

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

In the Matter of:

Electronic Application Of Kentucky Power Company )  
For Approval of A Certificate of Public Convenience )  
And Necessity For Environmental Project )  
Construction At The Mitchell Generating Station, An )  
Amended Environmental Compliance Plan, And )  
Revised Environmental Surcharge Tariff Sheets )

Case No. 2021-00004

**DIRECT TESTIMONY OF**  
**LERAH M. SCOTT**  
**ON BEHALF OF KENTUCKY POWER COMPANY**

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**EXHIBITS**

<b><u>EXHIBIT</u></b>	<b><u>DESCRIPTION</u></b>
Exhibit LMS-1	2021 Plan
Exhibit LMS-2	Illustration of the changes to the current Tariff E.S.
Exhibit LMS-3	Revised Monthly ES (Environmental Surcharge) Forms 3.13 and 3.22
Exhibit LMS-4	Estimated annual revenue requirement
Exhibit LMS-5	Calculation of the estimated monthly impact of the environmental surcharge for both residential and all other rate schedules.

**DIRECT TESTIMONY OF  
LERAH M. SCOTT  
ON BEHALF OF  
KENTUCKY POWER COMPANY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**I. INTRODUCTION AND BACKGROUND**

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

2 A. My name is Lerah M. Scott. My business address is 1645 Winchester Avenue,  
3 Ashland, Kentucky 41101. My position is Regulatory Consultant, Kentucky Power  
4 Company (“Kentucky Power” or the “Company”).

5 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL  
6 BACKGROUND.**

7 A. In 2009, I earned a Bachelor of Arts degree in History from the University of  
8 Guelph in Guelph, Ontario, Canada. Additionally, in 2010 I received a Paralegal  
9 diploma from Algonquin Careers Academy in Mississauga, Ontario, Canada.

10 From 2013 through 2018 I worked at Sogefi Group Inc., a global supplier  
11 for the automotive industry, as a material planner and accounting specialist. I  
12 accepted my current position with Kentucky Power Company in July 2018.

13 **Q. WHAT ARE YOUR PRINCIPAL AREAS OF RESPONSIBILITY WITH  
14 KENTUCKY POWER?**

15 A. My primary responsibility is to support the Company’s regulatory activities. As  
16 part of this responsibility, I supervise the day-to-day implementation of Kentucky  
17 Power’s environmental surcharge and prepare the environmental surcharge filings  
18 utilized by the Company to implement the surcharge. Additionally, I assist with

1 the Company's other periodic regulatory filings with the Public Service  
2 Commission of Kentucky ("Commission").

3 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY**  
4 **PROCEEDINGS?**

5 A. Yes. I have submitted testimony before this Commission in Case No. 2019-00389  
6 (application for the Company's current Environmental Compliance Plan), Case No.  
7 2020-00133 (Commission's examination of the Company's Environmental  
8 Surcharge mechanism for the two-year billing period ending June 30, 2010), and  
9 most recently in Case No. 2020-00174 (base rate case).

## II. PURPOSE OF DIRECT TESTIMONY

10 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

11 A. My testimony supports the Company's application for approval of its 2021  
12 Environmental Compliance Plan ("2021 Plan"). As discussed by Company  
13 Witness Brett Mattison, Kentucky Power management evaluated two cases to meet  
14 the requirements of Coal Combustion Residual ("CCR") and Steam Electric  
15 Effluent Limitation Guidelines ("ELG") rules at the Mitchell Plant. Kentucky  
16 Power recommends that the Commission authorize the Company to undertake the  
17 compliance work required to permit the Mitchell Plant to continue to operate under  
18 the CCR and ELG requirements through 2040. Nonetheless, my testimony  
19 addresses both cases and refers to them as "CCR and ELG Case" or "Case 1," and  
20 "CCR Only Case" or "Case 2". In particular, my testimony addresses:

- 21 • Changes to the Company's existing 2019 Environmental Compliance Plan  
22 (the "2019 Plan");
- 23 • Changes to the Company's Environmental Surcharge Tariff ("Tariff E.S.");

- 1           • Changes to the Company’s monthly environmental surcharge forms 3.13  
2           and 3.22; and,  
3           • The total retail and residential impact of the 2021 Plan.

4   **Q.    ARE YOU SPONSORING ANY EXHIBITS?**

5   A.    Yes. I am sponsoring the following exhibits:

- 6           • Exhibit LMS-1 – 2021 Plan;  
7           • Exhibit LMS-2 – Illustration of the changes to the current Tariff E.S.;  
8           • Exhibit LMS-3 – Revised Monthly ES (Environmental Surcharge) Forms  
9           3.13 and 3.22;  
10          • Exhibit LMS-4 – Estimated annual revenue requirement; and,  
11          • Exhibit LMS-5 – Calculation of the estimated monthly impact of the  
12          environmental surcharge for both residential and all other rate schedules.

**III.    KENTUCKY POWER’S 2021 PLAN**

13   **Q.    HOW IS THE COMPANY AMENDING ITS 2019 PLAN?**

14   A.    The 2021 Plan adds Project 22 (CCR and ELG Case) to Kentucky Power’s existing  
15          environmental compliance plan. No other changes are proposed to the 2019 Plan.  
16          The Commission approved Kentucky Power’s existing environmental compliance  
17          plan in Case No. 2019-00389 by Order dated May 18, 2020. A copy of the proposed  
18          2021 Plan is included as Exhibit LMS-1.

19   **Q.    PLEASE EXPLAIN GENERALLY HOW KENTUCKY POWER  
20          RECOVERS APPROVED ENVIRONMENTAL COMPLIANCE COSTS  
21          THROUGH THE ENVIRONMENTAL SURCHARGE.**

22   A.    The Company’s Environmental Compliance Plan includes projects determined to  
23          be cost-effective and required for the Company to comply with the Federal Clean  
24          Air Act and federal, state, and local requirements applicable to coal combustion  
25          wastes and by-products from coal-fired generation facilities (“Environmental

1 Requirements”). The costs associated with these approved projects are recovered  
2 through a combination of both base rates and the Environmental Surcharge. There  
3 are two exceptions: a) the costs associated with the Mitchell Plant flue-gas  
4 desulfurization (“FGD”) project and b) the costs associated with the Rockport Plant  
5 Unit 2 selective catalytic reduction system (“SCR”). The FGD costs are excluded  
6 from the Company’s base rates pursuant to the Commission-approved Stipulation  
7 and Settlement Agreement in Case No. 2012-00578, and instead are recovered in  
8 their entirety through Tariff E.S. The SCR costs are excluded from the Company’s  
9 base rates because the unit was not in-service during the test year ending March  
10 31, 2020 used to establish Kentucky Power’s base revenue requirement approved  
11 by Order dated January 13, 2021 in Case No. 2020-00174.

12 Tariff E.S. identifies the monthly amount of environmental costs included  
13 in base rates. The monthly total cost included in base rates currently includes  
14 expenses and credits related to the operation of approved projects, a return on the  
15 environmental compliance rate base, emission allowance expenses, a return on the  
16 Company’s emission allowance inventory, a return on the Company’s consumable  
17 inventory, costs associated with the consumption of consumables, depreciation, and  
18 property taxes for both the Rockport Plant and the Mitchell Plant. Each month, the  
19 Company calculates the total cost associated with the approved environmental  
20 projects in the Environmental Compliance Plan. The Company then compares the  
21 total monthly environmental costs to the amount of environmental costs included  
22 in its base rates. If the total monthly environmental costs exceed the monthly base  
23 rate amount, customers are charged the difference through the environmental

1 surcharge. If the total monthly environmental costs are less than the monthly base  
2 rate amount, customers are credited the difference through the environmental  
3 surcharge.

**IV. MITCHELL CCR AND ELG PROJECTS THAT  
COMPRISE PROJECT 22**

4 **Q. BRIEFLY DESCRIBE THE CCR AND ELG PROJECTS.**

5 A. The CCR and ELG projects are required for compliance with the CCR Rule and the  
6 ELG Rule. The CCR Rule regulates the handling and storage of CCR material for  
7 the protection of groundwater. The ELG Rule regulates CCR-related wastewater  
8 discharges for the protection of surface water. The proposed wastewater pond work  
9 and chemical treatment is required to comply with the CCR Rule. The proposed  
10 dry ash handling system and water biological treatment system with ultrafiltration  
11 work is required to comply with the ELG Rule.

12 Company Witness Gary O. Spitznogle addresses the federal rulemakings  
13 that drive the need for Project 22 and the timeline for compliance. Company  
14 Witness Brian D. Sherrick addresses the scope and costs of Project 22, which I have  
15 utilized to determine the annual revenue requirement and retail impact.

16 **Q. DOES KENTUCKY POWER OWN THE MITCHELL PLANT?**

17 A. Kentucky Power owns an undivided 50% interest in the Mitchell Plant. The other  
18 50% interest is owned by Wheeling Power Company.

19 **Q. WHEN WILL PROJECT 22 BE PLACED IN SERVICE?**

20 A. As described by Company Witness Sherrick, Project 22 will be placed in service in  
21 stages. The Company forecasts the following in-service dates related to  
22 construction of the stages of Project 22:

- 1 • Dry Ash Handling System – May 2023
- 2 • Wastewater Ponds – November 2023
- 3 • Water Biological Treatment System with Ultrafiltration – April 2024.

4 The CCR Only Case requires only the construction and associated work in  
5 connection with the wastewater ponds. The Company estimates that the wastewater  
6 pond construction in connection with the CCR Only Case would be placed in  
7 service in November 2023.

#### V. REVENUE REQUIREMENT

8 **Q. WHAT IS KENTUCKY POWER’S SHARE FOR CCR AND ELG?**

9 A. As discussed by Company Witness Sherrick, the current estimated total cost for  
10 Case 1 (Project 22) is \$133.5 million. Accordingly, Kentucky Power’s total share  
11 is an estimated \$66.75 million. This figure consists of \$65.7 million in capital,  
12 \$900,000 in other charges, and \$83,000 in Asset Retirement Obligation (“ARO”)  
13 costs.

14 **Q. WHAT IS THE ESTIMATED ANNUAL REVENUE REQUIREMENT FOR**  
15 **PROJECT 22?**

16 A. Project 22 is expected to be placed in service in multiple stages with the last phase  
17 being placed in service April 2024. In addition, and discussed in further detail  
18 below, the Company is proposing to add construction work in progress to the  
19 environmental surcharge rate base until the assets are placed in service.  
20 Accordingly, Table 1 below outlines the annualized revenue requirement based on  
21 the various stages of Project 22.



**Table 1**

<b>Period</b>	<b>Period From*</b>	<b>Period To*</b>	<b>Revenue Requirement</b>	<b>Mos. In Period</b>	<b>Annualized Revenue Requirement</b>
Period 1	Aug-21	Apr-23	\$ 2,536,935	21	\$ 1,449,677
Period 2	May-23	Oct-23	\$ 2,796,202	6	\$ 5,592,404
Period 3	Nov-23	Mar-24	\$ 2,849,899	5	\$ 6,839,758
Period 4	Apr-24	Mar-25	\$ 8,166,153	12	\$ 8,166,153

\* Expense Month

1 **Q. PLEASE DESCRIBE AT A HIGH LEVEL THE PROJECT MILESTONES**  
2 **RELATED TO EACH PERIOD LISTED ABOVE.**

3 A. The periods provided in Table 1 align with the following Project 22 milestones:

- 4           • Period 1: Begin to include Construction Work in Progress (“CWIP”) as a  
5 component of the environmental surcharge rate base.<sup>1</sup>
- 6           • Period 2: Dry Ash Handling System is estimated to be placed into service  
7 (May 2023).
- 8           • Period 3: Wastewater Ponds is estimated to be placed into service  
9 (November 2023).
- 10          • Period 4: Water Biological Treatment System with Ultrafiltration is  
11 estimated to be placed into service (April 2024).

12 **Q. WHAT IS KENTUCKY POWER’S SHARE FOR CCR ONLY (CASE 2)?**

13 A. As discussed by Company Witness Sherrick, the current estimated total cost for  
14 CCR Only is \$35.1 million. Accordingly, Kentucky Power’s total share is an  
15 estimated \$17.5 million. This figure consists of \$12.6 million in capital, \$1.2  
16 million in other charges, and \$3.7 million in ARO costs.

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<sup>1</sup> The Company also will recover a levelized return on CWIP for the months of April 2020 through July 2021. As assets are placed in service, the corresponding CWIP will cease to be included in the environmental surcharge rate base.

1 **Q. WHAT IS THE ESTIMATED REVENUE REQUIREMENT FOR CCR**  
 2 **ONLY?**

3 A. Under the CCR Only Case there would be two periods. Period 1 provides for the  
 4 inclusion of construction work in progress in the environmental surcharge rate base  
 5 until the assets are placed in service.<sup>2</sup> Period 2 starts with the wastewater ponds  
 6 being placed in service. Table 2 below outlines the revenue requirement for these  
 7 two periods.

**Table 2**

<b>Period</b>	<b>Period From*</b>	<b>Period To*</b>	<b>Revenue Requirement</b>	<b>Mos. In Period</b>	<b>Annualized Revenue Requirement</b>
Period 1	Aug-21	Oct-23	\$ 1,262,368	27	\$ 561,052
Period 2	Nov-23	Oct-24	\$ 3,246,750	12	\$ 3,246,750

\* Expense Month

8 **Q. DO THE REVENUE REQUIREMENT CALCULATIONS INCLUDE THE**  
 9 **COSTS IDENTIFIED FOR ARO AND OTHER CHARGES?**

10 A. No. The estimated annual revenue requirements for both the CCR and ELG Case  
 11 and the CCR Only Case are specific to the \$65.7 million and \$12.6 million,  
 12 respectively, in capital costs. As discussed by Company Witness Whitney the  
 13 Company is proposing to continue recovery of ARO and other costs through base  
 14 rates. As addressed by Company Witness Sherrick there are also future AROs that  
 15 cannot be estimated at this time.

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<sup>2</sup> Includes the levelized recovery of a return on CWIP for the months of August 2020 through July 2021. As assets are placed in service, the corresponding CWIP will cease to be included in the environmental surcharge rate base.

1 **Q. HOW IS THE DEPRECIATION EXPENSE CALCULATED?**

2 A. For the CCR and ELG Case (Case 1), Company Witness Whitney supports the use  
3 of an annual depreciation rate of 5.86%. For the CCR Only Case (Case 2), Company  
4 Witness Whitney supports the use of an annual 20% depreciation rate.

5 Each depreciation rate was utilized for their corresponding case and was  
6 used to determine the depreciation expense amount found in Exhibit LMS-4.

7 **Q. WILL THE COMPANY RECOVER COSTS RELATED TO**  
8 **CONSTRUCTION WORK IN PROGRESS?**

9 A. Yes. Beginning with the month the Commission issues an order in this case  
10 (expected in August 2021) through the time the assets are placed in service, the  
11 Company will include CWIP as a component of the environmental surcharge rate  
12 base. For example, if the Commission issues approval in August 2021, the  
13 Company's September 2021 Environmental Surcharge filing, which reflects  
14 August actual expenses to be billed in October 2021, would incorporate CWIP to  
15 date in the environmental surcharge rate base for August 2021. Exhibit LMS-3  
16 illustrates the incorporation of CWIP into the monthly environmental surcharge  
17 forms.

18 **Q. ARE COSTS ASSOCIATED WITH PROJECT 22 BEING INCURRED**  
19 **PRIOR TO AUGUST 2021?**

20 A. Yes. These costs are limited to the necessary costs required for the engineering and  
21 related work required to investigate compliance options and to prepare this  
22 Application. The Company is requesting that a return on the amounts for CWIP

1 incurred from April 1, 2020<sup>3</sup> through the Commission's order in this case be  
2 recovered monthly on a levelized basis until the dry ash handling system is placed  
3 into service in May 2023. If an Order is issued in August 2021, Kentucky Power  
4 proposes to begin recovering through Tariff E.S. a return on the amount of CWIP  
5 associated with Project 22 from April 2020 through July 2021. The return  
6 associated with the Project 22 CWIP from April 2020 through July 2021 is  
7 estimated to total \$105,111<sup>4</sup> and will be recovered on a levelized basis over 21  
8 months in a monthly amount of \$5,005.) *See* Exhibit LMS-4. If the Commission's  
9 Order is entered in August 2021, this amount, plus the August 2021 CWIP, would  
10 be reflected in the Company's September 2021 environmental surcharge filing and  
11 billed to customers beginning with the October 2021 billing cycle.<sup>5</sup>

**VI. PROCESS FOR DETERMINING THE REVENUE REQUIREMENT**

12 **Q. PLEASE DESCRIBE THE PROCESS USED TO CALCULATE THE**  
13 **REVENUE REQUIREMENT FOR EACH CASE.**

14 A. The revenue requirement for each of the two Cases was calculated using the same  
15 approach and their derivation is shown on Exhibit LMS-4. The revenue requirement  
16 is calculated in a step-wise fashion.

17 First, the rate base is calculated by subtracting the monthly depreciation  
18 amount and the monthly accumulated deferred federal income tax from the  
19 estimated original cost. The monthly amount of incremental CWIP is added,

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<sup>3</sup> Test year end date used to establish Kentucky Power Company's base rates in Case No. 2020-00174 was March 31, 2020.

<sup>4</sup> Cell AB25 on Exhibit LMS-4 tab "Est Revenue Req CCR.ELG."

<sup>5</sup> Under the CCR Only Case the return on CWIP for the period between the end of the Company's base rate case and assumed order in this case (August 2021) is \$92,736 (cell AB21 on Exhibit LMS-4 tab "Est Revenue Req Only").

1 removing CWIP already being reflected in the Company’s base rates for these  
2 projects. Then, the monthly return on rate base is calculated by multiplying the  
3 calculated environmental rate base by the Commission-approved weighted average  
4 cost of capital (“WACC”).<sup>6</sup> The calculated monthly return on environmental rate  
5 base next is added to the monthly operations and maintenance (“O&M”)<sup>7</sup> expenses  
6 and depreciation expense to produce a total monthly revenue requirement. Finally,  
7 the 12-months ending December 2020 average retail allocation factor is applied to  
8 calculate the monthly retail revenue requirement.

## **VII. ESTIMATED RETAIL EFFECT**

9 **Q. WHAT IS THE ESTIMATED MONTHLY EFFECT OF PROJECT 22 ON**  
10 **THE AVERAGE RESIDENTIAL CUSTOMER’S BILL?**

11 A. For a residential customer using 1,219 kWh per month, the monthly increase in the  
12 customer’s total bill is expected to be \$0.40 (or 0.28%) beginning in October 2021  
13 (Period 1) and increasing to \$2.26 (or 1.58%) beginning in July 2024 (Period 4).<sup>8</sup>  
14 Exhibit LMS-5 provides detailed calculations of the estimated monthly impact of  
15 the environmental surcharge for both residential and all other rate schedules.<sup>9</sup>

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<sup>6</sup> As supported by Company Witness Mattison and approved by Order Dated January 13, 2021 in Case No. 2020-00174.

<sup>7</sup> As described by Company Witness Whitney, the Company is recovering ash disposal operations and maintenance costs through base rates and does not currently expect to incur incremental O&M related to the CCR and ELG construction projects.

<sup>8</sup> The monthly bill impact amounts were calculated based on the average customer bill for the twelve months ended December 2020.

<sup>9</sup> Under the CCR Only Case: For a residential customer using 1,219 kWh per month, the monthly increase in the customer’s total bill would be \$0.16 (or 0.11%) beginning in October 2021 and increasing to \$0.90 (or 0.63%) beginning in February 2024. Exhibit LMS-5 provides detailed calculations of the estimated monthly impact of the environmental surcharge for both residential and all other rate schedules.

1 **Q. WHEN WOULD THE COSTS OF THE PROJECTS BE REFLECTED IN**  
2 **KENTUCKY POWER'S ENVIRONMENTAL SURCHARGE?**

3 A. Most environmental costs recovered through the environmental surcharge are  
4 reflected on the customers' bills two months after they are incurred by Kentucky  
5 Power. The incorporation of CWIP into the environmental surcharge rate base will  
6 follow this schedule. The exceptions are those costs associated with plant in-  
7 service. Because of the delay in the availability of the information, plant in-service  
8 costs are filed with the Commission on a two month delay and appear on customers'  
9 bills beginning the following month.

#### **VIII. CHANGES TO TARIFF E.S.**

10 **Q. HAS THE COMPANY REVISED TARIFF E.S. (ENVIRONMENTAL**  
11 **SURCHARGE) TO REFLECT THE CHANGES PROPOSED FOR THE**  
12 **2021 PLAN?**

13 A. Yes. A copy of the Company's proposed Tariff E.S., with markups indicating  
14 changes from the current Tariff E.S., is included as Exhibit LMS-2.

15 **Q. WHAT CHANGES TO THE COMPANY'S TARIFF E.S. ARE BEING**  
16 **PROPOSED?**

17 A. The Company is proposing three changes to Tariff E.S. in this proceeding. First,  
18 the Company is updating references to its environmental compliance plan on 29-3  
19 to refer to the 2021 Plan, which includes Project 22. Second, the Company is  
20 updating the list of environmental costs for the total company provided on 29-5.  
21 Third, the Company is updating the list of environmental equipment at the Mitchell  
22 Plant on 29-6.

1 **Q. HAS THE COMPANY ALSO REVISED THE ENVIRONMENTAL**  
2 **SURCHARGE FORMS USED FOR ITS MONTHLY FILING?**

3 A. Yes. There are two forms being modified to incorporate Project 22. First, Form  
4 3.13 is being modified to a) include CWIP in the environmental surcharge rate base  
5 (line 13 on Exhibit LMS-3); and b) isolate the depreciation expense specific to  
6 Project 22 (line 36 on Exhibit LMS-3). Second, Form 3.22 is being modified to  
7 identify Project 22 and is illustrated on Exhibit LMS-3.

8 **Q. WHAT DATE IS THE COMPANY PROPOSING FOR THE CHANGES**  
9 **TO TARIFF E.S. TO GO INTO EFFECT?**

10 A. The Company is proposing that the changes associated with Project 22 go into  
11 effect for bills rendered on and after September 28, 2021. This will allow the  
12 Company to bill the appropriate changes beginning with Cycle 1 of the October  
13 2021 billing cycle.

14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 A. Yes, it does.

Kentucky Power Company's **Previously Approved** Environmental Compliance Projects

Project	Plant	Pollutant	Description	In-Service Year
1	Mitchell	NO <sub>x</sub> , SO <sub>2</sub> , and SO <sub>3</sub>	Mitchell Units 1 and 2 Water Injection, Low NO <sub>x</sub> Burners, Low NO <sub>x</sub> Burner Modification, SCR, FGD, Landfill, Coal Blending Facilities and SO <sub>3</sub> Mitigation	1993-1994-2002-2007
2	Mitchell	SO <sub>2</sub> , NO <sub>x</sub> , and Gypsum	Mitchell Plant Common CEMS, Replace Burner Barrier Valves and Gypsum Material Handling Facilities	1993-2004-2007
3	Rockport	SO <sub>2</sub> / NO <sub>x</sub>	Continuous Emission Monitors (CEMS) - Rockport Plant	1994
4	Rockport	NO <sub>x</sub> , Fly Ash, and Bottom Ash	Rockport Units 1 and 2 Low NOX Burners, Over Fire Air, and Landfill	2003-2008
5	Mitchell and Rockport	SO <sub>2</sub> /NO <sub>x</sub> /Particulates/VOC and etc.	Title V Air Emission Fees at Mitchell and Rockport Plants	Annual
6	Big Sandy, Mitchell, and Rockport	NO <sub>x</sub>	Costs Associated with Nox Allowances	As-Needed
7	Big Sandy, Mitchell, and Rockport	SO <sub>2</sub>	Costs Associated with SO <sub>2</sub> Allowances	As-Needed
8	Big Sandy, Mitchell, and Rockport	SO <sub>2</sub> / NO <sub>x</sub>	Costs associated with the CSAPR Allowances	As-Needed
9	Mitchell	Particulates	Precipitator Modifications - Mitchell Plant Units 1 and 2	2007-2013
10	Mitchell	Particulates	Bottom Ash and Fly Ash Handling - Mitchell Plant Units 1 and 2	2008 & 2010
11	Mitchell	Mercury	Mercury Monitoring (MATS) - Mitchell Plant Units 1 and 2	2014
12	Mitchell	Selenium	Dry Fly Ash Handling Conversion - Mitchell Plant Units 1 and 2	2015
13	Mitchell	Fly Ash, Bottom Ash, Gypsum, and WWTP Solids	Coal Combustion Waste Landfill - Mitchell Plant Units 1 and 2	2014 & 2015
14	Mitchell	Particulates	Electrostatic Precipitator Upgrade - Mitchell Plant Unit 2	2015
15	Rockport	Particulates	Precipitator Modifications - Rockport Plant Units 1 & 2	2004-2009
16	Rockport	Mercury	Activated Carbon Injection (ACI) and Mercury Monitoring - Rockport Plant Units 1 & 2	2009-2010
17	Rockport	HAPS	Dry Sorbent Injection - Rockport Plant Units 1 and 2	2015
18	Rockport	Fly Ash and Bottom Ash	Coal Combustion Waste Landfill Upgrade To Accept Type 1 Ash -- Rockport Plant	2013 and 2015
19	Rockport	NO <sub>x</sub>	Unit 1 SCR	2017
20	Rockport and Mitchell	Consumables	Costs associated with the use of consumables used in conjunction with approved ECP projects. These costs include the return on inventory of consumables as well as consumption of consumables. These consumables include but are not limited to sodium bicarbonate, activated carbon, anhydrous ammonia, trona, lime hydrate, limestone, polymer, and urea.	As-Needed
21	Rockport	NO <sub>x</sub>	Unit 2 SCR	2020

Kentucky Power Company's **Proposed** Environmental Compliance Projects

Project	Plant	Pollutant	Description	In-Service Year
22	Mitchell	Fly Ash, Bottom Ash, Gypsum, and Waste Water Discharge	Costs associated with CCR and ELG compliance at the Mitchell Plant.	2023 and 2024



KENTUCKY POWER COMPANY

P.S.C. KY. NO. 12 1<sup>st</sup> REVISED ORIGINAL SHEET NO. 29-3  
CANCELLING P.S.C. KY. NO. ~~121~~ 1<sup>st</sup> REVISED ORIGINAL SHEET NO. 29-3

**TARIFF E.S. (Cont'd)**  
**(Environmental Surcharge)**

**RATE (Cont'd)**

OE <sub>KP(C)</sub>	=	Monthly Pollution Control Operating Expenses for Mitchell.
RB <sub>IM(C)</sub>	=	Environmental Compliance Rate Base for Rockport.
ROR <sub>IM(C)</sub>	=	Annual Rate of Return on Rockport Rate Base; Annual Rate divided by 12 to restate to a Monthly Rate of Return.
OE <sub>IM(C)</sub>	=	Monthly Pollution Control Operating Expenses for Rockport.
AS	=	Net proceeds from the sale of Title IV and CSAPR SO <sub>2</sub> emission allowances, ERCs, and NOx emission allowances, reflected in the month of receipt.

“KP(C)” identifies components from Mitchell Units – Current Period, and “IM(C)” identifies components from the Indiana Michigan Power Company’s Rockport Units – Current Period.

The Environmental Compliance Rate Base for both Kentucky Power and Rockport reflects the current cost associated with the 1997 Plan, the 2003 Plan, the 2005 Plan, the 2007 Plan, the 2015 Plan, the 2017 Plan, ~~and~~ the 2019 Plan, and the 2021 Plan. The Environmental Compliance Rate Base for Kentucky Power should also include construction work in progress until assets are placed in service. The Operating Expenses for both Kentucky Power and Rockport reflects the current operating expenses associated with the 1997 Plan, the 2003 Plan, the 2005 Plan, the 2007 Plan, the 2015 Plan, the 2017 Plan, ~~and~~ the 2019 Plan, and the 2021 Plan.

The Rate of Return for Kentucky Power is 9.10% rate of return on equity as authorized by the Commission in its Order Dated January 13, 2021, Case No. 2020-00174.

The Rate of Return for Rockport should reflect the requirements of the Rockport Unit Power Agreement.

Net Proceeds from the sale of emission allowances and ERCs that reflect net gains will be a reduction to the Current Period Revenue Requirement, while net losses will be an increase.

The Current Period Revenue Requirement will reflect the balances and expenses as of the Expense Month of the filing.

(Cont'd on Sheet No. 29-4)

DATE OF ISSUE: XXXX XX, XXXX  
DATE EFFECTIVE: Bills Rendered On And After September 28, 2021  
ISSUED BY: /s/ Brian K. West  
TITLE: Vice President, Regulatory & Finance  
By Authority Of an Order of the Public Service Commission  
In Case No. 2021-00004 Dated XXXX XX, XXXX

KENTUCKY POWER COMPANY

P.S.C. KY. NO. 12 ~~1<sup>st</sup> REVISED ORIGINAL SHEET NO. 29-5~~ T  
CANCELLING P.S.C. KY. NO. ~~121~~ ORIGINAL SHEET NO. 29-5 T

**TARIFF E.S. (Cont'd)**  
**(Environmental Surcharge)**

**RATE (Cont'd)**

6. Environmental costs "E" shall be the Company's costs of compliance with the Clean Air Act and those environmental requirements that apply to coal combustion wastes and by-products, as follows:

Total Company:

- return on Title IV and CSAPR SO<sub>2</sub> allowance inventory
- over/under recovery balances between the actual costs incurred less the amount collected through the environmental surcharge
- costs associated with any Commission's consultant approved by the Commission
- costs associated with the consumption of Title IV and CSAPR SO<sub>2</sub> allowances
- costs associated with the consumption of NO<sub>x</sub> allowances
- return on NO<sub>x</sub> allowance inventory
- costs associated with maintaining approved pollution control equipment including material and contract labor (excluding plant labor)
- costs associated with consumables used in conjunction with approved environmental projects.
- return on inventories of consumables used in conjunction with approved environmental projects.
- return on environmental compliance rate base including construction work in progress. T

(Cont'd on Sheet No. 29-6)

DATE OF ISSUE: XXXX XX, XXXX  
DATE EFFECTIVE: Bills Rendered On And After September 28, 2021  
ISSUED BY: /s/ Brian K. West  
TITLE: Vice President, Regulatory & Finance  
By Authority Of an Order of the Public Service Commission  
In Case No. 2021-00004 Dated XXXX XX, XXXX

KENTUCKY POWER COMPANY

P.S.C. KY. NO. 12 1<sup>st</sup> REVISED ORIGINAL SHEET NO. 29-6  
CANCELLING P.S.C. KY. NO. 12 ORIGINAL 1-1<sup>st</sup> REVISED SHEET NO. 29-6

T

T

**TARIFF E.S. (Cont'd)**  
**(Environmental Surcharge)**

**RATE (Cont'd)**

The Company's share of costs associated with the following environmental equipment at the Rockport Plant:

- Continuous Emissions Monitors
- Air Emission Fees
- Costs Associated with the Rockport Unit Power Agreement
- Activated Carbon Injection
- Mercury Monitoring
- Precipitator Modifications
- Dry Sorbent Injection
- Coal Combustion Waste Landfill
- Low NO<sub>x</sub> burners, over Fire Air Landfill
- Selective Catalytic Reduction Technology

The Company's share of costs associated with the following environmental equipment at the Mitchell Plant:

- Mitchell Unit Nos 1 and 2 Water Injection, Low NO<sub>x</sub> burners, Low NO<sub>x</sub> burner Modification, SCR, FGD, Landfill, Coal Blending Facilities and SO<sub>3</sub> Mitigation
- Mitchell Plant Common CEMS, Replace Burner Barrier Valves and Gypsum Material Handling Facilities
- Air Emission Fees
- Precipitator Modifications and Upgrades
- Coal Combustion Waste Landfill
- Bottom Ash and Fly Ash Handling
- Mercury Monitoring (MATS)
- Dry Fly Ash Handling Conversion
- Dry Fly Ash Handling System (ELG)
- Wastewater Ponds (CCR)
- Water Biological Treatment System with Ultrafiltration (ELG)

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(Cont'd on Sheet No. 29-7)

DATE OF ISSUE: XXXX XX, XXXX  
DATE EFFECTIVE: Bills Rendered On And After September 28, 2021  
ISSUED BY: /s/ Brian K. West  
TITLE: Vice President, Regulatory & Finance  
By Authority Of an Order of the Public Service Commission  
In Case No. 2021-00004 Dated XXXX XX, XXXX

ES FORM 3.13

Kentucky Power Company  
Mitchell Environmental Costs  
SAMPLE ONLY

Ln. No.	Cost Component	Non-FGD Costs	FGD Costs	Total Costs
1	Utility Plant at Original Cost	X	X	X
2	Less Accumulated Depreciation	X	X	X
3	Less Accumulated Deferred Income Tax	X	X	X
4	Net Utility Plant	X	X	X
5	*SO2 Emission Allowance Inventory	X	X	X
6	*CSAPR SO2 Emission Allowance Inventory	X	X	X
7	*CSAPR NOx Emission Allowance Inventory (Seasonal)	X	X	X
8	*CSAPR AN Emission Allowance Inventory (Annual)	X	X	X
9	Limestone Inventory (1540006)	X	X	X
10	Urea Inventory (1540012)	X	X	X
11	Limestone In-Transit Inventory (1540022)	X	X	X
12	Urea In-Transit Inventory (1540023)	X	X	X
13	Construction Work in Progress (CWIP)	X	X	X
14	<b>Total Rate Base</b>	X	X	X
15	Weighted Average Cost of Capital X			
16	Monthly Weighted Avg. Cost of Capital	X	X	X
17	Monthly Return on Rate Base	X	X	X
18	Monthly Disposal (5010000)	X	X	X
19	Monthly Fly Ash Sales (5010012)***	X	X	X
20	Monthly Urea Expense (5020002)	X	X	X
21	Monthly Trona Expense (5020003)	X	X	X
22	Monthly Lime Stone Expense (5020004)	X	X	X
23	Monthly Polymer Expense (5020005)	X	X	X
24	Monthly Lime Hydrate Expense (5020007)	X	X	X
25	Monthly WV Air Emission Fee	X	X	X
26	SO2 Consumption **	X	X	X
27	CSAPR SO2 Consumption **	X	X	X
28	CSAPR Annual NOx Consumption	X	X	X
29	CSAPR Seasonal NOx consumption	X	X	X
30	<b>Total Monthly Operation Costs</b>	X	X	X
31	Monthly FGD Maintenance Expense	X	X	X
32	Monthly Non-FGD Maintenance Expense	X	X	X
33	<b>Total Monthly Maintenance Expense</b>	X	X	X
34	Monthly Depreciation Expense	X	X	X
35	Monthly Catalyst Amortization Expense	X	X	X
36	Monthly ELG/CCR Depreciation Expense	X	X	X
37	Monthly Property Tax	X	X	X
38	<b>Total Monthly Other Expenses</b>	X	X	X
39	<b>Total Monthly Operation, Maintenance, and Other Expenses</b>	X	X	X
40	<b>O&amp;M for corresponding month of test year</b>	X	X	X
41	<b>Difference in Test Year Month O&amp;M &amp; Current Month O&amp;M</b>	X	X	X
42	<b>Gross-up for Uncollectible Expense &amp; KPSC Maint Fee (Ln 42 * .006093)</b>	X	X	X
43	<b>Total Revenue Requirement</b>	X	X	X

\* Inventory Includes Total Kentucky Power allowances inventory.

\*\* Includes Consumption for Rockport and Mitchell plants only.

ES FORM 3.22

Kentucky Power Company  
SAMPLE ONLY

Plant	Description	Total In Service Cost	Accumulated Depreciation
Mitchell	FGD	X	X
Mitchell	Mitchell Units 1 and 2 Water Injection	X	X
Mitchell	Low NOX Burners	X	X
Mitchell	Low NOX Burner Modification,	X	X
Mitchell	SCR	X	X
Mitchell	Landfill	X	X
Mitchell	Coal Blending Facilities	X	X
Mitchell	SO3 Mitigation	X	X
Mitchell	Mitchell Plant Common CEMS	X	X
Mitchell	Replace Burner Barrier Valves	X	X
Mitchell	Gypsum Material Handling Facilities	X	X
Mitchell	Precipitator Modifications - Mitchell Plant Units 1 and 2	X	X
Mitchell	Bottom Ash and Fly Ash Handling - Mitchell Plant Units 1 and 2	X	X
Mitchell	Mercury Monitoring (MATS) - Mitchell Plant Units 1 and 2	X	X
Mitchell	Dry Fly Ash Handling Conversion - Mitchell Plant Units 1 and 2	X	X
Mitchell	Coal Combustion Waste Landfill - Mitchell Plant Units 1 and 2	X	X
Mitchell	Electrostatic Precipitator Upgrade - Mitchell Plant Unit 2	X	X
Mitchell	Dry Fly Ash Handling System (ELG)	X	X
Mitchell	Wastewater Ponds (CCR)	X	X
Mitchell	Water Biological Treatment System with Ultrafiltration (ELG)	X	X
Mitchell	<b>Non-FGD Total</b>	X	X
RK1	Precipitator Modifications	X	X
RK1	*Activated Carbon Injection (ACI) and Mercury Monitoring	X	X
RK1	*Dry Sorbent Injection	X	X
RK1	Coal Combustion Waste Landfill Upgrade To Accept Type 1 Ash	X	X
RK1	Continuous Emission Monitors (CEMS)	X	X
RK1	Low NOX Burners	X	X
RK1	Selective Catalytic Reduction Technology	X	X
RK1	Over Fire Air	X	X
RK1	Landfill	X	X
RK1	<b>Rockport Unit 1 Total</b>	X	X
RK2	Precipitator Modifications	X	X
RK2	*Activated Carbon Injection (ACI) and Mercury Monitoring	X	X
RK2	*Dry Sorbent Injection	X	X
RK2	Coal Combustion Waste Landfill Upgrade To Accept Type 1 Ash	X	X
RK2	Continuous Emission Monitors (CEMS)	X	X
RK2	Low NOX Burners	X	X
RK2	Selective Catalytic Reduction Technology	X	X
RK2	Over Fire Air	X	X
RK2	Landfill	X	X
RK2	<b>Rockport Unit 2 Total</b>	X	X



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### E-Signature Summary

**E-Signature 1: Lerah Scott (LS)**

February 05, 2021 09:04:38 -8:00 [CD7AADAFD8CA] [161.235.221.83]  
 lmscott@aep.com (Principal) (Personally Known)

**E-Signature Notary: S. Smithhisler (SRS)**

February 05, 2021 09:04:38 -8:00 [ECA9DB29B959] [167.239.221.82]  
 srsmithhisler@aep.com  
 I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Lerah M. Scott, being duly sworn, deposes and says she is a Regulatory Consultant for Kentucky Power Company, that she has personal knowledge of the matters set forth in the forgoing testimony, and the information contained therein is true and correct to the best of her information, knowledge and belief after reasonable inquiry.

  
Signed on 2021/02/05 09:04:38 -8:00

Lerah M. Scott

STATE OF OHIO

)


) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Lerah M. Scott, this 5<sup>th</sup> day of February 2021.



  
Signed on 2021/02/05 09:04:38 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

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