

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

Electronic Application Of Kentucky Power)
Company For A Certificate Of Public Convenience)
And Necessity To Construct A 138 kV)
Transmission Line And Associated Facilities)
In Breathitt, Floyd, And Knott Counties, Kentucky)
(Garrett Area Improvements 138 kV Transmission)
Project))

Case No. 2021-00346

DIRECT TESTIMONY OF

**GEORGE T. REESE
GAI CONSULTANTS, INC.**

ON BEHALF OF KENTUCKY POWER COMPANY

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GEORGE T. REESE GAI CONSULTANTS, INC.
ON BEHALF OF KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

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TESTIMONY INDEX

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I. INTRODUCTION

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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 34 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.

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

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

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

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

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

19 A. Yes. I provided testimony on behalf of Kentucky Power in connection with its application
 20 for a certificate of public convenience and necessity for the East Park 138 kV Transmission
 21 Line Phase 1 (Case No. 2018-00072) and the Bonnyman-Soft Shell 138 kV Transmission
 22 Line (Case No. 2011-00295). I also supervised the preparation of the following siting and
 23 environmental studies filed on behalf of Kentucky Power: the Leeco Project 138 kV

1 Transmission Line Siting Study (Case No. 2009-00235); and the Hays Branch-Morgan
2 Fork 138 kV Transmission Line (Case No. 2007-00155).

3
4 **III. PURPOSE OF TESTIMONY**

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

6 A. I am testifying in support of Kentucky Power Company’s (“Kentucky Power” or the
7 “Company”) Application for a Certificate of Public Convenience and Necessity to
8 construct the proposed Garrett Area Improvements 138 kV Transmission Project
9 (“Project”) in Knott, Floyd, and Breathitt counties (the “Application”). In my testimony,
10 I:

- 11 • Describe the methodology employed by GAI in conducting the siting study
12 that was used in identifying and evaluating the alternative transmission line
13 routes and substation sites.
- 14 • Describe the results and conclusions of the siting study, as well as the basis
15 for the recommendation of the Proposed Route.
- 16 • Sponsor the siting study.
- 17
- 18

19
20 **IV. THE SITING STUDY**

21 **A. Overview**

22 **Q. PLEASE DESCRIBE GAI’S ROLE RELATED TO THE PROPOSED PROJECT.**

23 A. GAI was retained in 2020 by the Company to identify and evaluate potential transmission
24 line routes for the proposed approximately 15-mile 138 kV transmission line and identify
25 a suitable site for the proposed Eastern Substation as part of the Project. The Project
26 includes constructing the new 138kV line and constructing a new Eastern Substation and a
27 new Snag Fork switch structure. The existing Garrett Substation will be upgraded from

1 46kV to 138kV, and various work will be conducted at other substations. This work would
2 eliminate the need to rebuild the approximately 25-mile-long Beaver Creek – McKinney
3 #1 circuit and allow retirement of this 46kV circuit and certain assets in Breathitt County.
4 GAI was responsible for assisting Kentucky Power in determining the most suitable route
5 for the transmission line and site for the Eastern Substation. The transmission line will
6 connect the existing Hays Branch Substation in Floyd County, the proposed Eastern
7 Substation in Floyd County, the existing Garrett Substation in Floyd County, the existing
8 Salt Lick Substation in Floyd County, and the existing Soft Shell Substation in Knott
9 County. As noted, the Project will allow for the retirement of approximately 25 miles of
10 existing transmission line that includes deteriorating wooden poles from the 1920s and
11 1940s. The overall Project also includes various work at several existing substations, which
12 will strengthen the local electric system and increase electric reliability for area customers.
13 GAI prepared a report to document environmental suitability and feasibility of the Project
14 and the Alternative Routes reviewed and evaluated. The Garrett Area Transmission Project
15 Siting Study (the “Siting Study”) is filed as **EXHIBIT 20** to the Application. I served as
16 Project Advisor on behalf of GAI in connection with the siting and environmental work
17 associated with the Project.

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

19 **A.** No. A multi-disciplinary team assisted with the development of the Alternative Routes
20 and in the selection of the Proposed Route (the “Siting Team”). The Siting Team members
21 provided a wide range of experience including transmission line siting, impact assessment
22 for a wide variety of natural resources and the human environment, impact mitigation,
23 outreach, engineering, right-of-way, and construction management. Members of the Siting

1 Team were from several companies including Kentucky Power, GAI, ERM (Outreach
 2 Support), Power Engineers, and Emerald Energy & Exploration (right-of-way support).

3 **Q. PLEASE DESCRIBE THE PURPOSE OF THE SITING STUDY.**

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

8 **B. The Eastern 138 kV Substation Site.**

9 **Q: WHAT FACTORS WERE CONSIDERED IN EVALUATING LOCATIONS FOR**
 10 **THE PROPOSED EASTERN 138 kV SUBSTATION SITE?**

11 A. The proposed Eastern 138 kV Substation is needed to establish a new 138 kV service point
 12 in Eastern, KY, and can also serve future distribution load. AEP's planners and engineers
 13 defined the general location for the Proposed Substation to meet the Project's electrical
 14 need requirements. A new substation in this area will reasonably address the identified
 15 electrical issues; be in proximity to the existing Hays Branch-Morgan Fork 138kV line;
 16 and be in proximity to the natural gas liquids extraction facility currently serviced by the
 17 existing Hays Branch Substation. The specific location of the substation was dependent on
 18 engineering and constructability considerations, future development plans, as well as
 19 efforts to avoid or minimize environmental and land use impacts. The location of the
 20 substation also affects the transmission line routes and associated impacts on residences
 21 and environment. GAI worked extensively with Kentucky Power to complete a Substation
 22 Site Selection Study to determine the best location for the Proposed Substation
 23 (Attachment C to the Siting Study).

1 **Q. HOW MANY SUBSTATION SITES WERE EXAMINED?**

2 A. The Siting Team identified 10 Alternative Sites within the Study Area. Six substation sites
3 initially considered were eliminated due to development plans, topography, environmental
4 or socioeconomic resource concerns, and/or access issues. As a result, four Alternative
5 Sites were carried forward for further consideration.

6 **Q. WHERE ARE THE FOUR ALTERNATIVES LOCATED?**

7 A. Alternative Site A is located northeast of the community of Eastern and adjacent to and
8 north of the Hays Branch-Morgan Fork 138kV line. It is located on a mostly forested
9 parcel crossed by several underground pipelines. Alternative Site B is located on the
10 western edge of the community of Eastern and is adjacent to KY-550 along a private
11 roadway. This roadway provides access to three residences and a wastewater treatment
12 plant. Alternative Site C is located on a narrow strip of land between KY-80 and KY-550
13 on the eastern edge of the community of Eastern. Alternative Site D is located northeast
14 of the community of Eastern and north of the Hays Branch-Morgan Fork 138kV line on
15 parcels of mixed use land (business, residential, and undeveloped field and forest).

16 **Q. HOW WAS THE PROPOSED SUBSTATION SITE SELECTED?**

17 A. Through a quantitative and qualitative analysis and comparison of the Alternative Sites,
18 the Siting Team identified a Proposed Substation Site, which is the most suitable site that
19 meets the goals of the Substation Siting Study. Both Alternative Sites A and D are located
20 on the northern side of the Hays Branch-Morgan Fork 138kV line, and their construction
21 may require extended outages as compared to options on the southern side of the line. Both
22 sites have access concerns including (but not limited to) the need for the installation of a
23 deceleration lane on KY-80 and the existing access to each site not being suitable for large

1 vehicles. Alternative Site B would require the purchase of three residences and the
 2 rerouting of access to a wastewater treatment plant. It would also require a longer
 3 transmission line route for entrance to the substation. Alternative Site C was identified as
 4 the Proposed Substation Site due to its accessibility, topography, central location and the
 5 landowners are willing to sell the properties.

6 **C. Transmission Line Siting Methodology.**

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

10 A. Yes.

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

13 A. Yes.

14 **Q. PLEASE DESCRIBE THE KENTUCKY EPRI METHODOLOGY.**

15 A. The Kentucky EPRI methodology develops and ranks Alternative Routes by assigning
 16 differing weights to different landscape resources or variables.¹ A Study Area comprising
 17 multiple differing land uses/land covers can yield sufficient differentiation in the values
 18 assigned to the alternatives to inform decision making; the larger the Study Area, the
 19 greater the possibility to consider a larger number of Alternative Routes based on
 20 differences in the land use or land cover across a large area.

21 **Q. WAS THE KENTUCKY EPRI METHODOLOGY USED HERE?**

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.

1 A. No. Use of the Kentucky EPRI methodology was not feasible or probative due to the
2 homogenous landscape, including land use and land cover, in the area between the Hays
3 Branch and Soft Shell Substations.

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

6 A. The Study Area is dominated by undeveloped land on former surface mining sites, forested
7 areas on slopes, and scattered residential development located along roadways located in
8 valley bottoms (i.e. KY Route 80 and KY Route 550/7). These predominant land uses and
9 limited resource variability would not yield sufficient differentiation among land uses or
10 the resulting transmission corridors under the Kentucky EPRI methodology to make its use
11 probative. Further constraining the usefulness of the Kentucky EPRI methodology was
12 the linear residential development in the valleys, which limited the locations where a
13 transmission line right-of-way could be constructed. The spatial distribution of homes
14 within these valleys provided limited opportunities for a transmission line to cross while
15 avoiding impacts to residential structures.

16 **Q. WHAT METHODOLOGIES WERE USED?**

17 A. The Siting Team used a multi-step methodology to identify and evaluate Alternative
18 Routes. It is the same multi-step methodology previously employed successfully by
19 Kentucky Power and its experts on the following projects: Hays Branch-Morgan Fork
20 (Case No. 2007-00155), Bonnyman-Soft Shell (Case No. 2011-00295), Hazard-Wooton
21 (Case No. 2017-00328), East Park (Case No. 2018-00072), Leeco (Case No. 2009-00235)
22 and Kewanee-Enterprise Park (Case No. 2020-00062). These steps included efforts at
23 various points in the process to identify constraints and opportunities, to identify and

1 address stakeholder and landowner concerns, and to coordinate with local officials. These
 2 traditional methodologies are industry accepted, robust, tested and defensible, and the
 3 resulting Alternative Routes are buildable and efficient while avoiding or minimizing
 4 impacts on environmental resources and residents of the surrounding areas. This
 5 methodology has also been used successfully on multiple other state-approved AEP
 6 projects in Virginia, West Virginia, and Ohio.

7 **Q. IS INFORMATION CONCERNING THE METHODOLOGY USED IN**
 8 **LOCATING THE PROPOSED ROUTE OF THE GARRETT AREA**
 9 **IMPROVEMENTS 138 KV TRANSMISSION PROJECT INCLUDED IN THE**
 10 **SITING STUDY?**

11 A. Yes. The methodology employed is described in detail in Section 2.0 of the Siting Study.
 12 Section 3.0 of the Siting Study discusses the constraints within the Study Area that were
 13 considered and discusses the development of the Alternative Routes. A detailed
 14 comparison of the Alternative Routes based on the resource description of the Study Area
 15 is provided in Section 4.0 of the Siting Study (Application EXHIBIT 20).

16 **Q. PLEASE OUTLINE THE GENERAL STEPS THE SITING METHODOLOGY**
 17 **IMPLEMENTED.**

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

- 19 1. Identification of the Study Area and opportunities and constraints within;
- 20 2. Development of siting guidelines (general and technical);
- 21 3. Development of four Focus Areas (Eastern-Hays Branch, Eastern-Garrett,
 22 Garrett-Salt Lick, and Salt Lick-Soft Shell);
- 23 4. Identification, evaluation, and refinement of the Study Segments, including the
 24 consideration of stakeholder and public input;

- 1 5. Creation of Alternative Routes by assembling the Study Segments that best
- 2 meet the siting guidelines into individual routes between each endpoint for
- 3 analysis; and
- 4 6. Completion of a quantitative and qualitative analysis and comparison of the
- 5 Alternative Routes to determine the preferred Alternative Route (the “Proposed
- 6 Route”).

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

9 A. The first step was to identify a Study Area for locating a new 100-foot wide transmission
 10 line corridor. The Study Area generally consisted of the area between the Project
 11 endpoints: the existing Hays Branch Substation and Hays Branch-Morgan Fork 138kV
 12 transmission line on the northeast in Floyd County and the existing Soft Shell Substation
 13 to the southwest in Knott County. To the southeast, the Study Area boundary is situated
 14 on the hilltops along KY Route 550. To the northwest, the boundary was developed to
 15 include options for avoiding a large mining operation north and east of the Soft Shell
 16 Substation, and the Magoffin County line. The Siting Team ultimately identified a
 17 50.5-square mile area in Floyd and Knott counties as the Study Area. The boundaries of
 18 the Study Area encompass the termini of the proposed transmission line and sufficient
 19 surrounding area to accommodate reasonable routes between the Project endpoints. **Map**
 20 **1** in Attachment B of the Siting Study shows the Study Area. Following identification of
 21 the Study Area, GAI initiated the collection of high-level data concerning environmental,
 22 land use and ownership, and topographic constraints within this area.

23 **Q. BRIEFLY DESCRIBE YOUR DATA COLLECTION PROCESS AND**
 24 **CONSTRAINTS MAPPING.**

25 A. A list of data collected is included as Attachment D and E to the Siting Study. In general,
 26 publicly available data were collected regarding land use, natural resources, and cultural

1 resources. In addition to the collection of publicly available data and specific data requests,
2 site visits and discussions with landowners and local stakeholders were conducted to better
3 understand the Project area. A virtual open house and virtual town hall were held to give
4 the general public the opportunity to offer comments and gather additional information.
5 The virtual open house and virtual town hall were implemented to comply with physical
6 distancing recommendations from the Centers for Disease Control and Prevention during
7 COVID-19. The Siting Team also completed field reviews of the Study Area from publicly
8 accessible areas and collected data regarding land use.

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

11 A. The Study Area is characterized by forested ridgelines bisected by valleys with roadways
12 and scattered residential development. Extensive surface mining has occurred in the past
13 in the Study Area and several ridges have been mined and are now terraced hillsides.
14 Additionally, there are permitted and future mining areas within the Study Area. The
15 predominant land uses in the Study Area are forested slopes and hillsides, reclaimed mine
16 areas, and scattered residential development located along roadways in the valley bottoms.
17 The small communities of Garrett and Eastern contain denser residential and commercial
18 development.

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

21 A. The Siting Team next developed the siting guidelines to be used in locating the
22 transmission line corridor to achieve three primary goals or objectives. The goals are that
23 the Proposed Route should (1) reasonably avoid or minimize adverse impacts on residential

1 areas and the natural and cultural environment; (2) minimize special design requirements
2 and unreasonable costs; and (3) permit the line to be constructed and operated in a timely,
3 safe, and reliable manner.

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

6 A. The Siting Team next identified four Focus Areas for siting transmission line corridors
7 between the Project endpoints. Given that the Project's goal is to connect several
8 substations, the siting of Study Segments was broken down into four Focus Areas to link
9 these substations: Hays Branch Substation-Eastern Substation, Eastern Substation-Garrett
10 Substation, Garrett Substation-Salt Lick Substation, and Salt Lick Substation-Soft Shell
11 Substation. Each Focus Area has its own constraints and opportunities that were
12 considered when developing Study Segments.

13 **Q. WHAT WAS THE FOURTH STEP IN THE SITING METHODOLOGY**
14 **EMPLOYED BY THE SITING TEAM?**

15 A. Within the Focus Areas, Study Segments were created using the siting criteria, desktop
16 review, field visits, and stakeholder input (see **Map 2**, Study Segments, in Attachment B
17 of the Siting Study). The Siting Team focused on creating Study Segments that would
18 minimize impact to the residential development in the valley bottoms, existing and planned
19 mining and mineral extraction activities, and provide the most direct route, while also
20 considering constructability on steep terrain and paralleling opportunities. In total, 30
21 Study Segments were developed to connect the various substation endpoints of the Project.

22 **Q. WHY WERE STUDY SEGMENTS USED IN THE FOURTH STEP OF THE**
23 **SITING METHODOLOGY?**

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

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

8 A. No. The Study Area was constrained in places by current and planned development or
9 mining activities, as well as residential development along roadways, including Kentucky
10 Routes 7 and 80 and KY Routes 777 and 2029 among others. Once viable road crossing
11 locations were identified, Study Segments were refined and developed into a network that
12 could be combined to form the Alternative Routes between the intervening substations.
13 Stakeholder input was critical and used to modify and refine Study Segments.

14 **Q. WHICH STAKEHOLDERS WERE CONSULTED DURING THE SITING**
15 **PROCESS?**

16 A. Stakeholders included local public officials, the affected landowners, and the general
17 public. In the early stages of Study Segment development, members of the Siting Team
18 met with representatives of Floyd and Knott Counties. A virtual meeting was held with
19 the Knott County Judge Executive, and an in-person meeting was held with the Floyd
20 County Judge Executive. These local stakeholders were supportive of the Project and did
21 not foresee major issues or conflicts with the Project. Kentucky Power also met with
22 Western Pocahontas Properties, which is a mining company that owns permitted mining
23 areas in the Study Area between the Salt Lick and Soft Shell Substations. An in-person

1 public open house was not held due to the COVID-19 pandemic. However, a virtual open
2 house was conducted using a Project-specific website that provided for a 30-day comment
3 period. Components of the virtual open house included an interactive overview map, fact
4 sheet, project updates and news releases, schedule information, and photographs of
5 representative structures. A live virtual town hall was also conducted on April 1, 2021, in
6 which a presentation regarding the Project was presented by Kentucky Power
7 representatives and landowners were given the opportunity to ask questions. A meeting
8 with the Breathitt County Judge Executive was held on October 14, 2021.

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

11 A. Kentucky Power published a news release on March 11, 2021 to announce the Project and
12 inform landowners that Study Segments were under development. Also on March 11,
13 2021, 328 postcards were mailed to landowners with property crossed by or adjacent to a
14 proposed Study Segment. The postcards were designed to let landowners know that more
15 information would be sent to them via U.S. Mail. On March 15, 2021, packets were mailed
16 to the 328 landowners that included a fact sheet, detailed map, comment card, and self-
17 addressed stamped return envelope. On March 17 and March 24, 2021 automated
18 voicemail messages were sent to the 328 landowners, and ads were published in the local
19 newspapers. Facebook ads targeted by zip code (which directed residents to the Project
20 website and virtual open house) were run between March 12 and April 19, 2021. A live
21 virtual town hall was conducted at 12:00 pm and 5:00 pm on April 1, 2021, in which a
22 presentation was made by Kentucky Power representatives and landowners were given the
23 opportunity to ask questions. On March 30, a trifold brochure with a comment card tear-

1 off was mailed to the 328 landowners to provide a reminder about the Project and to request
2 feedback by April 19. The public comment period ended on April 19, 2021.

3 **Q. PLEASE CONTINUE.**

4 A. Through the process outlined above, landowners contacted Kentucky Power to discuss the
5 Project and obtain information, relay information regarding sensitive features on their
6 properties, and provide other comment and information. These comments were collected
7 by ERM, who requested specific Siting Team members from the appropriate discipline
8 follow up with landowners who required more detailed information. Through this process
9 Kentucky Power representatives were able to speak to many landowners within the Study
10 Area who might be affected by a Study Segment to start soliciting feedback and addressing
11 concerns, including future or existing land use conflicts. Once the Proposed Route was
12 selected, Kentucky Power published a third News Release on June 28, 2021 and sent letters
13 on June 29, 2021 notifying previously contacted landowners of the Proposed Route.
14 Kentucky Power right-of-way agents continued speaking with landowners impacted by the
15 Proposed Route to further solicit input.

16 **Q. WERE STAKEHOLDERS AND THE GENERAL PUBLIC PROVIDED NOTICE**
17 **OF THE PROJECT?**

18 A. Yes. Kentucky Power instituted a Project website and virtual open house on March 11,
19 2021 to inform the public on the Project and of the intent to file the Project with the PSC
20 in the fall of 2021. A total of 2,276 views of the Project website were recorded.
21 Landowners crossed or adjacent to a proposed Study Segment were made aware of the
22 Project via postcard mailers, trifold brochures, and information packets sent directly to
23 their residences. They were also contacted twice during the public comment period by

1 automated voice messages. The general public was made aware via ads placed in local
2 newspapers (Floyd County Times and the Troublesome Creek Times) on two separate
3 occasions, news releases distributed to the local media, and Facebook ads targeted by zip
4 code which directed the public to the Project website and virtual open house. Additional
5 notices of the Project were run in the Floyd County Times on October 20, 2021, the
6 Troublesome Creek Times on October 21, 2021, and the Jackson Breathitt County Times
7 Voice on October 20, 2021.

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

10 A. Kentucky Power conducted a virtual public open house between March 11 and April 19,
11 2021 through information posted on a Project specific website. The virtual open house
12 afforded the public the opportunity to learn about the Project and share feedback with the
13 Siting Team. Visitors were able to provide feedback using a "Submit a Comment" button
14 on an interactive map, or share comments and questions through a "Contact Us" link which
15 included a phone number to contact the Project Outreach Specialist directly. Affected
16 landowners and the general public were also invited to meet with Kentucky Power
17 representatives to provide their input and to learn more about the Project during a virtual
18 town hall. Two town hall sessions were held on April 1, 2021 (one at 12:00pm and another
19 at 5:00pm). The virtual town hall was preceded by an extensive public notification
20 campaign, multiple news releases, published advertisements in the local Floyd County and
21 Knott County newspapers, an established Project website, and direct contact with affected
22 landowners. A total of 21 persons attended the virtual town hall. At the town hall,
23 representatives of Kentucky Power provided information on the Project, were available to

1 answer questions, and collected concerns from the public. Both the virtual open house and
2 virtual town hall were implemented to comply with physical distancing recommendations
3 from the Centers for Disease Control and Prevention during COVID-19.

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

6 A. Yes, route adjustments requested by stakeholders and/or landowners were reviewed by the
7 Siting Team. For example, several study segments were eliminated to avoid conflicts with
8 planned mining activities. Kentucky Power met with Western Pocahontas Properties
9 representatives, who indicated that several of the preliminary Study Segments crossed
10 permitted or future mining areas. The affected Study Segments were modified or
11 eliminated in response to this information to avoid the future land use and to avoid a future
12 relocation of the transmission line.

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

15 A. Following the virtual open house, the Siting Team reviewed the comments obtained from
16 stakeholders and landowners and further scrutinized the Study Segments presented to the
17 public. As a result of landowner/stakeholder feedback and further engineering review,
18 several Study Segments between the Garrett and Salt Lick Substations, and the Salt Lick
19 and Soft Shell Substations were eliminated. No other Study Segments required
20 modification.

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

22 A. Following the Study Segment evaluation and elimination process, the remaining Study
23 Segments were combined into Alternative Routes. The Alternative Routes were evaluated

1 and a Proposed Route was selected between each substation. The Proposed Route,
 2 including route modifications, is further described in Section 5.0 of the Siting Study and in
 3 Section VI of my testimony.

4
 5 **V. RESULTS AND CONCLUSIONS OF THE STUDY**

6 **Q. YOU PREVIOUSLY INDICATED THAT ALTERNATIVE ROUTES WERE**
 7 **DEVELOPED IN EACH FOCUS AREA. WILL YOU PLEASE DESCRIBE EACH**
 8 **OF THOSE ROUTES?**

9 A. Yes. The Alternative Routes are presented on **Map 3** in Attachment B of the Siting Study
 10 and **EXHIBITS 4A and 4B** to the Application. They can be generally described as follows:

- 11 • Hays Branch-Eastern Focus Area: four Study Segments were combined into two
 12 Alternative Route options identified as Alternative Routes A and B.
- 13 • Eastern-Garrett Focus Area: three Study Segments were combined into two
 14 Alternative Route options identified as Alternative Routes C and D.
- 15 • Garret and Salt Lick Focus Area: the remaining Study Segments were combined
 16 into two Alternative Route options identified as Alternative Routes E and F.
- 17 • Salt Lick-Soft Shell Focus Area: the remaining Study Segments were combined
 18 into four Alternative Route options identified as Alternative Routes G, H, I and J.

19
 20 **Q. WHICH ROUTE WAS SELECTED AS THE PROPOSED ROUTE?**

21 A. Between the Hays Branch and Eastern substations, neither Alternative Route A or B was
 22 selected and instead an intermediary “hybrid” route was selected and is between the two
 23 Alternative Route options being considered. The hybrid was needed as this area will
 24 require LiDAR (Light Detection and Ranging) data to properly finalize structure
 25 placement, which was not available during the route selection process. LiDAR information
 26 provides current aerial photography and contours data suitable for detailed transmission

1 line design; this information is more detailed than other data sources and provides
2 information on areas otherwise not publicly accessible since it is collected via aircraft.
3 Additionally, based on topographic mapping, a cemetery is located in the vicinity of
4 Alternative Routes A and B but identification of the exact location will require further
5 studies. By selecting a hybrid route and using a 1,000-foot corridor filing corridor,
6 Kentucky Power will be able to engineer the most suitable route and avoid the cemetery
7 without needing to submit an addendum to the application once additional data are
8 obtained.

9 Between the Eastern and Garrett Substations, Alternative Route D was selected. It has the
10 following advantages over Alternative Route C:

- 11 • It is shorter.
- 12 • It crosses fewer parcels.
- 13 • It crosses fewer individual landowners.
- 14 • Its construction would require fewer heavy angles (angles in excess of 30-
15 percent) thereby resulting in improved constructability.
- 16 • It would require less tree clearing.
- 17 • It would require fewer structures to construct.

18 Between the Garrett and Salt Lick Substations, Alternative Route F was selected. It has
19 the following advantages over Alternative Route E:

- 20 • It crosses fewer parcels.
- 21 • It crosses fewer individual landowners.
- 22 • It spans KY Route 80 in a more suitable location than the other Alternative
23 Routes.

- 1 • It would require less tree clearing.
- 2 • It avoids the DLT Enterprises resource mitigation site.

3 Between the Salt Lick and Soft Shell Substations, Alternative Route I was selected. It has
 4 the following advantages over Alternative Routes G, H, and J:

- 5 • It is the second shortest option (behind Alternative Route H which encroaches on
 6 mining operations).
- 7 • It avoids the active mining areas of the Western Pocahontas Properties mining
 8 operation.
- 9 • It crosses the fewest parcels.
- 10 • It crosses the fewest individual landowners.
- 11 • Its location limits the number of crossings of Outstanding State Resource Waters

12 The combination of the hybrid option between the Hays Branch and Eastern Substations,
 13 Alternative Route D between Eastern and Garrett Substations, Alternative Route F between
 14 Garrett and Salt Lick Substations, and Alternative Route I between Salt Lick and Soft Shell
 15 Substations represents the most direct, efficient route that minimizes impacts to residences,
 16 viewsheds and environmental resources. Section 5.0 provides additional detail concerning
 17 the basis for the Company’s recommendation of this combination of routes (Hybrid, D, F,
 18 and I) as the Proposed Route. In addition, Tables 1, 2, and 3 of the Siting Study provide a
 19 comparative evaluation of the constraints and opportunities for the various Alternative
 20 Route options.

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

1 A. Yes. Three landowners expressed opposition to the Project as proposed. One is located
 2 between Eastern and Garrett Substations. Two are located adjacent to the Soft Shell
 3 Substation. Each of these landowners will be crossed by the Proposed Route.

4 **Q. DID KENTUCKY POWER ATTEMPT TO ADDRESS THESE REQUESTS?**

5 A. Yes. Kentucky Power coordinated with these landowners in an attempt to address their
 6 concerns. However, upon further consideration, avoidance of these properties was not
 7 feasible due to proximity to existing facilities or the size and location of the property.

8 **Q. DID ANY OTHER LANDOWNERS WHO WERE CONTACTED OBJECT TO**
 9 **THE ROUTE OF THE PROPOSED TRANSMISSION LINE?**

10 A. Yes. Additional landowners between the Garrett and Salt Lick Substations, and the Salt
 11 Lick and Soft Shell Substations also requested that their properties not be impacted by the
 12 Project. These landowners are located along Study Segments that were eventually
 13 eliminated from consideration, and no impact to their properties is anticipated.

14 **Q. WERE ANY OTHER ALIGNMENT SHIFTS REQUIRED FOR THE PROPOSED**
 15 **ROUTE?**

16 A. No. As noted previously, between the Hays Branch and Eastern Substations, an
 17 intermediary “hybrid” route was selected between Alternatives Routes A and B. By
 18 selecting a hybrid route and using a 1,000-foot corridor filing corridor in this area,
 19 Kentucky Power will be able to engineer the most topographically suitable route and avoid
 20 a cemetery. No other alignment shifts were made. EXHIBITS 3A and 3B to the
 21 Application shows the Proposed Route centerline.

22 **Q. BASED ON THE EFFORTS UNDERTAKEN BY THE SITING TEAM AND**
 23 **DESCRIBED ABOVE, DO YOU HAVE AN OPINION ON THE COMPANY’S**

1 proposed Eastern Substation from the southeast. This alignment avoids multiple crossings
2 of a CSX Railroad and the floodplain of the Right Fork Beaver Creek.

3 The transmission line exits the proposed Eastern Substation on its southeastern edge and
4 proceeds generally south along the ridgetops that parallel KY Route 80 for approximately
5 3.0 miles before descending the ridge to enter the Garrett Substation from the north.

6 As the transmission line exits the Garrett Substation on its southern edge, it ascends the
7 ridge in a southern orientation for approximately 1,100 feet before turning generally west
8 once reaching the ridgeline. After approximately 1,400 feet, the transmission line meets
9 and parallels the existing right-of-way of the Beaver Creek-Garrett 46kV Transmission
10 Line, and then the Spring Fork 46kV Tap as it spans KY Route 550/7. After paralleling
11 existing rights-of-way for approximately 5,000 feet, the transmission line diverges from
12 the existing right-of-way to head slightly south and span KY Route 80 in an area with
13 fewer engineering and residential constraints. The transmission line continues on this
14 alignment for approximately 6,400 feet along the ridgetop above the residences along
15 Howard Brach Road before rejoining the existing right-of-way of the Spring Fork 46kV
16 Tap. The transmission line again parallels the existing right-of-way for another 4,200 feet
17 before diverging from the existing right-of-way of the Spring Fork 46kV Tap slightly as it
18 descends into the valley for another approximately 4,200 feet to reach the Salt Lick
19 Substation and avoid existing residences. The transmission line enters Salt Lick Substation
20 on its eastern edge.

21 The transmission line exits Salt Lick Substation on its western edge and ascends the
22 adjacent ridge to the ridgeline in a southwest orientation. It continues this alignment,
23 spanning ridgetop to ridgetop for approximately 3.0 miles until approaching the mining

1 limits of the Western Pocahontas Properties mining operation. The transmission line then
2 heads generally south for approximately 5,000 feet, spanning ridgetop to ridgetop and
3 crossing KY Route 80. The alignment then turns southwest for an additional 2.2 miles,
4 entering the Knott County Sportsplex development. Within the development, the
5 transmission line parallels KY Route 80 as topography allows before arriving at the Soft
6 Shell Substation and entering it on its northern edge.

7 The transmission line principally crosses undeveloped remote and rugged terrain with areas
8 that have been previously surface mined and reclaimed. More detailed information
9 regarding the selection of the Proposed Route is provided in the Siting Study (Application
10 **EXHIBIT 20**).

11 **VII. PERMITTING AND ENVIRONMENTAL STUDIES**

12 **Q. WHAT ENVIRONMENTAL PERMITTING OR STUDIES ARE ANTICIPATED** 13 **FOR THIS PROJECT?**

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

16 A wetland delineation and stream identification study will be conducted for the Project. It
17 is anticipated that any impact to jurisdictional resources will be covered under the United
18 States Army Corps of Engineers (Army Corps of Engineers) Nationwide Permit 57, non-
19 reporting, for the installation of culverts on access roads. Construction activities that take
20 place in, along, or over a wetland or a stream (if the watershed is one square mile or more
21 in size) or within a floodplain may also require a Kentucky Division of Water (KDOW)
22 Stream Construction Permit.
23

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

5 Kentucky Power will coordinate with the U.S. Fish and Wildlife Service (USFWS)
6 regarding the potential for impacts to sensitive species. Based on review of the USFWS
7 Information for Planning and Consultation system, three species of bats, one species of
8 fish, eight species of mollusks, and one species of crustacean potentially occur in the Study
9 Area. Mist net and portal searches will be conducted for bat species, as appropriate, and
10 the results coordinated with the USFWS. Kentucky Power will request guidance from the
11 USFWS regarding avoiding or minimizing impact to the other listed species.

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

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

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

1 A. Bat portal studies were conducted relative to the expansion of the Garrett Substation in 2021.
2 No other studies or permits have been conducted or completed to date. The Company plans
3 to obtain the required environmental permitting and approvals before construction begins
4 for the Project in 2023. The anticipated permit requirements are typical for a transmission
5 line and the Company does not anticipate any extraordinary issues or delays.

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

7 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 forgoing 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. 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 November 3, 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