COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES)COMPANY FOR CERTIFICATES OF PUBLIC)CONVENIENCE AND NECESSITY AND)APPROVAL OF ITS 2016 COMPLIANCE PLAN)FOR RECOVERY BY ENVIRONMENTAL)SURCHARGE)

CASE NO. 2016-00026

APPLICATION

Kentucky Utilities Company ("KU"), pursuant to KRS 278.020(1), KRS 278.183, and 807 KAR 5:001 Sections 14 and 15, hereby petitions the Kentucky Public Service Commission ("Commission") by application to issue an order granting KU Certificates of Public Convenience and Necessity ("CPCN") for the construction of Phase II of the landfill at the E.W. Brown Generating Station ("Brown"), and to conduct surface-impoundment-related construction necessary to comply with the U.S. Environmental Protection Agency's ("EPA's") Coal Combustion Residuals Final Rule ("CCR Rule") and construct new process water systems at the Ghent Generating Station ("Ghent"), the Trimble County Generating Station ("Trimble County"), and Brown.¹ KU also petitions the Commission to issue an order declaring that surface impoundment closures at the Green River Generating Station ("Green River"), Pineville Generating Station ("Pineville"), and Tyrone Generating Station ("Tyrone") do not require CPCNs pursuant to KRS 278.020(1); in the alternative, KU requests a CPCN for each generating station for which the Commission determines a CPCN is required. KU further petitions the Commission for an order approving an amended compliance plan for purposes of recovering the

¹ The CCR Rule defines CCR as "fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers." 40 CFR 257.53. This definition includes what is commonly referred to as gypsum.

costs of new pollution control facilities through its Environmental Cost Recovery ("ECR") Surcharge tariff ("2016 Plan"). The 2016 Plan is attached as Application Exhibit 1. These projects are required for KU to comply with the federal Clean Air Act as amended ("CAA"), the CCR Rule, the Mercury and Air Toxics Standards ("MATS Rule"), and other environmental requirements that apply to KU facilities used in the production of energy from coal. In support of this Application, KU states as follows:

1. The full name and mailing address of KU are: Kentucky Utilities Company, Post Office Box 32010, 220 West Main Street, Louisville, Kentucky 40202. KU may be reached by electronic mail at the electronic mail addresses of its counsel set forth below.

2. KU is a utility engaged in the electric business. KU generates and purchases electricity, and distributes and sells electricity at retail in the following counties in Central, Northern, Southeastern and Western Kentucky:

Adair	Edmonson	Jessamine	Ohio
Anderson	Estill	Knox	Oldham
Ballard	Fayette	Larue	Owen
Barren	Fleming	Laurel	Pendleton
Bath	Franklin	Lee	Pulaski
Bell	Fulton	Lincoln	Robertson
Bourbon	Gallatin	Livingston	Rockcastle
Boyle	Garrard	Lyon	Rowan
Bracken	Grant	Madison	Russell
Bullitt	Grayson	Marion	Scott
Caldwell	Green	Mason	Shelby
Campbell	Hardin	McCracken	Spencer
Carlisle	Harlan	McCreary	Taylor
Carroll	Harrison	McLean	Trimble
Casey	Hart	Mercer	Union
Christian	Henderson	Montgomery	Washington
Clark	Henry	Muhlenberg	Webster
Clay	Hickman	Nelson	Whitley
Crittenden	Hopkins	Nicholas	Woodford
Daviess			

3. KU was incorporated in Kentucky on August 17, 1912, and in Virginia on November 26, 1991 (and effective as of December 1, 1991), and is in good standing in both Kentucky and Virginia. Copies of KU's good standing certificates from the Kentucky Secretary of State and the Virginia State Corporation Commission are attached as Application Exhibit 2.

4. Pursuant to KRS 278.380, KU waives any right to service of Commission orders by mail for purposes of this proceeding only. Copies of all orders, pleadings and other communications related to this proceeding should be directed to:

> Robert M. Conroy Director – Rates LG&E and KU Services Company 220 West Main Street Louisville, KY 40202 robert.conroy@lge-ku.com

> Derek A. Rahn Manager, Revenue Requirement LG&E and KU Services Company 220 West Main Street Louisville, KY 40202 derek.rahn@lge-ku.com

> Allyson K. Sturgeon Senior Corporate Attorney LG&E and KU Services Company 220 West Main Street Louisville, Kentucky 40202 allyson.sturgeon@lge-ku.com

> Sara Veeneman Corporate Attorney LG&E and KU Services Company 220 West Main Street Louisville, Kentucky 40202 sara.veeneman@lge-ku.com

> > Kendrick R. Riggs W. Duncan Crosby III Stoll Keenon Ogden PLLC 2000 PNC Plaza

500 West Jefferson Street Louisville, Kentucky 40202-2828 kendrick.riggs@skofirm.com duncan.crosby@skofirm.com

Lindsey W. Ingram III Monica Braun Stoll Keenon Ogden PLLC 300 West Vine Street, Suite 2100 Lexington, Kentucky 40507-1801 l.ingram@skofirm.com monica.braun@skofirm.com

Request for Certificates of Public Convenience and Necessity

Brown CCR Landfill (Phase II)

5. KU proposes to construct Phase II of the CCR landfill at Brown. The Commission approved conversion of the Brown Main Ash Pond (a surface impoundment) to a dry landfill in KU's 2011 Plan proceeding.² In accordance with Commission authorization, KU will place Phase I of the landfill in service in 2016.

6. <u>Statement of Need (807 KAR 5:001 § 15(2)(a)</u>): In support of KU's contention that the public convenience and necessity requires the proposed construction of Phase II of the Brown landfill, John N. Voyles, Jr. explains in his testimony that when the Kentucky Division of Waste Management issued the permit for the Special Waste Landfill at Brown, it set forth a 10 foot height limit for each successive phase of lateral expansion such that the volume of CCR disposed in each phase be no more than 10 feet higher than adjoining phase(s). Because of this permit condition, the initial capacity of Phase I is limited to a height of 10 feet. Based on the historical production at Brown, Phase I's initial 10 feet of capacity may be exhausted by as early as the second quarter of 2018. Forecasted production volumes suggest there may be usable

² In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge, Case No. 2011-00161, Order (Dec. 15, 2011).

capacity until 2019.³ To ensure KU's uninterrupted ability to dispatch the Brown coal-fired units with adequate time for construction and possible delays, KU is seeking approval to construct Phase II at this time, but will not begin construction before 2017. Building Phase II of the Brown landfill is the most cost-effective means of ensuring continued operation of Brown and complying with the CCR Rule.

7. <u>Description of Proposed Construction (807 KAR 5:001 § 15(2)(c))</u>: KU is requesting a CPCN to construct Phase II of the Brown landfill. This project consists of new construction that requires prior approval from the Commission under KRS 278.020. KU proposes to begin constructing Phase II of the Brown landfill in 2017. Construction is expected to last approximately a year. Depending on suitable weather conditions during the construction periods, Phase II would be available for commercial operation prior to the end of 2018.

There are no utilities, corporations, or persons with whom the proposed new construction is likely to compete.

8. <u>Permits or Franchises (807 KAR 5:001 § 15(2)(b))</u>: KU will submit to the Kentucky Division of Waste Management a request to modify existing operating permits to reflect the construction of Phase II of the Brown landfill, and will file a copy of the application with the Commission when it is available. KU will also seek any applicable construction permits.

9. <u>Maps and Drawings of Proposed Construction (807 KAR 5:001 § 15(2)(d)(1) and</u> (2)): The required maps and drawings for KU's proposed construction of Phase II of the Brown landfill are attached in Application Exhibit 3.

10. <u>Financing Plans (807 KAR 5:001 § 15(2)(e))</u>: The total projected capital cost of this facility at Brown is \$11.9 million, of which KU seeks to recover \$5.3 million through the

³ Voyles Testimony at 14.

ECR mechanism as part of its 2016 Plan Project 36. KU's proposed financing of such costs is discussed in the direct testimony of Mr. Conroy, which accompanies this Application and is incorporated herein by reference.

11. Estimated Cost of Operation (807 KAR 5:001 § 15(2)(f)): The proposed construction is not anticipated to create incremental operating costs, and the Company is not seeking ECR recovery of such costs in this proceeding, as reflected on page 2 of Exhibit JNV-1 to Mr. Voyles's testimony.

<u>CCR Rule Compliance Construction and Construction of New Process Water Systems at</u> <u>Ghent, Trimble County, and Brown</u>

12. KU proposes to conduct CCR Rule compliance construction at Ghent, Trimble County, and Brown and construct new process water systems for continued station operation.

13. <u>Statement of Need (807 KAR 5:001 § 15(2)(a)</u>): On December 19, 2014, the EPA finalized its proposed CCR Rule, establishing technical requirements for CCR landfills and surface impoundments under subtitle D of the Resource Conservation and Recovery Act ("RCRA"). The CCR Rule, which became effective October 19, 2015, is intended to provide a comprehensive set of requirements for the safe disposal of CCR.

Conducting CCR Rule compliance construction at Ghent, Trimble County, and Brown and constructing new process water system are economical, as Mr. Voyles and Charles R. Schram discuss in their testimonies,⁴ and are prudent means of complying with the CCR Rule and other applicable environmental requirements, as Gary H. Revlett discusses in his testimony.⁵

14. <u>Description of Proposed Construction (807 KAR 5:001 § 15(2)(c))</u>: KU is requesting three CCR-related CPCNs for the lowest-reasonable-cost construction necessary to comply with the CCR Rule (and other applicable federal, state, and local requirements)

⁴ Voyles Testimony at 29-31; Schram Testimony at 5-6.

⁵ Revlett Testimony at 19.

concerning surface impoundments: one to address five surface impoundments and construct a new process water system at Ghent; one to address two surface impoundments and construct a new process water system at Trimble County; and one to address one surface impoundment and construct a new process water system at Brown. These projects consist of new construction and changes to existing certificated facilities that require prior approval from the Commission under KRS 278.020. The CCR Management Facilities Plans for Ghent, Trimble County, and Brown, attached to the testimony of Mr. Voyles as Exhibits JNV-6, JNV-7, and JNV-8, respectively, contain the engineering work papers related to KU's currently expected surface impoundment closures and process water system construction; however, as noted in the testimony of Mr. Voyles, as engineering proceeds and matures for each proposed closure and the assessments of the CCR Rule's criteria for each surface impoundment's circumstances becomes clearer, the closure approach and costs for a given surface impoundment could change, perhaps significantly, especially if larger quantities of virgin fill materials become necessary for closure.⁶ KU is therefore explicitly requesting CPCN authority at each of Ghent, Trimble County, and Brown to perform all construction necessary to comply with the CCR Rule (and other applicable federal, state, and local requirements) in a lowest-reasonable-cost manner.

KU proposes to begin conducting CCR Rule compliance construction and constructing the new process water system at Ghent in 2016, and all work should be complete by 2022. KU proposes to begin conducting CCR Rule compliance construction and constructing the new process water systems at Trimble County in 2017, and all work should be complete by 2023. KU proposes to begin conducting CCR Rule compliance construction and constructing the new process water systems at Brown in 2017 and all work should be complete by 2023.

⁶ Voyles Testimony at 23-24.

For these reasons, KU is requesting that the Commission issue the requested CPCNs by July 29, 2016.

There are no utilities, corporations, or persons with whom the proposed new construction is likely to compete.

15. <u>Permits or Franchises (807 KAR 5:001 § 15(2)(b))</u>: KU will submit any required surface-impoundment-closure plans to the Kentucky Division of Water by the end of 2016, and will file a copy of the plans with the Commission when they are available. KU will also seek any applicable construction permits.

16. <u>Maps and Drawings of Proposed Construction (807 KAR 5:001 § 15(2)(d)(1) and</u> (2)): The required maps and drawings for the proposed construction of the requested CCRrelated CPCNs are attached in Application Exhibit 3.

17. <u>Financing Plans (807 KAR 5:001 § 15(2)(e)</u>): The projected capital cost of closing the Ghent surface impoundments and constructing a new process water system to serve Ghent is \$364.2 million, of which KU seeks to recover \$339.9 million through the ECR mechanism as part of its 2016 Plan Project 40. The projected capital cost of closing the Trimble County surface impoundments and constructing a new process water system to serve Trimble County is \$105.3 million, of which KU seeks to recover \$101.9 million through the ECR mechanism as part of its 2016 Plan Project 41, which corresponds with KU's 36% ownership share of Trimble County's common plant assets. The projected capital cost of closing the Brown surface impoundment and constructing a new process water system to serve Brown is \$101.3 million, of which KU seeks to recover \$98.3 million through the ECR mechanism as part of its 2016 Plan Project 42. But as noted above and in the testimony of Mr. Voyles, as engineering proceeds and matures for each proposed closure and the assessments of the CCR Rule's criteria

for each surface impoundment's circumstances becomes clearer, the closure approach and costs for a given surface impoundment could change, perhaps significantly, especially if larger quantities of virgin fill materials become necessary for closure.⁷

KU's proposed financing of such costs is discussed in the direct testimony of Mr. Conroy, which accompanies this Application and is incorporated herein by reference.

18. <u>Estimated Cost of Operation (807 KAR 5:001 § 15(2)(f))</u>: KU is not seeking O&M cost recovery through the ECR mechanism for these projects, as noted on the second page of Exhibit JNV-1. Christopher M. Garrett's testimony addresses cost recovery for ongoing groundwater monitoring obligations under the CCR Rule.

19. Final action on this Application is requested by July 29, 2016, to allow KU to begin procurement of materials and equipment under the proposed construction schedule.

Request for Declaratory Order that CPCNs Are Not Required for Surface Impoundment

Closures at Green River, Pineville, and Tyrone

20. KU proposes to close the surface impoundments at Green River, Pineville, and Tyrone. As described more fully in the testimony of Robert M. Conroy, the total capital cost of all of the proposed surface impoundment closures at Green River, Pineville, and Tyrone is less than 1.5% of KU's current net utility rate base. Therefore none of the closures meets the 807 KAR 5:001 Section 15(3) financial materiality criterion for requiring a CPCN as the Commission has historically interpreted it.⁸

⁷ Voyles Testimony at 23-24.

⁸ See, e.g., In the Matter of: Tariff Filing of Warren County Water District To Establish the Rockfield School Sewer Capital Recovery Fee, Case No. 2012-00269 (Nov. 19, 2012); In the Matter of: Application of Big Rivers Electric Corporation for Approval of an Interconnection Agreement with Kentucky Utilities Company, Case No. 2007-00058 (Apr. 16, 2007); In the Matter of: Application of Southern Madison Water District to Issue Securities in the Approximate Amount of \$860,000 for the Purpose of Refunding an Outstanding Revenue Bond of the District and Finance Certain System Improvements Pursuant to the Provisions of KRS 278.300 and 807 KAR 5:001, Case No. 99-310 (Sept. 1, 1999).

21. In the alternative, KU asks the Commission to grant one CPCN per generating station for the surface impoundment closures at Green River, Pineville, and Tyrone if the Commission believes one or more of the stations' surface impoundment closures requires a CPCN. If required, the surface impoundment closures at those stations would meet the CPCN requirements set out in 807 KAR 5:001 Section 15(2).

22. KU will conduct the surface impoundment closures at Green River, Pineville, and Tyrone in accordance with applicable state environmental regulations. Closing the inactive surface impoundments as part of KU's overall surface-impoundment-closure effort should result in a number of benefits, including: (1) minimizing the risk of environmental releases, potential citizen suits, or nuisance lawsuits; (2) minimizing cost escalation that could occur if KU closed the surface impoundments later; (3) taking advantage of economies of scale by closing these surface impoundments contemporaneously with other of the Companies' surface-impoundment closures; and (4) as Mr. Revlett explains, it is possible that complying with the federal Effluent Limitation Guidelines could ultimately require KU to close these surface impoundments under state law.

23. The proposed construction will not be wastefully duplicative, and will likely improve the landscape by replacing open surface impoundments with vegetated contoured slopes (or virgin materials when "clean closed"). And there is no facility or other utility with which the closed surface impoundments will compete.

24. Mr. Revlett's testimony addresses the necessary environmental permit applications and other requirements.

25. Maps and drawings showing the location of the proposed construction such as would be required for CPCNs are attached in Application Exhibit 3.

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26. The total projected capital cost of these surface impoundment closures is \$77.9 million for all three stations, of which KU seeks to recover \$77.5 million through the ECR mechanism as part of its 2016 Plan Project 39. KU will finance these surface impoundment closures in the same manner in which it will finance all other ECR projects, which is discussed in the direct testimony of Mr. Conroy that accompanies this Application and is incorporated herein by reference.

Request for Approval of KU's 2016 Environmental Compliance Plan for Recovery by Environmental Surcharge

27. This Application and supporting testimony and exhibits are available for public inspection at the KU office located at 100 Quality Street, Lexington, Kentucky. The Company is giving notice to the public of the proposed assessment through its existing environmental surcharge tariff for the recovery of the costs of 2016 Environmental Compliance Plan by newspaper publication, through a bill insert in monthly billings to its customers, and through posting the newspaper notice at the offices and places of business of the Company. The Company is also posting this Application on its website (http://www.lge-ku.com). An initial Certificate of Notice and Publication is filed with this Application. A Certification of this notice.

28. Pursuant to KRS 278.183, KU is "entitled to the current recovery of its costs of complying with the Federal Clean Air Act as amended and those federal, state, or local environmental requirements which apply to coal combustion wastes and byproducts from facilities utilized for production of energy from coal in accordance with the utility's compliance plan."

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29. KU is adding seven new projects. The new projects will enable Brown, Ghent, and Trimble County Stations to comply with the Clean Air Act, CCR Rule, and other current and proposed environmental laws, regulations, and enforcement actions. The environmental regulations creating the need for these new and additional projects are specifically shown in the 2016 Plan, which is attached to this Application (Application Exhibit 1) and to the testimony of Mr. Voyles as Exhibit JNV-1. Mr. Revlett's testimony presents KU's evidence concerning the applicable regulatory requirements, and Mr. Voyles's testimony and the testimony of R. Scott Straight explain how the proposed projects will enable KU to cost effectively satisfy those regulatory requirements. The pollution control projects included in the 2016 Plan are:

- a. Project 36 (Brown CCR Storage Landfill): Construct Phase II of the Brown CCR Storage Landfill;
- b. Project 37 (Ghent Unit 2): Install improvements to the Wet Flue Gas
 Desulfurization ("WFGD") systems;
- c. Project 38 (Ghent): Install supplemental mercury-related control technologies at Ghent Units 1-4, thereby allowing use of the most cost-effective additive injections to mitigate mercury emissions;
- d. Project 39 (Green River, Pineville, Tyrone): Close surface impoundments;
- e. Project 40 (Ghent): CCR Rule Compliance Construction and Construction of New Process Water Systems;
- f. Project 41 (Trimble): CCR Rule Compliance Construction and Construction of New Process Water Systems; and
- g. Project 42 (Brown): CCR Rule Compliance Construction and Construction
 of New Process Water Systems.

The total capital cost of these new projects to the Compliance Plan is estimated to be \$677.7 million, of which KU seeks to recover \$640 million through the ECR mechanism as part of its 2016 Plan.

30. A detailed summary of the facts and compliance requirements supporting this Application is set forth in the direct testimony and exhibits of the Company's witnesses:

- The testimony of Robert M. Conroy, Director of Rates, presents an overview of KU's environmental surcharge plan and supporting testimony, and requests the recovery of an overall rate of return that includes a 10.00% return on common equity. Mr. Conroy's testimony also states the reasons KU is seeking CPCNs for certain ECR projects, the reasons KU is not seeking CPCNs for certain ECR projects, the reasons KU is not seeking CPCNs for certain ECR projects, the reasons for requesting the projects themselves, and how KU plans to finance the projects.
- John N. Voyles, Jr., Vice President, Transmission and Generation Services, presents testimony that describes the engineering and construction aspects of the projects in KU's 2016 Plan, and the projects' costs. Mr. Voyles sponsors the 2016 Plan and the CCR Management Facilities Plans for Ghent, Trimble County, Green River, Pineville, and Tyrone.
- R. Scott Straight, Director of Project Engineering, presents testimony that discusses Projects 37 and 38 and their costs, and sponsors Project Engineering documents and process flow diagrams supporting Projects 37 and 38.
- Gary H. Revlett, Director, Environmental Affairs, presents testimony discussing the environmental regulations that necessitate KU's 2016 Plan. Mr. Revlett describes the pertinent statutes, rules, or regulations requiring KU to take action.

- Charles R. Schram, Director, Energy Planning, Analysis and Forecasting, presents testimony on the cost-effectiveness of the projects in KU's 2016 Plan, and presents as exhibits the cost-benefit studies KU performed.
- Derek A. Rahn, Manager, Revenue Requirement, presents testimony addressing how the environmental surcharge under KU's ECR tariff provisions will be calculated to include the costs of the 2016 Plan, presents the revisions to the monthly ECR reporting forms that KU proposes and explains why the revisions to the forms are appropriate, and discusses the bill impact on KU's customers.
- John J. Spanos, Senior Vice President, Gannett Fleming Valuation and Rate Consultants, LLC presents testimony demonstrating that the terminal net salvage value used with the depreciation rates and reserves in base rates does not reflect any surface impoundment closures under the CCR Rule and proposes depreciation rates for the surface impoundment closures at each generation station to be used in the ECR filing.
- Christopher M. Garrett, C.P.A., Director, Accounting and Regulatory Reporting, presents testimony affirming that the costs for which KU is seeking recovery through its Environmental Surcharge tariff are not included in base rates, and describes the accounting associated with the projects in KU's 2016 Plan, all consistent with the Commission's prior orders. Also, Mr. Garrett addresses the accounting for the proposed CCR Rule compliance construction contained in Projects 39 through 42.

31. KU is proposing no changes to its Environmental Cost Recovery Surcharge tariff sheets, P.S.C. No. 17, Second Revision to Original Sheet No. 87 and First Revision to Original

Sheet No. 87.1, *Adjustment Clause ECR*, other than to change their issue and effective dates. KU is filing its Environmental Cost Recovery Surcharge tariff sheets, attached as Application Exhibit 4, for the purpose of obtaining the Commission's approval of the recovery of the costs of 2016 Environmental Compliance Plan by the proposed assessment through this tariff provision. In accordance with KRS 278.183(2), the ECR tariff has an issue date of January 29, 2016, and is proposed to be effective on July 29, 2016. Therefore, bills issued on and after August 31, 2016, will reflect the revised environmental surcharge beginning with the expense month of July 2016 (i.e., beginning with the expense month six months after the filing of this Application).

WHEREFORE, Kentucky Utilities Company respectfully asks the Commission to enter an order on or before July 29, 2016: (1) granting KU a Certificate of Public Convenience and Necessity to construct Phase II of the Brown landfill; (2) granting KU Certificates of Public Convenience and Necessity to conduct CCR Rule compliance construction and construct new process water systems at Ghent, Trimble County, and Brown; (3) declaring that the proposed surface impoundment closures at Green River, Pineville, and Tyrone do not require CPCNs, or in the alternative granting a CPCN for each generating station for which the Commission determines a CPCN is required; (4) approving the new and amended projects to KU's Environmental Compliance Plan for purposes of recovering the costs of the projects through the environmental surcharge mechanism; (5) approving the proposed environmental surcharge tariff for the recovery of the costs of 2016 Plan effective for bills rendered on and after August 31, 2016 (i.e., beginning with the expense month of July 2016); (6) approving the proposed ES monthly filing forms; (7) approving the recovery of the overall rate of return requested herein, including the return on equity therein; (8) approving the proposed depreciation rates for purposes of calculating the ECR beginning with the expense month of July 2016; and (9) granting such other relief as KU may be entitled under law.

Dated: January 29, 2016

Respectfully submitted,

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Kendrick R. Riggs Stoll Keenon Ogden PLLC 2000 PNC Plaza 500 West Jefferson Street Louisville, Kentucky 40202 Telephone: (502) 333-6000 Fax: (502) 627-8722 kendrick.riggs@skofirm.com

Allyson K. Sturgeon Senior Corporate Attorney LG&E and KU Services Company 220 West Main Street Louisville, Kentucky 40202 Telephone: (502) 627-2088 Fax: (502) 627-3367 allyson.sturgeon@lge-ku.com

Counsel for Kentucky Utilities Company

Exhibit 1 2016 Environmental Compliance Plan

Actual (A) or Air Pollutant or Environmental Actual or Estimated (E) Waste/By-Product To **Regulation / Regulatory** Project **Control Facility** Generating Station **Environmental Permit*** Scheduled Projected Capital Be Controlled Requirement* Completion Cost (\$Million) CCR Storage Fly & Bottom Ash, Division of Waste Mgmt 36 Brown Station EPA CCR Rule 2017 \$5.3 (E) Landfill (Phase II) Landfill Permit Gypsum Wet Flue Gas Desulfurization Ky Division for Air Quality 37 SO_2 Ghent Unit 2 Clean Air Act (1990) and MATS 2016 \$7.0 (E) Improvements Title V Permit Ghent Unit 1 2016 \$2.6 (E) Ghent Unit 2 \$2.7 (E) 2016 Supplemental Mercury Related Control Ky Division for Air Quality Clean Air Act (1990) and MATS 38 Mercury (Hg) Technologies Title V Permit Ghent Unit 3 \$2.7 (E) 2016 Ghent Unit 4 2016 \$2.1 (E) Green River Station Division of Waste Mgmt 2018 \$56.4 (E) Fly & Bottom Ash, Landfill Permit and 39 Surface Impoundment Closure 401 KAR Chapter 45 Pineville Station 2019 \$8.0 (E) Division of Water -Gypsum **KPDES** Permit Tyrone Station 2019 \$13.1 (E) CCR Rule Compliance Construction and Fly & Bottom Ash, 40 \$339.9 (E) Construction of New Process Water Ghent Station 2022 Gypsum Systems Division of Waste Mgmt -CCR Rule Compliance Construction and Landfill Permit and Fly & Bottom Ash, Trimble County Station Construction of New Process Water EPA CCR Rule 41 2023 \$101.9 (E) Gypsum (See Note 1) Division of Water -Systems **KPDES** Permit CCR Rule Compliance Construction and Fly & Bottom Ash, 42 Construction of New Process Water Brown Station 2023 \$98.3 (E) Gypsum Systems

KENTUCKY UTILITIES COMPANY 2016 ENVIRONMENTAL COMPLIANCE PLAN (Case No. 2016-00026)

* Sponsored by Witness Revlett

Note 1: KU and LG&E's costs split 48% / 52% respectively.

Note 2: CCP now known as CCR; HAPS now known as MATS; CATR now known as CSAPR

\$640.0

Project	Air Pollutant or Waste/By-Product To Be Controlled	Control Facility	Generating Station	Estimated Annual Operations and Maintenance Costs (Through 2024)								
				2016	2017	2018	2019	2020	2021	2022	2023	2024
36	Fly & Bottom Ash, Gypsum	CCR Storage Landfill (Phase II)	Brown Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	SO ₂	Wet Flue Gas Desulfurization Improvements	Ghent Unit 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		Mercury (Hg) Supplemental Mercury Related Control Technologies (See Note 1)	Ghent Unit 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	Mercury (Hg)		Ghent Unit 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
50	Mercury (rig)		Ghent Unit 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			Ghent Unit 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			Green River Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	Fly & Bottom Ash, Gypsum	Surface Impoundment Closures	Pineville Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	51		Tyrone Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40	Fly & Bottom Ash, Gypsum	CCR Rule Compliance Construction and Construction of New Process Water Systems	Ghent Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41	Fly & Bottom Ash, Gypsum	CCR Rule Compliance Construction and Construction of New Process Water Systems	Trimble County Station (See Note 2)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
42	Fly & Bottom Ash, Gypsum	CCR Rule Compliance Construction and Construction of New Process Water Systems	Brown Station	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

KENTUCKY UTILITIES COMPANY 2016 ENVIRONMENTAL COMPLIANCE PLAN (Case No. 2016-00026)

Note 1: The \$0 O&M costs for Project 38 represent KU's expectation that the cost of the proposed additives will balance or partially offset costs currently being recovered through the O&M shown in KU's monthly ECR reports for Project 35 (approved as part of KU's 2011 Plan).

Note 2: KU and LG&E's costs split 48% / 52% respectively.

Exhibit 2 Good Standing Certificate

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: 172479 Visit <u>https://app.sos.ky.gov/ftshow/certvalidate.aspx</u> 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 UTILITIES COMPANY

is a corporation duly incorporated and existing under KRS Chapter 14A and KRS Chapter 271B, whose date of incorporation is August 17, 1912 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 27th day of January, 2016, in the 224th year of the Commonwealth.



undergan Crimes

Alison Lundergan Grimes Secretary of State Commonwealth of Kentucky 172479/0028494

Commonwealth F Hirginia



State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That KENTUCKY UTILITIES COMPANY is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is November 26, 1991;

That the period of its duration is perpetual; and

That the corporation is in existence and in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.



Signed and Sealed at Richmond on this Date: January 27, 2016

Joel H. Peck, Clerk of the Commission

Exhibit 3 Maps and Drawings



a PPL company



Tyrone Generating Station





Ghent Project





Trimble Co. Project

Affected CCR Facility or Process Water System Location

Gypsum Storage Pond







E.W. Brown Project

Affected CCR Facility of Process Water System Location

Dtential Basins Dcation











Green River Project

Affected CCR Facility or Process Water System Location

SO2 Pond -



PINEVILLE GENERATING STATION OVERALL SITE PLAN



GUARD POND COAL HOUSE FILE TELCOM SUBSTATION & BLOG SWATCHYARD MICROMAKYE TOWER BLOG MAIN BULDING





Pineville Project





Tyrone Project

Ash Treatment Basin-



Exhibit 4 Environmental Cost Recovery Surchage Tariff Sheets

Kentucky Utilities Company

P.S.C. No. 17, Second Revision of Original Sheet No. 87 Canceling P.S.C. No. 17, First Revision of Original Sheet No. 87

ECR

Adjustment Clause

Environmental Cost Recovery Surcharge

APPLICABLE

In all territory served.

AVAILABILITY OF SERVICE

This schedule is mandatory to all Standard Electric Rate Schedules listed in Section 1 of the General Index except CTAC and Special Charges, all Pilot Programs listed in Section 3 of the General Index, and the FAC (including the Off-System Sales Tracker) and DSM Adjustment Clauses. Standard Electric Rate Schedules subject to this schedule are divided into Group 1 or Group 2 as follows:

Group 1: Rate Schedules RS; RTOD-Energy; RTOD-Demand; VFD; AES; LS; RLS; LE; and TE. Group 2: Rate Schedules GS; PS; TODS; TODP; RTS; and FLS.

RATE

The monthly billing amount under each of the schedules to which this mechanism is applicable, shall be increased or decreased by a percentage factor calculated in accordance with the following formula.

Group Environmental Surcharge Billing Factor = Group E(m) / Group R(m)

As set forth below, Group E(m) is the sum of Jurisdictional E(m) of each approved environmental compliance plan revenue requirement of environmental compliance costs for the current expense month allocated to each of Group 1 and Group 2. Group R(m) for Group 1 is the 12-month average revenue for the current expense month and for Group 2 it is the 12-month average non-fuel revenue for the current expense month.

DEFINITIONS

- 1) For all Plans, E(m) = [(RB/12) (ROR + (ROR DR) (TR / (1 TR))] + OE EAS + BR
 - a) RB is the Total Environmental Compliance Rate Base.
 - b) ROR is the Rate of Return on Environmental Compliance Rate Base, designated as the overall rate of return [cost of short-term debt, long-term debt, preferred stock, and common equity].
 - c) DR is the Debt Rate [cost of short-term debt, and long-term debt].
 - d) TR is the Composite Federal and State Income Tax Rate.
 - e) OE is the Operating Expenses. OE includes operation and maintenance expense recovery authorized by the K.P.S.C. in all approved ECR Plan proceedings.
 - f) EAS is the total proceeds from emission allowance sales.
 - g) BR is the operation and maintenance expenses, and/or revenues if applicable, associated with Beneficial Reuse.
 - h) Plans are the environmental surcharge compliance plans submitted to and approved by the Kentucky Public Service Commission pursuant to KRS 278.183.

DATE OF ISSUE: January 29, 2016

DATE EFFECTIVE: July 29, 2016

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2016-00026 dated _____, 20____

Kentucky Utilities Company

P.S.C. No. 17, First Revision of Original Sheet No. 87.1 Canceling P.S.C. No. 17, Original Sheet No. 87.1

Adjustment Clause

ECR Environmental Cost Recovery Surcharge

DEFINITIONS (continued)

- 2) Total E(m) (sum of each approved environmental compliance plan revenue requirement) is multiplied by the Jurisdictional Allocation Factor. Jurisdictional E(m) is adjusted for any (Over)/Under collection or prior period adjustment and by the subtraction of the Revenue Collected through Base Rates for the Current Expense month to arrive at Adjusted Net Jurisdictional E(m). Adjusted Net Jurisdictional E(m) is allocated to Group 1 and Group 2 on the basis of Revenue as a Percentage of Total Revenue for the 12 months ending with the Current Month to arrive at Group 1 E(m) and Group 2 E(m).
- 3) The Group 1 R(m) is the average of total Group 1 monthly base revenue for the 12 months ending with the current expense month. Base revenue includes the customer, energy, and lighting charges for each rate schedule included in Group 1 to which this mechanism is applicable and automatic adjustment clause revenues for the Fuel Adjustment Clause and the Demand-Side Management Cost Recovery Mechanism as applicable for each rate schedule in Group 1.
- 4) The Group 2 R(m) is the average of total Group 2 monthly base non-fuel revenue for the 12 months ending with the current expense month. Base non-fuel revenue includes the customer, non-fuel energy, and demand charges for each rate schedule included in Group 2 to which this mechanism is applicable and automatic adjustment clause revenues for the Demand-Side Management Cost Recovery Mechanism as applicable for each rate schedule in Group 2. Non-fuel energy is equal to the tariff energy rate for each rate schedule included in Group 2 less the base fuel factor as defined on Sheet No. 85.1, Paragraph 6.
- 5) Current expense month (m) shall be the second month preceding the month in which the Environmental Surcharge is billed.

DATE OF ISSUE: January 29, 2016

DATE EFFECTIVE: July 29, 2016

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

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