

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter Of:

The Electronic Application Of Kentucky Power)
Company For Approval Of A Contract For) Case No. 2018-00418
Electric Service With Braidy Industries Inc.)

APPLICATION

Kentucky Power Company (“Kentucky Power” or the “Company”) moves the Public Service Commission of Kentucky (“Commission”), pursuant to KRS 278.160, 807 KAR 5:001 Section 14, 807 KAR 5:011 Section 13, and other applicable law, for an order approving a special contract entitled “Contract for Electric Service Between Kentucky Power Company and Braidy Industries Inc.” (the “Special Contract”).¹ In support of this Application, Kentucky Power states as follows:

APPLICANT INFORMATION AND GENERAL FILING REQUIREMENTS

1. Kentucky Power is a corporation organized under the laws of the Commonwealth of Kentucky.² The Company is in good standing in the Commonwealth.
2. The post office address of Kentucky Power is 855 Central Avenue, Suite 200, Ashland, Kentucky 41101. The Company’s electronic mail address is kentucky_regulatory_services@aep.com.
3. Kentucky Power is engaged in the generation, purchase, transmission, distribution and sale of electric power. Kentucky Power serves approximately 166,400 customers in the following 20 counties of eastern Kentucky: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup,

¹ The Special Contract is attached as **EXHIBIT 2** to this Application.

² A certified copy of the Company’s Articles of Incorporation and all amendments thereto was attached to the Joint Application in *In the Matter Of: The Joint Application Of Kentucky Power Company, American Electric Power Company, Inc. And Central And South West Corporation Regarding A Proposed Merger*, P.S.C. Case No. 99-149. The Company’s December 13, 2018 Certificate of Existence is filed as **EXHIBIT 1** to this Application.

Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike and Rowan. Kentucky Power also supplies electric power at wholesale to other utilities and municipalities in Kentucky for resale. Kentucky Power is a utility as that term is defined at KRS 278.010.

4. Kentucky Power is a wholly-owned subsidiary of American Electric Power Company, Inc. (“AEP”). The AEP System is a multi-state public utility holding company system that provides electric service to customers in parts of eleven states: Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, and West Virginia.

BACKGROUND

5. The Company’s service territory and the entire eastern Kentucky region are struggling economically and are in need of a transformative influx of new industry and jobs for the area’s citizens. The coal mining economy, once a primary driver of the Eastern Kentucky economy, has declined. Although there have been some recent improvements in coal mining activity, the direct and indirect job losses over the past few years resulting from the downturn in coal mining activity continue to be felt throughout the Company’s service territory.

6. Eastern Kentucky coal production decreased from 17.85 million tons in the third quarter of 2009 to 4.18 million tons in the second quarter of 2018.³ Eastern Kentucky coal industry employment declined from 13,278 jobs in the third quarter of 2009 to 3,909 jobs in the same period in 2018.⁴ The overall unemployment rate in the 20 counties comprising Kentucky Power’s service territory is markedly higher than the 4.5 percent unemployment rate for Kentucky as a whole.⁵

³ [http://energy.ky.gov/Coal%20Facts%20Library/Kentucky%20Quarterly%20Coal%20Report%20\(Q2-2018\).pdf](http://energy.ky.gov/Coal%20Facts%20Library/Kentucky%20Quarterly%20Coal%20Report%20(Q2-2018).pdf) (last visited December 17, 2018).

⁴ *Id.*

⁵ https://kystats.ky.gov/Content/Reports/201810_CountyLAUSMaps.pdf (last visited December 17, 2018).

Unemployment in the Company's service territory ranged from a high of 11.3 percent in Magoffin County to a low of 5.4 percent in Boyd County.⁶

7. Unemployment and declining economic activity in Kentucky Power's service territory has resulted in a concomitant population decline in 19 of the 20 counties comprising the Company's service territory. Between 2010 and 2018 population declined in Martin County (-11.3 percent); Pike County (-9.5 percent); Floyd (-9.2 percent); Letcher (-9.0 percent); Leslie County (-8.4 percent); Perry County (-7.4 percent); Owsley County (-6.6 percent); Breathitt County (-6.6 percent); Knott County (-6.4 percent); Clay County (6.0 percent); Magoffin County (-5.8 percent); Elliott County (-4.1 percent); Morgan County (-3.9 percent); Greenup County (-3.7 percent); Lewis County (-3.5 percent); Johnson County (-3.4 percent); Boyd County (-3.2 percent); Carter County (-2.2 percent); and Lawrence County (-0.9 percent).⁷ Kentucky Power's total customers during declined by approximately four percent from approximately 173,400 customers to approximately 166,400 customers between 2011 and 2018.

8. Owsley County, Clay County, Martin County, and Knott County in 2016 had poverty rates among the 30 highest county poverty rates in the United States.⁸ The 2016 poverty rate in Owsley County of 45.2 percent was the third highest in the nation.⁹ Estimated 2017 poverty rates among the 20 counties in Kentucky Power's service territory ranged from a high of 41.7 percent (Clay County) to a low of 16.0 percent (Greenup County).¹⁰ Nineteen of the 20 counties

⁶ *Id.*

⁷ <http://worldpopulationreview.com/us-counties/ky/> (last visited December 17, 2018). The population in Rowan County increased 4.9 percent. *Id.*

⁸ <https://www.kentucky.com/news/state/article187823434.html> (last visited December 20, 2018).

⁹ *Id.*

¹⁰ https://www.census.gov/data-tools/demo/saipe/saipe.html?s_appName=saipe&map_yearSelector=2016&map_geoSelector=aa_c&s_state=21&menu=grid_proxy (last visited December 17, 2018).

in Kentucky Power's service territory had 2017 poverty rates above the Kentucky Poverty rate of 17.1 percent.¹¹ Seventeen of the 20 counties in Kentucky Power's service territory had a 2017 poverty rate greater than 25 percent.¹²

9. The Appalachian Regional Commission in 2018 categorized 17 of Kentucky Power's 20 counties as distressed based on a composite index composed of three indicators: three-year unemployment rate, per capital market income, and poverty rate.¹³ Distressed counties rank among the "worst ten percent [as measured by the composite index] of the nation's counties."¹⁴ The remaining three counties (Boyd County, Greenup County, and Rowan County) are ranked in the next lowest category: at-risk.

10. In order to foster the fundamental changes necessary to revive the economy of the Company's service territory and the eastern Kentucky region, large "seed" industrial development is necessary to provide the economic basis for other industries and supply chain providers to locate in the region.

THE BRAIDY INDUSTRIES INC. FACILITY

11. Braidy Industries Inc. ("Braidy") is a Delaware corporation with its place of business in Ashland, Kentucky. Braidy plans to construct a 2.5 million square foot, fully integrated aluminum rolling mill in Ashland, Kentucky at 262 Technology Drive in the EastPark Industrial Center ("Braidy Atlas Mill.") Public information indicates that the Braidy Atlas Mill will be the most technologically advanced mill in the United States. Braidy's \$1.68 billion investment is

¹¹ *Id.*

¹² *Id.*

¹³ https://www.arc.gov/program_areas/index.asp?PROGRAM_AREA_ID=15 (last visited December 17, 2018).

¹⁴ *Id.*

expected to generate up to 1,000 jobs during the mill's construction and approximately 500-600 full-time skilled labor and administrative positions once it is in operation.¹⁵

12. Veloxint, a wholly-owned subsidiary of Braidy, is involved with high performance products and parts using nanocrystalline alloys. Its EastPark Industrial Center facility is located at 149 Commerce Drive.

13. Braidy also will operate the Braidy Service Center at 656 Commerce Drive in the EastPark Industrial Center. The Braidy Service Center will be used solely to store maintenance equipment and spare parts used at the Braidy Atlas Mill. The Braidy Life Center will be located at 262 Technology Drive in the EastPark Industrial Center and will provide services to Braidy and Veloxint employees. The Braidy Atlas Mill, the Braidy Service Center, the Braidy Life Center, and the Veloxint operation collectively constitute the "Braidy Facility."

14. The Braidy Facility is in a unique position to serve as one of the seed industrial developments the eastern Kentucky region needs, and to assist the region in its economic development efforts to attract customers to the Company's service territory. To facilitate economic development in the Company's service territory through the construction and operation of the Braidy Facility, including the possible benefits flowing to all customers over time through spreading fixed costs over a larger demand, and in recognition of the need for the efficient use of existing utility generation and transmission facilities, the Company and Braidy have entered into the Special Contract.

15. Subject to the Commission approval of the Special Contract, the Company will provide retail electric service to the Braidy Facility under the special rate design and other terms and conditions contained in the Special Contract. The service the Company will provide to the

¹⁵ <https://www.braidyindustries.com/> (last visited December 21, 2018).

Braidy Facility pursuant to the Special Contract will provide benefits to Braidy and Veloxint, the Company, the Company's other customers, and the Commonwealth of Kentucky.

THE SPECIAL CONTRACT

16. The Special Contract provides that the Company will supply energy and capacity to the Braidy Facility up to 180 MW of metered demand at a fixed, annual rate per kilowatt-hour (kWh) of energy used.¹⁶ The special per-kWh rate increases annually over the term of the Special Contract.¹⁷

17. As demonstrated in the Direct Testimony of Company Witness Alex E. Vaughan in support of this Application, the Agreement and associated rates and terms as proposed cover all of the variable costs associated with serving Braidy, contribute to fixed costs, and will not adversely impact the rates of other customers. The Braidy Special Contract will benefit all customers and the Company.

18. The Company will bill Braidy for any metered demand in excess of 180 MW, and the associated energy usage, under the rates set forth in Tariff I.G.S.¹⁸ The special contract rate is applicable only to service to the Braidy Facility; other Braidy-related operations will take service from Kentucky Power at the applicable tariffed rates.

19. In exchange for the special rate the Braidy Facility will receive, and other terms set forth in the Special Contract, Braidy indicated it will employ approximately 550 full time equivalent employees or other equivalent positions at the Facility.¹⁹ Braidy is required to employ at least 440 full-time equivalent employees or other equivalent positions; if employment is reduced

¹⁶ EXHIBIT 2 at § 4.1(A).

¹⁷ *Id.*

¹⁸ *Id.* at § 4.1(B).

¹⁹ *Id.* at § 8.2.

below that number, the Company may terminate the Special Contract.²⁰ Braidy has also agreed to use its best efforts to advocate for and work to attract new industrial development and supply chain providers to Kentucky Power's service territory.²¹

20. The Special Contract also contains provisions to protect the Company and its customers should there be a substantial and material increase in Kentucky Power's actual power production costs.²² It further requires Braidy to provide by April 1, 2019 reasonable assurance in writing to the Company that sufficient financing has been secured to complete construction of the Atlas aluminum mill and supporting ancillary operations that are the subject of the Special Contract.²³

21. Subject to Commission approval of the Special Contract, the Special Contract will become effective on the earlier of September 1, 2021 or the date when Braidy provides written notice to the Company that the Braidy Facility has begun commercial operation.²⁴

KENTUCKY POWER'S REQUEST FOR APPROVAL OF SPECIAL CONTRACT

22. The facts upon which this Application is based are set forth generally in paragraphs 1 through 21 above. Pursuant to KRS 278.160 and 807 KAR 5:011 Section 13, Kentucky Power requests approval to file, and Commission approval of, the Special Contract.

²⁰ *Id.*

²¹ *Id.* at § 6.8.

²² *Id.* at § 8.1; Direct Testimony of Ranie K. Wohnhas at 6-8, *In The Matter Of: The Electronic Application Of Kentucky Power Company For Approval Of A Contract For Electric Service With Braidy Industries Inc.*, Case No. 2018-00418 (Ky. P.S.C. Filed December 21, 2018) ("Wohnhas Direct").

²³ **EXHIBIT 2** at § 6.11. *See also* Order, *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 In Boyd County, Kentucky (EastPark 138 kV Transmission Line (Phase 1))*, Case No. 2018-00072 at 8, 9 (Ky. P.S.C. October 5, 2018).

²⁴ **EXHIBIT 2** at § 5.1.

23. The Special Contract is being filed with the Commission because it sets out rate, charges, or conditions not currently included in Kentucky Power's general tariffs.

24. The Special Contract, and the rates contained therein, are fair, just, and reasonable, and will be beneficial to customers, residents in the Company's service territory and the entire eastern Kentucky region, Braidy, and Kentucky Power.

MOTION FOR CONFIDENTIAL TREATMENT

25. Certain of the exhibits to this Application and accompanying testimony contain information that is confidential, proprietary, and competitively sensitive. That information is redacted in the public version of this Application and accompanying testimony, and is the subject of the Motion for Confidential Treatment the Company is filing contemporaneously with this Application.

EXHIBITS AND TESTIMONY

26. The exhibits and testimony listed in the Appendix to this Application are attached to and made a part of this Application.

COMMUNICATIONS

27. Kentucky Power respectfully requests that communications in this matter be addressed to the e-mail addresses identified on Kentucky Power's December 14, 2018 Notice of Election of Use of Electronic Filing Procedures.

WHEREFORE, the Kentucky Power Company respectfully requests that the Commission issue an Order:

- (1) Approving the Special Contract;
- (2) Granting the Company's Motion for Confidential Treatment filed herewith; and
- (3) Granting any and all other relief to which Kentucky Power may be entitled.

Respectfully submitted,



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COUNSEL FOR KENTUCKY POWER
COMPANY

APPENDIX

Exhibits

EXHIBIT 1

Kentucky Power Company's December 13,
2018 Certificate of Authority

EXHIBIT 2

"Contract for Electric Service Between
Kentucky Power Company and Braidy
Industries Inc."

Testimony

DIRECT TESTIMONY OF MATTHEW J. SATTERWHITE

DIRECT TESTIMONY OF RANIE K. WOHNHAS

DIRECT TESTIMONY OF ALEX E. VAUGHAN

**Commonwealth of Kentucky
Alison Lundergan Grimes, Secretary of State**

Alison Lundergan Grimes
Secretary of State
P. O. Box 718
Frankfort, KY 40602-0718
(502) 564-3490
<http://www.sos.ky.gov>

Certificate of Existence

Authentication number: 210222
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

KENTUCKY POWER COMPANY

is a corporation duly incorporated and existing under KRS Chapter 14A and KRS Chapter 271B, whose date of incorporation is July 21, 1919 and whose period of duration is perpetual.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that Articles of Dissolution have not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 13th day of December, 2018, in the 227th year of the Commonwealth.



Alison Lundergan Grimes

 Alison Lundergan Grimes
 Secretary of State
 Commonwealth of Kentucky
 210222/0028317

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**CONTRACT FOR
FIRM ELECTRIC SERVICE
BETWEEN KENTUCKY POWER COMPANY
AND BRAIDY INDUSTRIES INC.**

This Contract for Firm Electric Service (“Contract”) is entered into by and between Kentucky Power Company, a Kentucky corporation (the “Company”), and Braidy Industries Inc., a Delaware corporation (the “Customer”) on the date this Contract is last signed.

RECITALS

1. The Company is a corporation organized and existing under the laws of the Commonwealth of Kentucky that owns and operates facilities for the generation, transmission and distribution of electric power and energy in the Commonwealth of Kentucky and is a member of the integrated American Electric Power (“AEP”) System.

2. Customer is a corporation organized and existing under the laws of the State of Delaware with one place of business in Ashland, Kentucky.

3. The Company’s service territory and the entire eastern Kentucky region are struggling economically and is in need of a transformative influx of new industry and jobs for its citizens.

4. In order to foster the fundamental changes necessary to revive the economy of the Company’s service territory and the eastern Kentucky region, large “seed” industrial development is necessary to allow other industries and supply chain providers to locate in the region. Customer is in a unique position to serve as the seed industrial development and to assist the region in its economic development efforts to attract customers to the Company’s service territory.

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5. To facilitate economic development in the Company's service territory through the construction and operation of the Customer's facility in eastern Kentucky, including the benefits flowing to all customers through spreading fixed costs over a larger demand, the Company is agreeable to providing energy to Customer under the terms and conditions contained in this Contract, subject to approval by the Kentucky Public Service Commission.

6. In recognition of the need for the efficient use of existing utility generation and transmission facilities, the Company and Customer agree to the special economic development rate design contained in this Contract.

7. The service the Company will provide Customer pursuant to this Contract will provide benefits to the Customer, the Company, the Company's other customers, and the Commonwealth of Kentucky.

8. **NOW, THEREFORE**, in consideration of the promises and the mutual covenants herein contained, and subject to the terms and conditions herein contained, the Company and the Customer agree as set forth below.

AGREEMENT

**ARTICLE 1
Definitions**

1.1 Whenever used in this Contract, the following terms shall have the meanings set forth below, unless a different meaning is plainly required by the context:

- A. "Braidy Service Center" shall mean the building located at 656 Commerce Drive, Grayson, Kentucky, 41143, within which the Customer will solely store maintenance equipment and spare parts used at the Braidy Atlas aluminum mill and which shall not be used in any other manner or for any other purpose.

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- B. “Commission” shall mean the Public Service Commission of Kentucky, the regulatory agency having jurisdiction over the retail electric service of the Company in Kentucky, including the electric service covered by this Contract, or any amendment or successor thereto.
- C. “Company” shall mean Kentucky Power Company.
- D. “Contract” shall mean this Contract for electric service between the Company and the Customer, as the same may, from time to time, be amended.
- E. “Customer” shall mean Braidy Industries Inc.
- F. “Facility” shall mean and be limited to the following locations within the East Park Industrial Site that are wholly-owned by the Customer:
 - i. Braidy Atlas aluminum mill, 262 Technology Drive, Grayson, Kentucky 41143;
 - ii. Braidy Life Center, 262 Technology Drive, Grayson, Kentucky 41143;
 - iii. Braidy Service Center, 656 Commerce Drive, Grayson, Kentucky 41143; and
 - iv. Veloxint, 149 Commerce Drive, Grayson, Kentucky 41143.
- G. “Kentucky Power System” shall mean the integrated, interconnected electric system operated and owned by Kentucky Power Company.
- H. “Parties” shall mean the Company and the Customer.
- I. “Party” shall mean either the Company or the Customer.

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J. "Tariff I.G.S." shall mean the Company's Industrial General Service Tariff, or any successor or amendment thereto, approved by the Commission.

1.2 Unless the context plainly indicates otherwise, words importing the singular number shall be deemed to include the plural number (and vice versa); terms such as "hereof," "herein," "hereunder" and other similar compounds of the word "here" shall mean and refer to the entire Contract rather than any particular part of the same. Certain other definitions, as required, appear in subsequent parts of this Contract.

ARTICLE 2
Delivery of Power and Energy

2.1 Subject to the terms and conditions specified herein, the Parties agree that the Company will furnish to the Customer, during the term of this Contract, all of the electric power and energy that shall be required by the Customer for consumption at the Facility.

2.2 The Delivery Point for electric power and energy delivered hereunder shall be at the interconnection of the Company's facilities to the Customer's facilities located in the Customer's substation that will serve the Facility.

2.3 The Customer will provide any substation and transformation equipment and any other facilities including real property required to take delivery of the electric service to be provided by the Company under this Contract at the voltage and at the Delivery Point designated herein.

2.4 The electric energy delivered by the Company shall be three-phase alternating current having a frequency of approximately 60 cycles per second at approximately 138,000 volts and shall be delivered at the Delivery Point specified in Article 2.2. The electric energy shall be delivered and maintained reasonably close to constant voltage and frequency, as required by Company tariffs, and shall be measured by meters owned and installed by the Company and

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located at the Customer's substation. The Company shall have the right to enter the substation to read and maintain its meters.

ARTICLE 3
Capacity Reservations

3.1 The Total Capacity Reservation contracted for by the Customer is hereby initially fixed at 180 MW. The Customer may request a change to the Total Capacity Reservation by providing written notice to the Company one year in advance of the date the requested change is proposed to be effective. The Parties may reduce the one year written notice requirement by mutual written agreement. Any change to the Total Capacity Reservation is subject to the availability and cost of incremental Capacity from the Company, and to the receipt of any necessary regulatory approvals.

3.2 The Company shall supply capacity in excess of the Total Capacity Reservation under the rates and terms of Tariff I.G.S.

3.3 The Customer's Metered Demand shall be the single highest 15-minute integrated monthly peak in kW as registered by a demand meter.

ARTICLE 4

Billing

4.1 The Customer agrees to pay for all electric service supplied hereunder in accordance with the following provisions:

A. The Monthly Energy Charge for energy usage associated with up to 180 MW of the Customer's Metered Demand shall be the product of the Monthly Billing Energy and the applicable kWh rate contained in Table 1 below.

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Table 1

	\$/kWh
Year 1	
Year 2	
Year 3	
Year 4	
Year 5	
Year 6	
Year 7	
Year 8	
Year 9	
Year 10	

B. The Monthly Billing Energy shall equal the sum of the kWh registered during the month by the Company's energy meter(s) at the Delivery Point.

C. The rate year shall change annually, on the anniversary of the Effective Date as defined in Article 5.1 below.

D. The Customer's Metered Demand in excess of 180 MW and the associated energy usage shall be billed under the rates set forth in Tariff I.G.S.

4.2 The Monthly Bill under this Contract shall be the sum of the following:

- A. The Monthly Energy Charge;
- B. Tariff I.G.S. demand and energy charges, if applicable; and
- C. Any applicable taxes and franchise fees.

4.3 Bills computed under this Contract are net if the account is paid in full within fifteen (15) days of the date of the bill. On accounts not so paid, an additional charge of five percent (5%) of the unpaid balance will be made. Unless otherwise stated in this Contract, the standard billing and payment provisions of Tariff I.G.S. shall apply.

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4.4 Temporary construction power and electric service shall be provided and billed under the otherwise applicable retail tariff(s) until the Effective Date as defined in Article 5.1 below.

4.5 The Company will provide and bill all electric power and energy that the Customer requests for consumption at locations other than the Facility pursuant to the otherwise applicable retail tariff(s).

4.6 An illustrative billing calculation based upon current Tariff I.G.S. rates is included as an addendum to this Contract ("Bill Illustration Addendum"). The Bill Illustration Addendum is incorporated by reference and made a part of this Contract.

ARTICLE 5
Effective Date And Term Of Contract

5.1 The Effective Date of this Contract shall be the first day of the first billing month following the earlier of (1) the first day of September, 2021; or (2) the date when the Customer provides written notice to the Company that the Facility has begun commercial operation. In no event shall this Contract become effective without the approval of this Contract by the Commission as required by Article 7.2.

5.2 The term of this Contract shall be for ten (10) years. The period shall commence on the Effective Date of this Contract as established under Article 5.1.

5.3 No later than January 1, 2028, the Parties shall meet to discuss the Customer taking service under an appropriate Company tariff upon expiration of the term of this Contract.

ARTICLE 6
Service Conditions

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6.1 Each Party shall exercise reasonable care to maintain and operate, or to cause to be maintained and operated, their respective facilities in accordance with good engineering and utility practices.

6.2 To the extent not expressly modified by this Contract, the Company's Terms and Conditions of Service, as filed with the Commission, including any amendments thereto, are incorporated by reference and made a part of this Contract. The Customer acknowledges receipt of the currently approved Terms and Conditions of Service. In the event of a conflict between express provisions of this Contract and the provisions of the Company's Terms and Conditions of Service, the provisions of this Contract shall control.

6.3 Any service being provided to the Customer under this Contract may be interrupted or reduced by the Company (a) by operation of equipment installed for power system protection; (b) after adequate notice to and consultation with the Customer for routine installation, maintenance, inspection, repairs, or replacement of equipment; or (c) when, in the Company's sole judgment, such action is necessary to (i) preserve the integrity of, or to prevent or limit any instability or material disturbance on the Kentucky Power system or an interconnected system, (ii) preserve personal or public safety, or (iii) protect property. To the extent practicable, Company shall provide Customer with at least 15 days' written notice with respect to, and otherwise use reasonable efforts when undertaking, the activities described in (b) above, and shall work with Customer to schedule such interruptions or reductions as are permitted under this Section so as to minimize to the extent practicable any impact on Customer's operations.

6.4 The Company reserves the right to disconnect from the Kentucky Power System the Customer's conductors or apparatus without notice when, in the exercise of reasonable care,

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the Company determines that it is necessary in the interest of preserving or protecting life and/or property.

6.5 During the term hereof, the Customer shall not receive electric service, as the term “service” is defined in Chapter 278 of the Kentucky Revised Statutes, from any source other than the Company. However, this provision does not apply to generation that is not designed or required to operate in parallel with the Kentucky Power System and which Customer utilizes to mitigate the impact of any interruption or reduction as might occur in accordance with Section 6.3 herein.

6.6 The Customer shall notify the Company in advance of any change to be made to the Customer’s Facility that the Customer knows or reasonably should know has the potential to materially affect the Kentucky Power System or other facilities interconnected to the Kentucky Power System including, for example, the installation of equipment that would change power factor or generate electrical harmonics.

6.7 The Customer represents and warrants that it is the sole owner of the Facility. Customer further represents and warrants that the Braidy Service Center shall be used solely by the Customer for the purposes of storing maintenance equipment and spare parts used at the Braidy Atlas aluminum mill and in connection with other maintenance activities related to the Facility.

6.8 As consideration for the rate terms set forth in this Contract, the Customer agrees to use its best efforts to advocate for and work to attract new industrial development and supply chain providers to the Company’s service territory.

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6.9 The Customer shall adhere to the addendum to this contract regarding voltage flicker criteria and harmonic distortion criteria (“Flicker/Harmonics Addendum”). The Flicker/Harmonics Addendum is incorporated by reference and made a part of this Contract.

6.10 The Customer has been provided a copy of and shall adhere to the Company’s Requirements for Connection of New Facilities or Changes to Existing Facilities Connected to the AEP Transmission System (eff. Jan. 2, 2014), including Section 4.3 of those requirements.

6.11 On or before April 1, 2019, the Customer shall provide reasonable assurance in writing to the Company that sufficient financing has been secured to complete construction of the Facility.

ARTICLE 7
Regulatory Authorities

7.1 The Parties recognize that this Contract is subject to the jurisdiction of the Commission, and is also subject to such lawful action as any regulatory authority having jurisdiction shall take with respect to the provision of services under the Contract. The performance of any obligation of either Party shall be subject to the receipt of such authorizations, approvals or actions of such regulatory authorities having jurisdiction as shall be required by law.

7.2 The Company and the Customer agree that this Contract reflects steps required to ensure adequate service to the Customer and that the Company will file this Contract with the Commission. This Contract is expressly conditioned upon the issuance of a final and non-appealable order by the Commission approving the Contract without material change or condition. Should the Commission issue an order rejecting this Contract, or approving this Contract with conditions or modifications that materially alter the commercial aspects of this Contract, the Parties agree to use good faith efforts to renegotiate this Contract and to file the

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amended Contract with the Commission seeking approval thereof. In the event that no such amended Contract is filed, the Customer shall take service under an applicable retail tariff.

**ARTICLE 8
Conditions Authorizing Reopening**

8.1 In the event of a substantial and material increase in Company’s actual power production costs, Company may terminate the Contract by providing six (6) months’ written notice to Customer. Upon such notification, Company and Customer shall negotiate in good faith the terms and conditions of a new special contract, subject to approval by the Commission, or a service agreement under Company’s generally available Tariffs applicable to Customer. A substantial and material increase in the Company’s actual power production costs authorizing the Company to reopen the Contract under this Article 8.1 is an increase in actual power production costs that is (1) greater than 30% in any one year relative to the prior year; or (2) greater than 50% in any one year over Company’s 2017 level of actual power production costs. Actual power production costs for 2017 are calculated as follows:

	2017 Values	Source
(1) Total Power Production Expense	\$300,915,073	FERC Form 1 Page 321 (Apr. 12, 2018)
(2) Electric Energy (MWh)	7,487,149	FERC Form 1 Page 401a
(3) Actual Power Production Costs (\$/MWh)	\$40.19	(1) / (2)

If FERC Form 1 is no longer published the values for “Total Power Production Expense” and “Electric Energy (MWh)” shall be such successor publication of the United States government designated by the Company. If FERC Form 1 is amended, the values for “Total Power Production Expense” and “Electric Energy (MWh)” shall be those values published in FERC Form 1 that most closely correspond to “Total Power Production Expense” and “Electric Energy (MWh)” in the 2017 FERC Form 1.

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8.2 In the event the Customer reduces the labor force at the Facility to less than 440 full-time equivalent employees or other equivalent positions, Company may terminate the Contract by providing three (3) months' written notice to Customer. Upon such notification, Company and Customer shall negotiate in good faith the terms and conditions of a new special contract, subject to approval by the Commission, or a service agreement under Company's generally available Tariffs applicable to Customer. The Parties agree that the Facility is anticipated to employ approximately 550 full time equivalent persons.

ARTICLE 9
Assignment

9.1 This Contract shall inure to the benefit of and be binding upon the successors and assigns of the Parties.

9.2 This Contract shall not be assigned by either Party without the written consent of the other Party, such consent not to be unreasonably withheld.

9.3 Any assignment by one Party to this Contract shall not relieve that Party of its financial obligation under this Contract unless the other Party so consents in writing.

ARTICLE 10
General

10.1 Any waiver at any time of any rights as to any default or other matter arising under this Contract shall not be deemed a waiver as to any other proceeding or subsequent default or matter. Any delay, excepting the applicable statutory period of limitation, in asserting or enforcing any right hereunder shall not be deemed a waiver of such right.

10.2 Except as set forth in Article 7, in the event that any of the provisions, or portions thereof, of this Contract is held to be unenforceable or invalid by any court of competent

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jurisdiction, the validity and enforceability of the remaining provisions, or portions thereof, shall not be affected.

10.3 All terms and stipulations made or agreed to regarding the subject matter of this Contract are completely expressed and merged in this Contract, and no previous promises, representations or agreements made by the Company's or the Customer's officers or agents shall be binding on either Party unless contained herein.

10.4 All notices permitted or required to be given hereunder shall be in writing and shall be delivered by first-class mail to the Company and to the Customer at their respective addresses set forth below. When a notice is mailed pursuant to this paragraph, the postmark shall be deemed to establish the date on which the notice is given:

If to Company:

If to Customer:

President and Chief Operating Officer
 Kentucky Power Company
 855 Central Avenue, 02
 Ashland, KY 41101

Chief Executive Officer
 Braidy Industries Inc.
 1544 Winchester Avenue, 3rd Floor
 Ashland, KY 41101

10.5 The rights and remedies granted under this Contract shall not be exclusive rights and remedies but shall be in addition to all other rights and remedies available at law or in equity.

10.6 The validity and meaning of this Contract shall be governed by the laws of the Commonwealth of Kentucky without regard to conflict of law rules.

10.7 This Contract may be executed in counterparts, each of which shall be an original, but all of which, together, shall constitute one and the same Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be duly executed the day and year last written below.

Executed Copy

KENTUCKY POWER COMPANY

BRAIDY INDUSTRIES INC.

By  _____

By  _____

Title President / COO

Title Chairman and CEO

Date 12/21/18

Date 12/14/2018

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ADDENDUM TO CONTRACT FOR ELECTRICAL DISTRIBUTION SERVICE- Flicker/Harmonics

This Addendum is entered into this ___ day of _____, by and between **Kentucky Power Company**, hereafter called the Company, and **Braidy Industries LLC**, or its heirs, successors or assigns, hereafter called the Customer.

WHEREAS, the Company's terms and conditions of service contained in the applicable tariffs indicate that the Customer shall not use the electrical service provided for under the terms of the Contract for Electric Service dated _____ in a manner detrimental to other customers or in such a way as to impose unacceptable voltage fluctuations or harmonic distortions, and

WHEREAS, the Customer anticipates utilizing certain equipment at the service location covered by the Contract that could impose an unacceptable level of voltage flicker or harmonic distortion,

NOW THEREFORE, the parties hereby agree as follows:

I. POINT OF COMPLIANCE – The point where the Customer's electric system connects to Kentucky Power's system will be the point where compliance with the voltage flicker and harmonic distortion requirements are evaluated.

II. VOLTAGE FLICKER CRITERIA – The Company's standards require that the voltage flicker occurring at the Point of Compliance shall remain below the Border Line of Visibility curve on the Flicker Limits Curve contained herein.

The Customer shall design and operate its facility in compliance with the voltage flicker criteria contained in IEEE Standard 1453, "IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems."

Notwithstanding these criteria, the Customer has certain equipment that it anticipates utilizing at the service location covered by the Contract that could impose a level of voltage flicker above the Border Line of Visibility curve. The Company agrees to permit the Customer to operate above the Border Line of Visibility curve unless and until the Company receives complaints from other customers or other operating problems arise for the Company, provided that the voltage flicker does not exceed the Border Line of Irritation curve shown on the Flicker Limits Curve, whether or not complaints or operating problems occur. By so agreeing, the Company does not waive any rights it may have to strictly enforce its established voltage flicker criteria as measured/calculated in the future. All measurements shall be determined at the Point of Compliance and compliance with these criteria shall be determined solely by the Company.

If the Customer is operating above the Border Line of Visibility curve and complaints are received by the Company or other operating problems arise, or should the Customer's flicker exceed the Border Line of Irritation curve, the Customer agrees to take action, at the Customer's expense, to comply with the Voltage Flicker Criteria. Corrective measures could include, but are not limited to, modifying production methods/materials or installing voltage flicker mitigation equipment necessary to bring the Customer's operations into compliance with the Voltage Flicker Criteria.

If the Customer fails to take corrective action within a reasonable time, not to exceed 90 days, after notice by the Company, the Company shall have such rights as currently provided for under its tariffs, which may include discontinuing service, until such time as the problem is corrected.

III. HARMONIC DISTORTION CRITERIA – The Customer shall design and operate its facility in compliance with the harmonic distortion criteria contained in IEEE Standard 519-1992.

The Customer agrees that if the operation of motors, appliances, devices or apparatus results in harmonic distortions in excess of the Company's Harmonic Distortion Criteria, it will be the Customer's responsibility to take action, at the Customer's expense, to comply with such Criteria. If the Customer fails to take corrective action within a reasonable time, not to exceed 90 days, after notice by the Company, the Company shall have such rights as currently provided for under its tariffs, which may include discontinuing service, until such time as the problem is corrected.

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IV. OTHER REQUIREMENTS

Compliance Assessment — To achieve compliance, at least 95% of all recordings within each harmonic measure and 99% within each flicker measure must fall below the applicable limit, i.e., Customer will be in material non-compliance with the Company's Power Quality Requirements if more than 5% of the harmonic voltage and harmonic current recordings and 1% of the flicker recordings exceed the specified limits.

Electrical Interactions — If power quality compliance monitoring recordings or analytical studies conducted by the Company indicate likely adverse electrical interactions between the Customer and the Kentucky Power's System, joint efforts will be undertaken by the Parties to determine the nature and extent of the electrical interaction and to resolve, at no expense to the Company, any likely adverse impacts on the performance of Company facilities.

Kentucky Power Company

Braidy Industries, LLC

By: _____

By: _____

Title: _____

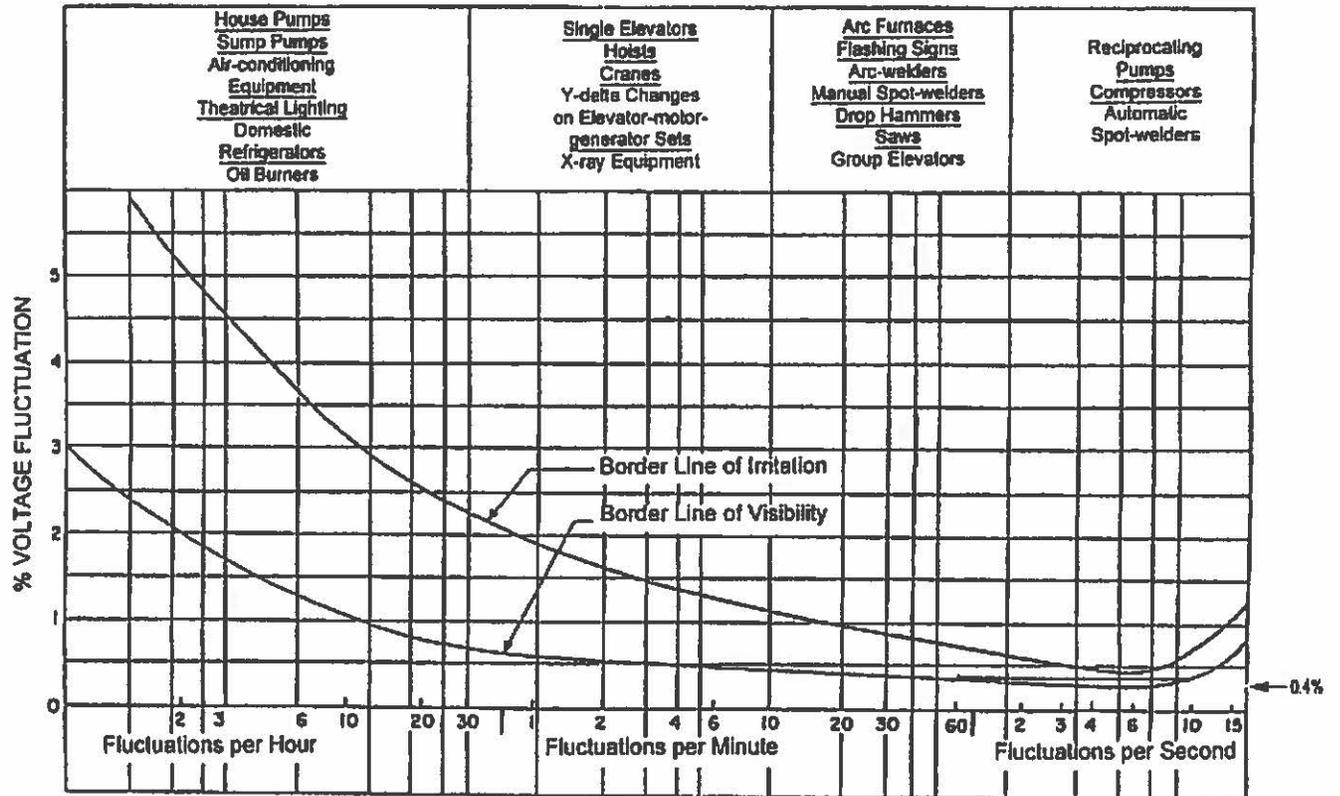
Title: _____

Date: _____

Date: _____

Account Number: 003XXXXXXXX

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Bill Illustration Addendum

Contract Article	Description	Total Usage	Contract Usage	IGS-Tran Usage
4.1 B	Monthly Billing Energy	118,899,546	117,052,094	1,847,452 kWh
3.2	Metered Demand	199,999	180,000	19,999 kW
3.4	On-Peak Demand			19,947 kW
3.4	Off-Peak Demand			19,999 kW
3.4	Minimum Billing Demand			12,000 kW
3.4	Reactive Demand			- kVAR
4.2 A	Contract Rate Billing	Units	Rate	Billing
	Energy Charge	117,052,094 kWh		
4.2 A	Contract Rate Billing - Total			
4.2 B	Tariff IGS Rate Billing	Units	Rate	Billing
	Customer Charge		\$ 1,353.00	\$ 1,353.00
	Energy Charge	1,847,452 kWh	\$ 0.02731	\$ 50,453.91
	On-Peak Demand Charge:	19,947 kW	\$ 13.26	\$ 264,497.22
	Off-Peak Demand Charge:	19,999 kW	\$ 1.49	\$ 29,798.51
	Minimum Demand Charge - Total	12,000 kW	\$ 14.86	\$ 178,320.00
	Minimum Demand Charge - Net			\$ -
	Reactive Demand Charge	0.0 kVAR	\$ 0.69	\$ -
	System Sales	1,847,452 kWh	\$ 0.0003000	\$ 554.24
	Demand Side Mgmt Adj Clause	1,847,452 kWh	\$ 0.002017	\$ 3,726.31
	Capacity Charge	1,847,452 kWh	\$ 0.000705	\$ 1,302.45
	Economic Development Surcharge	1 Month	\$ 1.00	\$ 1.00
	Federal Tax Cut	1,847,452 kWh	\$ (0.0031880)	\$ (5,889.68)
	Subtotal:			\$ 345,796.96
	Fuel in Base:	1,847,452 kWh	\$ 0.0272500	\$ 50,343.07
	Basis for % Riders:			\$ 295,453.90
	Fuel Adjustment Clause	1,847,452 kWh	\$ 0.003170	\$ 5,856.42
	Purchase Power Adjustment	1,847,452 kWh	\$ -	\$ -
	Purchase Power Adjustment	19,947 kW	\$ 0.03000	\$ 598.41
	Decommissioning Rider - w/o fuel (%)	\$ 295,453.90	6.3640%	\$ 18,802.69
	Environmental Surcharge - w/o fuel (%)	\$ 295,453.90	9.5931%	\$ 28,343.19
	Subtotal:			\$ 53,600.71
4.2 B	Tariff IGS Rate Billing - Total			\$ 399,397.67
4.2 C	School Tax		2.5%	
	Franchise Tax		3.0%	
4.2 C	Sales Tax		6.0%	
Total Kentucky Power Billing Charge				

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power)	
Company For Approval Of A Contract)	Case No. 2018-00418
For Electric Service With Braidy Industries Inc.)	

DIRECT TESTIMONY OF
MATTHEW J. SATTERWHITE
ON BEHALF OF KENTUCKY POWER COMPANY

**DIRECT TESTIMONY OF
MATTHEW J. SATTERWHITE, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY
CASE NO. 2018-00418**

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**DIRECT TESTIMONY OF
MATTHEW J. SATTERWHITE, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

I. INTRODUCTION

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

2 A. My name is Matthew J. Satterwhite, and I am the President and Chief Operating
3 Officer of Kentucky Power Company (“Kentucky Power” or the “Company”).
4 My business address is 855 Central Avenue, Suite 200, Ashland, Kentucky
5 41101.

II. BACKGROUND

6 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
7 **EXPERIENCE.**

8 A. I graduated from the University of Kansas in 1995 with a Bachelor of Arts in
9 Political Science and from Capital University Law School in 1999. After
10 graduation from law school, I joined the Ohio Attorney General’s Office,
11 representing the Public Utilities Commission of Ohio (“PUCO”) from 1999 to
12 2004. In 2004, I became the Legal Director for the PUCO’s Service Monitoring
13 and Enforcement Department, where I served until 2006. I left the Commission
14 to serve as a Master Commissioner with the Supreme Court of Ohio from 2006 to
15 2008. In Ohio, cases from the PUCO have the right of direct appeal to the
16 Supreme Court of Ohio, and I served as the public utility expert for that court. In
17 late 2008, I joined the American Electric Power Service Corporation (“AEPSC”)
18 legal department as Senior Counsel.

1 **Q. WHEN DID YOU ASSUME THE DUTIES OF PRESIDENT AND CHIEF**
2 **OPERATING OFFICER OF KENTUCKY POWER?**

3 A. I formally assumed the duties of President and Chief Operating Officer of
4 Kentucky Power on December 8, 2016. Immediately following the formal
5 announcement of my appointment in November 2016, I began traveling regularly
6 to Kentucky Power's service territory. I have spent my time in Kentucky working
7 vigorously on economic development and establishing the eastern Kentucky
8 region as a destination for advanced manufacturing companies with high job
9 counts. I have a deep appreciation for the talented men and women in our
10 organization and in the communities we serve.

11 I have also met with local, state, and federal officials to discuss key issues
12 impacting our region. Whenever possible, I spread the word about the skilled and
13 available workforce in eastern Kentucky. I am convinced that a concerted effort
14 by industry and the Commonwealth can effectively inform the world about the
15 opportunity for industry to locate in eastern Kentucky with the goal of
16 diversifying the economy and creating well-paying jobs.

17 **Q. HOW WILL YOUR JOB CHANGE ON JANUARY 1, 2019?**

18 A. I change titles on January 1, 2019 to Vice President of Regulatory Services for
19 American Electric Power Service Corporation. In this role, I will be responsible
20 for AEP's regulatory activities before 11 state regulatory commissions and the
21 Federal Energy Regulatory Commission ("FERC"). Although my job title is
22 changing, I will continue to be invested and involved in the economic
23 development of eastern Kentucky and central Appalachia.

III. PURPOSE OF TESTIMONY

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

3 A. I was the President of Kentucky Power when the entity that would become known
4 as Braidy Industries Inc. (“Braidy”) explored where to place its planned
5 aluminum mill. Braidy ultimately decided to place the mill in eastern Kentucky.
6 My testimony will discuss the importance of the Braidy mill to the regional
7 economy and Braidy’s status as an early mover to diversify the economy in recent
8 years. I will also discuss how the Braidy location provided a unique opportunity
9 for the area and the steps taken to determine that a special contract, subject to
10 approval by the Commission, was an appropriate tool to use to help attract the
11 large employer to the region.

12 **Q. IN LIGHT OF YOUR IMPENDING JOB CHANGE, AS WELL AS YOUR**
13 **CURRENT POSITION AS PRESIDENT AND CHIEF OPERATING**
14 **OFFICER OF KENTUCKY POWER, WHY ARE YOU OFFERING**
15 **TESTIMONY IN THIS CASE?**

16 A. There are two sets of reasons. First, I was deeply involved on behalf of Kentucky
17 Power in the efforts that eventually resulted in Braidy agreeing to locate in the
18 Company’s service territory and have personal knowledge regarding that
19 background. Second, and more fundamentally, Braidy has the potential to
20 transform the economy of northeastern Kentucky and, more broadly, eastern
21 Kentucky. This effort has been a focus of my tenure at Kentucky Power and will
22 continue as an important facet of my new position. The success of Braidy, and its
23 ability to attract suppliers and customers to locate in the Company’s service

1 territory, is critical to Kentucky Power's efforts to reverse the economic and
2 population decline in the Company's service territory for the benefit of Kentucky
3 Power's customers and the Company. My testimony allows me to continue my
4 efforts on behalf of Kentucky Power and its customers with respect to Braidy
5 specifically and to continue to support economic development in eastern
6 Kentucky in general.

IV. EFFORTS TO ATTRACT BRAIDY TO EASTERN KENTUCKY

7 **Q. BEFORE ADDRESSING THESE TOPICS, WOULD YOU PLEASE**
8 **EXPLAIN THE IMPORTANCE OF ECONOMIC DEVELOPMENT IN**
9 **AND AROUND KENTUCKY POWER'S SERVICE TERRITORY TO**
10 **KENTUCKY POWER'S CUSTOMERS?**

11 A. It is no secret that eastern Kentucky is in the midst of a fundamental
12 transformation of its economy that in large part is driven by forces outside its
13 control. The coal mining economy, once the primary driver of the eastern
14 Kentucky economy, has declined. Although there have been some recent
15 improvements in coal mining activity reported, the direct and indirect job losses
16 over the past few years resulting from the downturn in coal mining activity are
17 being felt throughout the Company's service territory. One of these effects is that
18 the resulting decline in Kentucky Power's customer base has required that the
19 Company's fixed costs of providing service to its remaining customers be spread
20 over fewer customers and load. Economic development, in addition to bringing
21 jobs to the area, helps the Company to "grow the denominator" and relieve at
22 least some of the upward pressure on rates in the future.

1 **Q. WHAT WAS YOUR INVOLVEMENT IN ATTRACTING BRAIDY TO**
2 **THE REGION?**

3 A. I served in two roles in the recruiting of Braidy to eastern Kentucky. First, I
4 served as the President of the electric utility that would provide Braidy electric
5 power. Electricity was likely to be one of the largest operating costs for a mill the
6 size contemplated by Braidy, making the involvement of the electric utility vital
7 in the recruiting of the prospect. The Commonwealth led the process for the state
8 by showing the Braidy team multiple sites in the state. My role was as part of the
9 Kentucky Power team that discussed the Company's services and the potential for
10 a special contract that could be presented to the Commission for review. Second,
11 I served as a local executive living in eastern Kentucky, with experience from
12 outside the region, and brought that perspective to discuss quality of life and
13 workforce issues with the prospect. In that role I served as an ambassador for the
14 region to help alleviate concerns over negative (and unfounded) stereotypes about
15 Appalachia that sometimes are raised.

16 **Q. WHY DID KENTUCKY POWER DECIDE THAT A SPECIAL**
17 **CONTRACT WAS AN APPROPRIATE TOOL TO USE TO ATTRACT**
18 **BRAIDY TO THE REGION?**

19 A. The Braidy project, referred to as Project Derby by the Commonwealth, was an
20 opportunity to attract a large employer with wages well above minimum wage to
21 the area at the same time we were seeing a decline of customers in the region.
22 Eastern Kentucky had not had a lot of success in attracting new large industry
23 employers. The State Economic Development Office provided the Ashland area

1 an opportunity to participate in the Project Derby recruiting. Recognizing the
2 importance of Project Derby to Kentucky Power's economic development plans,
3 the Kentucky Power team determined that it would be an active participant in
4 showing the benefits of locating in our region. It was our understanding that the
5 Project Derby team wanted to find a location quickly and start investing in a
6 community as soon as possible. Project Derby's initial projections indicated that
7 it would need approximately 45 MW-55 MW of power and employ over 500
8 people at wages well above minimum wage.

9 **Q. WHAT DID KENTUCKY POWER DO WHEN ASKED TO**
10 **PARTICIPATE IN ATTRACTING PROJECT DERBY?**

11 A. Kentucky Power determined it was important to help drive the recruitment of
12 Project Derby to the region and undertook the confidential analysis described in
13 Company Witness Vaughan's testimony. The purpose of the analysis was to
14 determine the price Kentucky Power would provide to the Commonwealth to
15 include in its Project Derby recruitment. This was important because Ashland
16 was not guaranteed a visit by the Project Derby prospect. The electric rate was
17 our part of the confidential equation shared with the Project Derby prospect to
18 determine if it would even schedule a visit to consider the site. I understood the
19 need for a new large company to jump start the economic renaissance needed for
20 the region and prioritized the analysis so that we could be competitive and help
21 deliver the prospect.

22

1 **Q. HOW DID KENTUCKY POWER WORK WITH BRAIDY TO FINALIZE**
2 **THE DETAILS OF THE CONTRACT FILED?**

3 A. It quickly became apparent that the nature of the Braidy business was going to be
4 a company that brought in associated businesses and suppliers. This fact helped
5 bolster the effort to work on a special rate for Braidy as a large first mover and
6 new job creator in the region. The nature of Braidy's business makes it
7 advantageous for suppliers and potential takers of their product to be located in
8 proximity to the Braidy operations. Kentucky Power and Braidy discussed the
9 price that was produced by the confidential analysis sponsored by Company
10 Witness Alex Vaughan. Over time, other aspects of Braidy's operations were
11 determined and memorialized in the agreement. These included the size of the
12 operation and specific terms for the agreement. Protections and requirements to
13 maintain certain employment numbers were also included to tie the special rate to
14 a dedicated level of local employment. There was also a commitment by Braidy
15 that the agreement carried with it a duty to participate in the continued growth in
16 the Kentucky Power footprint through the addition of other companies and
17 industry.

18 **Q, WHAT OTHER TYPES OF COMPANIES ARE EXPECTED AS A**
19 **RESULT OF THE ADDITION OF BRAIDY?**

20 A. Braidy is expected to act as the "seed" industrial development that produces other
21 industries and supply chain providers to locate in the region. At its core nature,
22 Braidy will produce aluminum sheets. There are associated businesses that deal
23 with supplying the producer of aluminum sheet that could locate in the region.

1 There are also potential takers such as automobile, food canning, and aerospace
2 companies that could decide to locate in proximity to the plant to cut down on
3 transportation costs of the aluminum for their products.

4 **Q. DID KENTUCKY POWER EXPLAIN THE COMMISSION'S ROLE IN**
5 **CONSIDERING SPECIAL CONTRACTS?**

6 A. Yes. The Commission's oversight and authority over special contracts is a legal
7 precondition that I shared with the Braidy team. Braidy understood before the
8 parties began contract negotiations that any special contract was subject to
9 Commission review and approval to be final.

10 **Q. HOW DOES THIS CONTRACT IMPACT THE PLAN SHARED IN THE**
11 **2017 RATE CASE TESTIMONY?**

12 A. The plan for economic development I discussed at length in my testimony in the
13 Company's 2017 rate case embodied the idea that Kentucky Power would work to
14 secure an anchor or seed company in the Ashland, Lawrence County area adjacent
15 to the Big Sandy site, Pikeville, and Hazard. There are other industrial parks and
16 areas to which we are also seeking to attract companies with large employment
17 needs that pay above minimum wage. The idea is to actively pursue large
18 employers in new industries in these areas to provide a new base of employment
19 and attract a cluster of business and suppliers to help diversify the economy.
20 Braidy is a key ingredient in that plan in the Ashland area. But there are still
21 needs in the other areas. The good news is that state and local officials and
22 corporate economic development groups are working in tandem as a team to

1 market eastern Kentucky as a region with a strong available and skilled workforce
2 and as a great place to live.

V. CONFIDENTIAL TREATMENT

3 **Q. DO YOU HAVE ANY THOUGHTS ON THE NEED FOR**
4 **CONFIDENTIALITY OF THE BRAIDY CONTRACT TERMS?**

5 A. Yes. The Braidy contract is developed in a way to ensure that Braidy is covering
6 its variable costs, so that others are not subsidizing their operation, while making
7 a contribution to fixed costs. This provides a competitive rate that helped ensure
8 Braidy would locate its business in this area, along with new jobs and the
9 associated development of companies that are expected to cluster to the area. But
10 it also lowers the ability for Kentucky Power to earn a return on the customer's
11 usage that could be used in the greater mix of ratemaking in the future. The
12 theory is to attract the seed company and employ our neighbors in the region so
13 that the population increases, not continues to decrease, because there are good
14 jobs available and more businesses need more employees. That makes the price
15 terms of the Braidy contract extremely confidential. Not only has Braidy
16 indicated that these costs are confidential and proprietary, but it is important to
17 ensure as new companies seek to locate in the region that Kentucky Power, and
18 by extension its customers, are not placed in an unfair commercial disadvantage
19 in negotiations with these prospective customers, or in connection with the
20 Company's ongoing economic development efforts. These new companies may
21 bring with them the need for large numbers of employees, while acting as seed
22 companies for other areas of the Company's service territory. But if these
23 companies, or existing Kentucky Power customers, gain access to the results of

1 the negotiations with Braidy, Kentucky Power (and its customers) will be at a
2 decided commercial disadvantage in economic development negotiations.
3 Disclosure, in effect, requires Kentucky Power to reveal its “hole card.” That will
4 lead to cascading lower price demands by new prospects or existing customers
5 that are unfair to Kentucky Power and its other customers. That could lead to
6 losing opportunities long before a contract ever comes to the Commission for
7 review. The revitalization of the Company’s service territory is a partnership that
8 Kentucky Power must navigate with the oversight of the Commission and, if he
9 chooses to intervene, the Attorney General. Disclosure of the contract rates risks
10 the financial consequence of higher rates for customers.

11 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

12 A. Yes.

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

In the Matter of:

Electronic Application Of Kentucky Power)
Company For Approval Of A Contract)
For Electric Service With Braidy Industries, Inc.) Case No. 2018-00418

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

**DIRECT TESTIMONY OF
RANIE K. WOHNHAS, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY
CASE NO. 2018-00418**

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I. INTRODUCTION

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

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

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I received a Bachelor of Science degree with a major in accounting from Franklin University, Columbus, Ohio in December 1981. I began work with Columbus Southern Power Company in 1978, and worked in various customer service and accounting positions. In 1983, I transferred to Kentucky Power Company and worked in the areas of accounting, rates, and customer service. I became the Billing and Collections Manager in 1995. My duties included overseeing all billing and collection activity for the Company. In 1998, I transferred to Appalachian Power Company and worked in the rates department. In 2001, I transferred to the American Electric Power Service Corporation (“AEPSC”) working as a Senior Rate Consultant. In July 2004, I transferred back to Kentucky Power Company and assumed the position of Manager, Business Operations Support. I was promoted to Director in April 2006. I was promoted to my current position as Managing Director, Regulatory and Finance 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
5 and state regulatory agencies, as well as filings for certificates of public
6 convenience and necessity before this Commission. I am also responsible for
7 managing the Company's financial operating plans. Included as part of this
8 responsibility is the preparation and coordination of various capital and O&M
9 operating budgets with other American Electric Power Company, Inc. affiliates. I
10 work with various AEPSC departments to ensure that adequate resources such as
11 debt, equity, and cash are available to build, operate, and maintain Kentucky
12 Power's electric system assets used to provide service to our retail and wholesale
13 customers. I report directly to Matthew J. Satterwhite, President and Chief
14 Operating Officer of Kentucky Power in my role as Managing Director, Regulatory
15 and Finance.

16 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

17 A. Yes, I have testified on multiple occasions in a wide variety of proceedings,
18 including numerous rate cases, fuel adjustment clause cases, an environmental
19 compliance plan case, various certificate applications for transmission projects, the
20 proceeding to transfer a fifty percent undivided interest in the Mitchell generating
21 station to Kentucky Power, and in connection with the Company's application to
22 convert Big Sandy Unit 1 to a gas-fired unit.

1 **III. PURPOSE OF TESTIMONY**

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

4 A. I am testifying in support of Kentucky Power’s application for approval of a special
5 contract with Braidy Industries Inc. (“Braidy”) for four facilities to be located at
6 the EastPark Industrial Center. This contract (“Special Contract”) is intended to
7 foster the fundamental changes necessary to revive the economy of the Company’s
8 service territory and the eastern Kentucky region. This sort of large “seed”
9 industrial development is necessary to allow other industries and supply chain
10 providers to locate in the region. Braidy is in a unique position to serve as the seed
11 industrial development and to assist the region in its economic development efforts
12 to attract customers to the Company’s service territory.

13 **Q. WHAT TOPICS DO YOU ADDRESS IN YOUR TESTIMONY?**

14 A. In my testimony I provide an overview and some of the details of the Special
15 Contract, as well as the reasons for requesting confidential treatment for limited
16 aspects of the contract.

17 **Q. WHO ELSE IS PROVIDING TESTIMONY?**

18 A. Matthew J. Satterwhite, President and COO of Kentucky Power Company, is
19 testifying concerning the economic need and the basis for the special economic
20 development rate. Alex E. Vaughan, Director, Regulated Pricing and Analysis,
21 AEPSC, is testifying in support of the derivation, structure, and reasonableness of
22 the proposed Special Contract rate pricing for Braidy.

1 **IV. THE SPECIAL CONTRACT OVERVIEW**

2 **Q. PLEASE DESCRIBE THE SPECIAL CONTRACT.**

3 A. The Special Contract provides for a rate that escalates annually over the ten-year
4 contract period. Table 1 of Article 4.1.A of the Special Contract sets forth the per-
5 kWh rate applicable to each year of the Special Contract. The Monthly Bill under
6 the Special Contract is equal to the sum of the Monthly Energy Charge, plus the
7 Tariff I.G.S. demand and energy charges, if applicable, plus any applicable taxes
8 and franchise fees (Article 4.2 of the Special Contract).

9 **Q. HOW IS THE MONTHLY ENERGY CHARGE CALCULATED?**

10 A. The Monthly Energy Charge is equal to the energy associated with the first 180
11 MW of Braidy's monthly metered demand multiplied by the applicable kWh
12 charge. The monthly kWh charge is an "all-in" rate except for applicable taxes and
13 franchise fees.

14 **Q. HOW ARE THE MONTHLY DEMAND AND ENERGY METERED?**

15 A. They are metered in 15-minute intervals. The metered demand is defined by Article
16 3.3 as the single highest 15-minute integrated monthly peak in kW as registered by
17 a demand meter. This definition is consistent with the definition of interval-
18 metered demand contained in the Company's I.G.S. Tariff.

19 **Q. WHAT HAPPENS IF BRAIDY'S METERED DEMAND EXCEEDS THE
20 CONTRACT CAPACITY OF 180 MW IN ANY 15-MINUTE INCREMENT?**

21 A. In summary, Braidy would be billed up to 180 MW at the rates contained in Table
22 1 of Article 4.1.A. of the Special Contract. Any usage above the 180 MW threshold
23 will be billed at Tariff I.G.S. demand and energy charges, plus all surcharges and

1 riders. The Bill Illustration Addendum attached to the Special Contract provides
2 an example of how Braidy would be billed if or when it exceeds the peak capacity
3 of 180 MW.

4 **Q. WHAT IS THE EFFECTIVE DATE OF THE CONTRACT?**

5 A. The effective date of the Special Contract will be the first day of the first billing
6 month following the earlier of (1) the first day of September, 2021; or (2) the date
7 when Braidy provides written notice to the Company that the facility has begun
8 commercial operation as described in Article 5 of the Contract.

9 **Q. WHICH BRAIDY FACILITIES ARE ENTITLED TO RECEIVE SERVICE**
10 **UNDER THE SPECIAL CONTRACT?**

11 A. The Special Contract kWh rate is applicable only to service provided to the Braidy
12 Atlas Mill, the Braidy Service Center, the Braidy Life Center, and Veloxint. These
13 operations are collectively described as the “Facility” in the Special Contract. This
14 contract provision is included to protect the Company’s other customers.

15 **Q. WHAT IS THE BRAIDY ATLAS MILL?**

16 A. The Braidy Atlas Mill is the aluminum rolling mill at 262 Technology Drive in the
17 EastPark Industrial Center.

18 **Q. DOES THE CONTRACT DEFINE THE BRAIDY SERVICE CENTER?**

19 A. Yes. The Braidy Service Center will be located at 656 Commerce Drive in the
20 EastPark Industrial Center. Braidy agrees in the Special Contract that the Braidy
21 Service Center is to be used solely for the purposes of storing maintenance
22 equipment and spare parts used at the Braidy Atlas mill, and in connection with
23 other maintenance activities related to the Facility.

1 **Q. WHAT ARE VELOXINT AND THE BRAIDY LIFE CENTER?**

2 A. The Braidy Life Center will be located in conjunction with the Braidy Atlas Mill
3 at 262 Technology Drive in the EastPark Industrial Center. It will provide services
4 to employees of the Braidy EastPark operations. Veloxint will be located at 149
5 Commerce Drive in the EastPark Industrial Center. Veloxint is a subsidiary of
6 Braidy Industries and is involved with high performance products and parts
7 employing nanocrystalline metal alloys. Veloxint currently is being served under
8 the applicable Company tariff.

9 **Q. WILL THE SPECIAL CONTRACT RATES BE MADE AVAILABLE TO**
10 **SUPPLIERS AND CUSTOMERS OF BRAIDY WHO LOCATE IN**
11 **KENTUCKY POWER'S SERVICE TERRITORY?**

12 A. No. The Special Contract rates reflect Braidy's unique status as a first taker and as
13 a "seed" development.

14 **Q. ARE THE ANNUALLY-INCREASING RATES AGREED TO IN THE**
15 **SPECIAL CONTRACT SUBJECT TO MODIFICATION DURING THE**
16 **TERM OF THE AGREEMENT?**

17 A. The rates specified in Table 1 of Article 4.1B are expected to be the applicable rates
18 during the term of the Special Contract. Article 8 of the Special Contract
19 nevertheless contains two important protections for Kentucky Power and its
20 customers that will allow the Special Contract (including its rates) to be reopened.
21 First, Article 8.1 allows the Company to reopen the Special Contract in the event
22 of a "substantial and material increase" in Kentucky Power's power production
23 costs. Article 8.1 defines "substantial and material increase" in Kentucky Power's

1 actual power production costs as (1) an increase in such costs that is greater than
2 30 percent over the prior year's costs, or, (2) an increase in such costs that is greater
3 than 50 percent of such costs over Kentucky Power's 2017 power production cost
4 of \$40.19 per MWh.

5 **Q. WHAT DOES THE CONTRACT PROVIDE WILL OCCUR IN THE**
6 **EVENT OF A SUBSTANTIAL AND MATERIAL INCREASE IN**
7 **KENTUCKY POWER'S ACTUAL POWER PRODUCTION COSTS?**

8 A. Kentucky Power may reopen the contract to renegotiate the terms, including the
9 contract rate. Upon Kentucky Power providing Braidy with written notice of a
10 substantial and material increase in the Company's actual power production costs
11 the parties are obligated to negotiate in good faith a new or amended contract within
12 a six-month period. Alternatively, Braidy and Kentucky Power may negotiate in
13 good faith a service agreement under the applicable tariff within the same period.
14 This rate "reopener" provides important protection to Kentucky Power and its
15 customers in the event of substantial and unanticipated changes in the Company's
16 power production costs.

17 **Q. WHAT IF THE PARTIES ARE UNABLE TO REACH AGREEMENT**
18 **WITHIN THE SIX-MONTH PERIOD?**

19 A. Braidy will be required to take service under the applicable Kentucky Power tariff.

20 **Q. WOULD THE COMMISSION HAVE THE OPPORTUNITY TO REVIEW**
21 **AND APPROVE A NEW SPECIAL CONTRACT?**

22 A. Yes. Article 8.1 recognizes that any new or amended special contract would be
23 subject to Commission review and approval.

1 **Q. WHAT IS THE SECOND CIRCUMSTANCE IN WHICH KENTUCKY**
2 **POWER MAY REOPEN THE CONTRACT?**

3 A. The Special Contract anticipates that Braidy will employ approximately 550 full-
4 time equivalent employees at the Facility. Kentucky Power may terminate the
5 Special Contract upon giving three months' written notice to Braidy in the event
6 the number of full-time equivalent employees is less than 440 employees. During
7 the three-month period Braidy and Kentucky Power are obligated to negotiate a
8 new special contract or service agreement for electric service to the Facility. Any
9 such special contract would be subject to Commission review and approval.

10 **Q. DOES THE SPECIAL CONTRACT ADDRESS WHAT WILL OCCUR AT**
11 **THE END OF ITS TERM?**

12 Y. Yes, Article 5.3 provides that Braidy and Kentucky Power will meet beginning no
13 later than January 1, 2028, or approximately three years prior to the expiration of
14 the Special Contract, to discuss service to Braidy under the applicable
15 Commission-approved tariff following the expiration of the Contract's term.

16 **Q. WHAT IS THE CAPACITY RESERVATION FOR THE SPECIAL**
17 **CONTRACT?**

18 A. As described in Article 3 of the Special Contract the Total Capacity Reservation
19 contracted for by Braidy is initially fixed at 180 MW. Braidy can request a change
20 to the Total Capacity Reservation with written notice. As I discussed earlier, any
21 usage in excess of 180 MW will be billed under the rates and terms of Tariff I.G.S.

22 **Q. WILL THE SPECIAL CONTRACT RATES BE AVAILABLE TO BRAIDY**
23 **DURING THE CONSTRUCTION OF THE BRAIDY FACILITIES?**

1 A. No. Article 4.4 of the Special Contract provides that temporary construction power
2 and service will be provided to Braidy in accordance with the applicable retail tariff
3 until the effective date of the Special Contract.

4 **Q. DID THE COMPANY INITIALLY INDICATE THAT BRAIDY'S PEAK**
5 **CAPACITY WOULD BE 60 MW?**

6 A. Yes. Based on the best information available from Braidy at the time the Company
7 filed its application for a certificate of public convenience and necessity to
8 construct the transmission and related facilities to serve Braidy (Case No. 2018-
9 00072), Kentucky Power initially indicated that Braidy's peak capacity would be
10 60 MW. Based on later information that Braidy provided Kentucky Power, the
11 Company updated the expected peak capacity to 90 MW on July 19, 2018, and
12 most recently updated the peak capacity to 180 MW on December 12, 2018. The
13 180 MW was agreed upon after discussions on the actual operations of the
14 aluminum mill between the Company, Braidy, and Braidy's electrical contractors.

15 **Q. THE COMMISSION'S APPROVAL OF A CERTIFICATE OF PUBLIC**
16 **CONVENIENCE AND NECESSITY TO CONSTRUCT PHASE 1 OF THE**
17 **EASTPARK INDUSTRIAL CENTER TRANSMISSION PROJECT WAS**
18 **CONDITIONED ON KENTUCKY POWER FILING WITH THE**
19 **COMMISSION A WRITTEN STATEMENT FROM BRAIDY PROVIDING**
20 **REASONABLE ASSURANCE THAT BRAIDY HAD OBTAINED**
21 **SUFFICIENT FINANCING TO COMPLETE ITS EASTPARK**
22 **FACILITIES. DOES THE SPECIAL CONTRACT ADDRESS THIS**
23 **REQUIREMENT?**

1 A. Yes. Article 6.11 mandates that Braidy provide Kentucky Power with the required
2 written reasonable assurance on or before April 1, 2019.

3 **Q. DOES THE SPECIAL CONTRACT REQUIRE BRAIDY TO ASSIST**
4 **KENTUCKY POWER IN ITS ECONOMIC DEVELOPMENT EFFORTS?**

5 A. Yes. Under Article 6.8 of the Special Contract, Braidy is obligated to use its best
6 efforts to attract new industrial development and supply chain providers to
7 Kentucky Power's service territory.

8 **Q. DOES THE SPECIAL CONTRACT REQUIRE COMMISSION**
9 **APPROVAL?**

10 A. Yes. Article 7.1 recognizes that the Special Contract is subject to the
11 Commission's review and approval.

12 **Q. ARE THERE OTHER SPECIAL CONTRACT PROVISIONS YOU WISH**
13 **TO ADDRESS?**

14 A. Yes. Article 2 of the Special Contract describes the non-financial terms regarding
15 the delivery of power and energy while Article 6 describes the service conditions.
16 Article 9 addresses the limitations on the assignment of the Special Contract.
17 Article 10 furnishes general terms and conditions for the administration of the
18 Special Contract.

19

1 **V. CONFIDENTIAL TREATMENT**

2 **Q. IS KENTUCKY POWER SEEKING CONFIDENTIAL TREATMENT FOR**
3 **THE SPECIAL CONTRACT RATE-RELATED PROVISIONS OF THIS**
4 **CONTRACT AND CONFIDENTIAL EXHIBIT AEV-1?**

5 **A.** Yes. Kentucky Power is seeking confidential treatment of the Special Contract
6 rates shown in Table 1 of Article 4.1.A., the Bill Illustration Addendum to the
7 contract, and Confidential Exhibit AEV-1 (collectively the “Braidy Confidential
8 Rate Information”). The three parts of the Braidy Confidential Rate Information
9 either constitute or reflect the Special Contract rates.

10 **Q. WHY IS KENTUCKY POWER SEEKING CONFIDENTIAL TREATMENT**
11 **OF THE BRAIDY CONFIDENTIAL RATE INFORMATION?**

12 **A.** Before addressing the specific question, it is important to place the Special Contract
13 in context. The recruitment of Braidy to Kentucky Power’s service territory is the
14 result of extensive and fiercely competitive efforts to start the process of
15 transforming the economy of Kentucky Power’s service territory. Company
16 Witness Satterwhite describes this effort in his testimony and why a “seed” project
17 such as the Braidy Facility is fundamental to the development of Kentucky Power’s
18 service territory. Although the Braidy Facility brings much needed investment and
19 jobs to the Company’s service territory, the project is equally important in its
20 anticipated ability to attract other enterprises to eastern Kentucky. The rates that
21 Braidy will pay under the Special Contract reflect Braidy’s intrinsic contribution
22 to economic development in Kentucky Power’s service territory, as well as its
23 unique status as the “first-taker.” Making the contract rates public would result in

1 competitive injury to Kentucky Power, its ongoing economic development efforts,
2 and to Braidy.

3 **Q. PLEASE DESCRIBE THE UNFAIR COMPETITIVE INJURY TO**
4 **KENTUCKY POWER IF THE BRAIDY CONFIDENTIAL RATE**
5 **INFORMATION IS MADE PUBLIC.**

6 A. Making the rates public would establish a ceiling for future negotiations with
7 industrial and large commercial enterprises looking to locate in Kentucky Power's
8 service territory. Common sense and experience teach that future prospects will
9 demand rates that meet or are less than the Braidy rates. Kentucky Power would
10 start each of these negotiations already having revealed its current "bottom line."
11 Kentucky Power thus would be faced with meeting or beating the rates in the
12 Special Contract or risk losing the prospect. In addition, existing customers also
13 could seek similar rates with respect to both existing and any expanded load. This
14 means that the Braidy Confidential Rate Information cannot be disclosed to
15 existing customers as well as the more general public.

16 **Q. DOES CONFIDENTIAL EXHIBIT AEV-1 REFLECT THE BRAIDY**
17 **CONTRACT RATES?**

18 A. Yes. The exhibit also reflects Kentucky Power's ten-year fuel forecast as well as
19 the confidential strategy Kentucky Power used to negotiate the Special Contract
20 and design the Braidy Contract Rates. The disclosure of such information would
21 jeopardize the Company's ability to negotiate future contracts.

22 **Q. HOW WOULD MAKING THE BRAIDY CONFIDENTIAL RATE**
23 **INFORMATION PUBLIC RESULT IN UNFAIR COMPETITIVE INJURY**

1 **TO KENTUCKY POWER’S FUTURE ECONOMIC DEVELOPMENT**
2 **EFFORTS?**

3 A. Economic development is intensely competitive. Kentucky Power is informed that
4 Braidy received at least 24 proposals before electing to locate in Kentucky Power’s
5 service territory. The Special Contract rates represent the end point of the
6 negotiations between Braidy and Kentucky Power. Other utilities and economic
7 development agencies with knowledge of the Braidy Contract Rates, and that are
8 looking to secure the same economic development prospects for which Kentucky
9 Power competes, could underbid Kentucky Power, or offer rates lower than the
10 competing utilities might otherwise offer. In either case, Kentucky Power’s
11 economic development efforts would be hindered, to the detriment of customers,
12 the eastern Kentucky region, and the Company.

13 **Q. WOULD MAKING THE BRAIDY CONFIDENTIAL RATE**
14 **INFORMATION PUBLIC, INCLUDING TO COMPETITORS AND**
15 **CUSTOMERS OF BRAIDY, RESULT IN UNFAIR COMPETITIVE**
16 **INJURY TO BRAIDY?**

17 A. Based on the affidavit of Steven Miller, Chief Procurement Officer of Braidy
18 Industries Inc., it is my understanding that Braidy also would suffer unfair
19 competitive injury if the Braidy Confidential Rate Information were made public.
20 Such injury would not be limited to Braidy. Economic development prospects
21 looking to avoid the competitive injury resulting from making their cost of energy
22 public could choose to locate in other jurisdictions and thereby further injure
23 Kentucky Power’s economic development efforts.

1 **Q. DOES KENTUCKY POWER TAKE ALL REASONABLE STEPS TO**
2 **PROTECT THE BRAIDY CONFIDENTIAL RATE INFORMATION**
3 **FROM PUBLIC DISCLOSURE?**

4 A. Yes. Dissemination of the Braidy Confidential Rate Information is restricted by
5 Kentucky Power, its parent, American Electric Power Company, Inc., and
6 AEPSC. The Company, AEP, and AEPSC take all reasonable measures to
7 prevent its disclosure to the public as well as to persons within the Company and
8 third-party vendors who do not have a need for the information. Within those
9 organizations, the information is available only upon a confidential need-to-know
10 basis that does not extend beyond those employees with a legitimate business
11 need to know and act upon the identified information.

12 **Q. WAS EACH OF THE THREE PIECES OF THE BRAIDY**
13 **CONFIDENTIAL RATE INFORMATION PROVIDED TO BRAIDY?**

14 A. No. Braidy was only provided Table 1 of Article 4.1.A. and the Bill Illustration
15 Addendum to the Special Contract. Braidy has not been provided Confidential
16 Exhibit AEV-1. It is my understanding that Braidy protects against the public
17 disclosure of Table 1 of Article 4.1.A. and the Bill Illustration Addendum.

18 **Q. WAS KENTUCKY POWER'S INITIAL RATE PROPOSAL INCLUDED**
19 **IN THE JOINT PACKAGE ASSEMBLED BY ECONOMIC**
20 **DEVELOPMENT OFFICIALS AND OTHER PARTICIPANTS JOINING**
21 **WITH THE COMPANY TO RECRUIT BRAIDY?**

22 A. Yes, the Company's initial rate proposal was confidentially included in the
23 proposal package. Kentucky Power and Braidy then confidentially negotiated the

1 final terms of the Special Contract.

2 **Q. IS THE BRAIDY CONFIDENTIAL RATE INFORMATION OTHERWISE**
3 **AVAILABLE TO COMPETITORS AND CUSTOMERS OF KENTUCKY**
4 **POWER AND BRAIDY?**

5 A. No, the information is not publicly available. Nor can it be reasonably discerned
6 through lawful means.

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

8 A. Yes.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application Of Kentucky Power)
Company For Approval Of A Contract For) Case No. 2018-00418
Electric Service With Braidy Industries Inc.)

DIRECT TESTIMONY OF
ALEX E. VAUGHAN
ON BEHALF OF KENTUCKY POWER COMPANY

**DIRECT TESTIMONY OF
ALEX E. VAUGHAN, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2018-00418

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**DIRECT TESTIMONY OF
ALEX E. VAUGHAN
FOR KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY
CASE NO. 2018-00418**

I. INTRODUCTION

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

3 A. My name is Alex E. Vaughan, and I am employed by American Electric Power Service
4 Corporation (“AEPSC”) as Director, Regulated Pricing and Analysis. My business address
5 is 1 Riverside Plaza, Columbus, Ohio 43215. AEPSC is a wholly-owned subsidiary of
6 American Electric Power Company, Inc. (“AEP”), the parent Company of Kentucky Power
7 Company (the “Company” or “Kentucky Power”).

8 **Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES.**

9 A. My responsibilities include the oversight of cost of service analyses, rate design, and
10 special contracts for the AEP System operating companies.

11 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND**
12 **EDUCATIONAL BACKGROUND.**

13 A. I graduated from Bowling Green State University with a Bachelor of Science degree in
14 Finance in 2005. Prior to joining AEP, I worked for a retail bank and a holding company
15 where I held various underwriting, finance, and accounting positions. In 2007, I joined
16 AEPSC as a Settlement Analyst in the Regional Transmission Organization (“RTO”)
17 Settlements Group. I later became the PJM Settlements Lead Analyst, where I was
18 responsible for reconciling AEP’s settlement of its activities in the PJM market with the
19 monthly PJM invoices and for resolving billing issues with PJM. In 2010, I transferred to

1 Regulatory Services as a Regulatory Analyst and was later promoted to the position of
2 Regulatory Consultant. My responsibilities included supporting regulatory filings across
3 AEP's 11 state jurisdictions and at the Federal Energy Regulatory Commission ("FERC").
4 In addition, I was responsible for performing financial analyses related to AEP's generation
5 resources and loads, power pools, and PJM. In September 2012, I was promoted to
6 Manager, Regulatory Pricing and Analysis, where I was responsible cost of service, rate
7 design and special contract analysis for the AEP east operating companies. In September
8 2018, I was promoted to my current position.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS?**

10 A. Yes. I presented testimony on behalf of the AEP operating companies numerous times
11 before the regulatory bodies in Virginia, West Virginia, Kentucky, Tennessee and Indiana.
12 In Kentucky, I have testified before the Kentucky Public Service Commission (the
13 "Commission") in Case No. 2013-00197, Case No. 2014-00396, and Case No. 2017-00179
14 on behalf of the Company. I have also participated in and provided information to the
15 Commission in several informal conferences.

16 **II. PURPOSE OF TESTIMONY**

17 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

18 A. The purpose of my testimony is to support the derivation, structure, and reasonableness of
19 the proposed special contract rate pricing for Braidy Industries Inc. ("Braidy" or "the
20 Customer"). I also explain and support various contract provisions and protections for the
21 Company and its other customers.

22 **Q. ARE YOU SPONSORING ANY EXHIBITS OR SCHEDULES?**

A. Yes, I am sponsoring the following exhibit:

- Confidential Exhibit AEV 1 – Braidy Contract Pricing Analysis

1 • Confidential Exhibit AEV 1 – Braidy Contract Pricing Analysis
2 **Q. WAS THIS EXHIBIT PREPARED BY YOU OR UNDER YOUR SUPERVISION?**

3 A. Yes.

III. CONTRACT PRICING STRUCTURE

4 **Q. CAN YOU DESCRIBE GENERALLY HOW THE BRAIDY CONTRACT**
5 **PRICING IS STRUCTURED?**

6 A. Yes. The special contract rate will be billed to Braidy based upon its monthly kWh usage.
7 The special contract rate is an annually fixed rate that escalates once each year on the
8 anniversary of the effective date of the contract. This annual escalation is designed to
9 recognize the Company's expected gradual increase in power supply costs over time and
10 gradually bring the special contract pricing closer to standard tariff pricing.

11 **Q. DOES THE SPECIAL CONTRACT RATE APPLY TO ALL OF BRAIDY'S**
12 **USAGE?**

13 A. No. The special contract rate is limited to the first 180 MW of demand and associated
14 energy. If Braidy exceeds the demand threshold in a month, that additional demand and
15 the associated energy usage will be billed at the applicable tariff I.G.S Transmission
16 demand and energy rates as well as all applicable riders. In addition, the special contact
17 rate is limited to the demand and associated energy used at the four Braidy facilities
18 identified in the special contract. This contract provision is included to protect the
19 Company's other customers.

20

1 **Q. PLEASE SUMMARIZE WHAT IS INCLUDED IN BRAIDY’S MONTHLY BILL**
2 **FOR SERVICE UNDER THIS SPECIAL CONTRACT.**

3 A. The monthly bill under this contract for Braidy’s electric service will be the sum of the
4 following:

- 5 A. The monthly energy charge for all usage up to the demand threshold amount;
- 6 B. Tariff I.G.S demand, energy and rider charges applicable to demand and energy
7 above the monthly demand threshold amount; and
- 8 C. Any applicable taxes and franchise fees associated with Braidy’s usage.

9 **Q. PLEASE EXPLAIN WHAT COSTS ARE COVERED BY THE SPECIAL**
10 **CONTRACT RATE.**

11 A. The special contract rate is intended to cover the Company’s variable cost of energy supply
12 (fuel and purchased power) and incremental PJM LSE OATT transmission costs, as well
13 as make a contribution to the Company’s fixed cost of service as shown is Confidential
14 Exhibit AEV 1 – Braidy Contract Pricing Analysis.

15 **Q. IS THIS PRICING STRUCTURE REASONABLE FOR THE BRAIDY SPECIAL**
16 **CONTRACT?**

17 A. Yes it is. As described by Company Witnesses Satterwhite and Wohnhas, the Braidy load
18 was a highly competitive economic development prospect, which required a unique
19 contract pricing structure to attract this unique opportunity to the Company’s service
20 territory. The escalating annual rate is designed to cover the variable cost of serving Braidy
21 and make a contribution towards the Company’s fixed cost of service that will benefit both
22 the Company and other customers. The Commission has approved special contracts

1 designed to cover the variable costs of service and to make a contribution toward fixed
2 costs.

IV. SPECIAL CONTRACT REVENUE ACCOUNTING

3 **Q. HOW DOES THE COMPANY PROPOSE TO ACCOUNT FOR THE MONTHLY**
4 **SPECIAL CONTRACT REVENUES RECEIVED FROM BRAIDY?**

5 A. Throughout the entire duration of the special contract, the portion of the special contract
6 rate revenues equal to the base fuel and FAC components of rates will be credited to the
7 monthly fuel deferral calculation. Once Braidy's load and revenues are included in a
8 base rate case test year, all of its test year non-fuel special contract rate revenues will
9 serve as a revenue credit reducing the cost of service for other customers. Once the
10 Company begins incurring incremental transmission costs as a result of the Braidy load
11 (such costs are expected to begin in the year following commercial operation), the
12 Company will credit \$7.2/MWh¹ to other customers in Tariff P.P.A. during the interim
13 period prior to the incremental non-fuel special contract rate revenue from Braidy being
14 included as a credit in the Company's base rates. Any remaining special contract rate
15 revenue after these credits will be retained by the Company, where it could potentially
16 aid in delaying the need for a future rate case filing. This is consistent with the treatment
17 of base revenues associated with other non-test year load increases and losses. Similarly,
18 all billing under the special contract at Tariff I.G.S. rates will be treated no differently
19 than any other Tariff I.G.S. billing.

¹ The incremental PJM LSE OATT charges are expected to be \$9/MWh. $\$7.2/\text{MWh} = \$9 * 80\%$, this reflects the currently approved ratemaking treatment of post-test year PJM LSE OATT charges.

1 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

2 A. Yes.

CONFIDENTIAL EXHIBIT AEV 1 – BRAIDY CONTRACT PRICING ANALYSIS

THIS EXHIBIT HAS BEEN REDACTED IN ITS ENTIRETY

