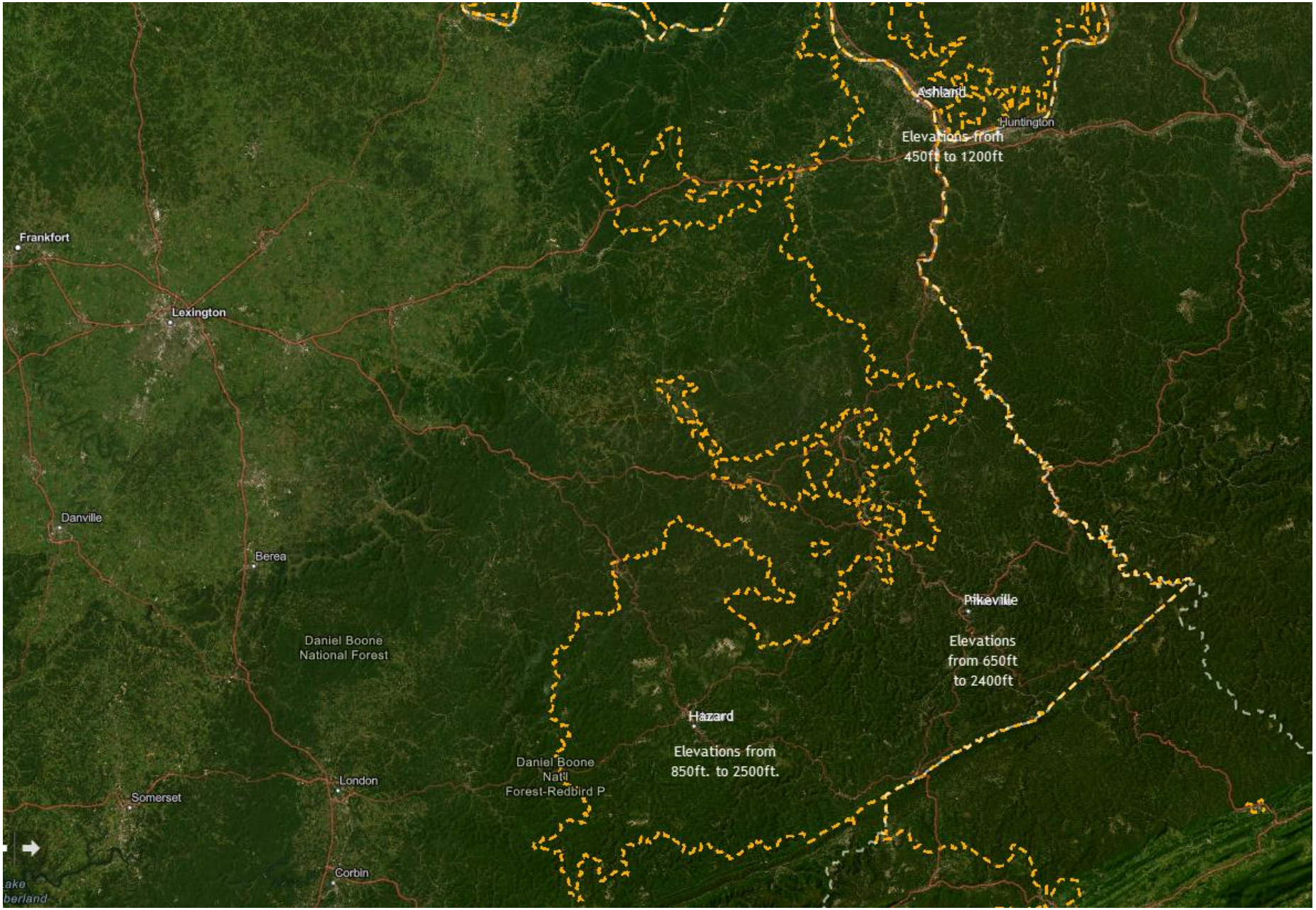
- Gibson EMC (TN)
- Pennyrile RECC
- Tri-County REMC
- Warren RECC
- West Kentucky RECC



The electric service areas are compiled from certified territory maps on file with the Public Service Commission. These are legal documents which define the retail service area of electric suppliers regulated by the Commission (Kentucky Statute 278.017). The legal certified territory boundaries are drafted on 1:24,000 USGS topographic maps, and can be assumed to have an accuracy of 100 feet. This map, which was compiled from that data, is for informational purposes only, and has no legal standing.

Kentucky has 30 municipal systems serving over 500,000 customers. Ten of these are provided wholesale power by the Tennessee Valley Authority (TVA) and are regulated by them. The others are self-regulated by the municipality. The boundaries for the municipal systems were either derived from the Public Service Commission's certified territory maps, or from boundaries submitted for informational purposes to the PSC from the utility. If the municipal service area boundaries were unknown, a circle was placed around the urbanized area.

Kentucky Public Service Commission
March 17, 2023


Ashland
Huntington
Elevations from
450ft to 1200ft
Frankfort
Lexington
Danville
Berea
Daniel Boone
National Forest
Pikeville
Elevations
from 650ft
to 2400ft
Hazard
Elevations from
850ft. to 2500ft.
Daniel Boone
Natl
Forest-Redbird P
London
Somerset
Corbin

VERIFICATION

The undersigned, Stephen D. Blankenship, being duly sworn, deposes and says he is the Region Support Manager, for Kentucky Power, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Stephen D. Blankenship

Commonwealth of Kentucky)
) Case No. 2021-00370
County of Boyd)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Stephen D. Blankenship, on February 16 2024

Marilyn Michelle Caldwell
Notary Public

MARILYN MICHELLE CALDWELL
Notary Public
Commonwealth of Kentucky
Commission Number KYNP71841
My Commission Expires May 5, 2027

My Commission Expires May 5, 2027

Notary ID Number KYNP71841