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 Electric Service Under Tariff E.D.R.	)))	Case No. 2018-00378

APPLICATION

Kentucky Power Company ("Kentucky Power" or the "Company") petitions the Public Service Commission of Kentucky ("Commission"), pursuant to 807 K.A.R. 5:001 Section 14, K.A.R. 5:011, and other applicable law, for an order approving a special contract identified as "Contract for Electric Service Between Kentucky Power Company and Big Run Power Producers LLC" (the "Special Contract"). The Special Contract is submitted for Commission approval pursuant to the provisions of Kentucky Power Company's Tariff E.D.R. – Economic Development Rider tariff. The Company further requests a deviation from Finding Number 5 of the Commission's September 24, 1990 Order in Administrative Case No. 327.[1]

In support of this Application, Kentucky Power states as follows:

BACKGROUND

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

[1] *In The Matter Of: An Investigation Into The Implementation Of Economic Development Rates By Electric And Gas Utilities,* Order, Administrative Case No. 327 (Ky. P.S.C. Sept. 24, 1990) ("Administrative Case No. 327 Order").

[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 November 15, 2018 Certificate of Existence is filed as **EXHIBIT 1** to this Application.

kentucky_regulatory_services@aep.com. 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, 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.

3. In Case No. 2014-00336, Kentucky Power sought approval of Tariff E.D.R. pursuant to the Commission's Administrative Case No. 327 Order.[3] The Commission found that Kentucky Power's Tariff E.D.R. was reasonable and approved it as proposed effective March 4, 2015.[4] The Special Contract is the first special contract executed pursuant to the terms of the Company's Tariff E.D.R.

BIG RUN POWER PRODUCERS LLC

4. Big Run Power Producers LLC ("Big Run") is a North Carolina limited liability company with offices near Ashland, Kentucky and in San Francisco, California. Big Run intends to substantially expand operations at the existing Big Run Landfill located on US Route 60, west of Ashland, Kentucky and install new operations and facilities that will compress and process landfill emissions into renewable natural gas. The processed gas will be sold into the Columbia Gulf Transmission interstate pipeline. The new renewable natural gas processing operation represents an investment of approximately $40 million in eastern Kentucky. Big Run submitted

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[3] *In The Matter Of: Application Of Kentucky Power For (1) Approval Of An Economic Development Rider; (2) For Any Required Deviation From The Commission's Order In Administrative Case No. 327; And (3) All Other Required Approvals And Relief*, Order, Case No. 2014-00336 (Ky. P.S.C. Mar. 4, 2015) ("Tariff E.D.R. Order").

[4] Tariff E.D.R. Order at 7.

an application to the Company requesting service under Tariff E.D.R. in accordance with Kentucky Power's Tariff E.D.R. Big Run's application for service under Tariff E.D.R. is attached as **EXHIBIT 2** to this Application.

5. Big Run does not own the existing Big Run Landfill. The Big Run Landfill is a landfill and solid waste disposal site owned and operated by River Cities Disposal LLC ("River Cities"). River Cities is a Kentucky limited liability company with its principal offices in Manassas, Virginia. River Cities, which is not owned by or otherwise affiliated with Big Run, has multiple accounts with Kentucky Power, each with monthly demand of under 100 kW, served under Tariff G.S.

6. Big Run Power acquired the right to process the landfill gas emissions and presently flares the gas emissions. Big Run currently has an account with Kentucky Power for its gas flaring operations. That account is served under Tariff L.G.S. and has an average monthly billing demand of approximately 91 kW.

7. Big Run intends to expand and convert its operations to begin processing the landfill emissions into renewable natural gas in late December 2018 or early January 2019. This expansion involves the construction of a new landfill gas upgrading and conditioning plant which will process up to 4,000 standard cubic feet per minute of landfill gas into biogas that will be sold into the transportation fuels market. The new facility is separate from, and when complete will replace, the existing flaring of methane by Big Run at the Big Run Landfill.

8. A new meter will be installed and a new account established for Big Run's gas upgrading and conditioning plant. The newly-metered demand at the gas upgrading and conditioning plant is expected to be approximately 3,600 kW per month with a 90% load factor. The existing meter and account will be maintained for use for methane flaring as needed by Big

Run. Big Run in accordance with Tariff E.D.R. represented that it would not have expanded its operations at the Big Run Landfill absent the Incremental Billing Demand Discount ("IBDD") available under Tariff E.D.R.[5]

THE SPECIAL CONTRACT

9. Pursuant to the Commission's decision in Administrative Case No. 327 and the terms of Tariff E.D.R., Kentucky Power and Big Run have entered into the Special Contract that includes Tariff E.D.R. provisions to govern service to Big Run's gas upgrading and processing plant. Service to the Big Run gas upgrading and processing plant will be billed under Tariff I.G.S. The term of the Special Contract is ten years, entitling Big Run to a five-year IBDD under the tariff.[6] Big Run is not eligible for and will not receive a Supplemental Billing Demand Discount ("SBDD"). The Special Contract is attached to this Application as **EXHIBIT 3**.

10. The Special Contract will become effective on the first day of the first billing month following Commission approval of the Special Contract.[7] Consequently, the discount period will not begin until the effective date, and Big Run will not be billed at the reduced demand charge until that time. While acknowledging that the Commission will need time to review and evaluate the Special Contract, the Company respectfully requests that the Commission undertake its review and evaluation of the Special Contract in as prompt and timely a manner as its schedule will permit.

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[5] **EXHIBIT 2** at 2.

[6] P.S.C. Ky. No. 11 Original Sheet No. 37-2, Terms and Conditions, Section (5); Administrative Case No. 327 Order, 1990 Ky. PUC LEXIS 832, at *32.

[7] **EXHIBIT 3** at 6 (§ 5.1).

Compliance with Tariff E.D.R.

11. In conformance with the terms of Tariff E.D.R., total new load served under the tariff with the Special Contract will not exceed 250 MW.[8] A total of approximately 3.6 MW of load would be served under Tariff E.D.R. with the approval of the Special Contract.

12. Pursuant to the terms of Tariff E.D.R., Big Run's new qualifying incremental demand resides in new and separate facilities that will be metered on a separate meter according to Tariff I.G.S. Big Run's incremental billing demand will be calculated based upon that facility's meter readings.[9]

13. Big Run's monthly demand as a result of its expanded operations will exceed 500 kW.[10]

14. The total contract period of, and amounts and decline in the IBDD set forth in, the Special Contract conform to the terms of Tariff E.D.R.[11]

Compliance with Administrative Case No. 327 Order

15. In its September 24, 1990 Order in Administrative Case No. 327, the Commission established requirements for filing economic development rider ("EDR") contracts. In compliance with that directive, Kentucky Power provides the following information.

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[8] *See* P.S.C. Ky. No. 11 Original Sheet No. 37-1, Availability of Service.

[9] *Id.* at Original Sheet No. 37-3, Determination of Monthly Qualifying Incremental Billing Demand; **EXHIBIT 3** at 5 (§ 4.3).

[10] P.S.C. Ky. No. 11 Original Sheet No. 37-1, Availability of Service.

[11] *Id.* at Original Sheet No. 37-1, Terms and Conditions, Section (5); *Id.* at Original Sheet No. 37-3-37-4, Determination of Incremental Billing Demand Discount.

A. Findings 3 and 4.

16. Consistent with Finding Number 3, Kentucky Power and Big Run have entered into the Special Contract, which contains the EDR provisions.

17. Consistent with Finding Number 4, the Special Contract specifies all terms and conditions of service. Big Run has selected the five-year IBDD option as described in Tariff E.D.R, which provides for a 50 percent discount of the demand charge in the first year and a discount that is reduced annually by an amount equal to one-fifth of the initial 50 percent discount (*i.e.,* 40% discount in year 2, 30% discount in year 3). Big Run anticipates that its new renewable natural gas processing operation represents a capital investment of approximately $40 million.[12] Fewer than 25 new jobs will be created; therefore, Big Run is not eligible for and will not receive an SBDD under Tariff E.D.R. Kentucky Power has not identified any customer-specific fixed costs associated exclusively with serving Big Run. The Company will recover from Big Run the Company's fixed costs associated with upgrading its distribution facilities to serve Big Run over the life of the Special Contract. These upgrades, the full cost of which the Company will recover from Big Run, also constitute improvements and upgrades to common facilities that also serve other customers.

18. Consistent with Tariff E.D.R.'s terms, the minimum demand charge otherwise applicable under Tariff I.G.S. will be waived for the first 36 months of the Special Contract unless Big Run's monthly demand falls below the minimum billing demand level under Tariff I.G.S. for four consecutive months or six months in total in a year, in which case the minimum demand charge shall not be waived and the appropriate minimum billing demand charge will apply until

[12] **EXHIBIT 2**.

Big Run achieves the minimum billing demand level. The contract demand for Big Run will initially be 3,600 kW.

B. Finding 5.

19. Finding Number 5 requires that economic development rates should only be offered during periods of excess capacity. The Commission required that upon submission of each special contract utilities should demonstrate that the load expected to be served during each year of the contract period would not cause the utility to fall below a reserve margin that was considered essential for system reliability and that such a reserve margin should be identified and justified with each special contract filing.

20. Kentucky Power currently has surplus capacity of over 200 MW, and it expects that surplus to remain through the end of the 2021-2022 PJM planning year, which ends May 31, 2022. In other words, the Company expects to have surplus capacity beyond its PJM installed reserve margin for the first approximately 3.5 years of the discount period under the Special Contract.

21. Based on current projections, which include the potential addition of significant new load unrelated to Big Run in the next few years, Kentucky Power expects that it may not have sufficient capacity to serve its then-existing load beginning in the 2022-2023 PJM planning year. The Company expects to fully address its future resource needs in its next integrated resource plan filing in December 2019.

22. In any event, given the relatively modest size of Big Run's contract demand, the Company does not anticipate that it will be necessary to make a specific market purchase to cover the new Big Run load. Nonetheless, Kentucky Power has the ability to make bilateral purchases to meet the needs of an EDR customer during times when excess capacity may not exist.

Moreover, Tariff E.D.R includes provisions to address a specific market purchase if needed.[13] Specifically, when sufficient generating capacity is not available, the Company will procure the additional capacity on the customer's behalf. The cost of capacity procured on behalf of the customer shall reduce on a dollar-for-dollar basis the customer's demand discount. Such reduction shall be capped so that the customer's maximum demand charge shall be the non-discounted tariff demand charge.[14] For these reasons, Kentucky Power requests that the Commission recognize this arrangement as an immaterial variance from the Administrative Case No. 327 Order guidelines concerning when a Tariff E.D.R. contract may be in place.

23. Kentucky Power respectfully requests a deviation from Finding Number 5, which the Commission originally intended to address a concern that load served under discounted rates should not create a need for new plant capacity.[15] The electric industry has changed significantly since Administrative Case No. 327 Order was issued in 1990, with the development of wholesale energy and capacity markets and the advent of Regional Transmission Organizations that allow utilities to increase the use of market purchases and diversify resource portfolios.[16]

C. Findings 6, 7, and 11.

24. Finding Number 6 requires that upon submission of a special contract, a utility should demonstrate that the discounted rate exceeds the marginal cost associated with serving the customer. The Commission noted that marginal cost includes both the marginal cost of capacity as well as the marginal cost of energy. To demonstrate marginal cost recovery, the Commission

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[13] P.S.C. Ky. No. 11 Original Sheet No. 37-1, Terms and Conditions, Section (1); **EXHIBIT 3** at 5 (§ 4.2).

[14] P.S.C. Ky. No. 11 Original Sheet No. 37-1, Terms and Conditions, Section (1).

[15] *In The Matter Of: Application Of East Kentucky Power Cooperative, Inc. For Approval Of An Economic Development Rider*, Case No. 2014-00034, Order at 4 (Ky. P.S.C. June 20, 2014).

[16] *Id.*

required that a utility should submit a current marginal cost-of-service study which had been conducted no more than one year prior to the date of the special contract. Attached to this Application as **EXHIBIT 4** is a November 2018 analysis of marginal costs, and a determination of that the offered discounted rate exceeds the marginal costs associated with serving Big Run. As **EXHIBIT 4** demonstrates, the offered discount rate exceeds the marginal costs associated with serving this customer by $3,724,380[17] over the five-year discount period.

25. Consistent with Finding Numbers 7 and 11, as well as the Commission's Tariff E.D.R. Order, Kentucky Power will file an annual report with the Commission detailing revenues received from individual Tariff E.D.R. customers and the marginal costs associated with serving those customers. While preparing this Application, Kentucky Power noted that neither the Administrative Case No. 327 Order nor the Tariff E.D.R. Order stated when that annual report is due to be filed with the Commission. Kentucky Power would propose that the Tariff E.D.R. annual report be filed on March 31 each year, on the same date as the Company's Kentucky Economic Development Surcharge is filed with the Commission.

D. Findings 8, 9, 10.

26. Consistent with Finding Number 8, during rate proceedings Kentucky Power will demonstrate through a detailed cost-of-service analysis that nonparticipating ratepayers are not adversely affected by EDR customers.

27. Consistent with Finding Number 9 and Tariff E.D.R., the Special Contract provides for the recovery of the cost associated with the Tariff E.D.R. new or expanded local distribution or transmission related facilities to serve the increased load over the life of the Special Contract.

[17] $62,073/month * 12 months * 5 years = $3,724,380.

As set forth in paragraph 17, *supra*, although the Company will recover from Big Run the full fixed costs associated with upgrading its distribution facilities to serve Big Run, such improvements also constitute upgrades to common facilities that serve other customers.

28. Although Big Run has indicated the expected capital investment associated with the Big Run Landfill, the Company did not establish a specific capital investment requirement in order to be eligible for Tariff E.D.R. The Company also did not establish a minimum job creation requirement. This is consistent with Finding Number 10.

E. Findings 12, 14, and 17.

29. Finding Number 12 states that for existing industrial customers, an EDR should apply only to new load that exceeds a normalized base load. The Commission required that at the time an EDR special contract was filed the minimum usage level required for an existing customer be identified and justified. As set forth in paragraphs 11 through 13, *supra*, Tariff E.D.R. sets the requisite incremental monthly billing demand increase at 500 kW. Big Run's 3,600 kW demand level under the Special Contract exceeds that minimum incremental increase.

30. Consistent with Finding 14, the discount period is for five years and the total term of the Special Contract is ten years. During the last five years of the special contract, Big Run will be charged the rates contained in Kentucky Power's Tariff I.G.S.

31. Finding Number 17 directed that comments submitted by the Kentucky Cabinet for Economic Development ("Cabinet") or other interested parties pertaining to EDR contracts were to be filed with the Commission no more than 20 days following the filing of an EDR contract by a utility. Kentucky Power is providing the Cabinet and the Office of the Attorney General copies of this Application upon its filing at the Commission.

F. Findings 13, 15, 16, and 18.

32. Finding Numbers 13, 15, 16, and 18 are not applicable to this Special Contract.

COMMISSION APPROVAL OF FUTURE TARIFF E.D.R. SPECIAL CONTRACTS

33. As this is the first EDR special contract submitted for Commission approval under Kentucky Power's Tariff E.D.R., this Application has been prepared and submitted as a formal case. Kentucky Power is aware, however, that the Commission has approved an EDR special contract that was submitted without application by utilizing the Commission's electronic tariff filing system.[18] The Commission has also approved another utility's prospective request to file future EDR special contracts through the Commission's electronic tariff filing system.[19] Kentucky Power requests confirmation from the Commission that, consistent with the Commission's November 21, 2016 Order in Case No. 2016-00316, future Tariff E.D.R. special contracts may be submitted through either a formal case or through the electronic tariff filing system. Kentucky Power also requests that the Commission confirm that, for all subsequent Tariff E.D.R. special contracts submitted through the electronic tariff filing system, the Commission will establish a formal proceeding if the Commission finds that further investigation is needed to determine the reasonableness of a proposed special contract.

[18] On January 25, 2016 the Kentucky Utilities Company submitted an EDR contract with an existing customer utilizing the Commission's electronic tariff filing system. The submission included all the information required by the Administrative Case No. 327 Order. The submission was logged as TFS20 16-00027. On February 24, 2016, the Commission accepted the EDR contract and it became effective on that date.

[19] *In The Matter Of: Application of East Kentucky Power Cooperative, Inc. For Approval Of An Industrial Power Agreement With Economic Development Rider*, Order, Case No. 2016-00316 (Ky. P.S.C. Nov. 21, 2016).

EXHIBITS

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

COMMUNICATIONS

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

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

(1) Approving the Special Contract;

(2) Granting the requested deviation from Finding Number 5 of the Commission's September 24, 1990 Order in Administrative Case No. 327;

(3) Approving Kentucky Power's request to submit the Commission-required annual Tariff E.D.R. reporting on March 31 of each year, the same date the Company's annual Kentucky Economic Development Surcharge filing is due;

(4) Clarifying whether subsequent Tariff E.D.R. special contracts may be submitted to the Commission utilizing the Commission's electronic tariff filing system; and

(5) 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

Exhibit 1	Kentucky Power Company's November 15, 2018 Certificate of Authority
Exhibit 2	Big Run Power Producers LLC's Application for Service Under Tariff E.D.R.
Exhibit 3	"Contract for Electric Service Between Kentucky Power Company and Big Run Power Producers LLC"
Exhibit 4	November 2018 Marginal Cost Analysis

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: 209142
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 14th day of November, 2018, in the 227th year of the Commonwealth.

COMMONWEALTH OF KENTUCKY
OFFICE OF SECRETARY OF STATE

Alison Lundergan Grimes

Alison Lundergan Grimes
Secretary of State
Commonwealth of Kentucky
209142/0028317

KENTUCKY POWER
An AEP Company
BOUNDLESS ENERGY

Kentucky Power Co.
Application for Economic Development Rider Discount

The following information requested is necessary to apply for the incremental and/or supplemental billing demand discounts provided under the Economic Development Rider (Tariff E.D.R).

Customer Name: **Big Run Power Producers, LLC**

Address: **1837 River Cities Drive, Ashland, KY 41102**

Contact Name: **Dave Watson**

Phone: **(760) 604-1420**

Email: **dwatson@ultracapital.com**

In order for the Company to determine whether the Customer is eligible for service under Tariff E.D.R., please provide the following information required by the Tariff:

1. A description and good faith estimate of the new or increased load to be served during each year of the contract.

   The Total Capacity Reservation for the Customer has been initially fixed at 3,600 kW. The load is not expected to change significantly during the course of the coming 10 years.

2. The number of new employees or jobs that will be added as a result of the new load.

   BRPP has (or will shortly) create 7 fulltime jobs for management of plant operations (3), management of the well field and gas production (2), and for project maintenance (2). All positions within the company require good technical skills and an ongoing investment in training to ensure a safe and healthy industrial workplace. As a result, all of the jobs created pay well, with overtime opportunities and bonus provisions, depending upon annual plant operating results.

3. A description of the anticipated capital investment.

   The project is a gas upgrading and conditioning facility that takes raw landfill gas and, through a series of chemical processes, removes unwanted compounds such as water, hydrogen sulfide, oxygen, carbon dioxide, siloxanes, non-methane organic compounds and nitrogen to generate biogas, or renewable natural gas (RNG), that complies in all respects with the pipeline gas quality specified by Columbia Gulf Transmission, for delivery into transportation fuel markets. BRPP built a new, approximately 2-mile long interconnection pipeline to connect the landfill gas plant to the Columbia Gulf interstate pipeline. Total construction costs are expected to total approximately $30 million, with a total capital investment of almost $40 million.

   Project construction is nearing completion and should be commissioned in late December 2018, or in January 2019.

4. A description of all other federal, state or local economic development tax incentives, grants, or any other incentives / assistance associated with the new or expanded project.

   Aside from the benefit provided by the Tariff E.D.R., the project does not expect to receive any additional non-statutory federal, state or local incentives or grants. The project will capture its economics through the sale RNG to (i) a corporate customer, and (ii) into the transportation sector, due to the market premium for RNG beyond the cost of natural gas.

5. A statement that without the EDR discount, the customer would locate elsewhere or choose not to expand within Kentucky Power's service territory.

   Electricity is the largest single project operating cost by a wide margin. Without the E.D.R. tariff discount, BRPP would not have chosen to expand within Kentucky Power's service territory and would not have acquired the Project and committed to construct the landfill gas plant at the Big Run Landfill.

6. Any additional information that the Customer believes is relevant to demonstrate the Customer's eligibility for the requested billing demand discount(s).

The decision to invest in a landfill gas-to-RNG upgrading and conditioning facility at Big Run landfill is the result of a business opportunity to acquire ownership and replace the existing flaring of methane at the Big Run landfill with a facility that will produce a high value, renewable fuel that is indistinguishable from pipeline quality natural gas, and which can be sold at a premium in the transportation fuel market pursuant to the federal Renewable Fuel Standard (RFS2).

Benefits of the project include:

- ***An expanded landfill gas gathering system, with additional wells***
- ***Better control of odors in the area***
- ***7 relatively highly skilled jobs created***
- ***Approximately $40 million in new investment, where approximately $10 million in construction labor has been locally sourced***
- ***Additionally, over 90% of all project investment was comprised of US goods and labor***
- ***A major local corporate customer (L'Oreal) has purchased 100% of its demand for natural gas in the form of RNG for its entire fleet of US facilities***
- ***RNG provides cleaner transportation fuel and enhances US energy security***

Please provide all information above in an electronic format using Microsoft Word or Adobe Acrobat format. Email application to klborders@aep.com

CONTRACT FOR ELECTRIC SERVICE BETWEEN KENTUCKY POWER COMPANY AND BIG RUN POWER PRODUCERS LLC

This Contract for Electric Service ("Contract") is entered into by and between Kentucky Power Company, a Kentucky corporation (the "Company") and Big Run Power Producers LLC, a North Carolina limited liability company (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 limited liability company organized and existing under the laws of the State of North Carolina with operations near Ashland, Kentucky. The Customer intends to substantially expand its operations on US Route 60, west of Ashland, Kentucky.

3. The Customer has demonstrated to the Company that, absent the availability of Tariff E.D.R., the Customer's new electrical demand would not be placed in service.

4. The Company's service territory and the entire eastern Kentucky region are struggling economically and in need of jobs for Kentucky's citizens.

5. To facilitate economic development in the Company's service territory through the expansion 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. 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.

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:

1.1.1 "Commission" shall mean the Kentucky Public Service Commission, 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 successor thereto.

1.1.2 "Contract" shall mean this Contract for electric service between the Company and the Customer, as the same may, from time to time, be amended.

1.1.3 "Kentucky Power System" shall mean the integrated, interconnected electric system operated and owned by Kentucky Power Company.

1.1.4 "Parties" shall mean the Company and the Customer.

1.1.5 "Party" shall mean either the Company or the Customer.

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

1.1.7 "Tariff E.D.R." shall mean the Company's Economic Development Rider, or any successor or amendment thereto, approved by the Commission.

1.1.8 "I.B.D.D." shall mean the Incremental Billing Demand Discount and shall have the same meaning as set forth in Tariff E.D.R.

1.1.9 "Qualifying Incremental Billing Demand" shall have the same meaning as that set forth in Tariff E.D.R.

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 Electric Power and Energy

2.1 Subject to the terms and conditions specified herein, the Company agrees to furnish to the Customer, during the term of this Contract, and the Customer agrees to take and pay for, all of the electric power and energy that shall be required by the Customer for consumption at the premises located at 1837 River Cities Drive, Ashland, Kentucky 41102.

2.2 The Delivery Point for electric power and energy delivered hereunder shall be Customer's switch pole one span from Company pole 38830162C36083.

2.3 The electric energy delivered by the Company to the Delivery Point shall be four-wire, three-phase alternating current at approximately 7200/12470 volts. The said electric energy shall be delivered at reasonably close maintenance to constant potential and frequency, and it shall be measured by a meter or meters owned and installed by the Company and located on Company pole 38830162C36083. No Adjustment Factor shall apply.

ARTICLE 3
Capacity Reservation

3.1 The Total Capacity Reservation contracted for by the Customer is hereby initially fixed at 3,600 kW. 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 conditions as determined by the Company, such as the availability and cost of incremental Capacity from the Company, and to the receipt of any necessary regulatory approvals.

3.2 The Customer's Metered Demand shall not exceed, and the Company shall not be required to supply capacity in excess of, the Total Capacity Reservation except by mutual written agreement of the Parties.

3.3 The Customer's Metered Demand shall be determined each month as the highest of either the On-Peak Demand or the Off-Peak Demand. The On-Peak Demand during each month is the single highest 15-minute integrated peak in kW as registered by a demand meter during the On-Peak Period. The Off-Peak Demand during each month is the single highest 15-minute integrated peak in kW as registered by a demand meter during the Off-Peak Period.

ARTICLE 4
Billing

4.1 The Customer and the Company agree that the Customer has chosen to receive service under the provisions of the Company's Tariff I.G.S. at the rate of Primary, Code 370.

4.2 The Customer agrees to pay the Company monthly for electric energy delivered hereunder at the rates and under the provisions of the Company's Tariff I.G.S., as modified by the Customer's participation in Tariff E.D.R. and described herein.

4.3 The Customer's new qualifying incremental demand resides in separate facilities from those already existing at the Customer's premises. The Customer's new qualifying incremental demand will be metered according to Tariff I.G.S. on a separate meter from the meter for its existing operations. The Customer's Qualifying Incremental Billing Demand will be calculated based on meter readings for the Customer's new qualifying incremental demand on the Customer's new, separate meter.

4.4 The Customer's estimated load factor is 90%.

4.5 Over the term of this Contract, the Customer's Qualifying Incremental Billing Demand shall be reduced by the following percentages set forth in Table 1:

Table 1

Year	% Reduction
Year 1	50%
Year 2	40%
Year 3	30%
Year 4	20%
Year 5	10%
Year 6	0%
Year 7	0%
Year 8	0%
Year 9	0%
Year 10	0%

4.6 The Customer's Minimum Demand Charge, as set forth in Tariff I.G.S., shall be waived for the first 36 months of this Contract. However, if during the term of this Contract the Customer's monthly demand falls below the minimum billing demand level under Tariff I.G.S. for 4 consecutive months or 6 months total in a Contract year, then the Customer's minimum demand charge shall not be waived and the appropriate minimum billing demand charge otherwise applicable under Tariff I.G.S. will apply until the Customer achieves the minimum billing demand level.

4.7 The Parties agree that the charges that the Company collects from the Customer during the term of this Contract will recover all of the Company's fixed costs associated with upgrading its distribution facilities to serve the Customer.

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 approval of this Contract by the Commission. 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 an initial term of 10 years. The term shall commence on the Effective Date of this Contract as established under Article 5.1.

ARTICLE 6
Service Conditions

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 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 explicit 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 (a) by operation of equipment installed for power system protection; (b) after notice to and consultation with the Customer for routine installation, maintenance, inspection, repairs, or replacement of equipment; (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, or to avoid a burden on, the Kentucky Power system or an interconnected system, (ii) preserve personal or public safety, (iii) or to protect property; or (d) upon occurrence of an event of Force Majeure as defined by the Company's Terms and Conditions of Service.

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, 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's Facility shall not purchase electric power from any source other than the Company. This provision does not apply to emergency generation that is not designed to operate in parallel with the Kentucky Power System.

6.6 The Customer shall notify the Company in advance of any changes to be made to the Customer's Facility that has the potential of materially affecting the Kentucky Power System or other facilities interconnected to the Kentucky Power System.

6.7 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.

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 from time to time as required of such authorizations, approvals or actions of regulatory authorities having jurisdiction as shall be required by law.

7.2 The Company and the Customer agree that this Contract reflects the 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 change or condition. In the event that the Commission does not approve this Contract without change or condition, then this Contract shall not become effective, unless the Parties agree otherwise in writing. It is the intent of the Parties that the issuance of an order by the Commission approving the Contract without change or condition is a prerequisite to the validity of this Contract. To the extent a subsequent Commission Order alters the terms of this Contract, this Contract shall terminate unless within thirty day of the Commission Order the Parties agree in writing otherwise. In the event of a termination of the Contract due to subsequent Commission order, the Customer shall take service under the appropriate Company tariff.

ARTICLE 8
Assignment

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

8.2 This Contract shall not be assigned by either Party without the written consent of the other Party.

8.3 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 9
General

9.1 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.

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

9.3 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.

9.4 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:
Customer Account Manager Kentucky Power Company 12333 Kevin Avenue Ashland, Kentucky 41102	Operations Supervisor Big Run Power Producers, LLC 1837 River Cities Drive Ashland, Kentucky 41102

9.5 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.

9.6 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.

9.7 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.

KENTUCKY POWER COMPANY	BIG RUN POWER PRODUCERS LLC
By Matthew A. Horeled	By DKW
Name: Matthew A. Horeled	Name: David K. Watson
Title Director of Regulatory Services	Title: Authorized Representative
Date November 30, 2018	Date: November 30, 2018

ADDENDUM TO CONTRACT FOR ELECTRICAL DISTRIBUTION SERVICE-Flicker/Harmonics

This Addendum is entered into this 30 **day of** November, 2018, by and between **Kentucky Power Company**, hereafter called the Company, and **Big Run Power Producers 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 November 30, 2018 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.

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

By: Matthew A Horeled

Matthew A. Horeled

Title: Director of Regulatory Services

Date: November 30, 2018

Big Run Power Producers LLC

By: DKW

David K. Watson

Title: Authorized Representative

Date: November 30, 2018

Account Number: 003XXXXXXX

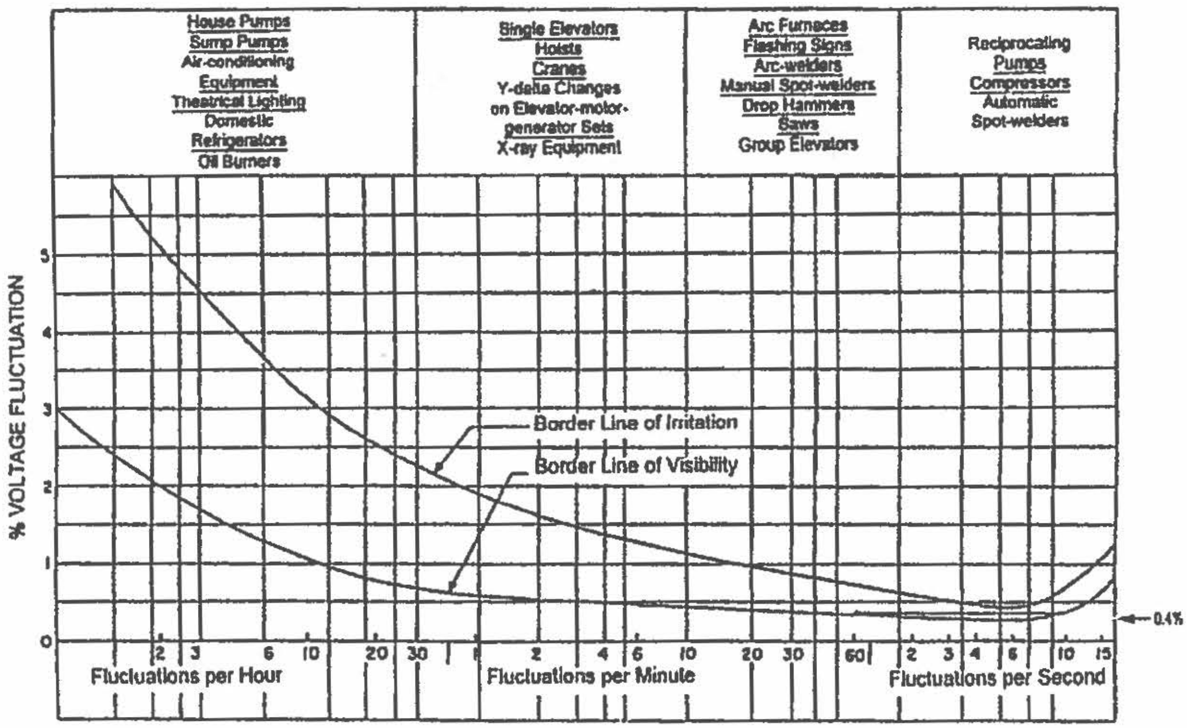
House Pumps
Sump Pumps
Air-conditioning Equipment
Theatrical Lighting
Domestic Refrigerators
Oil Burners
Single Elevators
Hoists
Cranes
Y-delta Changes on Elevator-motor-generator Sets
X-ray Equipment
Arc Furnaces
Flashing Signs
Arc-welders
Manual Spot-welders
Drop Hammers
Saws
Group Elevators
Reciprocating Pumps
Compressors
Automatic Spot-welders
% VOLTAGE FLUCTUATION
Border Line of Irritation
Border Line of Visibility
0.4%
Fluctuations per Hour
Fluctuations per Minute
Fluctuations per Second

Exhibit 4
Marginal Cost Analysis

Kentucky Power Company ("KPCo" or the "Company") fully integrated into PJM effective October 1, 2004 and participates in the PJM capacity construct as a Fixed Resource Requirement ("FRR") entity. As an FRR entity, KPCo meets its capacity obligations through self-supply and the capacity costs of an actual new generation facility best represent the marginal costs of capacity for the Company. PJM calculates the capacity costs of a new generation facility as net Cost of New Entry ("net CONE"). In addition, KPCo participates in the PJM energy markets by bidding its entire generation energy output in the market and purchases its energy needs from the market.

The focus of marginal cost studies is on the estimated change in costs that results from providing an increment of service.[1] Given the nature of KPCo's participation in the PJM markets, it is reasonable to use PJM energy prices as KPCo's marginal energy cost and net CONE as KPCo's marginal capacity cost at the point that KPCo has a demonstrated need for capacity. In addition, new load will ultimately result in increased transmission service charges, when all else is held constant. Lastly, with load additions there could be incremental distribution and local facility costs, depending upon the customer-specific circumstances.

This analysis compares the capacity, transmission, distribution and energy costs with the demand and energy rates that KPCo will be charging for the service to Big Run Power Producers LLC under the terms of a Contract for Electric Service executed pursuant to the provisions of KPCo's Tariff E.D.R. (the "EDR special contract").

Marginal Costs - Capacity

Net Cone for RTO locational delivery area are as follows:

Delivery Year	$/MW-day	$/kW-month[2]
2017-2018	$351.39	$10.69
2018-2019	$300.57	$9.14
2019-2020	$299.30	$9.13
2020-2021	$292.95	$8.91
2021-2022	$321.57	$9.78
Average		$9.53

Note: Values shown for illustration purposes, KPCo is not expected to require incremental capacity to serve this load during this period.

[1] NARUC Electric Utility Cost Allocation Manual (Washington, DC: NARUC, January 1992), 18.

[2] $/MW-day x 365 (or 366) days / 12 months / 1,000 kW per MW

Exhibit 4
Marginal Cost Analysis

Marginal Costs - Transmission

Additional load results in additional costs for Transmission Service. Assuming the worst case of 100% coincidence with the Company's peaks, the Company would experience additional transmission costs as follows:

NITS + Schedule 12	3.6 MW	x	$4,844.51 /MW-mth	= $17,440
Schedule 1A	2,102.4 MWh	x	$0.0906 /MWh	= $ 191
Total				$17,631

Marginal Costs - Distribution

KPCo expects to incur $250,000 of incremental distribution investment to serve this existing customer. At an annual carrying cost of 21.95%, this equates to a monthly marginal cost of $4,573 ($250,000 x 21.95% / 12).

Marginal Costs - Energy

Average annual LMP costs are as follows:

Year	Day Ahead $/MWh
Nov 2015 – Oct 2016	$27.67
Nov 2016 – Oct 2017	$29.40
Nov 2017 - Oct 2018	$34.85
Average	$30.64

Assuming 2,102,400 monthly kWh and the average Day Ahead LMP of $0.03064 per kWh, the marginal energy cost is $64,418.

Exhibit 4
Marginal Cost Analysis

<u>Marginal Costs – Summary</u>

Expected Incremental Monthly Revenue[3]	$148,695
Less:	
Marginal Costs – Capacity	$0
Marginal Costs – Transmission	$17,631
Marginal Costs – Distribution	$4,573
Marginal Costs – Energy	$64,418
Net Revenue	**$62,073**

<u>Conclusion</u>

As computed above, there is Net Revenue (revenue greater than marginal costs) generated from billing under the EDR special contract.

[3] Values shown reflect average monthly revenue for the five discounted years.