COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct 69kV Transmission Lines And Associated Facilities In Pike County, Kentucky ("Belfry Area Transmission Line Project")	)))))	Case No. 2023-00040

DIRECT TESTIMONY OF

GEORGE T. REESE
GAI CONSULTANTS, INC.

ON BEHALF OF KENTUCKY POWER COMPANY

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I. INTRODUCTION

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

A. My name is George T. Reese. I am employed by GAI Consultants, Inc. ("GAI"), 385 East Waterfront Drive, Homestead, PA 15120, as Vice President, Business Sector Manager for Power Delivery – Environmental.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I hold a Bachelor of Science degree in Biological Sciences from the University of Pittsburgh, and a Master of Science Degree in Biology from Clarion University of Pennsylvania. I have been associated with GAI since 1987 and have had various technical, supervisory, and managerial roles in many of GAI's utility transmission (electric and gas) siting projects since 1987. I have more than 35 years' experience in siting, licensing/certification and permitting of natural gas and electric transmission lines. I routinely oversee the work of GAI technical staff members who are responsible for the environmental permitting and siting aspects of GAI's transmission line projects.

Q. PLEASE DETAIL FOR THE COMMISSION GAI'S EXPERIENCE IN ANALYZING ALTERNATIVE ROUTING FOR ELECTRIC TRANSMISSION LINES.

A. GAI has been providing routing, siting, and permitting services for companies that construct electric transmission lines for over 30 years. GAI has successfully sited and permitted hundreds of transmission line projects covering thousands of miles of high voltage transmission lines and associated facilities. GAI's siting specialists coordinate closely with project transmission line engineers to evaluate alternative routes and weigh aspects of the project based on need, project specific criteria, agency and public concerns, resource studies, and project technical specifications.

Q. HAVE YOU PREVIOUSLY BEEN INVOLVED IN ELECTRIC TRANSMISSION LINE SITING STUDIES?

A. Yes. I have served as Project Manager or otherwise supervised the preparation of over 30 siting studies or reviews in the states of Kentucky, Virginia, West Virginia, Pennsylvania, Ohio, Indiana, and Michigan as well as in Honduras, El Salvador, and the Dominican Republic.

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY TO THIS COMMISSION ON BEHALF OF KENTUCKY POWER?

A. Yes. I provided testimony on behalf of Kentucky Power in connection with its application for a certificate of public convenience and necessity for the Garrett Area Improvements 138kV Transmission Line Project (Case No. 2021-00346), East Park 138kV Transmission Line Phase 1 (Case No. 2018-00072), the Bonnyman-Soft Shell 138kV Transmission Line (Case No. 2011-00295), and the Belfry Area Transmission Line Project (Case No. 2022-

00236). I also supervised the preparation of the following siting and environmental studies filed on behalf of Kentucky Power: the Leeco Project 138kV Transmission Line Siting Study (Case No. 2009-00235); and the Hays Branch-Morgan Fork 138kV Transmission Line (Case No. 2007-00155).

III. PURPOSE OF TESTIMONY

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

A. I am testifying in support of Kentucky Power Company's ("Kentucky Power" or the "Company") Application for a Certificate of Public Convenience and Necessity to construct the proposed Belfry Area Transmission Line Project ("Project") in Pike County (the "Application"). In my testimony, I:

- Describe the methodology employed by the Company in conducting the *Belfry Area Transmission Line Project Siting Study* (the "Siting Study") for the project that was used in identifying and evaluating the alternative transmission line routes and substation sites. The Siting Study is filed as **EXHIBIT 10** to the Application.
- Describe the results and conclusions of the Siting Study, as well as the basis for the recommendation of the Proposed Route.
- Sponsor the Siting Study.

IV. THE SITING STUDY

A. Overview.

Q. PLEASE DESCRIBE GAI'S ROLE RELATED TO THE PROPOSED PROJECT.

A. GAI was retained in 2021 by the Company to identify and evaluate potential transmission line routes ("Alternative Routes") for the proposed approximately 6.5 miles of 69kV transmission line and assist in identifying a suitable site for the proposed Orinoco Substation as part of the Project. The Project is being constructed to allow for the

retirement of 8.2 miles of 46kV transmission line between the existing Sprigg and Stone substations, approximately 6.5 miles of which is located in Kentucky with the remainder in West Virginia. The retirement is further described in Company Witness Koehler's testimony. The existing 46kV line was built with wooden poles and dates from the 1940s. The new transmission between the existing New Camp Substation, the proposed Orinoco Substation, and the existing Stone Substation will be built to 69kV . These upgrades will strengthen the local electric system, address aging infrastructure, and increase reliability for the area. GAI was responsible for assisting Kentucky Power in determining the most suitable route for the transmission line and site for the Orinoco Substation.

The Siting Study does not consider the alternative solutions described in witness Koehler's testimony because the alternative solutions are not adequate from an electrical point of view as determined by Kentucky Power's transmission planning standards.

GAI prepared a report to document environmental suitability and feasibility of the Project and the Alternative Routes reviewed and evaluated. I served as Project Advisor on behalf of GAI in connection with the siting and environmental work associated with the Project. The Siting Study for the Project was initially filed in September 2022 in support of Kentucky Power's CPCN application to the Commission for Case No. 2022-00236. Please see Company Witness West's testimony concerning the previous case for additional information.

Q. HAS THE PROPOSED ROUTE OR SITING STUDY BEEN UPDATED SINCE THE SEPTEMBER 2022 APPLICATION?

A. Yes. The location of the Alternative Routes and Proposed Route have not changed and the Siting Team determined that it is appropriate to use the same data and analysis as presented

in the September 2022 filing. Some new information was discovered after the filing of the previous CPCN application which, is addressed in Section 6 - Addendum of the Siting Study. As part of the refiling effort, the Company also reviewed other possible electrical solutions for the Project. These electrical solutions, as discussed by Company Witness Koehler, were determined to be less effective and more costly than the electrical solution originally presented. Given that the proposed electrical solution remained the same, significant updates to the Siting Study were not required as a result of the refiling effort and only minor editorial updates, including the addition of the addendum and replacement of Attachment H, were completed in the Siting Study Revision 2 dated June 2023 (Application **Exhibit 10**).

Q. DID GAI WORK ALONE TO DEVELOP THE ALTERNATIVE ROUTES?

A. No. A multi-disciplinary team assisted with the development of the Alternative Routes and in the selection of the Proposed Route (the "Siting Team"). The Siting Team members provided a wide range of experience including transmission line siting, impact assessment for a wide variety of natural resources and the human environment, impact mitigation, outreach, engineering, right-of-way, and construction management. Members of the Siting Team were from several companies including Kentucky Power, GAI, ERM (outreach support), POWER Engineers (transmission engineering support), and Emerald Energy & Exploration (right-of-way support).

Q. PLEASE DESCRIBE THE PURPOSE OF THE SITING STUDY.

A. The purpose of the Siting Study is to identify a Proposed Route for the Project that will enable the Company to acquire the required right-of-way, engineer, build, operate, and maintain the Project, while minimizing overall environmental and land use impacts.

B. The Orinoco Substation Site.

Q: WHAT FACTORS WERE CONSIDERED IN EVALUATING LOCATIONS FOR THE PROPOSED ORINOCO SUBSTATION SITE?

A. The proposed Orinoco 69kV Substation is needed to replace the existing 46kV Belfry Substation that cannot be expanded at its current location. Kentucky Power's planners and engineers defined the general location for the Proposed Substation to be as close as possible to the existing Belfry Substation to minimize distribution system work. A new substation in this area will reasonably address the identified electrical issues by upgrading the local system from 46kV to 69kV, thereby strengthening the local electrical system and increasing reliability for local customers. The specific location of the substation was dependent on engineering and constructability considerations, future development plans, proximity to existing residential and commercial development, and efforts to avoid or minimize environmental and land use impacts. The location of the substation also affects the transmission line routes and associated impacts on residences and environment. GAI worked with Kentucky Power to determine the best location for the proposed Orinoco Substation, as described in the Substation Siting Study included as Attachment B in **EXHIBIT 10**.

Q. WHY CAN THE BELFRY SUBSTATION NOT BE EXPANDED AT ITS CURRENT LOCATION?

A. The existing Belfry Substation has fence dimensions of approximately 60' by 70'and has no room for additional equipment. Due to outage constraints, any site expansion would have required additional property in order to avoid lengthy disruption to customers. The existing Belfry Substation is bounded by steep hillside to the north and west, United States

Route 119 to the east, and by residences and corresponding residential outbuildings to the south. Three residences are located in the area that would be needed to expand the substation. These three land owners were contacted in early 2021 to inquire about purchases of their property to allow for the expansion of the existing substation. Two of them were not willing to sell. For the above reasons, expansion adjacent to the existing Belfry Substation was dismissed, and alternative sites were examined.

Q. HOW MANY SUBSTATION SITES WERE EXAMINED?

A. The Siting Team identified five study sites, of which three were evaluated in detail as Alternative Sites. Ultimately, two Alternative Sites considered were eliminated due to size constraints, costs, socioeconomic concerns (proximity to residences), line-of-sight access safety concerns, and concerns regarding historic mining. Rebuilding the existing Belfry Substation was also eliminated from consideration as it would require purchasing and removing up to three residences immediately adjacent to the existing substation.

Q. WHERE ARE THE THREE ALTERNATIVE STATION SITES LOCATED?

A. Alternative Site A is located 0.75-mile north of the existing Belfry Substation along US-119 adjacent to a Dollar General store. The parcel is undeveloped with a distribution line running along the back edge. Field review identified concrete structures on the steep hillside above the site and a potential mine opening from historic mining. Boulders were also present on the hillside, which could be a hazard to the new substation. Field view also revealed that the substation entrance would be located in a curve of a four-lane roadway (US-119) which presented a safety concern for the large trucks with trailers that would need to enter and exit the substation using this access.

Alternative Site B is currently a residential property located 0.08-mile south of the Belfry Substation. It is nearly adjacent to the Belfry Substation, with two residences on the northern side, and a beauty school and additional residence adjacent to the parcel on the south side. Field reviews concluded that while the parcel is of adequate size for the substation, it would leave limited room for material laydown or construction vehicle parking. Concerns including that its current land use is residential, and the adjacent land use consists of residential parcels and a beauty school, were also taken into consideration. Additionally, access to the site would be close to a curve in a four-lane roadway (US-119) creating line-of-sight concerns.

Alternative Site C is located 1.25-miles south of the Belfry Substation along US-119. It is adjacent to the Belfry Branch Library and is the largest of the three sites considered. A field review concluded that the site has the best visibility of the sites considered along the four-lane roadway (US-119) for an access road, and that its size would allow for the substation to be constructed with room remaining for a laydown yard and construction parking.

Q. HOW WAS THE PROPOSED SUBSTATION SITE SELECTED?

A. Through an analysis and comparison of the Alternative Sites and discussions with affected landowners, the Siting Team identified a Proposed Substation Site, which was determined to be the most suitable site that minimizes impacts to the natural and human environments while satisfying engineering, construction, and access needs. Field review of Alternative Sites A and B identified concerns with access into the proposed substation from the four-lane roadway (US-119) due to the sites' orientation in relation to the curvature of the roadway which limits the line-of-sight. Additionally, although both sites were of adequate

size for substation construction, there was little room left for staging of materials or construction vehicle parking. Alternative Site A is also located at the base of a steep hillside where historic mining remnants were identified and large boulders are situated, potentially posing a threat to the substation below. Alternative Site B (currently a residential parcel) is adjacent to other residences and a beauty school. Concerns, including visual and how the land use change would be perceived, were raised for a new substation in such tight proximity to residences. Ultimately, Alternative Site C was selected as the Proposed Substation Site due to its size, location, accessibility, and line-of sight from the four-lane roadway (US-119), and surrounding land use which is generally undeveloped or commercial in nature.

C. Transmission Line Siting Methodology.

Q. ARE YOU FAMILIAR WITH THE ELECTRIC POWER RESEARCH INSTITUTE/GEORGIA TRANSMISSION CORPORATION'S ("EPRI") "OVERHEAD ELECTRIC TRANSMISSION LINE SITING METHODOLOGY"?

A. Yes.

Q. ARE YOU FAMILIAR WITH THE RELATED "KENTUCKY TRANSMISSION LINE SITING METHODOLOGY" ("KENTUCKY EPRI METHODOLOGY")?

A. Yes.

Q. PLEASE DESCRIBE THE KENTUCKY EPRI METHODOLOGY.

A. The Kentucky EPRI methodology develops and ranks Alternative Routes by assigning differing weights to different landscape resources or variables.[1] A Study Area comprising

[1] The Kentucky EPRI Methodology considers a number of variables related to the Project area landscape. These include parameters for land use, land cover, proposed development, presence and density of buildings, public lands, water and wetland resources, floodplains, cultural resources, wildlife habitat, infrastructure, and slope.

multiple differing land uses/land covers can yield sufficient differentiation in the values assigned to the alternatives to inform decision making; the larger the Study Area, the greater the possibility to consider a larger number of Alternative Routes based on differences in the land use or land cover across a large area.

Q. WAS THE KENTUCKY EPRI METHODOLOGY USED HERE?

A. No. Use of the Kentucky EPRI methodology was not feasible or probative due to the homogenous landscape, including land use and land cover, in the area between the New Camp, Orinoco, and Stone substations.

Q. HOW DOES THE HOMOGENOUS LANDSCAPE AFFECT THE RESULTS PRODUCED BY THE KENTUCKY EPRI METHODOLOGY?

A. The Study Area is dominated by forested land, undeveloped land on former surface and underground mining sites, and scattered residential development located along roadways in valley bottoms (i.e. U.S. Route 119, KY Route 199, KY Route 308 and Pecco Hollow Road). These predominant land uses and limited resource variability would not yield sufficient differentiation among land uses or the resulting transmission corridors under the Kentucky EPRI methodology to make its use probative. Further constraining the usefulness of the Kentucky EPRI methodology was the linear residential development in the valleys, which limited the locations where a transmission line right-of-way could be constructed. The spatial distribution of homes within these valleys provided limited opportunities for a transmission line to cross while avoiding impacts to residential structures.

Q. WHAT METHODOLOGIES WERE USED?

A. The Siting Team used a multi-step methodology to identify and evaluate Alternative Routes. It is the same multi-step methodology previously employed successfully by

Kentucky Power and its experts on the following projects: 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), Kewanee-Enterprise Park (Case No. 2020-00062), Garrett Area Improvements 138kV Transmission Line Project (Case No. 2021-00346), and Wooton-Stinnett 161kV Transmission Rebuild Project (Case No. 2022-00118). These steps included efforts at various points in the process to identify constraints and opportunities, to identify and address stakeholder and landowner concerns, and to coordinate with local officials. These traditional methodologies are industry accepted, robust, tested and defensible, and the resulting Alternative Routes are buildable and efficient while avoiding or minimizing impacts to environmental resources and residents of the surrounding areas. This methodology has also been used successfully on multiple other state-approved AEP projects in Virginia, West Virginia, and Ohio.

Q. IS INFORMATION CONCERNING THE METHODOLOGY USED IN LOCATING THE PROPOSED ROUTE OF THE BELFRY AREA TRANSMISSION LINE PROJECT INCLUDED IN THE SITING STUDY?

A. Yes. The methodology employed is described in detail in Section 2.0 of the Siting Study. Section 3.0 of the Siting Study discusses the constraints within the Study Area that were considered and discusses the development of the Alternative Routes. A detailed comparison of the Alternative Routes based on the resource description of the Study Area is provided in Section 4.0 of the Siting Study (Application **EXHIBIT 10**).

Q. PLEASE OUTLINE THE GENERAL STEPS THE SITING METHODOLOGY IMPLEMENTED.

A. In general, the siting methodology consisted of five steps:

1. Identification of the Study Area, end points, and opportunities and constraints within;

2. Development of siting guidelines;

3. Identification, evaluation, and refinement of Study Segments, including the consideration of stakeholder and public input;

4. Creation of Alternative Routes by assembling the Study Segments that best meet the siting guidelines into individual routes between each Project Component endpoint for analysis; and

5. Completion of a quantitative and qualitative analysis and comparison of the Alternative Routes to determine the preferred Alternative Route (the "Proposed Route").

Q. PLEASE DESCRIBE IN MORE DETAIL THE FIRST STEP OF THE SITING METHODOLOGY UTILIZED BY THE SITING TEAM.

A. The first step was to define Project endpoints and identify a Study Area for locating a new 100-foot-wide transmission line ROW. The endpoints were defined as the existing New Camp Substation in the north, the proposed Orinoco Substation in the community of Belfry, and the existing Stone Substation in the south. The Study Area generally consisted of the area between the Project endpoints. The eastern boundary of the Study Area follows US-119 then loosely follows State Highway 319 and Narrows Branch. The western boundary of the Study Area is not associated with roadways or other physical features or constraints but was developed to allow space for logical route options. The Siting Team ultimately identified a 12.9-square mile area in Pike County as the Study Area. **Map 1** in Attachment C of the Siting Study shows the Study Area. Following identification of the Study Area, GAI initiated the collection of high-level data concerning environmental, land use and ownership, and topographic constraints within this area.

Q. BRIEFLY DESCRIBE YOUR DATA COLLECTION PROCESS AND CONSTRAINTS MAPPING.

A. A list of data collected is included as Attachment D and E to the Siting Study. In general, publicly available data were collected regarding land use, natural resources, and cultural resources. In addition to the collection of publicly available data and specific data requests, site visits and discussions with landowners and local stakeholders were conducted to better understand the Project area (described further below). The Siting Team also completed field reviews of the Study Area from publicly accessible areas and collected data regarding land use.

Q. PLEASE DESCRIBE GENERALLY THE TOPOGRAPHY AND LAND USE CURRENTLY FOUND IN THE STUDY AREA.

A. The Study Area is characterized by forested ridgelines with intermittent landslides and drainage ravines susceptible to debris flows bisected by valleys with roadways and scattered residential development. Extensive surface mining has occurred in the past in the Study Area and several ridges have been mined. Additionally, there are existing permitted and future mining areas within the Study Area. The predominant land uses in the Study Area are forested slopes and hillsides, reclaimed mine areas, oil and gas development, and residential development located along roadways in the valley bottoms. The small communities of Belfry and Huddy contain denser residential and commercial development.

Q. WHAT WAS THE SECOND STEP IN THE SITING METHODOLOGY EMPLOYED BY THE SITING TEAM?

A. The Siting Team next developed the siting guidelines to be used in locating the transmission line corridor to achieve three primary goals or objectives. The goals are that

the Proposed Route should (1) reasonably avoid or minimize adverse impacts on residential areas and the natural and cultural environment; (2) minimize special design requirements and unreasonable costs; and (3) permit the line to be constructed and operated in a timely, safe, and reliable manner.

Q. WHAT WAS THE THIRD STEP IN THE SITING METHODOLOGY EMPLOYED BY THE SITING TEAM?

A. Study Segments were created using the siting criteria, desktop review, field visits, and stakeholder input (see **Map 2,** Study Segments, in Attachment C of the Siting Study). The Siting Team focused on creating Study Segments that would minimize impact to the residential development in the valley bottoms, existing and planned mining and mineral extraction activities, and provide the most direct route, while also considering constructability on steep terrain, geological hazards, paralleling opportunities, and opportunities for utilizing existing ROW. In total, 17 Study Segments were developed to connect the various substation endpoints of the Project.

Q. WHY WERE STUDY SEGMENTS USED IN THE THIRD STEP OF THE SITING METHODOLOGY?

A. Study Segments are partial alignments that are created to avoid known constraints, take advantage of opportunities, and most feasibly connect the Project endpoints. Study Segments can be combined in a variety of ways to create Alternative Routes. By using multiple shorter segments, constraints can be more easily avoided by providing multiple options to connect endpoints.

Q. WAS THE ENTIRE STUDY AREA AVAILABLE IN CREATING THE SEGMENTS?

A. No. The Study Area was constrained in places by current and planned development or mining activities, the residential and commercial development along U.S. Route 119 and in the communities of Belfry and Huddy, as well as residential development along smaller roadways including Kentucky Routes 199, 308, and Pecco Hollow Road among others. Once viable road crossing locations were identified, Study Segments were refined and developed into a network that could be combined to form the Alternative Routes between the intervening substations. Stakeholder input was critical and used to modify and refine Study Segments.

Q. WHICH EXTERNAL STAKEHOLDERS WERE CONSULTED DURING THE SITING PROCESS?

A. Stakeholders included local public officials, the affected landowners, and the general public. In the early stages of Study Segment development, members of the Siting Team met with representatives of Pike County on July 7, 2021. These local stakeholders were supportive of the Project and did not foresee major issues or conflicts with the Project. Kentucky Power also met with Tierney Lawrence Land Company, which is a mining company that owns permitted mining areas in the Study Area, and Kinzer Business Reality which owns several parcels within the Study Area. An in-person public open house was not held due to the COVID-19 pandemic; however, a virtual open house and two town halls were conducted using a Project-specific website. Components of the virtual open house included an interactive overview map, fact sheet, project updates and news releases, schedule information, and photographs of representative structures. Two live virtual town halls were also conducted on September 9, 2021, in which a presentation regarding the

Project was presented by Kentucky Power representatives and landowners were given the opportunity to ask questions.

Q. PLEASE DESCRIBE THE PUBLIC OUTREACH PROCESS, INCLUDING CONTACT WITH LANDOWNERS, IN MORE DETAIL.

A. Kentucky Power published a news release on August 19, 2021 to announce the Project and inform landowners that Study Segments were under development. A Project website and virtual open house were instituted on August 19, 2021 to inform the public on the Project and of the intent to file the Project with the Commission in early 2022. A total of 422 views of the Project website were recorded between August 18 and November 28, 2021. Also on August 19, 2021, 243 postcards were mailed to landowners with property crossed by or adjacent to a proposed Study Segment. The postcards were designed to let landowners know that more information would be sent to them via U.S. Mail. On August 26, 2021, packets were mailed to the 243 landowners that included a letter, fact sheet, comment card, and self-addressed stamped return envelope. Copies of the letter and fact sheet are provided in Exhibit 23. On August 23 and September 1, 2021 automated voicemail messages were sent to the 243 landowners, and ads were published in the Appalachian News-Express. A live virtual town hall was conducted at 12:00 pm and 5:00 pm on September 9, 2021, in which a presentation was made by Kentucky Power representatives and landowners were given the opportunity to ask questions. No additional handouts were provided at the town hall. On September 14, 2021 a trifold brochure with a comment card tear-off was mailed to landowners to provide a reminder about the Project and to request feedback by September 23, 2021. The public comment period ended on September 23, 2021.

Through the process outlined above, landowners contacted Kentucky Power to discuss the Project and obtain information, relay information regarding sensitive features on their properties, and provide other comment and information. These comments were collected by ERM, who requested specific Siting Team members from the appropriate discipline follow up with landowners who required more detailed information. Through this process Kentucky Power representatives were able to speak to many landowners within the Study Area who might be affected by a Study Segment to start soliciting feedback and addressing concerns, including future or existing land use conflicts. Once the Proposed Route was selected, Kentucky Power sent letters and a map on June 21, 2022 notifying previously contacted landowners of the Proposed Route.

The Company filed its application for Case No. 2022-00236 on September 8, 2022. All materials presented to the public during the open house or in informational packages for that filing indicated that routes were preliminary and subject to change.

A public hearing for Case No. 2022-00236 was held on October 25, 2022 in Pikeville, Kentucky. No public comments were received at the local hearing. However, Company representatives present at the local public hearing did meet with two landowners after the hearing concluded to discuss the Project and answer their questions. Kentucky Power right-of-way agents continued speaking with landowners impacted by the Proposed Route to further solicit input.

Kentucky Power sent letters and a map on June 9, 2023 to notify landowners of the filing for this case, Case No. 2023-00040. The required notice of the Company's intent to construct the Project and of this proceeding was published on Tuesday, May 16, 2023, in the *Appalachian News Express*.

Q. PLEASE DESCRIBE THE 2021 PUBLIC VIRTUAL TOWN HALL AND OPEN HOUSE.

A. Kentucky Power conducted a virtual public open house between August 19, 2021 and September 23, 2021 through information posted on a Project specific website. The virtual open house afforded the public the opportunity to learn about the Project and share feedback with the Siting Team. Visitors were able to provide feedback or share comments and questions. Affected landowners and the general public were also invited to meet with Kentucky Power representatives to provide their input and to learn more about the Project during a virtual town hall. Two town hall sessions were held on September 9, 2021 (one at 12:00pm and another at 5:00pm). A total of three attendees were at the 12:00pm town hall and seven attended the 5:00pm town hall. Both the virtual open house and virtual town hall were implemented to comply with physical distancing recommendations from the Centers for Disease Control and Prevention during the COVID-19 pandemic.

Q. WERE ROUTES MODIFIED AS A RESULT OF INITIAL STAKEHOLDER AND LANDOWNER INPUT?

A. Yes, route adjustments requested by stakeholders and/or landowners were reviewed by the Siting Team and, when feasible, adjustments were made. For example, conversations with a landowner directly outside of the Orinoco Substation resulted in shifting a Study Segment to avoid future development plans on the parcel.

Q. WERE ADDITIONAL MODIFICATIONS OR ELIMINATIONS TO STUDY SEGMENTS MADE FOLLOWING THE 2021 VIRTUAL OPEN HOUSE?

A. Following the virtual open house, the Siting Team reviewed the comments obtained from stakeholders and landowners and further scrutinized the Study Segments presented to the

public. As a result of landowner/stakeholder feedback and further engineering review, two Study Segments were eliminated.

Q. WHY WERE THESE TWO STUDY SEGMENTS ELIMINATED?

A. The Siting Team reviewed the Study Segments, constraints, and comments in detail to determine if any Study Segments should be revised or eliminated. As a result of the Study Segment review, Study Segments 02 and 06 were eliminated after the open house based on engineering review.[2] On Study Segment 02, engineers determined that residences along Forest Hills Road would likely be within the area of conductor sway and would need to be removed. Study Segment 06 was a connector segment from Study Segment 02 and was eliminated as it was no longer needed.

Q. WHAT WERE THE FINAL TWO STEPS IN THE PROCESS?

A. Following the Study Segment evaluation and elimination process, the remaining Study Segments were combined into Alternative Routes. These Alternative Routes were organized for analysis according to two general Project Components, the first describing Study Segments between New Camp Substation and Orinoco Substation, and the second describing Study Segments between Orinoco Substation and Stone Substation. The Alternative Routes were evaluated and a Proposed Route was selected between each substation. The Proposed Route, including route modifications, is further described in Section 5.0 of the Siting Study and in Section VI of my testimony.

[2] *See* Siting Study Section 4.0 (**Exhibit 10**, page 7 of 82), and **Exhibit 10**-Attachment C, Map 2.

V. RESULTS AND CONCLUSIONS OF THE STUDY

Q. YOU PREVIOUSLY INDICATED THAT ALTERNATIVE ROUTES WERE DEVELOPED BETWEEN EACH SUBSTATION. WILL YOU PLEASE DESCRIBE EACH OF THOSE ROUTES?

A. Yes. The Alternative Routes are presented on **Map 3** in Attachment C of the Siting Study and **EXHIBIT 11** to the Application, which includes an in-depth discussion of their development. They can be generally described as follows:

- New Camp – Orinoco Project Component: eleven Study Segments were combined into three Alternative Route options identified as Alternative Routes A, B and C.
- Orinoco-Stone Project Component: seven Study Segments were combined into three Alternative Route options identified as Alternative Routes D, E, and F.

Q. WHICH ROUTE WAS SELECTED AS THE PROPOSED ROUTE?

A. Between the New Camp and Orinoco substations, Alternative Route C was selected as the Proposed Route. It has the following advantages over Alternative Routes A and B:

- It was the shortest of the three alternative routes;
- It utilized approximately 0.7 mile of existing transmission line ROW;
- It lies in proximity to existing access roads that may be able to be used during construction and for maintenance;
- It requires the least amount of tree clearing;
- It avoids conflicts with a natural gas pipeline on a narrow ridge; and
- Avoids crossing U.S. 119 and associated development.

Between the Orinoco and Stone Substations, Alternative Route E was selected. It has the following advantages over Alternative Routes D and F:

- It is the shortest.
- It is not outage constrained. Both Alternative Routes E and F will allow for the

Orinoco Substation to be energized before the existing Belfry Substation and the Stone-Sprigg 46kV Transmission Line are taken out of service. Therefore, there would be no outage constraint associated with these options.

- It enters the Stone Substation from the preferred direction.
- It crosses fewer steep slopes.

The combination of Alternative C between the New Camp and Orinoco Substations and Alternative Route E between the Orinoco and Stone Substations represents the most direct, efficient route that minimizes impacts to residences, viewsheds and environmental resources while utilizing existing ROW to the greatest extent feasible. Section 5.0 provides additional detail concerning the basis for the Company's recommendation of this combination of routes (C and E) as the Proposed Route. In addition, Tables 1, 2, and 3 of the Siting Study provide a comparative evaluation of the constraints and opportunities for the various Alternative Route options.

Q. CAN YOU PLEASE PROVIDE FURTHER INFORMATION ON WHY ALTERNATIVE ROUTE D WAS NOT SELECTED?

A. In addition to being longer than the selected route, Alternative Route D would rebuild on the existing Stone – Sprigg 46kV Transmission Line centerline into the south side of the Stone Substation, which is not desirable. Outage constraints on the existing line would require constructing on an additional approximately 1.6 miles of existing ROW and would mean extended outages on the existing centerline.

Q. EXHIBIT 11 SHOWS A PORTION OF ALTERNATIVE ROUTE D THAT DEVIATES FROM THE EXISTING CENTERLINE; WHY IS THIS?

A. Although Alternative Route D was not selected due to the reasons stated above, this question was raised when the Company last filed this application, and it probably is helpful

to provide this information here. The section of Alternative Route D that deviates from existing centerline to feed the Orinoco Substation would be shorter and more topographically suitable than using the existing transmission line to connect into the new Orinoco Substation. Additionally, there are two residences on Pecco Hollow Road that would likely be within the area of conductor sway of the existing transmission line at this road crossing location that would likely need to be removed if the line were rebuilt in place. The deviation from the existing centerline on Alternative Route D also would have avoided the removal of residences at this location, had Alternative Route D been selected.

Q. ARE THESE RESIDENCES CURRENTLY ENCROACHING ON THE EXISTING LINE?

A. Yes, they are believed to be. However, Kentucky Power regularly monitors its ROW and takes necessary actions in the event that an encroachment represents an immediate safety risk or violation of the National Electrical Safety Code ("NESC") or impedes access to Company facilities for normal operations and maintenance. Encroachments are reviewed on a case-by-case basis relative to the type of encroachment, the rights of the Company under its easements and ROW agreements, the impacts of mitigating the encroachment (such as removal), and costs. When lines are proposed for reconstruction, Kentucky Power works to mitigate or remove encroachments and, if needed, update the terms of the ROW agreements to provide greater ability to protect ROW from future encroachment.

No encroachments have been determined to require immediate removal at this time.

Q. YOU MENTIONED EARLIER THAT AFFECTED LANDOWNERS WERE CONTACTED THROUGHOUT THE PROCESS. DID ANY LANDOWNERS CONTACTED EXPRESS OPPOSITION TO THE ROUTE CONSIDERED?

A. The Company received comments from 15 landowners. Correspondence was conducted in multiple ways and responses included six comment cards, two emails, 11 voicemails/phone conversations, and two website contact forms. A number of landowners asked questions about the alternative routes and overall Project. These included comments on the need for the Project; questions regarding route location, structure types, and removals; property ownership and leases, development plans, Belfry Substation; information on various resources and constraints present on their property; and requests for information.

Q. DID KENTUCKY POWER ATTEMPT TO ADDRESS THESE REQUESTS?

A. Yes. The Company reviewed comments and concerns from landowners in order to develop and select a line route that minimizes impacts. Several study segments were modified or eliminated to avoid resources. For example, a Study Segment was shifted near the Orinoco Substation to avoid future development plans.

Q. BASED ON THE EFFORTS UNDERTAKEN BY THE SITING TEAM AND DESCRIBED ABOVE, DO YOU HAVE AN OPINION ON THE COMPANY'S PROPOSED ROUTE FOR THE PROJECT?

A. Yes. The Proposed Route is the most suitable route to connect the Project endpoints. Based on the information gathered as part of the siting process, it is most consistent with the siting guidelines and meets the goals of minimizing impacts on land use and the natural and cultural resources along the route, while avoiding circuitous routes, extreme costs, and non-standard design requirements. The Proposed Route also spans residential development along roadways in such a way as to minimize visual impacts to the residences. Long spans between ridgetops will be necessary to span many of the valleys along the Proposed Route,

including some of the crossings of primary roadways like KY Route 308 and Pecco Hollow Road.

By spanning the topography from peak to peak, impacts on the viewshed from residences located in valleys will be minimized and residents will see fewer structures. By contrast, a route that followed lower topography would likely require additional structures and impact the viewshed and developed areas to a greater extent.

VI. PROPOSED ROUTE

Q. PLEASE DESCRIBE THE PATH OF THE PROPOSED 69kV TRANSMISSION LINE.

A. Beginning at the New Camp Substation, the Proposed Route heads southwest for approximately 400 feet before turning generally southeast, using the most conducive topography along the ridgelines west of New Camp Road and U.S. Route 119 for approximately 8,000 feet. It then proceeds south for approximately 1,900 feet to span the valley containing KY Route 308 (Forest Hills Road), and then proceeds southeastward for approximately 4,400 feet along a forested ridgeline to the east of an active surface mine. It turns to the southeast to remain east of the surface mine and residential development associated with Right Fork Pecco Hollow Road and uses an existing ROW for 3,600 feet. It then leaves the existing ROW and proceeds approximately 1,600 feet to the southeast to span Pecco Hollow and cross Pecco Hollow Road. It then turns southeast for another 1,000 feet, then east for 500 feet, before turning northeast for approximately 900 feet to enter the proposed Orinoco Eastern Substation from the east.

The transmission line exits the proposed Orinoco Substation on its northeastern edge and proceeds northeast for approximately 700 feet and crosses U.S. Route 119. It

bypasses the Murphy Cemetery, which sits approximately 250 feet northwest of the ROW. After reaching the ridgetop to the north of U.S. Route 119 it proceeds generally east for approximately 2,400 feet. It then turns generally southwest then southeast spanning between forested ridgetops to the east of U.S Route 119 for approximately 7,050 feet. It then turns to the southwest and proceeds for approximately 1,800 feet to enter the Stone Substation on its northern side.

The transmission line principally crosses undeveloped remote and rugged terrain with areas that have been previously surface mined and reclaimed. More detailed information regarding the selection of the Proposed Route is provided in the Siting Study (Application **EXHIBIT 10**).

Q. WHY IS THE COMPANY REQUESTING THE USE OF A 400-FOOT WIDE AREA?

A. The Company is seeking approval for a 400-foot wide area, in which the final 100-foot-wide right-of-way will be located, to allow for possible adjustments during final engineering, additional environmental and geotechnical studies, and landowner discussions. There are two geological hazards within the study area that may warrant later adjustments to the centerline: landslides and mining.

The Company conducted a desktop geological evaluation of the study area and determined that it is highly landslide prone. There are several factors which substantially increase landslide risk including, but not limited to, slope angle, historical and recent site activity (previous landslides, mining activity, and site grading), and drainage. The desktop study identified 44 previous landslides within the Study Area. There are likely other previous landslides and locations with exceptionally high risk of sliding in the future. Due

to the dynamic nature of the terrain, it is necessary for the Company to conduct additional detailed on-site geotechnical and engineering analysis as Project designs are advanced and throughout construction. It is not feasible to conduct this analysis concurrently with engineering design and landowner negotiations while meeting the required in-service date and allowing construction crews adequate time to safely build the line.

The Company's desktop investigation also identified mining activity near the Proposed Route. There are several factors which determine how mining activity may impact the proposed line including, but not limited to depth of mining, portal and shaft locations, dip of the coal seam, mining method, and coal seam thickness. Numerous natural gas wells are also located in the project vicinity, some of which may be unrecorded. These will require additional stakeholder discussions and engineering analysis to evaluate.

Geologic desktop studies are valuable tools to generally assess the occurrence, scale, impact, and predictability of geological hazards that rely on existing data sources. They are a precursor evaluative tool to provides a preliminary identification of the hazards that may be encountered for project construction and operation. This tool allows for preliminary assessment of risks and planning for mitigative measures. However, it is essential to note that once field investigations are conducted, additional hazards and high risk locations such as undocumented mining features and/or recent landslides, may be identified.

The topography of the area makes it more likely that any necessary relocation would be unable to be adequately addressed by only slight adjustments in the route. This increases the probability the centerline and right-of-way will be shifted within the 400-foot wide area. To mitigate for potential geological hazards and allow for added design

flexibility in rugged topography, the 400-foot wide area can be used to accommodate possible adjustments to the Proposed Route. Constructability issues, access requirements, and conditions that are not evident until final engineering and landowner negotiations are complete may result in Kentucky Power being required to place the identified centerline and adjacent right-of-way outside the right-of-way indicated on **EXHIBIT 4.** The Company seeks authority to relocate the centerline and associated right-of-way within the 400-foot wide area if required to address these conditions or issues.

Q. HAVE LANDOWNERS THAT MAY BE AFFECTED BY MOVEMENT OF THE CENTERLINE BEEN NOTIFIED OF THE POSSIBILITY THAT THE CENTERLINE AND ASSOCIATED ROW COULD SHIFT UP TO 200 FEET FROM THE SELECTED LOCATION?

A. The Company's application for Case No. 2022-0036 filed on September 8, 2022, the notice of intent filed therein on July 29, 2022, the landowner notifications mailed on August 24, 2022, as well as the Company's application in this case, the notice of intent filed herein on March 2, 2023, and the landowner notifications mailed on June 9, 2023 (provided in **Exhibit 12**), all stated that the proposed 69kV transmission line will be built using both existing right-of-way and right-of-way to be acquired. The right-of-way will generally be maintained at a 100 foot width, except where a wider right-of-way of up to 400 feet is required in areas of unusually steep terrain or where doing so is required by the safe and efficient operation of the proposed transmission line. All materials presented to the public during the open house or in informational packages indicated that routes were preliminary and subject to change.

VII. PERMITTING AND ENVIRONMENTAL STUDIES

Q. WHAT ENVIRONMENTAL PERMITTING OR STUDIES ARE ANTICIPATED FOR THIS PROJECT?

A. Kentucky Power anticipates that the following environmental studies, permits or approvals may be required for the construction of the Project:

A wetland delineation and stream identification study will be conducted for the Project. It is anticipated that any impact to jurisdictional resources will be covered under the United States Army Corps of Engineers (Army Corps of Engineers) Nationwide Permit 57 or Nationwide Permit 3, non-reporting, for the installation of culverts on access roads. Construction activities that take place in, along, or over a wetland or a stream (if the watershed is one square mile or more in size) or within a floodplain may also require a Kentucky Division of Water (KDOW) Stream Construction Permit.

Because the total earth disturbance will be greater than one acre, a construction stormwater permit will be required from the Kentucky Department of Environmental Protection, Division of Water. A Kentucky Pollutant Discharge Elimination System (KPDES) Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project.

Kentucky Power will coordinate with the U.S. Fish and Wildlife Service (USFWS) regarding the potential for impacts to sensitive species. Based on review of the USFWS Information for Planning and Consultation system in April 2022, three species of bats one species of crustacean, and one candidate insect species potentially occur in the Study Area. Mist net and portal searches have been conducted for bat species and the results will be coordinated with the USFWS and the Kentucky Department of Fish and Wildlife

Resources (KDFWR). Kentucky Power will request guidance from the USFWS regarding avoiding or minimizing impact to the other listed species.

A Phase I cultural resources survey will be conducted and coordinated with the Kentucky Heritage Council and the Kentucky Office of State Archaeology.

In addition to the environmental permits, engineering related permits will be filed with the appropriate agencies or companies once the transmission line design is completed. It is anticipated that these may include aerial road crossing permits from the Kentucky Transportation Cabinet (KYTC), Federal Highway Administration, or county engineering offices; and construction entrance permits for state or county roads. The Company will also coordinate with the Federal Aviation Administration and KYTC as necessary regarding aviation related approvals.

Q. HAVE ANY OF THE ENVIRONMENTAL PERMITS OR STUDIES BEEN COMPLETED FOR THE PROJECT?

A. The company conducted studies for bat species during the summer of 2022. No endangered or threatened species were captured. Results are being coordinated with the USFWS and KDFWR. The Company also conducted field studies to identify the location of a cemetery (the Murphy Cemetery) located to the north of the Orinoco Substation. No other studies or permits have been conducted or completed to date. The Company plans to obtain the required environmental permitting and approvals before construction begins for the Project in 2024. The anticipated permit requirements are typical for a transmission line and the Company does not anticipate any extraordinary issues or delays.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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 foregoing testimony, 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. 2023-00040
COUNTY OF ALLEGHENY)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by George T. Reese, on 6/5/23.

Notary Public

Notary ID Number 1185072

Commonwealth of Pennsylvania - Notary Seal
Donna Jean Zeno, Notary Public
Allegheny County
My commission expires April 17, 2026
Commission number 1185072
Member, Pennsylvania Association of Notaries