

**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) Case No. 2018-00072
Transmission Line In Boyd County, Kentucky)
(EastPark 138 kV Transmission Line (Phase 1)))

DIRECT TESTIMONY OF

RANIE K. WOHNHAS

ON BEHALF OF KENTUCKY POWER COMPANY

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RANIE K. WOHNHAS, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2018-00072

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DIRECT TESTIMONY OF
RANIE K. WOHNHAS
ON BEHALF OF KENTUCKY POWER COMPANY

I. INTRODUCTION

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

2 A: My name is Ranie K. Wohnhas. My position is Managing Director, Regulatory and
3 Finance, Kentucky Power Company. My business address is 855 Central Avenue, Suite
4 200, Ashland, Kentucky 41101.

II. BACKGROUND

5 **Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
6 **BUSINESS EXPERIENCE.**

7 A: I received a Bachelor of Science degree with a major in accounting from Franklin
8 University, Columbus, Ohio in December 1981. I began work with Columbus Southern
9 Power Company in 1978, and worked in various customer services and accounting
10 positions. In 1983, I transferred to Kentucky Power Company and worked in accounting,
11 rates, and customer services. I became the Billing and Collections Manager in 1995. My
12 duties included overseeing all billing and collection activity for the Company. In 1998, I
13 transferred to Appalachian Power Company and worked in rates. In 2001, I transferred to
14 the American Electric Power Service Corporation working as a Senior Rate Consultant.
15 In July 2004, I transferred back to Kentucky Power Company and assumed the position
16 of Manager, Business Operations Support. I was promoted to Director in April 2006. I
17 was promoted to my current position as Managing Director, Regulatory and Finance
18 effective September 1, 2010.

1 **Q: WHAT ARE YOUR RESPONSIBILITIES AS MANAGING DIRECTOR,**
2 **REGULATORY AND FINANCE?**

3 A: I am primarily responsible for managing the regulatory and financial strategy for
4 Kentucky Power. This includes planning and executing rate filings for both federal and
5 state regulatory agencies, as well as filings for certificates of public convenience and
6 necessity before this Commission. I am also responsible for managing the Company's
7 financial operating plans. Included as part of this responsibility is the preparation and
8 coordination of various capital and O&M operating budgets with other American Electric
9 Power Company, Inc. affiliates. I work with various American Electric Power Service
10 Corporation departments to ensure that adequate resources such as debt, equity, and cash
11 are available to build, operate, and maintain Kentucky Power's electric system assets
12 used to provide service to our retail and wholesale customers. I report directly to
13 Matthew J. Satterwhite, President and Chief Operating Officer of Kentucky Power in my
14 role as Managing Director, Regulatory and Finance.

15 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

16 A: Yes, I have testified on multiple occasions in a wide variety of proceedings, including
17 numerous rate cases, fuel adjustment clause cases, an environmental compliance plan
18 case, the proceeding to transfer a fifty percent undivided interest in the Mitchell
19 generating station to Kentucky Power, and in connection with the Company's application
20 to convert Big Sandy Unit 1 to a gas-fired unit. Most pertinent to this proceeding, I also
21 filed testimony in Case No. 2011-00295¹ and Case No. 2017-328.²

¹ *In the Matter of: The Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 KV Transmission Line In and Associated Facilities in Breathitt, Knott and Perry Counties, Kentucky (Bonnyman-Soft Shell Line).*

² *In the Matter of: Electronic Application Of Kentucky Power Company For A Certificate Of Public Convenience*

III. PURPOSE OF TESTIMONY

1
2 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

3 A: I am testifying in support of Kentucky Power's application for a certificate of public
4 convenience and necessity to build Phase 1 of the proposed EastPark 138 kV
5 transmission line and related work. Phase 1 consists of the following: (a) an
6 approximately 2.7 mile 138 kV single circuit (three phase) transmission line in Boyd
7 County, Kentucky to serve the EastPark Industrial Center, including the planned \$1.3
8 billion Braidy Industries Inc. aluminum rolling mill; (b) the planned Moore Hollow 138
9 kV Substation; and (c) remote work at the Chadwick Substation. Collectively, the
10 transmission line, substation, and remote work constitute the Project. In my testimony I:

- 11 • Provide an overview of the Project;
- 12 • Detail the Company's compliance with the notice requirements for this
13 proceeding; and
14
- 15 • Address the financial aspects of the Project.

IV. OVERVIEW OF PROJECT

A. EastPark Industrial Center And The Braidy Industries Rolling Mill.

16 **Q: WHAT IS EASTPARK INDUSTRIAL CENTER AND WHERE IS IT LOCATED?**

17 A. Detailed information regarding EastPark Industrial Center is available at its website:
18 <https://eastparkky.com/>. The EastPark Industrial Center is an established industrial park
19 located in Boyd, Carter and Greenup counties, approximately 12 miles southwest of
20 Ashland at the I-64/Industrial Parkway (KY 67) interchange (Exit 179). It is a former
21 surface mine site and consists of two parts. Site A is located at the I-64/Industrial

1 Parkway interchange and hosts multiple tenants, including Cintas, an AT&T call center,
2 and the IND-KY-OH Regional Council of Carpenters Union and Training Center. Site B
3 is located to the northeast of Site A. Among the current tenants of Site B are the Ashland
4 Community and Technical College, EastPark Campus; the FIVCO Area Development
5 District Office; and General Sales Company, a wholesale paper and janitorial products
6 supplier. Site B also is the future site of the \$1.3 billion aluminum rolling mill to be
7 constructed by Braidy Industries Inc. on a 204 acre parcel beginning this year. Braidy
8 Industries also purchased a 110,000 square foot office building in EastPark in 2017.

9 Phase 1 of the Project will bring 138 kV transmission service to Site B of
10 EastPark in connection with the operation of the Braidy Industries rolling mill while
11 supporting distribution service to other customers in the area.

12 **Q. CAN YOU PROVIDE ADDITIONAL BACKGROUND ON THE BRAIDY**
13 **INDUSTRIES ROLLING MILL?**

14 A. Yes. Information made publicly available by Braidy Industries indicates Braidy
15 Industries plans to construct a 2.5 million square-foot, fully integrated aluminum rolling
16 mill that Braidy Industries indicates will be the most technologically advanced mill in the
17 United States. The Braidy Industries website further provides that the mill will generate
18 up to 1,000 jobs during its construction, followed by approximately 500 full-time skilled
19 labor and administrative positions once the facility is in operation. Finally, the Braidy
20 website explains that “[t]he new Braidy Industries mill will focus on Series 5000, 6000
21 (auto body sheet), and 7000 (aerospace plate) aluminum sheet and plate products, while
22 also supporting research and development to advance the science and technology of

1 molten-metal manufacturing.” Additional information regarding Braidy Industries and its
2 planned rolling mill is available at <http://www.braidyindustries.com/> .

3 **Q. WHAT IS THE STATUS OF CONSTRUCTION OF THE BRAIDY INDUSTRIES**
4 **ROLLING MILL?**

5 A. Braidy Industries broke ground for the rolling mill on June 1, 2018. Kentucky Power
6 understands that Braidy Industries intends to be fully operational in 2020. The planned
7 in-service date for the Project is June 2020.

8 **Q. WILL THE PROPOSED TRANSMISSION PROJECT ALSO ENHANCE**
9 **KENTUCKY POWER’S CAPACITY TO PROVIDE 138 kV SERVICE TO**
10 **OTHER CUSTOMERS LOCATING IN SITE B OF THE EASTPARK**
11 **INDUSTRIAL CENTER?**

12 A. Yes. The Project, along with the looped service to be established by means of Phase 2
13 described below, will enhance Kentucky Power’s capacity to provide 138 kV service to
14 other customers that may locate at Site B, in addition to supplying Braidy Industries’
15 projected load of 60 MW.

16 B. The Project.

17 **Q: PLEASE DESCRIBE THE PROJECT.**

18 A: Kentucky Power is seeking authority to build an approximately 2.7 mile 138 kV single
19 circuit (three phase) transmission line in Boyd County, Kentucky. The line will connect
20 to the Company’s existing Chadwick-Kentucky Electric Steel 138 kV circuit near the I-
21 64/ U.S. 60 exit (Exit 181) and the Kentucky Electric Steel plant and proceed generally in
22 a northwesterly direction to the new Moore Hollow 138 kV Substation in the East Park
23 Industrial Center. The proposed line is entirely a new project and will not involve

1 rebuilding an existing transmission line. Kentucky Power also is seeking authority to
2 construct the Moore Hollow 138 kV Substation to be located in the EastPark Industrial
3 Center near 297 South Commerce Drive. Finally, remote work will be performed at the
4 Chadwick Substation in connection with the proposed construction. Company Witness
5 Lasslo provides additional detail concerning both the nature of and the need for the
6 transmission line and substation work.

7 **Q. PLEASE DESCRIBE THE AREA THE PROPOSED LINE WILL TRAVERSE.**

8 A. The line principally will cross former surface mining sites with scattered residential
9 development located along roadways in two intervening valley bottoms. More detailed
10 information regarding the area the line will cross is provided in the testimony of Mr.
11 Reese as well as the Siting Report (EXHIBIT 21).

12 **Q. IN WHAT COUNTY IS THE PROJECT LOCATED?**

13 A. The proposed 138 kV transmission line and the proposed 138 kV substation are both
14 located entirely within Boyd County, Kentucky. The Chadwick Substation is located
15 near Alley Branch Road, Catlettsburg, Kentucky, in Boyd County, Kentucky

16 **Q. WHAT IS THE PURPOSE OF THE NEW TRANSMISSION LINE?**

17 A. The Project at first will principally provide 138 kV service to the planned Braidy
18 Industries rolling mill. The Project, along with the proposed looped service to be
19 provided through Phase II, will make 138 kV service available to Site B of the EastPark
20 Industrial Center in connection with future development. It also will provide additional
21 distribution reliability for current residential and commercial customers in the EastPark
22 general area served by the Princess Substation.

1 **Q. COULD THE SERVICE TO BE FURNISHED BY THE PROJECT BE**
 2 **REASONABLY PROVIDED BY REBUILDING AN EXISTING TRANSMISSION**
 3 **LINE OR EXTENDING SERVICE FROM AN EXISTING SUBSTATION?**

4 A. No. Although generally the Company prefers to rebuild or upgrade an existing
 5 transmission line when practicable, in this instance there are no existing transmission
 6 lines in the vicinity of the proposed line that can be rebuilt or upgraded to provide 138
 7 kV service to Site B of the EastPark Industrial Center.

8 **Q. THE APPLICATION SEEKS APPROVAL OF PHASE 1 OF THE EASTPARK**
 9 **138 kV TRANSMISSION LINE. HOW MANY ADDITIONAL PHASES ARE**
 10 **PLANNED?**

11 A. There is one additional phase. Phase 2 will include a second 138 kV line and substation
 12 to provide looped service to the EastPark Industrial Center, including Braidy Industries.
 13 Company Witness Lasslo provides additional information regarding Phase 2.

14 **Q. WHY IS THE EAST PARK 138 kV TRANSMISSION LINE BEING**
 15 **CONSTRUCTED IN TWO PHASES?**

16 A. The two phases can be engineered and constructed separately. Filing the applications
 17 separately allows work to begin on Phase I while the second phase is being developed.

18 1. The Transmission Line And Structures.

19 **Q. WHAT IS THE STATUS OF THE ENGINEERING AND DESIGN WORK FOR**
 20 **PHASE 1 OF THE PROPOSED EASTPARK 138 kV TRANSMISSION LINE?**

21 A. Engineering and design work is ongoing and a final design determination will be made
 22 once the final design is complete. The results of this preliminary work with respect to the
 23 structures, conductor, and groundwires are described in more detail in Company Witness

1 Lasslo's testimony.

2 2. The Proposed Substation.

3 **Q. PLEASE DESCRIBE THE PROPOSED MOORE HOLLOW 138 kV**
4 **SUBSTATION.**

5 A. The Moore Hollow 138 kV Substation will be constructed on an approximately five acre
6 site to be acquired from Braidy Industries and located near 297 South Commerce Drive
7 in the EastPark Industrial Center. The footprint of the substation itself is expected to
8 measure approximately 300 feet by 250 feet. The substation, the proposed transmission
9 line, and later the looped service to be provided through Phase 2, are required to provide
10 the electrical service Braidy Industries indicates it requires to operate its proposed \$1.3
11 billion aluminum rolling mill to be constructed in the East Park Industrial Center.
12 Company Witness Lasslo provides additional information regarding the planned
13 substation, its components, and its purpose.

14 3. The Chadwick Substation.

15 **Q. WHAT WORK DOES KENTUCKY PROPOSE TO UNDERTAKE AT THE**
16 **CHADWICK SUBSTATION?**

17 A. Kentucky Power proposes to upgrade the Chadwick Substation by replacing an existing
18 line relay panel to provide the required protection and control. Again, Company Witness
19 Lasslo provides additional information regarding the planned Chadwick Substation work
20 and its purpose.

21 4. Construction Schedule.

22 **Q: WHEN DOES KENTUCKY POWER PROPOSE TO BUILD THE LINE AND**
23 **THE SUBSTATION IF THE CERTIFICATE IS GRANTED ?**

1 A: The Company anticipates beginning construction during the first quarter of 2019 and
2 completing all Phase 1 work (including restoration) by June 2020 to meet Braidy
3 Industries' schedule.

4 C. Right-Of-Way.

1. Width.

5 **Q. WHAT IS THE WIDTH OF THE RIGHT-OF-WAY FOR THE PROPOSED**
6 **LINE?**

7 A. Generally, the right-of-way will measure 50 feet on each side of the centerline for a total
8 width of 100 feet.

9 **Q. WILL THE PROPOSED LINE'S RIGHT-OF-WAY EXCEED 100 FEET IN**
10 **SOME CIRCUMSTANCES?**

11 A. Yes. An expanded right-of-way may be required in some circumstances. As of this
12 filing, Kentucky Power has identified a single instance where an expanded right-of-way
13 is required. Company Witness Lasslo provides additional information concerning the
14 expanded right-of-way.

2. Requested Authority To Relocate The Indicated Centerline.

15 **Q: KENTUCKY POWER FILED MAPS ILLUSTRATING THE CENTERLINE OF**
16 **THE PROPOSED TRANSMISSION LINE AS EXHIBITS 3 AND 4 TO ITS**
17 **APPLICATION. COULD THAT CENTERLINE CHANGE?**

18 A. Yes. Constructability, access requirements, and conditions that are not evident until final
19 engineering and landowner negotiations are complete, may result in Kentucky Power
20 modifying the identified centerline. To ensure the ability to address potential issues that
21 may emerge after ground surveys, final engineering, and during right-of-way

1 negotiations, Kentucky Power is seeking authority to move the illustrated centerline (and
2 right-of-way), and to expand the right-of-way within the Filing Corridor illustrated on
3 **EXHIBIT 4**. The Filing Corridor is 250 feet on either side of the indicated centerline
4 (500-foot corridor).

5 **Q: IS KENTUCKY POWER SEEKING UNLIMITED DISCRETION TO LOCATE**
6 **THE LINE AND RIGHT-OF-WAY WITHIN THE PROPOSED 500-FOOT**
7 **CORRIDOR?**

8 A: No. There are two limitations. First, neither the line nor its right-of-way will be moved
9 onto the property of a landowner who was not sent a notice of this proceeding in
10 accordance with the applicable regulation. Second, the landowner onto whose property
11 the line will be moved must consent in writing to the relocation.

12 **Q: HAS THE COMMISSION GRANTED KENTUCKY POWER SIMILAR**
13 **AUTHORITY IN OTHER CASES?**

14 A: Yes. By Order dated the January 26, 2012 in Case No. 2011-00295,³ the Commission
15 authorized the Company to locate its proposed line within a 500-foot corridor, including
16 parcels not owned by the persons over whose property the proposed line initially was
17 anticipated to cross. That authority is similar to the authority sought here.

18 **Q: WILL THE COMMISSION BE INFORMED OF THE FINAL LOCATION OF**
19 **THE LINE AND THE ADJACENT RIGHTS-OF-WAY?**

20 A: Yes. Kentucky Power will file with the Commission a revised plan showing the final
21 location of the proposed line, structures, and the proposed Moore Hollow 138 kV
22 Substation after construction is completed.

³ *In the Matter of: The Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 KV Transmission Line In and Associated Facilities in Breathitt, Knott and Perry Counties, Kentucky (Bonnyman-Soft Shell Line).*

V. NOTICES

1
2 **Q: DID KENTUCKY POWER COMPLY WITH THE REQUIREMENTS OF 807**
3 **KAR 5:120, SECTION 2(3) BY PROVIDING NOTICE TO ADJOINING**
4 **LANDOWNERS WHOSE PROPERTY MIGHT BE AFFECTED BY THE**
5 **PROJECT?**

6 A: Yes. Kentucky Power notified all landowners whose property may be affected by the
7 Project of the Company's proposal and this proceeding. This includes those landowners
8 whose property lies within the Filing Corridor for the Project. The notice was mailed
9 June 18, 2018. The landowners notified in connection with the Project were identified
10 from the records of the Boyd County Property Valuation Administrator. The list of
11 landowners within the Filing Corridor to whom the notice was mailed is attached as
12 **EXHIBIT 15** to the application. Also included in **EXHIBIT 15** to the application is the
13 required verification.

14 **Q. DID THE NOTICE CONTAIN THE INFORMATION REQUIRED BY 807 KAR**
15 **5:120, SECTION 2(3)(A)-(E)?**

16 A. Yes. Copies of the form of the notice is attached to the application as **EXHIBIT 15**.

17 **Q. DID KENTUCKY POWER PUBLISH THE REQUIRED NOTICE IN THE BOYD**
18 **COUNTY NEWSPAPER OF RECORD?**

19 A. Yes. The required notice of the Company's intent to construct the Project and of this
20 proceeding was published in the *Ashland Daily Independent* (the Boyd County
21 newspaper of record) on June 20, 2018. The published notice contained all information
22 required by 807 KAR 5:120, Section 2(5). A copy of the published notice is attached as
23 **EXHIBIT 16** to the application. Attached as **EXHIBIT 17** to the application is an affidavit

1 of publication.

2 **VI. FINANCIAL ASPECTS OF THE PROJECT**

3 **Q: WHAT IS THE PROJECTED COST OF THE PROJECT?**

4 A: The total estimated cost of the Project is \$22.4 million. That sum comprises: (a)
5 approximately \$8.4 million for transmission line work including right-of-way acquisition;
6 (b) approximately \$ 13.6 million for construction of the Moore Hollow Substation; and
7 (c) approximately \$0.4 million for remote work at the existing Chadwick Substation.

8 **Q: DOES THE \$22.4 MILLION COST ESTIMATE DESCRIBED ABOVE AND SET
9 OUT IN THE APPLICATION REPRESENT A FIXED AND FINAL COST?**

10 A: No. The \$22.4 million estimate represents the best engineering assessment of the costs
11 as of the date of this application. The exact cost will not be known until the Project is
12 complete.

13 **Q. IS BRAIDY INDUSTRIES CONTRIBUTING TO THE COST OF THE
14 PROJECT?**

15 A. No. Such a contribution by Braidy Industries would contravene Kentucky Power's
16 Commission-approved contribution in aid of construction tariff (Tariff Sheets 2-7 and 2-
17 8). The estimated revenue to be produced by Braidy Industries exceeds the annual cost
18 to serve Braidy Industries as defined in the tariff.

19 **Q: HOW WILL THE PROJECT COST BE FUNDED?**

20 A: Kentucky Power anticipates funding the cost of the line and the substation through its
21 operating cash flow and other internally generated funds. The Company will include, as
22 appropriate, the costs associated with the Project in its next general rate case.

Q: WILL THE COST OF THE PROJECT MATERIALLY AFFECT THE

1 **FINANCIAL CONDITION OF KENTUCKY POWER COMPANY?**

2 A: No. Kentucky Power's assets, net of regulatory assets and deferred charges, as of March
3 31, 2018 totaled \$1,941 million. The cost of this project thus represents an increase of
4 approximately 1.15 percent in those assets. Kentucky Power will not need to secure any
5 additional financing to complete this project nor will it affect the completion of any other
6 current capital project.

7 **Q: WHAT IS THE PROJECTED COST OF OPERATION FOR THE PROPOSED**
8 **FACILITIES AFTER THEY ARE COMPLETED?**

9 A: Kentucky Power projects the annual operating cost will be approximately \$7,000 for
10 general maintenance and inspection. The projected annual ad valorem taxes resulting
11 from the Project are expected to total approximately \$158,000.

12 **VII. REVIEW OF THE PROJECT AND STAKEHOLDER INPUT**

13 **Q. IS THE PROJECT SUBJECT TO REVIEW BY PJM INTERCONNECTION**
14 **LLC?**

15 A. Kentucky Power will provide information concerning the Project to PJM and its
16 Transmission Expansion Advisory Committee. PJM approval is not required. Additional
17 information concerning the PJM review process is provided in the testimony of Company
18 Witness Ali.

19 **Q. IS KENTUCKY POWER RELYING ON THE PJM REVIEW OF THE PROJECT**
20 **TO DEMONSTRATE THE NEED FOR THE PROJECT?**

21 A. No. The necessity for the Project is demonstrated by the application, including Company
22 Witness Lasslo's testimony regarding both the need for the Project and its components.

1 Further, Kentucky Power is required by statute⁴ to provide efficient, reasonable, and
2 adequate service to all of its customers, including Braidy Industries and other future
3 customers that might require 138 kV service in Site B of the EastPark Industrial Center.
4 Absent the construction of the Project, along with the looped service to be provided
5 through Phase 2, Kentucky Power cannot meet this statutory requirement. By the same
6 token, Braidy Industries cannot proceed with its \$1.3 billion investment absent the
7 Project. It also is worth noting that under KRS 278.016, KRS 278.018(1), and KRS
8 278.018(4) Kentucky Power is granted the exclusive right to provide retail electrical
9 service to the site, which lies within Kentucky Power's certified territory, and all other
10 retail electric suppliers are prohibited from providing such service.

11 **Q. HAVE RELEVANT STAKEHOLDERS BEEN AFFORDED AN OPPORTUNITY**
12 **TO PROVIDE INPUT REGARDING THE PROPOSED TRANSMISSION LINE**
13 **ROUTE?**

14 A. Most certainly. The details of the Company's efforts to engage all stakeholders are
15 provided in Mr. Reese's testimony. Nevertheless, it is fair to say that Kentucky Power
16 took the initiative to contact public officials, as well as landowners who may be affected
17 by the Project, particularly the transmission line, to apprise them of the details of the
18 Project. Further, the Company not only provided information regarding the Project as
19 part of these outreach efforts, but worked with stakeholders to address their reasonable
20 concerns regarding the Project.

21 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

22 A: Yes.

⁴ KRS 278.030(2).

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Transmission Line In Boyd County,)
Kentucky And Associated Facilities)
EastPark 138 kV Transmission Line (Phase 1))

DIRECT TESTIMONY OF

MICHAEL G. LASSLO

ON BEHALF OF KENTUCKY POWER COMPANY

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MICHAEL G. LASSLO, ON BEHALF OF
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DIRECT TESTIMONY OF
MICHAEL G. LASSLO
ON BEHALF OF KENTUCKY POWER COMPANY

I. INTRODUCTION

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

2 A: My name is Michael G. Lasslo. My position is Reliability Manager for Kentucky Power
3 Company. My business address is 1400 E. Main Street, Hazard, Kentucky.

II. BACKGROUND

4 **Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
5 **BUSINESS EXPERIENCE.**

6 A: I have a Bachelor of Science Degree in Electrical Engineering from the University of
7 Kentucky. I am a native of Hazard, Kentucky and have 40 years of experience with
8 Kentucky Power Company. My work experience includes engineering and design for
9 new and upgraded electrical service to residential, commercial and industrial customers;
10 preparation of detailed studies to evaluate the existing distribution infrastructure and to
11 plan for future system improvements; transmission/sub-transmission construction,
12 operation and maintenance; substation construction, operation and maintenance; power
13 quality studies and customer complaint resolution; budgeting for capital, operation, and
14 maintenance expenditures; implementation and monitoring of safety programs and
15 performance, accident/incident investigation; marketing of electro-technologies;
16 customer service; and various supervisory and management positions.

17

1 **Q: WHAT ARE YOUR RESPONSIBILITIES AS RELIABILITY MANAGER FOR**
2 **KENTUCKY POWER COMPANY?**

3 A: My role is to lead the activities of the Kentucky Power Reliability Team to provide safe,
4 efficient, and reliable electric service to the Company's over 167,000 residential,
5 commercial, and industrial customers. I manage talented professionals who are
6 organized into the functions of distribution engineering; project management; risk
7 management; customer service; distribution right-of-way acquisition; technical design;
8 and power quality. Among my responsibilities are customer service; restoration of service
9 interruptions (including major storms); provision of new and upgraded service to
10 distribution customers from 120V single phase through 34.5 kV three phase; and the
11 provision of new and upgraded service to transmission customers from 46kV through
12 138kV. I also participate in planning activities with American Electric Power Service
13 Corporation distribution and transmission assets planning groups to address overall
14 system performance. My duties also include evaluating and recommending large system
15 improvements. I also have multiple administrative, budgeting, personnel, and
16 expenditure responsibilities. Finally, I work with state and local community officials and
17 civic leaders and support the Company's economic development activities.

18 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

19 A: Yes. I filed written testimony in the following cases:

- 20 • Case No. 2011-00295¹ in support of the Company's application seeking a
21 certificate of public convenience and necessity to construct the approximately 20-
22 mile Bonnyman-Soft Shell 138 kV transmission line in Breathitt, Knott, and Perry

¹ *In the Matter of: 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, Knott, And Perry Counties, Kentucky (Bonnyman-Soft Shell Line).*

1 counties in eastern Kentucky. The Commission granted the Company's application
2 by Order dated January 26, 2012. The Bonnyman-Soft Shell transmission line was
3 placed in service in late 2014.

- Case No. 2017-00328² in support of the Company's application seeking a certificate of public convenience and necessity to rebuild approximately 6.6 miles of the Hazard-Wooton 161 kV transmission line in Perry and Leslie counties in eastern Kentucky.

III. PURPOSE OF TESTIMONY

4 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

5 A: I am testifying in support of Kentucky Power's application for a Certificate of Public
6 Convenience and Necessity to construct the proposed 2.7 mile EastPark 138 kV
7 transmission line, to construct the proposed Moore Hollow 138 kV Substation, and to
8 undertake the proposed upgrades at the Chadwick 138 kV Substation (the "Project"). I
9 describe the Project and the need for it, as well as the benefits the Project will provide. In
10 summary, the Project is required to provide 138 kV electric transmission service to the
11 EastPark Industrial Center in Boyd County, including the Braidy Industries, Inc. rolling
12 mill to be located there.

² *In the Matter of: Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 161 kV Transmission Line And Associated Facilities In Perry and Leslie Counties, Kentucky (Hazard-Wooton Line).*

IV. THE COMPANY'S PROPOSED PROJECT

A. The Transmission Line.

1 **Q. PLEASE DESCRIBE THE PROPOSED TRANSMISSION LINE.**

2 A: The Company is proposing to construct a 138 kV single circuit (three phase) transmission
3 line. The proposed line connects the proposed Moore Hollow 138 kV Substation, to be
4 located near 297 South Commerce Drive in the EastPark Industrial Center, to the existing
5 Chadwick-Kentucky Electric Steel 138 kV circuit. The Project will extend the 138 kV
6 circuit to the EastPark Industrial Center.

7 **Q: WHAT IS THE PROPOSED ROUTE FOR THE LINE?**

8 A: The line will connect to Kentucky Power's existing Chadwick-Kentucky Electric Steel
9 138 kV circuit, near the I-64/US Route 60 Interchange in Boyd County, and proceed
10 generally northwest for approximately 2.7 miles to the proposed Moore Hollow 138 kV
11 Substation to be located in the EastPark Industrial Center (the "Proposed Route.") The
12 Proposed Route and the location of the proposed Moore Hollow 138 kV Substation are
13 illustrated in EXHIBITS 2, 3, and 4 to the application.

14 **Q. IS CHADWICK-KENTUCKY ELECTRIC STEEL 138 kV CIRCUIT THE**
15 **NEAREST 138 kV TRANSMISSION INFRASTRUCTURE TO THE EASTPARK**
16 **INDUSTRIAL CENTER?**

17 A: Yes.

18 **Q. PLEASE DESCRIBE THE PRINCIPAL TYPES OF STRUCTURES THAT WILL**
19 **BE USED FOR THE PROPOSED LINE.**

20 A. Structure types will be ultimately determined during final engineering, which includes the
21 ground survey and geotechnical studies. Nevertheless, based on preliminary engineering,

1 the Company anticipates using a total of fourteen 138 kV single-circuit, steel galvanized
2 structures: (a) three custom monopoles; (b) six H-Frame structures; and (b) five lattice
3 towers. The specific number and type of structures used will depend on terrain, spans,
4 turning angles, and other engineering considerations. Illustrations of the proposed
5 structures are attached to the application as EXHIBITS 7, 8, and 9. The height of the
6 proposed structures is expected to vary from 65 feet to 110 feet and average
7 approximately 90 feet tall.

8 **Q. PLEASE DESCRIBE THE CONDUCTOR AND GROUNDWIRE TO BE USED IN**
9 **CONNECTION WITH THE PROPOSED TRANSMISSION LINE.**

10 A. The proposed single-circuit structures will support one conductor and two overhead
11 groundwires. Three 1,033,500 cm ACSR 54/7 kcm ACSR (Curlew) conductors (one for
12 each phase) will be used. The overhead groundwires will consist of one 7 # 8
13 Alumoweld wire and one 0.646" diameter 96 count fiber optic overhead groundwire,
14 which will be used for relaying communications between stations.

15 **Q. WHAT IS THE RIGHT-OF-WAY WIDTH FOR THE PROPOSED LINE?**

16 A. The proposed line generally will be located in a 100-foot right-of-way. The Company
17 also is seeking authority for a wider right-of-way where required by the safe and efficient
18 operation of the proposed transmission line. The widened right-of-way would be
19 required to permit additional tree clearing to prevent the conductors from coming in
20 contact with trees during high wind conditions, and where otherwise required by
21 topography of the route. Kentucky Power to date has identified a 1,828 foot span that
22 will require thirty feet of additional clearing on the eastern side of the span. The total
23 right-of-way width for this span will be 130 feet. Any additional areas of wider right-of-

1 way will be identified during detailed engineering design and addressed during the right-
2 of-way negotiations with landowners.

3 B. The Proposed Moore Hollow 138 kV Substation.

4 **Q. PLEASE DESCRIBE THE PROPOSED MOORE HOLLOW 138 kV**
5 **SUBSTATION AND WHAT WORK KENTUCKY POWER IS SEEKING**
6 **AUTHORITY TO PERFORM IN CONNECTION WITH IT.**

7 A. The substation will be located on a five acre tract in Site B of the EastPark Industrial
8 Center. The site will be acquired from Braidy Industries. The fenced portion of the
9 proposed substation will measure approximately 300 feet x 250 feet, and the yard will be
10 graveled. Ancillary components also will be required for the functioning of the station.

11 **Q. APPROXIMATELY HOW TALL ARE THE STRUCTURES IN THE**
12 **SUBSTATION?**

13 A. The bay heights are expected to be approximately 50 feet tall. A layout of the proposed
14 substation is attached to the application as EXHIBIT 10.

15 **Q. PLEASE DESCRIBE THE TOPOGRAPHY OF THE SITE OF THE PROPOSED**
16 **MOORE HOLLOW 138 kV SUBSTATION.**

17 A. The site is a reclaimed strip mine. It currently is a flat and open field. The site is an ideal
18 substation site and the Company does not anticipate any geotechnical or construction
19 issues in connection with the proposed construction on the site.

20 **Q. WHAT IS THE PURPOSE OF THE PROPOSED MOORE HOLLOW 138 kV**
21 **SUBSTATION?**

22 A. The Moore Hollow 138 kV Substation will serve as a transmission service delivery point
23 to industrial customers at EastPark Industrial Center. The substation will provide two

1 138 kV feeds to a Braidy Industries-owned substation that will provide electrical service
2 to the Braidy Industries aluminum mill. The Moore Hollow 138 kV Substation also will
3 stepdown voltage from 138 kV to 34.5 kV to serve industrial and distribution customers
4 at 34.5 kV.

5 C. The Work To Be Performed At The Chadwick 138 kV Substation.

6 **Q. WHERE IS THE CHADWICK 138 kV SUBSTATION LOCATED?**

7 A. The Chadwick 138 kV Substation is located near Alley Branch Road, Catlettsburg,
8 Kentucky, in Boyd County, Kentucky. The Chadwick 138 kV Substation is located
9 approximately 11.5 miles from the proposed Moore Hollow 138 kV Substation.

10 **Q. WHAT WORK DOES KENTUCKY POWER PROPOSE TO PERFORM AT THE**
11 **CHADWICK 138 kV SUBSTATION?**

12 A. Kentucky Power will upgrade the Chadwick 138 kV Substation by replacing the existing
13 line relay panel on the current Chadwick-Kentucky Electric Steel 138 kV line.

14 **V. NEED FOR PROPOSED PROJECT**

15 A. Overall.

16 **Q. WHY IS THE PROJECT NEEDED?**

17 A: EastPark Industrial Center is located within Kentucky Power's service territory.
18 Although I am not an attorney, it is my understanding based upon my 40 years of
19 experience with Kentucky Power that the Company is obligated to provide adequate and
20 reasonable service to all customers within its service territory. Braidy Industries
21 proposes to construct a \$1.3 billion aluminum rolling milling in the EastPark Industrial
22 Center. The mill requires transmission electric service for a peak load of 60 MW. In
23 addition, there is space available in EastPark Industrial Center for future development.

1 The existing electric system in the area cannot support either the planned Braidy
2 Industries facility or any additional load that might be added to the East Park Industrial
3 Center. Therefore, the Project, along with Phase 2 (a future 138 kV line and related
4 facilities to provide a second source), are necessary to provide the Company's customers
5 with adequate and reliable service.

6 **Q. PLEASE SUMMARIZE THE COMPANY'S OVERALL PLAN TO SERVE THE**
7 **EASTPARK INDUSTRIAL CENTER, INCLUDING BRAIDY INDUSTRIES.**

8 A: The Company has worked extensively with Braidy Industries to develop a plan to meet
9 its ambitious construction schedule. The planned in-service date sequence is as follows:

- 10 • **June 2020:** Projected completion date for the Project.
- 11 • **December 2021:** Project completion date for a second 138 kV transmission line
12 to EastPark to serve Braidy Industries' 60 MW peak load and to provide looped
13 service (EastPark 138 kV Transmission Line – Phase 2). The second 138 kV
14 transmission line will be extended from the Company's Princess Substation
15 located approximately three miles west of the proposed Moore Hollow 138 kV
16 Substation.

17 **Q. WHY IS A FUTURE SECOND 138 kV SOURCE NEEDED?**

18 A: Braidy Industries' rolling mill requires consistent, adequate, and reliable electrical service
19 to sustain production. The looped 138 kV service to be established through construction
20 of the two 138 kV lines and related facilities (Phase 1 and Phase 2) will enable Kentucky
21 Power to improve the consistency and reliability of the Company's electrical service to
22 the EastPark Industrial Center, including the proposed Braidy Industries aluminum
23 rolling mill.

1 **Q. WHEN DOES KENTUCKY POWER ANTICIPATE FILING ITS APPLICATION**
2 **FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR**
3 **THE SECOND 138 kV SOURCE?**

4 A: The Company anticipates filing its application in the fourth quarter of 2018 or the first
5 quarter of 2019.

6 **Q. WHY IS THE COMPANY FILING THE PHASE 1 AND PHASE 2 PROJECTS**
7 **SEPARATELY?**

8 A: Although both 138 kV transmission lines ultimately will be required to provide reliable
9 service to Braidy Industries and EastPark Industrial Center, the two phases can be
10 engineered and constructed separately. Filing the applications separately allows work to
11 begin on Phase 1 while second phase is being developed.

12 B. The 138 kV Transmission Line.

13 **Q. YOU HAVE TESTIFIED CONCERNING THE NEED FOR THE PROJECT AS A**
14 **WHOLE. I WOULD LIKE NOW TO DIRECT YOUR ATTENTION TO THE**
15 **INDIVIDUAL COMPONENTS OF THE PROJECT. FIRST, WHY MUST THE**
16 **COMPANY CONSTRUCT A 138 kV TRANSMISSION LINE TO BRING 138 KV**
17 **SERVICE TO THE EASTPARK INDUSTRIAL CENTER?**

18 A: EastPark Industrial Center is currently served by an existing 34.5 kV single circuit
19 distribution line. The nearest 138 kV infrastructure is the Company's existing Chadwick-
20 Kentucky Electric Steel 138 kV circuit located about three miles southeast of the
21 industrial center.

22 **Q. CAN THE EXISTING 34.5 kV DISTRIBUTION LINE SERVE THE FUTURE**
23 **LOAD?**

1 A: No. The existing 34.5 kV distribution system is not capable of serving the proposed
2 Braidy Industries load of 60 MW. The Project also will enable the Company to serve
3 potential future industrial load in the area in addition to the 60 MW of peak load
4 associated with the Braidy Industries aluminum rolling mill.

5 **Q. ARE THERE ANY REASONABLE ELECTRICAL ALTERNATIVES TO**
6 **CONSTRUCTING THE PROPOSED TRANSMISSION LINE?**

7 A: No. The required 138 kV service is not otherwise available at Site B of the EastPark
8 Industrial Center.

9 C. The Proposed Moore Hollow 138 kV Substation.

10 **Q. HOW WILL THE PROPOSED MOORE HOLLOW 138 kV SUBSTATION**
11 **ENHANCE DISTRIBUTION SERVICE IN THE GENERAL AREA OF**
12 **EASTPARK INDUSTRIAL CENTER.**

13 A. The Moore Hollow 138 kV Substation will improve the reliability of the Company's
14 distribution system by interconnecting the new distribution circuits to be served out of the
15 Moore Hollow 138 kV Substation with the existing distribution circuits served from the
16 Princess Substation.

17 **Q. YOU EARLIER INDICATED THAT THE PROPOSED MOORE HOLLOW 138**
18 **kV SUBSTATION WILL SERVE AS A TRANSMISSION SERVICE DELIVERY**
19 **POINT TO INDUSTRIAL CUSTOMERS AT EASTPARK INDUSTRIAL**
20 **CENTER. WHY CANNOT EXISTING SUBSTATIONS SERVE AS A**
21 **TRANSMISSION SERVICE DELIVERY POINT TO CUSTOMERS IN THE**
22 **EASTPARK INDUSTRIAL CENTER?**

23 A. The lack of transmission infrastructure in the area means that it is neither feasible nor

1 cost-effective to provide the required service from existing substations. To do so would
 2 require longer transmission lines that would lack the required sectionalizing to provide
 3 reliable service.

4 **Q. COULD KENTUCKY POWER PROVIDE ADEQUATE, REASONABLE, AND**
 5 **EFFICIENT 138 kV SERVICE TO BRAIDY INDUSTRIES AND THE**
 6 **EASTPARK INDUSTRIAL CENTER ABSENT THE PROPOSED MOORE**
 7 **HOLLOW 138 kV SUBSTATION?**

8 A. No.

9 **Q. PLEASE IDENTIFY THE MAJOR COMPONENTS OF THE MOORE HOLLOW**
 10 **138 kV SUBSTATION AND EXPLAIN THE NEED FOR AND FUNCTION OF**
 11 **EACH.**

12 A. The Moore Hollow 138 kV Substation will consist of four major components and serve
 13 as a transmission service delivery point to industrial customers at EastPark Industrial
 14 Center. The four major components will perform the functions listed below:

<u>Component</u>	<u>Function</u>
Four 138 kV transmission line positions in a modified breaker and a half layout utilizing six 138 kV circuit breakers (3000A 40 kA).	The four line positions permit the termination of two source transmission lines (providing loop service) and two 138 kV leads to serve Braidy Industries.
One 138/34.5 kV Transformer (30 MVA) and a standard 34.5 kV right hand rural distribution structure with three (3) 34.5 kV distribution feeder positions;	Supplement service to the industrial park and improve service reliability by providing an additional source into the area. The transformer also will enhance the Company's capacity to serve distribution load in the area.
One 57.6 MVAR capacitor;	Provide reactive power to maintain adequate voltage under normal peak and contingency conditions and to avoid voltage violations.

<u>Component</u>	<u>Function</u>
One 16' x 36' mirrored base drop-in control module (DICM).	Provide housing for the associated protection and controls and telecommunications equipment for the station.

1 In addition, the station will require ancillary equipment such as, but not limited to, relays,
2 current transformers, potential transformers, and telecommunications equipment to
3 function. The proposed layout drawing and location map for the Moore Hollow 138 kV
4 Substation are included as **Exhibit 10** to the application.

5 D. The Upgrades At The Chadwick 138 kV Substation.

6 **Q. THE APPLICATION ALSO DESCRIBES REMOTE WORK BEING**
7 **PERFORMED AT THE COMPANY'S EXISTING CHADWICK 138 kV**
8 **SUBSTATION. PLEASE DESCRIBE THE NATURE OF THE REMOTE WORK**
9 **TO BE PERFORMED AT THE CHADWICK 138 kV SUBSTATION.**

10 A. The existing Chadwick-Kentucky Electric Steel relaying panel will be replaced with a
11 new panel.

12 **Q. PLEASE DESCRIBE THE PURPOSE OF AND NECESSITY FOR THE REMOTE**
13 **WORK TO BE PERFORMED AT THE CHADWICK 138 kV SUBSTATION.**

14 A. The upgrade will provide required protection and controls (e.g., relaying work) associated
15 with the Project

16 **Q. COULD KENTUCKY POWER PROVIDE ADEQUATE, REASONABLE, AND**
17 **EFFICIENT 138 kV SERVICE TO BRAIDY INDUSTRIES AND THE**
18 **EASTPARK INDUSTRIAL CENTER IN THE ABSENCE OF THE PROPOSED**
19 **REMOTE WORK AT THE CHADWICK 138 kV SUBSTATION?**

20 A. No.

1 **Q. ABSENT THE CONSTRUCTION OF THE PROPOSED PROJECT, INCLUDING**
2 **EACH OF ITS COMPONENTS, CAN KENTUCKY POWER PROVIDE**
3 **ADEQUATE, EFFICIENT, AND REASONABLE SERVICE TO MEET THE 138**
4 **kV REQUIREMENTS OF THE PROPOSED BRAIDY ROLLING MILL AND**
5 **OTHER FUTURE DEVELOPMENT IN EASTPARK INDUSTRIAL CENTER?**

6 A. No.

7 E. Relationship Of PJM Reviews To The Project.

8 **Q. IS THE PROJECT DESIGNATED AS A SUPPLEMENTAL PROJECT OR A**
9 **BASELINE PROJECT BY PJM?**

10 A. It is a Supplemental project. Company Witness Ali provides additional detail concerning
11 PJM's process for reviewing Supplemental projects, as well as the applicability of the
12 recent Federal Energy Regulatory Commission decision to the Project.

13 **Q. DOES THE FACT THAT THE PROJECT IS DESIGNATED SUPPLEMENTAL**
14 **MEAN THE PROJECT IS UNNECESSARY, OR DUPLICATIVE, OR**
15 **OTHERWISE OPTIONAL?**

16 A. No. The PJM criteria for identifying Baseline and Supplemental projects serve to
17 differentiate between two different categories of transmission projects that are intended to
18 address different kinds of transmission needs. The fact a project is classified as a
19 Supplemental project by the PJM planning process does not render it any less necessary
20 or any less required than a Baseline project. The EastPark 138 kV Transmission Line,
21 the Moore Hollow 138 kV Substation, along with the remote work to be performed at the
22 Chadwick 138 kV Substation, along with Phase 2 of the project, comprise a textbook
23 example of a supplementary project with a high need. Kentucky Power cannot meet its

1 statutory duty to provide adequate, efficient, and reasonable service to EastPark Industrial
2 Center, including the proposed Braidy Industries aluminum mill, without the proposed
3 line, new substation, and upgrade to the existing substation. At bottom, this means that
4 absent the requested certificate of public convenience and necessity the proposed Braidy
5 Industries aluminum mill cannot operate, which in turn will lead to the loss of the \$1.3
6 billion investment in Kentucky Power's service territory, as well as the consequent loss
7 of the accompanying jobs and other economic development activity.

8 **Q. IS KENTUCKY POWER RELYING UPON THE PJM REVIEW PROCESS TO**
9 **DEMONSTRATE THE NEED FOR THE PROJECT?**

10 A. Far from it. The evidence of the need for the project and its components is detailed above
11 in my testimony.

VI. BENEFITS OF THE PROJECT

12 **Q. PLEASE SUMMARIZE THE PROJECT BENEFITS.**

13 A: The proposed Project provides electric transmission service to Braidy Industries' planned
14 aluminum mill facility in the EastPark Industrial Center. Once complete, the Project,
15 along with the future second 138 kV source, will provide the industrial park with reliable
16 and robust power sources capable of handling the proposed Braidy Industries load as well
17 as future growth in the EastPark area. The proposed project will also benefit distribution
18 customers by providing a second distribution source out of the proposed Moore Hollow
19 138 kV Substation to the area.

20 **Q: WILL THE PROPOSED PROJECT RESULT IN WASTEFUL DUPLICATION?**

21 A: No. The Project will not duplicate any existing facilities in an area that largely is a
22 former strip mine site.

1 **Q: COULD IMPROVEMENTS TO OTHER COMPANIES' TRANSMISSION**
2 **SYSTEMS ADDRESS THESE NEEDS ON KENTUCKY POWER'S SYSTEM AT**
3 **A LESSER COST?**

4 A: No. The required service to EastPark Industrial Center, including the proposed Braidy
5 Industries aluminum mill, can only be provided by the extension of 138 kV service to the
6 area. The required extension cannot reasonably be addressed by improvements to other
7 utilities' systems.

8 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

9 A: Yes.

**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) Case No. 2018-00072
Transmission Line In Boyd County, Kentucky)
(EastPark 138 kV Transmission Line (Phase 1)))

DIRECT TESTIMONY OF

**GEORGE T. REESE
GAI CONSULTANTS**

ON BEHALF OF KENTUCKY POWER COMPANY

**DIRECT TESTIMONY OF
GEORGE T. REESE, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2018-00072

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DIRECT TESTIMONY OF

**GEORGE T. REESE
GAI CONSULTANTS**

ON BEHALF OF KENTUCKY POWER COMPANY

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, Pennsylvania 15120 as Environmental Director and Assistant Vice President.

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 30 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, cultural resources, and engineering 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 conducting siting, licensing, and permitting efforts for electric
5 transmission lines for over 30 years. This has included lines in the United States, Central
6 America, the Caribbean, and Southeast Asia.

7 **Q: HAVE YOU PREVIOUSLY BEEN INVOLVED IN ELECTRIC TRANSMISSION**
8 **LINE SITING STUDIES?**

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

13 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION ON**
14 **BEHALF OF KENTUCKY POWER?**

15 A: Yes. I provided testimony on behalf of Kentucky Power in connection with its
16 application for a certificate of public convenience and necessity for the Bonnyman-Soft
17 Shell 138 kV transmission line (Case No. 2011-00295). I also supervised the preparation
18 of the following siting and environmental studies filed on behalf of Kentucky Power: the
19 Leeco Project 138 kV Transmission Line Siting Study (Case No. 2009-00235); the
20 Bonnyman-Soft Shell 138 kV Transmission Line Siting Study (Case No. 2007-00430);
21 and the Hays Branch-Morgan Fork 138 kV Transmission Line (Case No. 2007-00155).

22

III. PURPOSE OF TESTIMONY

1 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

2 A: I am testifying in support of Kentucky Power Company's ("Kentucky Power" or the
3 "Company") application for a Certificate of Public Convenience and Necessity to
4 construct the proposed EastPark 138 kV Transmission Line (Phase 1). In my testimony I:

- 5 • Describe the methodology employed by GAI in conducting the siting
6 study that was used in identifying and evaluating the four alternative
7 transmission line routes;
- 8 • Describe the results and conclusions of the siting study, as well as the
9 basis for the recommendation of the preferred alternative route.

IV. STUDY METHODOLOGY

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

14
15 A: GAI was retained by the Company to develop and evaluate alternative transmission line
16 routes for the proposed 138 kV transmission line connecting the Company's Chadwick –
17 Kentucky Electric Steel ("KES") 138 kV transmission circuit located in Boyd County,
18 Kentucky, and its proposed Moore Hollow 138 kV Substation (the "Project") to be
19 located in the EastPark Industrial Center in Boyd County, Kentucky near 297 South
20 Commerce Drive. In addition, GAI prepared a siting study in which it evaluated the
21 environmental suitability and feasibility of the Project and the alternative routes that were
22 reviewed. The EastPark 138 kV Transmission Line (Phase 1) Siting Study (the "Siting
23 Study") is filed as **EXHIBIT 21** to the application. I served as the Project Manager on
24 behalf of GAI in connection with its work on the Project. The line will be constructed on
25 steel pole H-frame structures, steel monopole structures, and steel lattice towers. The
26 proposed line typically will require a 100-foot right-of-way (50 feet on each side of the
27 centerline).

1 **Q. PLEASE DESCRIBE FOR THE COMMISSION THE PURPOSE OF THE**
2 **SITING STUDY.**

3 A: The purpose of the Siting Study is to identify a proposed route for the line for which the
4 Company will be able to acquire the required right-of-way, engineer, build, operate, and
5 maintain while minimizing overall environmental impacts.

6 **Q: WAS THE ELECTRIC POWER RESEARCH INSTITUTE/GEORGIA**
7 **TRANSMISSION CORPORATION'S ("EPRI") "OVERHEAD ELECTRIC**
8 **TRANSMISSION LINE SITING METHODOLOGY" AND THE RELATED**
9 **"KENTUCKY TRANSMISSION LINE SITING METHODOLOGY"**
10 **("KENTUCKY EPRI METHODOLOGY") USED?**

11 A: No. Use of the Kentucky EPRI methodology was neither feasible nor probative due to
12 the proposed transmission line's short length, the study area's homogenous landscape,
13 and the unknown nature of the future development plans of landowners.

14 **Q. HOW DOES THE STUDY AREA'S HOMOGENOUS LANDSCAPE AFFECT**
15 **THE RESULTS PRODUCED BY THE KENTUCKY EPRI METHODOLOGY?**

16 A. The Kentucky EPRI methodology develops and ranks alternative routes by assigning
17 differing weights to different landscape resources¹. A study area comprising multiple
18 differing land uses/land covers can yield sufficient differentiation in the values assigned
19 to the alternatives to inform decision making. In addition, the larger the study area the
20 greater possibility of a larger number of alternatives. Here, the study area is dominated
21 by undeveloped land on former surface mining sites, forested areas on slopes, and
22 scattered residential development located along roadways in two intervening valley

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 bottoms. This single predominant land use and limited resource variability would not
2 yield sufficient differentiation among the alternatives under the Kentucky EPRI
3 methodology to make its use probative. This lack of differentiation was magnified here
4 by the short length of the line (and the reduced study area) and the resulting reduction in
5 the number of alternatives. Further constraining the usefulness of the Kentucky EPRI
6 methodology here was the linear residential development in the two valleys that also
7 limited the alternatives. The spatial distribution of homes within these valleys provided
8 limited opportunities to cross these valleys while avoiding impacts to residential
9 structures.

10 **Q. WHAT IMPACT DID THE UNKNOWN PLANS FOR FUTURE DEVELOPMENT**
11 **HAVE?**

12 **A.** Many of the undeveloped areas are owned by corporations that have future development
13 plans. These development plans and related mapping are either not formally
14 documented, or are considered confidential by the property owners and were not shared
15 in their entirety with Kentucky Power. Therefore, a comprehensive overview of planned
16 development within the study area was not available for use in the Kentucky EPRI
17 methodology.

18 **Q. DID KENTUCKY POWER WORK WITH LANDOWNERS TO ADDRESS THE**
19 **POSSIBILITY OF FUTURE DEVELOPMENT IN SITING THE PROPOSED**
20 **LINE?**

21 **A.** Yes. Representatives of the Company met with the large landowners to address any
22 concerns they might have about the location of the proposed transmission line. Without
23 revealing their development plans in full, the owners requested that the flatter

1 developable areas be avoided, and where practical, that the right-of-way follow the edges
2 of the properties instead of traversing their middle. The final alternative routes
3 reasonably addressed these concerns.

4 **Q. HOW DID THE COMPANY IDENTIFY AND EVALUATE ALTERNATIVE**
5 **ROUTES FOR THE PROPOSED LINE IF IT DID NOT USE THE KENTUCKY**
6 **EPRI METHODOLOGY?**

7 A: Before describing the siting methodology in more detail, let me note that the
8 methodology employed is described in detail in Section 2 of the Siting Study. Section 3
9 of the Siting Study discusses the constraints within the study area that were considered
10 and discusses the development of the alternative routes. A detailed comparison of the
11 alternative routes is provided in Section 4 of the Siting Study.

12 **Q. WITH THAT AS BACKGROUND, HOW DID THE COMPANY IDENTIFY AND**
13 **EVALUATE ALTERNATIVE ROUTES?**

14 A. The siting team used a multi-step methodology previously employed successfully with
15 the Bonnyman-Soft Shell (Case No. 2011-00295) and Hazard-Wooton (Case No. 2017-
16 00328) lines to identify and evaluate potential routes. These steps included efforts at
17 various points in the process to identify constraints and opportunities, identify and
18 address stakeholder and landowner concerns, and coordinate with local officials. These
19 industry accepted, traditional siting methods are robust, tested and defensible, and the
20 resulting alternative routes are buildable and efficient and avoid or minimize impacts on
21 environmental resources and residents. This methodology has been used successfully on
22 five Kentucky Power projects in eastern Kentucky, as well as a number of other state-
23 approved AEP projects in Virginia and Ohio.

1 **Q: PLEASE OUTLINE THE SITING METHODOLOGY EMPLOYED.**

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

- 3 1. Identification of the study area and constraints by GAI;
- 4 2. Development by GAI in coordination with Kentucky Power of siting
5 guidelines and identification of study corridors;
- 6 3. Development of conceptual routes and study segments;
- 7 4. Identification, evaluation, and refinement of the study segments;
- 8 5. Combination of study segments to identify the best alternative routes; and
- 9 6. Evaluation of the alternative routes to determine the preferred alternative route
10 (the "Proposed Route").

11 **Q: PLEASE DESCRIBE IN MORE DETAIL THE FIRST STEP OF THE SITING**
12 **METHODOLOGY UTILIZED BY GAI AND KENTUCKY POWER?**

13 A: With the termini of the line established by Kentucky Power at the Chadwick – KES 138
14 kV transmission circuit and the proposed Moore Hollow 138 kV Substation in Boyd
15 County, the first step was to identify a study area for locating the transmission line
16 corridor. The study area generally consisted of the area between the Chadwick – KES
17 138 kV transmission circuit near Kentucky Electric Steel and the proposed Moore
18 Hollow 138 kV Substation. It is bounded on the south by the Boyd County – Carter
19 County line, on the west by the Boyd County – Greenup County line, on the north by the
20 Greenup County line and a point approximately 0.1 mile north of the proposed Moore
21 Hollow 138 kV Substation, and on the east by the valley of Williams Creek. GAI
22 ultimately identified a 6.75-square mile area in Boyd County as the study area. The
23 boundaries of the Study Area encompass the termini of the proposed transmission line

1 and sufficient surrounding area to accommodate reasonable routes between these end
2 points. Map 2 of the Siting Study shows the study area. Following identification of the
3 study area, GAI initiated the collection of high level data concerning environmental,
4 socioeconomic, and topographic constraints within this area.

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

7 A. The Study Area is characterized by rolling uplands bisected by entrenched stream
8 valleys. Several larger stream valleys trend southwest to northeast across the study area.
9 Elevations range from approximately 600 feet along Williams Creek in the southeastern
10 corner of the Study Area to nearly 1,000 feet on ridgetops. Extensive surface mining has
11 occurred in the past and a number of hilltops have been leveled to form large tablelands.
12 The predominant land uses in the study area are forest on slopes and hilltops,
13 undeveloped open lands on reclaimed former mine sites, and scattered residential
14 development located along roadways in two intervening valley bottoms.

15 **Q: WHAT WAS THE SECOND STEP?**

16
17 A: GAI, in conjunction with Kentucky Power, next developed the siting guidelines to be
18 used in locating the transmission line corridor. The guidelines had five primary
19 objectives. The first objective was to avoid or minimize both present and, to the extent
20 known, anticipated future land use conflicts. The second objective was to limit the effect
21 of the proposed construction on human, natural, cultural, and visual resources. The third
22 objective sought to minimize regulatory conflict. Fourth, the guidelines addressed the
23 construction, operation, maintenance, and project completion requirements provided by
24 Kentucky Power. The final objective assessed stakeholder support and concerns. These

1 guidelines were then utilized to identify study corridors to be used in the development of
2 conceptual routes.

3 **Q: WHAT FACTORS WERE CONSIDERED IN CONNECTION WITH THE FIRST**
4 **SITING GUIDELINE OBJECTIVE?**

5 A: In addressing the first objective GAI assessed existing land use, including the presence
6 and proximity of residences, business and commercial structures, schools, churches,
7 airports, oil and gas wells, and mining activities. In addition, future plans for residential,
8 industrial, and commercial development, to the extent that they were shared by the
9 landowners, were considered. The line was routed to avoid or minimize the line's impact
10 on existing and future land uses.

11 **Q: WHAT FACTORS DID GAI CONSIDER IN ASSESSING THE POSSIBLE**
12 **IMPACT OF THE PROPOSED TRANSMISSION LINE ON HUMAN,**
13 **NATURAL, CULTURAL, AND VISUAL RESOURCES?**

14 A: These factors included the presence in and proximity of the following natural and cultural
15 resources: wetlands, streams, forests, prime farmland soils, previously documented
16 architectural and archaeological resources, rare or endangered species, as well as
17 recreational and aesthetic resources such as bikeways, scenic byways, trails and parks. In
18 general, the study area has a homogeneous landscape, and sensitive cultural, recreational,
19 and aesthetic resources are limited or absent.

20 **Q: WHAT IS MEANT BY "REGULATORY CONFLICT" AS USED IN**
21 **CONNECTION WITH THE THIRD OBJECTIVE?**

1 A: Simply that in siting the transmission line corridor an effort was made to eliminate or
2 avoid additional regulatory requirements, such as those resulting from the presence of
3 wetlands or endangered species, for example, in or near the corridor.

4 **Q: WHAT FACTORS DID GAI CONSIDER IN ASSESSING THE FOURTH**
5 **OBJECTIVE?**

6 A: The fourth objective addressed the engineering, logistical, and other technical
7 requirements associated with the construction, operation and maintenance of the
8 proposed line. These included minimizing the number of structures required, limiting the
9 number of angles in the route, as well as the size of the required structures. Finally,
10 other factors affecting the cost of construction, operation, and maintenance were
11 considered, including availability of existing access roads.

12 **Q: WHO WERE THE STAKEHOLDERS CONSIDERED IN CONNECTION WITH**
13 **THE FINAL OBJECTIVE?**

14 A: Stakeholders included property owners in the vicinity of the proposed line, as well as
15 state and local public officials and agencies whose regulatory or governmental interests
16 might be implicated by the proposed construction. Kentucky Power met with
17 representatives of Boyd and Greenup Counties on January 16, 2018. County
18 representatives attending the meeting included the Greenup County Director of Economic
19 Development, Greenup County Judge Executive, and Boyd County Director of
20 Community and Economic Development. Additionally, the Boyd County Judge
21 Executive attended the Public Open House on February 20, 2018.

22 **Q: WHAT WAS THE THIRD STEP IN THE SITING METHODOLOGY**
23 **EMPLOYED BY GAI?**

1 A: Once the study area and study corridors were identified, and the factors to be used in the
2 analysis were developed, a database of additional detailed information relevant to each of
3 the factors was developed for the search area. In addition to compiling information, GAI
4 also developed a GIS database for use in identifying and evaluating the alternatives. In
5 developing the database, numerous sources were reviewed and relevant information
6 compiled, including that gained from:

- 7 • Literature review and data collection from published data, aerial photographs, and
8 maps.
- 9
- 10 • Discussions with public officials, land owners concerning present and future land
11 use.
- 12
- 13 • Ground reconnaissance.
- 14
- 15 • Information from state and federal officials regarding endangered or threatened
16 species and cultural resources. These included United States Fish and Wildlife
17 Service, Kentucky State Nature Preserves Commission, Kentucky Department of
18 Fish and Wildlife Resources, Kentucky Office of State Archaeology, and the
19 Kentucky Heritage Council.
- 20
- 21 • Discussions with major landowners in the study area to identify existing and
22 future conflicts between current and future land use plans and the proposed line.
23 In connection with this aspect of compiling the data base, Kentucky Power or
24 representatives of GAI met with BCG Land LLC, Kings Crossing LLC, KES
25 Acquisition LLC (Kentucky Electric Steel Corporation), and Braidy Industries.
- 26
- 27 • Efforts to work with major landowners to identify conflicts with each of the study
28 corridors for the proposed line and present and future land use.
- 29
- 30 • Input from the general public.
- 31

32 Using this information, study segments were then developed within and between the
33 study corridors.

34 **Q: WHAT WAS THE PURPOSE OF MEETING AND WORKING WITH LARGE**
35 **LANDOWNERS?**

1 A: Several large properties in the vicinity of the EastPark Industrial Center have the
2 potential for large-scale industrial and commercial development. Kentucky Power
3 worked with landowners to identify future land use plans so that the prime areas
4 projected for future development could be avoided. In general, the landowners requested
5 that the routes avoid the flat developable areas and traverse along the property
6 boundaries. Kentucky Power also sought to identify areas of future mineral extraction
7 activity. Typically, Kentucky Power would be required to move the line if the area it
8 traverses is later surface-mined. It thus is critical that plans for future mining be
9 identified, and those areas avoided if possible, in planning the line. The resulting
10 alternative routes avoid the prime developable areas and no future mining plans were
11 identified.

12 **Q: WERE ONLY LARGE LANDOWNERS CONTACTED?**

13
14 A: No. Once Alternative Route D was tentatively identified as the preferred alternative route,
15 Kentucky Power right-of-way agents met with or spoke to each landowner over whose
16 property the line was projected to pass. The Company continues to work with the 11
17 landowners whose property is crossed by the Proposed Route right-of-way and is
18 optimistic a positive outcome will be achieved.

19 **Q: HOW WAS INPUT FROM THE GENERAL PUBLIC OBTAINED?**

20 A: Kentucky Power conducted a public open house in Grayson, Kentucky on February 20,
21 2018. The open house was preceded by an extensive public notification campaign.
22 Approximately 16 people attended the open house including several local officials. At
23 the open house, representatives of Kentucky Power provided information on the Project.
24 They also were available to answer questions and collected concerns from the public. In

1 addition, information regarding the Project was made available to the public through a
2 website.

3 **Q: WERE ROUTES MODIFIED AS A RESULT OF THE PUBLIC INPUT?**

4 A: Yes, minor landowner route adjustments were requested and reviewed by the Company's
5 engineers. The majority of suggestions were addressed. For example, a study segment
6 was moved slightly to avoid a previously unknown family cemetery. In several other
7 areas, there were minor route adjustments to reduce visual impacts and proximity to
8 residences or to avoid a landowner's future plans.

9 **Q: YOU PREVIOUSLY INDICATED THAT THE THIRD AND FOURTH STEPS IN**
10 **THE METHODOLOGY INVOLVED THE IDENTIFICATION AND**
11 **EVALUATION OF STUDY SEGMENTS. WHY WERE STUDY SEGMENTS**
12 **USED?**

13 A: Study segments are short stretches of proposed routes that are created to avoid the known
14 constraints. By using shorter segments obvious constraints can be more easily avoided
15 and a finer level of discrimination is achieved in designing the line.

16 **Q: WAS THE ENTIRE STUDY AREA AVAILABLE IN CREATING THE**
17 **SEGMENTS?**

18 A: No. The usable portions of the study area were constrained by current and planned
19 development activities, as well as residential development along Midland Trail Road,
20 Straight Creek Road, and Buena Vista Drive. Once the usable area was identified,
21 transmission line segments that could be combined to form the alternative routes between
22 the Chadwick – KES 138 kV circuit and the Moore Hollow 138 kV Substation were next
23 identified. In developing study segments, GAI used a two-tier process.

1 **Q: PLEASE EXPLAIN THIS TWO-TIER PROCESS.**

2 A: In the first tier, two potential study corridors linking the Chadwick – KES 138 kV circuit
3 and the proposed Moore Hollow 138 kV Substation were identified within the confines of
4 the usable territory within the study area. The western corridor lies generally to the west
5 of the Championship FastPitch Athletic Complex, the residential cluster along Straight
6 Creek Road, and areas identified as having high future development potential. The
7 eastern corridor lies to the east of these features. The second tier of the two-step process
8 involves the development and refinement of study segments utilizing these corridors.
9 Initially, conceptual routes were developed within the study corridors. Where two or
10 more of the conceptual routes intersect, study segments are formed between two common
11 nodes or points of intersection. Study segments were identified within each of these
12 corridors, as well as in areas providing an opportunity to connect the corridors. In
13 particular, GAI sought to identify those segments that could be used to construct the most
14 feasible corridors, while avoiding major environmental and socio-economic impacts.
15 These segments were further evaluated, with segments being added and deleted, based
16 upon input from the public, and state and local officials and agencies to develop a refined
17 study segment network.

18 **Q: WHAT WAS THE FIFTH STEP IN THE SITING METHODOLOGY?**

19 A: The study segments were combined to form four alternative transmission routes. More
20 information on the development of the four alternatives is provided in Section 3.0 of the
21 Siting Study.

22 **Q: WHAT WAS THE FINAL STEP IN THE PROCESS?**

1 A: The four alternative routes were evaluated using the guidelines and a preferred alternative
2 route was selected.

3 **V. RESULTS AND CONCLUSIONS OF THE STUDY**

4 **Q: YOU PREVIOUSLY INDICATED THAT FOUR ALTERNATIVE ROUTES**
5 **WERE DEVELOPED. WILL YOU PLEASE DESCRIBE EACH OF THOSE**
6 **ROUTES?**

7 A: Yes. The four alternative routes are presented on Map 4 of the Siting Study. They can be
8 generally described as follows:

- 9 • Alternative Route A is the westernmost route, and at approximately 3.3 miles is
10 the longest of the routes considered. In an effort to avoid residential development
11 along Midland Trail Road and Straight Creek Road, the Championship FastPitch
12 Athletic Complex, and the future development areas, the route is located in a
13 combination of forested and previously mined areas.
- 14 • Alternative Route B is a hybrid route that utilizes the eastern corridor to a point
15 north of Addington Road, where it then proceeds northwestward across forested
16 and previously mined areas to join with Alternative Route A north of Straight
17 Creek Road. It is approximately 3.0 miles long.
- 18 • Alternative Route C is another hybrid route that utilizes the eastern corridor to a
19 point north of Straight Creek Road. It then proceeds northeast across forested and
20 open land to intersect Alternative Route A near Addington Road. It is
21 approximately 3.0 miles long.
- 22 • Alternative Route D is the easternmost route. It is located to the east of the
23 residential development along Straight Creek Road, the Championship FastPitch

1 Athletic Complex, and the future development areas. The route is located in a
2 combination of forested and open areas. It is the shortest route at approximately
3 2.7 miles in length.

4 **Q: WHAT WAS THE PREFERRED ALTERNATIVE?**

5 A: Alternative Route D is the preferred alternative and the Proposed Route. An overview of
6 the Proposed Route is provided in a detailed aerial map in Attachment E of the Siting
7 Report.

8 **Q: WHAT WAS THE BASIS FOR GAI'S RECOMMENDATION OF**
9 **ALTERNATIVE ROUTE D AS THE PREFERRED ALTERNATIVE ROUTE?**

10 A: GAI recommended and Kentucky Power selected Alternative Route D as the Proposed
11 Route because:

- 12 • Alternative Route D is the shortest route, thereby reducing the overall potential
13 for impacts as compared to the other alternatives.
- 14
- 15 • Strong landowner opposition was expressed to Alternative Route A, and moderate
16 opposition to Alternative Routes B and C. In contrast, no landowners have
17 expressed objections to Alternative Route D to date.
- 18
- 19 • Alternative Route D has the second fewest number of residences within 250 feet
20 of the centerline.
- 21
- 22 • Alternative Route D requires the least amount of forest clearing and has fewer
23 stream crossings than the other alternatives.
- 24
- 25 • Alternative Route D is considered to have greater constructability advantages over
26 the other alternatives. In addition to being shorter, it requires fewer structures,
27 fewer angles, and can make the greatest use of existing access roads for
28 construction and maintenance.
- 29

30 Section 4.3 provides additional detail concerning the basis for the Company's
31 recommendation of Alternative Route D as the Proposed Route. In addition, Table 4
32 provides a comparative evaluation of the constraints and opportunities attending each of

1 the alternatives.

2 **Q: DID GAI AND KENTUCKY POWER COORDINATE THE LOCATION OF THE**
3 **PROPOSED ROUTE TO AVOID CONFLICTS WITH PLANNED**
4 **RESIDENTIAL, COMMERCIAL, RECREATIONAL AND MINERAL**
5 **EXTRACTION DEVELOPMENTS?**

6 A: Yes. Following extensive coordination with Boyd County officials, development
7 companies, and individual land owners within the Proposed Route corridor, minor
8 modifications were made to the route to eliminate or minimize conflicts with future
9 development plans.

10 **Q: WHAT ENVIRONMENTAL PERMITTING OR STUDIES ARE ANTICIPATED**
11 **FOR THIS PROJECT?**

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

14 A wetland delineation and stream identification survey will be conducted for the
15 Project. It is anticipated that any impact to these resources will be covered under
16 the USACE Nationwide Permit 12, non-reporting, for the installation of culverts
17 on access roads. Construction activities that take place in, along, or over a
18 wetland or a stream (if the watershed is one square mile or more in size) will
19 require a Kentucky Division of Water (KDOW) Stream Construction Permit.

20
21 Because the total earth disturbance will be greater than one acre, a construction
22 stormwater permit will be required from KDOW. A Kentucky Pollutant Discharge
23 Elimination System (KPDES) Stormwater Pollution Prevention Plan (SWPPP)
24 will be developed for the Project.

25
26 Kentucky Power will coordinate with the U.S. Fish and Wildlife Service
27 (USFWS) regarding the potential for impacts to sensitive species. Based on
28 review of the USFWS Information for Planning and Consultation system, three
29 species of bats potentially occur in the Project area. Mist net and portal searches
30 will be conducted for these species, as appropriate, and the results coordinated
31 with the USFWS.

32
33 A Phase I cultural resources survey will be conducted and coordinated with the

1 Kentucky Heritage Council and the Kentucky Office of State Archaeology.

2
3 In addition to the environmental permits, engineering related permits will be filed with
4 the appropriate agencies or companies once the transmission line design is completed. It
5 is anticipated that these may include aerial road crossing permits from the Kentucky
6 Transportation Cabinet (KYTC), Federal Highway Administration, or county engineering
7 office; construction entrance permits for state or county roads; and a railroad crossing
8 permit from CSX Transportation. The Company will also coordinate with the Federal
9 Aviation Administration and KYTC as necessary regarding aviation-related approvals.

10
11 **Q: HAVE ANY OF THE PERMITS OR STUDIES BEEN COMPLETED?**

12 A. The Company plans to begin the required environmental studies this summer and obtain
13 the required environmental permitting and approvals before construction begins this fall.
14 To date, a preliminary design is complete and preliminary access roads and laydown
15 yard(s) have been identified. The anticipated permit requirements are typical for a
16 transmission line and the Company does not anticipate any extraordinary issues or delays.

17 **Q. BASED ON THE EFFORTS UNDERTAKEN BY GAI AND DESCRIBED**
18 **ABOVE, INCLUDING THE SITING STUDY, DO YOU HAVE AN OPINION THE**
19 **COMPANY'S PROPOSED ROUTE FOR THE EASTPARK 138 KV**
20 **TRANSMISSION LINE?**

21 A. Yes. Alternative D, the Proposed Route, is the best route. It is most consistent with the
22 siting guidelines and meets the goals of minimizing impacts on land use and the natural
23 and cultural resources along the route, while avoiding circuitous routes, extreme costs,
24 and non- standard design requirements.

25

1 Q: DOES THIS CONCLUDE YOUR TESTIMONY?

2 A: Yes.

**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) Case No. 2018-00072
Transmission Line In Boyd County, Kentucky)
(EastPark 138 kV Transmission Line (Phase 1)))

DIRECT TESTIMONY OF

KAMRAN ALI

ON BEHALF OF KENTUCKY POWER COMPANY

**DIRECT TESTIMONY OF
KAMRAN ALI, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2018-00072

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DIRECT TESTIMONY OF
KAMRAN ALI
ON BEHALF OF KENTUCKY POWER COMPANY

I. INTRODUCTION

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

2 A: My name is Kamran Ali. My position is Director of Transmission Planning, American
3 Electric Power Service Corporation (“AEPSC”). My business address is 8500 Smiths
4 Mill Road, Floor 2, New Albany, Ohio 43054. In my capacity as the Director of
5 Transmission Planning I provide services to Kentucky Power Company, and am
6 responsible for managing all activities related to assessing the adequacy of Kentucky
7 Power's transmission network to meet the needs of Kentucky Power’s customers in a
8 reliable, cost effective, and environmentally compatible manner.

II. BACKGROUND

9 **Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
10 **BUSINESS EXPERIENCE.**

11 A: I received a Bachelor of Science – Electrical Engineering degree from the University of
12 Alabama in Tuscaloosa, Alabama and a Master of Science – Electrical Engineering
13 degree from Kansas State University in Manhattan, Kansas. I also received a Master of
14 Business Administration degree from The Ohio University in Athens, Ohio. I am a
15 registered Professional Engineer in the state of Ohio. My registration number is
16 PE.73895.

1 **Q: PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.**

2 A: I was employed by SMC Electrical in 2004 as an electrical engineer. In 2006, I joined
3 AEPSC as a Substation Engineer. In 2007, I transferred to Transmission Planning, where
4 I advanced through increasing levels of supervision. I assumed the position of Director,
5 Transmission Planning in June 2016.

6 **III. PURPOSE OF TESTIMONY**

7 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

8 A: I am testifying in support of Kentucky Power's application for a certificate of public
9 convenience and necessity to build Phase 1 of the proposed EastPark 138 kV
10 transmission line and related work. More specifically, my testimony supports the
11 portions of the Application and related exhibits that pertain to the PJM Interconnection,
12 L.L.C. ("PJM") process through which the Company will receive stakeholder input
13 through the Regional Transmission Expansion Plan ("RTEP") and Transmission
14 Expansion Advisory Committee ("TEAC").

15 **Q. BEFORE DESCRIBING THE PJM PROCESS, PLEASE DESCRIBE THE WORK
16 FOR WHICH KENTUCKY POWER IS SEEKING A CERTIFICATE OF PUBLIC
17 CONVENIENCE AND NECESSITY.**

18 A. Kentucky Power proposes to construct an approximately 2.7 mile 138 kV single circuit
19 (three phase) transmission line in Boyd County, Kentucky. In addition, the Company
20 plans to build the new Moore Hollow 138 kV Substation and to perform remote work at
21 the existing Chadwick 138 kV Substation. Both substations are located in Boyd County.
22 The proposed transmission line and Moore Hollow 138 kV Substation, along with the
23 work to be performed at the existing Chadwick 138 kV Substation, comprise the

1 “Project.” Additional information regarding the Project and the need for it are provided in
2 the testimony of Company Witness Lasslo.

3 A. Baseline and Supplemental Projects.

4 **Q. HOW ARE TRANSMISSION PROJECTS DENOMINATED BY PJM?**

5 A. PJM generally categorizes transmission projects as one of two types: Baseline or
6 Supplemental based on the project’s purpose. The designation of a project as Baseline or
7 Supplemental in turn determines the procedure by which PJM reviews a project. The
8 designation of a project as Baseline or Supplemental is not indicative of the level of, or
9 absence of, need for the project. Instead, the designations simply reflect that the project
10 satisfies different planning criteria and parameters. The criteria for designation as a
11 Supplemental or Baseline project are not mutually exclusive and a single project
12 sometimes can be justified under either.

13 **Q. HOW DOES PJM DEFINE A BASELINE PROJECT?**

14 A. Baseline projects are defined as projects primarily required to eliminate base-case
15 reliability criteria violations found in the PJM Regional Transmission Expansion Plan.
16 The transmission enhancements and expansions involved with the Project in this case
17 have not been identified as a Baseline project for purposes of PJM’s RTEP process
18 because the principal driver for the Project is to provide retail electric service to a
19 Kentucky Power customer.

20 **Q. WHAT IS A SUPPLEMENTAL PROJECT?**

21 A. The PJM Operating Agreement defines Supplemental project to mean:
22 a transmission expansion or enhancement that is not required for
23 compliance with the following PJM criteria: system reliability,
24 operational performance or economic criteria, pursuant to a determination
25 by the Office of the Interconnection and is not a state public policy project

1 pursuant to Operating Agreement, Schedule 6, section 1.5.9(a)(ii). Any
2 system upgrades required to maintain the reliability of the system that are
3 driven by a Supplemental Project are considered part of that Supplemental
4 Project and are the responsibility of the entity sponsoring that
5 Supplemental Project.¹

6
7 Supplemental projects include upgrades to address aging infrastructure as well as
8 transmission owner facilities for interconnecting retail and wholesale load.

9 **Q. HOW IS THE EASTPARK 138 KV TRANSMISSION LINE (PHASE 1) AND**
10 **RELATED WORK CLASSIFIED FOR PURPOSES OF PJM'S RTEP**
11 **PROCESS?**

12 A. Because the Project is not intended to address a PJM reliability criteria violation it is not
13 a Baseline project. Instead, its purpose is to interconnect EastPark Industrial Center, and
14 the proposed Braidy Industries aluminum mill in particular, with Kentucky Power's 138
15 kV transmission system to provide retail electric service. Thus, it is a Supplemental
16 project.

17 **Q. IS ALL OF THE WORK ASSOCIATED WITH A TRANSMISSION PROJECT**
18 **SUBMITTED TO PJM?**

19 A. No. There are project components and elements that either do not change the
20 transmission grid's topology, or that are implicit in the description of larger projects, that
21 are not required to be submitted to PJM for explicit review. These project elements do
22 not affect the transmission grid analysis within the framework of PJM's FERC-approved
23 planning process. These project elements nevertheless are essential to the larger projects
24 submitted to PJM.

25

¹ See PJM Operating Agreement, Definition S-T.

1 **Q. DOES THE PROJECT INCLUDE ANY SUCH ELEMENTS?**

2 A. Yes. Although not an exhaustive list, items such as the station land purchase, right-of-
3 way purchase, station grounding equipment, supervisory control and data acquisition
4 equipment, miscellaneous protection, control, and telecommunications equipment, and
5 structures fall into this category.

6 B. Approvals.

7 **Q. ONCE KENTUCKY POWER IDENTIFIED THE NEED FOR THE PROJECT,**
8 **ARE THERE OTHER APPROVALS REQUIRED BEFORE THE PROJECT IS**
9 **CONSTRUCTED AND PLACED IN SERVICE?**

10 A. Other than the grant of the requested certificate of public convenience and necessity by
11 this Commission no further approvals are required.

12 **Q. IS APPROVAL BY PJM REQUIRED FOR THE PROJECT TO BE**
13 **CONSTRUCTED?**

14 A. No. Kentucky Power is not required to obtain approval of the Project from either PJM or
15 the TEAC. The Company will provide PJM and the TEAC with information to augment
16 their understanding of the effect of the Project on the topology of the PJM transmission
17 and power grid. It would be incorrect to look at the review of Supplemental projects
18 through PJM's RTEP process as a form of approval.

19 **Q. PLEASE DESCRIBE THE PROCESS TO BE FOLLOWED BY PJM AND THE**
20 **TEAC TO REVIEW THE PROJECT IN THE CONTEXT OF PJM'S RTEP.**

21 A. Currently, the Project is subject to the Supplemental project review process described in
22 PJM's Open Access Transmission Tariff and PJM's FERC-approved operating

1 agreement. This process is the subject of a recent order from FERC,² and related
2 compliance filings submitted to FERC on March 19, 2018.³ The modifications indicated
3 by the FERC order, and described in the March 19, 2018 filing by PJM, are not currently
4 in force. FERC has not determined when the new procedures will become effective, or
5 whether additional process modifications may be required.

6 Regardless of whether it is reviewed under the current FERC-approved process,
7 or a subsequently approved process, the Project will go through a similar review. During
8 the process PJM and the members of the TEAC will receive high-level information about
9 the Project, providing an opportunity to ask questions and engage in discussion about the
10 topology changes required by the Project.

11 **Q. ARE SUPPLEMENTAL PROJECTS CURRENTLY BEING REVIEWED UNDER**
12 **PJM'S FORMER PROCESS WHILE A DECISION FROM FERC CONCERNING**
13 **WHETHER TO IMPLEMENT NEW PROCEDURES IS STILL PENDING?**

14 A. Yes. Until further order of FERC, all Supplemental projects currently submitted to PJM
15 are subject to the process that existed, and continues to exist, at the time of the February
16 15, 2018 FERC order. The Stakeholder process for Supplemental projects is not “on
17 hold” pending final action by FERC.

18

² Monongahela Power Co., 162 FERC ¶ 61,129 (Feb, 15, 2018), available at:
[https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14643464].

³ Compliance Filing in Response to Order Accepting in Part Proposed Tariff Revisions and Requiring Tariff Revisions Pursuant to Section 206, FERC Docket Nos. EL16-71-00 and ER17-179-002, available at:
[<http://www.pjm.com/directory/etariff/FercDockets/3549/20180319-er17-179-002.pdf>]

1 **Q. WILL SUPPLEMENTAL PROJECTS ALREADY REVIEWED UNDER PJM'S**
2 **FORMER PROCESS BE RE-SUBMITTED FOR REVIEW UNDER NEW**
3 **PROCEDURES ONCE THE AMENDED PROCEDURES ARE APPROVED BY**
4 **FERC AND IMPLEMENTED BY PJM?**

5 A. No. Supplemental projects reviewed prior to the effective date of the new procedures,
6 whenever in the future the effective date may be, were and will continue to be subject to
7 the rules applicable prior to the date determined as the effective date of the new
8 procedures. It is worth noting that FERC was very specific about the fact that the
9 changes required in the February 15, 2018 order will be prospective only.⁴

10 **Q. IS KENTUCKY POWER RELYING ON MERE PARTICIPATION IN THE**
11 **CURRENT PJM RTEP PROCESS TO SATISFY QUESTIONS AND CONCERNS**
12 **REGARDING THE NECESSITY AND REASONABLENESS OF THE PROJECT?**

13 A. No. The necessity and reasonableness of the Project are detailed in Company Witness
14 Lasslo's testimony.

15 **Q. HAS THE PROJECT BEEN REVIEWED BY PJM AND THE TEAC AS PART**
16 **OF PJM'S RTEP PROCESS?**

17 A. Not yet. The Company anticipates submitting the Project, as well as EastPark 138 kV
18 Transmission Line (Phase 2), to PJM for review under the RTEP process no later than
19 June 30, 2018. That review has no bearing on whether and when the Project is needed.
20 The need for the Project is driven by the needs of both new and existing local customers.

21 **Q. DOES KENTUCKY POWER HAVE AN OPINION ON WHETHER THE**
22 **COMMISSION'S REVIEW OF THIS APPLICATION SHOULD AWAIT THE**

⁴ See, e.g., *Monongahela Power Co.*, 162 FERC ¶ 61,129 at 58 (¶¶ 120 and 121).

1 **OUTCOME OF THE PJM REVIEW PROCESS?**

2 A. Yes. It would be not only impractical, but unreasonable, to delay this Commission's
3 review of the Company's application for a certificate of public convenience and necessity
4 for the Project pending further action by FERC.

5 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

6 A: Yes.

VERIFICATION

The undersigned, Kamran Ali, being duly sworn, deposes and says he is the Director of Transmission Planning, American Electric Power Service Corporation, and in that capacity providing services to Kentucky Power Company, that he has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



KAMRAN ALI



STATE OF OHIO

)

) SS

COUNTY OF LICKING

)

Subscribed and sworn to before me, a Notary Public in and before said County and State,
by Kamran Ali this the 27th day of June, 2018.



Notary Public

My Commission Expires: DECEMBER 19, 2021