COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief	)))))))	Case No. 2020-00174

SECTION III

DIRECT TESTIMONY OF
SCOTT, BISHOP, WHITNEY, KEATON,
COST, STEGALL, MESSNER, AND MCKENZIE
ON BEHALF OF KENTUCKY POWER COMPANY

VOLUME 2 OF 2

June 29, 2020

COMMONWEALTH OF KENTUCKY

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DIRECT TESTIMONY OF

LERAH M. SCOTT

ON BEHALF OF KENTUCKY POWER COMPANY

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

CASE NO. 2020-00174

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Exhibit LMS-2	Proposed Environmental Surcharge Tariff (“Tariff E.S.”)
Exhibit LMS-3	Revised Monthly ES (Environmental Surcharge) Calculation Forms

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

CASE NO. 2020-00174

I. INTRODUCTION

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

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

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCES.

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

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

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

A. My primary responsibility is to support the Company's regulatory activities. As part of this responsibility, I supervise the day-to-day implementation of Kentucky Power's environmental surcharge and prepare the environmental surcharge filings with the Commission. Additionally, I assist with the Company's other periodic regulatory filings with the Public Service Commission of Kentucky ("Commission"), including the Fuel Adjustment Clause.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY PROCEEDINGS?

A. Yes. I submitted testimony in connection with the Company's application (Case No. 2019-00389) for approval of its Amended Environmental Compliance Plan ("ECP") and revised environmental surcharge.

III. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to support an update to the Company's base revenue requirement for its environmental surcharge. In addition, I support the following adjustments to test year revenues and operating expenses:

- An adjustment to remove the capital cost of the Mitchell flue gas desulfurization ("FGD") and FGD-associated consumable inventories from rate base;
- An adjustment to remove Mitchell FGD expenses from test year expenses;
- An adjustment to remove Mitchell FGD revenues and to synchronize other environmental surcharge revenues and expenses during the test year;
- An adjustment to normalize major storm damage expense; and,
- An adjustment to eliminate advertising expense.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I have prepared the following exhibits:

- Exhibit LMS-1 – Adjusted Environmental Base;

- Exhibit LMS-2 – Proposed Tariff E.S.; and,
- Exhibit LMS-3 – Revised Monthly ES Calculation Forms.

IV. BASE ENVIRONMENTAL REVENUE REQUIREMENT

Q. PLEASE EXPLAIN GENERALLY HOW KENTUCKY POWER RECOVERS ITS ENVIRONMENTAL COSTS.

A. Kentucky Power recovers the costs of the authorized environmental projects included in its ECP through a combination of base rates and the environmental surcharge. The authorized projects included in the Company's ECP, which was most recently updated May 18, 2020, are those projects necessary for the Company to comply with the Federal Clean Air Act and federal, state, and local requirements applicable to coal combustion wastes and by-products from coal-fired generation facilities ("Environmental Requirements"). Tariff E.S. identifies, for each month, the amount of environmental costs included in base rates. Each month, the Company calculates the total costs associated with the approved environmental projects in its ECP. The monthly total cost currently includes expenses and credits related to the operation of approved projects, a return on the environmental compliance rate base, emission allowance expenses, a return on the Company's emission allowance inventory, costs associated with the consumption of consumables, depreciation, and property taxes for both the Rockport Plant and the Mitchell Plant. The Company then compares the total monthly environmental costs to the amount of environmental costs included in its base rates. If the total monthly environmental costs exceed the monthly base rate amount, customers are charged the difference through the environmental surcharge. If the total monthly environmental costs are less than the monthly base rate amount, customers are credited the difference through the environmental surcharge.

Q. PLEASE EXPLAIN HOW THE MONTHLY ENVIRONMENTAL COMPLIANCE BASE REVENUE REQUIREMENT WAS CALCULATED.

A. The process for identifying the monthly environmental base rate amount is described below and reflected in Exhibit LMS-1. The test year monthly environmental compliance base revenue requirement was calculated in a step-wise fashion. First, the Company identified Kentucky Power's share of the costs associated with Mitchell Non-FGD environmental projects in each month of the test year. Second, the Company added Kentucky Power's share of the monthly test year costs associated with the approved Rockport environmental projects. Finally, the Company included gains on allowances in each month.

Q. WERE THE COSTS FOR ALL OF THE COMPANY'S ENVIRONMENTAL COMPLIANCE PLAN PROJECTS INCLUDED IN THE CALCULATION OF THE MONTHLY ENVIRONMENTAL COMPLIANCE BASE REVENUE REQUIREMENT CALCULATION?

A. No. To properly identify the base level of environmental project costs, only the costs associated with projects that were in-service during the test year were included in the base revenue requirement calculation. The selective catalytic reduction system ("SCR") at Rockport Unit 2 was not in service during the test year ended March 31, 2020. The Commission approved the SCR at Rockport Unit 2, Project 21 for inclusion in the Company's 2019 ECP, in Case No. 2019-00389 Order dated May 18, 2020. The unit went into service early June 2020, after the close of the test year. As a result, the costs associated with the Rockport Unit 2 SCR will be recovered exclusively through Tariff E.S.

Additionally, and as explained in more detail below, the costs associated with the Mitchell FGD were not included in the calculation of the environmental compliance revenue requirement.

V. COSTS ASSOCIATED WITH THE MITCHELL FGD

Q. WHY ARE THE MITCHELL FGD COSTS NOT INCLUDED IN THE BASE ENVIRONMENTAL COSTS?

A. Paragraph 6 of the Commission-approved Stipulation and Settlement Agreement in Case No. 2012-00578 requires that all costs associated with the Mitchell FGD system be recovered solely through the environmental surcharge and excluded from base rates.

Q. DID YOU PREPARE ANY RATE CASE ADJUSTMENTS TO REMOVE KENTUCKY POWER'S SHARE OF THE COSTS ASSOCIATED WITH THE MITCHELL FGD FROM THE TEST YEAR DATA AND THE PROPOSED ENVIRONMENTAL COMPLIANCE RATE BASE AMOUNTS?

A. Yes. Please refer to Adjustments W03 and W04 within Section V, Exhibit 2. I prepared Adjustment W03 to remove Mitchell FGD operating and maintenance expenses from the calculation of the environmental base. The Mitchell FGD operating expense adjustment also includes the costs associated with gypsum disposal, limestone, lime hydrate, and polymer in addition to the depreciation, maintenance, and property tax expenses. After allocating the FGD expenses to retail customers as described in the Order dated March 31, 2003 in Case No. 2002-00169, this adjustment reduces test year operating expenses by a total of $13,231,810.

Additionally, I prepared Adjustment W04 to remove the rate base amount of the Mitchell FGD. The rate base deduction was calculated by removing the accumulated depreciation and accumulated deferred income tax amounts from the FGD electric plant in service amount. This adjustment also removes the consumable inventory of the limestone that is used in conjunction with the FGD. The production demand allocation factor was then applied to the rate base amount and the production demand energy allocation factor was applied to the consumable inventory. This adjustment results in a reduction of test-year base rate amount of $169,826,135.

Q. WHAT DEPRECIATION RATE WAS USED TO CALCULATE THE DEPRECIATION EXPENSE FOR THE MITCHELL FGD?

A. The Company uses a 2.96% depreciation rate for projects within account 312 – Boiler Plant Equipment. This is the depreciation rate utilized in developing the depreciation expense for the Mitchell FGD and is the same depreciation rate approved by the Commission in Case No. 2017-00179.

VI. WEIGHTED AVERAGE COST OF CAPITAL

Q. WHAT WEIGHTED AVERAGE COST OF CAPITAL ("WACC") DID KENTUCKY POWER USE IN CALCULATING THE REVENUE REQUIREMENT FOR THE NON-ROCKPORT ENVIRONMENTAL PROJECTS, INCLUDING THE MITCHELL FGD?

A. Kentucky Power used a 6.58% WACC. The WACC is calculated in Section V, Schedule 2, Page 1, of the Application and described in the testimony of Company Witness Messner. In calculating the WACC for the non-Rockport environmental projects, Kentucky Power used the 10.00% rate of return on equity proposed by the

Company in this case. The basis for using a 10.00% rate of equity is included in the testimony of Company Witnesses McKenzie and Mattison.

Q. WHAT WACC DID KENTUCKY POWER USE IN CALCULATING THE REVENUE REQUIREMENT FOR THE ROCKPORT ENVIRONMENTAL PROJECTS?

A. The Company calculated the Rockport average weighted cost of capital each month using information included in the Unit Power Bill ("UPA"). In calculating the WACC associated with the Rockport environmental projects, the Company utilizes a 12.16% return on equity for environmental projects at the Rockport Plant, as established by the FERC-approved Rockport UPA.

VII. <u>GROSS REVENUE CONVERSION FACTOR</u>

Q. IS THE COMPANY PROPOSING ANY CHANGES TO ITS GROSS REVENUE CONVERSION FACTOR ("GRCF")?

A. Yes. The revised factor can be found in Section V, Schedule 2, Page 2, of the Application and shown on Form 3.15 of Exhibit LMS-3.

VIII. <u>CHANGES TO TARIFF E.S.</u>

Q. HAS THE COMPANY REVISED TARIFF E.S. TO REFLECT THE CHANGES PROPOSED ABOVE?

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

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

A. Yes. A copy of the Company's revised environmental surcharge forms is included as Exhibit LMS-3. The proposed changes will not result in changes to the surcharge formulas but instead are limited to updated components used in the formulas. The only forms affected by the above proposed changes are:

- Form 1.10 – updated base environmental revenue requirement;
- Form 3.13 – updated WACC (line 15) and gross-up factor (line 41);
- Form 3.15 – revised to align with Section V, Schedule 2, Page 1 of the Application; and,
- Form 3.20 – updated gross-up factor (line 26).

IX. RATE CASE ADJUSTMENTS

Q. DID YOU PREPARE ANY ADJUSTMENTS BESIDES THE ENVIRONMENTAL COMPLIANCE ADJUSTMENTS W03 AND W04 DESCRIBED ABOVE?

A. Yes. I prepared adjustments to test year revenue amounts to remove FGD-related revenues and deferrals, an adjustment for the normalization of major storm damage expense and an adjustment to eliminate advertising expense.

Environmental Surcharge Revenue (Section V, Exhibit 2, W05)

Q. PLEASE EXPLAIN THE ENVIRONMENTAL SURCHARGE REVENUE ADJUSTMENT.

A. Because the costs associated with the Mitchell FGD have been removed from cost of service, any associated revenues must also be removed. This adjustment is calculated by first determining the total test year revenues associated with the Company's ECP; this calculation is made by adding the total amount of environmental surcharge revenue for the test year to the test year annual environmental compliance base revenue amount. The Company next deducted the going-forward annual environmental compliance base revenue amount as set forth in Exhibit LMS-1. This calculation results in a $28,786,651 reduction to base rates that simultaneously removes the FGD revenues and synchronizes the environmental compliance costs and revenues.

In addition to the removal of the FGD revenues, adjustment W05 adds $457,503 of deferred environmental surcharge amounts. Removing revenue or expense related to over-/under-recovery ensures that rider-related amounts are not in the determination of the Company's base rates. Company Witness Whitney discusses the basis for over-/under-recovery accounting.

Major Storm Normalization
(Section V, Exhibit 2, W16)

Q. HOW WAS THE MAJOR STORM NORMALIZATION ADJUSTMENT CALCULATED?

A. The Company adjusted its test year storm damage expense, less in-house labor, by using its three-year average storm damage expense, less in-house labor, adjusted by the Handy-Whitman Contract Labor Index. This is the same method used by the Company in its last several rate cases. Using the three year average, and deducting the test year level of storm damage expense, results in an increase of $511,729 in jurisdictional storm damage expenses.

Elimination of Advertising Expense
(Section V, Exhibit 2, W19)

Q. PLEASE DESCRIBE THE ADJUSTMENT TO ELIMINATE ADVERTISING EXPENSE.

A. Expenditures for political, promotional, and institutional advertising by electric or gas utilities are disallowed for ratemaking purposes by 807 KAR 5:016 Section 4(1), a. Following a review of the Company's advertising expenses recorded during the test year, a total of $104,982 is being eliminated from test year operating expenses.

Q. DOES THIS CONCLUDE YOUR PRE-FILED TESTIMONY?

A. Yes, it does.

Ln No.	**Month / Year**	**Mitchell Non-FGD**	**KPCo Share of Rockport Environmental Costs**	**Gains on Sale of Allowances**	**Adjusted Environmental Base**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6) =(3)+(4)-(5)**
1	Apr-19	$ 3,215,390	$ 1,515,516	$ -	$ 4,730,906
2	May-19	$ 3,199,021	$ 1,358,604	$ -	$ 4,557,625
3	Jun-19	$ 2,759,529	$ 1,215,316	$ -	$ 3,974,845
4	Jul-19	$ 2,739,079	$ 1,527,229	$ 56,580	$ 4,209,729
5	Aug-19	$ 2,735,743	$ 1,274,155	$ -	$ 4,009,897
6	Sep-19	$ 2,529,826	$ 1,259,727	$ 25,350	$ 3,764,203
7	Oct-19	$ 2,548,404	$ 1,302,814	$ -	$ 3,851,218
8	Nov-19	$ 2,617,197	$ 1,279,641	$ -	$ 3,896,838
9	Dec-19	$ 2,751,222	$ 1,155,876	$ 12,800	$ 3,894,298
10	Jan-20	$ 2,536,010	$ 1,070,981	$ 24,400	$ 3,582,591
11	Feb-20	$ 2,778,182	$ 1,270,450	$ 9,000	$ 4,039,633
12	Mar-20	$ 2,615,812	$ 1,158,007	$ -	$ 3,773,820
13	**Total**	$ 33,025,416	$ 15,388,316	$ 128,130	$ 48,285,602

KENTUCKY POWER COMPANY P.S.C. KY. NO. ~~11 2ND REVISED~~12 ORIGINAL SHEET NO. 29-1 T
CANCELLING P.S.C. KY. NO. 11 2ND REVISED ~~11 1ST REVISED~~ SHEET NO. 29-1 T

TARIFF E.S.
(Environmental Surcharge)

APPLICABLE.

To Tariffs R.S., R.S.D.,R.S.-L.M.-T.O.D., R.S.-T.O.D., Experimental R.S.-T.O.D. 2, G.S., S.G.S.-T.O.D., M.G.S.-T.O.D., L.G.S., L.G.S.-T.O.D., I.G.S., C.S.- I.R.P., C.S. Coal, M.W., O.L., and S.L.

RATE.

The environmental surcharge shall provide for monthly adjustments based on a percent of revenues, equal to the difference between the environmental compliance costs in the base period as provided in Paragraph 2 below and in the current period as provided in Paragraph 3 below.

The retail share of the revenue requirement will be allocated between residential and non-residential retail customers based upon their respective total revenues during the previous calendar year. The Environmental Surcharge will be implemented as a percentage of total revenues for the residential class and as a percentage of non-fuel revenues for all other customers.

The revenues to which the residential Environmental Surcharge factor are applied is the sum of the customer's Service Charge, Energy Charge(s), Fuel Adjustment Clause, System Sales Clause, Demand-Side Management Adjustment Clause, Federal Tax Cut, Residential Energy Assistance, Capacity Charge, ~~and~~ Purchase Power Adjustment, and Grid Modernization Rider. T

The revenues to which the all other customer Environmental Surcharge factor are applied is the sum of the customer's Service Charge, Demand Charge, Energy Charge(s) less Base Fuel, Minimum Charge, Reactive Charge, System Sales Clause, Demand-Side Management Adjustment Clause, Federal Tax Cut, Kentucky Economic Development Surcharge, Capacity Charge, ~~and~~ Purchase Power Adjustment, and Grid Modernization Rider. T

1. Monthly Environmental Surcharge Gross Revenue Requirement, E(m)

Where:	E(m)	=	CRR - BRR
	CRR	=	Current Period Revenue Requirement for the Expense Month.
	BRR	=	Base Period Revenue Requirement.

(Continued on Sheet 29-2) T

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TITLE: Director, Regulatory Services
By Authority Of an Order of the Public Service Commission
In Case No. 2020-00174 Dated XXXXXX

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

RATE (Cont'd)

2. Base Period Revenue Requirement, BRR

BRR = The Following Monthly Amounts:

Billing Month	Base Net Environmental Costs	
January	$ ~~3,664,681~~ 3,582,591	T
February	~~3,581,017~~ 4,039,633	
March	~~3,353,024~~ 3,773,820	
April	~~3,661,574~~ 4,730,906	
May	~~3,595,145~~ 4,557,625	
June	~~3,827,332~~ 3,974,845	
July	~~3,747,320~~ 4,209,729	
August	~~3,888,262~~ 4,009,897	
September	~~3,636,247~~ 3,764,203	
October	~~3,824,697~~ 3,851,218	
November	~~3,717,340~~ 3,896,838	
December	$ ~~3,882,677~~ 3,894,298	
	$ ~~44,379,316~~ 48,285,602	

In accordance with the Stipulation and Settlement Agreement approved by the Commission by its Order dated October 7, 2013 in Case No. 2012-00578, the Mitchell FGD and all related associated costs are not included in base rates or the Base Revenue Requirement but will be included in the Current Period Revenue Requirement. The Mitchell FGD will be excluded from Base Rates at least until June 30, 2020.

3. Current Period Revenue Requirement, CRR

$$CRR=[((RB_{KP(c)})(ROR_{KP(c)})/12) + OE_{KP(c)} + [((RB_{IM(c)})\ (ROR_{IM(c)})/12) + OE_{IM(c)}]\ (.15) - AS]$$

Where:

$RB_{KP(C)}$ = Environmental Compliance Rate Base for Mitchell.

$ROR_{KP(C)}$ = Annual Rate of Return on Mitchell Environmental Compliance Rate Base; Annual Rate divided by 12 to restate to a Monthly Rate of Return.

(Cont'd on Sheet 29-3)

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KENTUCKY POWER COMPANY P.S.C. KY. NO. ~~11~~ 12 ORIGINAL SHEET NO. 29-3 T
CANCELLING P.S.C. KY. NO. ~~10~~ 11 ORIGINAL SHEET NO. 29-3 T

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

RATE (Cont'd)

$OE_{KP(C)}$	=	Monthly Pollution Control Operating Expenses for Mitchell.
$RB_{IM(C)}$	=	Environmental Compliance Rate Base for Rockport.
$ROR_{IM(C)}$	=	Annual Rate of Return on Rockport Rate Base; Annual Rate divided by 12 to restate to a Monthly Rate of Return.
$OE_{IM(C)}$	=	Monthly Pollution Control Operating Expenses for Rockport.
AS	=	Net proceeds from the sale of Title IV and CSAPR SO_2 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, ~~and~~ the 2017 Plan, and the 2019 Plan. The Environmental Compliance Rate Base for Kentucky Power should also include a cash working capital allowance based on the 1/8 formula approach, due to the inclusion of Kentucky Power's accounts receivable financing in the capital structure and weighted average cost of capital. 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, ~~and~~ the 2017 Plan, and the 2019 Plan. T T

The Rate of Return for Kentucky Power is 10.00~~9.70~~% rate of return on equity as authorized by the Commission in its Order Dated ~~January~~ XXXX XX, 2020 in ~~18,~~
~~2018 in~~ Case No. 20~~17-00179~~20-00174. T

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)

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

RATE (Cont'd)

4. Revenue Allocation

$$\text{Residential Allocation } RA(m) = \frac{\text{KY Residential Retail Revenue } RR(b)}{\text{KY Retail Revenue } R(b)}$$

$$\text{All Other Allocation } OA(m) = \frac{\text{KY All Other Classes Retail Revenue } OR(b)}{\text{KY Retail Revenue } R(b)}$$

Where:
(m) = the expense month
(b) = most recent calendar year revenues

5. Environmental Surcharge Factor

$$\text{Residential Monthly Environmental Surcharge Factor} = \frac{\text{Net KY Retail } E(m) \ * \ RA(m)}{\text{KY } RR(m)}$$

$$\text{All Other Monthly Environmental Surcharge Factor} = \frac{\text{Net KY Retail } E(m) \ * \ AO(m)}{\text{KY } OR(m) - \text{KY } OF(m)}$$

Where:
Net KY Retail E(m) = Monthly E(m) allocated to Kentucky Retail Customers, net of Over/(Under) Recovery Adjustment; Allocation based on Percentage of Kentucky Retail Revenues to Total Company Revenues in the Expense Month.

(For purposes of this formula, Total Company Revenues do not include Non -Physical Revenues.)

RR(m) = Average Kentucky Residential Retail Revenues for the Preceding Twelve Month Period

OR(m) = Average Kentucky All Other Classes Retail Revenues for the Preceding Twelve Month Period

OF(m) = Average Kentucky All Other Classes Fuel Revenues for the Preceding Twelve Month Period.

(Cont'd on Sheet No. 29-5)

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KENTUCKY POWER COMPANY

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CANCELLING P.S.C. KY. NO. ~~10~~ 11 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 CSA~~S~~PR SO_2 allowance inventory T
- 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_2 allowances
- costs associated with the consumption of NO_x allowances
- return on NO_x 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.

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

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KENTUCKY POWER COMPANY

P.S.C. KY. NO. ~~11~~ 12 ORIGINAL SHEET NO. 29-6 T

CANCELLING P.S.C. KY. NO. ~~10~~ 11 ORIGINAL SHEET NO. 29-6 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 NOx burners, over Fire Air Landfill
- Selective Catalytic Reduction Technology at Unit 1

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_x burners, Low NO_x burner Modification, SCR, FGD, Landfill, Coal Blending Facilities and SO_3 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

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

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

RATE (Cont'd)

7. The monthly environmental surcharge shall be filed with the Commission ten (10) days before it is scheduled to go into effect, along with all necessary supporting data to justify the amount of the adjustments which shall include data and information as may be required by the Commission.

KENTUCKY POWER COMPANY

Environmental Surcharge

Summary

Month Ended: **SAMPLE ONLY**

Residential Environmental Surcharge Factor	=	X / X	=	X
All Other Classes Environmental Surcharge	=	X / X	=	X

Effective Date for Billing: X

Submitted by: ____________________
(Signature)

Title: X

Date Submitted: X

ES FORM 1.00

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CALCULATION OF E(m) and SURCHARGE FACTOR
SAMPLE ONLY

	CALCULATION OF E(m) E(m) = CRR - BRR			
LINE 1	CRR from ES FORM 3.00	X		
LINE 2	BRR from ES FORM 1.10	X		
LINE 3	Mitchell FGD Expenses (E.S. Form 3.13, Line 42)	X		
LINE 4	E(m) (LINE 1 - LINE 2 + LINE 3)	X		
LINE 5	Kentucky Retail Jurisdictional Allocation Factor, from ES FORM 3.30, Schedule of Revenues, LINE 1	X		
LINE 6	KY Retail E(m) (LINE 4 * LINE 5)	X		
LINE 7	Under/ (Over) Collection, ES Form 3.30	X		
LINE 8	Net KY Retail E(m) (Line 6 + Line 7)	X		
	SURCHARGE FACTORS	Residential	All Other Classifications	
LINE 9	Allocation Factors, % of revenue during previous Calendar Year	X	X	
LINE 10	Current Month's Allocation E(m) (Line 8* Line 9)	X	X	
LINE 11	Kentucky Residential Revenues/All Other Non-Fuel Revenues	X	X	
LINE 12	Surcharge Factors (Line 10/Line 11)	X	X	

ES FORM 1.10

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
BASE PERIOD REVENUE REQUIREMENT
SAMPLE ONLY

MONTHLY BASE PERIOD REVENUE REQUIREMENT

Billing Month	Base Net Environmental Costs
JANUARY	$3,582,591
FEBRUARY	$4,039,633
MARCH	$3,773,820
APRIL	$4,730,906
MAY	$4,557,625
JUNE	$3,974,845
JULY	$4,209,729
AUGUST	$4,009,897
SEPTEMBER	$3,764,203
OCTOBER	$3,851,218
NOVEMBER	$3,896,838
DECEMBER	$3,894,298
TOTAL	$48,285,602

ES FORM 3.00

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
SAMPLE ONLY

CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS		
	First Component: Associated with Mitchell Non-FGD expenses		
1	**ES FORM 3.13**, Line 42		X
	Second Component: Associated with Rockport Plant [((RB IM(C)) (ROR IM(C)/12)) + OE IM(C)]		
2	**ES FORM 3.20**, Line 28		X
3	**Third Component:** Net Proceeds from Emission Allowances Sales		
	1) **CAIR SO2** - EPA Auction Proceeds received during Expense Month	X	
	2) **CSAPR SO2** - Net Gain or (Loss) from Allowance Sales, received during Expense Month	X	
	Total Net Proceeds from SO2 Allowances	**X**	
	3) **NOx** - EPA Auction Proceeds, received during Expense Month	X	
	4) **NOx** - Net Gain or (Loss) from NOx Allowances Sales, received during Expense Month	X	
	Total Net Proceeds from NOx Allowances	**X**	
4	Total Net Gain or (Loss) from Emission Allowance Sales	------------------	X ------------------
5	Total Current Period Revenue Requirement, CRR Record on ES FORM 1.00. (Line 1 + Line 2 + Line 4)		X

ES FORM 3.11 A

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
SO2 EMISSIONS ALLOWANCE INVENTORY

SAMPLE ONLY

	(1) Total Allowance Inventory (Quantity)	(2) Total Allowance Inventory (Dollar Value)	(3) Current Allowance Inventory (Quantity)	(4) Current Allowance Inventory (Dollar Value)	(5) Average Cost per Allowance (Current Allowances)	
MONTHLY BEGINNING INVENTORY	X	X	X	X	X	
Additions -						
EPA Allowances	X	X	X	X	X	
Gavin Reallocation	X	X	X	X	X	
P & E Transfers In	X	X	X	X	X	
Intercompany Purchases	X	X	X	X	X	
Other (List)	X	X	X	X	X	
SO2 Emissions Allowance Adjustment	X	X	X	X	X	
Withdrawals -						
P & E Transfers Out	X	X	X	X	X	
Intercompany Sales	X	X	X	X	X	
Off - System Sales	X	X	X	X	X	
Surrenders- Consent Decree	X	X	X	X	X	
Consumption Adjustment (RP & ML)	X	X	X	X	X	****
Consumption Adjustment (BS)	X	X	X	X	X	
SO2 Emissions Allowances Consumed By Kentucky Power - 1:1 (Year 2009 & Prior)	X	X	X	X	X	
SO2 Emissions Allowances Consumed By Mitchell and Rockport	X	X	X	X	X	*
SO2 Emissions Allowances Consumed By Big Sandy	X	X	X	X	X	**
ENDING INVENTORY - Record Balance on ES FORM 3.13	X	X	X	X	X	***

* Includes only Mitchell and Rockport allowance consumption.
** Big Sandy consumption is recovered through base and not included in E(m).
*** Inventory represents entire Kentucky Power SO2 emissions allowance inventory.
**** Prior Year Consumption Adjustments. Only adjustments related to Rockport and Mitchell are included.

ES FORM 3.11B

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
CSAPR SO2 EMISSIONS ALLOWANCE INVENTORY

SAMPLE ONLY

	(1) Total Allowance Inventory (Quantity)	(2) Total Allowance Inventory (Dollar Value)	(3) Current Allowance Inventory (Quantity)	(4) Current Allowance Inventory (Dollar Value)	(5) Average Cost per Allowance (Current Allowances)	
MONTHLY BEGINNING INVENTORY	X	X	X	X	X	
Additions -						
EPA Allowances	X	X	X	X	X	
Gavin Reallocation	X	X	X	X	X	
P & E Transfers In	X	X	X	X	X	
Intercompany Purchases	X	X	X	X	X	
Other (List)	X	X	X	X	X	
CSAPR SO2 Emissions Allowance Adjustment	X	X	X	X	X	
Withdrawals -						
P & E Transfers Out	X	X	X	X	X	
Intercompany Sales	X	X	X	X	X	
Off - System Sales	X	X	X	X	X	
Consumption Adjustment (RP & ML)	X	X	X	X	X	****
Consumption Adjustment (BS)	X	X	X	X	X	
CSAPR SO2 Emissions Allowances Consumed in Current Month At Rockport and Mitchell Plants	X	X	X	X	X	*
CSAPR SO2 Emissions Allowances Consumed in Current Month at Big Sandy Plant	X	X	X	X	X	**
ENDING INVENTORY - Record Balance on ES FORM 3.13	X	X	X	X	X	***

* Includes only Mitchell and Rockport allowance consumption.
** Big Sandy consumption is recovered through base and not included in E(m).
*** Inventory represents entire Kentucky Power CSAPR SO2 emissions allowance inventory.
**** Prior Year Consumption Adjustments. Only adjustments related to Rockport and Mitchell are included.

ES FORM 3.12 A

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
CSAPR Annual NOx EMISSIONS ALLOWANCE INVENTORY
SAMPLE ONLY

	(1) Total Allowance Inventory (Quantity)	(2) Total Allowance Inventory (Dollar Value)	(3) Current Allowance Inventory (Quantity)	(4) Current Allowance Inventory (Dollar Value)	(5) Average Cost per Allowance (Current Allowances)	
MONTHLY BEGINNING INVENTORY	X	X	X	X	X	
Additions -						
EPA Allowances	X	X	X	X	X	
P&E Transfers In	X	X	X	X	X	
Intercompany Purchases	X	X	X	X	X	
Other (List)	X	X	X	X	X	
Withdrawals -						
P & E Transfers Out	X	X	X	X	X	
Intercompany Sales	X	X	X	X	X	
Off - System Sales	X	X	X	X	X	
Prior Period Consumption Adjustment	X	X	X	X	X	
CSAPR Annual NOx Emissions Allowances Consumed By Kentucky Power--Mitchell and Rockport Plants	X	X	X	X	X	*
CASPR Annual NOx Emissions Allowances Consumed By Kentucky Power--Big Sandy Plant	X	X	X	X	X	**
ENDING INVENTORY - Record Balance on ES FORM 3.13	X	X	X	X	X	***

* Includes only Mitchell and Rockport allowance consumption.
** Big Sandy consumption is recovered through base and not included in E(m).
*** Inventory represents entire Kentucky Power CSAPR ANNX emissions allowance inventory.

ES FORM 3.12 B

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
CSAPR Seasonal NOx EMISSIONS ALLOWANCE INVENTORY
SAMPLE ONLY

	(1) Total Allowance Inventory (Quantity)	(2) Total Allowance Inventory (Dollar Value)	(3) Current Allowance Inventory (Quantity)	(4) Current Allowance Inventory (Dollar Value)	(5) Average Cost per Allowance (Current Allowances)	
MONTHLY BEGINNING INVENTORY	X	X	X	X	X	
Additions -						
EPA Allowances	X	X	X	X	X	
P&E Transfers In	X	X	X	X	X	
Intercompany Purchases	X	X	X	X	X	
External Purchases	X	X	X	X	X	
Other (List)	X	X	X	X	X	
CSAPR Seasonal NOx Emissions Allowance Adjustment	X	X	X	X	X	
Withdrawals -						
P & E Transfers Out	X	X	X	X	X	
Intercompany Sales	X	X	X	X	X	
External Sales	X	X	X	X	X	
Consumption Adjustments	X	X	X	X	X	
CSAPR Seasonal NOx Emissions Allowances Consumed By Kentucky Power --Rockport and Mitchell Plants only	X	X	X	X	X	*
CSAPR Seasonal NOx Emissions AllowancesConsumed by Kentucky Power--Big Sandy Plant	X	X	X	X	X	**
ENDING INVENTORY - Record Balance on ES FORM 3.13	X	X	X	X	X	***

* Includes only Mitchell and Rockport allowance consumption.
** Big Sandy consumption is recovered through base and not included in E(m).
*** Inventory represents entire Kentucky Power CSAPR Seasonal NOx emissions allowance inventory.

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 S02 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	Cash Working Capital Allowance		X	X	X
14	**Total Rate Base**		**X**	**X**	**X**
15	Weighted Average Cost of Capital	8.12%			
16	Monthly Weighted Avg. Cost of Capital		0.68%	0.68%	0.68%
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 S02 Consumption **		X	X	X
28	CSAPR Annual NOx Consumption		X	X	X
29	CSAPR Seasonal NOx consumption		X	X	X
30	**Total Monthly Operation Costs**		**X**	**X**	**X**
31	Monthly FGD Maintenance Expense		X	X	X
32	Monthly Non-FGD Maintenance Expense		X	X	X
33	**Total Monthly Maintenance Expense**		**X**	**X**	**X**
34	Monthly Depreciation Expense		X	X	X
35	Monthly Catalyst Amortization Expense		X	X	X
36	Monthly Property Tax		X	X	X
37	**Total Monthly Other Expenses**		**X**	**X**	**X**
38	**Total Monthly Operation, Maintenance, and Other Expenses**		**X**	**X**	**X**
39	**O&M for corresponding month of test year**		X	X	X
40	**Difference in Test Year Month O&M & Current Month O&M**		X	X	X
41	**Gross-up for Uncollectible Expense & KPSC Maint Fee (Ln 40 * .006093)**		**X**	**X**	**X**
42	**Total Revenue Requirement**		**X**	**X**	**X**

* Inventory Includes Total Kentucky Power allowances inventory.
** Includes Consumption for Rockport and Mitchell plants only.

ES FORM 3.15

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
MITCHELL PLANT COST OF CAPITAL

SAMPLE ONLY

LINE NO.	Component	Balances	Cap. Structure	Cost Rates	WACC (Net of Tax)	GRCF	WACC (PRE-TAX)
		As of 3/31/2020					
1	L/T DEBT	$762,880,808	53.75%	4.030%	2.17%	1.006093	2.1832%
2	S/T DEBT	$0	0.00%	2.230%	0.00%	1.006093	0.0000%
3	ACCTS REC FINANCING	$42,248,932	2.98%	2.802%	0.08%	1.006093	0.0805%
4	C EQUITY	$614,167,162	43.27%	**10.000%**	4.33%	**1.352731**	5.8573%
5	TOTAL	**$1,419,296,902**	**100.00%**				**8.1210%**

		Debt	Equity
6	Operating Revenues	100.0000	100.0000
7	Less Uncollectible Accounts Expense	0.4100	0.4100
8	KPSC Maintenance Assessment Fee	0.1956	0.1956
9	Income Before Income Taxes	99.3944	99.3944
10	Less State Income Taxes (Ln 4 x 5.8545)	5.8545%	5.8190
11	Income Before Federal Income Taxes		93.5754
12	Less Federal Income Taxes (Ln 13*21%)		19.6508
13	Operating Income Percentage		73.9245
14	Gross Up Factor (100.00/Ln 9)	1.006093	1.3527

E.S. 3.20

Kentucky Power Company
Rockport Environmental Costs
SAMPLE ONLY

Ln. No.	Cost Component		Total Costs	
1a	Utility Plant at Original Cost Unit 1		X	
1b	Utility Plant at Original Cost Unit 2		X	
2	Less Accumulated Depreciation		X	
3	Less Accumulated Deferred Income Tax		X	
4	Net Utility Plant		X	
5	Activated Carbon Inventory (1540025)		X	
6	Anhydrous Ammonia Inventory (1540028)		X	
7	Sodium Bicarbonate Inventory (1540029)		X	
8	Cash Working Capital Allowance		X	
9	**Total Rate Base**		X	
10	Weighted Average Cost of Capital	X		
11	Monthly Weighted Avg. Cost of Capital		X	
12	Monthly Return on Rate Base		X	
13	Monthly Sodium Bicarbonate (5020028)		X	
14	Monthly Brominated Activated Carbon (5020008)		X	
15	Monthly Anhydrous Ammonia (5020013)		X	
16	Monthly IN Air Emission Fee		X	
17	Property Tax		X	*
18	**Total Monthly Operation Costs**		X	
19	Monthly Maintenance Expense		X	
20	**Total Monthly Maintenance Expense**		X	
21a	Monthly Depreciation Expense Unit 1	**2.95%**	X	**
21b	Monthly Depreciation Expense Unit 2	**28.48%**	X	**
22	Total Monthly Other Expenses		X	
23	Total Monthly Operation, Maintenance, and Other Expenses		X	
24	O&M for corresponding month of test year		X	
25	Difference in Base Level O&M & Current Month O&M		X	
26	Gross-up for Uncollectible Expense & KPSC Maint Fee (Ln 25 * .006093)		X	
27	Total Revenue Requirement		X	
28	**KPCo Share of Environmental Revenue Requirement**	**15%**	X	

* Indiana does not currently assess property taxes on environmental controls.
** In accordance with FERC Docket No. ER19-717-000 Order dated February 14, 2019.

ES FORM 3.21

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL

SAMPLE ONLY

LINE NO.	Component	Balances As of xxxxxx	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF		WACC (PRE - TAX)
1	L/T DEBT	X	X	X		X			X
2	S/T DEBT	X	X	X		X			X
3	CAPITALIZATION OFFSETS	X	X	X		X			X
4	DEBT	X	X	X		X			X
5	C EQUITY	X	X	**12.1600%**	1/	X	X	2/	X
		-------------------	-------------------			-------------------			-------------------
6	TOTAL	X	X			X			X
		==========	==========			==========			==========

	WACC = Weighted Average Cost of Capital	
1/	Cost Rates per the Provisions of the Rockport Unit Power Agreement	
2/	Gross Revenue Conversion Factor (GRCF) Calculation:	
7	OPERATING REVENUE	X
8	LESS: INDIANA ADJUSTED GROSS INCOME	
9	(LINE 1 X .0550)	X
10	INCOME BEFORE FED INC TAX	X
11	LESS: FEDERAL INCOME TAX	
12	(LINE 4 X .21)	X
13	OPERATING INCOME PERCENTAGE	X
14	GROSS REVENUE CONVERSION	
15	FACTOR (100% / LINE 13)	X

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.20, Line 10.

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	**Non-FGD Total**	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	**Rockport Unit 1 Total**	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	**Rockport Unit 2 Total**	X	X

ES FORM 3.30

KENTUCKY POWER COMPANY - ENVIRONMENTAL SURCHARGE REPORT
CURRENT PERIOD REVENUE REQUIREMENT
MONTHLY REVENUES, JURISDICTIONAL ALLOCATION FACTOR,
and (OVER)/UNDER RECOVERY ADJUSTMENT
SAMPLE ONLY

SCHEDULE OF MONTHLY REVENUES

Line No.	Description	Monthly Revenues	Percentage of Total Revenues
1	Kentucky Retail Revenues	x	x
2	FERC Wholesale Revenues	x	x
3	Associated Utilities Revenues	x	x
4	Non-Assoc. Utilities Revenues	x	x
		-------------------	-------------------
5	Total Revenues for Surcharges Purposes	x	x
6	Non-Physical Revenues for Month	x	
7	Total Revenues for Month	x	

The Kentucky Retail Percentage of Total Revenues (Line 1) is to be recorded on ES FORM 1.00, Line 5. The Percentage of Kentucky Retail Revenues to the Total Revenues for the Expense Month will be the Kentucky Retail Jurisdictional Allocation Factor.

OVER/(UNDER) RECOVERY ADJUSTMENT

Line No.	Description	
1	Surcharge Amount To Be Collected	x
2	Actual Billed Environmental Surcharge Revenues	x
3	(Over) / Under Recovery (1) - (2) = (3)	x

The (Over)/Under Recovery amount is to be recorded on ES FORM 1.00, LINE 7.

ES Form 3.31

Kentucky Power Company
Total Billed Revenues
As Used in Calculation of ES Form 3.30
Calendar Year 202X

Line No.	Revenue Category (1)	Total (2)	Percentage of Total (3)	**Residential/ All Other Classes to be used in 202X** (4)
1	Residential	X	X	**X**
2	All Other Classes	X	X	**X**
3	Total Retail Revenues	X	X	**X**
4	FERC Wholesale Revenues	X	X	
5	Associated Utilities Revenues	X	X	
6	Non Associated Utilities Revenues	X	X	
7	Non-Physical Sales	X	X	
8	Total Revenues	X		

KENTUCKY POWER COMPANY
Environmental Surcharge
Billed Revenues
SAMPLE ONLY

Month	Residential Revenues	Residential Decommissioning Rider Revenues	Residential Environmental Surcharge Revenues	Residential PPA Revenues	Residential ATR Revenues	Residential, Non-Percentage of Revenue Rider Revenues
(1)	(2)	(3)	(4)	(5)	(6)	(7) (2)-(3)-(4)-(5)-(6)
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
x	X	X	X	X	X	X
Average Monthly Residential Revenues for 12-Month Period ended with most Recent Expense Month						X

Non-Residential, Non-Fuel Revenues								
Month	Non-Residential Revenues	Base Rate Fuel Revenue	Fuel Adjustment Clause Revenue	Non-Residential Decommissioning Rider Revenues	ATR	Non-Residential Environmental Surcharge Revenues	Non-Residential PPA Revenues	Non-Residential, Non-Percentage of Revenue Rider Total Revenues
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) (2)-(3)-(4)-(5)-(6)-(7)
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
x	X	X	X	X	X	X	X	X
Average Monthly Non-Residential Revenues for 12-Month Period ended with most Recent Expense Month								X

Kentucky Power Company
Environmental Surcharge
Cash Working Capital Calculation
SAMPLE ONLY

ES 3.33

		Rockport	Mitchell Non-FGD	Mitchell FGD
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X
5	X	X	X	X
6	X	X	X	X
7	X	X	X	X
8	X	X	X	X
9	X	X	X	X
10	X	X	X	X
11	X	X	X	X
12	X	X	X	X
	1/8 of 12-Month Total	X	X	X

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.

Lerah M. Scott

COMMONWEALTH OF KENTUCKY)
) Case No. 2020-00174
COUNTY OF BOYD)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Lerah M. Scott, this 24 day of June 2020.

Notary Public

OFFICIAL SEAL
TRISHA NANCE
NOTARY PUBLIC - KENTUCKY
STATE-AT-LARGE
My Comm. Expires September 26, 2023
ID # 632421

Notary ID Number: 632421

My Commission Expires: 9-26-2023

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2020-00174
Regulatory Assets And Liabilities; (4) Approval Of A	)	
Certificate Of Public Convenience And Necessity;	)	
And (5) All Other Required Approvals And Relief	)	

DIRECT TESTIMONY OF

SCOTT E. BISHOP

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
SCOTT E. BISHOP ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

TABLE OF CONTENTS

EXHIBITS

DIRECT TESTIMONY OF
SCOTT E. BISHOP ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

Q, PLEASE STATE YOUR NAME, POSITION WITH KENTUCKY POWER COMPANY, AND BUSINESS ADDRESS.

A. My name is Scott E. Bishop. My position is Regulatory Consultant Senior for Kentucky Power Company ("Kentucky Power" or the "Company"). My business address is 1645 Winchester Avenue, Ashland, Kentucky 41101.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCES.

A. I received a Bachelor of Arts degree in Economics from The Ohio State University in Columbus, Ohio in 1992 and a Master of Business Administration degree from Ohio Dominican University in Columbus, Ohio in 2004. I began my utility industry career with American Electric Power Service Corporation ("AEPSC") in October 1998 as a Cash Management Analyst with responsibility for determining the corporation's daily cash position. In 2000, I transferred to the Trusts and Investments Department as an Investment Analyst. My duties included staying abreast of pending legislation and litigation that could affect AEP benefits and performing analysis and reporting for the corporate investment committee. I also worked as an Analyst in other departments where my work included the analysis of spending trends, and creation of complex financial models. In January 2010, I accepted the position of Demand Side Management ("DSM") / Energy Efficiency Coordinator for AEPSC. In October 2010, I transferred to Kentucky Power Company. My duties included developing, issuing, and evaluating requests for proposals for potential DSM programs and third-party managers. I also implemented and managed new DSM programs, managed program budgets, assisted with Public Service Commission of Kentucky ("Commission") filings and status reports, supported the preparation of responses to Commission data requests and inquiries, and assisted with testimony development.

In April 2018, I assumed my current position as Regulatory Consultant Senior for Kentucky Power.

Q WHAT ARE YOUR PRINCIPAL AREAS OF RESPONSIBILITY WITH KENTUCKY POWER?

A. My primary responsibility is to support the Company's regulatory activities. As part of this responsibility, I prepare the Company's monthly Fuel Adjustment Clause filings with the Commission. Additionally, I assist with the Company's other periodic Commission regulatory filings.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN ANY REGULATORY PROCEEDING?

A. Yes. I submitted testimony in the Company's most recent Demand-Side Management adjustment clause proceeding (Case No. 2019-00410).

III. PURPOSE OF TESTIMONY

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

The purpose of my testimony is to support two adjustments to the Company's test year operating expenses to remove non-recoverable business expenses and tariff insert expenses. Additionally, I describe certain proposed changes to Kentucky Power's tariffs.

Q. ARE YOU SPONSORING ANY EXHIBITS TO YOUR TESTIMONY?

A. Yes, I am sponsoring Exhibit SEB-1, which provides a summary of the changes to the tariff sheets.

IV. OPERATING EXPENSE ADJUSTMENTS

Q. PLEASE IDENTIFY EACH OF THE REVENUE AND OPERATING EXPENSE ADJUSTMENTS THAT YOU ARE SPONSORING.

A. The details of the revenue and operating expense adjustments are set forth on various pages of Section V, Exhibit 2 to the application. Specifically, I am sponsoring the following adjustments:

Adjustment	Adjustment No.
Non-recoverable Business Expense	W34
Tariff Insert Expense	W46

Additional information regarding each of these adjustments is provided below.

Elimination of Non-recoverable Business Expense
(Section V, Exhibit 2, W34)

Q. PLEASE DESCRIBE THE ADJUSTMENT TO ELIMINATE NON-RECOVERABLE BUSINESS EXPENSES.

A. The Company is removing non-recoverable business expenses during the test year, including those relating to athletic events tickets and employee gifts and awards. The adjustment decreases the Company's test year expenses by $27,551.

Elimination of Tariff Insert Expense
(Section V, Exhibit 2, W46)

Q. PLEASE EXPLAIN THE COMPANY'S ELIMINATION OF TARIFF INSERT EXPENSE.

A. In Case No. 2020-00022, the Company requested a deviation, to the extent required, from the requirements of 807 KAR 5:006, Section 7(1)(b) and for authorization to provide a monthly recurring bill message alerting customers of their right to request and receive their applicable rate schedule via mail or email as a substitute for the notification methods identified in 807 KAR 5:006, Section 7(1)(b). The Commission granted the Company's request on April 29, 2020. During the test year, expenses associated with the printing, processing, and mailing each customer's applicable rate schedule were $9,496. Because the Company will no longer annually incur these costs, this adjustment removes that amount from test year expenses.

V. TARIFF SHEET CHANGES

Q. PLEASE DESCRIBE THE TARIFF SHEET CHANGES THE COMPANY IS PROPOSING IN THIS CASE.

A. The Company is proposing to add new tariffs and modify certain existing tariff sheets. Each category of change is described below. A set of the Company's proposed tariff sheets are included in Section II, Exhibit D of the Company's Application. The proposed effective date of the Company's revised tariffs is December 30, 2020, the first day of the January 2021 billing cycle.

Q. PLEASE IDENTIFY THE NEW TARIFFS THE COMPANY IS PROPOSING.

A. As described by Company Witness West, the Company is proposing to add Tariff F.P. (Flex Pay Program) and Tariff G.M.R. (Grid Modernization Rider). The Company is also proposing to add Rider D.R.S. (Demand Response Service) and Tariff N.M.S II (Net Metering Service II), as explained by Company Witness Vaughan.

Q. IS THE COMPANY PROPOSING ANY MODIFICATIONS TO ITS EXISTING TARIFFS IN THIS PROCEEDING?

A. Yes. In addition to the rate changes sought in this proceeding, the Company is proposing a number of textual changes to its current tariffs. My testimony does not address minor text changes that clarify existing language or that are intended to conform the tariff to other approved tariffs. A summary of those changes is provided in Exhibit SEB-1.

I describe proposed substantive changes to Tariff F.A.C. (Fuel Adjustment Clause) and Tariff E.D.R. (Economic Development Rider) below. In addition to those changes I describe, the Company is also proposing substantive changes to Tariff O.L. (Outdoor Lighting), Tariff S.L. (Street Lighting), Tariff N.M.S (Net Metering Service), Tariff N.U.G. (Non-Utility Generator), Tariff F.T.C. (Federal Tax Cut Tariff), and Tariff R.S. (Residential Service), including a new provision regarding electric vehicle charging in certain of its residential and general service tariff. Company Witness Vaughan describes each of those tariff modifications and additions.

Fuel Adjustment Clause

Q. IS THE COMPANY PROPOSING ANY CHANGES TO ITS FUEL ADJUSTMENT CLAUSE TARIFF?

A. Yes. The Company is proposing to update Tariff F.A.C. to include PJM billing line item 1999 as a category of fuel costs recoverable through the tariff. PJM allocates costs associated with PJM Customer Payment Defaults to Kentucky Power through billing line item 1999.

Q. WHY IS THE COMPANY PROPOSING THIS CHANGE?

A. As the Commission has recognized, costs that PJM allocates to Kentucky Power through billing line item 1999 are fuel-related costs. In its December 26, 2019 order in Case No. 2019-00002 at page 4, the Commission stated:

> Should Kentucky Power want to recover fuel-related costs such as the GreenHat default costs that are not passed through the FAC tariff via listed PJM billing line items, it has a number of options such as seeking recovery through base rates in a base rate case or requesting to update its FAC Tariff in a base rate case.

Based upon the Commission's direction in Case No. 2019-00002, the Company is requesting that billing line Item 1999 be added to the Company's Tariff F.A.C. as recoverable fuel expenses.

Q. IS PJM CURRENTLY ALLOCATING PJM CUSTOMER DEFAULT COSTS TO KENTUCKY POWER THROUGH PJM BILLING LINE ITEM 1999?

A. Yes. PJM has been allocating costs to Kentucky Power associated with the June 2018 default of GreenHat Energy, LLC ("GreenHat") since mid-2018 and is expected to continue to do so through June 2021. It is also possible that PJM in the future could allocate costs related to other PJM customer defaults.

Q. DID THE COMPANY REQUEST ACCOUNTING AUTHORITY TO DEFER GREENHAT DEFAULT CHARGES AS A REGULATORY ASSET?

A. Yes. In Case No. 2020-00034, the Company requested approval of accounting authority to defer GreenHat default charges. That case remains pending before the Commission. In her direct testimony, Company Witness Whitney supports an adjustment for GreenHat default costs through the end of the test year, March 31, 2020. Further, Ms. Whitney supports the amortization over a three-year period of those costs through December 31, 2020. Any GreenHat default costs incurred after December 31, 2020, or any similar charges billed to the Company through billing line item 1999 in the future, would be recovered through Tariff F.A.C.

Economic Development Rider

Q. IS THE COMPANY PROPOSING ANY CHANGES TO ITS ECONOMIC DEVELOPMENT RIDER?

A. Yes, Tariff E.D.R., was developed to encourage companies to locate or expand operations in the Company's service territory. Under Tariff E.D.R., the Company offers a monthly billing demand discount through a Commission-approved service contract. The contract term is equal to twice the number of years for which the customer receives a demand discount. For example, for a ten year contract, the customer will receive a demand discount for the first five years of the contract. The demand discount under the existing tariff would be 50% for the first 12 months, 40% for the second 12 months, and so forth. The demand discounts declines by 10% every 12 month.

The Company is proposing to amend Tariff E.D.R. to afford customers flexibility in choosing the timing of the application of the contractual discounts. The timing would be set out in the Tariff E.D.R. service contract when the contract is presented to the Commission for approval.

Q. WHY IS THE COMPANY PROPOSING THIS CHANGE?

A. The proposed change will permit a customer to realize the economic development discount available under Tariff E.D.R. in the year most advantageous to its plans. For example, a customer may choose to delay the maximum discount until the second year of the service contract if it expects its facility to be first fully operable then. This increased flexibility should make the tariff more attractive to customers seeking to relocate or expand, and thereby aid the Company's economic development efforts.

Q. IS THERE PRECEDENT FOR THIS PROPOSED CHANGE?

A. Yes. In Case No. 2018-00295, the Louisville Gas and Electric Company requested and received approval from the Commission to allow the customer to choose the sequence of the discounts in the service contract when it is presented to the Commission for approval.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Tariff Sheet	Action Taken	Change	Reason for change
All pages	Changed	Updated all tariff sheet headers to current version	Update to current Tariff sheet version
All pages	Changed	Updated all tariff sheets to note cancelled tariff pages	Update to current Tariff sheet version
Title Page	Changed	P.S.C KY.NO ~~11~~ 12	Update to current Tariff sheet version
	Changed	Cancelling P.S.C. KY NO ~~10~~ 11	Update to current Tariff sheet version
	Changed	Updated address to : 1645 Winchester Avenue	Update to current Kentucky Power headquarter's address
1-1	Changed	"2-22" to "2-24"	Update page reference
	Changed	"XXX" to "F.P".	Change to reflect new tariff title
	Changed	"Reserved for Future Use" to "Flex Pay Program"	Change description to updated program
	Changed	"8-1" to "8-1 thru 8-3"	Update page reference
	Changed	"14-4" to "14-6"	Update page reference
	Changed	"15-3" to "15-5"	Update page reference
1-2	Changed	"22-18" to "22-3"	Reduce the number of pages reserved for future use due to DSM program closures.
	Added	"N.M.S. II"	Add new tariff title
	Changed	"Reserved for Future Use" to "Net Metering Service II"	Change description to updated program
	Added	"28-1 thru 28-22"	Add page references for new tariff
	Changed	Tariff sheet 28 to tariff sheet 30	Move new tariff sheet to be next to similar tariff sheet
	Added	"thru 30-2"	Define tariff pages covered by Tariff C.C.
	Changed	"Tariff XXX" to "Rider D.R.S."	Change title to new tariff title
	Changed	"Reserved for Future Use" to "Demand Response Service"	Change description to updated program
	Added	"thru 36-3"	Define tariff pages covered by new program offering.
1-3	Added	"Tariff G.M.R."	Add title for new tariff
	Added	"Grid Modernization Rider"	Add title for new tariff
	Added	"39-1"	Define tariff pages covered by new program offering.
2-3	Deleted	","	Correct grammar
2-4	Deleted	"s"	Correct grammar
	Added	"When mutually agreeable, the Equal Payment Plan may be offered by the Company to Customers taking service under other tariffs."	Add language to offer plan to other customer classes.
	Added	":"	Correct grammar
	Added	"; and"	Correct grammar
	Added	". W"	Correct grammar
	Added	","	Correct grammar
2-5	Added	"(12)"	Correct grammar
	Added	"thirty ( )"	Correct grammar
	Deleted	"to"	Correct grammar
	Added	.	Correct grammar
	Deleted	","	Correct grammar
2-6	Changed	"he is" to "they are"	Correct grammar
	Added	", city, or town within Kentucky Power’s service territory"	Expand definition of customers who can request underground service
	Deleted	"or the"	Correct grammar
	Added	"city or town"	Correct grammar
	Added	"If the entity requesting underground service is a city or town, such costs will be paid exclusively by the residents of the city or town."	Define who the Company recovers costs from when a city or town requests underground service.
	Added	"When the Company is required to install underground facilities or relocate existing overhead facilities underground pursuant to a municipal or other governmental requirement or directive, the difference between the cost of the underground facilities installed and the cost of the overhead facilities that would ordinarily be installed, or in the case of the relocation of existing overhead facilities, the entire cost of the relocation underground, shall be recovered from customers within the boundary of the municipality or governmental entity requiring or directing the installation or relocation of the facilities underground."	Define who, and how, the Company recovers costs from when required to install underground facilities or replace existing overhead facilities with underground facilities based on a municipal or other governmental requirement or directive.
	Deleted	"s"	Correct grammar
	Changed	upper case "S" to a lower case "s"	Correct grammar
	Added	"i" in "supplied"	Correct spelling
	Added	"Company-"	Refine meter base definition

Tariff Sheet	Action Taken	Change	Reason for change
2-7	Added	"TI" to "CONDITIONS"	Corrected spelling
	Changed	"of" to "the"	Correct grammar
	Added	.	Correct grammar
2-8	Deleted	"d"	Correct grammar
	Added	"."	Correct grammar
	Changed	"c" to "C"	Correct grammar
	Deleted	"s"	Correct grammar
	Deleted	"s"	Correct grammar
	Added	","	Correct grammar
2-9	Deleted	"the"	Correct grammar
	Added	"to"	Correct grammar
	Changed	"customers" to "Customer"	Correct grammar
	Added	a hypen between "unprovided" and "for"	Correct grammar
2-10	Deleted	", which"	Correct grammar
	Added	"that"	Correct grammar
	Added	"secondary"	Define services offered
	Added	"primary service or"	Define services eligible
	Added	","	Correct grammar
2-11	Changed	"10:00" to "8:00"	Revise defined time for service "call out"
	Changed	"10:00" to "8:00"	Revise defined time for service "call out"
	Added	", or verbal request to the Customer Service Representative, by"	Expand how a request can be made to Kentucky Power
	Deleted	"of"	Correct grammar
2-12	Added	"."	Correct grammar
	Changed	"Customers" to "Customer's"	Correct grammar
	Added	"or"	Correct grammar
2-13	Changed	"electronic mail" to "e-mail"	Correct grammar
	Added	"Customers wishing to participate in Kentucky Power's Mobile Alert Service and receive alerts via e-mail should add communications@kentuckypower-mail.com to the customer's email address book or spam filter to avoid alert communications from Kentucky Power being directed to spam. Customers are advised to contact their e-mail service provider for instructions on how to add addresses to an address book or spam filter if needed."	Explain how a customer can sign up for alerts and subscriptions
	Added	"Email addresses from which alerts are sent through the Mobile Alert Service are used for sending e-mails only. Any e-mails sent to those addresses will not be received by the Company and the Company will not respond. Any communication to the Company should be sent to Communications@kentuckypower-mail.com."	Explain how a customer can sign up for alerts and subscriptions
	Changed	"outage related" to "outage-related"	Correct grammar
2-14	Added	"ir elected"	Correct grammar
	Deleted	"elected"	Correct grammar
	Added	"of"	Correct grammar
2-15	Deleted	"Customers wishing to participate in Kentucky Power's Mobile Alert Service and receive alerts via electronic mail should add "communications@kentuckypower-mail.com" to the customer's e-mail address book or spam filter to avoid alert communications from Kentucky Power being directed as spam. Customers are advised to contact their e-mail service provider for instructions on how to add addresses to an address book or spam filter if needed. E-mail addresses from which alerts are sent through the Mobile Alert Service are used for sending e-mails only. Any e-mails sent to those addresses will not be received by the Company and the Company will not respond. Any communication to the Company should be sent to communications@kentuckypower-mail.com."	Remove duplicative language

Tariff Sheet	Action Taken	Change	Reason for change
2-16	Deleted	"the"	Correct grammar
	Added	"ill" to "will"	Correct grammar
2-18	Changed	Added new sample tariff page	Update for new program offering
2-20	Changed	Added new sample tariff page	Update for new program offering
2-22	Changed	Added new sample tariff page	Update for new program offering
2-23	Added	New Customer statement	Add statement for new progam offering
	Added	"(Cont'd on Sheet No. 2-24)	Update tariff page
2-24	Added	New Customer statement	Add statement for new progam offering
	Added	"Terms and Conditions of Service (Cont'd)"	Update tariff page
3-1	Added	"s" to "sales"	Correct grammar
	Deleted	"," after "below"	Correct grammar
3-2	Added	"are" after "actions"	Correct grammar
3-4	Added	"al" to "national"	Correct spelling
3-6	Changed	"IV" to "V"	Update description
4-1	Changed	"," to ";"	Correct grammar
	Deleted	"19,900"	Correct list of Subtransmission Line Voltages
5-1	Changed	"kwh" to "kWh"	Correct spelling
	Added	"be"	Correct grammar
	Added	"1999"	Add billing line item
5-2	Deleted	"r" in "manufacturer"	Correct grammar
	Changed	"kwh" to "kWh"	Correct spelling
	Deleted	","	Correct grammar
	Added	"shall conduct a formal review and may conduct"	Update language
	Deleted	"will conduct"	Update language
	Changed	"will" to "shall"	Correct grammar
	Changed	"the commission" to "the Commission"	Correct grammar
	Deleted	"it"	Correct grammar
	Added	"shall conduct a formal review"	Update language
	Deleted	"in a public hearing will review"	Update language
	Changed	"Subsection 2" to "Section 1 (2) of the administrative regulation"	Update language
	Changed	"kwh" to "kWh"	Correct spelling
6-1	Changed	"14.00" to "17.50"	Update rate
	Added	"Energy Charge:" "March through November" "All kWh" "December, January, February:" "First 1,100 kWh:" "All kWh Over 1,100"	Add new tariff language to define rate terms
	Changed	"9.810" to "12.265"	Update rate
	Added	"12.265¢ per KWH"	Update rate
	Added	"6.265¢ per KWH"	Update rate
	Changed	Placement of Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
6-2	Changed	"6.212" to "8.251"	Update rate
	Changed	"6.212" to "8.251"	Update rate
	Changed	"6.212" to "8.251"	Update rate
	Changed	"6.212" to "8.251"	Update rate

Tariff Sheet	Action Taken	Change	Reason for change
6-3	Added	**"ELECTRIC VEHICLE CHARGING PROVISION. (Tariff code 059)"**	Update for new tariff offering
	Added	"Available to customers for use charging electric vehicles primarily during off-peak hours specified by the Company. Electric vehicle charging load shall be separately wired to a time-of-day meter and their general-use load to a standard meter, customers will receive service for both under the appropriate provision of this tariff."	Update for new tariff offering
	Added	"Energy Charge:" "All KWH used during on-peak billing period" "All KWH used during off-peak billing period"	Update for new tariff offering
	Added	"For the purpose of this tariff, the on-peak billing period is defined as 7:00 A.M. to 9:00 P.M. for all weekdays, Monday through Friday. The off-peak billing period is defined as 9:00 P.M. to 7:00 A.M. for all weekdays and all hours of Saturday and Sunday."	Update for new tariff offering
	Added	"15.737¢ per KWH"	Update for new tariff offering
	Added	"8.251¢ per KWH"	Update for new tariff offering
6-4	Changed	"16.00" to "21.00"	Update rate
	Changed	"14.504" to "15.737"	Update rate
	Changed	"6.212" to "8.251"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
6-5	Changed	"3.75" to "4.30"	Update rate
6-6	Changed	"16.00" to "21.00"	Update rate
	Changed	"14.550" to "15.737"	Update rate
	Changed	"6.212" to "8.251"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
6-8	Changed	"16.00" to "21.00"	Update rate
	Changed	"18.005" to "19.580"	Update rate
	Changed	"15.508" to "17.083"	Update rate
	Changed	"8.241" to "9.816"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
6-10	Changed	"17.50" to "21.00"	Update rate
	Changed	"9.890" to "14.374"	Update rate
	Changed	"7.174" to "8.251"	Update rate
	Changed	"4.02" to "4.18"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
7-1	Changed	"normal" to "average"	Update tariff language
	Changed	"6.00" to "8.65"	Update rate
	Changed	"7.18" to "8.01"	Update rate
	Changed	"5.74" to "6.63"	Update rate
	Changed	"9.952" to "11.146"	Update rate
	Changed	"8.762" to "9.813"	Update rate
	Changed	"7.948" to "8.902"	Update rate
	Changed	"9.943" to "10.440"	Update rate
	Changed	"8.792" to "9.232"	Update rate
	Changed	"7.981" to "8.380"	Update rate
	Changed	"22.50" to "25.00"	Update rate
	Changed	"75.00" to "100.00"	Update rate
	Changed	"364.00" to "400.00"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
7-2	Changed	"22.50" to "25.00"	Update rate
	Changed	"10.118" to "11.474"	Update rate

Tariff Sheet	Action Taken	Change	Reason for change
7-3	Added	"This provision is also available for electric vehicle charging if separately metered."	Update for tariff offering
	Changed	"22.50" to "25.00"	Update rate
	Changed	"14.620" to "16.860"	Update rate
	Changed	"6.212" to "8.246"	Update rate
7-4	Added	"Customer Charge"	Correct inadvertent deletion
	Changed	"14.00" to "15.00"	Update rate
	Changed	"9.952" to "11.146"	Update rate
	Changed	"9.943" to "10.440"	Update rate
7-5	Deleted	"only"	Correct grammar
	Added	"only for continuous service"	Update language
	Added	"s" to "premises"	Correct grammar
	Deleted	"for continuous service beginning no later than"	Update language
	Added	"on or prior to"	Update language
	Changed	"22.50" to "25.00"	Update rate
	Changed	"17.238" to "21.476"	Update rate
	Changed	"14.564" to "18.802"	Update rate
	Changed	"7.671" to "11.909"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
7-7	Changed	"S" to "M"	Correct typographical error
	Changed	"normal" to "average"	Update tariff language
	Added	"being served by a multi- register meter capable of measuring electrical energy consumption during variable pricing periods."	Update tariff language
	Changed	"22.50" to "25.00"	Update rate
	Changed	"16.888" to "16.860"	Update rate
	Changed	"6.212" to "8.246"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
8-1	Added	New Tariff Language	Add language for new tariff offering
8-2	Added	New Tariff Language	Add language for new tariff offering
8-3	Added	New Tariff Language	Add language for new tariff offering
9-1	Changed	"normal" to "average"	Update tariff language
	Changed	"7.97" to "8.77"	Update rate
	Changed	"7.853" to "9.010"	Update rate
	Changed	"7.18" to "7.90"	Update rate
	Changed	"6.853" to "7.922"	Update rate
	Changed	"5.74" to "6.63"	Update rate
	Changed	"5.253" to "5.668"	Update rate
	Changed	"5.60" to "6.54"	Update rate
	Changed	"5.139" to "5.585"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
9-2	Added	"This provision is also available for electric vehicle charging if separately metered."	Update for tariff offering
	Changed	"14.211" to "15.237"	Update rate
	Changed	"6.223" to "8.218"	Update rate
9-3	Changed	"normal" to "average"	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
9-4	Changed	"normal" to "average"	Update tariff language
	Changed	"10.87" to "11.23"	Update rate
	Changed	"9.816" to "10.935"	Update rate
	Changed	"4.266" to "5.709"	Update rate
	Changed	"7.84" to "8.39"	Update rate
	Changed	"9.445" to "10.787"	Update rate
	Changed	"4.145" to "5.666"	Update rate
	Changed	"1.52" to "1.82"	Update rate
	Changed	"9.321" to "10.696"	Update rate
	Changed	"4.104" to "5.639"	Update rate
	Changed	"1.49" to "1.80"	Update rate
	Changed	"9.194" to "10.607"	Update rate
	Changed	"4.062" to "5.613"	Update rate
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
9-5	Deleted	"Tariff L.G.S"	Remove duplicative language
	Changed	"normal" to "average"	Update tariff language
10-1	Changed	"normal" to "average"	Update tariff language
	Changed	"24.13" to "26.99"	Update rate
	Changed	"1.60" to "1.85"	Update rate
	Changed	"3.060" to "2.937"	Update rate
	Changed	"20.57" to "23.98"	Update rate
	Changed	"1.55" to "1.83"	Update rate
	Changed	"2.945" to "2.899"	Update rate
	Changed	"13.69" to "17.16"	Update rate
	Changed	"1.51" to "1.81"	Update rate
	Changed	"2.896" to "2.874"	Update rate
	Changed	"13.26" to "16.90"	Update rate
	Changed	"1.49" to "1.80"	Update rate
	Changed	"2.857" to "2.851"	Update rate
	Changed	"25.83" to "29.52"	Update rate
	Changed	"22.21" to "26.47"	Update rate
	Changed	"15.30" to "19.65"	Update rate
	Changed	"14.86" to "19.35"	Update rate
10-2	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
11-1	Changed	"normal" to "average"	Update tariff language
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30

Tariff Sheet	Action Taken	Change	Reason for change
12-1	Added	"Load Management Resource Product – Capacity Performance Demand Response requirement, hereafter referred to as the "PJM Demand Response Program"'	Update tariff language
	Deleted	"Limited Demand Response, Emergency – Capacity Only Program"	Update tariff language
	Deleted	"If insufficient MWs are available for PJM enrollment by Kentucky Power, the Company shall offer to substitute one of the other PJM Emergency Demand Response Programs that is available."	Update tariff language
	Changed	"offer" to "addendum"	Update tariff language
	Changed	"normal" to "average"	Update tariff language
	Added	"The Company reserves the right to test and verify the customer's ability to curtail. Any such test or verification may require actual physical interruption or curtailment, to the extent such testing or interruption is required under PJM's Demand Response Program."	Update tariff language
	Added	"NO RESPONSIBILITY OR LIABILITY OF ANY KIND SHALL ATTACH TO OR BE INCURRED BY THE COMPANY FOR, OR ON ACCOUNT OF, ANY LOSS, COST, EXPENSE, OR DAMAGE CAUSED BY OR RESULTING FROM, EITHER DIRECTLY OR INDIRECTLY, ANY CURTAILMENT OF SERVICE UNDER THE PROVISIONS OF THIS SCHEDULE."	Update tariff language
	Added	"Except as otherwise provided in the written agreement, the Company's Terms and Conditions of Service shall apply to service under this tariff."	Update tariff language
	Deleted	The "SPECIAL PROVISIONS FOR COAL MINING CUSTOMERS" section in its entirety.	Update tariff language
12-2	Added	"Demand Response Program"	Update tariff language
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
12-3	Deleted	"This tariff is also available to Customers having other sources of energy supply, but who desire to purchase standby or back-up electric service from the Company. Where such conditions exist, the Customer shall contract for the maximum amount of demand in KW, which the Company might be required to furnish, but not less than 1,000 KW."	Updated language for tariff offering
13-1	Changed	"22.90" to "25.00"	Update rate
	Changed	"9.267" to "10.304"	Update rate
	Changed	"8.89" to "9.78"	Update rate
	Added	"Demand Response Program"	Update tariff language
	Changed	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Added	"DELAYED PAYMENT CHARGE."	Update tariff language
	Added	"Bills under this tariff are due and payable within fifteen (15) days after their mailing date. All accounts not paid in full by the next billing date will be assessed an additional charge of 5% of the unpaid portion will be made."	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
14-1	Added	"New installations of High Pressure Sodium, Mercury Vapor and Metal Halide lamps shall cease on January 1, 2021."	Update tariff language
	Changed	"8.51" to "9.30"	Update rate
	Changed	"9.31" to "10.65"	Update rate
	Changed	"10.90" to "13.20"	Update rate
	Changed	"15.04" to "18.80"	Update rate
	Changed	"16.01" to "20.85"	Update rate
	Changed	"9.04" to "11.85"	Update rate
	Changed	"14.64" to "20.40"	Update rate
	Changed	"14-3" to "14-5" throughout	Update tariff page
	Added	3. LED	Update tariff offering
	Added	Tariff Code 150 for 55 watts (5,400 Lumens) with a new rate of $6.66 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Added	Tariff Code 151 for 100 watts (10,500 Lumens) with a new rate of $9.26 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Added	Tariff Code 152 for 175 watt (18,430 Lumens) with a new rate of $11.74 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Added	Tariff Code 153 for 300 watt (30,230 Lumens) with a new rate of $18.13 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
14-2	Changed	"14.05" to "16.85"	Update rate
	Changed	"23.30" to "27.65"	Update rate
	Changed	"29.50" to "30.60"	Update rate
	Changed	"24.99" to "30.85"	Update rate
	Changed	"36.16" to "42.00"	Update rate
	Changed	"14-3" to "14-5" throughout	Update tariff page
	Changed	"10.59" to "13.60"	Update rate
	Added	3. LED	Update tariff offering
	Added	Tariff Code 160 for 65 watt (7,230 Lumens) with a new rate of $19.09 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Changed	"13.10" to "15.15"	Update rate
	Changed	"17.06" to "22.10"	Update rate
	Changed	"15.27" to "17.90"	Update rate
	Changed	"18.39" to "22.55"	Update rate
	Changed	"30.94" to "41.50"	Update rate
	Changed	"20.57" to "24.15"	Update rate
	Changed	"23.59" to "29.40"	Update rate
	Changed	"19,000" to "20,500"	Update tariff language
	Changed	"40,000" to "36,000"	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
14-3	Added	3. LED	update tariff offering
	Added	Tariff Code 165 for 175 watt (21,962 Lumens) with a new rate of $24.87 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Added	Tariff Code 166 for 265 watt (32,000 Lumens) with a new rate of $30.58 per lamp + 0.02851 x kWh in Sheet No. 14-5 in Company's tariff	New offering rate
	Added	D. LED Lamp Converstion Charge	Update tariff offering
	Added	"Existing outdoor lighting customers that wish to convert from non-LED lamps to new LED fixtures shall pay a monthly charge of $3.33 per lamp replaced, per month for 84 months."	Update tariff offering
	Added	"All lumen figures are based upon manufacturer estimates and may vary."	Update tariff offering
	Changed	"3.40" to "3.70"	Update rate
	Changed	"7.40" to "6.95"	Update rate
	Added	E. FLEXIBLE LIGHTING OPTION (Tariff Code 175)	Update tariff offering
	Added	"Applicable for the installation of any outdoor area lighting system (System) on a private or public property and owned by the Company. The customer must be adjacent to an electric power line of the Company that is adequate for supplying the necessary electric service. Service for the System under this tariff shall require a contract addendum agreed to and signed by the customer. The System shall comply with the Company's terms and conditions unless otherwise noted in this section. Included in the contract addendum shall be the installed capital cost of the System and the monthly amount of kWh the System will use if it is not metered. The Company reserves the right to refuse service under this provision based on customer's creditworthiness."	Update tariff offering
14-4	Added	"Customers shall pay the monthly lamp charge for the System, a monthly maintenance charge, a non-fuel energy charge, a base fuel charge, and all applicable adjustment clauses."	Update tariff offering
	Added	"Monthly Lamp Charge = IC x MLFCR" "Where: IC = Installed Cost of System"	Update tariff offering
	Added	"MLFCR = Monthly Levelized Fixed Cost Rate of 1.43% which is inclusive of return, depreciation, income taxes, property taxes and A&G expense components"	Update tariff offering
	Added	"Monthly maintenance charge is $1.20 per lamp per month" "Monthly non-fuel charge is .05677 $/kWh" "Base fuel charge is .02851 $/kWh"	Update tariff offering
	Added	"Customers selecting this flexible lighting option to replace existing lamps shall also be subject to the LED Lamp Conversion Charge."	Update tariff offering
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
14-5	Added	Added new "LIGHT EMITTING DIODE" table	Updated language for tariff offering
	Changed	"14-5" to "14-6"	Update tariff offering

Tariff Sheet	Action Taken	Change	Reason for change
15-1	Added	"New installations of High Pressure Sodium lamps shall cease on January 1, 2021."	Update tariff offering
	Changed	"7.03" to "7.90"	Update rate
	Changed	"7.55" to "8.45"	Update rate
	Changed	"8.95" to "10.05"	Update rate
	Changed	"11.71" to "13.15"	Update rate
	Added	2. LED	Update tariff offering
	Added	55 watts OH (5,400 Lumens) with a new rate of $8.74 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	100 watts OH (10,500 Lumens) with a new rate of $11.25 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts OH (18,430 Lumens) with a new rate of $13.44 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	65 watts Post Top (7,230 Lumens) with a new rate of $9.09 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	90 watts Post Top (7,230 Lumens) with a new rate of $20.11 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts Flood (21.962 Lumens) with a new rate of $14.79 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Changed	"10.80" to "12.10"	Update rate
	Changed	"11.55" to "12.95"	Update rate
	Changed	"12.95" to "14.55"	Update rate
	Changed	"16.61" to "18.65"	Update rate
	Changed	"15-2" to "15-4" throughout	Update tariff page

Tariff Sheet	Action Taken	Change	Reason for change
15-2	Added	2. LED	Update tariff offering
	Added	55 watts OH (5,400 Lumens) with a new rate of $14.83 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	100 watts OH (10,500 Lumens) with a new rate of $17.34 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts OH (18,430 Lumens) with a new rate of $19.53 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	65 watts Post Top (7,230 Lumens) with a new rate of $15.18 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	90 watts Post Top (7,230 Lumens) with a new rate of $26.20 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts Flood (21.962 Lumens) with a new rate of $20.89 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Changed	"27.45" to "26.75"	Update rate
	Changed	"28.15" to "27.65"	Update rate
	Changed	"26.70" to "29.30"	Update rate
	Changed	"27.11" to "30.40"	Update rate
	Added	55 watts OH (5,400 Lumens) with a new rate of $26.44 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	100 watts OH (10,500 Lumens) with a new rate of $28.12 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts OH (18,430 Lumens) with a new rate of $29.49 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	65 watts Post Top (7,230 Lumens) with a new rate of $27.23 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	90 watts Post Top (7,230 Lumens) with a new rate of $38.12 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	175 watts Flood (21.962 Lumens) with a new rate of $30.81 per lamp + 0.02851 x kWh in Sheet No. 15-4 in Company's tariff	New offering rate
	Added	D. LED Lamp Conversion Charge	Update tariff offering
	Added	"Existing street lighting customers that wish to convert from non-LED lamps to a new LED fixture shall pay a monthly charge of $2.18 per lamp replaced, per month for 84 months."	Update tariff offering
	Added	"and may vary"	Update tariff offering
	Added	E. FLEXIBLE LIGHTING OPTION (Tariff code 525)	Update tariff offering
	Added	"Applicable for the installation of any street lighting system (System) on a private or public property and owned by the Company. The customer must be adjacent to an electric power line of the Company that is adequate for supplying the necessary electric service. Service for the System under this tariff shall require a contract addendum agreed to and signed by the customer. The System shall comply with the Company’s terms and conditions unless otherwise noted in this section. Included in the contract addendum shall be the installed capital cost of the System and the monthly amount of kWh the System will use unless the system is separately metered. The Company reserves the right to refuse service under this provision based on customer’s credit worthiness."	Update tariff offering

Tariff Sheet	Action Taken	Change	Reason for change
15-3	Added	"Customers shall pay the monthly lamp charge for the System, a monthly maintenance charge, a non-fuel energy charge, a base fuel charge, and all applicable adjustment clauses."	Update tariff offering
	Added	"Monthly Lamp Charge = IC x MLFCR" "Where: IC = Installed Cost of System"	Update tariff offering
	Added	"MLFCR = Monthly Levelized Fixed Cost Rate of 1.05% which is inclusive of return, depreciation, income taxes, property taxes and A&G expense components"	Update tariff offering
	Added	"Monthly maintenance charge is $2.23 per lamp per month" "Monthly non-fuel charge is .04533 $/kWh" "Base fuel charge is .02851 $/kWh"	Update tariff offering
	Added	"Customers selecting this flexible lighting option to replace existing lamps shall also be subject to the LED Lamp Conversion Charge."	update tariff offering
	Added	"Grid Modernization Rider" … "Sheet No. 39"	Update for new tariff
	Changed	Placement Capacity Charge	Update to reflect change from Sheet No. 28 to Sheet No. 30
15-4	Added	Added new Light Emitting Diode table	Update tariff offering
	Added	"(cont'd on Sheet No. 15-5)"	Update tariff language
17-2	Changed	"3.24" to "2.61"	Update rate
	Changed	"3.86" to "3.06"	Update rate
	Changed	"2.79" to "2.28"	Update rate
17-3	Changed	"3.11" to "3.12"	Update rate
	Changed	"7.47" to "7.49"	Update rate
18-2	Changed	"3.24" to "2.61"	Update rate
	Changed	"3.86" to "3.06"	Update rate
	Changed	"2.79" to "2.28"	Update rate
18-3	Changed	"3.11" to "3.12"	Update rate
	Changed	"7.47" to "7.49'	Update rate
19-2	Changed	"7,650,360" to "7,343,330"	Update rate
20-1	Changed	"of" to "for"	Correct Grammar
	Added	"When the Company is required to install underground facilities or relocate existing overhead facilities underground pursuant to a municipal or other governmental requirement or directive pursuant to Section 7 of the Company’s Terms and Conditions of Service, the Company shall increase the rates and charges to all customer classifications within the boundary of that municipality or governmental entity proportionately to recover such costs."	Update tariff language
	Added	"Each city or town participating in this tariff shall be responsible for timely notifying Kentucky Power of any expansion of the city’s or town’s boundaries through annexation or otherwise and shall provide a new map of the city's or town's boundaries at the time notice is made. Kentucky Power will begin to bill applicable charges under this tariff to any customers added to a city or town through annexation or otherwise within 30 days after receipt of notice of expansion from the city or town."	Update tariff language
21-1	Added	DELAYED PAYMENT CHARGE.	Update tariff language
	Added	"Bills under this tariff are due and payable within fifteen (15) days after their mailing date. All accounts not paid in full by the next billing date will be assessed an additional charge of 5% of the unpaid balance.	update tariff language
22-4	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-5	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-6	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-7	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-8	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-9	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.

Tariff Sheet	Action Taken	Change	Reason for change
22-10	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-11	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-12	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-13	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-14	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-15	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-16	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-17	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
22-18	Deleted	Tariff page	Remove unnecessary pages due to discontinuance of the DSM programs.
23-1	Changed	"Annual Total Rate Credit Amount (AC) was calculated as follows:" to "Company proposes to maintain the same rates in calendar year 2021 as are in effect in calendar year 2020."	Update tariff language
	Changed	"AC = the sum of (1/18th of estimated retail Generation and Distribution related Unprotected Excess ADIT) + calendar year estimated retail Generation and Distribution related ARAM of Protected Excess ADIT." to "The Company shall amortize the calendar year retail Generation and Distribution related ARAM of Protected Excess ADIT and the amount of retail Generation and Distribution related Unprotected Excess ADIT needed to support the remainder of the actual calendar year rate credits provided to customers through this rider."	Update tariff language
	Changed	Moved Subsection to the end and titled it: "Post 2021"	Update tariff language
	Changed	Subsection 4 to Subsection 3	Update tariff language
	Changed	"Allocation" to "rate credits"	Update tariff language
	Deleted	"July-December 2018", "January-March and December 2019", and "April-November 2019" rates	Update tariff language
	Added	Tariff rates from January 2021 thru December 2021.	Update tariff language
	Changed	"Annual Tax Credit Amount between residential and all other customers shall be based upon their respective contribution to total retail revenues, according to the following formula" to "retail Generation and Distribution related ARAM of Protected Excess ADIT and any Commission authorized amount of Unprotected Excess ADIT, between residential and all other customers shall be based upon their respective contribution to total retail revenues, according to the following formula:"	Update tariff language
	Changed	"236,006,728" to "269,181,515"	Update tariff language
	Changed	"316,554,577" to "328,960,189"	Update tariff language
	Changed	"552,561,305" to "598,141,704"	Update tariff language
24-1	Added	"." to "Tariff K.E.D.S."	Correct grammar

Tariff Sheet	Action Taken	Change	Reason for change
26-1	Added	**"This tariff is unavailable to new participants."**	Update tariff language
	Deleted	"Commissioning Power, Startup Power and/or"	Update tariff language
	Changed	"customer's" to "Customer's"	Update tariff language
	Deleted	1	Update tariff language
	Deleted	**"Commissioning Power -** The electrical energy and capacity supplied to the customer prior to the commercial operation of the customer's generator, including initial construction and testing phases."	Update tariff language
	Deleted	2	Update tariff language
	Deleted	3	Update tariff language
	Deleted	"**Startup Power -** The electrical energy and capacity supplied to the customer following a planned or forced outage of the customer's generator for the purpose of returning the customer's generator to synchronous operation."	Update tariff language
	Deleted	**COMMISSIONING POWER SERVICE.**	Update tariff language
	Deleted	"Customers requiring Commissioning Power shall take service under Tariff T.S. or by special agreement with the Company. The Customer shall coordinate its construction and testing with the Company to ensure that the customer's operations do not cause any undue interference with the Company's obligations to provide service to its other customers or impose a burden on the Company's system or any system interconnected with the Company."	Update tariff language
	Changed	"customer's" to "Customer's"	Update tariff language
	Deleted	**STARTUP POWER SERVICE.**	Update tariff language
	Deleted	"Customers requiring Startup Power have the option of contracting for such service under the terms of this tariff or under the generally available demand-metered tariff appropriate for the customer's Startup Power requirements."	Update tariff language
	Deleted	"**Startup Contract Capacity** – The Customer shall contract for a definite amount of electrical capacity in kW sufficient to meet the maximum Startup Power requirements that the Company is expected to supply."	Update tariff language
	Deleted	"**Startup Duration** – The Customer shall contract for a definite number of hours sufficient to meet the maximum period of time for which the Company is expected to supply Startup Power."	Update tariff language
	Added	DELAYED PAYMENT CHARGE.	Update tariff language
	Added	"This tariff is due and payable in full on or before the due date stated on the bill. On all accounts not so paid, an additional charge of 5% of the unpaid portion will be made."	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
26-2	Deleted	**STARTUP POWER SERVICE. (cont'd)**	Update tariff language
	Deleted	"**Startup Duration –** The Customer shall contract for a definite number of hours sufficient to meet the maximum period of time for which the Company is expected to supply Startup Power."	Update tariff language
	Deleted	"**Startup Frequency –** The Customer shall contract for a definite number of startup events sufficient to meet the maximum number of times per year that the Company is expected to supply Startup Power."	Update tariff language
	Deleted	"**Other Startup Characteristics –** The customer shall provide to the Company other information regarding the customer's Startup Power requirements, including, but not limited to, anticipated time-of-use and seasonal characteristics."	Update tariff language
	Deleted	"**Notification Requirement -** Whenever Startup Power is needed, the Customer shall provide advance notice to the Company."	Update tariff language
	Deleted	Upon receipt of a request from the Customer for Startup Power Service under the terms of this tariff, the Company will provide the Customer a written offer containing the Notification Requirement, generation, transmission and distribution rates (including demand and energy charges) and related terms and conditions of service under which service will be provided by the Company. Such offer shall be based upon the Startup Contract Capacity, Startup Duration, Startup Frequency, and Other Startup Characteristics as specified by the customer. In no event shall the rates be less than the sum of the Tariff I.G.S. Energy Charge, the Fuel Adjustment Clause, the System Sales Clause, the Demand-Side Management Adjustment Clause, Decommissioning Rider, Purchase Power Adjustment, KY Economic Development Surcharge, Environmental Surcharge, and the Capacity Charge."	Update tariff language
	Deleted	If the parties reach an agreement based upon the offer provided to the customer by the Company, a contract shall be executed that provides full disclosure of all rates, terms and conditions of service under this tariff, and any and all agreements related thereto.	Update tariff language
	Deleted	**DELAYED PAYMENT CHARGE.**	Update tariff language
	Deleted	"This tariff is due and payable in full on or before the due date stated on the bill. On all accounts not so paid, an additional charge of 5% of the unpaid balance will be made."	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
26-3	Deleted	MONTHLY BILLING DEMAND	Update tariff language
	Deleted	"The monthly billing demand in kW shall be taken each month as the highest single 15-minute integrated peak in kW as registered by a demand meter or indicator, less the Station Contract Capacity. The monthly billing demand so established shall in no event be less than the greater of (a) the Startup Contract Capacity or b) the customer's highest previously established monthly billing demand during the past 11 months."	Update tariff language
	Deleted	MONTHLY BILLING ENERGY	Update tariff language
	Deleted	"Interval billing energy shall be measured each 15-minute interval of the month as the total KWH registered by an energy meter or meters less the quotient of the Station Contract Capacity and four (4). In no event shall the interval billing energy be less than zero (0). Monthly billing energy shall be the sum of the interval billing energy for all intervals of the billing month."	Update tariff language
	Deleted	"Should the customer's use of Startup Power result in any charges for Transmission Congestion from the Transmission Provider, such charges, including any applicable taxes or assessments, shall be paid by or passed through to the customer without markup."	Update tariff language
	Deleted	"Startup and"	Update tariff language
27-1	Added	"This tariff is closed to new customers as of January 1, 2021."	Update tariff language
28-1	Changed	Replaced Tariff C.C. with Tariff N.M.S. II	Replace Tariff C.C. with Tariff N.M.S. II
29-1	Deleted	"and"	Correct grammar
	Added	", and Grid Modernization Rider"	Update tariff language
	Deleted	"and"	Correct grammar
	Added	", and Grid Modernization Rider"	Update tariff language
29-2	Changed	"3,664,681" to "3,582,591"	Update rate
	Changed	"3,581,017" to "4,039,633"	Update rate
	Changed	"3,353,024" to "3,773,820"	Update rate
	Changed	"3,661,574" to "4,730,906"	Update rate
	Changed	"3,595,145" to "4,557,625"	Update rate
	Changed	"3,827,332" to "3,974,845"	Update rate
	Changed	"3,747,320" to "4,209,729"	Update rate
	Changed	"3,888,262" to "4,009,897"	Update rate
	Changed	"3,636,247" to "3,764,203"	Update rate
	Changed	"3,824,697" to "3,851,218"	Update rate
	Changed	"3,717,340" to "3,896,838"	Update rate
	Changed	"3,882,677" to "3,894,298"	Update rate
	Changed	"44,379,316" to "48,285,602"	Update rate
29-3	Deleted	"and"	Update tariff language
	Added	", and the 2019 Plan"	Update tariff language
	Deleted	"and"	Update tariff language
	Added	", and the 2019 Plan"	Update tariff language
	Changed	"9.70" to "10.00"	Update rates
	Added	"20-00174"	Update tariff language
	Added	"xxxx xx, 2020 in"	Update tariff language
	Deleted	"18"	Update tariff language
	Deleted	"2018 in"	Update tariff language
	Deleted	"17-00179"	Update tariff language
29-5	Changed	"CASPR" to "CSAPR"	Correct typographical error
30-1	Changed	Moved Tariff C.C. here	Update tariff language
	Changed	"0.001338" to "0.000000"	Updated rate
	Changed	"0.000681" to "0.000000"	Updated rate
	Added	"Conditioned upon Commission approval of the Company's requested rate increase in Case No. 2020-00174 as filed, this tariff's revenue requirement will be set to $0 beginning with the first day of the first billing cycle of 2021."	Update tariff language

Tariff Sheet	Action Taken	Change	Reason for change
32-2	Added	"(Cont'd)"	Correct grammar
	Changed	"14.67" to "15.75"	Update rate
	Changed	"6.29" to "6.57"	Update rate
	Changed	"normal" to "average"	Update tariff language
32-3	Added	"(Cont'd)"	Correct grammar
	Changed	"AEP" to "Kentucky Power"	Update tariff language
32-4	Added	"(Cont'd)"	Correct grammar
35-1	Changed	"74,453,085" to "96,896,495"	Update tariff language
	Added	"and purchased power expense from avoided cost payments to net metering customers under tariff N.M.S.II."	Update tariff language
	Changed	"80" to "100"	Update tariff language
	Changed	"74,453,085" to "96,896,495"	Update tariff language
	Changed	"a" to "1"	Correct formatting
	Changed	"b" to "2"	Correct formatting
	Changed	"c" to "3"	Correct formatting
	Changed	"d" to "4"	Correct formatting
	Changed	"e" to "5"	Correct formatting
35-2	Added	"LGS-T.O.D."	Update tariff language
	Deleted	"and"	Update tariff language
	Added	"and CS-I.R.P."	Update tariff language
35-3	Changed	"0.0240909%" to "0.02428%"	Update tariff language
	Changed	"0.0196553%" to "0.01962%"	Update tariff language
	Changed	"0.0196553%" to "0.01962%"	Update tariff language
	Changed	"0.0196553%" to "0.01962%"	Update tariff language
	Changed	"0.0170480%" to "0.01798%"	Update tariff language
	Changed	"0.0170480%" to "0.01798%"	Update tariff language
	Changed	"0.0118222%" to "0.01232%"	Update tariff language
	Changed	"0.0135480%" to "0.01326%"	Update tariff language
	Changed	"0.0000000%" to "0.00263%"	Update tariff language
	Changed	"0.0000000%" to "0.00262%"	Update tariff language
	Changed	"0.34%" to "0.41%"	Update rate
	Changed	"0.1996%" to "0.1956%"	Update rate
36-1	Added	New tariff Rider D.R.S.	Add new tariff offering
36-2	Added	New tariff offering language	Add language for new tariff offering
36-3	Added	New tariff offering language	Add language for new tariff offering
37-1	Added	"and,"	Correct grammar
	Added	"The l"	Correct grammar
	Deleted	"L"	Correct grammar
	Changed	"will" to "must"	Correct grammar
37-2	Deleted	"and"	Correct grammar
	Added	"or"	Correct grammar
	Added	", and"	Correct grammar
	Added	"would"	Correct grammar
	Changed	"chose" to "choose"	Correct spelling
	Added	"applicable under this EDR shall be"	Update tariff language
	Changed	"KPCo" to "Company"	Correct grammar
	Changed	"KPCo" to "Company"	Correct grammar
	Deleted	","	Correct grammar
	Added	"or"	Correct grammar
	Changed	"and" to "or"	Correct grammar
	Changed	"(ten) 10 to " to "ten (10)"	Correct grammar
	Deleted	"the"	Correct grammar
37-3	Added	"The qualifying incremental billing demand charge shall be reduced by 50%, 40%, 30%, 20%, 10% in the order of the Customer's choosing at the time of the contract filing. A sample illustration of an (IBDD) for a ten (10) year contract follows:"	Update tariff language
	Deleted	"The (IBDD) for a ten (10) year contract follows:"	Update tariff language
	Added	"or" to subsections (a), (b), and (c)	Correct grammar

Tariff Sheet	Action Taken	Change	Reason for change
37-4	Added	"demand"	Update tariff language
	Added	"or" to subsections (d) and (e)	Correct grammar
	Deleted	"," in (d) and (e)	Correct grammar
	Changed	"beginning with the" to "and a maximum annual"	Update tariff language
	Changed	"beginning with the" to "and a maximum annual"	Update tariff language
	Changed	"year one (1)" to "one year"	Update tariff language
	Changed	"year one (1)" to "one year"	Update tariff language
	Added	"The order in which the SBDD is applied will follow the same order selected by the Customer for the IBDD contract. A sample illustration of the SBDD for a ten (10) year contract follows:"	Update tariff language
	Deleted	"The (SBDD) for a ten (10) year contract follows:"	Update tariff language
	Added	"an additional"	Update tariff language
	Added	"an increase of"	Update tariff language
	Added	"an increase of"	Update tariff language
37-5	Changed	"a" to "e"	Correct formatting
	Changed	"b" to "f"	Correct formatting
	Deleted	"the"	Update tariff language
	Added	"a maximum"	Update tariff language
	Deleted	"in year one (1)"	Update tariff language
	Added	"during one year of the contract"	Update tariff language
	Deleted	"beginning with the first such month following the end of the start-up period"	Update tariff language
	Added	"as selected by the Customer in 12-month increments at the time of the contract."	Update tariff language
	Deleted	"The start-up period shall commence with the effective date of the contract addendum for service under this EDR and shall terminate by mutual agreement between the Company and the customer. In no event shall the start-up period exceed 12 months."	Update tariff language
	Added	"or"	Correct grammar
	Deleted	","	Correct grammar
	Changed	"c" to "C"	Correct grammar
38-2	Deleted	"and"	Correct grammar
	Added	"and Grid Modernization Rider."	Update tariff language
	Added	"and Grid Modernization Rider."	Update tariff language
	Deleted	"and"	Correct grammar
39-1	Added	New tariff	Added new tariff offering

VERIFICATION

The undersigned, Scott E. Bishop, being duly sworn, deposes and says he is a Regulatory Consultant Senior for Kentucky Power Company, that he 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 his information, knowledge and belief after reasonable inquiry.

Scott E. Bishop

Scott E. Bishop

COMMONWEALTH OF KENTUCKY)
) Case No. 2020-00174
COUNTY OF BOYD)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Scott E. Bishop, this 24th day of June 2020.

Trisha Nance

Notary Public

OFFICIAL SEAL
TRISHA NANCE
NOTARY PUBLIC - KENTUCKY
STATE-AT-LARGE
My Comm. Expires September 26, 2023
ID # 632421

Notary ID Number: 632421

My Commission Expires: 9-26-2023

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief	)))))))	Case No. 2020-00174

DIRECT TESTIMONY OF

HEATHER M. WHITNEY

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
HEATHER M. WHITNEY ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

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DIRECT TESTIMONY OF
HEATHER M. WHITNEY ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

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

A. My name is Heather M. Whitney. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I am employed by the American Electric Power Service Corporation ("AEPSC") as a Director in Regulatory Accounting Services. AEPSC is a wholly-owned subsidiary of American Electric Power Company, Inc. ("AEP"). AEP is the parent company of Kentucky Power Company ("Kentucky Power" or the "Company").

II. BACKGROUND

Q. PLEASE DISCUSS YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL QUALIFICATIONS.

A. I received a Bachelor of Science Degree in Agriculture and a Master of Accounting Degree from The Ohio State University in June 2005. I have been a Certified Public Accountant since 2007, transitioning my Ohio license to inactive status in 2012. I began my career in 2005 as an auditor within Ernst & Young's Columbus, Ohio, Assurance Services practice. I joined AEPSC as an internal auditor in 2008 and held roles of increasing responsibility within the AEPSC Audit Services function through early 2016, when I accepted a role within the AEPSC Accounting function.

Since early 2016, I have held roles of increasing responsibility in a diverse set of disciplines within the AEPSC Accounting function, including Manager Derivative Accounting Policy & Research (2016), Director Commercial Accounting (2017), Director Tax Accounting & Support Services (2018), and my current role of Director Regulatory Accounting Services (2019).

Q. WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR IN THE REGULATORY ACCOUNTING SERVICES GROUP?

A. My primary responsibilities in Regulatory Accounting Services involve providing the AEP System operating subsidiaries, including Kentucky Power, with accounting support for regulatory filings. This accounting support includes the preparation of cost of service adjustments, accounting schedules, testimony, and responses to data requests. Also, I monitor regulatory proceedings, settlements, orders, and legislation for accounting implications and participate in determining the appropriate regulatory accounting and financial reporting treatment of regulatory transactions.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN ANY REGULATORY PROCEEDING?

A. Yes, I filed testimony with the Public Utilities Commission of Texas in Case No. 49494, *Application of AEP Texas for Authority to Change Rates*, addressing AEP Texas' accounting for actual costs, investment, and revenues associated with deployment of its advanced metering system. In addition, I filed testimony with the Public Utilities Commission of Ohio in Case No. 05-376-EL-UNC, *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Recover Costs Associated With Construction and Ultimate Operation of an Integrated Gasification Combined Cycle Electric Generating Facility.*

III. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to support certain known and measurable adjustments to the Company's revenues and operating expenses for the test year ended (twelve months ended) March 31, 2020. In addition, my testimony supports certain adjustments to the Company's capitalization and rate base for the test year ended March 31, 2020, that I have provided to Company Witness West. My testimony also supports accounting treatment for amortization of the Rockport Capacity Deferral through Tariff Purchase Power Adjustment ("Tariff P.P.A.") beginning in December 2022. Finally, my testimony supports accounting treatment of the Grid Modernization Rider proposed by Company Witness West.

IV. SUMMARY OF ADJUSTMENTS

Q. PLEASE DESCRIBE THE TYPES OF ADJUSTMENTS THAT YOU HAVE PREPARED FOR THIS CASE.

A. I have prepared two types of adjustments in this case. First, I have prepared numerous adjustments to test year revenue and operating expense amounts. Second, I have prepared adjustments to the Company's capitalization and rate base. The adjustments are described in detail in the Revenue and Operating Expense Adjustments and Capitalization and Rate Base Adjustment sections of my testimony.

Q. HOW DID YOU DETERMINE THE APPROPRIATE ALLOCATION FACTORS FOR THE ADJUSTMENTS THAT YOU ARE SPONSORING?

A. For all of the adjustments that I sponsor and in my testimony below, I calculated the total Company adjustments and applied operations and maintenance ("O&M") and retail allocation factors (as applicable) that were provided to me by Company Witness Cost.

Q. DOES THE APPLICATION INCLUDE SUPPORT FOR THE ADJUSTMENTS INCLUDED IN YOUR TESTIMONY?

A. Yes. See Section V, Exhibit 2.

V. REVENUE AND OPERATING EXPENSE ADJUSTMENTS

Q. WHAT TYPES OF REVENUE AND OPERATING EXPENSE ADJUSTMENTS DID YOU PREPARE?

A. The adjustments to test year revenue and operating expense that I prepared fall into five broad categories: (1) rider and surcharge-related adjustments, (2) payroll and benefit-related adjustments, (3) depreciation and asset retirement obligation-related adjustments, (4) regulatory asset amortization-related adjustments, and (5) other O&M adjustments.

Q. CAN YOU PROVIDE A LIST OF THE REVENUE AND OPERATING EXPENSE ADJUSTMENTS THAT YOU ARE SPONSORING?

A. Yes. The table below identifies the revenue and operating expense adjustments that I am sponsoring. The details supporting the calculations of these adjustments are included on the referenced pages of Exhibit 2 to Section V of the Application.

Adjustment Description	**Reference in Section V, Exhibit 2**
Remove Tariff D.R. Revenues and Expenses	W02
Remove Tariff P.P.A. Revenues and Expenses	W08
Remove Tariff D.S.M.C. Revenues and Expenses	W09
Remove Tariff R.E.A. Revenues and Expenses	W10
Remove Tariff K.E.D.S. Revenues and Expenses	W11
Adjust Interest on Customer Deposits	W15
Amortization of Big Sandy Unit 1 Operations Rider Deferral	W17
Annualization of Lease Expense	W20
Adjust Pension and OPEB Expense	W21
Adjust Employee Related Group Benefit Expense	W22
Amortization of NERC Compliance and Cybersecurity Cost Deferral	W25
Remove Severance Expense	W26
KPCo Incentive Compensation Expense Adjustment	W27
KPCo Annualization of Payroll Expense Adjustment	W28
KPCo Overtime Related to Employee Merit Increases Adjustment	W29
KPCo Savings Plan Expense Adjustment	W30
KPCo Medicare Tax Expense Adjustment	W31
KPCo Social Security Tax Expense Adjustment	W32
KPCo Social Security Tax Base Adjustment	W33
Annualization of Depreciation Expense (Excluding ARO Depreciation)	W35
Annualization of ARO Depreciation Expense	W36
Annualization of ARO Accretion Expense	W37
Interest Synchronization Adjustment	W39
AFUDC Offset Adjustment	W40
Adjustment to Defer and Amortize GreenHat Default Charges	W49

Adjustment Description	**Reference in Section V, Exhibit 2**
Remove Adjustment to Joint Use Pole Rental Revenue and Expense Related to a Prior Period	W50
Remove Non-Ongoing Expense Related to the COVID-19 Pandemic	W51
Remove Insurance Proceeds Related to a Prior Period	W52
Remove Rockport Bill Adjustment Related to a Prior Period	W53
Amortization of Deferred Plant Maintenance Costs	W54
Remove Amortization of Rate Case Expense Deferral	W64

Rider and Surcharge Related Adjustments

Q. DID YOU MAKE ANY COST OF SERVICE ADJUSTMENTS FOR RIDERS WITH OVER-/UNDER-RECOVERY ACCOUNTING?

A. Yes. For riders with over-/under-recovery accounting, I made certain adjustments to remove revenue and expense amounts related to the over-/under-recovery in order to avoid including certain rider-related amounts in the determination of the Company's base rates.

Q. PLEASE DESCRIBE THE BASIS FOR OVER-/UNDER-RECOVERY ACCOUNTING.

A. Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC") 980-340-25-1 (regulatory assets) requires deferral accounting based on the existence of a regulatory asset when there is probability of recovery from customers in the future for an under-recovery of costs. ASC 980-405-25-1 (regulatory liabilities) requires deferral accounting based on the existence of a regulatory liability when a true-up to actual costs results in an over-recovery and probability of refund to customers in the future.

Q. FOR WHICH RIDERS DID YOU MAKE TEST YEAR COST OF SERVICE ADJUSTMENTS RELATED TO OVER-/UNDER-RECOVERY?

A. I made adjustments to the test year cost of service for the Decommissioning Rider ("Tariff D.R."), Tariff P.P.A., and Tariff Demand-Side Management Adjustment Clause ("Tariff D.S.M.C.").

Q. PLEASE DESCRIBE THE ADJUSTMENTS THAT YOU ARE SPONSORING RELATED TO TARIFF D.R. IN SECTION V, EXHIBIT 2 W02.

A. Since the Company recovers the costs associated with the decommissioning of coal-related assets at Big Sandy through Tariff D.R. and not through base rates, any revenues and expenses related to Tariff D.R. must be removed from the Company's cost of service. Accordingly, I made the following adjustments relating to Tariff D.R. revenue and expense for the test year ended March 31, 2020:

1. A decrease to test year revenue of $(21,011,102) in Accounts 440-444 to remove Tariff D.R. charges from revenue.
2. A total decrease of $(256,371) (retail jurisdictional amount) to test year O&M expense in Accounts 501, 506, 920, 921, and 931 to remove Big Sandy coal-related O&M expense.
3. An increase to test year O&M expense of $256,371 (retail jurisdictional amount) in Account 512 to remove the deferral of Big Sandy coal-related O&M expense.

4. A removal of both test year asset retirement obligation (“ARO”) accretion expense of $(1,597,114) (retail jurisdictional amount) in Account 411.1 and removal of the corresponding deferral of test year ARO accretion expense of $1,597,114 (retail jurisdictional amount) in Account 411.1, both related to Big Sandy coal-related ARO accretion expense. This removal of offsetting ARO accretion expense and the deferral of ARO accretion expense had no impact on test year cost of service.
5. A decrease in test year amortization expense of $(6,002,692) (retail jurisdictional amount) in Account 407.3 to remove amortization expense of the net Tariff D.R. regulatory asset.

Q. PLEASE DESCRIBE THE GOING-LEVEL ADJUSTMENTS THAT YOU ARE SPONSORING RELATED TO TARIFF P.P.A. IN SECTION V, EXHIBIT 2 W08.

A. Since the Company recovers certain purchase power costs through Tariff P.P.A. and not through base rates, any revenues and expenses related to Tariff P.P.A. must be removed from the Company’s cost of service. Accordingly, I made the following adjustments relating to Tariff P.P.A. revenue and expense for the test year ended March 31, 2020 (retail jurisdictional amounts):

1. An increase to test year revenue of $2,098,615 in Accounts 440-444 to remove Tariff P.P.A. credits from revenue.

2. A decrease to test year O&M expense of $(1,250,000) in Account 555 to remove Rockport related expenses includable in Tariff P.P.A. pursuant to the Commission approved Settlement Agreement in Case No. 2017-00179.
3. An increase to test year O&M expense of $1,250,000 in Account 555 to remove the deferral of Rockport related expenses includable in Tariff P.P.A. pursuant to the Commission approved Settlement Agreement in Case No. 2017-00179.
4. A decrease to test year O&M expense of $(6,428,996) in Account 456/566 to remove 80% of the net annual PJM load-serving entity Open Access Transmission Tariff Charges above or below the $74,453,085 included in base rates, less the transmission return difference pursuant to the Commission approved Settlement Agreement in Case No. 2017-00179.
5. A decrease to test year O&M expense of $(854,641) in Account 555 to remove the net annual cost of any credits provided to customers under Tariff C.S.-I.R.P. for interruptible service.
6. An increase to test year O&M expense of $9,382,251 in Account 566 to remove the deferral of (1) 80% of the net annual PJM load-serving entity Open Access Transmission Tariff Charges above or below the $74,453,085 included in base rates, less the transmission return difference pursuant to the Commission approved Settlement Agreement in Case No. 2017-00179 and (2) the net annual cost of any credits provided to customers under Tariff C.S.-I.R.P. for interruptible service.

Q. PLEASE DESCRIBE THE GOING-LEVEL ADJUSTMENTS THAT YOU ARE SPONSORING RELATED TO TARIFF D.S.M.C. IN SECTION V, EXHIBIT 2 W09.

A. Tariff D.S.M.C. continues to recover lost revenue, incentives and program costs as previously approved by the Commission. This adjustment involves the removal of all Tariff D.S.M.C. revenue and O&M expense. The components of these net adjustments for the test year ended March 31, 2020, are described below:

1. Increase in test year other electric revenues of $196,263 in Account 456, composed of the following:
    - Remove Demand Side Management ("DSM") Rider Refund of $717,020.
    - Remove DSM Incentive Revenue Accrued of $(2,126).
    - Remove DSM Lost Revenue Accrued of $(299,488).
    - Remove DSM Revenue Recovery of Incentives, Lost Revenue of $(219,144).
2. Increase in test year O&M expense of $497,876 in Account 908, composed of the following items related to program costs:
    - Remove DSM O&M for Refund of Program Costs of $497,876.
    - Remove DSM O&M for Program Costs Expense of $(288,755).
    - Remove DSM O&M Credits for Program Costs Deferred of $288,755.

The net DSM adjustments result in increases of $196,263 in test year revenue and $497,876 in test year expense. These increases are all directly assigned to the Company's retail jurisdiction.

Q. DID YOU MAKE ANY COST OF SERVICE ADJUSTMENTS FOR CERTAIN RIDERS WITHOUT OVER-/UNDER-RECOVERY ACCOUNTING?

A. Yes. I made adjustments to test year cost of service for Tariff Residential Energy Assistance ("Tariff R.E.A.") and Tariff Kentucky Economic Development Surcharge ("Tariff K.E.D.S.").

Q. PLEASE DESCRIBE THE GOING-LEVEL ADJUSTMENTS THAT YOU ARE SPONSORING RELATED TO TARIFF R.E.A. IN SECTION V, EXHIBIT 2 W10.

A. For this adjustment, test year retail Tariff R.E.A. revenue of $(482,478) recorded to Accounts 440-444 is removed and corresponding expense of $(482,478) recorded as O&M expense to Account 908 is also removed. These Tariff R.E.A. revenue and expense adjustments are directly assigned to the Company's retail jurisdiction.

Q. PLEASE DESCRIBE THE GOING-LEVEL ADJUSTMENTS THAT YOU ARE SPONSORING RELATED TO THE COMPANY'S TARIFF K.E.D.S. AS DESCRIBED IN SECTION V, EXHIBIT 2 W11.

A. For this adjustment, test year retail Tariff K.E.D.S. revenue of $(370,224) in Accounts 440-444 is removed and corresponding expense of $(370,224) recorded as O&M expense to Account 908 is also removed. These Tariff K.E.D.S. revenue and expense adjustments are directly assigned to the Company's retail jurisdiction.

<u>Payroll and Benefit Adjustments</u>

Q. ARE SPECIAL ADJUSTMENTS NECESSARY WHEN CALCULATING GOING LEVEL COST OF SERVICE ADJUSTMENTS FOR PAYROLL AND BENEFIT RELATED ISSUES?

A. Yes. As the operator and owner of an undivided 50% interest in the Mitchell Plant, the Company initially records 100% of all Mitchell Plant labor costs charged by Company employees. The Company then bills Wheeling Power Company ("Wheeling Power"), an affiliated AEP subsidiary company and owner of the remaining 50% undivided interest in the Mitchell Plant, Wheeling Power's share of Mitchell Plant labor costs.

In May 2015, AEP Generation Resources Inc. ("AEP Generation Resources"), an affiliated AEP subsidiary company, ceased operations at its Kammer Plant generating facility due to pending environmental regulations. Due to the proximity of Kammer Plant to Mitchell Plant, certain Company employees worked at the Kammer Plant during the ongoing shutdown of the plant facility. The Company initially records 100% of all Kammer Plant retiree pension and other post-retirement benefit costs applicable to these employees and then bills 100% of these retiree costs to AEP Generation Resources.

In summary, all of the payroll and benefit cost of service adjustments discussed below are properly limited to Kentucky Power's ownership share of generation plant-related labor costs and are exclusive of amounts properly billed or allocated to AEP

Generation Resources and Wheeling Power for their ownership shares of Kammer Plant and Mitchell Plant, respectively.

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR PENSION AND OTHER POST EMPLOYMENT BENEFITS ("OPEB") (SECTION V, EXHIBIT 2 W21).

A. This adjustment accounts for known changes from test year pension and OPEB costs related to both active and inactive Company employees. This adjustment is based on 2020 forecasts, as provided by the Company's actuaries, Willis, Towers and Watson, less actual costs for the test year ended March 31, 2020. After applying corresponding O&M and retail allocation factors, the retail jurisdictional share of the cost of service decrease for pension and OPEB expense is $(8,840).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR EMPLOYEE GROUP BENEFITS (SECTION V, EXHIBIT 2 W22).

A. This adjustment accounts for known changes from test year values in medical, dental, life and long-term disability coverage for Company employees. The adjustment is based on the number of Company employees enrolled in each plan as of March 31, 2020, and actual cost per employee for 2020 compared to actual Company medical, dental, life and long-term disability coverage costs for the test year ended March 31, 2020. After applying corresponding O&M and retail allocation factors, the retail jurisdictional share of the net cost of service decrease for group benefit expense is $(383,644).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT RELATED TO SEVERANCE EXPENSE (SECTION V, EXHIBIT 2 W26).

A. This cost of service adjustment was made to decrease payroll expense for severance expense recorded in the test year. The retail jurisdictional share of the decrease for severance expense is $(1,541,217).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR THE COMPANY'S INCENTIVE COMPENSATION (SECTION V, EXHIBIT 2 W27).

A. As described by Company Witness Kaiser, the AEP System offers two types of incentive pay to its employees: variable annual (or short-term) incentive compensation ("STI") and long-term incentive compensation ("LTI"). Test year cost of service amounts include expenses for STI, also referred to as Incentive Compensation Plan ("ICP") expense, and LTI, which is composed of expenses related to Performance Share Units ("PSUs"), and Restricted Stock Units ("RSUs").

The incentive compensation cost of service adjustment decreases test year ICP and PSU expense to reflect expenses at a level of 1.0 of the incentive target to be paid to Company employees subject to meeting performance goals. No adjustment to RSU expense is necessary since RSU expense per books is already at a level of 1.0 of the incentive target to be paid to Company employees subject to meeting performance goals. The retail jurisdictional share of the cost of service decrease for incentive compensation expense is $(945,619).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR ANNUALIZATION OF PAYROLL EXPENSE (SECTION V, EXHIBIT 2 W28).

A. This adjustment decreases O&M expenses to reflect the annualized base payroll expense for the Company at the test year-end. Base payroll expense in the test year was updated using the actual employees on the payroll in the last pay period of March 2020 and their base payroll amounts at that time ("March 2020 Base Payroll"), resulting in a calculated decrease in payroll expense of $(1,118,107). Next, annual merit increases and promotions effective in April, May or June of 2020, as approved by the Company and provided by AEPSC's Human Resources department, were applied to March 2020 Base Payroll, resulting in a calculated increase in payroll expense of $525,218. Finally, the net payroll expense decrease of $(592,888) was multiplied by the corresponding retail allocation factor, resulting in a retail jurisdictional O&M expense decrease of $(586,959). The calculation to annualize payroll expense does not include overtime, severance payments or incentive payments.

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR ADDITIONAL OVERTIME COSTS RELATED TO MERIT INCREASES (SECTION V, EXHIBIT 2 W29).

A. To account for the impact of increased base pay on the Company's overtime expense, overtime costs for the test year ended March 31, 2020, were multiplied by the approved average merit increase percentages for 2020. After applying the corresponding retail allocation factor, the retail jurisdictional share of the cost of service increase for overtime expense related to merit increases is $95,845.

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR SAVINGS PLAN EXPENSE (SECTION V, EXHIBIT 2 W30).

A. For Company individuals participating in the AEP 401(k) retirement savings plan, the Company makes 100% matching contributions for each employee's first 1% of contributions of eligible compensation and 75% matching contributions for the next 5% of each employee's contributions of eligible compensation. The Company's 401(k) matching contributions are included as a test year expense for the Company. For 2020, the Company estimates that 401(k) retirement savings matching contributions will be 4.00% of employees' eligible earnings.

This cost of service adjustment for savings plan expense is determined by taking the net forecasted decrease related to changes in incentives, annualization of base payroll, merit increases, and the impact of merit increases on overtime. This net decrease of $(1,451,246) prior to application of O&M and retail allocation factors is then multiplied by the Company's forecasted savings plan rate of 4.00%, resulting in a $(58,050) decrease in savings plan costs. After applying the corresponding retail allocation factor, the retail jurisdictional share of the cost of the savings plan expense decrease is $(57,469).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR MEDICARE TAX EXPENSE (SECTION V, EXHIBIT 2 W31).

A. The Company incurs Medicare tax expense for labor costs that include base pay, overtime and incentives. This cost of service adjustment for Medicare tax expense is determined by taking the net forecasted decrease related to changes in incentives, annualization of base payroll, merit increases, and the impact of merit increases on overtime. This net decrease of $(1,451,246) is then multiplied by the Medicare tax rate of 1.45%, resulting in a $(21,043) decrease in savings plan expenses. After applying the corresponding retail allocation factor, the retail jurisdictional share of the savings plan expense decrease is $(20,833).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR SOCIAL SECURITY TAX EXPENSE (SECTION V, EXHIBIT 2 W32).

A. The Company incurs Social Security tax expense for labor costs that include base pay, overtime and incentives. This cost of service adjustment for Social Security Tax is determined by taking the net forecasted decrease related to changes in incentives, annualization of base payroll, merit increases, and the impact of merit increases on overtime. This net decrease of $(1,451,246) is then multiplied by both the percent of 2019 Company salaries subject to 2019 Social Security tax and the Social Security tax rate of 6.20%, resulting in a $(86,988) decrease in Company test year Social Security taxes. After applying the corresponding retail allocation factor, the retail jurisdictional share of the Social Security tax expense decrease is $(86,118).

Q. PLEASE DESCRIBE THE COST OF SERVICE ADJUSTMENT FOR SOCIAL SECURITY TAX BASE (SECTION V, EXHIBIT 2 W33).

A. The Company incurs Social Security tax expense of 6.20% on each employee's combined base pay, overtime and incentive compensation up to the annual Social Security tax base. The tax base on which Social Security taxes are imposed increased from $132,900 in 2019 to $137,700 in 2020. Based on this tax base increase, the number of Company employees who earned more than $132,900 in 2019 and the Social Security tax rate of 6.20%, a net increase in Company Social Security tax expense of $17,260 was calculated. After applying corresponding O&M and retail allocation factors, the retail jurisdictional share of the cost of service increase due to the increase in the Social Security tax base is $10,032.

Depreciation and Asset Retirement Obligation Adjustments

Q. HOW DID THE COMPANY CALCULATE THE ANNUALIZATION OF DEPRECIATION EXPENSE USING COMMISSION APPROVED DEPRECIATION RATES AS OF MARCH 31, 2020 IN SECTION V, EXHIBIT 2 W35?

A. To properly reflect depreciation expense based on property balances at the end of the test year and to reflect assets placed in service or retired during the test year, I calculated a depreciation annualization adjustment by multiplying the Company's March 31, 2020, gross plant balances for each functional class by corresponding depreciation rates used in March 2020. The resulting adjusted Current Annual Depreciation Expense is then compared to the corresponding 12 Month Test Year per Books Depreciation Expense, resulting in a total Company $5,252,060 increase in depreciation expense. After applying corresponding allocation factors to each functional class' depreciation expense increase, the retail jurisdictional amount of the depreciation expense increase is $5,192,764.

Q. WHAT ADJUSTMENTS WERE MADE TO ARRIVE AT TEST YEAR PER BOOKS DEPRECIATION?

A. Adjustments were made to remove property balances and depreciation expense for the test year ended March 31, 2020, related to the Company's (1) Mitchell Plant Flue Gas Desulfurization ("FGD") investment, (2) NERC Compliance and Cybersecurity Cost Deferral, and (3) AROs.

Q. PLEASE DESCRIBE THE ADJUSTMENTS MADE IN THE ANNUALIZATION OF DEPRECIATION EXPENSE RELATED TO THE MITCHELL PLANT FGD.

A. For the calculation of the annualization of depreciation in Section V, Exhibit 2 W35, March 31, 2020 Property Balances are reduced by $(328,781,793) related to Mitchell Plant FGD plant in service while test year per books depreciation expense is also reduced by $(9,729,242) for depreciation expense in the test year ended March 31, 2020, related to Mitchell Plant FGD plant in service. These adjustments are sponsored and described by Company Witness Scott.

Q. PLEASE DESCRIBE THE ADJUSTMENTS MADE IN THE ANNUALIZATION OF DEPRECIATION EXPENSE RELATED TO THE NERC COMPLIANCE AND CYBERSECURITY COST DEFERRAL.

A. For the calculation of the annualization of depreciation expense in Section V, Exhibit 2 W35, March 31, 2020 Property Balances are reduced by $(1,365,996) related to plant in service being recovered through the NERC Compliance and Cybersecurity Cost Deferral. Test year per books depreciation expense was increased by $188,154 to remove deferral of depreciation expense (net of deferral amortization) in the test year ended March 31, 2020, being recovered through the NERC Compliance and Cybersecurity Cost Deferral.

Q. PLEASE DESCRIBE THE ADJUSTMENTS MADE IN THE ANNUALIZATION OF DEPRECIATION EXPENSE RELATED TO ARO.

A. For the calculation of the annualization of depreciation expense in Section V, Exhibit 2 W35, March 31, 2020 Property Balances are decreased by $(13,284,347) to remove ARO property balances while depreciation expense for the test year ended March 31, 2020, is reduced by $(242,412) to remove test year ARO depreciation expense on Mitchell Plant. See Section V, Exhibit 2 W36 for the separate annualization of ARO depreciation expense.

Q. PLEASE DESCRIBE THE ANNUALIZATION OF ARO DEPRECIATION EXPENSE IN SECTION V, EXHIBIT 2 W36.

A. The Company ARO depreciation annualization adjustment increases depreciation expense by $51,634. The depreciation annualization adjustment is calculated by comparing forecasted ARO depreciation expense for the period April 2019 through March 2020 of $294,832 less per books ARO depreciation expense of $242,412 for the test year ended March 31, 2020, resulting in a total Company ARO depreciation decrease of $52,420. The retail jurisdictional amount of the ARO depreciation decrease is $51,634 and is related to a Mitchell Plant ARO described below.

Q. PLEASE DESCRIBE THE ANNUALIZATION OF ARO ACCRETION EXPENSE IN SECTION V, EXHIBIT 2 W37.

A. This adjustment decreases other expense by $(150,304). This decrease was calculated by comparing forecasted ARO accretion for the period April 2019 through March 2020 to per books ARO accretion expense for the test year ended March 31, 2020, resulting in a total Company decrease of $(152,593). The retail jurisdictional amount of the ARO accretion expense decrease is $(150,304).

<u>Regulatory Accounting Treatment and Amortization of Jurisdictional Deferrals</u>

Q. HOW DOES THE COMPANY ACCOUNT FOR SIGNIFICANT REGULATORY DEFERRALS?

A. FASB ASC 980 requires deferral accounting when certain conditions are met. FASB ASC 980-340 requires that when incurred costs are probable of future recovery, the unrecovered costs should be capitalized (deferred) as a regulatory asset and amortized to expense when recovered in revenues. Conversely, FASB ASC 980-405 requires the recognition of a regulatory liability/provision for refund when it becomes probable that a utility will be required by a regulator to provide a refund to customers. FASB ASC 980 recognizes that a regulator can provide reasonable assurance of the existence of an asset if the regulator provides for the future recovery through cost-based rates of a currently incurred cost that would otherwise have been charged to expense. When that occurs, the regulator-created asset, or regulatory asset, must be recorded by deferring the incurred cost to be recovered in the future. The deferral as a regulatory asset of unrecovered incurred costs to be recovered in the future allows the Company to properly match such costs with the revenues, allowing recovery of such costs in the same accounting period. The matching of cost and revenue is a long-standing utility accounting concept, which produces meaningful financial statements especially for cost-based regulated operations. The FERC amended its Uniform System of Accounts ("USofA"), incorporating FASB ASC 980 in the USofA, in its Order 390 effective January 1, 1984. As such, the Company's proposed deferral accounting is consistent with both Generally Accepted Accounting Principles ("GAAP") codified in FASB ASC 980 and the FERC USofA.

Q. DO YOU SPONSOR ANY AMORTIZATIONS OF JURISDICTIONAL REGULATORY DEFERRALS?

A. Yes. I sponsor the adjustments listed in the table below.

Adjustment Description	**Reference in Section V, Exhibit 2**
Amortization of Big Sandy Unit 1 Operations Rider Deferral	W17
Amortization of NERC Compliance and Cybersecurity Cost Deferral	W25

Adjustment to Defer and Amortize GreenHat Default Charges	W49
Amortization of Deferred Plant Maintenance Costs	W54
Remove Amortization of Rate Case Expense Deferral	W64

Q. PLEASE EXPLAIN THE ADJUSTMENT TO AMORTIZE THE BIG SANDY UNIT 1 OPERATIONS RIDER DEFERRAL (SECTION V, EXHIBIT 2 W17).

A. The January 18, 2018, Order in Case No. 2017-00179 approved recovery of Big Sandy Unit 1 costs in base rates effective January 19, 2018. At the time new base rates were implemented, the Company stopped recording under-/over-recovery adjustments to the Big Sandy Unit 1 Operations Rider ("BS1OR") regulatory asset/regulatory liability balance. The Company is requesting to amortize the final BS1OR regulatory asset balance of $1,083,437 over 3 years through the cost of service adjustment at Section V, Exhibit 2 W17. Company Witness West supports the 3-year amortization period for this regulatory asset. I support the Company's requested regulatory asset amount to be recovered and proposed annual amortization amount.

The annual level of amortization expense proposed is $361,146, which was calculated by dividing the Company's BS1OR regulatory asset balance of $1,083,437 as of March 31, 2020, by the 3-year amortization period requested by Company Witness West. The BS1OR regulatory asset balance and related proposed amortization expense is directly assigned to the Company's retail jurisdiction.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO AMORTIZE THE NERC COMPLIANCE AND CYBERSECURITY COST DEFERRAL (SECTION V, EXHIBIT 2 W25).

A. The Company is requesting to amortize the NERC Compliance and Cybersecurity cost deferral post February 28, 2017, as authorized by order dated January 18, 2018, in Case No. 2017-00179 of $444,340 over 5 years through the cost of service adjustment at Section V, Exhibit 2 W25. Company Witness West supports the 5-year amortization period for this regulatory asset. I support the Company's requested regulatory asset amount to be recovered and proposed annual amortization amount.

The annual level of amortization expense proposed is $88,868, which was calculated by dividing the Company's deferral post February 28, 2017, through March 31, 2020, of $444,340 by the 5-year amortization period requested by Company Witness West. The cost of service adjustment to annualize depreciation expense at Section V, Exhibit 2 W35 removed NERC Compliance and Cybersecurity cost deferral annual amortization expense authorized in Case No. 2017-00179 of $14,275 from the test year. In order to reflect going-level amortization expense in the test year, the total NERC Compliance and Cybersecurity cost deferral amortization expense adjustment is $103,143, which represents the sum of the currently requested and previously approved annual NERC Compliance and Cybersecurity cost deferral amortization amounts of $88,868 and $14,275, respectively.

The NERC Compliance and Cybersecurity cost deferral regulatory asset balance and related amortization expense is directly assigned to the Company's retail jurisdiction.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO DEFER AND AMORTIZE GREENHAT DEFAULT CHARGES (SECTION V, EXHIBIT 2 W49).

A. In Case No. 2020-00034, the Company is seeking accounting authority to defer GreenHat default costs. The purpose of this adjustment is to remove GreenHat default costs from the cost of service for test year ended March 31, 2020, in alignment with the Company's proposal and to request amortization of the proposed GreenHat default cost deferral over 3 years. Company Witness West supports the 3-year amortization period for the GreenHat default cost deferral. I support (1) removal of GreenHat default costs from the test year, (2) the Company's requested regulatory asset amount to be recovered, and (3) the proposed annual amortization amount.

GreenHat default costs to be removed from the test year ended March 31, 2020, total $(150,650) (retail jurisdictional amount). The annual level of amortization expense proposed is $117,487, which was calculated by dividing the Company's total expected deferred GreenHat default costs through December 31, 2020, of $357,829 by the 3-year amortization period requested by Company Witness West and multiplying by the applicable jurisdictional allocation factor.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO AMORTIZE DEFERRED PLANT MAINTENANCE COSTS (SECTION V, EXHIBIT 2 W54).

A. The Company is requesting to amortize the plant maintenance cost deferral authorized by order dated January 18, 2018 in Case No. 2017-00179 of $696,194 over 3 years through the cost of service adjustment at Section V, Exhibit 2 W54. Company Witness West supports the 3-year amortization period for this regulatory asset. I support the Company's requested cost deferral amount to be recovered and proposed annual amortization amount.

The annual level of amortization expense proposed is $232,065, which was calculated by dividing the Company's cost deferral of $696,194 as of March 31, 2020, by the 3-year amortization period requested by Company Witness West. The plant maintenance cost deferral and related proposed amortization expense is directly assigned to the Company's retail jurisdiction.

Due to an immaterial accounting omission, the plant maintenance cost deferral was not recorded as a regulatory asset/liability in the Company's books until May 2020. See Section V, Exhibit 2 W60 for the adjustment to add the Plant Maintenance cost deferral balance of as of March 31, 2020, to jurisdictional capitalization.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE AMORTIZATION OF RATE CASE EXPENSE DEFERRAL (SECTION V, EXHIBIT 2 W64).

A. The January 18, 2018 Order in Case No. 2017-00179 approved deferral of $1,375,000 base rate case expenses and amortization over 3 years, beginning on January 19, 2018, and ending on January 18, 2021. The Company proposes to decrease test year rate case expense by $(458,333) in order to remove amortization related to the previous base case from the test year since the previously authorized amortization period ends at approximately the same time a Commission order is anticipated in this base case proceeding. Company Witness West sponsors a separate adjustment to defer and amortize base rate case expenses related to this base case proceeding.

Other O&M Adjustments

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR INTEREST EXPENSE ASSOCIATED WITH CUSTOMER DEPOSITS (SECTION V, EXHIBIT 2 W15).

A. During 2019, the interest rate paid by Kentucky Power pursuant to KRS 278.460 on customer deposits was 2.64%. Test year customer deposit interest expense was $727,940. On December 13, 2019, the Commission announced that the 2020 interest rate applicable to customer deposits would be decreased to 1.66%. Consistent with the treatment of customer deposit interest expense in prior rate cases, Kentucky Power proposes to decrease test year customer deposit interest expense by $(220,699) to $507,242 in order to reflect the decrease in the applicable rate from 2.64% to 1.66%.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO ANNUALIZE LEASE EXPENSE (SECTION V, EXHIBIT 2 W20).

A. This adjustment decreases O&M expense to reflect the annualized lease expense for the Company at the test year-end. Specifically, annualized March 2020 lease expenses of

$1,043,553 were compared to test year lease expenses of $1,153,026, resulting in a calculated decrease of $(109,473). After applying the corresponding retail allocation factor, the retail jurisdictional share of the cost of service decrease for lease expenses is $(109,657). Note that March 2020 lease expense excludes $3,100 in monthly lease expense related to the Ashland Office Lease (855 Central Ave). The Ashland Office Lease was terminated in the second quarter of 2020.

Q. WHY IS AN INTEREST SYNCHRONIZATION ADJUSTMENT NECESSARY (SECTION V, EXHIBIT 2 W39)?

A. This adjustment synchronizes the capital costs and capital structure included by the Company in this filing with the federal and state income taxes included in the test period cost of service and the interest expense tax deduction that will result. The adjustment resulted in an increase to state income tax of $441,404 and an increase to federal income tax of $1,490,607 for a total increase to expenses of $1,932,011.

Q. PLEASE EXPLAIN THE AFUDC OFFSET ADJUSTMENT (SECTION V, EXHIBIT 2 W40).

A. The March 31, 2020, balance of Construction Work In Progress (“CWIP”) was used in the determination of rate base. Consistent with prior Commission practice for the Company, an Allowance for Funds Used During Construction (“AFUDC”) “offset” adjustment is being made to record AFUDC above the line. The CWIP balance was $91,925,130 on March 31, 2020, of which $8,005,266 is not subject to AFUDC. The remaining balance of

$83,919,864 is subject to AFUDC. Using the requested overall return of 6.580%, the annualized AFUDC is $5,521,927. The AFUDC booked during the test year was $2,383,718 requiring an adjustment to increase the AFUDC offset by $3,138,210. The Deferred Federal Income Taxes ("DFIT") associated with the borrowed funds portion of the $5,521,927 in Annualized AFUDC is $369,879. The booked DFIT on the borrowed funds portion was $273,157. This increases DFIT by $96,722.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE JOINT USE POLE RENTAL REVENUE AND O&M EXPENSE ACTIVITY RELATED TO A PRIOR PERIOD (SECTION V, EXHIBIT 2 W50).

A. An adjustment to joint use pole rental revenue and expense was recorded in the test year that relates to a prior period. This cost of service adjustment increases test year revenue and expense to remove this prior period adjustment from the test year. The retail jurisdictional shares of the revenue (Account 454) and O&M expense (Account 589) increases are $283,945 and 226,538, respectively.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE NON-ONGOING O&M EXPENSE RELATED TO THE COVID-19 PANDEMIC (SECTION V, EXHIBIT 2 W51).

A. During the test year, the Company accrued O&M expense for additional paid-days off awarded to essential employees reporting to work during the COVID-19 pandemic. This cost of service adjustment removes this non-ongoing expense from the test year, decreasing test year O&M expense. The retail jurisdictional share of the expense reduction is $(142,980), composed of a $(64,729) reduction in Account 506 and a $(78,251) reduction in Account 588.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE INSURANCE PROCEEDS RELATED TO A PRIOR PERIOD (SECTION V, EXHIBIT 2 W52).

A. During the test year, the Company recorded insurance proceeds from an insurance claim related to a prior period, resulting in decreased O&M expense. This cost of service adjustment removes the insurance proceeds to reflect O&M expense at a going level. The retail jurisdictional share of the resulting expense increase is $41,707 in Account 903.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE A ROCKPORT BILL ADJUSTMENT RELATED TO A PRIOR PERIOD (SECTION V, EXHIBIT 2 W53).

A. During April 2019, the Company recorded a decrease in purchased power expense as the result of an adjustment to first quarter 2019 Rockport billings. This cost of service adjustment removes this prior period entry from the test year, resulting in an increase to purchased power expense. The retail jurisdictional share of the expense increase is $919,331 in Account 555.

VI. CAPITALIZATION AND RATE BASE ADJUSTMENTS

Q. ARE YOU SPONSORING ANY ADJUSTMENTS TO THE COMPANY'S CAPITALIZATION CALCULATION OR RATE BASE CALCULATION?

A. Yes. The table below identifies the adjustments to the Company's capitalization calculation and rate base calculation that I am sponsoring. The details supporting the calculations of these adjustments are included on the referenced pages of Exhibit 2 to Section V of the Application.

Adjustment Description	**Reference in Section V, Exhibit 2**
Remove Big Sandy Unit 2 from Capitalization and Rate Base	W42
Add Deferred Plant Maintenance Regulatory Asset to Capitalization and Rate Base	W60
Remove NERC Compliance and Cybersecurity Investment from Capitalization and Rate Base	W61
Remove Rockport Deferral from Capitalization and Rate Base	W62

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE BIG SANDY UNIT 2 FROM CAPITALIZATION AND RATE BASE (SECTION V, EXHIBIT 2 W42).

A. Big Sandy Unit 2 coal assets are recovered exclusively through the Company's Tariff D.R. and, therefore, should be removed from capitalization and rate base. In addition, Tariff D.R. reflects the amortization of related unprotected accumulated deferred income tax over 18 years as ordered by the Commission in its June 28, 2018, Order in Case No. 2018-00035.

As shown in Section V, Exhibit 2 W42, I provided Company Witness West with a capitalization adjustment of $(207,760,965), which removes the total Company Big Sandy Unit 2 regulatory asset balance of $300,631,090, net of related accumulated deferred income taxes of $(92,870,124). After applying corresponding retail allocation factors to this adjustment, the retail jurisdictional amount of the capitalization adjustment is $(203,926,657).

As shown in Section V, Exhibit 2 W42, I also provided Company Witness West with a rate base adjustment to remove accumulated deferred income taxes related to Big Sandy Unit 2 coal assets from rate base, resulting in a rate base increase of $92,870,124. After applying corresponding retail allocation factors to this adjustment, the retail jurisdictional amount of the rate base increase is $91,862,903.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO INCREASE CAPITALIZATION FOR THE DEFERRED PLANT MAINTENANCE REGULATORY ASSET (SECTION V, EXHIBIT 2 W60).

A. In Case No. 2017-00179, the Commission approved the Company's request to defer the actual annual steam plant maintenance cost above or below the 3-year average included in base rates and establish a regulatory asset or liability as appropriate to be recovered by the Company or returned to customers in the Company's next base rate case. The Company inadvertently failed to record a regulatory asset on the books as of the end of the test year. Thus, we are increasing capitalization for the known and measurable regulatory asset. As shown in Section V, Exhibit 2 W60, I provided Company Witness West with an adjustment to increase capitalization by $549,993 to reflect the Company's cumulative deferral of plant maintenance costs above the 3-year average included in base rates of $696,194 through March 31, 2020, net of related accumulated deferred income taxes of $(146,201). The plant maintenance cost deferral is directly assigned to the Company's retail jurisdiction.

The Company recorded the deferred plant maintenance regulatory asset on its books in May 2020. As approved in Case No. 2017-00179 and until new base rates are implemented, the Company will continue to defer the actual annual steam plant maintenance cost above or below the 3-year average included in base rates and establish a regulatory asset or liability, as appropriate, to be recovered by the Company or returned to the customer in the Company's next base rate case.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE NERC COMPLIANCE AND CYBERSECURITY INVESTMENT FROM CAPITALIZATION (SECTION V, EXHIBIT 2 W61).

A. In Case No. 2014-00589, the Commission approved the deferral of certain NERC Compliance and Cybersecurity costs. Because the related intangible plant investment is earning a Weighted Cost of Capital ("WACC") return through the approved deferral mechanism, the Company is removing the related intangible plant and regulatory asset balances from capitalization. As shown in Section V, Exhibit 2 W61, I provided Company Witness West with an adjustment to capitalization of $(1,417,564) to reflect the Company's related intangible plant investment balance of $1,365,996 and regulatory asset balance of $428,389 as of March 31, 2020, net of related accumulated deferred income taxes of $(376,821). The NERC Compliance and Cybersecurity capitalization adjustment is directly assigned to the Company's retail jurisdiction.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO REMOVE THE ROCKPORT DEFERRAL FROM CAPITALIZATION (SECTION V, EXHIBIT 2 W62).

A. In Case No. 2017-00179, the Commission authorized the deferral of $50 million of Rockport Plant Unit Power Agreement ("UPA") non-fuel, non-environmental expenses. Because the Rockport deferral is earning a WACC return through the approved deferral mechanism, the Company is removing the total deferral from capitalization.

As shown in Section V, Exhibit 2 W62, I provided Company Witness West with a capitalization adjustment of $(25,998,927), which removes the total Company Rockport deferral regulatory asset balance of $32,910,034, net of related accumulated deferred income taxes of $(6,911,107). The Rockport deferral is directly assigned to the Company's retail jurisdiction.

VII. ROCKPORT DEFERRAL AMORTIZATION

Q. PLEASE DESCRIBE THE ROCKPORT DEFERRAL REGULATORY ASSET AUTHORIZED IN CASE NO. 2017-00179.

A. The January 18, 2018, Order in Case No. 2017-00179 approved deferral of $50 million of Rockport Unit 2 non-fuel and non-environmental lease expenses plus a carrying charge based on the authorized WACC: $15 million in 2018 and 2019, $10 million in 2020, and $5 million in 2021 and 2022. Deferral began on January 19, 2018, and will continue through the end of the Rockport lease on December 8, 2022. In 2020, 2021, and 2022 the decrease in the deferral is offset with an increase in the amount recovered through Tariff P.P.A. Additionally, in 2022, the increase in the amount recovered through Tariff P.P.A. will be prorated through December 8, 2022, as the Rockport UPA will terminate on that date. By utilizing Tariff P.P.A., the Company is able to reduce the annual deferral amount and concurrently keep base rates unchanged.

Q. WHAT IS THE ROCKPORT DEFERRAL REGULATORY ASSET BALANCE AS OF MARCH 31, 2020?

A. The Rockport deferral regulatory asset balance as of March 31, 2020, is presented in the table below. The equity component of the carrying charge is not deferrable for accounting purposes due to the provisions of FASB ASC 980-340-25-5 which prohibits the recognition through deferral of equity costs (before collection in rates) except during construction. Therefore, the equity portion of the return related to the Rockport Deferral is tracked and credited as a contra regulatory asset in account 1823429.

Account Number	**Account Description**	**Balance as of March 31, 2020**
1823431	Rockport Capacity Deferral	31,774,194
1823430	Rockport Capacity CC Deferral	2,172,431
1823429	Rockport Capacity Def-Eqty CC	(1,036,591)
		32,910,034

Q. WAS AMORTIZATION OF THE ROCKPORT DEFERRAL REGULATORY ASSET AUTHORIZED IN CASE NO. 2017-00179?

A. No. While the Settlement Agreement in Case No. 2017-00179 stated the Company and the Settling Intervenors agreed to amortize and recover the Rockport Deferral regulatory asset over 5 years through Tariff P.P.A. beginning in December 2022, the January 18, 2018, Order in Case No. 2017-00179 stated, "....this approval is for accounting purposes only, and the appropriate ratemaking treatment for this regulatory asset account will be addressed in Kentucky Power's next general rate case."

Q. IS THE COMPANY REQUESTING AMORTIZATION OF THE ROCKPORT DEFERRAL REGULATORY ASSET IN THIS PROCEEDING?

A. Yes. As also discussed by Company Witness West, the Company is requesting to amortize and recover the Rockport Deferral regulatory asset over 5 years through Tariff P.P.A. beginning in December 2022, consistent with the Settlement Agreement filed in Case No. 2017-00179. As further described in the Settlement Agreement filed in Case No. 2017-00179, the Rockport Deferral regulatory asset will be subject to the authorized WACC carrying charge until it is fully recovered. Kentucky Power estimates that the Rockport Deferral regulatory asset will total approximately $59 million in December 2022, resulting in annual amortization of approximately $12 million through Tariff P.P.A for a 5-year period ending in December 2027.

VIII. ACCOUNTING TREATMENT OF THE PROPOSED GRID MODERNIZATION RIDER

Q. PLEASE EXPLAIN HOW YOU ARE SUPPORTING THE COMPANY'S GRID MODERNIZATION RIDER PROPOSAL.

A. The Grid Modernization Rider ("GMR") proposed by Company Witness West will be the recovery mechanism for many projects that will either help to modernize the grid or improve the reliability or resiliency of the grid. The Company's proposed Advanced Metering Infrastructure ("AMI") project, as presented by Company Witness Blankenship, is the first such grid modernization project ("AMI GMR Project"). Company Witness Vaughan supports the initial GMR revenue requirement, based on forecasted expenditures for the proposed AMI GMR Project provided by Company Witness Blankenship. I address the Company's accounting for temporary differences between GMR revenues and actual costs incurred related to approved GMR projects (plus allowed pre-tax WACC return on GMR project rate base) and related request for accounting deferral authorization. In addition, I address the Company's accounting for actual GMR revenues, GMR project rate base, and GMR project costs.

Q. HOW DOES THE COMPANY PROPOSE TO ACCOUNT FOR THE RECOVERY OF GMR PROJECT COSTS THROUGH THE GMR?

A. The Company will record GMR revenues, GMR project rate base, and GMR project costs in a manner that will readily allow for the identification, tracking, and reporting of these amounts on a monthly or other periodic basis. This is necessary to distinguish GMR-related amounts from other amounts included in base rate revenues for use in future base rate filings, to support GMR annual reporting and future GMR reconciliation proceedings described by Company Witness West, and to support the Company's ongoing accounting in accordance with GAAP. Upon approval of a GMR project, the Company will begin appropriate accounting and cost recording processes to accumulate GMR revenues and related GMR project costs and, as I discuss below, will calculate and record (i.e., defer) any differences between billed and accrued GMR revenues and actual GMR project costs incurred (plus allowed pre-tax WACC return on GMR project rate base) as a regulatory asset or regulatory liability.

Q. WILL A REGULATORY ASSET OR REGULATORY LIABILITY BE CREATED TO ACCOUNT FOR TEMPORARY DIFFERENCES BETWEEN GMR REVENUES AND ACTUAL GMR PROJECT COSTS INCURRED AND THE EFFECT ON ACTUAL RETURN ON INVESTED CAPITAL?

A. Yes. The Company will defer the cumulative monthly or other periodic difference between GMR revenues and actual incurred GMR project costs (plus allowed WACC return on GMR project rate base), as a regulatory asset or regulatory liability on the books and records of the Company. This deferral -- a regulatory asset or regulatory liability -- is a timing difference between costs incurred for GMR projects and GMR revenues and is intended to be zero as of the end of the GMR. This regulatory asset or regulatory liability, therefore, represents “over-under” recoveries. The Company requests, therefore, specific provisions in the final order in this proceeding authorizing the creation of this regulatory asset or regulatory liability.

Q. HOW WILL THE COMPANY TRACK AND RECORD GMR REVENUES?

A. The Company will utilize its customer information system to separately track GMR revenues over the life of the GMR. Reports can be run against the customer information system to separately identify GMR revenues. GMR revenues will be recorded in the appropriate FERC account.

Q. HOW WILL THE COMPANY TRACK AND RECORD GMR PROJECT RATE BASE?

A. As described by Company Witness Vaughan, GMR project rate base will include Electric Plant in Service (“EPIS”, defined per FERC classification of tangible and intangible utility assets) net of accumulated depreciation and related accumulated deferred federal income taxes (“ADFIT”). For the GMR AMI Project specifically, project rate base will include (1) AMI meters and related communication equipment EPIS, (2) AMI-related software EPIS, and (3) related ADFIT. Company Witness Blankenship and Company Witness West address the reasonableness and necessity of GMR AMI Project rate base in their testimonies.

The Company will track GMR project EPIS through appropriate FERC accounts, sub-accounts, property unit numbers, and project tracking, as necessary, to provide for the separate reporting of GMR Project EPIS and permit the Commission to fully review GMR project rate base through GMR annual reporting and future GMR reconciliation proceedings, as described by Company Witness West.

The Company will separately calculate and track GMR project accumulated depreciation using GMR project EPIS balances. Generally, accumulated depreciation represents the cumulative amount of depreciation expense recorded to date, less any retirement amounts. Accumulated depreciation is subtracted from gross EPIS in arriving at net EPIS on which a return is earned. Conceptually, accumulated depreciation at the end of the useful life of a GMR project should represent the fully recovered costs of the Company's GMR project investment, including removal cost net of salvage. However, as described later in my testimony, the Company's EPIS included in the GMR are depreciated using a straight-line depreciation rate that does not take into account future cost of removal or salvage.

The Company will calculate and maintain records reflecting separate identification of ADFIT related to GMR projects. AFDIT represents the net timing difference between the book treatment of an item for accounting purposes and the federal tax treatment of an item for tax purposes. Deferred federal income tax assets and liabilities may be created due to different methods of computing revenue and expenses for accounting purposes and for income tax purposes. These timing differences eventually reverse to zero at the end of life of the item creating the difference. AFDIT is included as GMR AMI Project rate base component to reflect the cash flow timing differences between book and tax treatment of depreciation expense. To the extent the net ADFIT balance is a liability, or a negative balance, the ADFIT is in effect cost-free capital and has been deducted from rate base to provide customers the benefit of the cost-free capital. Company Witness Keaton addresses AFDIT in her testimony.

Q. CAN YOU PLEASE SUMMARIZE WHAT IS GENERALLY INCLUDED IN GMR PROJECT COST?

A. As described by Company Witness Vaughan, GMR project cost will generally include (1) incremental O&M expense, (2) depreciation and amortization expense related to GMR project EPIS, (3) taxes related to GMR project EPIS and revenues, and (4) an allowed pre-tax WACC return on GMR project rate base. Company Witness Blankenship and Company Witness West address the reasonableness and necessity of GMR AMI Project cost in their testimonies.

Q. HOW WILL THE COMPANY TRACK AND RECORD GMR PROJECT INCREMENTAL O&M COSTS?

A. In order to record and track GMR project incremental O&M costs, the Company will utilize the appropriate FERC expense accounts combined with the use of unique GMR project numbers where applicable. GMR project O&M costs will be further refined using a manual review process to identify other incremental GMR project costs and remove any determined to be non-incremental. This cost recording mechanism will allow for the identification, tracking, and reporting of all incremental GMR project O&M expenses over the life of the rider.

Q. HOW WILL THE COMPANY TRACK AND RECORD GMR PROJECT DEPRECIATION AND AMORTIZATION EXPENSE?

A. Depreciation and amortization in the accounting sense is the process of distributing the total cost of tangible and intangible assets, respectively, over their estimated useful lives in a systematic and rational manner. Generally, the total cost of an asset consists of the actual cost incurred to place the asset in service plus an estimate of a future cost of removal less any estimated proceeds from salvage upon disposal of the asset.

Book depreciation begins one month after an asset is placed in service and continues over the useful life of the asset using the approved depreciation rates. This practice assumes assets are placed in service on the last day of each month in order to avoid daily recording and tracking of capital project completions.

The Company's GMR project EPIS are depreciated using a straight-line depreciation rate that does not take into account future cost of removal or salvage. In order to calculate depreciation and amortization expense on GMR projects, the Company will multiply the authorized depreciation or amortization rate with the GMR project net EPIS balance. This will allow for the calculation and reporting of all GMR project depreciation and amortization over the life of the surcharge.

For the GMR AMI Project, Company Witness West has requested a depreciation period of 15 years for AMI meters and related communication equipment EPIS and an amortization period of 5 years for AMI-related software EPIS.

Q. HOW WILL THE COMPANY TRACK AND RECORD TAXES RELATED TO GMR PROJECT EPIS AND REVENUES?

A. In order to calculate incremental property taxes driven by the GMR, the Company will multiply the Company's prior-year effective property tax rate with the GMR net EPIS balance. This will allow for the separate calculation, tracking, and reporting of property taxes driven by GMR projects over the life of the GMR.

In order to calculate the federal income taxes driven by the GMR, the Company will utilize the equity return contained within its cost of capital which will be multiplied by an income tax gross-up factor. This will allow for the separate calculation, tracking, and reporting of all federal income taxes driven by the GMR over its life.

Q. HOW WILL THE COMPANY TRACK AND RECORD AN ALLOWED PRE-TAX WACC RETURN ON GMR PROJECT RATE BASE?

A. The Company's allowed pre-tax WACC return on GMR project rate base will be calculated as the Company's pre-tax WACC authorized in this case, applied to its GMR project rate base. The Company's requested pre-tax WACC is included in Company Witness Vaughan's testimony at Exhibit AEV-8.

Q. DOES THIS CONCLUDE YOUR PRE-FILED TESTIMONY?

A. Yes.

KY Verification - Whitney.docx

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E-Signature Summary

E-Signature 1: Heather M. Whitney (HMW)
June 17, 2020 12:38:04 -8:00 [F792469C0B93] [161.235.221.82]
hmwhitney@aep.com (Principal) (Personally Known)

E-Signature Notary: Sarah Smithhisler (SRS)
June 17, 2020 12:38:04 -8:00 [6A67F80389BC] [161.235.2.86]
srsmithhisler@aep.com
I, Sarah Smithhisler, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Heather M. Whitney, being duly sworn, deposes and says she is the Director in Regulatory Accounting Services for American Electric Power Service 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 his information, knowledge and belief after reasonable inquiry.

Heather M. Whitney
Signed on 2020/06/17 12:38:04 -8:00
____
Heather M. Whitney

STATE OF OHIO)
) Case No. 2020-00174
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Heather Whitney, this 17th day of June 2020.

S. Smithhisler
Signed on 2020/06/17 12:38:04 -8:00
____
Notary Public

NOTARY PUBLIC
STATE OF OHIO
Sarah Smithhisler
Commission # 2019-RE-775042
Electronic Notary Public
State of Ohio
My Comm Exp. Apr 29, 2024
Notary Stamp 2020/06/17 12:38:04 PST 6A67F80389BC

Notary ID Number: 2019-RE-775042

My Commission Expires: April 29, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief	)))))))	Case No. 2020-00174

DIRECT TESTIMONY OF

ALLYSON M. KEATON

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
ALLYSON M. KEATON ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

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DIRECT TESTIMONY OF
ALLYSON M. KEATON ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

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

A. My name is Allyson M. Keaton. I am a Tax Analyst Principal – Tax Accounting and Regulatory Support for American Electric Power Service Corporation, a wholly owned subsidiary of American Electric Power Company, Inc. ("AEP"), the parent company of Kentucky Power Company ("Kentucky Power" or the "Company"). My business address is 1 Riverside Plaza, Columbus, Ohio 43215.

II. BACKGROUND

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I earned a Bachelor of Science Degree in Accounting from Mount Vernon Nazarene University in 1998. I earned a Masters of Taxation Degree from Capital University Law School in 2006. I began my career in FirstEnergy Corporation's tax department in June 1998. In August 2002, I joined AEP as a Tax Analyst III. I was promoted to Tax Analyst II in 2006 and in 2014, I was promoted to Tax Analyst I. In 2016, my title became Tax Analyst Sr. I was promoted to Tax Analyst Principal in 2019, which is my current position.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN ANY REGULATORY PROCEEDINGS?

A. Yes. I filed testimony before the Public Service Commission of Virginia in Case Nos. PUR-2018-00054 and PUR-2020-00015.

III. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony in this proceeding is to calculate the Gross Revenue Conversion Factor ("GRCF"); to present and support certain adjustments to the jurisdictional federal, state, and local income taxes to which Kentucky Power is subject; and to support the tax effects of certain fixed, known, and measurable ratemaking adjustments for the test year ended March 31, 2020.

IV. GROSS REVENUE CONVERSION FACTOR

Q. PLEASE DESCRIBE THE GROSS REVENUE CONVERSION FACTOR.

A. The GRCF is the factor necessary to determine the incremental amount of gross revenue required to generate an additional dollar of operating income after accounting for the effects of uncollectible accounts, commission assessment fees, and state and federal income taxes.

Q. HOW WAS THE GRCF RATE DETERMINED?

A. The methodology used in this case was also utilized in the Company's prior base rate cases. The uncollectible accounts rate and the KRS 278.130 assessment rate were provided to me by Company Witness West; the state and federal income tax rates and apportionment factors are based on the most recent income tax return information that also is currently being used in the monthly closing accrual process. Please see Section V, Workpaper S-2, Page 2.

V. JURISDICTIONAL STATE AND FEDERAL INCOME TAXES

Q. PLEASE DESCRIBE THE COMPUTATION OF JURISDICTIONAL STATE AND CURRENT FEDERAL INCOME TAXES.

A. The computation of jurisdictional Current Federal Income Tax is accomplished by first allocating Pre-Tax Book Income and the various book-to-tax adjustments used in the determination of the Company's total separate federal taxable income to Kentucky Power's retail customers, and applying the statutory federal income tax rate of 21%, as shown in Section V, Exhibit 3. The computation of jurisdictional Deferred Federal income tax is accomplished by applying the appropriate federal income tax rate to the allocated normalized timing differences, as shown in Section V, Exhibit 3, and by amortizing the allocated balances of the embedded Deferred Federal income taxes balances over the appropriate remaining lives. The computation of jurisdictional Deferred Investment Tax Credit is accomplished by amortizing the allocated balances over the appropriate remaining lives. State income tax expense is calculated on the same basis as the federal income tax expense as shown in Section V, Exhibit 3. Company Witness Cost prepared the jurisdictional allocation factors.

Q. WERE DEFERRED TAXES AND INVESTMENT TAX CREDITS ALLOCATED TO THE KENTUCKY RETAIL JURISDICTION?

A. Yes. Each component was allocated to the Kentucky retail jurisdiction as shown in Section V, Exhibit 3.

VI. EXCESS ACCUMULATED DEFERRED FEDERAL INCOME TAXES

Q. WHAT ARE EXCESS ACCUMULATED DEFERRED FEDERAL INCOME TAXES?

A. Excess Accumulated Deferred Federal Income Taxes ("ADFIT") arise not only by accelerated depreciation and bonus deprecation, but by all differences between book and tax provisions of the federal corporate income tax code that result in corporations, such as the Company, recovering, through rates, their federal corporate income tax expense at a different (initially faster) rate than they pay the associated taxes. Kentucky Power, as a regulated utility following Financial Accounting Standards Board Accounting Standards Codification 980, deferred the difference on the Company's books as a regulatory liability, and if income tax rates had remained the same, the deferral would have been reversed in later years as the Company paid its current federal corporate income tax expense at a rate that was greater than the amount the Company was recovering through rates. When the federal corporate income tax rate is reduced, as happened with the Tax Cut and Jobs Act, ("TCJA"), and all other things being equal, a portion of the deferral will never be paid and thus becomes "excess." There are two types of ADFIT: "protected" and "unprotected."

Q. WHAT ARE PROTECTED AND UNPROTECTED ADFIT?

A. Under the TCJA, protected and unprotected ADFIT are treated differently. The TCJA requires that protected ADFIT be amortized over "the remaining lives of the property as used in its regulated books of account which gave rise to the reserve for deferred taxes." See TCJA Subtitle C, Part I, Sec. 13001(d)(3)(B).

For Kentucky Power, this amortization period is based on the Average Rate Assumption Method or "ARAM." By contrast, the TCJA does not require that unprotected ADFIT be amortized over any specific period. In Case No. 2018-00035, the Commission approved a settlement agreement that provided that Kentucky Power's excess unprotected ADFIT will be amortized over 18 years beginning January 1, 2018. Beginning July 1, 2018, customer bills included a credit to reflect the amortization of both protected and excess unprotected ADFIT as provided for under Kentucky Power's Federal Tax Cut Tariff ("Tariff F.T.C."). Company Witnesses West and Vaughan discuss the Company's proposal regarding changes to the amortization of the remaining Kentucky Power's excess unprotected ADFIT balance.

VII. RATEMAKING ADJUSTMENTS

Q. WHICH RATEMAKING ADJUSTMENTS ARE YOU SPONSORING?

A. I am sponsoring the ratemaking adjustments in Schedule 5 related to Annualization of Property Taxes, Sales and Use Tax, State Business and Occupation Tax, and Removing Kentucky Excess ADFIT related to Tariff F.T.C. These adjustments are necessary to reflect an adjusted test year level of tax expense representative of ongoing operations. In addition, I have reviewed each of the ratemaking adjustments proposed by other Company witnesses and determined the proper income tax consequences as shown on Section V, Schedule 5.

Q. PLEASE DESCRIBE THE ANNUALIZATION OF PROPERTY TAX ADJUSTMENT.

A. Adjustment 57 of Section V, Exhibit 2 calculates the difference between the property taxes that were estimated and actually paid.

Q. PLEASE DESCRIBE THE SALES AND USE TAX ADJUSTMENT.

A. Adjustment 58 of Section V, Exhibit 2 adjusts the Sales and Use Tax Expense to remove an out-of-period adjustment related to the settlement of a Sales and Use Tax Audit that was recorded during the test period.

Q. PLEASE DESCRIBE THE STATE BUSINESS AND OCCUPATION TAX ADJUSTMENT.

A. Adjustment 59 of Section V, Exhibit 2 adjusts the State Business and Occupation Tax Expense to remove an out-of-period adjustment that was recorded during the test period.

Q. PLEASE DESCRIBE REMOVING KENTUCKY EXCESS ADFIT RELATED TO THE FEDERAL TAX CUT TARIFF RIDER ADJUSTMENT.

A. Adjustment 60 of Section V, Exhibit 2 removes Kentucky Excess ADFIT related to the Tariff F.T.C. The test period included all Excess ADFIT for Kentucky Power Company that is included in other jurisdictions and/or in other rates that are not associated with base rates proposed in this case. The adjustment removed all Kentucky Excess ADFIT that relates to the Tariff F.T.C. leaving zero Excess ADFIT in base rates.

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

A. Yes.

VERIFICATION

The undersigned, Allyson M. Keaton, being duly sworn, deposes and says she is a Tax Analyst Principle for American Electric Power Service 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 his information, knowledge and belief after reasonable inquiry.

F11AE0D7F781

Allyson M Keaton

Signed on 2020/06/18 08:39:06 -8:00

____

Allyson M. Keaton

STATE OF OHIO)

) Case No. 2020-00174

COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Allyson Keaton, this 18th ____ day of June 2020.

NOTARY PUBLIC STATE OF OHIO

Sarah Smithhisler

Commission # 2019-RE-775042

Electronic Notary Public

State of Ohio

My Comm Exp. Apr 29, 2024

Notary Stamp 2020/06/18 08:39:06 PST C81D323EAF12

C81D323EAF12

S Smithhisler

Signed on 2020/06/18 08:39:06 -8:00

____

Notary Public

Notary ID Number: 2019-RE-775042

My Commission Expires: April 29, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2020-00174
Regulatory Assets And Liabilities; (4) Approval Of A	)	
Certificate Of Public Convenience And Necessity;	)	
And (5) All Other Required Approvals And Relief	)	

DIRECT TESTIMONY OF

JACLYN N. COST

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
JACLYN N. COST ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

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DIRECT TESTIMONY OF
JACLYN N. COST ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

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

A. My name is Jaclyn N. Cost. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I am employed by American Electric Power Service Corporation ("AEPSC") as Regulatory Consultant Sr. AEPSC is a wholly-owned subsidiary of American Electric Power Company Inc. ("AEP"), the parent Company of Kentucky Power Company ("Kentucky Power" or the "Company").

Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES.

A. My responsibilities include preparing cost-of-service studies for regulatory filings and providing regulatory support and analysis for pricing matters associated with Kentucky Power and other AEP electric-utility operating companies.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received my Bachelor of Arts degrees in Accounting and Finance from Walsh University in 2013. I began my career as an Accountant for Innovative Mattress Solutions ("IMS") where I performed various reconciling duties for each of the company's retail stores. After IMS, I accepted a position with AEPSC in 2015 as an Accounting Associate within the Fuel department of Utility and Energy Accounting. My responsibilities included month-end accounting close as well as various reporting and contract review duties. I was promoted to Accountant before accepting a position as a Regulatory Consultant within Pricing and Analysis in August 2017. I was promoted to Regulatory Consultant Sr. in 2020.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN ANY REGULATORY PROCEEDING?

A. Yes, I have filed testimony before the State Corporation Commission of Virginia on behalf of Appalachian Power Company, an AEP subsidiary and affiliate of Kentucky Power, in which I was a rate-design witness during Case No. PUR-2019-00122.

III. <u>PURPOSE OF TESTIMONY</u>

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY ON THIS PROCEEDING?

A. The purpose of my testimony is to support the Kentucky Power jurisdictional cost-of-service study through which the cost to provide service to the Company's retail customers is developed. A copy of the Kentucky Power jurisdictional cost-of-service study is included as Section V Schedules TYE 03-31-2020.

Q. ARE YOU SPONSORING ANY SCHEDULES?

A. Yes, I am sponsoring the following schedules filed with the Company's Application:

- Section V, Schedule 4 – Jurisdictional Cost-of-Service; and
- Section V, Schedule 5 – Jurisdictional Cost-of-Service Adjustments.
- Section V, Schedule 6 – Electric Operation & Maintenance Expense
- Section V, Schedule 7 – Energy & Capacity Charges

- Section V, Schedule 8 – Monthly Book Credits
- Section V, Schedule 9 – KPCO Demand Allocation Factors
- Section V, Schedule 10 – KPCO Energy Allocation Factors

I am also sponsoring Section II, Exhibit L of the Application – Reconciliation – Rate Base and Capitalization.

IV. COST-OF-SERVICE STUDY OVERVIEW

Q. WHAT IS THE SOURCE OF THE DATA USED IN THE COMPANY'S JURISDICTIONAL COST-OF-SERVICE STUDY?

A. The Company follows the Uniform System of Accounts as prescribed by the Federal Energy Regulatory Commission ("FERC") and adopted by the Public Service Commission of Kentucky ("Commission"). The Uniform System of Accounts sets the guidelines for recording assets, liabilities, income and expenses into various accounts. The costs recorded in each FERC account are examined to verify compliance with these guidelines and may be adjusted to reflect the Commission's policies and known and measurable changes to the test year level of expenditures.

Q. HOW IS THE INFORMATION USED TO ALLOCATE COSTS TO KENTUCKY POWER'S RETAIL CUSTOMERS?

A. The costs recorded by FERC account are per book amounts pertaining to electric utility operations of the Company for service supplied to all customers, both wholesale and retail. Kentucky Power's retail revenue is approximately 99% of its total firm sales revenue. The Company's wholesale revenue, which includes sales to the cities of Olive Hill and Vanceburg, is approximately 1% of its total revenue. It is therefore necessary to identify and segregate costs related only to providing service to Kentucky Power's retail customers.

Q. EXPLAIN HOW THE REVENUE REQUIREMENT IS DETERMINED FOR KENTUCKY POWER'S RETAIL CUSTOMERS.

A. A three-step process is followed to assign and allocate costs to determine the total revenue requirement for the Company's retail customers. These three steps are (1) the functionalization of costs, (2) the classification of costs, and (3) the allocation of costs. By following this process, the Company is able to identify and segregate the costs related to providing service to Kentucky Power's retail customers.

Q. PLEASE DESCRIBE THE FUNCTIONALIZATION PROCESS.

A. Once the data is gathered, the costs are then separated by functional group as follows:

1) Production and Purchased Power costs;
2) Transmission costs;
3) Distribution costs;
4) Customer Service costs; and
5) Administrative and General ("A&G") costs.

Q. PLEASE DESCRIBE EACH OF THESE FUNCTIONAL GROUPS.

A. The Production and Purchased Power functional group consists of the costs associated with power generation and power purchases and their delivery to the bulk transmission system. The Transmission functional group consists of the costs associated with the high-voltage system utilized for the bulk transmission of power from generation sources to the load centers, and to and from interconnected utilities. The Distribution functional group consists of the radial distribution system that connects the transmission system and the ultimate customer. The Customer Service functional group encompasses the costs associated with providing meter reading, billing and collection, and customer information and services. Finally, the A&G functional group consists of all costs not directly assignable to other cost functions.

Q. PLEASE DESCRIBE THE CLASSIFICATION PROCESS.

A. Once costs have been segregated by functional group, the Company separates the costs within each functional group into separate classifications. The Company utilized the following classifications as part of its cost-of-service study: 1) demand costs (costs associated with the kilowatt demand imposed by the customer), 2) energy costs (costs that vary with the number of kilowatt hours used by the customer), 3) customer costs (costs that are directly related to the number of customers served) and 4) labor costs (costs that are directly related to payroll expenses associated with serving the customer). The Company classified costs within each functional group as follows:

Function	Classification
Production and Purchased Power costs	Demand, Energy
Transmission costs	Demand
Distribution costs	Demand, Customer
Customer Service costs	Customer
A&G costs	Labor

Production plant costs, such as depreciation and return on investment, are considered to be demand-related costs. Most fuel and production operation and maintenance ("O&M") expenses are energy-related because they vary with the quantity of energy produced. Transmission costs are demand-related because they are fixed and do not vary with energy usage. Generally, the distribution system costs are affected by either demand or by the number of customers served. Demand-related distribution costs will usually vary with the size of the load served, while customer-related distribution costs vary with the number of customers receiving the service. The classification process provides a basis on which to allocate different categories of costs (demand, energy or customer) to the utility's jurisdictions.

Q. PLEASE DESCRIBE THE ALLOCATION PROCESS.

A. Once the costs have been functionalized and classified, the third and final step is for the Company to allocate those costs between retail and wholesale customers based on how the costs are incurred for each. In other words, the allocation process assigns costs to customers subject to the Commission's jurisdiction (retail customers) or FERC's jurisdiction (wholesale customers). The allocation process employed by Kentucky Power is a reasonable, appropriate, and understandable method to assign costs as between the Company's retail and wholesale customer classes.

Some costs are directly assignable to a single jurisdiction. For example, costs related to regulatory deferrals are associated with a specific jurisdiction and are directly assigned to that jurisdiction. Most costs, however, are attributable to both jurisdictions. These are joint costs and must be allocated to the jurisdictions by an allocation methodology that is based on the classification described above for that cost.

Q. ARE THE ALLOCATION METHODS EMPLOYED BY THE COMPANY CONSISTENT WITH COST-OF-SERVICE PRINCIPLES?

A. Yes. The allocation methodologies utilized in the Company's jurisdictional cost-of-service study were chosen after giving consideration to cost causation principles. The results of the jurisdictional cost-of-service study can be relied upon to determine the appropriate revenue requirement for the Company's retail customers.

Q. ARE YOU RESPONSIBLE FOR THE METHODOLOGY USED IN THE PREPARATION OF THE KENTUCKY POWER JURISDICTIONAL COST-OF-SERVICE STUDY?

A. Yes. I developed the allocation methodology and the allocation factors used to calculate Kentucky Power's retail jurisdictional cost of service using the same methodology as in the Company's last rate case.

V. ALLOCATIONS

Q. PLEASE DESCRIBE HOW THE ENERGY ALLOCATION FACTOR ("EAF") WAS DETERMINED.

A. First, total retail customer test year sales of energy (in kilowatt hours) were accumulated. Next, the total sales of energy were adjusted to the generation level by applying the appropriate transmission and distribution loss factors to obtain the generation-level energy sales to retail customers. Finally, the retail generation-level sales were divided by the net total Company generation-level energy sales to obtain the retail EAF.

Q. PLEASE DESCRIBE HOW THE PRODUCTION DEMAND ALLOCATION FACTOR ("PDAF") WAS DETERMINED.

A. One basis for allocating the elements of the cost of property between retail and wholesale customers is the respective contribution by each of the two classes to the Company's peak demand. The PDAF reflects the coincident demand of the Company's retail customers at the time of Kentucky Power's monthly peak demand (the coincident peak demand). In other words, it represents the kilowatt contribution of retail customers to the Company's monthly peak demand.

The PDAF was calculated by dividing the average of the twelve monthly retail class coincident demands, adjusted for losses to the generation levels, by the average of the twelve monthly total Company internal peak demands. The transmission and sub-transmission demand allocation factors are the same as the PDAF.

The remaining allocators are internally calculated within the study and can be found in Section V, Allocation Factors.

Q. PLEASE DESCRIBE ANY ADJUSTMENTS MADE TO THE PDAF AND EAF ALLOCATORS.

A. No changes were made.

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S ELECTRIC PLANT IN SERVICE.

A. Electric Plant in Service was separated into different plant categories by function and then allocated accordingly. Kentucky Power's production plant was allocated to the two jurisdictions using the PDAF. Transmission plant was allocated using the transmission demand allocation factor ("TDAF"). With the exception of Olive Hill substation and meter costs, which are wholesale costs, distribution plant was directly assigned to Kentucky Power's retail customers. General and intangible plant were allocated using gross plant production, transmission and distribution factor ("GP-PTD").

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION.

A. Kentucky Power's Accumulated Provision for Depreciation and Amortization were functionalized and classified in a fashion similar to Kentucky Power's Electric Plant in Service. Production, transmission, and distribution accumulated depreciation were allocated using the same process as the allocation of the associated plant. General and Intangible plant accumulated depreciation was allocated by GP-PTD factor.

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S OTHER RATE BASE COMPONENTS.

A. Electric Plant held for Future Use, Construction Work in Progress, and Allowance for Funds Used during Construction were booked by functional group and then allocated using the associated plant factors. This is consistent with past treatment of these items.

Fuel and Allowance Inventory were allocated using the EAF. Materials and Supplies were separated into functional groups and allocated by associated plant factors accordingly. Materials and Supplies other components, such as Lime, Limestone, Urea, and Urea In-Transit are allocated using the EAF. Prepayments were allocated using the gross plant total allocation factor ("GP-TOT").

The Cash Working Capital component is calculated by using the standard formula of one-eighth of Total Company O&M expenses. This equals one-and-one-half months of the Company's O&M expenses.

Accumulated Deferred Investment Tax Credit amounts were provided by Company Witness Keaton. Customer Advances and Customer Deposits are a result of the Company's retail operations and, therefore, 100% of these amounts are allocated to Kentucky Power's retail cost-of-service.

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S OPERATING REVENUES.

A. Sales revenue was directly assigned to each jurisdiction where possible. Demand-related system sales revenue was allocated based on the PDAF. Energy-related system sales revenue was allocated on the EAF.

Forfeited Discounts and miscellaneous service revenues were a result of Kentucky Power's retail operations and therefore directly assigned 100% to the Company's retail customers.

Rent from electric property, other electric revenue, and various transmission agreement revenues were allocated to jurisdictions based on the corresponding functional allocator or directly assigned to Kentucky Power's retail customers where applicable.

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S OPERATING AND MAINTENANCE EXPENSES.

A. Production-related O&M expenses were classified as either demand- or energy-related. The demand component was allocated using the PDAF and the energy component was allocated using the EAF.

Transmission-related O&M was allocated based on the gross plant transmission ("GP-TRANS") allocation factor or directly assigned as applicable.

Distribution-related O&M was allocated based on the gross plant distribution ("GP-DIST") allocation factor or directly assigned as applicable.

Customer Accounts, Customer Information, and Customer Service expenses were classified as customer-related and allocated on the total number of customers.

A&G expenses were allocated consistent with the allocation of non-A&G O&M expenses.

Q. PLEASE DESCRIBE THE ALLOCATION OF KENTUCKY POWER'S DEPRECIATION AND AMORTIZATION EXPENSE.

A. Depreciation and Amortization were booked by functional group then allocated using the associated plant factors.

Q. PLEASE EXPLAIN HOW KENTUCKY POWER'S TAXES OTHER THAN FEDERAL AND STATE INCOME TAXES WERE ALLOCATED.

A. Taxes Other than Income Taxes were classified as relating to payroll, property, revenue, demand or energy and allocated accordingly or directly assigned. Payroll taxes are related to labor and allocated on the Operations and Maintenance Labor allocation factor ("OML"). Property taxes were allocated using the GP-TOT allocation factor.

Q. PLEASE EXPLAIN HOW KENTUCKY POWER'S FEDERAL AND STATE INCOME TAXES WERE ALLOCATED.

A. For details on Federal and State Income Taxes, please see Company Witness Keaton's testimony and supporting tax schedules.

Q. PLEASE EXPLAIN HOW ADJUSTMENTS FOR KENTUCKY POWER'S TEST YEAR REVENUES AND OPERATING EXPENSES WERE INCORPORATED INTO SECTION V.

A. Adjustments to test year revenues and operating expenses were provided to me by way of individual worksheets compiled and prepared by various Company witnesses based on their expertise. I added the retail adjustments to the Company's retail per books cost-of-service amounts to arrive at the going-level Kentucky Power jurisdictional cost of service.

Q. PLEASE EXPLAIN ANY DIFFERENCES IN PRESENTATION, FROM PAST FILINGS, IN THE FORMAT OF THE COMPANY'S JURISDICTIONAL COST OF SERVICE STUDY.

A. There were no differences in presentation.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, this concludes my testimony supporting the Jurisdictional Cost-of-Service study which has been prepared and reviewed for reasonable and accurate results to then be used by company witness Stegall in preparation of the Class Cost-of-Service study.

KY Verification - Cost.docx

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Created:	June 17, 2020 12:17:57 -8:00
Pages:	1
Remote Notary:	Yes / State: OH

E-Signature Summary

E-Signature 1: Jaclyn N Cost (JC)
June 18, 2020 06:37:34 -8:00 [8715D90CAE0E] [161.235.2.87]
jncost1@aep.com (Principal) (Personally Known)

E-Signature Notary: Sarah Smithhisler (SRS)
June 18, 2020 06:37:34 -8:00 [B8FEACC521B4] [161.235.221.85]
srsmithhisler@aep.com
I, Sarah Smithhisler, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Jaclyn N. Cost, being duly sworn, deposes and says she is a Regulatory Consultant Sr. for American Electric Power Service 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 his information, knowledge and belief after reasonable inquiry.

Jaclyn N Cost
Signed on 2020/06/18 06:37:34 -8:00
____
Jaclyn N. Cost

STATE OF OHIO)
) Case No. 2020-00174
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Jaclyn Cost, this 18th day of June 2020.

NOTARY PUBLIC
STATE OF OHIO
Sarah Smithhisler
Commission # 2019-RE-775042
Electronic Notary Public
State of Ohio
My Comm Exp. Apr 29, 2024
Notary Stamp 2020/06/18 06:37:34 PST B8FEACC521B4

S Smithhisler
Signed on 2020/06/18 06:37:34 -8:00
____
Notary Public

Notary ID Number: 2019-RE-775042

My Commission Expires: April 29, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief	)))))))	Case No. 2020-00174

DIRECT TESTIMONY OF

JASON M. STEGALL

ON BEHALF OF KENTUCKY POWER COMPANY

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DIRECT TESTIMONY OF JASON M. STEGALL ON BEHALF OF KENTUCKY POWER COMPANY BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

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

A. My name is Jason M. Stegall. My business address is 1 Riverside Plaza, Columbus, Ohio. I currently hold the position of Manager of Regulatory Pricing and Analysis in the Regulatory Services department for the American Electric Power Service Corporation ("AEPSC"), a subsidiary of American Electric Power Company, Inc. ("AEP"). AEP is the parent company of Kentucky Power Company ("Kentucky Power" or the "Company"). AEPSC supplies accounting, administrative, information systems, engineering, financial, legal, maintenance, and other services to AEP's regulated electric operating companies, including the Company.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCES.

A. In May 1997, I earned my Bachelor of Science Degree in Accounting from Virginia Polytechnic Institute and State University. In August 2011, I earned my Master's Degree in Business Administration from the Ohio State University. I have also attended the 2018 EEI Transmission and Wholesale Markets School.

In June 1997, I joined AEPSC as an Accountant in the Regulated Accounting Division of the Accounting Department. From 1997 to 2009, I held various positions in Accounting and Risk Management. In July 2009, I joined the Regulatory Services Department as a Regulatory Consultant. From July 2009 through June 2010, I performed duties as a Regulatory Consultant in Customer and Distribution Services Support, where I was responsible for assisting customer services and distribution services witnesses in regulatory proceedings by supporting testimony preparation, providing research in support of the discovery process, and compiling data for regulatory filings. In July 2010, I joined Regulated Pricing & Analysis, where my responsibilities included preparation of cost-of-service studies, rate design and tariff provisions for the AEP operating companies. In December 2017, I was promoted to my current position, where my responsibilities include managing recovery of the fuel and purchased power costs for all AEP companies as well as conducting analyses, preparing cost-of-service studies, and developing rate designs.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY PROCEEDINGS?

A. Yes. I submitted testimony before the Public Service Commission of Kentucky in Case Nos. 2013-00197 and 2014-00396. In addition, I have submitted testimony before the Indiana Utility Regulatory Commission and the Michigan Public Service Commission regarding cost-of-service and rate design.

III. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to support and describe the development of the Company's Class Cost-of-Service Study. In addition, I will address the allocation of the requested increase to Kentucky Power's customer classes.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. I am sponsoring the following exhibits:

Exhibit JMS-1	Class Cost–of-Service Study
Exhibit JMS-2	Revenue Allocation

IV. CLASS COST-OF-SERVICE STUDY

Q. PLEASE DESCRIBE THE GENERAL PURPOSE OF A CLASS COST-OF-SERVICE STUDY.

A. A class cost-of-service study is a basic analytical tool used in traditional utility rate design to determine the revenue requirement for the services offered by the utility. It analyzes, at a very detailed level, the costs that different classes of customers impose on the utility system. A class cost-of-service study calculates the total functional costs the Company incurs in serving each retail rate class as well as the rate of return on rate base earned from each class during the test year. This is accomplished by classifying and allocating the jurisdictional and functionalized costs of serving Kentucky's retail customers to the various rate classes. When a cost-of-service study is completed and all of the costs are allocated to the customer classes, the Company is able to establish rates based on the costs to serve each customer class. A copy of the class cost-of-service study prepared for this case is included as Exhibit JMS-1.

Q. WHAT DATA SOURCE WAS USED IN THE DEVELOPMENT OF THE CLASS COST-OF-SERVICE STUDY?

A. The Company's jurisdictional cost-of-service study, shown in Section V of this filing and sponsored by Company Witness Cost, is the primary data source for the class cost-of-service study. In addition, historic accounting records and Company data were used to derive the various allocators that were applied to the results of the jurisdictional cost-of-service study to classify and allocate costs to the customer classes.

Q. AFTER THE COSTS PRESENTED IN THE JURISDICTIONAL COST-OF-SERVICE STUDY ARE EXAMINED, HOW ARE THESE COSTS ASSIGNED TO EACH CUSTOMER CLASS?

A. This costs are assigned to the different customer classes in a way that reflects the costs of providing utility service to each class. The Company assigns costs to customer classes using a standard three-step process: functionalization of costs, classification of costs, and allocation of costs.

Q. PLEASE EXPLAIN THE FUNCTIONALIZATION PROCESS.

A. Functionalization is the process of separating costs according to electric system functions. Typically, functions in an electric utility include the following:

1) Production and Purchased Power costs;
2) Transmission costs;
3) Distribution costs;
4) Customer Service costs; and
5) Administrative and General ("A&G") costs.

The production function includes the costs associated with power generation and power purchases and their delivery to the bulk transmission system. The transmission function consists of costs associated with the high voltage system utilized for the bulk transmission of power to and from interconnected utilities to load centers of the utility's system. The distribution function includes the radial distribution system that connects the transmission system and the ultimate customer. The customer service function encompasses the costs associated with providing meter reading, billing and collection, and customer information and services. The A&G function is comprised of costs that may not be directly assignable to other cost functions. These costs include such items as management costs and administrative buildings. A&G costs are generally allocated to the remaining functions based on labor.

Q. PLEASE EXPLAIN THE CLASSIFICATION PROCESS.

A. The second step is to separate the functionalized costs into classifications of demand costs, energy costs, and customer costs.

Typical cost classifications used in cost studies include the following:

Function	Classification
Production	Demand, Energy
Transmission	Demand
Distribution	Demand, Customer
Customer Service	Customer

Demand costs are associated with the kilowatt (kW) demand imposed by the customer. These are fixed costs, which are incurred regardless of the level of energy sales. An example of a demand-related cost is the investment in production, transmission or distribution facilities, such as a generating unit or transmission and distribution poles and lines.

Energy costs vary with the number of kilowatt-hours (kWh) used by the customer. Production costs such as fuel and certain production operation and maintenance expenses are energy-related since they vary with the level of sales of electricity.

Customer costs are directly related to the number of customers served. These are fixed costs which are incurred regardless of the level of energy sales. Meter and customer service costs are examples of costs whose levels are fixed by the number of customers.

The classification process provides a basis on which to allocate different categories of costs (demand, energy, or customer) to the Company's classes.

Q. PLEASE EXPLAIN THE ALLOCATION PROCESS.

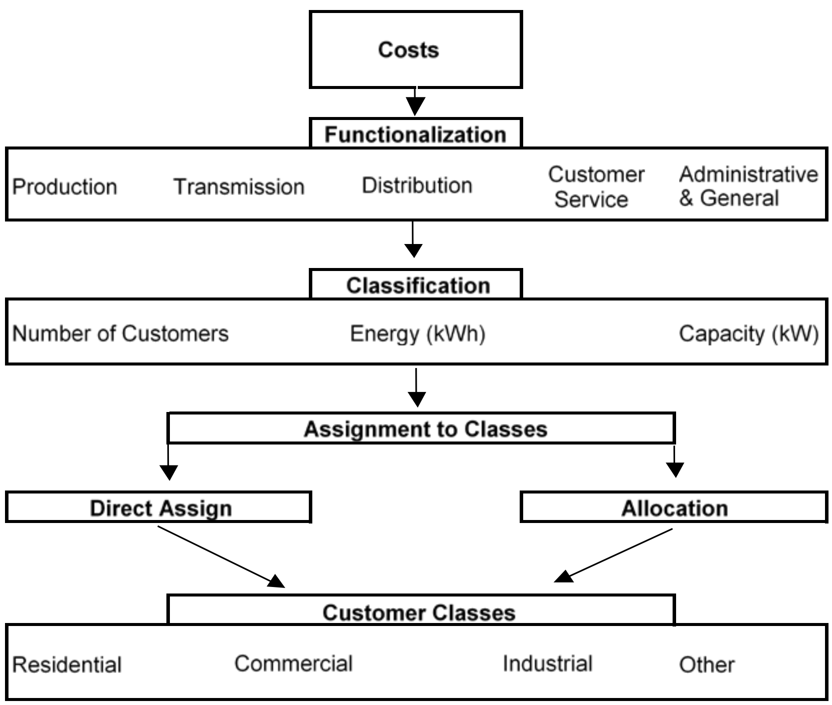
A. The third and final step is to allocate the functionalized and classified costs among the classes of customers based on how the costs are incurred to serve each class. Allocation factors are used to assign these costs to the various customer classes. Customer classes are determined and grouped according to the nature of service provided, voltage level, and the load usage characteristics. The three principal customer classes are residential, commercial, and industrial.

The allocation process involves multiplying the functionalized and classified costs by allocation factors, which results in costs assigned to each class. The objective in this process is to determine a reasonable, appropriate, and understandable method to assign the costs. Some costs are directly assignable to a single class, or even a single customer. For instance, the costs associated with the poles and luminaries used for street lighting are directly assigned to the street lighting class. Most costs, however, are attributable to more than one type of customer. These are joint costs that are allocated to customers by an allocation methodology that is based on the manner in which the costs are caused by the different customers.

The following flowchart (Figure 1) provides an overview of how the allocation of costs to customer classes is determined.

Figure 1:

Cost Allocation Example



In the illustration above, costs are functionalized into production, transmission, distribution, etc. Some of these costs can be functionalized and classified and directly assigned to a customer class. The remaining functionalized costs are incurred based on the number of customers, the energy used, or by the capacity demanded.

After functionalization, the next step is the classification process which leads to an allocation methodology. For example, the cost of billing customers varies with the number of customers as well as the complexity of preparing the customer's bill, so those costs associated with billing are allocated to the customer classes based on a weighted number of customers. An allocation factor using a weighted number of customers is developed by multiplying the number of customers in each class by a factor representing the difference in cost associated with providing that service to each customer class. Similarly, the cost of fuel varies by the number of kWh consumed and, therefore, is allocated based on the proportion of total energy used by a customer class.

The final step in the cost assignment process is to allocate the functionalized and classified costs to the customer classes through the use of allocation factors.

When this process is completed and all of the costs are allocated to the customer classes, the result is a fully allocated cost study that establishes cost responsibility, by class, and makes it possible to determine rates based on costs that are just and reasonable.

V. ALLOCATION BASIS

Q. WHAT CRITERIA ARE USED WHEN SELECTING ALLOCATION FACTORS FOR EACH FUNCTIONALIZED AND CLASSIFIED COST?

A. Generally, the following criteria are used to determine the appropriateness of an allocation methodology:

1) The method should reflect the planning and operating characteristics of the utility's system.

2) The method should recognize customer class characteristics such as energy usage, peak demand on the system, diversity characteristics, and number of customers, etc.

3) The method should produce stable results on a year-to-year basis.

4) The method should cause customers who benefit from the use of the system to bear appropriate cost responsibility for the system.

Q. DOES THE ALLOCATION METHOD EMPLOYED BY THE COMPANY MEET THESE OBJECTIVES?

A. Yes, it does. The allocation methodology utilized in the Company's class cost-of-service study is consistent with prior cases and reflects the consideration of each of the criteria listed above. The results of the cost-of-service study can be relied upon to determine the appropriate revenue requirement for the Kentucky Power customer classes. The allocation of specific sections of the class cost-of-service study, as shown on Exhibit JMS-1, follows.

Q. PLEASE EXPLAIN THE ALLOCATION OF PRODUCTION PLANT.

A. Electric plant-in-service is functionalized into production, transmission, distribution and general plant. Production plant is classified as demand-related and allocated using the production demand allocation factor. The production demand allocation factor assigns costs to the retail classes based on their average contribution to Kentucky Power's 12 coincident peaks ("CPs"). The CPs used in the allocation of Production Plant were the 12 monthly internal peak demands for the test period ended March 31, 2020.

Q. PLEASE EXPLAIN HOW GENERATOR STEP-UP TRANSFORMERS WERE ALLOCATED.

A. Generator step-up transformers are included in transmission plant but were allocated using the production demand allocation factor because they are more related to the production function.

Q. PLEASE EXPLAIN THE ALLOCATION OF TRANSMISSION PLANT.

A. Transmission plant, excluding generator step-up transformers, is classified as demand related and is allocated using the transmission demand allocation factor. The transmission demand allocation factor, similar to the production plant allocation factor, assigns costs based on the class average contribution to Kentucky Power's 12 CPs on the transmission facilities.

Q. PLEASE EXPLAIN THE ALLOCATION OF DISTRIBUTION PLANT.

A. Distribution plant is classified as demand/customer related and allocated to the customer classes using factors based on demand levels or number of customers. Distribution plant accounts 360 through 368 were classified solely as demand-related. Accounts 360, 361, and 362 were allocated to the distribution customer classes based on their contributions to the average of Kentucky Power's 12 monthly CP demands during the test year on the primary distribution system.

Accounts 364 through 368 were split into primary and secondary voltage functions based upon information contained in the company's records and the expertise of the company's distribution engineers. The primary portions of accounts 364 through 368 were allocated using the average of 12 monthly CP demands on the distribution system. The secondary component of accounts 364 through 368 were allocated based on a combination of each class' 12-month maximum demand and the summation of individual customers' annual maximum demands in each class served from those facilities. This process reflects the fact that some secondary facilities serve only one customer, while others serve two or more customers.

Services, account 369, was classified as customer-related and was allocated using the average number of secondary customers served.

Meter plant, account 370, was allocated using the average number of customers weighted by a factor which considers the cost differential of various metering installations. Account 371 was directly assigned to the outdoor lighting class and account 373 was directly assigned to the street lighting class.

Q. PLEASE EXPLAIN HOW GENERAL AND INTANGIBLE PLANT WAS ALLOCATED.

A. General and intangible plant and investment reflects a composite demand, energy, and customer classification. General and intangible plant investment is allocated on the basis of payroll labor.

Q. PLEASE DESCRIBE THE ALLOCATION OF ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION.

A. The functionalized components of Depreciation and Amortization were obtained directly from the jurisdictional cost-of-service study provided in Section V. Production, transmission, distribution, and general and intangible related amounts were classified and allocated based upon the allocation of the corresponding functional Electric Plant-in-Service costs excluding land and land rights.

Q. PLEASE DESCRIBE THE ALLOCATION OF WORKING CAPITAL.

A. Working Capital was divided into cash, material and supplies, and prepayments. Cash working capital is related to operation and maintenance ("O&M") expense and was allocated based upon the allocation of total O&M expense less purchased power and fuel.

Materials and supplies were split between fuel stock, production, emissions, and transmission and distribution and were classified and allocated using the corresponding functional plant items. Fuel stock and emissions materials were allocated using the energy allocation factor. Production-related material and supplies were allocated using the production demand allocation factor, and the transmission- and distribution-related materials and supplies were allocated using the allocation of transmission and distribution electric plant-in-service.

Prepayments were allocated based upon gross utility plant.

Q. PLEASE DESCRIBE THE ALLOCATION OF OTHER RATE BASE COMPONENTS.

A. Plant Held for Future Use is limited to a distribution component that was allocated using distribution electric plant-in-service. Construction Work-in-Progress was functionalized and allocated by the corresponding functional Electric Plant-in-Service allocators. Accumulated Deferred Federal Income Tax was allocated on gross utility plant. Customer Deposits were directly assigned based on an analysis of accounting records, and Customer Advances were allocated based on transmission and distribution plant-in-service.

Q. HOW WERE REVENUES DEVELOPED FOR EACH CLASS?

A. Sales revenues were directly assigned to each class utilizing the revenue schedules in Section II – Application Filing Requirements Exhibit J, sponsored by Company Witness Vaughan. Energy-related system sales revenue was allocated using the energy allocation factor.

Forfeited Discounts and Miscellaneous Service Revenue were directly assigned based on an analysis of accounting records.

Rent from Electric Property and Other Electric Revenue were functionalized in the jurisdictional cost-of-service study and allocated to classes based on corresponding functional allocators.

Q. PLEASE DESCRIBE THE ALLOCATION OF PRODUCTION O&M EXPENSE.

A. Production-related O&M was classified as either demand or energy related. The demand component was allocated using the production demand allocation factor and the energy component was allocated using the energy allocation factor. Supervision and Engineering accounts for both O&M were classified and allocated based on functional labor expense. For example, Accounts 500 and 510 for Steam Production accounts were allocated on production labor expense.

Q. PLEASE DESCRIBE THE ALLOCATION OF TRANSMISSION O&M.

A. Transmission-related O&M was broken down into two pieces: expenses incurred through PJM as a Load Serving Entity (“LSE”), and the traditional transmission cost-of-service expenses recorded in FERC accounts 560 through 575. Most Transmission O&M expenses were allocated based upon the transmission demand allocation factor.

Supervision and Engineering accounts for both O&M were classified and allocated based on functional labor expense. For example, Transmission Accounts 560 and 568 were allocated on total transmission O&M excluding PJM related costs. Expenses incurred through PJM as an LSE are classified as production expenses as they capture load LSE charges and are allocated using an allocation factor based on production demand.

Q. PLEASE DESCRIBE THE ALLOCATION OF DISTRIBUTION O&M AMONG THE VARIOUS CUSTOMER CLASSES.

A. Distribution O&M expenses were functionalized and classified according to the associated distribution plant accounts and allocated accordingly. Accounts 581, Load Dispatching and 582, Station Expenses were allocated using the distribution demand allocation factor. Account 583 Overhead Line Expense was allocated based upon the same allocation used for plant account 365 Overhead Lines. Account 584 Underground Line Expense was allocated based upon the same allocation used for plant accounts 366 Underground Conduit and 367 Underground Lines. Account 585 Street Lighting Operation Expense was classified as customer-related and directly assigned to the Street Lighting class. Meter Operation Expense account 586 was classified customer-related and allocated in the same manner as account 370 Meter Plant. Account 587 Customer Installation Expense was classified as customer-related and allocated based on primary customers. Accounts 588 and 589 were allocated on total distribution plant and classified accordingly. Account 580 was classified and allocated based on the sum of the allocated O&M expense accounts 581 through 589. Accounts 591 and 592 were classified demand-related and allocated on the distribution demand allocation factor.

Accounts 593, 594, and 595 were functionalized and classified according to the associated distribution plant accounts and allocated accordingly. Distribution maintenance account 596 was directly assigned to the Street Lighting class. Account 597 was classified customer-related and allocated in the same manner as meter plant. Account 598 was classified customer-related and directly assigned to the Outdoor Lighting class. Account 590 was classified and allocated based on the sum of the allocated O&M expense accounts 591 through 598.

Q. CAN YOU EXPLAIN HOW CUSTOMER ACCOUNTING (ACCOUNTS 901-905), CUSTOMER SERVICES (ACCOUNTS 907-910), AND SALES EXPENSE (ACCOUNTS 911-916) WERE ALLOCATED?

A. Account 902, Meter Reading Expense, was allocated to those classes with meter installations based upon an average number of customers weighted to reflect varying levels of difficulty in meter reading. Account 903, Customer Records Expense, was divided into two categories of cost; call center and other. Call center costs were first divided into residential and other based on the number of calls received; then, other (non-residential) call center expenses were further allocated to the remaining non-residential classes based on the number of customers in each respective class. Account 904, Uncollectibles, was allocated based on the number of customers. Accounts 901 and 905 were allocated based on the sum of the allocated accounts 902, 903 and 904.

Accounts 907 through 916, Customer Service Expenses and Sales Expenses, were allocated based on the number of customers.

Q. PLEASE DESCRIBE THE ALLOCATION OF A&G EXPENSE.

A. A&G expenses, excluding Property Insurance, account 924, and Rate Case Expense, account 928, were functionalized, classified, and allocated using O&M labor. Property Insurance was allocated using gross utility plant. Rate Case Expense was allocated to the customer classes based on sales revenue.

Q. PLEASE DESCRIBE THE ALLOCATION OF DEPRECIATION AND AMORTIZATION EXPENSE.

A. The functionalized components of depreciation and amortization expense were allocated using the corresponding functional plant items excluding land and land rights.

Q. PLEASE DESCRIBE HOW OTHER EXPENSES WERE ALLOCATED.

A. The Gain on Disposition of Utility Plant was allocated based on distribution plant. A/R Factoring was allocated based on gross utility plant. Gain/Loss on Disposition of Allowances was allocated based on the energy allocation factor. Accretion was allocated on production demand. The Interest Income and Interest Expense items were allocated based on gross utility plant. Interest on Customer Deposits was allocated using the customer deposit allocator that was also used for the customer deposit rate base offset.

Q. HOW WERE TAXES ASSIGNED TO THE CUSTOMER CLASSES?

A. Individual tax items other than income taxes were allocated and classified using the appropriate revenue, labor, or plant allocator.

Interest Expense was allocated on rate base and individual Schedule M items were allocated using the appropriate allocators. State and current Federal Income Taxes were computed by class. Feedback of prior Investment Tax Credit Normalized was allocated based on gross utility plant and individual Deferred Federal Income Tax items were allocated using the appropriate allocation factors.

Q. PLEASE DESCRIBE THE ALLOCATION OF THE ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION ("AFUDC") OFFSET.

A. The AFUDC offset was divided into the individual functionalized components in the jurisdictional cost-of-service study. The production component was allocated using the production demand allocator. The transmission and distribution components were allocated using the corresponding plant allocators. The general plant component was allocated using the labor allocation factor.

Q. PLEASE DESCRIBE THE ALLOCATION OF THE VARIOUS JURISDICTIONAL ADJUSTMENTS.

A. The jurisdictional adjustments are identified in the various sections of the cost-of-service study to which they apply. Each adjustment was allocated using a method consistent with both the nature of the adjustment and the underlying line item being adjusted. For example, an adjustment to employee-related expenses is allocated using the labor allocation factor, and an adjustment to the Mitchell Plant coal stock is allocated using the energy allocation factor.

VI. REVENUE ALLOCATION

Q. WHAT IS THE RESULTING GOING-LEVEL AND RELATIVE RATE OF RETURN FOR EACH CLASS SHOWN IN THE CLASS COST-OF-SERVICE STUDY?

A. The resulting going-level rates of return ("ROR") and relative rates of return prior to the rate relief requested in this case, for each customer class as shown in the class cost-of-service study, during the test year are presented in the table below. The going-level return is calculated from current income and rate base. The relative return provides a comparison to the total average Kentucky Power jurisdictional return. If the return earned on each class was the same as the average jurisdictional return, each would have a relative return of 1.00. A relative return less than 1.00 shows that the return earned from that class is less than the average return and that class is receiving a subsidy. A relative return greater than 1.00 shows that the return earned from that class is greater than the average and that customer class is paying a subsidy. A relative return of less than 0.00 indicates the customer class is not providing enough revenue to offset the expenses required to serve them and reduces the Company's overall return.

Class Going-Level Rates of Return and Relative
Rates of Return and Current Subsidy

CLASS	Going-Level ROR	Relative ROR	Subsidy (Paid)/ Received ($ in Millions)
Residential	-0.11 %	-0.04	$31.8
General Service	7.25 %	2.53	($11.2)
Large General Service	6.38 %	2.23	($7.2)
IGS	5.62 %	1.97	($9.4)
Municipal Waterworks	9.51 %	3.33	($0.03)
Outdoor Lighting	15.21 %	5.32	($3.4)
Street Lighting	17.35 %	6.07	($0.6)
Total Kentucky Power Jurisdiction	2.86 %	1.00	$0.0

Q. HOW ARE THESE RATES OF RETURN USED IN THIS PROCEEDING?

A. The going-level and relative rates of return for each class form the basis for the allocation of the revenue increase required for each class. This information was provided to Company Witness West to assist in his determination of the allocation of the requested rate increase by class.

Q. PLEASE EXPLAIN THE PRINCIPLES OR GUIDELINES USED IN ALLOCATING THE PROPOSED REVENUE INCREASE AMONG THE TARIFF CLASSES.

A. A key objective of ratemaking is to design rates such that they reflect as nearly as possible the actual costs of serving the customer. To fully meet this objective would require that the rates of return for all tariff classes be equalized. However, as indicated by Company Witness Vaughan, this would result in significant bill impacts to the Residential customer class. As a result, the Company opted not to propose to fully equalize returns across tariff classes at this time, but rather proposes to continue its gradual progress toward cost alignment.

Q. PLEASE DESCRIBE EXHIBIT JMS-2.

A. Exhibit JMS-2 is the calculation of the allocation of the proposed revenue increase to each class of customers. Page 1 is a summary of the calculation of the required sales revenue per class based upon the Company's proposed subsidy reduction. Page 2 of the exhibit calculates the current subsidies received by each class. Page 3, in Columns 2 through 11, shows the calculation of the required sales revenue at an equalized ROR for each class before demonstrating that each class will retain its current subsidy.

Q. WHAT CLASS-BY-CLASS BASE RATE REVENUE INCREASE WILL RESULT FROM THE PROPOSED INCREASE?

A. The following table summarizes the Company's proposed revenue allocation, as sponsored by Company Witness West, between the major customer classes and the class rate increases:

Base Rate Increase

CLASS	Proposed Increase ($ in Millions)	Percent Increase
Residential	$39.4	17.97 %
General Service	$9.4	12.76 %
Large General Service	$7.5	12.93 %
IGS	$12.6	10.91 %
Municipal Waterworks	$0.02	10.70 %
Outdoor Lighting	$1.0	12.99 %
Street Lighting	$0.1	10.18 %
Total Kentucky Power Jurisdiction	$70.1	14.73 %

VII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The class cost-of-service study, Exhibit JMS-1, has been developed in accordance with sound cost-of-service principles. The class cost-of-service study, along with the revenue allocation submitted as Exhibit JMS-2, provide Company Witness Vaughan with functionalized revenue requirements that he can use to develop rates for the Company’s customer classes.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Rate Base												
P-T-D Plant in Service												
Production Plant & Comp. Const. not Classif.	1,195,068,515	PROD_DEMAND	TOTAL	1,195,068,515	614,726,489	145,625,104	103,833,628	305,034,184	23,886,175	308,927	1,372,431	281,578
Transmission & Comp. Const. not Classif.												
GSU	12,011,524	PROD_DEMAND	TOTAL	12,011,524	6,178,560	1,463,665	1,043,622	3,065,871	240,078	3,105	13,794	2,830
All Other Transmission Plant	633,385,993	TRANS_TOTAL	TOTAL	633,385,993	325,333,079	77,167,129	54,762,525	162,701,064	12,572,919	162,880	569,545	116,852
Total	645,397,517		TOTAL	645,397,517	331,511,639	78,630,794	55,806,147	165,766,935	12,812,997	165,985	583,339	119,682
Distribution & Comp. Const. not Classif.												
360 Land and Land Rights	7,866,118	DIST_CPD	TOTAL	7,866,118	5,150,790	1,222,321	825,548	469,198	195,733	2,529	-	-
361 Structures and Improvements	6,899,650	DIST_CPD	TOTAL	6,899,650	4,517,940	1,072,141	724,117	411,550	171,684	2,218	-	-
362 Station Equipment	126,872,130	DIST_CPD	TOTAL	126,872,130	83,076,768	19,714,747	13,315,206	7,567,666	3,156,959	40,784	-	-
363 Storage Battery Equipment	-	DIST_CPD	TOTAL	-	-	-	-	-	-	-	-	-
364 Poles	237,133,430	DIST_POLES	TOTAL	237,133,430	164,126,465	36,265,508	21,830,287	8,381,141	5,519,946	68,965	779,480	161,636
365 Overhead Lines	262,417,346	DIST_OHLINES	TOTAL	262,417,346	175,584,319	40,530,145	26,244,813	13,209,467	6,368,369	81,277	330,435	68,520
366 Underground Conduit	7,560,305	DIST_UGLINES	TOTAL	7,560,305	5,070,678	1,166,889	751,956	372,718	182,956	2,332	10,582	2,194
367 Underground Lines	11,854,633	DIST_UGLINES	TOTAL	11,854,633	7,950,874	1,829,694	1,179,074	584,426	286,876	3,656	16,592	3,441
368 Transformers	142,711,644	DIST_TRANSF	TOTAL	142,711,644	103,337,703	21,524,798	11,561,757	2,072,242	3,125,747	37,760	871,020	180,618
369 Services	66,236,429	DIST_SERV	TOTAL	66,236,429	42,242,071	9,577,847	171,490	1,579	48,320	2,842	14,174,910	17,370
370 Meters	25,229,878	DIST_METERS	TOTAL	25,229,878	11,287,155	9,939,042	2,305,099	1,418,241	254,212	26,130	-	-
371 Installations on Cust Premises	18,637,645	DIST_OL	TOTAL	18,637,645	-	-	-	-	-	-	18,637,645	-
373 Street Lighting	4,366,835	DIST_SL	TOTAL	4,366,835	-	-	-	-	-	-	-	4,366,835
Total	917,786,043		TOTAL	917,786,043	602,344,762	142,843,132	78,909,347	34,488,229	19,310,804	268,492	34,820,663	4,800,615
Total P-T-D Plant in Service	2,758,252,075		TOTAL	2,758,252,075	1,548,582,890	367,099,029	238,549,122	505,289,347	56,009,975	743,404	36,776,432	5,201,875
General & Intangible Plant & Comp. Const. not Classif.	101,738,591	LABOR_M	TOTAL	101,738,591	56,647,725	13,396,991	8,191,898	20,687,331	1,910,428	27,313	724,169	152,736
HR - J 765 Line - FERC AFUDC Adj.	482,062	BULK_TRANS	TOTAL	482,062	247,966	58,742	41,884	123,043	9,635	125	554	114
Total Electric Plant in Service	2,860,472,728		TOTAL	2,860,472,728	1,605,478,581	380,554,762	246,782,904	526,099,721	57,930,038	770,842	37,501,155	5,354,725
Adj 4 - Remove FGD from Base Rates (Mitchell)	(323,850,066)	PROD_DEMAND	TOTAL	(323,850,066)	(166,583,934)	(39,462,758)	(28,137,740)	(82,660,818)	(6,472,883)	(83,716)	(371,913)	(76,304)
Total Adjustments to Electric Plant in Service	(323,850,066)		TOTAL	(323,850,066)	(166,583,934)	(39,462,758)	(28,137,740)	(82,660,818)	(6,472,883)	(83,716)	(371,913)	(76,304)
Total Adjusted Electric Plant in Service	2,536,622,662		TOTAL	2,536,622,662	1,438,894,647	341,092,004	218,645,164	443,438,904	51,457,155	687,126	37,129,242	5,278,421
Depreciation Reserve												
Generation	(493,022,673)	RB_GUP-Land_P	TOTAL	(493,022,673)	(253,603,951)	(60,077,290)	(42,836,316)	(125,841,127)	(9,854,185)	(127,447)	(566,193)	(116,164)
Transmission - GSU	(139,329)	RB_GUP-Land_P	TOTAL	(139,329)	(71,669)	(16,978)	(12,106)	(35,563)	(2,785)	(36)	(160)	(33)
Transmission - All Other	(225,237,538)	RB_GUP-Land_T	TOTAL	(225,237,538)	(115,684,943)	(27,441,110)	(19,470,424)	(57,871,732)	(4,469,878)	(57,910)	(200,422)	(41,120)
Distribution	(271,663,484)	RB_GUP-Land_D	TOTAL	(271,663,484)	(178,296,719)	(42,281,955)	(23,313,323)	(10,157,585)	(5,707,114)	(79,407)	(10,394,346)	(1,433,036)
General & Intangible	(38,401,198)	RB_GUP-Land_G	TOTAL	(38,401,198)	(21,381,665)	(5,056,690)	(3,092,029)	(7,808,426)	(721,090)	(10,309)	(273,337)	(57,650)
HR-J Post In-Service AFUDC	(1,162,708)	BULK_TRANS	TOTAL	(1,162,708)	(598,081)	(141,682)	(101,022)	(296,774)	(23,239)	(301)	(1,335)	(274)
Total Depreciation Reserve	(1,029,626,930)		TOTAL	(1,029,626,930)	(569,637,027)	(135,015,704)	(88,825,220)	(202,011,207)	(20,778,291)	(275,410)	(11,435,794)	(1,648,277)
Adj 4 - Remove FGD from Base Rates (Mitchell)	121,568,119	PROD_DEMAND	TOTAL	121,568,119	62,532,936	14,813,686	10,562,456	31,029,545	2,429,817	31,426	139,610	28,643
Total Depreciation Adjustments	121,568,119		TOTAL	121,568,119	62,532,936	14,813,686	10,562,456	31,029,545	2,429,817	31,426	139,610	28,643
Total Adjusted Depreciation Reserve	(908,058,811)		TOTAL	(908,058,811)	(507,104,091)	(120,202,018)	(78,262,763)	(170,981,663)	(18,348,474)	(243,984)	(11,296,184)	(1,619,634)
Net Electric Plant in Service	1,628,563,851		TOTAL	1,628,563,851	931,790,556	220,889,986	140,382,401	272,457,241	33,108,681	443,142	25,833,058	3,658,787
Plant Held for Future Use - Tranmsission	-	RB_GUP_EPIS_T	TOTAL	-	-	-	-	-	-	-	-	-
Plant Held for Future Use - Distribution	555,589	RB_GUP_EPIS_D	TOTAL	555,589	364,634	86,471	47,768	20,878	11,690	163	21,079	2,906
Total Plant Held for Future Use	555,589		TOTAL	555,589	364,634	86,471	47,768	20,878	11,690	163	21,079	2,906
Working Capital												
Working Capital - Cash												
Working Capital Cash - Excl Sys Sales	19,763,568	EXP_OM_LPP	TOTAL	19,763,568	11,045,351	2,653,206	1,669,737	3,826,138	391,052	5,537	136,056	36,491
Total Working Capital - Cash	19,763,568		TOTAL	19,763,568	11,045,351	2,653,206	1,669,737	3,826,138	391,052	5,537	136,056	36,491

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Cash Working Capital Adjustments												
Adj 3 - Env Surcharge - Remove Mitchell FGD Expenses	(480,401)	PROD_ENERGY	TOTAL	(480,401)	(187,974)	(55,092)	(42,787)	(179,842)	(9,859)	(173)	(3,875)	(799)
Adj 6 - Fuel Under (Over) Revenue & Expense	352,863	PROD_ENERGY	TOTAL	352,863	138,070	40,466	31,428	132,097	7,242	127	2,846	587
Adj 8 - Remove PPA Rider Revenue, Expense	262,327	PROD_ENERGY	TOTAL	262,327	102,645	30,083	23,364	98,204	5,384	94	2,116	436
Adj 9 - Remove DSM Rider	62,235	CUST_TOTAL	TOTAL	62,235	39,649	9,014	181	21	46	3	13,305	16
Adj 10 - Remove HEAP Surcharge	(60,310)	CUST_TOTAL	TOTAL	(60,310)	(38,423)	(8,735)	(176)	(21)	(44)	(3)	(12,893)	(16)
Adj 11 - Remove Economic Development Surcharge	(46,278)	CUST_TOTAL	TOTAL	(46,278)	(29,483)	(6,703)	(135)	(16)	(34)	(2)	(9,893)	(12)
Adj 12 - Specific Customer Adjustment	(801,552)	CUST_SPEC_OM	TOTAL	(801,552)	-	-	(3,546)	(798,006)	-	-	-	-
Adj 13 - Customer Annualization Adjustment	(1,226,783)	REVYEC_EXP_OM	TOTAL	(1,226,783)	(4,233)	(22,129)	(158,368)	(1,031,333)	(9,367)	-	(1,521)	169
Adj 14 - Weather Normalization Adjustment	358,802	WEATHER_FXNL_OM	TOTAL	358,802	346,692	10,644	938	(254)	782	-	-	-
Adj 16 - Normalization of Major Storms	63,966	TDOMX	TOTAL	63,966	42,658	10,378	6,019	2,491	1,458	21	624	317
Adj 17 - Amortization of Big Sandy Operation Rider	45,143	PROD_DEMAND	TOTAL	45,143	23,221	5,501	3,922	11,522	902	12	52	11
Adj 18 - Rate Case Expense	65,974	RSALE	TOTAL	65,974	28,645	9,787	6,448	18,278	1,559	24	1,041	191
Adj 19 - Eliminate Advertising Expense A&G	(13,998)	LABOR_M	TOTAL	(13,998)	(7,794)	(1,843)	(1,127)	(2,846)	(263)	(4)	(100)	(21)
Adj 20 - Annualization of Lease Costs	(13,707)	RB_GUP	TOTAL	(13,707)	(7,775)	(1,843)	(1,181)	(2,396)	(278)	(4)	(201)	(29)
Adj 21 - Pension & OPEB Expense Adjustment	(1,105)	LABOR_M	TOTAL	(1,105)	(615)	(146)	(89)	(225)	(21)	(0)	(8)	(2)
Adj 22 - Employee Related Group Benefit Expenses	(47,956)	LABOR_M	TOTAL	(47,956)	(26,702)	(6,315)	(3,861)	(9,751)	(901)	(13)	(341)	(72)
Adj 23 - PJM LSE OATT Expense	1,530,108	TRAN_LSE	TOTAL	1,530,108	787,066	186,451	132,944	390,551	30,583	396	1,757	361
Adj 24 - Annualize PJM Admin Fees	26,055	TRAN_LSE	TOTAL	26,055	13,402	3,175	2,264	6,650	521	7	30	6
Adj 26 - Severance Related Payroll Expenses - Big Sandy Plant	(192,652)	LABOR_PROD	TOTAL	(192,652)	(92,322)	(23,081)	(16,859)	(55,729)	(3,880)	(55)	(602)	(124)
Adjs 27-33 - Total Incentive Compensation & Payroll Adjs	(186,775)	LABOR_M	TOTAL	(186,775)	(103,996)	(24,595)	(15,039)	(37,978)	(3,507)	(50)	(1,329)	(280)
Adj 34 - Remove Non-Recoverable Business Expenses	(3,445)	RB_GUP	TOTAL	(3,445)	(1,954)	(463)	(297)	(602)	(70)	(1)	(50)	(7)
Adj 35 - Plant Maintenance Normalization	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
Adj 47 - Veg Management Tree Trimming	(32,919)	TOTOHLINES	TOTAL	(32,919)	(22,386)	(5,061)	(3,168)	(1,423)	(783)	(10)	(73)	(15)
Adj 48 - Eliminate Tariff Insert Expense	(1,187)	CUST_TOTAL	TOTAL	(1,187)	(756)	(172)	(3)	(0)	(1)	(0)	(254)	(0)
Adj 49 - Rockport UPA Demand Expense	211,939	PROD_DEMAND	TOTAL	211,939	109,018	25,826	18,414	54,096	4,236	55	243	50
Adj 50 - PJM Capacity Performance Insurance Premium	6,441	PROD_DEMAND	TOTAL	6,441	3,313	785	560	1,644	129	2	7	2
Adj 51 - Def and Amortize GreenHat Default Charges	(4,145)	TRANS_TOTAL	TOTAL	(4,145)	(2,129)	(505)	(358)	(1,065)	(82)	(1)	(4)	(1)
Adj 52 - Removal of Pole Rental Rev & Exp to prior periods	28,317	RB_GUP_EPIS_D	TOTAL	28,317	18,585	4,407	2,435	1,064	596	8	1,074	148
Adj 53 - Removal Non-Ongoing Exp - COVID-19 Pandemic	(17,873)	LABOR_M	TOTAL	(17,873)	(9,952)	(2,354)	(1,439)	(3,634)	(336)	(5)	(127)	(27)
Adj 54 - Removal Prior Period Insurance Proceeds	5,213	CUST_903	TOTAL	5,213	4,493	699	14	2	4	0	-	1
Adj 55 - Removal Prior Period Rockport Bill	114,916	PROD_DEMAND	TOTAL	114,916	59,111	14,003	9,984	29,332	2,297	30	132	27
Adj 56 - Amoritization Deferred Plant Maintenance Costs	29,008	PROD_ENERGY	TOTAL	29,008	11,350	3,327	2,584	10,859	595	10	234	48
Adj 65 - Annualize EOP Rates	707,736	PROD_ENERGY	TOTAL	707,736	276,927	81,162	63,034	264,947	14,525	255	5,708	1,177
Adj 66 - Removal of Regulatory Asset Amortization	(57,292)	RSALE	TOTAL	(57,292)	(24,876)	(8,499)	(5,600)	(15,873)	(1,354)	(21)	(904)	(166)
Total Cash Working Capital Adjustments	682,665		TOTAL	682,665	1,443,478	268,173	50,499	(1,119,235)	40,077	702	(3,006)	1,976
Working Capital - Materials & Supplies												
Fuel / Allowance Inventory	31,786,747	PROD_ENERGY	TOTAL	31,786,747	12,437,716	3,645,249	2,831,082	11,899,637	652,349	11,446	256,387	52,881
Production - Demand Related	11,551,542	PROD_DEMAND	TOTAL	11,551,542	5,941,951	1,407,613	1,003,657	2,948,463	230,884	2,986	13,266	2,722
Emissions - Energy Related	2,355,851	PROD_ENERGY	TOTAL	2,355,851	921,812	270,165	209,824	881,933	48,348	848	19,002	3,919
Transmission & Distribution	3,215,559	TDPLANT	TOTAL	3,215,559	1,920,914	455,565	277,118	412,062	66,080	894	72,807	10,118
Total Working Cap - Materials & Supplies	48,909,699		TOTAL	48,909,699	21,222,393	5,778,592	4,321,680	16,142,096	997,661	16,174	361,461	69,641
Working Capital - Materials & Supplies Adjustments												
Adj 4 - Remove FGD from Base Rates (Mitchell)	(1,699,124)	PROD_ENERGY	TOTAL	(1,699,124)	(664,844)	(194,853)	(151,332)	(636,081)	(34,871)	(612)	(13,705)	(2,827)
Adj 43 - Mitchell Coal Stock Adjustment	(12,888,097)	PROD_ENERGY	TOTAL	(12,888,097)	(5,042,935)	(1,477,985)	(1,147,876)	(4,824,768)	(264,498)	(4,641)	(103,953)	(21,441)
Total Working Cap - Materials & Supplies Adjustments	(14,587,221)		TOTAL	(14,587,221)	(5,707,778)	(1,672,837)	(1,299,209)	(5,460,850)	(299,369)	(5,253)	(117,658)	(24,268)
Working Capital - Prepayments												
Working Capital - Prepayments	65,885,351	RB_GUP_EPIS	TOTAL	65,885,351	37,373,347	8,859,405	5,679,013	11,517,727	1,336,530	17,847	964,382	137,100
Total Working Capital	120,654,062		TOTAL	120,654,062	65,376,791	15,886,539	10,421,721	24,905,876	2,465,952	35,007	1,341,235	220,941
Construction Work-In-Progress excluding AFUDC												
Production	5,437,818	RB_GUP_EPIS_P	TOTAL	5,437,818	2,797,137	662,625	472,465	1,387,971	108,687	1,406	6,245	1,281
Transmission	48,529,444	RB_GUP_EPIS_T	TOTAL	48,529,444	24,927,416	5,912,494	4,196,253	12,464,473	963,454	12,481	43,872	9,001
Distribution	19,828,478	RB_GUP_EPIS_D	TOTAL	19,828,478	13,013,469	3,086,081	1,704,812	745,107	417,204	5,801	752,289	103,716
General	14,089,268	RB_GUP_EPIS_G	TOTAL	14,089,268	7,844,860	1,855,282	1,134,455	2,864,885	264,566	3,782	100,287	21,152
Total CWIP	87,885,008		TOTAL	87,885,008	48,582,882	11,516,483	7,507,984	17,462,436	1,753,911	23,470	902,693	135,150
Adjustments to CWIP	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-
Total Adjusted CWIP	87,885,008		TOTAL	87,885,008	48,582,882	11,516,483	7,507,984	17,462,436	1,753,911	23,470	902,693	135,150

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Rate Base Offsets												
Accumulated Deferred FIT	(532,313,594)	RB_GUP	TOTAL	(532,313,594)	(301,953,930)	(71,578,605)	(45,882,975)	(93,056,236)	(10,798,351)	(144,194)	(7,791,620)	(1,107,683)
Customer Advances	(161,168)	TDPLANT	TOTAL	(161,168)	(96,279)	(22,834)	(13,890)	(20,653)	(3,312)	(45)	(3,649)	(507)
Customer Deposits	(31,260,748)	CUST_DEP_FXNL	TOTAL	(31,260,748)	(21,354,741)	(5,020,540)	(2,210,350)	(2,528,044)	(29,339)	-	(117,734)	-
Adjustments to Rate Base Offsets												
Adj 4 - Remove FGD from Base Rates (Mitchell)	34,154,936	PROD_DEMAND	TOTAL	34,154,936	17,568,820	4,161,951	2,967,554	8,717,846	682,664	8,829	39,224	8,047
Adj 44 - Remove Decommissioning Rider ADIT	91,862,902	PROD_DEMAND	TOTAL	91,862,902	47,252,989	11,193,956	7,981,516	23,447,463	1,836,090	23,747	105,496	21,644
Adj 62 - Add Defd Plant Maintenance to Reg. Asset	146,201	PROD_DEMAND	TOTAL	146,201	75,204	17,815	12,703	37,317	2,922	38	168	34
Adj 63 - Remove NERC Compliance Cyber Security Assets	376,821	RB_GUP-Land_G	TOTAL	376,821	209,813	49,620	30,341	76,622	7,076	101	2,682	566
Adj 64 - Remove Rockport Deferred Regulatory Asset	6,911,107	PROD_DEMAND	TOTAL	6,911,107	3,554,977	842,153	600,472	1,764,019	138,134	1,787	7,937	1,628
Total Adjustments to Rate Base Offsets	133,451,967		TOTAL	133,451,967	68,661,802	16,265,495	11,592,587	34,043,267	2,666,887	34,501	155,507	31,920
Total Rate Base Offsets	(430,283,543)		TOTAL	(430,283,543)	(254,743,148)	(60,356,483)	(36,514,627)	(61,561,666)	(8,164,116)	(109,738)	(7,757,496)	(1,076,270)
Total Rate Base	1,407,374,967		TOTAL	1,407,374,967	791,371,716	188,022,996	121,845,247	253,284,765	29,176,118	392,044	20,340,568	2,941,513
Operating Revenues												
Year End Migration Revenue	495,706,715	RSALE	TOTAL	495,706,715	215,231,779	73,533,612	48,449,402	137,335,510	11,717,018	182,521	7,819,282	1,437,591
Adj 12 - Specific Customer Adjustment	(9,504,100)	CUST_SPEC_FXNL	TOTAL	(9,504,100)	-	-	(42,050)	(9,462,049)	-	-	-	-
Adj 13 - Year End Customer Annualization	(14,546,115)	REVYEC_FXNL	TOTAL	(14,546,115)	(50,187)	(262,389)	(1,877,794)	(12,228,643)	(111,061)	-	(18,040)	2,000
Adj 14 - Weather Normalization Adjustment	4,254,356	WEATHER_FXNL	TOTAL	4,254,356	4,110,763	126,207	11,122	(3,008)	9,272	-	-	-
Total Firm Sales	475,910,856		TOTAL	475,910,856	219,292,354	73,397,430	46,540,680	115,641,810	11,615,228	182,521	7,801,242	1,439,592
Non-Firm Sales: Energy	26,689,221	PROD_ENERGY	TOTAL	26,689,221	10,443,124	3,060,674	2,377,071	9,991,336	547,734	9,610	215,271	44,401
Non-Firm Sales: Demand	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
Adjs 8, 25 - Non-Firm Sales: Energy Adjustment - reset OSS mar	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-
Total Sales of Electricity Adjustments	-		TOTAL	-	-	-	-	-	-	-	-	-
Sales of Electricity	502,600,077		TOTAL	502,600,077	229,735,478	76,458,104	48,917,751	125,633,145	12,162,962	192,131	8,016,513	1,483,993
Other Operating Revenues												
450-Forfeited Discounts	4,066,117	FORF_DISC_FXNL	TOTAL	4,066,117	2,436,674	554,186	308,005	752,140	-	-	15,111	-
451-Miscellaneous Service Revenue	622,204	MISC_SERV_REV	TOTAL	622,204	568,030	48,934	1,166	213	-	-	3,861	-
454x-Rent from Electric Prop - Poles	5,205,177	DIST_POLES	TOTAL	5,205,177	3,602,644	796,043	479,184	183,970	121,165	1,514	17,110	3,548
454x-Rent from Electric Prop - Production	2,688,058	RB_GUP_EPIS_P	TOTAL	2,688,058	1,382,699	327,553	233,552	686,111	53,727	695	3,087	633
454x-Rent from Electric Prop - Transmission	(46,312)	TRANS_TOTAL	TOTAL	(46,312)	(23,788)	(5,642)	(4,004)	(11,896)	(919)	(12)	(42)	(9)
454x-Rent from Electric Prop - Other Dist	1,347,306	RB_GUP_EPIS_D	TOTAL	1,347,306	884,240	209,693	115,839	50,629	28,348	394	51,117	7,047
456-Other Electric Revenue - Production Energy	70,919	PROD_ENERGY	TOTAL	70,919	27,750	8,133	6,316	26,549	1,455	26	572	118
456-Other Electric Revenue - Transmission	59,491,793	TRANS_TOTAL	TOTAL	59,491,793	30,557,430	7,248,046	5,143,658	15,281,958	1,180,932	15,299	53,495	10,976
456-Other Electric Revenue - Dist	242,796	RB_GUP_EPIS_D	TOTAL	242,796	159,347	37,788	20,875	9,124	5,109	71	9,212	1,270
456-Other Electric LSE Charge	(40,131,547)	TRAN_LSE	TOTAL	(40,131,547)	(20,643,105)	(4,890,231)	(3,486,833)	(10,243,340)	(802,121)	(10,374)	(46,088)	(9,456)
456-Other Electric Revenues DSM	(196,263)	PROD_DEMAND	TOTAL	(196,263)	(100,955)	(23,916)	(17,052)	(50,095)	(3,923)	(51)	(225)	(46)
Total Other Operating Revenues	33,360,249		TOTAL	33,360,249	18,850,966	4,310,588	2,800,706	6,685,361	583,773	7,561	107,210	14,082
Other Operating Revenue Adjustments												
Adj 14 - Weather Normalization Adjustment	196,263	PROD_DEMAND	TOTAL	196,263	100,955	23,916	17,052	50,095	3,923	51	225	46
Adj 50 - PJM Capacity Performance Insurance Premium	(2,058,187)	TRAN_LSE	TOTAL	(2,058,187)	(1,058,703)	(250,800)	(178,826)	(525,340)	(41,138)	(532)	(2,364)	(485)
Adj 52 - Rent from Electric Prop - Poles -CATV Adj.	283,945	DIST_POLES	TOTAL	283,945	196,526	43,425	26,140	10,036	6,610	83	933	194
Total Other Operating Revenue Adjustments	(1,577,979)		TOTAL	(1,577,979)	(761,222)	(183,460)	(135,634)	(465,209)	(30,605)	(399)	(1,205)	(245)
Total Other Operating Revenues	31,782,270		TOTAL	31,782,270	18,089,745	4,127,128	2,665,072	6,220,152	553,168	7,163	106,005	13,836
Total Operating Revenues	534,382,347		TOTAL	534,382,347	247,825,223	80,585,232	51,582,824	131,853,297	12,716,130	199,294	8,122,518	1,497,829
Operating Expense												
O&M Expense												
Production												
500-Supervision & Engineering	4,303,310	LABOR_PROD	TOTAL	4,303,310	2,062,216	515,556	376,573	1,244,841	86,670	1,237	13,447	2,770
501-Fuel Delivered and Consumed	89,951,355	PROD_ENERGY	TOTAL	89,951,355	35,196,725	10,315,466	8,011,504	33,674,050	1,846,042	32,390	725,533	149,646
502-Steam / Consumables	5,455,871	PROD_ENERGY	TOTAL	5,455,871	2,134,807	625,670	485,926	2,042,451	111,969	1,965	44,006	9,077
503-Steam other Sources	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
504-Steam Transferred Credit	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
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Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
505-Electric	3,124	PROD_DEMAND	TOTAL	3,124	1,607	381	271	797	62	1	4	1
506-Misc. Steam Power Expenses	7,359,361	PROD_DEMAND	TOTAL	7,359,361	3,785,552	896,775	639,419	1,878,433	147,094	1,902	8,452	1,734
507-Rents	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
508-IPP Operations	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
509-Allowances	171,767	PROD_ENERGY	TOTAL	171,767	67,210	19,698	15,298	64,302	3,525	62	1,385	286
510-Supervision & Engineering	2,036,288	LABOR_PROD	TOTAL	2,036,288	975,822	243,957	178,191	589,048	41,011	585	6,363	1,311
511-Structures	1,531,807	PROD_DEMAND	TOTAL	1,531,807	787,940	186,658	133,091	390,985	30,617	396	1,759	361
512-Boiler Plant	11,227,170	PROD_ENERGY	TOTAL	11,227,170	4,393,037	1,287,512	999,946	4,202,986	230,412	4,043	90,556	18,678
513-Electric Plant	3,997,481	PROD_DEMAND	TOTAL	3,997,481	2,056,248	487,113	347,321	1,020,333	79,899	1,033	4,591	942
514-Misc Steam Plant	1,657,009	PROD_DEMAND	TOTAL	1,657,009	852,342	201,915	143,969	422,942	33,119	428	1,903	390
555-Purchased Power Expense Demand	57,519,245	PROD_DEMAND	TOTAL	57,519,245	29,587,093	7,009,009	4,997,564	14,681,448	1,149,654	14,869	66,056	13,552
555-Purchased Power Expense Energy	68,860,226	PROD_ENERGY	TOTAL	68,860,226	26,944,057	7,896,771	6,133,025	25,778,408	1,413,196	24,796	555,415	114,558
556-Sys Control & Load Dispatching	520,557	PROD_DEMAND	TOTAL	520,557	267,767	63,432	45,229	132,869	10,405	135	598	123
557- Other Expenses	659,397	PROD_DEMAND	TOTAL	659,397	339,185	80,351	57,292	168,307	13,180	170	757	155
Total Production Expenses	255,253,968		TOTAL	255,253,968	109,451,609	29,830,265	22,564,622	86,292,201	5,196,853	84,013	1,520,824	313,583
Transmission												
560-Supervision & Engineering	3,016,611	EXP_OM_TRAN	TOTAL	3,016,611	1,549,455	367,522	260,816	774,892	59,881	776	2,713	557
561-Load Dispatching - Company	486,641	TRANS_TOTAL	TOTAL	486,641	249,959	59,289	42,075	125,006	9,660	125	438	90
561-Load Dispatching - PJM	1,443,293	TRAN_LSE	TOTAL	1,443,293	742,410	175,873	125,401	368,392	28,848	373	1,657	340
562-Station Equipment	234,728	TRANS_TOTAL	TOTAL	234,728	120,566	28,598	20,295	60,296	4,659	60	211	43
563-Overhead Lines	17,242	TRANS_TOTAL	TOTAL	17,242	8,856	2,101	1,491	4,429	342	4	16	3
564-Underground Lines	(6)	TRANS_TOTAL	TOTAL	(6)	(3)	(1)	(1)	(2)	(0)	(0)	(0)	(0)
565 LSE Transmission Purchases	41,982,450	TRAN_LSE	TOTAL	41,982,450	21,595,184	5,115,772	3,647,649	10,715,773	839,115	10,853	48,213	9,892
565 LSE Transmission Purchases - Retail Energy	195,641	PROD_ENERGY	TOTAL	195,641	76,552	22,436	17,425	73,240	4,015	70	1,578	325
565 Transmission by Others	104,170	TRANS_TOTAL	TOTAL	104,170	53,506	12,691	9,007	26,759	2,068	27	94	19
565 Transmission Purchases - Non-Juris	-	TRANS_TOTAL	TOTAL	-	-	-	-	-	-	-	-	-
566-Misc Transmission	(8,579,562)	TRANS_TOTAL	TOTAL	(8,579,562)	(4,406,816)	(1,045,271)	(741,789)	(2,203,875)	(170,307)	(2,206)	(7,715)	(1,583)
567-Rents	5,386	TRANS_TOTAL	TOTAL	5,386	2,766	656	466	1,384	107	1	5	1
Total Transmission Expenses	38,906,594		TOTAL	38,906,594	19,992,435	4,739,665	3,382,834	9,946,292	778,388	10,084	47,209	9,687
568-Supervision & Engineering	33,967	EXP_OM_TRAN	TOTAL	33,967	17,447	4,138	2,937	8,725	674	9	31	6
569-Structures	238,185	TRANS_TOTAL	TOTAL	238,185	122,342	29,019	20,593	61,184	4,728	61	214	44
570-Station Equipment	595,011	TRANS_TOTAL	TOTAL	595,011	305,622	72,492	51,445	152,843	11,811	153	535	110
571-Overhead Lines	5,979,397	TRANS_TOTAL	TOTAL	5,979,397	3,071,264	728,486	516,978	1,535,958	118,693	1,538	5,377	1,103
572-Underground Lines	226	TRANS_TOTAL	TOTAL	226	116	28	20	58	4	0	0	0
573-Misc Transmission Expenses	95,588	TRANS_TOTAL	TOTAL	95,588	49,098	11,646	8,265	24,554	1,897	25	86	18
575- PJM Admin	1,029,504	TRAN_LSE	TOTAL	1,029,504	529,562	125,450	89,449	262,775	20,577	266	1,182	243
Total Transmission Maintenance	7,971,878		TOTAL	7,971,878	4,095,451	971,258	689,686	2,046,098	158,385	2,051	7,425	1,523
Total Transmission O&M	46,878,472		TOTAL	46,878,472	24,087,886	5,710,924	4,072,519	11,992,390	936,773	12,135	54,634	11,211
Distribution Operation												
580 Supervision & Engineering	1,100,094	TOTOXEXP	TOTAL	1,100,094	683,706	206,673	95,761	45,816	21,448	435	31,648	14,609
581 Load Dispatching	8,942	DIST_CPD	TOTAL	8,942	5,855	1,390	938	533	223	3	-	-
582 Station Expenses	214,714	DIST_CPD	TOTAL	214,714	140,596	33,365	22,534	12,807	5,343	69	-	-
583 Overhead Lines	1,130,565	DIST_OHLINES	TOTAL	1,130,565	756,465	174,615	113,070	56,910	27,437	350	1,424	295
584 Underground Lines	129,807	DIST_UGLINES	TOTAL	129,807	87,061	20,035	12,911	6,399	3,141	40	182	38
585 Street Lighting	85,965	DIST_SL	TOTAL	85,965	-	-	-	-	-	-	-	85,965
586 Meters	1,258,658	DIST_METERS	TOTAL	1,258,658	563,089	495,835	114,996	70,753	12,682	1,304	-	-
587 Customer Installs	142,437	DIST_PCUST	TOTAL	142,437	90,763	20,630	406	33	105	6	30,457	37
588 Miscellaneous Distribution	4,477,658	RB_GUP_EPIS_D	TOTAL	4,477,658	2,938,696	696,897	384,980	168,260	94,213	1,310	169,882	23,421
589 Rents	1,346,121	RB_GUP_EPIS_D	TOTAL	1,346,121	883,462	209,509	115,737	50,584	28,323	394	51,072	7,041
Total Distribution Operations Expenses	9,894,961		TOTAL	9,894,961	6,149,692	1,858,948	861,332	412,095	192,913	3,910	284,663	131,407
Distribution Maintenance												
590 Supervision & Engineering	3,939	TOTMXEXP	TOTAL	3,939	2,666	605	378	171	93	1	15	10
591 Structures	67,313	DIST_CPD	TOTAL	67,313	44,077	10,460	7,064	4,015	1,675	22	-	-
592 Station Equipment	609,170	DIST_CPD	TOTAL	609,170	398,889	94,659	63,932	36,336	15,158	196	-	-
593 Overhead Lines	29,302,071	TOTOHLINES	TOTAL	29,302,071	19,926,362	4,504,590	2,819,934	1,266,437	697,331	8,813	65,104	13,500
5930010 Storm Expense Amortization	2,064,492	TOTOHLINES	TOTAL	2,064,492	1,403,922	317,373	198,680	89,227	49,131	621	4,587	951
593-Forestry Direct Assigned	407,928	TOTOHLINES	TOTAL	407,928	277,404	62,711	39,258	17,631	9,708	123	906	188
594 Underground Lines	71,712	TOTUGLINES	TOTAL	71,712	48,097	11,068	7,133	3,535	1,735	22	100	21
595 Line Transformers	70,023	DIST_TRANSF	TOTAL	70,023	50,704	10,561	5,673	1,017	1,534	19	427	89
596 Street Lighting	61,349	DIST_SL	TOTAL	61,349	-	-	-	-	-	-	-	61,349
597 Meters	41,539	DIST_METERS	TOTAL	41,539	18,583	16,364	3,795	2,335	419	43	-	-
598 Miscellaneous Distribution	53,430	DIST_OL	TOTAL	53,430	-	-	-	-	-	-	53,430	-

KENTUCKY POWER COMPANY
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Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Total Distribution Maintenance Expenses	32,752,966		TOTAL	32,752,966	22,170,703	5,028,392	3,145,847	1,420,704	776,784	9,859	124,571	76,107
Total Distribution O&M	42,647,927		TOTAL	42,647,927	28,320,396	6,887,339	4,007,179	1,832,799	969,697	13,769	409,234	207,514
Customer Accounts												
901 Supervision	37,113	TOTOX234	TOTAL	37,113	30,960	5,366	116	15	28	2	619	8
902 Meter Read	521,719	CUST_902	TOTAL	521,719	384,949	131,332	4,013	622	777	26	-	-
903 Customer Records	5,312,421	CUST_903	TOTAL	5,312,421	4,579,192	712,109	14,331	1,685	3,606	211	-	1,288
904 Uncollectibles	493,523	CUST_TOTAL	TOTAL	493,523	314,416	71,480	1,439	169	362	21	105,507	129
905 Miscellaneous	25,398	TOTOX234	TOTAL	25,398	21,187	3,672	79	10	19	1	423	6
Total	6,390,174		TOTAL	6,390,174	5,330,703	923,959	19,978	2,500	4,792	261	106,549	1,431
907 - 910 Total Customer Services Expenses	734,968	CUST_TOTAL	TOTAL	734,968	468,237	106,450	2,142	252	539	32	157,123	193
911 - 916 Total Sales Expenses	52,280	CUST_TOTAL	TOTAL	52,280	33,307	7,572	152	18	38	2	11,177	14
Administrative & General Expense												
920-Salaries	10,363,136	LABOR_M	TOTAL	10,363,136	5,770,161	1,364,623	834,430	2,107,220	194,597	2,782	73,764	15,558
921-Office Supplies	920,380	LABOR_M	TOTAL	920,380	512,465	121,196	74,108	187,148	17,283	247	6,551	1,382
922-Administrative Expense Transferred	(1,044,036)	LABOR_M	TOTAL	(1,044,036)	(581,316)	(137,479)	(84,065)	(212,292)	(19,605)	(280)	(7,431)	(1,567)
923-Outside Services	3,312,280	LABOR_M	TOTAL	3,312,280	1,844,267	436,163	266,702	673,513	62,197	889	23,577	4,973
924-Property Insurance	905,387	RB_GUP_EPIS	TOTAL	905,387	513,579	121,745	78,040	158,275	18,366	245	13,252	1,884
925-Injuries & Damages	1,498,136	LABOR_M	TOTAL	1,498,136	834,158	197,275	120,629	304,628	28,132	402	10,664	2,249
926-Employee Pension & Benefits	1,477,197	LABOR_M	TOTAL	1,477,197	822,499	194,518	118,943	300,371	27,739	397	10,515	2,218
9260057 Post Ret Medicare Subsidy Direct	-	LABOR_M	TOTAL	-	-	-	-	-	-	-	-	-
927-Franchise Requirements	123,211	LABOR_M	TOTAL	123,211	68,603	16,224	9,921	25,053	2,314	33	877	185
928-Regulatory Commission Expense Allocated	498	LABOR_M	TOTAL	498	277	66	40	101	9	0	4	1
928- Rate Case Expense	1,048,834	RSALE	TOTAL	1,048,834	455,395	155,585	102,511	290,579	24,791	386	16,544	3,042
930-General Advertising Expense	620,621	LABOR_M	TOTAL	620,621	345,560	81,724	49,972	126,196	11,654	167	4,418	932
931-Rent	213,328	LABOR_M	TOTAL	213,328	118,780	28,091	17,177	43,378	4,006	57	1,518	320
Total A&G Operation	19,438,972		TOTAL	19,438,972	10,704,428	2,579,731	1,588,407	4,004,170	371,483	5,325	154,252	31,175
Total A&G Maintenance	3,042,611	LABOR_M	TOTAL	3,042,611	1,694,116	400,653	244,988	618,679	57,134	817	21,657	4,568
Total A&G Expenses	22,481,584		TOTAL	22,481,584	12,398,545	2,980,384	1,833,396	4,622,849	428,617	6,142	175,909	35,743
Total O&M Expenses	374,439,373		TOTAL	374,439,373	180,090,682	46,446,893	32,499,989	104,743,010	7,537,309	116,353	2,435,450	569,688
O&M Adjustments												
Adj 3 - Env Surcharge - Remove Mitchell FGD Expenses	(3,843,206)	PROD_ENERGY	TOTAL	(3,843,206)	(1,503,794)	(440,732)	(342,295)	(1,438,737)	(78,873)	(1,384)	(30,999)	(6,394)
Adj 6 - Fuel Under (Over) Revenue & Expense	2,822,903	PROD_ENERGY	TOTAL	2,822,903	1,104,563	323,726	251,421	1,056,778	57,934	1,016	22,769	4,696
Adj 8 - Remove PPA Rider Revenue, Expense	2,098,614	PROD_ENERGY	TOTAL	2,098,614	821,159	240,665	186,913	785,634	43,069	756	16,927	3,491
Adj 9 - Remove DSM Rider	497,876	CUST_TOTAL	TOTAL	497,876	317,189	72,111	1,451	171	365	21	106,437	130
Adj 10 - Remove HEAP Surcharge	(482,478)	CUST_TOTAL	TOTAL	(482,478)	(307,379)	(69,880)	(1,406)	(165)	(354)	(21)	(103,145)	(126)
Adj 11 - Remove Economic Development Surcharge	(370,224)	CUST_TOTAL	TOTAL	(370,224)	(235,864)	(53,622)	(1,079)	(127)	(272)	(16)	(79,147)	(97)
Adj 12 - Specific Customer Adjustment	(6,412,416)	CUST_SPEC_OM	TOTAL	(6,412,416)	-	-	(28,371)	(6,384,045)	-	-	-	-
Adj 13 - Customer Annualization Adjustment	(9,814,264)	REVYEC_EXP_OM	TOTAL	(9,814,264)	(33,862)	(177,034)	(1,266,948)	(8,250,666)	(74,933)	-	(12,172)	1,350
Adj 14 - Weather Normalization Adjustment	2,870,414	WEATHER_FXNL_OM	TOTAL	2,870,414	2,773,532	85,152	7,504	(2,029)	6,256	-	-	-
Adj 16 - Normalization of Major Storms	511,729	TDOMX	TOTAL	511,729	341,265	83,023	48,154	19,928	11,663	166	4,994	2,535
Adj 17 - Amortization of Big Sandy Operation Rider	361,146	PROD_DEMAND	TOTAL	361,146	185,768	44,007	31,378	92,180	7,218	93	415	85
Adj 18 - Rate Case Expense	527,792	RSALE	TOTAL	527,792	229,163	78,293	51,585	146,225	12,475	194	8,325	1,531
Adj 19 - Eliminate Advertising Expense A&G	(111,982)	LABOR_M	TOTAL	(111,982)	(62,351)	(14,746)	(9,017)	(22,770)	(2,103)	(30)	(797)	(168)
Adj 20 - Annualization of Lease Costs	(109,657)	RB_GUP	TOTAL	(109,657)	(62,202)	(14,745)	(9,452)	(19,170)	(2,224)	(30)	(1,605)	(228)
Adj 21 - Pension & OPEB Expense Adjustment	(8,840)	LABOR_M	TOTAL	(8,840)	(4,922)	(1,164)	(712)	(1,798)	(166)	(2)	(63)	(13)
Adj 22 - Employee Related Group Benefit Expenses	(383,644)	LABOR_M	TOTAL	(383,644)	(213,612)	(50,518)	(30,891)	(78,009)	(7,204)	(103)	(2,731)	(576)
Adj 23 - PJM LSE OATT Expense	12,240,862	TRAN_LSE	TOTAL	12,240,862	6,296,528	1,491,611	1,063,548	3,124,408	244,662	3,164	14,058	2,884
Adj 24 - Annualize PJM Admin Fees	208,436	TRAN_LSE	TOTAL	208,436	107,217	25,399	18,110	53,202	4,166	54	239	49
Adj 26 - Severance Related Payroll Expenses - Big Sandy Plant	(1,541,217)	LABOR_PROD	TOTAL	(1,541,217)	(738,576)	(184,645)	(134,869)	(445,836)	(31,040)	(443)	(4,816)	(992)
Adjs 27-33 - Total Incentive Compensation & Payroll Adjs	(1,494,203)	LABOR_M	TOTAL	(1,494,203)	(831,967)	(196,757)	(120,312)	(303,828)	(28,058)	(401)	(10,636)	(2,243)
Adj 34 - Remove Non-Recoverable Business Expenses	(27,556)	RB_GUP	TOTAL	(27,556)	(15,631)	(3,705)	(2,375)	(4,817)	(559)	(7)	(403)	(57)
Adj 35 - Plant Maintenance Normalization	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
Adj 47 - Veg Management Tree Trimming	(263,353)	TOTOHLINES	TOTAL	(263,353)	(179,089)	(40,485)	(25,344)	(11,382)	(6,267)	(79)	(585)	(121)
Adj 48 - Eliminate Tariff Insert Expense	(9,496)	CUST_TOTAL	TOTAL	(9,496)	(6,050)	(1,375)	(28)	(3)	(7)	(0)	(2,030)	(2)
Adj 49 - Rockport UPA Demand Expense	1,695,513	PROD_DEMAND	TOTAL	1,695,513	872,148	206,607	147,315	432,770	33,889	438	1,947	399
Adj 50 - PJM Capacity Performance Insurance Premium	51,527	PROD_DEMAND	TOTAL	51,527	26,505	6,279	4,477	13,152	1,030	13	59	12
Adj 51 - Def and Amortize GreenHat Default Charges	(33,163)	TRANS_TOTAL	TOTAL	(33,163)	(17,034)	(4,040)	(2,867)	(8,519)	(658)	(9)	(30)	(6)
Adj 52 - Removal of Pole Rental Rev & Exp to prior periods	226,538	RB_GUP_EPIS_D	TOTAL	226,538	148,677	35,258	19,477	8,513	4,767	66	8,595	1,185

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Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Adj 53 - Removal Non-Ongoing Exp - COVID-19 Pandemic	(142,980)	LABOR_M	TOTAL	(142,980)	(79,611)	(18,828)	(11,513)	(29,073)	(2,685)	(38)	(1,018)	(215)
Adj 54 - Removal Prior Period Insurance Proceeds	41,707	CUST_903	TOTAL	41,707	35,951	5,591	113	13	28	2	-	10
Adj 55 - Removal Prior Period Rockport Bill	919,331	PROD_DEMAND	TOTAL	919,331	472,891	112,025	79,876	234,654	18,375	238	1,056	217
Adj 56 - Amoritization Deferred Plant Maintenance Costs	232,065	PROD_ENERGY	TOTAL	232,065	90,804	26,613	20,669	86,875	4,763	84	1,872	386
Adj 65 - Annualize EOP Rates	5,661,884	PROD_ENERGY	TOTAL	5,661,884	2,215,417	649,295	504,275	2,119,574	116,197	2,039	45,668	9,419
Adj 66 - Removal of Regulatory Asset Amortization	(458,333)	RSALE	TOTAL	(458,333)	(199,004)	(67,990)	(44,797)	(126,981)	(10,834)	(169)	(7,230)	(1,329)
Total Operations and Maintenance Expense Adjustments	5,461,325		TOTAL	5,461,325	11,547,828	2,145,386	403,993	(8,953,879)	320,619	5,612	(24,045)	15,812
Adjusted Operating & Maintenance Expenses	379,900,698		TOTAL	379,900,698	191,638,510	48,592,279	32,903,981	95,789,131	7,857,928	121,965	2,411,405	585,499
Depreciation, Amortization & Reg. Debits Expense												
Production & Reg Debits	40,970,810	RB_GUP-Land_P	TOTAL	40,970,810	21,074,810	4,992,499	3,559,752	10,457,557	818,895	10,591	47,051	9,653
Transmission & Reg. Debits	16,814,570	RB_GUP-Land_T	TOTAL	16,814,570	8,636,183	2,048,550	1,453,518	4,320,276	333,688	4,323	14,962	3,070
Distribution	30,840,687	RB_GUP-Land_D	TOTAL	30,840,687	20,241,194	4,800,073	2,646,653	1,153,143	647,902	9,015	1,180,022	162,686
General & Intangible	8,304,116	RB_GUP-Land_G	TOTAL	8,304,116	4,623,705	1,093,490	668,640	1,688,543	155,933	2,229	59,108	12,467
Total Depreciation & Amort Expense	96,930,183		TOTAL	96,930,183	54,575,893	12,934,613	8,328,563	17,619,520	1,956,418	26,158	1,301,143	187,876
Depreciation & Amortization Adjustments												
Adj 2 - Decommissioning Rider Removal	(6,002,692)	RB_GUP-Land_P	TOTAL	(6,002,692)	(3,087,701)	(731,458)	(521,544)	(1,532,152)	(119,978)	(1,552)	(6,894)	(1,414)
Adj 3 - Env Surcharge - Remove Mitchell FGD Expenses	(9,199,006)	RB_GUP-Land_P	TOTAL	(9,199,006)	(4,731,840)	(1,120,945)	(799,256)	(2,347,992)	(183,863)	(2,378)	(10,564)	(2,167)
Adj 5 - Environmental Surcharge Revenue Sync	457,503	RB_GUP-Land_P	TOTAL	457,503	235,333	55,749	39,750	116,775	9,144	118	525	108
Adj 25 - NERC Compliance & Cyber Security	103,143	RB_GUP-Land_P	TOTAL	103,143	53,055	12,568	8,962	26,327	2,062	27	118	24
Adj 36 - Annualization Depreciation/Amortization Exp Production	2,820,664	RB_GUP-Land_P	TOTAL	2,820,664	1,450,910	343,712	245,074	719,958	56,377	729	3,239	665
Adj 36 - Annualization Depreciation/Amortization Exp Transmissi	836,657	RB_GUP-Land_T	TOTAL	836,657	429,718	101,931	72,324	214,968	16,604	215	744	153
Adj 36 - Annualization Depreciation/Amortization Exp Distribution	1,390,415	RB_GUP-Land_D	TOTAL	1,390,415	912,550	216,405	119,321	51,988	29,210	406	53,200	7,334
Adj 36 - Annualization Depreciation/Amortization Exp General	145,029	RB_GUP-Land_G	TOTAL	145,029	80,752	19,097	11,678	29,490	2,723	39	1,032	218
Adj 38 - ARO Depreciation Expense	51,634	RB_GUP-Land_P	TOTAL	51,634	26,560	6,292	4,486	13,179	1,032	13	59	12
Total Depreciation & Amort Adjustments	(9,396,653)		TOTAL	(9,396,653)	(4,630,663)	(1,096,647)	(819,207)	(2,707,459)	(186,689)	(2,382)	41,461	4,932
Adjusted Depreciation & Amortization Expense	87,533,530		TOTAL	87,533,530	49,945,230	11,837,965	7,509,356	14,912,060	1,769,730	23,776	1,342,604	192,808
Taxes Other Than Income												
Federal Insurance Contribution Excise	1,961,534	LABOR_M	TOTAL	1,961,534	1,092,176	258,296	157,941	398,855	36,833	527	13,962	2,945
Federal Unemployment Tax	11,054	LABOR_M	TOTAL	11,054	6,155	1,456	890	2,248	208	3	79	17
Kentucky Unemployment	20,519	LABOR_M	TOTAL	20,519	11,425	2,702	1,652	4,172	385	6	146	31
Kentucky Real & Personal Property	16,963,626	RB_GUP	TOTAL	16,963,626	9,622,586	2,281,048	1,462,186	2,965,491	344,119	4,595	248,301	35,299
Kentucky PSC Maintenance	1,191,482	RSALE	TOTAL	1,191,482	517,332	176,746	116,453	330,100	28,163	439	18,794	3,455
Kentucky Sales & Use	243,870	TDPLANT	TOTAL	243,870	145,683	34,550	21,017	31,251	5,012	68	5,522	767
Regis Fee	140	LABOR_M	TOTAL	140	78	18	11	28	3	0	1	0
Kentucky Business Occup Taxes	6,265,260	LABOR_M	TOTAL	6,265,260	3,488,477	825,013	504,473	1,273,966	117,648	1,682	44,596	9,406
Gross Receipts	42,256	RSALE	TOTAL	42,256	18,347	6,268	4,130	11,707	999	16	667	123
Business Franchise Taxes	696,267	RSALE	TOTAL	696,267	302,313	103,285	68,052	192,901	16,458	256	10,983	2,019
Federal Excise	3,603	LABOR_M	TOTAL	3,603	2,006	474	290	733	68	1	26	5
Taxes on Capital Leases	420,985	RB_GUP	TOTAL	420,985	238,803	56,609	36,287	73,594	8,540	114	6,162	876
Total Taxes Other Than Income	27,820,596		TOTAL	27,820,596	15,445,382	3,746,464	2,373,382	5,285,046	558,434	7,706	349,238	54,944
Taxes Other Than Income Adjustments												
Adj 3 - Env Surcharge - Remove Mitchell FGD Expenses	(189,598)	RB_GUP	TOTAL	(189,598)	(107,549)	(25,495)	(16,342)	(33,145)	(3,846)	(51)	(2,775)	(395)
Adjs 27-33 - Total Incentive Compensation & Payroll Adjs	(96,919)	LABOR_M	TOTAL	(96,919)	(53,964)	(12,762)	(7,804)	(19,707)	(1,820)	(26)	(690)	(146)
Adj 40 - KPSC Maintenance Assessment	5,435	RSALE	TOTAL	5,435	2,360	806	531	1,506	128	2	86	16
Adj 57 - Property Tax Expense Annualization	1,527,835	RB_GUP	TOTAL	1,527,835	866,662	205,443	131,692	267,088	30,993	414	22,363	3,179
Adj 58 - Sales and Use Tax	(407,790)	TDPLANT	TOTAL	(407,790)	(243,606)	(57,774)	(35,144)	(52,257)	(8,380)	(113)	(9,233)	(1,283)
Adj 59 - State Business and Occupation Taxes	(39,197)	LABOR_M	TOTAL	(39,197)	(21,825)	(5,161)	(3,156)	(7,970)	(736)	(11)	(279)	(59)
Total Adjustments to Taxes Other Than Income	799,766		TOTAL	799,766	442,077	105,057	69,778	155,515	16,339	215	9,472	1,313
Adjusted Taxes Other Than Income	28,620,362		TOTAL	28,620,362	15,887,459	3,851,522	2,443,160	5,440,561	574,774	7,920	358,710	56,256
Other Expenses												
Gain/Loss on Disposition of Utility Plant	(7,903)	RB_GUP_EPIS_D	TOTAL	(7,903)	(5,187)	(1,230)	(679)	(297)	(166)	(2)	(300)	(41)
A/R Factoring	2,310,624	RB_GUP	TOTAL	2,310,624	1,310,697	310,703	199,165	403,931	46,873	626	33,821	4,808
Gain/Loss on Disposition of Allowances	(126,336)	PROD_ENERGY	TOTAL	(126,336)	(49,434)	(14,488)	(11,252)	(47,295)	(2,593)	(45)	(1,019)	(210)
Accretion	747,078	PROD_DEMAND	TOTAL	747,078	384,286	91,035	64,910	190,687	14,932	193	858	176
Interest Income - Corp. Borrowing Program	(47,011)	RB_GUP	TOTAL	(47,011)	(26,667)	(6,321)	(4,052)	(8,218)	(954)	(13)	(688)	(98)
Interest Expense - Corp. Borrowing Program	1,770,981	RB_GUP	TOTAL	1,770,981	1,004,586	238,138	152,650	309,593	35,926	480	25,922	3,685
Other Interest Expense	314,928	RB_GUP	TOTAL	314,928	178,642	42,347	27,145	55,054	6,389	85	4,610	655
Interest on Customer Deposits	727,940	CUST_DEP_FXNL	TOTAL	727,940	497,268	116,909	51,470	58,868	683	-	2,742	-
Total Other Expenses	5,690,301		TOTAL	5,690,301	3,294,193	777,093	479,357	962,324	101,089	1,324	65,946	8,975

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Other Expense Adjustments												
Adj 15 - Interest on Customer Deposits	(220,699)	CUST_DEP_FXNL	TOTAL	(220,699)	(150,763)	(35,445)	(15,605)	(17,848)	(207)	-	(831)	-
Adj 39 - ARO Depreciation	(150,304)	PROD_DEMAND	TOTAL	(150,304)	(77,314)	(18,315)	(13,059)	(38,364)	(3,004)	(39)	(173)	(35)
Total Adjustments to Other Expenses	(371,003)		TOTAL	(371,003)	(228,077)	(53,760)	(28,664)	(56,212)	(3,211)	(39)	(1,004)	(35)
Total Adjusted Other Expenses	5,319,298		TOTAL	5,319,298	3,066,115	723,333	450,693	906,112	97,878	1,285	64,942	8,940
Total Operating Expense Before Income Tax	501,373,888		TOTAL	501,373,888	260,537,314	65,005,099	43,307,191	117,047,863	10,300,309	154,947	4,177,661	843,504
Gross Operating Income	33,008,459		TOTAL	33,008,459	(12,712,091)	15,580,133	8,275,633	14,805,434	2,415,821	44,347	3,944,857	654,325
Allowance for Borrowed Funds Used During Construction	1,379,480	RATEBASE	TOTAL	1,379,480	775,686	184,296	119,430	248,265	28,598	384	19,937	2,883
Interest Synchronization Tax	(32,693,244)	RATEBASE	TOTAL	(32,693,244)	(18,383,522)	(4,367,764)	(2,830,458)	(5,883,791)	(677,760)	(9,107)	(472,510)	(68,331)
Taxable Income Before Schedule M Adjustments	1,694,695		TOTAL	1,694,695	(30,319,926)	11,396,665	5,564,604	9,169,907	1,766,659	35,624	3,492,284	588,877
Schedule M Income Adjustments												
Book vs. Tax Depreciation - Normalized	18,129,255	RB_GUP	TOTAL	18,129,255	10,283,787	2,437,786	1,562,658	3,169,260	367,765	4,911	265,363	37,725
AFUDC - HR/J	-	BULK_TRANS	TOTAL	-	-	-	-	-	-	-	-	-
ABFUDC	(1,379,480)	RB_GUP_CWIP	TOTAL	(1,379,480)	(762,577)	(180,768)	(117,848)	(274,098)	(27,530)	(368)	(14,169)	(2,121)
ABFUDC - HR/J	-	BULK_TRANS	TOTAL	-	-	-	-	-	-	-	-	-
Interest Capitalization	2,584,795	RB_GUP	TOTAL	2,584,795	1,466,220	347,570	222,797	451,860	52,434	700	37,834	5,379
Capitalized Relocation Costs	(112)	RB_GUP	TOTAL	(112)	(64)	(15)	(10)	(20)	(2)	(0)	(2)	(0)
Book/Tax Unit of Property	(44,892,917)	RB_GUP	TOTAL	(44,892,917)	(25,465,427)	(6,036,615)	(3,869,562)	(7,847,941)	(910,684)	(12,161)	(657,110)	(93,417)
Book/Tax Unit of Property - SEC 481	-	RB_GUP	TOTAL	-	-	-	-	-	-	-	-	-
Removal Costs	(9,422,510)	RB_GUP	TOTAL	(9,422,510)	(5,344,902)	(1,267,017)	(812,177)	(1,647,193)	(191,142)	(2,552)	(137,920)	(19,607)
Tax Amortization of Pollution Control	9,369,539	PROD_DEMAND	TOTAL	9,369,539	4,819,560	1,141,725	814,073	2,391,520	187,272	2,422	10,760	2,208
Property Tax - State 2- Old Method	(749,828)	RB_GUP	TOTAL	(749,828)	(425,339)	(100,827)	(64,632)	(131,081)	(15,211)	(203)	(10,975)	(1,560)
Provision for Possible Revenue Refunds	(260,459)	REV	TOTAL	(260,459)	(120,790)	(39,277)	(25,142)	(64,266)	(6,198)	(97)	(3,959)	(730)
Deferred Fuel	-	FUELREV	TOTAL	-	-	-	-	-	-	-	-	-
Provision for Workers Comp	(376,163)	LABOR_M	TOTAL	(376,163)	(209,446)	(49,533)	(30,288)	(76,488)	(7,064)	(101)	(2,678)	(565)
Accrued Book Pension Expense	1,034,955	LABOR_M	TOTAL	1,034,955	576,260	136,283	83,334	210,446	19,434	278	7,367	1,554
Accrued Book Pension Costs - SFAS 158	530,169	LABOR_M	TOTAL	530,169	295,196	69,813	42,689	107,804	9,955	142	3,774	796
Supplemental Executive Retirement	5,781	LABOR_M	TOTAL	5,781	3,219	761	465	1,175	109	2	41	9
Accrd Supplemental Exec Retirement SFAS 158	(329)	LABOR_M	TOTAL	(329)	(183)	(43)	(26)	(67)	(6)	(0)	(2)	(0)
Accrd Supplemental Savings Plan Exp	(720)	LABOR_M	TOTAL	(720)	(401)	(95)	(58)	(146)	(14)	(0)	(5)	(1)
Stock Based Compensation	179,400	LABOR_M	TOTAL	179,400	99,889	23,623	14,445	36,479	3,369	48	1,277	269
Book Provision for Uncollectible Accounts	404,340	CUST_TOTAL	TOTAL	404,340	257,599	58,563	1,179	139	297	17	86,441	106
Accrued Companywide Incentive Plan	(453,520)	LABOR_M	TOTAL	(453,520)	(252,518)	(59,720)	(36,517)	(92,218)	(8,516)	(122)	(3,228)	(681)
Accrued Book Vacation Pay	365,561	LABOR_M	TOTAL	365,561	203,543	48,137	29,435	74,332	6,864	98	2,602	549
(ICDP) Incentive Comp Deferral Plan	(2,267)	LABOR_M	TOTAL	(2,267)	(1,262)	(299)	(183)	(461)	(43)	(1)	(16)	(3)
Accrued Book Severance Benefits	(2,089,241)	LABOR_M	TOTAL	(2,089,241)	(1,163,283)	(275,112)	(168,224)	(424,822)	(39,231)	(561)	(14,871)	(3,137)
Reg Asset on Deferred RTO Costs	72,236	TRANS_TOTAL	TOTAL	72,236	37,103	8,801	6,246	18,556	1,434	19	65	13
Customer Adv Inc for Tax	2,933	TDPLANT	TOTAL	2,933	1,752	416	253	376	60	1	66	9
Deferred Book Contract Revenue	63,871	REV	TOTAL	63,871	29,621	9,632	6,165	15,760	1,520	24	971	179
Deferred Storm Damage	2,035,561	EXP_OM_DIST	TOTAL	2,035,561	1,351,716	328,729	191,260	87,478	46,283	657	19,532	9,905
Deferred Demand Side Management Exp	-	CUST_TOTAL	TOTAL	-	-	-	-	-	-	-	-	-
Advance Rental Income	(10,544)	REV_RENT	TOTAL	(10,544)	(6,722)	(1,525)	(946)	(1,022)	(232)	(3)	(80)	(13)
Deferred Rev - Bonus Lease	54,720	REV	TOTAL	54,720	25,377	8,252	5,282	13,502	1,302	20	832	153
Reg Asset - SFAS 158 Pensions	(530,169)	LABOR_M	TOTAL	(530,169)	(295,196)	(69,813)	(42,689)	(107,804)	(9,955)	(142)	(3,774)	(796)
Reg Asset - SFAS 158 SERP	329	LABOR_M	TOTAL	329	183	43	26	67	6	0	2	0
Reg Asset - SFAS 158 OPEB	3,560,526	LABOR_M	TOTAL	3,560,526	1,982,490	468,852	286,690	723,991	66,859	956	25,344	5,345
NET CCS FEED STUDY COSTS	34,390	PROD_DEMAND	TOTAL	34,390	17,690	4,191	2,988	8,778	687	9	39	8
REMOVAL CST - BIG SANDY	(455,748)	PROD_DEMAND	TOTAL	(455,748)	(234,430)	(55,535)	(39,598)	(116,327)	(9,109)	(118)	(523)	(107)
SPENT ARO - BIG SANDY	(21,948,002)	PROD_DEMAND	TOTAL	(21,948,002)	(11,289,745)	(2,674,474)	(1,906,954)	(5,602,098)	(438,681)	(5,674)	(25,205)	(5,171)
NBV - ARO - RETIRED PLANTS	20,333,650	PROD_DEMAND	TOTAL	20,333,650	10,459,344	2,477,757	1,766,691	5,190,044	406,414	5,256	23,351	4,791
BIG SANDY U1 OR-UNDER RECOV	-	PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
BIG SANDY RETIRE COSTS RECOV	6,189,686	PROD_DEMAND	TOTAL	6,189,686	3,183,888	754,244	537,791	1,579,881	123,715	1,600	7,108	1,458
BIG SANDY RETIRE RIDER U2 O&M	(256,391)	PROD_ENERGY	TOTAL	(256,391)	(100,322)	(29,402)	(22,835)	(95,982)	(5,262)	(92)	(2,068)	(427)
UND RECOV-PURCH PWR PPA	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-
DEFD DEPREC-ENVIRONMENTAL	(457,503)	RB_GUP	TOTAL	(457,503)	(259,518)	(61,519)	(39,435)	(79,978)	(9,281)	(124)	(6,697)	(952)
NERC COMPL/CYBER SEC-DEF DEPR	(188,154)	PROD_DEMAND	TOTAL	(188,154)	(96,784)	(22,928)	(16,348)	(48,025)	(3,761)	(49)	(216)	(44)
CAPACITY CHARGE TARIFF REV	(36,929)	PROD_DEMAND	TOTAL	(36,929)	(18,996)	(4,500)	(3,209)	(9,426)	(738)	(10)	(42)	(9)
REG ASSET - ROCKPORT CAPACITY	(14,338,673)	PROD_DEMAND	TOTAL	(14,338,673)	(7,375,612)	(1,747,239)	(1,245,817)	(3,659,862)	(286,591)	(3,707)	(16,467)	(3,378)
REG ASSET-KENTUCKY UNDER RECOV-PPA RIDER	(5,866,882)	PROD_ENERGY	TOTAL	(5,866,882)	(2,295,630)	(672,804)	(522,533)	(2,196,317)	(120,404)	(2,113)	(47,321)	(9,760)

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
REG ASSET-GreenHat Settlement & Liability	(38,724)	TRANS_TOTAL	TOTAL	(38,724)	(19,890)	(4,718)	(3,348)	(9,947)	(769)	(10)	(35)	(7)
Book Amortization Loss on Reacquired Debt	33,146	RB_GUP	TOTAL	33,146	18,802	4,457	2,857	5,794	672	9	485	69
Accrued SFAS 106 Post Retirement Exp	(2,689,793)	LABOR_M	TOTAL	(2,689,793)	(1,497,668)	(354,193)	(216,580)	(546,937)	(50,508)	(722)	(19,146)	(4,038)
Accrued OPEB Costs SFAS 158	(3,560,526)	LABOR_M	TOTAL	(3,560,526)	(1,982,490)	(468,852)	(286,690)	(723,991)	(66,859)	(956)	(25,344)	(5,345)
Accrd SFAS 112 Post Employment Benefits	149,760	LABOR_M	TOTAL	149,760	83,386	19,720	12,059	30,452	2,812	40	1,066	225
Accrued Book ARO Expense - SFAS 143	(18,356,080)	RB_GUP	TOTAL	(18,356,080)	(10,412,453)	(2,468,287)	(1,582,209)	(3,208,912)	(372,366)	(4,972)	(268,683)	(38,197)
Reg Asset Medicare Subsidy Flow Thru	214,454	LABOR_M	TOTAL	214,454	119,407	28,239	17,268	43,607	4,027	58	1,526	322
Book Operating Lease - Total	26,484	RB_GUP	TOTAL	26,484	15,023	3,561	2,283	4,630	537	7	388	55
Gross Receipts - Tax Expense	(70,288)	RSALE	TOTAL	(70,288)	(30,518)	(10,427)	(6,870)	(19,473)	(1,661)	(26)	(1,109)	(204)
Accured Sales & Use Tax Reserve	407,790	TDPLANT	TOTAL	407,790	243,606	57,774	35,144	52,257	8,380	113	9,233	1,283
SFAS 109 - Deferred SIT Liability	7,340,438	RB_GUP	TOTAL	7,340,438	4,163,850	987,047	632,712	1,283,216	148,906	1,988	107,444	15,275
Reg Asset - SFAS 109 - Deferred SIT Liability	(7,340,438)	RB_GUP	TOTAL	(7,340,438)	(4,163,850)	(987,047)	(632,712)	(1,283,216)	(148,906)	(1,988)	(107,444)	(15,275)
Regulatory Asset Accrued SFAS 112	(265,571)	LABOR_M	TOTAL	(265,571)	(147,869)	(34,971)	(21,384)	(54,001)	(4,987)	(71)	(1,890)	(399)
Restricted Stock Plan	(1,732,958)	RB_GUP	TOTAL	(1,732,958)	(983,017)	(233,026)	(149,373)	(302,947)	(35,154)	(469)	(25,366)	(3,606)
Stock Based Compensation	395,558	RB_GUP	TOTAL	395,558	224,380	53,189	34,095	69,149	8,024	107	5,790	823
Nontaxable Defd Compensation CSV Earn	(909)	LABOR_M	TOTAL	(909)	(506)	(120)	(73)	(185)	(17)	(0)	(6)	(1)
Nondeductible Meals and Travel & Entertainment	92,884	LABOR_M	TOTAL	92,884	51,718	12,231	7,479	18,887	1,744	25	661	139
RESTRICTED STOCK PLAN - TAX DEDUCTION	(18,106)	RB_GUP	TOTAL	(18,106)	(10,271)	(2,435)	(1,561)	(3,165)	(367)	(5)	(265)	(38)
Capitalized Software Costs Tax	(122,194)	RB_GUP	TOTAL	(122,194)	(69,314)	(16,431)	(10,533)	(21,361)	(2,479)	(33)	(1,789)	(254)
Capitalized Software Costs Book	(3,662,689)	RB_GUP	TOTAL	(3,662,689)	(2,077,654)	(492,511)	(315,707)	(640,292)	(74,300)	(992)	(53,612)	(7,622)
REG ASSET - UNRECOVERED PLANT - BIG SANDY	36,668	PROD_DEMAND	TOTAL	36,668	18,862	4,468	3,186	9,359	733	9	42	9
MTM Book Gain Above the Line Tax Deferral	6,283,507	PROD_ENERGY	TOTAL	6,283,507	2,458,650	720,582	559,640	2,352,284	128,954	2,263	50,682	10,453
Mark & Spread Deferral - 283 A/L	283,317	PROD_ENERGY	TOTAL	283,317	110,858	32,490	25,234	106,062	5,814	102	2,285	471
Provision for Trading Credit Risk (Above Line)	9,052	PROD_ENERGY	TOTAL	9,052	3,542	1,038	806	3,389	186	3	73	15
Provision for FAS 157 A/L	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-
Reg Liability - Unrealized MTM Gain Deferral	(3,244,682)	PROD_ENERGY	TOTAL	(3,244,682)	(1,269,599)	(372,095)	(288,987)	(1,214,674)	(66,590)	(1,168)	(26,171)	(5,398)
Book > Tax Basis - EMA A/C 283	316,119	PROD_ENERGY	TOTAL	316,119	123,693	36,252	28,155	118,342	6,488	114	2,550	526
Total Schedule M Adjustments - Per Books	(64,278,625)		TOTAL	(64,278,625)	(35,654,035)	(8,507,943)	(5,545,672)	(12,325,870)	(1,301,560)	(17,611)	(803,192)	(122,742)
Adjustments to Per Books Schedule M												
Adj 2 - Decommissioning Rider Removal	(5,933,295)	PROD_DEMAND	TOTAL	(5,933,295)	(3,052,004)	(723,002)	(515,515)	(1,514,439)	(118,590)	(1,534)	(6,814)	(1,398)
Adj 5 - Environmental Surcharge Revenue Sync	457,503	PROD_ENERGY	TOTAL	457,503	179,015	52,466	40,747	171,270	9,389	165	3,690	761
Adj 21 - Pension & OPEB Expense Adjustment	(8,841)	LABOR_M	TOTAL	(8,841)	(4,923)	(1,164)	(712)	(1,798)	(166)	(2)	(63)	(13)
Adj 25 - NERC Compliance & Cyber Security	291,297	RB_GUP-Land_P	TOTAL	291,297	149,839	35,496	25,309	74,352	5,822	75	335	69
Adjs 27 - 33 Incentive Compensation & Payroll Adjustments	453,520	LABOR_M	TOTAL	453,520	252,518	59,720	36,517	92,218	8,516	122	3,228	681
Adj 38 - ARO Depreciation Expense	51,634	RB_GUP-Land_P	TOTAL	51,634	26,560	6,292	4,486	13,179	1,032	13	59	12
Adj 39 - ARO Accretion	(150,304)	PROD_DEMAND	TOTAL	(150,304)	(77,314)	(18,315)	(13,059)	(38,364)	(3,004)	(39)	(173)	(35)
Adj 51 - Def and Amortize GreenHat Default Charges	(33,163)	TRANS_TOTAL	TOTAL	(33,163)	(17,034)	(4,040)	(2,867)	(8,519)	(658)	(9)	(30)	(6)
Adj 58 - Sales and Use Tax	(407,790)	TDPLANT	TOTAL	(407,790)	(243,606)	(57,774)	(35,144)	(52,257)	(8,380)	(113)	(9,233)	(1,283)
Adj 36 - Depreciation/Amortization Adjustments - Prod	1,121,850	RB_GUP-Land_P	TOTAL	1,121,850	577,064	136,703	97,472	286,346	22,423	290	1,288	264
Adj 36 - Depreciation/Amortization Adjustments - Trans	836,657	RB_GUP-Land_T	TOTAL	836,657	429,718	101,932	72,324	214,968	16,604	215	744	153
Adj 36 - Depreciation/Amortization Adjustments - Dist	1,390,415	RB_GUP-Land_D	TOTAL	1,390,415	912,549	216,405	119,321	51,988	29,210	406	53,200	7,334
Adj 36 - Depreciation/Amortization Adjustments - Gen & Int	1,843,843	RB_GUP-Land_G	TOTAL	1,843,843	1,026,646	242,798	148,465	374,924	34,623	495	13,124	2,768
		RB_GUP-Land_P	TOTAL	-	-	-	-	-	-	-	-	-
		PROD_DEMAND	TOTAL	-	-	-	-	-	-	-	-	-
Total Adjustments to Per Books Schedule M	(86,674)		TOTAL	(86,674)	159,029	47,516	(22,655)	(336,132)	(3,180)	85	59,357	9,306
Adjusted Schedule M	(64,365,299)		TOTAL	(64,365,299)	(35,495,006)	(8,460,426)	(5,568,327)	(12,662,002)	(1,304,740)	(17,526)	(743,836)	(113,436)
Kentucky Taxable Income Before Adjustments	(62,670,604)		TOTAL	(62,670,604)	(65,814,932)	2,936,239	(3,722)	(3,492,095)	461,919	18,098	2,748,448	475,441
Depreciation Adjustments (JWCA and Lookback)	(15,496,136)	RB_GUP	TOTAL	(15,496,136)	(8,790,155)	(2,083,719)	(1,335,695)	(2,708,952)	(314,350)	(4,198)	(226,821)	(32,246)
Kentucky Taxable Income	(78,166,740)		TOTAL	(78,166,740)	(74,605,088)	852,520	(1,339,418)	(6,201,047)	147,569	13,900	2,521,627	443,196
Tax Factor (Tax Rate x Apportionment)	4.39609%											
Kentucky Tax	(3,436,280)		TOTAL	(3,436,280)	(3,279,707)	37,478	(58,882)	(272,604)	6,487	611	110,853	19,483
West Virginia Taxable Income Before Adjustments	(62,670,604)		TOTAL	(62,670,604)	(65,814,932)	2,936,239	(3,722)	(3,492,095)	461,919	18,098	2,748,448	475,441
Tax Depreciation Lookback	(5,096,174)	RB_GUP	TOTAL	(5,096,174)	(2,890,796)	(685,267)	(439,267)	(890,886)	(103,379)	(1,380)	(74,594)	(10,605)
West Virginia Taxable Income	(67,766,778)		TOTAL	(67,766,778)	(68,705,728)	2,250,972	(442,989)	(4,382,981)	358,539	16,718	2,673,854	464,837
Apportionment Factor	21.0414%											
Apportioned West Virginia Taxable Income	(14,259,079)		TOTAL	(14,259,079)	(14,456,647)	473,636	(93,211)	(922,241)	75,442	3,518	562,616	97,808
Post Apportionment Schedule M Adjustments	6,831,359	RB_GUP	TOTAL	6,831,359	3,875,076	918,592	588,832	1,194,222	138,579	1,850	99,992	14,215
Post Apportionment Taxable Income	(7,427,720)		TOTAL	(7,427,720)	(10,581,571)	1,392,228	495,621	271,981	214,021	5,368	662,609	112,023
Tax Rate	6.50%											
West Virginia Tax	(482,802)		TOTAL	(482,802)	(687,802)	90,495	32,215	17,679	13,911	349	43,070	7,282
Illinois Taxable Income Before Depreciation Adjustment	(62,670,604)		TOTAL	(62,670,604)	(65,814,932)	2,936,239	(3,722)	(3,492,095)	461,919	18,098	2,748,448	475,441

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Depreciation Adjustments (JWCA and Lookback)	(13,386,459)	RB_GUP	TOTAL	(13,386,459)	(7,593,445)	(1,800,037)	(1,153,851)	(2,340,150)	(271,554)	(3,626)	(195,941)	(27,856)
Illinois Taxable Income	(76,057,063)		TOTAL	(76,057,063)	(73,408,377)	1,136,202	(1,157,573)	(5,832,244)	190,365	14,472	2,552,507	447,586
Apportionment Factor	0.9348%											
Apportioned Illinois State Taxable Income	(710,981)		TOTAL	(710,981)	(686,222)	10,621	(10,821)	(54,520)	1,780	135	23,861	4,184
Post Apportionment Schedule M Adjustments	552	RB_GUP	TOTAL	552	313	74	48	96	11	0	8	1
Post Apportionment Taxable Income	(710,429)		TOTAL	(710,429)	(685,908)	10,695	(10,773)	(54,423)	1,791	135	23,869	4,185
Tax Rate	9.50%											
Illinois Tax	(67,491)		TOTAL	(67,491)	(65,161)	1,016	(1,023)	(5,170)	170	13	2,268	398
Michigan Taxable Income Before Depreciation Adjustment	(62,670,604)		TOTAL	(62,670,604)	(65,814,932)	2,936,239	(3,722)	(3,492,095)	461,919	18,098	2,748,448	475,441
Depreciation Adjustments (JWCA and Lookback)	(14,694,137)	RB_GUP	TOTAL	(14,694,137)	(8,335,223)	(1,975,876)	(1,266,567)	(2,568,751)	(298,081)	(3,980)	(215,082)	(30,577)
Michigan Taxable Income	(77,364,741)		TOTAL	(77,364,741)	(74,150,155)	960,362	(1,270,289)	(6,060,846)	163,838	14,118	2,533,366	444,865
Tax Factor (Tax Rate x Apportionment)	0.001938%											
Michigan Tax	(1,499)		TOTAL	(1,499)	(1,437)	19	(25)	(117)	3	0	49	9
Total Current State Income Tax	(3,988,072)		TOTAL	(3,988,072)	(4,034,107)	129,007	(27,715)	(260,212)	20,572	973	156,239	27,171
Deferred State Income Tax												
			TOTAL	(444,038)	(251,880)	(59,708)	(38,274)	(77,624)	(9,008)	(120)	(6,500)	(924)
Deferred State Income Tax - WVA Pollution Control	(445,900)	RB_GUP	TOTAL	(445,900)	(252,936)	(59,959)	(38,435)	(77,950)	(9,045)	(121)	(6,527)	(928)
Adj 55 - Mitchell Plant DSIT Amortization Adjustment	-	RB_GUP_EPIS_P	TOTAL	-	-	-	-	-	-	-	-	-
Total Adjusted Deferred State Income Tax	(445,900)		TOTAL	(445,900)	(252,936)	(59,959)	(38,435)	(77,950)	(9,045)	(121)	(6,527)	(928)
Total State Income Tax (Current + Deferred)	(4,433,972)		TOTAL	(4,433,972)	(4,287,043)	69,048	(66,149)	(338,162)	11,527	852	149,712	26,243
Federal Taxable Income	(58,682,532)		TOTAL	(58,682,532)	(61,780,825)	2,807,232	23,993	(3,231,882)	441,347	17,125	2,592,209	448,270
Tax Factor (Tax Rate x Apportionment)	21.00%											
Gross Current FIT	(12,323,332)		TOTAL	(12,323,332)	(12,973,973)	589,519	5,038	(678,695)	92,683	3,596	544,364	94,137
Deferred FIT												
DFIT for Book vs Tax Depreciation Normalized	(1,389,470)	RB_GUP	TOTAL	(1,389,470)	(788,174)	(186,838)	(119,766)	(242,900)	(28,186)	(376)	(20,338)	(2,891)
DFIT ABFUDC	117,755	RB_GUP_CWIP	TOTAL	117,755	65,095	15,431	10,060	23,397	2,350	31	1,209	181
Interest Capitalization	(254,952)	RB_GUP	TOTAL	(254,952)	(144,621)	(34,283)	(21,976)	(44,569)	(5,172)	(69)	(3,732)	(531)
Property Tax - State 2- Old Method	157,464	RB_GUP	TOTAL	157,464	89,321	21,174	13,573	27,527	3,194	43	2,305	328
Removal Costs	720,459	RB_GUP	TOTAL	720,459	408,679	96,878	62,100	125,947	14,615	195	10,546	1,499
Percent Repair Allowance	9,203,295	RB_GUP	TOTAL	9,203,295	5,220,553	1,237,539	793,282	1,608,871	186,695	2,493	134,711	19,151
Tax Amortization of Pollution Control Equip.	(1,967,603)	PROD_DEMAND	TOTAL	(1,967,603)	(1,012,107)	(239,762)	(170,955)	(502,219)	(39,327)	(509)	(2,260)	(464)
Provision for Possible Revenue Refunds	54,697	REV	TOTAL	54,697	25,366	8,248	5,280	13,496	1,302	20	831	153
Deferred Fuel Costs	-	FUELREV	TOTAL	-	-	-	-	-	-	-	-	-
Provision for Workers Comp	78,994	LABOR_M	TOTAL	78,994	43,984	10,402	6,361	16,062	1,483	21	562	119
Accrued Book Pension Expense	(217,341)	LABOR_M	TOTAL	(217,341)	(121,015)	(28,620)	(17,500)	(44,194)	(4,081)	(58)	(1,547)	(326)
Accrued Book Pension Costs - SFAS 158	(111,335)	LABOR_M	TOTAL	(111,335)	(61,991)	(14,661)	(8,965)	(22,639)	(2,091)	(30)	(792)	(167)
Supplemental Executive Retirement	(1,214)	LABOR_M	TOTAL	(1,214)	(676)	(160)	(98)	(247)	(23)	(0)	(9)	(2)
Accrd Suppl Executive Retirement - SFAS 158	69	LABOR_M	TOTAL	69	38	9	6	14	1	0	0	0
Accrd Book Supplemental Savings Plan	151	LABOR_M	TOTAL	151	84	20	12	31	3	0	1	0
Stock Based Compensation	(37,674)	LABOR_M	TOTAL	(37,674)	(20,977)	(4,961)	(3,033)	(7,661)	(707)	(10)	(268)	(57)
Book Provision - Uncollectible Accounts	(84,911)	CUST_TOTAL	TOTAL	(84,911)	(54,095)	(12,298)	(248)	(29)	(62)	(4)	(18,152)	(22)
Accrd Companywide Incentive Plan	95,239	LABOR_M	TOTAL	95,239	53,029	12,541	7,669	19,366	1,788	26	678	143
Accrd Book Vacation Pay	(76,768)	LABOR_M	TOTAL	(76,768)	(42,744)	(10,109)	(6,181)	(15,610)	(1,442)	(21)	(546)	(115)
(IDCP) Incentive Comp Deferral Plan	476	LABOR_M	TOTAL	476	265	63	38	97	9	0	3	1
Accrd Book Severance Benefits	438,740	LABOR_M	TOTAL	438,740	244,289	57,774	35,327	89,213	8,239	118	3,123	659
Reg Asset on Deferred RTO Costs	(15,170)	TRANS_TOTAL	TOTAL	(15,170)	(7,792)	(1,848)	(1,312)	(3,897)	(301)	(4)	(14)	(3)
Customer Adv Inc for Tax	(616)	TDPLANT	TOTAL	(616)	(368)	(87)	(53)	(79)	(13)	(0)	(14)	(2)
Deferred Book Contract Revenue	(13,412)	REV	TOTAL	(13,412)	(6,220)	(2,023)	(1,295)	(3,309)	(319)	(5)	(204)	(38)
Deferred Storm Damage	(427,467)	EXP_OM_DIST	TOTAL	(427,467)	(283,860)	(69,033)	(40,165)	(18,370)	(9,719)	(138)	(4,102)	(2,080)
Deferred Demand Side Management Exp	-	CUST_TOTAL	TOTAL	-	-	-	-	-	-	-	-	-
Advance Rental Income	2,214	REV_RENT	TOTAL	2,214	1,411	320	199	215	49	1	17	3
Deferred Revenue - Bonus Lease - Short & Long-Term	(11,491)	REV	TOTAL	(11,491)	(5,329)	(1,733)	(1,109)	(2,835)	(273)	(4)	(175)	(32)
Reg Asset SFAS 158 Pensions	111,335	LABOR_M	TOTAL	111,335	61,991	14,661	8,965	22,639	2,091	30	792	167
Reg Asset SFAS 158 SERP	(69)	LABOR_M	TOTAL	(69)	(38)	(9)	(6)	(14)	(1)	(0)	(0)	(0)
Reg Asset SFAS 158 OPEB	(747,710)	LABOR_M	TOTAL	(747,710)	(416,323)	(98,459)	(60,205)	(152,038)	(14,040)	(201)	(5,322)	(1,123)
NET CCS FEED STUDY COSTS	(7,222)	PROD_DEMAND	TOTAL	(7,222)	(3,715)	(880)	(627)	(1,843)	(144)	(2)	(8)	(2)
REMOVAL CST - BIG SANDY	95,707	PROD_DEMAND	TOTAL	95,707	49,230	11,662	8,316	24,429	1,913	25	110	23
SPENT ARO - BIG SANDY	4,609,081	PROD_DEMAND	TOTAL	4,609,081	2,370,847	561,640	400,460	1,176,441	92,123	1,191	5,293	1,086
NBV - ARO - RETIRED PLANTS	(4,270,067)	PROD_DEMAND	TOTAL	(4,270,067)	(2,196,463)	(520,329)	(371,005)	(1,089,909)	(85,347)	(1,104)	(4,904)	(1,006)
Reg Asset - Unrecovered Plant - Big Sandy	(7,700)	PROD_DEMAND	TOTAL	(7,700)	(3,961)	(938)	(669)	(1,965)	(154)	(2)	(9)	(2)

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
BIG SANDY RETIRE COSTS RECOV	(1,299,834)	PROD_DEMAND	TOTAL	(1,299,834)	(668,616)	(158,391)	(112,936)	(331,775)	(25,980)	(336)	(1,493)	(306)
BIG SANDY RETIRE RIDER U2 O&M	53,843	PROD_ENERGY	TOTAL	53,843	21,068	6,175	4,796	20,157	1,105	19	434	90
UND RECOV-PURCH PWR PPA	-	PROD_ENERGY	TOTAL	-	-	-	-	-	-	-	-	-
DEFD DEPREC-ENVIRONMENTAL	96,076	RB_GUP	TOTAL	96,076	54,499	12,919	8,281	16,795	1,949	26	1,406	200
NERC COMPL/CYBER SEC-DEF DEPR	39,512	PROD_DEMAND	TOTAL	39,512	20,324	4,815	3,433	10,085	790	10	45	9
CAPACITY CHARGE TARIFF REV	7,755	PROD_DEMAND	TOTAL	7,755	3,989	945	674	1,979	155	2	9	2
REG ASSET-ROCKPORT CAPACITY DEF-EQ CC	(152,347)	PROD_DEMAND	TOTAL	(152,347)	(78,365)	(18,564)	(13,237)	(38,886)	(3,045)	(39)	(175)	(36)
REG ASSET-ROCKPORT CAPACITY CC DEFERRAL	319,281	PROD_DEMAND	TOTAL	319,281	164,234	38,906	27,741	81,495	6,382	83	367	75
REG ASSET-ROCKPORT CAPACITY DEFERRAL	2,844,188	PROD_DEMAND	TOTAL	2,844,188	1,463,010	346,579	247,118	725,962	56,848	735	3,266	670
REG ASSET-KENTUCKY UNDER RECOV-PPA RIDER	1,232,045	PROD_ENERGY	TOTAL	1,232,045	482,082	141,289	109,732	461,226	25,285	444	9,937	2,050
Green Hat Settlement & Liability	8,132	TRANS_TOTAL	TOTAL	8,132	4,177	991	703	2,089	161	2	7	2
Book Amortization Loss on Reacquired Debt	(6,961)	RB_GUP	TOTAL	(6,961)	(3,949)	(936)	(600)	(1,217)	(141)	(2)	(102)	(14)
Accrued SFAS 106 Post Retirement Expense	564,856	LABOR_M	TOTAL	564,856	314,510	74,381	45,482	114,857	10,607	152	4,021	848
Accrued OPEB Costs SFAS 158	747,710	LABOR_M	TOTAL	747,710	416,323	98,459	60,205	152,038	14,040	201	5,322	1,123
Accrued SFAS 112 Post Employment Benefits	(31,449)	LABOR_M	TOTAL	(31,449)	(17,511)	(4,141)	(2,532)	(6,395)	(591)	(8)	(224)	(47)
Accrued Book ARO Expense SFAS 143	3,854,777	RB_GUP	TOTAL	3,854,777	2,186,615	518,340	332,264	673,872	78,197	1,044	56,423	8,021
Medicare Subsidy (PPACA) Reg Asset	(45,035)	LABOR_M	TOTAL	(45,035)	(25,075)	(5,930)	(3,626)	(9,157)	(846)	(12)	(321)	(68)
Book Operating Lease	(5,561)	RB_GUP	TOTAL	(5,561)	(3,154)	(748)	(479)	(972)	(113)	(2)	(81)	(12)
Gross Receipts - Tax Expense	14,760	RSALE	TOTAL	14,760	6,409	2,190	1,443	4,089	349	5	233	43
DSIT Entry - WV Pollution Control	93,639	RB_GUP	TOTAL	93,639	53,117	12,591	8,071	16,369	1,900	25	1,371	195
Accrued Sales & Use Tax Reserve	(85,636)	RSALE	TOTAL	(85,636)	(37,182)	(12,703)	(8,370)	(23,725)	(2,024)	(32)	(1,351)	(248)
Reg Asset - Accrued SFAS 112	55,770	LABOR_M	TOTAL	55,770	31,053	7,344	4,491	11,340	1,047	15	397	84
Excess ADFIT 281 Protected	(751,633)	RB_GUP	TOTAL	(751,633)	(426,362)	(101,070)	(64,787)	(131,396)	(15,247)	(204)	(11,002)	(1,564)
Excess ADFIT 282 Protected and Unprotected	(8,597,345)	RB_GUP	TOTAL	(8,597,345)	(4,876,829)	(1,156,059)	(741,051)	(1,502,942)	(174,403)	(2,329)	(125,842)	(17,890)
Excess ADFIT 283 Unprotected	(909,531)	RB_GUP	TOTAL	(909,531)	(515,930)	(122,302)	(78,397)	(158,999)	(18,450)	(246)	(13,313)	(1,893)
Restricted Stock Plan & PSI Stock Based Comp	309,693	RB_GUP	TOTAL	309,693	175,673	41,643	26,694	54,139	6,282	84	4,533	644
Capitalized Software Costs Tax	25,661	RB_GUP	TOTAL	25,661	14,556	3,451	2,212	4,486	521	7	376	53
Capitalized Software Costs Book	769,165	RB_GUP	TOTAL	769,165	436,307	103,427	66,298	134,461	15,603	208	11,258	1,601
MTM Book Gain Above the Line Tax Deferral	(1,319,536)	PROD_ENERGY	TOTAL	(1,319,536)	(516,316)	(151,322)	(117,524)	(493,979)	(27,080)	(475)	(10,643)	(2,195)
Mark & Spread Deferral - 283 A/L	(59,496)	PROD_ENERGY	TOTAL	(59,496)	(23,280)	(6,823)	(5,299)	(22,273)	(1,221)	(21)	(480)	(99)
Prov for Trading Credit Risk - Above the Line	(1,901)	PROD_ENERGY	TOTAL	(1,901)	(744)	(218)	(169)	(712)	(39)	(1)	(15)	(3)
Reg Liability - Unrealized MTM Gain Deferral	681,383	PROD_ENERGY	TOTAL	681,383	266,616	78,140	60,687	255,081	13,984	245	5,496	1,134
Book > Tax Basis - EMA A/C 283	(66,384)	PROD_ENERGY	TOTAL	(66,384)	(25,975)	(7,613)	(5,912)	(24,851)	(1,362)	(24)	(535)	(110)
Total Per Books DFIT	4,429,081			4,429,081	2,358,986	567,093	381,880	986,657	89,111	1,234	37,112	7,007
DFIT Adjustments												
Adj 2 - Decommissioning Rider Removal	1,245,992	PROD_DEMAND	TOTAL	1,245,992	640,921	151,830	108,258	318,032	24,904	322	1,431	294
Adj 5 - Environmental Surcharge Revenue Sync	(96,076)	PROD_ENERGY	TOTAL	(96,076)	(37,593)	(11,018)	(8,557)	(35,967)	(1,972)	(35)	(775)	(160)
Adj 21 - Pension & OPEB Expense Adjustment	1,857	LABOR_M	TOTAL	1,857	1,034	245	150	378	35	0	13	3
Adj 25 - NERC Compliance & Cyber Security	(61,172)	RB_GUP-Land_P	TOTAL	(61,172)	(31,466)	(7,454)	(5,315)	(15,614)	(1,223)	(16)	(70)	(14)
Adjs 27 - 33 Incentive Compensation & Payroll Adjustments	(95,239)	LABOR_M	TOTAL	(95,239)	(53,029)	(12,541)	(7,669)	(19,366)	(1,788)	(26)	(678)	(143)
Adj 38 - ARO Depreciation Expense	(10,843)	RB_GUP-Land_P	TOTAL	(10,843)	(5,577)	(1,321)	(942)	(2,768)	(217)	(3)	(12)	(3)
Adj 39 - ARO Accretion	31,564	PROD_DEMAND	TOTAL	31,564	16,236	3,846	2,742	8,057	631	8	36	7
Adj 51 - Def and Amortize GreenHat Default Charges	6,964	TRANS_TOTAL	TOTAL	6,964	3,577	848	602	1,789	138	2	6	1
Adj 58 - Sales and Use Tax	85,636	TDPLANT	TOTAL	85,636	51,157	12,132	7,380	10,974	1,760	24	1,939	269
Adj 36 - Depreciation/Amortization Adjustments - Prod	(205,975)	RB_GUP-Land_P	TOTAL	(205,975)	(105,951)	(25,099)	(17,896)	(52,574)	(4,117)	(53)	(237)	(49)
Adj 36 - Depreciation/Amortization Adjustments - Trans	(134,005)	RB_GUP-Land_T	TOTAL	(134,005)	(68,827)	(16,326)	(11,584)	(34,431)	(2,659)	(34)	(119)	(24)
Adj 36 - Depreciation/Amortization Adjustments - Dist	(253,679)	RB_GUP-Land_D	TOTAL	(253,679)	(166,493)	(39,483)	(21,770)	(9,485)	(5,329)	(74)	(9,706)	(1,338)
Adj 36 - Depreciation/Amortization Adjustments - Gen & Int	(382,651)	RB_GUP-Land_G	TOTAL	(382,651)	(213,059)	(50,388)	(30,811)	(77,808)	(7,185)	(103)	(2,724)	(574)
Adj 60 - Excess ADFIT 281 Protected	751,633	RB_GUP	TOTAL	751,633	426,362	101,070	64,787	131,396	15,247	204	11,002	1,564
Adj 60 - Excess ADFIT 282 Protected and Unprotected	8,597,345	RB_GUP	TOTAL	8,597,345	4,876,829	1,156,059	741,051	1,502,942	174,403	2,329	125,842	17,890
Adj 60 - Excess ADFIT 283 Unprotected	909,531	RB_GUP	TOTAL	909,531	515,930	122,302	78,397	158,999	18,450	246	13,313	1,893
Adj 42 - AFUDC Offset	95,271	PROD_DEMAND	TOTAL	95,271	49,006	11,609	8,278	24,317	1,904	25	109	22
Total Adjustments to DFIT	10,486,153		TOTAL	10,486,153	5,899,057	1,396,312	907,103	1,908,873	212,983	2,816	139,370	19,638
Total Deferred FIT	14,915,234		TOTAL	14,915,234	8,258,043	1,963,406	1,288,983	2,895,530	302,094	4,051	176,483	26,645
Feedback Prior ITC Normalization Tax	(26)	RB_GUP	TOTAL	(26)	(15)	(3)	(2)	(5)	(1)	(0)	(0)	(0)
Total Federal Income Tax	2,591,876		TOTAL	2,591,876	(4,715,945)	2,552,921	1,294,019	2,216,830	394,776	7,647	720,846	120,782
Total Income Tax	(1,842,096)		TOTAL	(1,842,096)	(9,002,988)	2,621,969	1,227,870	1,878,668	406,303	8,500	870,559	147,025
Total Expenses	499,531,792		TOTAL	499,531,792	251,534,326	67,627,068	44,535,061	118,926,531	10,706,612	163,446	5,048,220	990,529

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Label	Constant	Allocation Factor	Function	Total Retail 1	RS 2	Total GS	Total LGS	Total IGS	Total PS	MW 16	OL 17	SL 18
Net Operating Income	34,850,555		TOTAL	34,850,555	(3,709,102)	12,958,164	7,047,763	12,926,766	2,009,519	35,848	3,074,298	507,300
AFUDC Offset												
Production	512,051	PROD_DEMAND	TOTAL	512,051	263,392	62,396	44,490	130,698	10,235	132	588	121
Transmission	1,198,212	RB_GUP_EPIS_T	TOTAL	1,198,212	615,468	145,982	103,607	307,753	23,788	308	1,083	222
Distribution	294,708	RB_GUP_EPIS_D	TOTAL	294,708	193,417	45,868	25,338	11,074	6,201	86	11,181	1,542
General & Intangible	347,122	LABOR_M	TOTAL	347,122	193,276	45,709	27,950	70,583	6,518	93	2,471	521
Total Per Books AFUDC Offset	2,352,093		TOTAL	2,352,093	1,265,554	299,955	201,385	520,109	46,742	620	15,323	2,406
Adj 42 - AFUDC Offest	3,091,136	PROD_DEMAND	TOTAL	3,091,136	1,590,037	376,670	268,574	788,994	61,783	799	3,550	728
Total AFUDC Offset Adjustments	3,091,136		TOTAL	3,091,136	1,590,037	376,670	268,574	788,994	61,783	799	3,550	728
Total Adjusted AFUDC Offsets	5,443,229		TOTAL	5,443,229	2,855,591	676,626	469,959	1,309,103	108,525	1,419	18,873	3,134
Adjusted Net Operating Income	40,293,784		TOTAL	40,293,784	(853,512)	13,634,790	7,517,721	14,235,869	2,118,044	37,267	3,093,171	510,434
Current Rate of Return				2.86%	-0.11%	7.25%	6.17%	5.62%	7.26%	9.51%	15.21%	17.35%
O&M Labor												
Production Demand	15,681,639	PROD_DEMAND	TOTAL	15,681,639	8,066,415	1,910,887	1,362,501	4,002,646	313,433	4,054	18,009	3,695
Production Energy	6,272,238	PROD_ENERGY	TOTAL	6,272,238	2,454,240	719,289	558,636	2,348,065	128,723	2,259	50,591	10,435
Transmission	3,104,442	EXP_OM_TRAN	TOTAL	3,104,442	1,594,569	378,223	268,410	797,454	61,624	798	2,792	573
Distribution	8,191,302	EXP_OM_DIST	TOTAL	8,191,302	5,439,442	1,322,837	769,651	352,022	186,248	2,645	78,601	39,857
Customer Accounts	3,379,484	EXP_OM_CUSTACCT	TOTAL	3,379,484	2,819,176	488,642	10,566	1,322	2,534	138	56,349	757
Customer Service	263,144	EXP_OM_CUSTSERV	TOTAL	263,144	167,645	38,113	767	90	193	11	56,256	69
Total	36,892,249		TOTAL	36,892,249	20,541,487	4,857,991	2,970,530	7,501,599	692,756	9,904	262,597	55,385
Calculation of Proposed Revenues												
Proposed Operating Income	92,112,514	RATEBASE	TOTAL	92,112,514	28,284,335	20,557,688	12,003,992	23,561,667	3,192,292	51,702	3,842,099	618,739
					28,284,335	20,557,688	12,003,992	23,561,667	3,192,292	51,702	3,842,099	618,739
Proposed Rate of Return				6.54%	3.57%	10.93%	9.85%	9.30%	10.94%	13.19%	18.89%	21.03%
Income Increase	51,818,730		TOTAL	51,818,730	29,137,847	6,922,898	4,486,271	9,325,798	1,074,248	14,435	748,928	108,305
Gross Revenue Conversion Factor	1.35273											
Revenue Increase	70,096,734		TOTAL	70,096,734	39,415,629	9,364,810	6,068,711	12,615,284	1,453,168	19,527	1,013,097	146,507
Percent Revenue Increase				14.73%	17.97%	12.76%	13.04%	10.91%	12.51%	10.70%	12.99%	10.18%
			PRODUCTION	261,487,372	126,381,118	35,989,858	24,604,111	67,977,719	5,958,097	81,581	407,145	87,742
			BULKTRAN	(4,056,872)	(7,754,247)	1,379,757	645,997	1,363,083	243,721	5,340	47,695	11,782
			SUBTRAN	(1,114,486)	(2,062,163)	358,522	162,818	363,240	61,726	1,370	-	-
			DISTPRI	74,599,754	42,886,747	14,793,757	9,466,288	5,011,413	2,407,330	34,219	-	-
			DISTSEC	31,490,216	20,643,519	6,281,958	2,993,153	110,774	901,534	11,805	447,270	100,202
			ENERGY	156,851,436	65,087,602	19,169,635	14,256,698	53,176,993	3,430,460	61,150	1,379,768	289,130
			CUSTOMER	26,750,170	13,525,407	4,788,753	480,326	253,870	65,527	6,583	6,532,461	1,097,243
Proposed Sales Revenue	546,007,590		TOTAL	546,007,590	258,707,983	82,762,240	52,609,391	128,257,094	13,068,396	202,048	8,814,339	1,586,099

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Allocation Factor	Total Retail	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
XXXXXXXXXXXXXXXXXXXXXXXXX																		
BULK_TRANS PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS BULKTRAN	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
BULK_TRANS SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
CUST_902 PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902 CUSTOMER	1.00000000	0.73784726	0.25094607	0.00072541	0.00005792	0.00674110	0.00077230	0.00016549	0.00001379	0.00008275	0.00072817	0.00031444	0.00006620	0.00147841	0.00001103	0.00004965	-	-
CUST_902 TOTAL	1.00000000	0.73784726	0.25094607	0.00072541	0.00005792	0.00674110	0.00077230	0.00016549	0.00001379	0.00008275	0.00072817	0.00031444	0.00006620	0.00147841	0.00001103	0.00004965	-	-
CUST_903 PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903 CUSTOMER	1.00000000	0.86197829	0.13368889	0.00033073	0.00002635	0.00239361	0.00024678	0.00005289	0.00000433	0.00002202	0.00019388	0.00008376	0.00001751	0.00067445	0.00000433	0.00003972	-	0.00024245
CUST_903 TOTAL	1.00000000	0.86197829	0.13368889	0.00033073	0.00002635	0.00239361	0.00024678	0.00005289	0.00000433	0.00002202	0.00019388	0.00008376	0.00001751	0.00067445	0.00000433	0.00003972	-	0.00024245
CUST_DEP_FXNL PRODUCTION	0.34439707	0.22625024	0.04630850	0.00408167	0.00267778	0.01659699	0.00807878	0.00220231	-	-	0.02204756	0.01081578	0.00489252	0.00033701	-	-	0.00010792	-
CUST_DEP_FXNL BULKTRAN	0.18702637	0.12286620	0.02514804	0.00221657	0.00145418	0.00901307	0.00438722	0.00119597	-	-	0.01197303	0.00587356	0.00265691	0.00018302	-	-	0.00005861	-
CUST_DEP_FXNL SUBTRAN	0.05114060	0.03379140	0.00695245	0.00061569	0.00052492	0.00241942	0.00118099	0.00041672	-	-	0.00317922	0.00201070	-	0.00004907	-	-	-	-
CUST_DEP_FXNL DISTPRI	0.24692365	0.17325659	0.03558935	0.00315126	-	0.01244047	0.00607202	-	-	-	0.01616160	-	-	0.00025237	-	-	-	-
CUST_DEP_FXNL DISTSEC	0.11611639	0.09412991	0.01665932	-	-	0.00501400	-	-	-	-	-	-	-	0.00010479	-	-	0.00020838	-
CUST_DEP_FXNL ENERGY	0.00567082	0.00321317	0.00081361	0.00007189	0.00004734	0.00031787	0.00015399	0.00004215	-	-	0.00054684	0.00030166	0.00014169	0.00000646	-	-	0.00001415	-
CUST_DEP_FXNL CUSTOMER	0.04872511	0.02960925	0.00828270	0.00335153	0.00265524	0.00038883	0.00030531	0.00048076	-	-	0.00016575	0.00005898	0.00004379	0.00000581	-	-	0.00337714	-
CUST_DEP_FXNL TOTAL	1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-
CUST_SPEC_FXNL PRODUCTION	0.52704409	-	-	-	-	-	0.00093481	0.00146060	-	-	0.13330194	0.29000322	0.10134352	-	-	-	-	-
CUST_SPEC_FXNL BULKTRAN	0.04358711	-	-	-	-	-	0.00008262	0.00003957	-	-	0.01286122	0.01709495	0.01350875	-	-	-	-	-
CUST_SPEC_FXNL SUBTRAN	0.00884218	-	-	-	-	-	0.00002113	0.00001288	-	-	0.00324796	0.00556021	-	-	-	-	-	-
CUST_SPEC_FXNL DISTPRI	0.05782211	-	-	-	-	-	0.00040750	-	-	-	0.05741461	-	-	-	-	-	-	-
CUST_SPEC_FXNL DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC_FXNL ENERGY	0.36025644	-	-	-	-	-	0.00044549	0.00081016	-	-	0.08105324	0.21326679	0.06468077	-	-	-	-	-
CUST_SPEC_FXNL CUSTOMER	0.00244808	-	-	-	-	-	0.00002293	0.00018676	-	-	0.00065924	0.00097041	0.00060874	-	-	-	-	-
CUST_SPEC_FXNL TOTAL	1.00000000	-	-	-	-	-	0.00191447	0.00250997	-	-	0.28853821	0.52689557	0.18014178	-	-	-	-	-
CUST_SPEC_OM PRODUCTION	0.33496088	-	-	-	-	-	0.00072537	0.00102359	-	-	0.09570912	0.17799733	0.05950547	-	-	-	-	-
CUST_SPEC_OM BULKTRAN	0.00721269	-	-	-	-	-	0.00001564	0.00002177	-	-	0.00206718	0.00381064	0.00129747	-	-	-	-	-
CUST_SPEC_OM SUBTRAN	0.00186554	-	-	-	-	-	0.00000421	0.00000759	-	-	0.00054883	0.00130491	-	-	-	-	-	-
CUST_SPEC_OM DISTPRI	0.02595015	-	-	-	-	-	0.00020007	-	-	-	0.02575008	-	-	-	-	-	-	-
CUST_SPEC_OM DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC_OM ENERGY	0.62886089	-	-	-	-	-	0.00095594	0.00135530	-	-	0.16411173	0.34334082	0.11909710	-	-	-	-	-
CUST_SPEC_OM CUSTOMER	0.00114985	-	-	-	-	-	0.00001324	0.00010172	-	-	0.00035128	0.00044187	0.00024174	-	-	-	-	-
CUST_SPEC_OM TOTAL	1.00000000	-	-	-	-	-	0.00191447	0.00250997	-	-	0.28853821	0.52689557	0.18014178	-	-	-	-	-
CUST_TOTAL PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL CUSTOMER	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
CUST_TOTAL TOTAL	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
DIST_CPD PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD DISTPRI	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DIST_CPD DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD TOTAL	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DIST_METERS PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS CUSTOMER	1.00000000	0.44737255	0.33729681	0.04847677	0.00816576	0.05171824	0.01705246	0.02008284	0.00251032	0.00032201	0.01209125	0.03375825	0.01004125	0.00985304	0.00022280	0.00103567	-	-
DIST_METERS TOTAL	1.00000000	0.44737255	0.33729681	0.04847677	0.00816576	0.05171824	0.01705246	0.02008284	0.00251032	0.00032201	0.01209125	0.03375825	0.01004125	0.00985304	0.00022280	0.00103567	-	-

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
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Allocation Factor	Total Retail 1	RS 2	GS-SEC 3	GS-PRI 4	GS-SUB 5	LGS-SEC 6	LGS-PRI 7	LGS-SUB 8	LGS-TRA 9	IGS-SEC 10	IGS-PRI 11	IGS-SUB 12	IGS-TRA 13	PS-SEC 14	PS-PRI 15	MW 16	OL 17	SL 18
DIST_OHLINES PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES DISTPRI	0.83623617	0.54757335	0.12815330	0.00179001	-	0.07439550	0.01336732	-	-	0.00336392	0.04651587	-	-	0.02039863	0.00040943	0.00026881	-	-
DIST_OHLINES DISTSEC	0.16376383	0.12152997	0.02450587	-	-	0.01224890	-	-	-	0.00045784	-	-	-	0.00346003	-	0.00004091	0.00125920	0.00026111
DIST_OHLINES ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES TOTAL	1.00000000	0.66910333	0.15265917	0.00179001	-	0.08664441	0.01336732	-	-	0.00382176	0.04651587	-	-	0.02385866	0.00040943	0.00030972	0.00125920	0.00026111
DIST_OL PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL CUSTOMER	1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000	-
DIST_OL TOTAL	1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000	-
DIST_PCUST PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST CUSTOMER	1.00000000	0.63721207	0.14447965	0.00035730	-	0.00258688	0.00026679	-	-	0.00002382	0.00020962	-	-	0.00072890	0.00000476	0.00004288	0.21382530	0.00026202
DIST_PCUST TOTAL	1.00000000	0.63721207	0.14447965	0.00035730	-	0.00258688	0.00026679	-	-	0.00002382	0.00020962	-	-	0.00072890	0.00000476	0.00004288	0.21382530	0.00026202
DIST_POLES PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES DISTPRI	0.57249889	0.37487632	0.08773553	0.00122547	-	0.05093220	0.00915146	-	-	0.00230299	0.03184541	-	-	0.01396519	0.00028030	0.00018403	-	-
DIST_POLES DISTSEC	0.42750111	0.31725075	0.06397192	-	-	0.03197544	-	-	-	0.00119517	-	-	-	0.00903232	-	0.00010679	0.00328710	0.00068163
DIST_POLES ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES TOTAL	1.00000000	0.69212707	0.15170745	0.00122547	-	0.08290763	0.00915146	-	-	0.00349816	0.03184541	-	-	0.02299750	0.00028030	0.00029083	0.00328710	0.00068163
DIST_SERV PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV CUSTOMER	1.00000000	0.63774681	0.14460089	-	-	0.00258906	-	-	-	0.00002384	-	-	-	0.00072951	-	0.00004291	0.21400474	0.00026224
DIST_SERV TOTAL	1.00000000	0.63774681	0.14460089	-	-	0.00258906	-	-	-	0.00002384	-	-	-	0.00072951	-	0.00004291	0.21400474	0.00026224
DIST_SL PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL CUSTOMER	1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000
DIST_SL TOTAL	1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000
DIST_TRANSF PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF DISTPRI	0.20623231	0.13504237	0.03160513	0.00044145	-	0.01834740	0.00329665	-	-	0.00082961	0.01147173	-	-	0.00503070	0.00010097	0.00006629	-	-
DIST_TRANSF DISTSEC	0.79376769	0.58905904	0.11878062	-	-	0.05937077	-	-	-	0.00221914	-	-	-	0.01677086	-	0.00019829	0.00610335	0.00126562
DIST_TRANSF ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF TOTAL	1.00000000	0.72410141	0.15038575	0.00044145	-	0.07771816	0.00329665	-	-	0.00304875	0.01147173	-	-	0.02180157	0.00010097	0.00026459	0.00610335	0.00126562
DIST_UGLINES PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES DISTPRI	0.81797379	0.53561502	0.12535459	0.00175092	-	0.07277080	0.01307540	-	-	0.00329046	0.04550002	-	-	0.01995315	0.00040049	0.00026294	-	-
DIST_UGLINES DISTSEC	0.18202621	0.13508258	0.02723868	-	-	0.01361486	-	-	-	0.00050889	-	-	-	0.00384588	-	0.00004547	0.00139962	0.00029023
DIST_UGLINES ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES TOTAL	1.00000000	0.67069759	0.15259327	0.00175092	-	0.08638566	0.01307540	-	-	0.00379935	0.04550002	-	-	0.02379903	0.00040049	0.00030842	0.00139962	0.00029023
EXP_OM_CUSTACCT PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT CUSTOMER	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
EXP_OM_CUSTACCT TOTAL	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398

KENTUCKY POWER COMPANY
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TWELVE MONTHS ENDING
MARCH 31, 2020

Allocation Factor	Total Retail	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
EXP_OM_CUSTSERV PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV CUSTOMER	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
EXP_OM_CUSTSERV TOTAL	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
EXP_OM_DIST PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST DISTPRI	0.67179516	0.43989622	0.10295269	0.00143802	-	0.05976606	0.01073872	-	-	0.00270243	0.03736879	-	-	0.01638736	0.00032892	0.00021595	-	-
EXP_OM_DIST DISTSEC	0.26614714	0.19750914	0.03982667	-	-	0.01990678	-	-	-	0.00074407	-	-	-	0.00562320	-	0.00006649	0.00204643	0.00042436
EXP_OM_DIST ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST CUSTOMER	0.06205770	0.02664557	0.01509904	0.00186294	0.00031358	0.00202450	0.00065585	0.00077122	0.00009640	0.00001272	0.00046511	0.00129638	0.00038560	0.00038920	0.00000857	0.00004041	0.00754920	0.00444140
EXP_OM_DIST TOTAL	1.00000000	0.66405093	0.15787840	0.00330096	0.00031358	0.08169734	0.01139457	0.00077122	0.00009640	0.00345922	0.03783391	0.00129638	0.00038560	0.02239976	0.00033749	0.00032285	0.00959563	0.00486575
EXP_OM_TRAN PRODUCTION	(0.00000000)	(0.00000000)	(0.00000000)	0.00000000	(0.00000000)	0.00000000	0.00000000	(0.00000000)	0.00000000	0.00000000	(0.00000000)	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
EXP_OM_TRAN BULKTRAN	0.78300000	0.40276422	0.09392468	0.00130592	0.00018188	0.05590474	0.01001766	0.00203148	0.00007714	0.00264749	0.03574265	0.13670128	0.02476471	0.01534359	0.00030645	0.00020241	0.00089921	0.00018449
EXP_OM_TRAN SUBTRAN	0.21700000	0.11087688	0.02599141	0.00036309	0.00006572	0.01502118	0.00269923	0.00070853	-	0.00067707	0.00949992	0.04684194	-	0.00411761	0.00008268	0.00005475	-	-
EXP_OM_TRAN DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN TOTAL	1.00000000	0.51364110	0.11991609	0.00166901	0.00024760	0.07092592	0.01271689	0.00274001	0.00007714	0.00332456	0.04524257	0.18354322	0.02476471	0.01946120	0.00038913	0.00025716	0.00089921	0.00018449
EXP_OM_LPP PRODUCTION	0.46989950	0.24151303	0.05640531	0.00078364	0.00010911	0.03356316	0.00602009	0.00121976	0.00004622	0.00158913	0.02148224	0.08210264	0.01489240	0.00921523	0.00018395	0.00012162	0.00054093	0.00011103
EXP_OM_LPP BULKTRAN	0.02058203	0.01044853	0.00248315	0.00003426	0.00000464	0.00147471	0.00026961	0.00005401	0.00000197	0.00006946	0.00096368	0.00365583	0.00067349	0.00040602	0.00000805	0.00000538	0.00002424	0.00000500
EXP_OM_LPP SUBTRAN	0.00570280	0.00287862	0.00068710	0.00000953	0.00000168	0.00039625	0.00007258	0.00001883	-	0.00001777	0.00025589	0.00125198	-	0.00010895	0.00000217	0.00000145	-	-
EXP_OM_LPP DISTPRI	0.20263676	0.13257849	0.03109407	0.00043389	-	0.01804539	0.00324848	-	-	0.00081557	0.01130631	-	-	0.00495000	0.00009928	0.00006527	-	-
EXP_OM_LPP DISTSEC	0.08037631	0.05960856	0.01205024	-	-	0.00602107	-	-	-	0.00022492	-	-	-	0.00170166	-	0.00002013	0.00062088	0.00012884
EXP_OM_LPP ENERGY	0.14346603	0.05619745	0.01621257	0.00022587	0.00003176	0.01051467	0.00187130	0.00038127	0.00001444	0.00055107	0.00868742	0.03735667	0.00702447	0.00288942	0.00005799	0.00005173	0.00115885	0.00023908
EXP_OM_LPP CUSTOMER	0.07733657	0.05564965	0.01300177	0.00058265	0.00009606	0.00077135	0.00021490	0.00023623	0.00002929	0.00000540	0.00015424	0.00039715	0.00011778	0.00016093	0.00000287	0.00001460	0.00453927	0.00136244
EXP_OM_LPP TOTAL	1.00000000	0.55887432	0.13193422	0.00206983	0.00024326	0.07078661	0.01169696	0.00191011	0.00009192	0.00327333	0.04284979	0.12476426	0.02270813	0.01943221	0.00035431	0.00028018	0.00688417	0.00184640
FORF_DISC_FXNL PRODUCTION	0.50660098	0.31553397	0.05935431	0.00188409	0.00026560	0.01740871	0.01603646	0.00356845	0.00008777	0.00094232	0.05021406	0.03083519	0.01028829	-	-	-	0.00018175	-
FORF_DISC_FXNL BULKTRAN	(0.03514568)	(0.04379301)	(0.00034285)	(0.00010471)	(0.00006303)	(0.00033234)	0.00141733	0.00009667	(0.00002435)	(0.00004908)	0.00484475	0.00181766	0.00137139	-	-	-	0.00001587	-
FORF_DISC_FXNL SUBTRAN	(0.00959198)	(0.01155535)	(0.00009741)	(0.00002813)	(0.00002036)	(0.00008721)	0.00036240	0.00003147	-	(0.00001208)	0.00122349	0.00059120	-	-	-	-	-	-
FORF_DISC_FXNL DISTPRI	0.14463021	0.08676443	0.02210867	0.00064047	-	0.00620020	0.00699052	-	-	0.00029818	0.02162774	-	-	-	-	-	-	-
FORF_DISC_FXNL DISTSEC	0.05176706	0.03987212	0.00936697	-	-	0.00225333	-	-	-	0.00008825	-	-	-	-	-	-	0.00018639	-
FORF_DISC_FXNL ENERGY	0.29727636	0.18027229	0.03383517	0.00116363	0.00024100	0.01092991	0.00764220	0.00197933	0.00008246	0.00070648	0.03053228	0.02267603	0.00656633	-	-	-	0.00064924	-
FORF_DISC_FXNL CUSTOMER	0.04446305	0.03216864	0.00718328	0.00080967	0.00009733	0.00023495	0.00039343	0.00045627	0.00002129	0.00000176	0.00024833	0.00010318	0.00006180	-	-	-	0.00268312	-
FORF_DISC_FXNL TOTAL	1.00000000	0.59926310	0.13140814	0.00436502	0.00052055	0.03660756	0.03284234	0.00613221	0.00016717	0.00197583	0.10869064	0.05602325	0.01828781	-	-	-	0.00371639	-
FUELREV PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV ENERGY	1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
FUELREV CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV TOTAL	1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
LABOR_M PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
LABOR_M BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
LABOR_M SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
LABOR_M DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
LABOR_M DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
LABOR_M ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
LABOR_M CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
LABOR_M TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126
LABOR_PROD PRODUCTION	0.71429930	0.36742555	0.08568369	0.00119134	0.00016592	0.05099964	0.00913871	0.00185324	0.00007038	0.00241520	0.03260658	0.12470706	0.02259184	0.01399734	0.00027956	0.00018465	0.00082031	0.00016830
LABOR_PROD BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD ENERGY	0.28570070	0.11179074	0.03225131	0.00044951	0.00006284	0.02092543	0.00373182	0.00075994	0.00002870	0.00109587	0.01732584	0.07451561	0.01401716	0.00574801	0.00011533	0.00010288	0.00230441	0.00047530
LABOR_PROD CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD TOTAL	1.00000000	0.47921629	0.11793500	0.00164086	0.00022876	0.07192507	0.01287053	0.00261317	0.00009908	0.00351106	0.04993241	0.19922267	0.03660901	0.01974535	0.00039490	0.00028752	0.00312472	0.00064360
MISC_SERV_REV PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV DISTPRI	0.58603823	0.53805656	0.04623570	0.00028118	-	0.00097387	0.00025086	-	-	-	0.00024006	-	-	-	-	-	-	-
MISC_SERV_REV DISTSEC	0.31624552	0.29374524	0.02174801	-	-	0.00039442	-	-	-	-	-	-	-	-	-	-	0.00035785	-
MISC_SERV_REV ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV CUSTOMER	0.09771625	0.08113055	0.01006564	0.00029634	0.00001934	0.00002981	0.00001245	0.00019339	0.00001934	-	0.00000243	0.00009967	-	-	-	-	0.00584730	-
MISC_SERV_REV TOTAL	1.00000000	0.91293234	0.07804935	0.00057752	0.00001934	0.00139810	0.00026331	0.00019339	0.00001934	-	0.00024249	0.00009967	-	-	-	-	0.00620515	-

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Allocation Factor	Total Retail 1	RS 2	GS-SEC 3	GS-PRI 4	GS-SUB 5	LGS-SEC 6	LGS-PRI 7	LGS-SUB 8	LGS-TRA 9	IGS-SEC 10	IGS-PRI 11	IGS-SUB 12	IGS-TRA 13	PS-SEC 14	PS-PRI 15	MW 16	OL 17	SL 18
PROD_DEMAND PRODUCTION	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
PROD_DEMAND BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
PROD_ENERGY PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY ENERGY	1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
PROD_ENERGY CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY TOTAL	1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
RATEBASE PRODUCTION	0.36988272	0.18946485	0.04430184	0.00053946	0.00002910	0.02659491	0.00463511	0.00092878	0.00003731	0.00127851	0.01668619	0.06544638	0.01177797	0.00739607	0.00014793	0.00009770	0.00043156	0.00008906
RATEBASE BULKTRAN	0.19225601	0.09830581	0.02300293	0.00027836	0.00001334	0.01382339	0.00241517	0.00048299	0.00001935	0.00066415	0.00869896	0.03415624	0.00615219	0.00384493	0.00007687	0.00005078	0.00022428	0.00004628
RATEBASE SUBTRAN	0.05089909	0.02583810	0.00607844	0.00007339	0.00000410	0.00354830	0.00062096	0.00016063	-	0.00016237	0.00220715	0.01118636	-	0.00098632	0.00001983	0.00001313	-	-
RATEBASE DISTPRI	0.21395619	0.13987231	0.03283935	0.00039969	-	0.01924162	0.00336745	-	-	0.00088295	0.01182788	-	-	0.00534693	0.00010745	0.00007054	-	-
RATEBASE DISTSEC	0.10157555	0.07520724	0.01521433	-	-	0.00767663	-	-	-	0.00029121	-	-	-	0.00219790	-	0.00002602	0.00079615	0.00016607
RATEBASE ENERGY	0.02267276	0.00925782	0.00264175	0.00003531	0.00000511	0.00169565	0.00027755	0.00005809	0.00000247	0.00009152	0.00128839	0.00557969	0.00102098	0.00047169	0.00000955	0.00000850	0.00018937	0.00003933
RATEBASE CUSTOMER	0.04875768	0.02435726	0.00769339	0.00042338	0.00002508	0.00060049	0.00016879	0.00019487	0.00002574	0.00000404	0.00012096	0.00034394	0.00010162	0.00012309	0.00000230	0.00001190	0.01281149	0.00174934
RATEBASE TOTAL	1.00000000	0.56230339	0.13177203	0.00174960	0.00007674	0.07318100	0.01148502	0.00182536	0.00008488	0.00337475	0.04082952	0.11671260	0.01905277	0.02036694	0.00036394	0.00027856	0.01445284	0.00209007
RB_GUP_CWIP PRODUCTION	0.14028782	0.07216209	0.01682821	0.00023398	0.00003259	0.01001629	0.00179483	0.00036397	0.00001382	0.00047434	0.00640391	0.02449237	0.00443702	0.00274907	0.00005491	0.00003626	0.00016111	0.00003305
RB_GUP_CWIP BULKTRAN	0.43497830	0.22374674	0.05217777	0.00072548	0.00010104	0.03105664	0.00556509	0.00112854	0.00004286	0.00147075	0.01985604	0.07594137	0.01375748	0.00852379	0.00017024	0.00011244	0.00049953	0.00010249
RB_GUP_CWIP SUBTRAN	0.12043532	0.06153683	0.01442527	0.00020152	0.00003647	0.00833678	0.00149808	0.00039323	-	0.00037577	0.00527247	0.02599735	-	0.00228528	0.00004589	0.00003039	-	-
RB_GUP_CWIP DISTPRI	0.15718939	0.10292872	0.02408929	0.00033647	-	0.01398431	0.00251269	-	-	0.00063233	0.00874370	-	-	0.00383438	0.00007696	0.00005053	-	-
RB_GUP_CWIP DISTSEC	0.07367505	0.05467463	0.01102485	-	-	0.00551061	-	-	-	0.00020597	-	-	-	0.00155662	-	0.00001840	0.00056649	0.00011747
RB_GUP_CWIP ENERGY	0.02725593	0.01066487	0.00307678	0.00004288	0.00000600	0.00199629	0.00035602	0.00007250	0.00000274	0.00010455	0.00165289	0.00710881	0.00133724	0.00054836	0.00001100	0.00000981	0.00021984	0.00004534
RB_GUP_CWIP CUSTOMER	0.04617819	0.02708669	0.00726673	0.00037275	0.00006227	0.00047858	0.00013370	0.00015299	0.00001908	0.00000326	0.00009530	0.00025714	0.00007634	0.00009862	0.00000176	0.00000921	0.00882432	0.00123945
RB_GUP_CWIP TOTAL	1.00000000	0.55280056	0.12888891	0.00191308	0.00023836	0.07137950	0.01186040	0.00211124	0.00007850	0.00326698	0.04202431	0.13379704	0.01960809	0.01959612	0.00036076	0.00026705	0.01027129	0.00153780
RB_GUP_EPIS_D PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D DISTPRI	0.59071727	0.38680584	0.09052750	0.00126447	-	0.05255299	0.00944268	-	-	0.00237628	0.03285881	-	-	0.01440959	0.00028922	0.00018989	-	-
RB_GUP_EPIS_D DISTSEC	0.28455782	0.21117180	0.04258167	-	-	0.02128383	-	-	-	0.00079554	-	-	-	0.00601219	-	0.00007109	0.00218799	0.00045371
RB_GUP_EPIS_D ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D CUSTOMER	0.12472492	0.05832430	0.01970808	0.00133262	0.00022448	0.00160858	0.00046877	0.00055208	0.00006901	0.00001057	0.00033239	0.00092801	0.00027603	0.00032351	0.00000612	0.00003157	0.03575186	0.00477694
RB_GUP_EPIS_D TOTAL	1.00000000	0.65630194	0.15281725	0.00259709	0.00022448	0.07544540	0.00991145	0.00055208	0.00006901	0.00318239	0.03319120	0.00092801	0.00027603	0.02074529	0.00029535	0.00029254	0.03793985	0.00523065
RB_GUP_EPIS_G PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
RB_GUP_EPIS_G BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
RB_GUP_EPIS_G SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
RB_GUP_EPIS_G DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
RB_GUP_EPIS_G DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
RB_GUP_EPIS_G ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
RB_GUP_EPIS_G CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
RB_GUP_EPIS_G TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126
RB_GUP_EPIS_P PRODUCTION	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
RB_GUP_EPIS_P BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
RB_GUP_EPIS_T PRODUCTION	0.01859716	0.00956612	0.00223082	0.00003102	0.00000432	0.00132780	0.00023793	0.00004825	0.00000183	0.00006288	0.00084893	0.00324681	0.00058819	0.00036443	0.00000728	0.00000481	0.00002136	0.00000438
RB_GUP_EPIS_T BULKTRAN	0.76860039	0.39535726	0.09219737	0.00128191	0.00017854	0.05487663	0.00983343	0.00199412	0.00007573	0.00259880	0.03508533	0.13418730	0.02430927	0.01506142	0.00030082	0.00019868	0.00088267	0.00018109
RB_GUP_EPIS_T SUBTRAN	0.21280246	0.10873213	0.02548865	0.00035607	0.00006445	0.01473061	0.00264702	0.00069482	-	0.00066397	0.00931616	0.04593585	-	0.00403796	0.00008108	0.00005369	-	-
RB_GUP_EPIS_T DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T TOTAL	1.00000000	0.51365551	0.11991684	0.00166899	0.00024730	0.07093505	0.01271838	0.00273719	0.00007756	0.00332565	0.04525042	0.18336997	0.02489747	0.01946381	0.00038917	0.00025718	0.00090403	0.00018548
RB_GUP-Land_P PRODUCTION	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
RB_GUP-Land_P BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

Allocation Factor	Total Retail 1	RS 2	GS-SEC 3	GS-PRI 4	GS-SUB 5	LGS-SEC 6	LGS-PRI 7	LGS-SUB 8	LGS-TRA 9	IGS-SEC 10	IGS-PRI 11	IGS-SUB 12	IGS-TRA 13	PS-SEC 14	PS-PRI 15	MW 16	OL 17	SL 18
RB_GUP-Land_T PRODUCTION	0.01967774	0.01012195	0.00236044	0.00003282	0.00000457	0.00140495	0.00025176	0.00005105	0.00000194	0.00006653	0.00089826	0.00343547	0.00062237	0.00038560	0.00000770	0.00000509	0.00002260	0.00000464
RB_GUP-Land_T BULKTRAN	0.75515504	0.38844117	0.09058454	0.00125948	0.00017541	0.05391666	0.00966141	0.00195924	0.00007440	0.00255334	0.03447157	0.13183993	0.02388403	0.01479795	0.00029555	0.00019521	0.00086723	0.00017793
RB_GUP-Land_T SUBTRAN	0.22516722	0.11504995	0.02696965	0.00037676	0.00006819	0.01558653	0.00280082	0.00073519	-	0.00070255	0.00985747	0.04860493	-	0.00427258	0.00008579	0.00005681	-	-
RB_GUP-Land_T DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T TOTAL	1.00000000	0.51361307	0.11991463	0.00166906	0.00024817	0.07090814	0.01271399	0.00274548	0.00007634	0.00332243	0.04522730	0.18388033	0.02450639	0.01945613	0.00038904	0.00025711	0.00088983	0.00018256
RB_GUP-Land_D PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D DISTPRI	0.58724366	0.38453130	0.08999517	0.00125703	-	0.05224396	0.00938715	-	-	0.00236230	0.03266559	-	-	0.01432486	0.00028752	0.00018877	-	-
RB_GUP-Land_D DISTSEC	0.28697288	0.21296403	0.04294306	-	-	0.02146447	-	-	-	0.00080229	-	-	-	0.00606321	-	0.00007169	0.00220656	0.00045756
RB_GUP-Land_D ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D CUSTOMER	0.12578346	0.05881930	0.01987535	0.00134393	0.00022638	0.00162223	0.00047275	0.00055676	0.00006959	0.00001066	0.00033521	0.00093589	0.00027838	0.00032625	0.00000618	0.00003184	0.03605528	0.00481748
RB_GUP-Land_D TOTAL	1.00000000	0.65631463	0.15281358	0.00260096	0.00022638	0.07533066	0.00985990	0.00055676	0.00006959	0.00317526	0.03300080	0.00093589	0.00027838	0.02071433	0.00029370	0.00029230	0.03826185	0.00527504
RB_GUP-Land_G PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
RB_GUP-Land_G BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
RB_GUP-Land_G SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
RB_GUP-Land_G DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
RB_GUP-Land_G DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
RB_GUP-Land_G ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
RB_GUP-Land_G CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
RB_GUP-Land_G TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126
RB_GUP_EPIS PRODUCTION	0.36523981	0.18787424	0.04381230	0.00060916	0.00008484	0.02607744	0.00467286	0.00094761	0.00003598	0.00123495	0.01667259	0.06376597	0.01155180	0.00715720	0.00014295	0.00009442	0.00041945	0.00008606
RB_GUP_EPIS BULKTRAN	0.19834511	0.10202594	0.02379247	0.00033081	0.00004607	0.01416147	0.00253762	0.00051460	0.00001954	0.00067065	0.00905412	0.03462839	0.00627325	0.00388675	0.00007763	0.00005127	0.00022778	0.00004673
RB_GUP_EPIS SUBTRAN	0.05491654	0.02805979	0.00657769	0.00009189	0.00001663	0.00380143	0.00068310	0.00017931	-	0.00017135	0.00240416	0.01185437	-	0.00104205	0.00002092	0.00001386	-	-
RB_GUP_EPIS DISTPRI	0.21971241	0.14386924	0.03367095	0.00047031	-	0.01954665	0.00351213	-	-	0.00088384	0.01222156	-	-	0.00535953	0.00010757	0.00007063	-	-
RB_GUP_EPIS DISTSEC	0.10532717	0.07816383	0.01576132	-	-	0.00787807	-	-	-	0.00029446	-	-	-	0.00222537	-	0.00002631	0.00080987	0.00016794
RB_GUP_EPIS ENERGY	0.00681895	0.00266816	0.00076976	0.00001073	0.00000150	0.00049944	0.00008907	0.00001814	0.00000069	0.00002616	0.00041352	0.00177850	0.00033455	0.00013719	0.00000275	0.00000246	0.00005500	0.00001134
RB_GUP_EPIS CUSTOMER	0.04964002	0.02458701	0.00783623	0.00050020	0.00008413	0.00061094	0.00017660	0.00020686	0.00002585	0.00000405	0.00012534	0.00034772	0.00010339	0.00012346	0.00000231	0.00001194	0.01312518	0.00176881
RB_GUP_EPIS TOTAL	1.00000000	0.56724820	0.13222072	0.00201309	0.00023317	0.07257544	0.01167136	0.00186652	0.00008206	0.00328545	0.04089131	0.11237494	0.01826300	0.01993156	0.00035414	0.00027088	0.01463727	0.00208089
RB_GUP PRODUCTION	0.36523981	0.18787424	0.04381230	0.00060916	0.00008484	0.02607744	0.00467286	0.00094761	0.00003598	0.00123495	0.01667259	0.06376597	0.01155180	0.00715720	0.00014295	0.00009442	0.00041945	0.00008606
RB_GUP BULKTRAN	0.19834511	0.10202594	0.02379247	0.00033081	0.00004607	0.01416147	0.00253762	0.00051460	0.00001954	0.00067065	0.00905412	0.03462839	0.00627325	0.00388675	0.00007763	0.00005127	0.00022778	0.00004673
RB_GUP SUBTRAN	0.05491654	0.02805979	0.00657769	0.00009189	0.00001663	0.00380143	0.00068310	0.00017931	-	0.00017135	0.00240416	0.01185437	-	0.00104205	0.00002092	0.00001386	-	-
RB_GUP DISTPRI	0.21971241	0.14386924	0.03367095	0.00047031	-	0.01954665	0.00351213	-	-	0.00088384	0.01222156	-	-	0.00535953	0.00010757	0.00007063	-	-
RB_GUP DISTSEC	0.10532717	0.07816383	0.01576132	-	-	0.00787807	-	-	-	0.00029446	-	-	-	0.00222537	-	0.00002631	0.00080987	0.00016794
RB_GUP ENERGY	0.00681895	0.00266816	0.00076976	0.00001073	0.00000150	0.00049944	0.00008907	0.00001814	0.00000069	0.00002616	0.00041352	0.00177850	0.00033455	0.00013719	0.00000275	0.00000246	0.00005500	0.00001134
RB_GUP CUSTOMER	0.04964002	0.02458701	0.00783623	0.00050020	0.00008413	0.00061094	0.00017660	0.00020686	0.00002585	0.00000405	0.00012534	0.00034772	0.00010339	0.00012346	0.00000231	0.00001194	0.01312518	0.00176881
RB_GUP TOTAL	1.00000000	0.56724820	0.13222072	0.00201309	0.00023317	0.07257544	0.01167136	0.00186652	0.00008206	0.00328545	0.04089131	0.11237494	0.01826300	0.01993156	0.00035414	0.00027088	0.01463727	0.00208089
REV_RENT PRODUCTION	0.28360505	0.14588246	0.03401981	0.00047301	0.00006588	0.02024887	0.00362843	0.00073581	0.00002794	0.00095893	0.01294610	0.04951363	0.00896985	0.00555750	0.00011100	0.00007331	0.00032570	0.00006682
REV_RENT BULKTRAN	(0.00382587)	(0.00196798)	(0.00045893)	(0.00000638)	(0.00000089)	(0.00027316)	(0.00004895)	(0.00000993)	(0.00000038)	(0.00001294)	(0.00017464)	(0.00066795)	(0.00012100)	(0.00007497)	(0.00000150)	(0.00000099)	(0.00000439)	(0.00000090)
REV_RENT SUBTRAN	(0.00106030)	(0.00054176)	(0.00012700)	(0.00000177)	(0.00000032)	(0.00007340)	(0.00001319)	(0.00000346)	-	(0.00000331)	(0.00004642)	(0.00022888)	-	(0.00002012)	(0.00000040)	(0.00000027)	-	-
REV_RENT DISTPRI	0.41552235	0.27208697	0.06367885	0.00088945	-	0.03696682	0.00664217	-	-	0.00167152	0.02311355	-	-	0.01013600	0.00020345	0.00013357	-	-
REV_RENT DISTSEC	0.28802934	0.21374804	0.04310115	-	-	0.02154349	-	-	-	0.00080525	-	-	-	0.00608553	-	0.00007195	0.00221468	0.00045925
REV_RENT ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REV_RENT CUSTOMER	0.01772943	0.00829070	0.00280147	0.00018943	0.00003191	0.00022866	0.00006663	0.00007848	0.00000981	0.00000150	0.00004725	0.00013192	0.00003924	0.00004599	0.00000087	0.00000449	0.00508206	0.00067903
REV_RENT TOTAL	1.00000000	0.63749843	0.14301536	0.00154374	0.00009658	0.07864128	0.01027509	0.00080090	0.00003737	0.00342095	0.03588583	0.04874872	0.00888809	0.02172992	0.00031341	0.00028207	0.00761805	0.00120420
REV PRODUCTION	0.37594877	0.18045010	0.05270948	0.00064888	0.00012059	0.02916766	0.00545375	0.00100441	0.00003176	0.00140257	0.01945217	0.06269360	0.01317974	0.00858424	0.00016033	0.00012195	0.00063045	0.00013708
REV BULKTRAN	0.06498688	0.01448210	0.01009264	0.00010236	(0.00001246)	0.00556135	0.00167998	0.00025839	(0.00000225)	0.00020844	0.00617841	0.01966323	0.00482332	0.00170063	0.00002564	0.00002581	0.00016250	0.00003681
REV SUBTRAN	0.01797860	0.00433326	0.00279027	0.00002886	(0.00000325)	0.00149843	0.00044488	0.00008937	-	0.00005413	0.00161296	0.00666022	-	0.00045554	0.00000700	0.00000693	-	-
REV DISTPRI	0.12081428	0.06570326	0.02416085	0.00027916	-	0.01294859	0.00291202	-	-	0.00055363	0.01025679	-	-	0.00387565	0.00006781	0.00005651	-	-
REV DISTSEC	0.04985157	0.03183634	0.01052682	-	-	0.00485075	-	-	-	0.00016941	-	-	-	0.00150048	-	0.00001972	0.00077429	0.00017378
REV ENERGY	0.32608380	0.14441369	0.04075489	0.00055569	0.00013602	0.02529402	0.00370379	0.00079670	0.00004171	0.00143101	0.01691631	0.06865602	0.01236079	0.00716568	0.00014678	0.00013129	0.00295920	0.00062022
REV CUSTOMER	0.04433610	0.02254137	0.00752259	0.00033614	0.00005117	0.00046970	0.00015841	0.00015482	0.00000970	0.00000311	0.00011388	0.00025585	0.00009403	0.00010448	0.00000170	0.00001073	0.01067339	0.00183503
REV TOTAL	1.00000000	0.46376012	0.14855753	0.00195110	0.00029207	0.07979050	0.01435282	0.00230369	0.00008092	0.00382230	0.05453053	0.15792892	0.03045787	0.02338668	0.00040926	0.00037294	0.01519982	0.00280292
RSALE PRODUCTION	0.50208873	0.22861787	0.06604237	0.00082483	0.00010959	0.03784060	0.00766376	0.00139582	0.00003772	0.00174302	0.02775980	0.09738100	0.02046660	0.01091276	0.00020316	0.00015206	0.00077145	0.00016632
RSALE BULKTRAN	(0.02107230)	(0.03172991)	(0.00038148)	(0.00004584)	(0.00002600)	(0.00072239)	0.00067734	0.00003781	(0.00001046)	(0.00009078)	0.00267832	0.00574036	0.00272813	(0.00000676)	(0.00000908)	0.00000355	0.00006737	0.00001753
RSALE SUBTRAN	(0.00598858)	(0.00837234)	(0.00010838)	(0.00001232)	(0.00000840)	(0.00018956)	0.00017319	0.00001231	-	(0.00002235)	0.00067638	0.00186708	-	(0.00000273)	(0.00000236)	0.00000091	-	-
RSALE DISTPRI	0.12121062	0.06286454	0.02459988	0.00028039	-	0.01347712	0.00334074	-	-	0.00055154	0.01195645	-	-	0.00401291	0.00006878	0.00005827	-	-
RSALE DISTSEC	0.04687347	0.02888906	0.01042244	-	-	0.00489797	-	-	-	0.00016324	-	-	-	0.00151171	-	0.00001985	0.00079113	0.00017808
RSALE ENERGY	0.31024311	0.13061499	0.03764772	0.00050942	0.00009944	0.02375790	0.00365218	0.00077422	0.00003544	0.00130678	0.01687913	0.07161346	0.01306246	0.00669833	0.00013587	0.00012210	0.00275568	0.00057799
RSALE CUSTOMER	0.04664495	0.02330756	0.00799269	0.00035446	0.00004016	0.00051070	0.00018802	0.00017847	0.00000915	0.00000325	0.00013729	0.00032586	0.00012294	0.00011259	0.00000181	0.00001147	0.01138838	0.00196016
RSALE TOTAL	1.00000000	0.43419178	0.14621524	0.00191095	0.00021478	0.07957233	0.01569522	0.00239864	0.00007185	0.00365469	0.06008736	0.17692775	0.03638013	0.02323881	0.00039819	0.00036820	0.01577401	0.00290008
REVYEC_FXNL PRODUCTION	0.53394795	0.00181667	0.00896722	0.00027594	(0.00125209)	0.02930315	0.03002191	0.00362640	(0.00012763)	(0.00098794)	0.03433234	0.36032818	0.06400564	0.00358540	-	-	0.00006065	(0.00000789)
REVYEC_FXNL BULKTRAN	0.03534378	(0.00025214)	(0.00005180)	(0.00001534)	0.00029711	(0.00055941)	0.00265339	0.00009824	0.00003541	0.00005146	0.00331245	0.02124043	0.00853173	(0.00000222)	-	-	0.00000530	(0.00000083)
REVYEC_FXNL SUBTRAN	0.00833111	(0.00006653)	(0.00001472)	(0.00000412)	0.00009600	(0.00014679)	0.00067845	0.00003198	-	0.00001267	0.00083652	0.00690854	-	(0.00000090)	-	-	-	-
REVYEC_FXNL DISTPRI	0.04325011	0.00049954	0.00334017	0.00009380	-	0.01043646	0.01308699	-	-	(0.00031261)	0.01478731	-	-	0.00131845	-	-	-	-
REVYEC_FXNL DISTSEC	0.00589553	0.00022956	0.00141516	-	-	0.00379291	-	-	-	(0.00009253)	-	-	-	0.00049667	-	-	0.00006220	(0.00000844)
REVYEC_FXNL ENERGY	0.36813901	0.00103791	0.00511180	0.00017042	(0.00113613)	0.01839773	0.01430700	0.00201147	(0.00011992)	(0.00074068)	0.02087552	0.26498338	0.04085050	0.00220074	-	-	0.00021666	(0.00002741)
REVYEC_FXNL CUSTOMER	0.00509251	0.00018521	0.00108525	0.00011858	(0.00045885)	0.00039548	0.00073654	0.00046368	(0.00003096)	(0.00000184)	0.00016979	0.00120573	0.00038446	0.00003699	-	-	0.00089539	(0.00009295)
REVYEC_FXNL TOTAL	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)

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Allocation Factor	Total Retail 1	RS 2	GS-SEC 3	GS-PRI 4	GS-SUB 5	LGS-SEC 6	LGS-PRI 7	LGS-SUB 8	LGS-TRA 9	IGS-SEC 10	IGS-PRI 11	IGS-SUB 12	IGS-TRA 13	PS-SEC 14	PS-PRI 15	MW 16	OL 17	SL 18
REVYEC_EXP_OM PRODUCTION	0.34175473	0.00136419	0.00722671	0.00021973	(0.00090757)	0.02257139	0.02329576	0.00254138	(0.00009125)	(0.00073241)	0.02465018	0.22116119	0.03758193	0.00279609	-	-	0.00008548	(0.00000807)
REVYEC_EXP_OM BULKTRAN	0.00732937	0.00002824	0.00015272	0.00000460	(0.00001843)	0.00047585	0.00050216	0.00005406	(0.00000186)	(0.00001535)	0.00053241	0.00473471	0.00081944	0.00005915	-	-	0.00000185	(0.00000018)
REVYEC_EXP_OM SUBTRAN	0.00210115	0.00000778	0.00004226	0.00000128	(0.00000669)	0.00012786	0.00013517	0.00001885	-	(0.00000393)	0.00014135	0.00162134	-	0.00001587	-	-	-	-
REVYEC_EXP_OM DISTPRI	0.02231253	0.00038232	0.00203549	0.00006214	-	0.00619965	0.00642549	-	-	(0.00019200)	0.00663201	-	-	0.00076744	-	-	-	-
REVYEC_EXP_OM DISTSEC	0.00328750	0.00017199	0.00078930	-	-	0.00206980	-	-	-	(0.00005298)	-	-	-	0.00026398	-	-	0.00005021	(0.00000479)
REVYEC_EXP_OM ENERGY	0.62056071	0.00134153	0.00878460	0.00026785	(0.00111154)	0.02991183	0.03070039	0.00336496	(0.00012035)	(0.00107356)	0.04226749	0.42660001	0.07521828	0.00370794	-	-	0.00077480	(0.00007352)
REVYEC_EXP_OM CUSTOMER	0.00265401	0.00015419	0.00082201	0.00008369	(0.00040972)	0.00026314	0.00042530	0.00025255	(0.00002964)	(0.00000126)	0.00009047	0.00054903	0.00015268	0.00002468	-	-	0.00032787	(0.00005096)
REVYEC_EXP_OM TOTAL	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)
TDOMX PRODUCTION	(0.00000000)	0.00000000	0.00000000	(0.00000000)	0.00000000	(0.00000000)	(0.00000000)	0.00000000	(0.00000000)	(0.00000000)	0.00000000	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)
TDOMX BULKTRAN	(0.01475930)	(0.00759198)	(0.00177045)	(0.00002462)	(0.00000343)	(0.00105379)	(0.00018883)	(0.00003829)	(0.00000145)	(0.00004990)	(0.00067374)	(0.00257678)	(0.00046681)	(0.00028922)	(0.00000578)	(0.00000382)	(0.00001695)	(0.00000348)
TDOMX SUBTRAN	(0.00409038)	(0.00208999)	(0.00048993)	(0.00000684)	(0.00000124)	(0.00028314)	(0.00005088)	(0.00001336)	-	(0.00001276)	(0.00017907)	(0.00088296)	-	(0.00007762)	(0.00000156)	(0.00000103)	-	-
TDOMX DISTPRI	0.68445829	0.44818812	0.10489332	0.00146512	-	0.06089263	0.01094114	-	-	0.00275337	0.03807318	-	-	0.01669626	0.00033512	0.00022002	-	-
TDOMX DISTSEC	0.27116393	0.20123213	0.04057739	-	-	0.02028202	-	-	-	0.00075809	-	-	-	0.00572920	-	0.00006774	0.00208500	0.00043236
TDOMX ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDOMX CUSTOMER	0.06322747	0.02714783	0.01538365	0.00189806	0.00031949	0.00206267	0.00066821	0.00078576	0.00009822	0.00001296	0.00047388	0.00132082	0.00039287	0.00039654	0.00000874	0.00004117	0.00769150	0.00452511
TDOMX TOTAL	1.00000000	0.66688611	0.15859398	0.00333172	0.00031482	0.08190038	0.01136964	0.00073411	0.00009676	0.00346175	0.03769426	(0.00213892)	(0.00007394)	0.02245516	0.00033652	0.00032409	0.00975956	0.00495399
TDPLANT PRODUCTION	0.00768165	0.00395133	0.00092145	0.00001281	0.00000178	0.00054846	0.00009828	0.00001993	0.00000076	0.00002597	0.00035065	0.00134111	0.00024295	0.00015053	0.00000301	0.00000199	0.00000882	0.00000181
TDPLANT BULKTRAN	0.31747407	0.16330421	0.03808257	0.00052950	0.00007375	0.02266706	0.00406175	0.00082368	0.00003128	0.00107345	0.01449216	0.05542671	0.01004106	0.00622119	0.00012425	0.00008207	0.00036459	0.00007480
TDPLANT SUBTRAN	0.08789907	0.04491233	0.01052821	0.00014707	0.00002662	0.00608455	0.00109336	0.00028700	-	0.00027426	0.00384808	0.01897402	-	0.00166790	0.00003349	0.00002218	-	-
TDPLANT DISTPRI	0.34671867	0.22703383	0.05313468	0.00074217	-	0.03084572	0.00554233	-	-	0.00139474	0.01928632	-	-	0.00845764	0.00016976	0.00011145	-	-
TDPLANT DISTSEC	0.16701985	0.12394628	0.02499311	-	-	0.01249244	-	-	-	0.00046694	-	-	-	0.00352882	-	0.00004172	0.00128423	0.00026630
TDPLANT ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDPLANT CUSTOMER	0.07320669	0.03423317	0.01156757	0.00078218	0.00013176	0.00094415	0.00027514	0.00032404	0.00004050	0.00000621	0.00019509	0.00054469	0.00016202	0.00018988	0.00000359	0.00001853	0.02098438	0.00280380
TDPLANT TOTAL	1.00000000	0.59738115	0.13922758	0.00221373	0.00023390	0.07358238	0.01107087	0.00145465	0.00007254	0.00324156	0.03817232	0.07628654	0.01044603	0.02021597	0.00033410	0.00027794	0.02264202	0.00314672
TOTMXEXP PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP DISTPRI	0.71288794	0.46680406	0.10925017	0.00152598	-	0.06342187	0.01139559	-	-	0.00286773	0.03965459	-	-	0.01738975	0.00034904	0.00022916	-	-
TOTMXEXP DISTSEC	0.28201771	0.20928677	0.04220156	-	-	0.02109384	-	-	-	0.00078844	-	-	-	0.00595852	-	0.00007045	0.00216846	0.00044966
TOTMXEXP ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP CUSTOMER	0.00509436	0.00060563	0.00045661	0.00006563	0.00001105	0.00007001	0.00002308	0.00002719	0.00000340	0.00000044	0.00001637	0.00004570	0.00001359	0.00001334	0.00000030	0.00000140	0.00174127	0.00199935
TOTMXEXP TOTAL	1.00000000	0.67669646	0.15190834	0.00159160	0.00001105	0.08458572	0.01141867	0.00002719	0.00000340	0.00365661	0.03967096	0.00004570	0.00001359	0.02336161	0.00034934	0.00030102	0.00390973	0.00244901
TOTOHLINES PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES DISTPRI	0.71104184	0.46559522	0.10896725	0.00152203	-	0.06325763	0.01136608	-	-	0.00286030	0.03955190	-	-	0.01734472	0.00034814	0.00022857	-	-
TOTOHLINES DISTSEC	0.28895816	0.21443732	0.04324014	-	-	0.02161296	-	-	-	0.00080784	-	-	-	0.00610516	-	0.00007218	0.00222183	0.00046073
TOTOHLINES ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES TOTAL	1.00000000	0.68003254	0.15220740	0.00152203	-	0.08487059	0.01136608	-	-	0.00366815	0.03955190	-	-	0.02344988	0.00034814	0.00030075	0.00222183	0.00046073
TOTOX234 PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234 CUSTOMER	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
TOTOX234 TOTAL	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
TOTOXEXP PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP DISTPRI	0.53616057	0.35108173	0.08216668	0.00114768	-	0.04769937	0.00857058	-	-	0.00215681	0.02982408	-	-	0.01307877	0.00026251	0.00017235	-	-
TOTOXEXP DISTSEC	0.21216646	0.15744981	0.03174892	-	-	0.01586923	-	-	-	0.00059315	-	-	-	0.00448269	-	0.00005300	0.00163137	0.00033829
TOTOXEXP ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP CUSTOMER	0.25167298	0.11296583	0.06366169	0.00782587	0.00131727	0.00850861	0.00275516	0.00323968	0.00040496	0.00005347	0.00195391	0.00544575	0.00161982	0.00163612	0.00003602	0.00016981	0.02713714	0.01294188
TOTOXEXP TOTAL	1.00000000	0.62149736	0.17757728	0.00897355	0.00131727	0.07207721	0.01132574	0.00323968	0.00040496	0.00280344	0.03177799	0.00544575	0.00161982	0.01919758	0.00029853	0.00039517	0.02876851	0.01328017
TOTUGLINES PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES DISTPRI	0.81797379	0.53561502	0.12535459	0.00175092	-	0.07277080	0.01307540	-	-	0.00329046	0.04550002	-	-	0.01995315	0.00040049	0.00026294	-	-
TOTUGLINES DISTSEC	0.18202621	0.13508258	0.02723868	-	-	0.01361486	-	-	-	0.00050889	-	-	-	0.00384588	-	0.00004547	0.00139962	0.00029023
TOTUGLINES ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES TOTAL	1.00000000	0.67069759	0.15259327	0.00175092	-	0.08638566	0.01307540	-	-	0.00379935	0.04550002	-	-	0.02379903	0.00040049	0.00030842	0.00139962	0.00029023
TRAN_LSE PRODUCTION	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
TRAN_LSE BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRAN_LSE TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562

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Allocation Factor	Total Retail 1	RS 2	GS-SEC 3	GS-PRI 4	GS-SUB 5	LGS-SEC 6	LGS-PRI 7	LGS-SUB 8	LGS-TRA 9	IGS-SEC 10	IGS-PRI 11	IGS-SUB 12	IGS-TRA 13	PS-SEC 14	PS-PRI 15	MW 16	OL 17	SL 18
TRANS_TOTAL PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL BULKTRAN	0.78300000	0.40276422	0.09392468	0.00130592	0.00018188	0.05590474	0.01001766	0.00203148	0.00007714	0.00264749	0.03574265	0.13670128	0.02476471	0.01534359	0.00030645	0.00020241	0.00089921	0.00018449
TRANS_TOTAL SUBTRAN	0.21700000	0.11087688	0.02599141	0.00036309	0.00006572	0.01502118	0.00269923	0.00070853	-	0.00067707	0.00949992	0.04684194	-	0.00411761	0.00008268	0.00005475	-	-
TRANS_TOTAL DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL TOTAL	1.00000000	0.51364110	0.11991609	0.00166901	0.00024760	0.07092592	0.01271689	0.00274001	0.00007714	0.00332456	0.04524257	0.18354322	0.02476471	0.01946120	0.00038913	0.00025716	0.00089921	0.00018449
WEATHER_FXNL PRODUCTION	0.52401823	0.50876495	0.01337143	0.00002652	-	0.00109376	0.00027592	(0.00013317)	(0.00001154)	0.00019923	(0.00011579)	(0.00032583)	(0.00015867)	0.00093128	0.00010014	-	-	-
WEATHER_FXNL BULKTRAN	(0.07075413)	(0.07061156)	(0.00007724)	(0.00000147)	-	(0.00002088)	0.00002439	(0.00000361)	0.00000320	(0.00001038)	(0.00001117)	(0.00001921)	(0.00002115)	(0.00000058)	(0.00000447)	-	-	-
WEATHER_FXNL SUBTRAN	(0.01866754)	(0.01863177)	(0.00002194)	(0.00000040)	-	(0.00000548)	0.00000624	(0.00000117)	-	(0.00000255)	(0.00000282)	(0.00000625)	-	(0.00000023)	(0.00000116)	-	-	-
WEATHER_FXNL DISTPRI	0.14578745	0.13989840	0.00498067	0.00000902	-	0.00038955	0.00012028	-	-	0.00006304	(0.00004987)	-	-	0.00034246	0.00003390	-	-	-
WEATHER_FXNL DISTSEC	0.06668900	0.06428956	0.00211021	-	-	0.00014157	-	-	-	0.00001866	-	-	-	0.00012901	-	-	-	-
WEATHER_FXNL ENERGY	0.29941886	0.29066988	0.00762244	0.00001638	-	0.00068671	0.00013149	(0.00007387)	(0.00001084)	0.00014937	(0.00007041)	(0.00023962)	(0.00010127)	0.00057163	0.00006697	-	-	-
WEATHER_FXNL CUSTOMER	0.05350813	0.05186851	0.00161826	0.00001140	-	0.00001476	0.00000677	(0.00001703)	(0.00000280)	0.00000037	(0.00000057)	(0.00000109)	(0.00000095)	0.00000961	0.00000089	-	-	-
WEATHER_FXNL TOTAL	1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-
WEATHER_FXNL_OM PRODUCTION	0.39437028	0.38204613	0.01077607	0.00002112	-	0.00084249	0.00021411	(0.00009333)	(0.00000825)	0.00014770	(0.00008314)	(0.00019999)	(0.00009317)	0.00072627	0.00007426	-	-	-
WEATHER_FXNL_OM BULKTRAN	0.00816819	0.00790789	0.00022772	0.00000044	-	0.00001776	0.00000462	(0.00000199)	(0.00000017)	0.00000310	(0.00000180)	(0.00000428)	(0.00000203)	0.00001536	0.00000156	-	-	-
WEATHER_FXNL_OM SUBTRAN	0.00225078	0.00217893	0.00006301	0.00000012	-	0.00000477	0.00000124	(0.00000069)	-	0.00000079	(0.00000048)	(0.00000147)	-	0.00000412	0.00000042	-	-	-
WEATHER_FXNL_OM DISTPRI	0.11063632	0.10706851	0.00303521	0.00000597	-	0.00023141	0.00005906	-	-	0.00003872	(0.00002237)	-	-	0.00019934	0.00002047	-	-	-
WEATHER_FXNL_OM DISTSEC	0.04949950	0.04816603	0.00117696	-	-	0.00007726	-	-	-	0.00001068	-	-	-	0.00006857	-	-	-	-
WEATHER_FXNL_OM ENERGY	0.39065203	0.37569920	0.01309912	0.00002575	-	0.00111648	0.00028216	(0.00012357)	(0.00001088)	0.00021650	(0.00014256)	(0.00038576)	(0.00018647)	0.00096311	0.00009896	-	-	-
WEATHER_FXNL_OM CUSTOMER	0.04442290	0.04318128	0.00122573	0.00000804	-	0.00000982	0.00000391	(0.00000927)	(0.00000268)	0.00000025	(0.00000031)	(0.00000050)	(0.00000038)	0.00000641	0.00000059	-	-	-
WEATHER_FXNL_OM TOTAL	1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

INPUTS FROM WORKPAPERS

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
CPG - 12 CP		Same as CPT	940,429	483,743	112,809	1,568	218	67,145	12,032	2,440	93	3,180	42,929	164,186	29,744	18,429	368	243	1,080	222
PROD_DEMAND	PRODUCTION		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
PROD_DEMAND	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_DEMAND	TOTAL		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
ENER			5,345,293,331	2,091,539,565	603,403,096	8,410,151	1,175,732	391,502,601	69,820,169	14,217,943	537,017	20,502,998	324,156,302	1,394,143,498	262,252,953	107,541,884	2,157,806	1,924,773	43,114,247	8,892,595
PROD_ENERGY	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	ENERGY		1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
PROD_ENERGY	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PROD_ENERGY	TOTAL		1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
CPT - 12 CP		Same as CPG	940,429	483,743	112,809	1,568	218	67,145	12,032	2,440	93	3,180	42,929	164,186	29,744	18,429	368	243	1,080	222
BULK_TRANS	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	BULKTRAN		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
BULK_TRANS	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BULK_TRANS	TOTAL		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
CPST - 12 CP			742,168	379,213	88,894	1,242	225	51,374	9,232	2,423	0	2,316	32,491	160,205	0	14,083	283	187	0	0
SUB_TRANS	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	SUBTRAN		1.00000000	0.51095336	0.11977610	0.00167323	0.00030285	0.06922202	0.01243885	0.00326510	-	0.00312013	0.04377844	0.21586148	-	0.01897515	0.00038099	0.00025231	-	-
SUB_TRANS	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB_TRANS	TOTAL		1.00000000	0.51095336	0.11977610	0.00167323	0.00030285	0.06922202	0.01243885	0.00326510	-	0.00312013	0.04377844	0.21586148	-	0.01897515	0.00038099	0.00025231	-	-
CPD - 12 CP			741,140	485,304	113,580	1,586	0	65,935	11,847	0	0	2,981	41,226	0	0	18,079	363	238	0	0
DIST_CPD	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	DISTPRI		1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DIST_CPD	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_CPD	TOTAL		1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
SECDEM		(NCP + SNCP) / 2	1,381,047	1,024,882	206,662	0	0	103,297	0	0	0	3,861	0	0	0	29,179	0	345	10,619	2,202
DISTSEC	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	DISTSEC		1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
DISTSEC	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTSEC	TOTAL		1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
TOTCUST			209,947	133,754	30,327	75	6	543	56	12	1	5	44	19	4	153	1	9	44,883	55
CUST_TOTAL	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_TOTAL	CUSTOMER		1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
CUST_TOTAL	TOTAL		1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
PRICUST		TOTCust excl Sub. & Tran.	209,905	133,754	30,327	75	0	543	56	0	0	5	44	0	0	153	1	9	44,883	55
DIST_PCUST	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_PCUST	CUSTOMER		1.00000000	0.63721207	0.14447965	0.00035730	-	0.00258688	0.00026679	-	-	0.00002382	0.00020962	-	-	0.00072890	0.00000476	0.00004288	0.21382530	0.00026202
DIST_PCUST	TOTAL		1.00000000	0.63721207	0.14447965	0.00035730	-	0.00258688	0.00026679	-	-	0.00002382	0.00020962	-	-	0.00072890	0.00000476	0.00004288	0.21382530	0.00026202
SECCUST		TOTCust excl Pri., Sub. & Tran.	209,729	133,754	30,327	0	0	543	0	0	0	5	0	0	0	153	0	9	44,883	55
DIST_SERV	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SERV	CUSTOMER		1.00000000	0.63774681	0.14460089	-	-	0.00258906	-	-	-	0.00002384	-	-	-	0.00072951	-	0.00004291	0.21400474	0.00026224
DIST_SERV	TOTAL		1.00000000	0.63774681	0.14460089	-	-	0.00258906	-	-	-	0.00002384	-	-	-	0.00072951	-	0.00004291	0.21400474	0.00026224

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
METER			32,526,922	14,551,652	10,971,227	1,576,800	265,607	1,682,235	554,664	653,233	81,653	10,474	393,291	1,098,052	326,611	320,489	7,247	33,687	0	0
DIST_METERS	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_METERS	CUSTOMER		1.00000000	0.44737255	0.33729681	0.04847677	0.00816576	0.05171824	0.01705246	0.02008284	0.00251032	0.00032201	0.01209125	0.03375825	0.01004125	0.00985304	0.00022280	0.00103567	-	-
DIST_METERS	TOTAL		1.00000000	0.44737255	0.33729681	0.04847677	0.00816576	0.05171824	0.01705246	0.02008284	0.00251032	0.00032201	0.01209125	0.03375825	0.01004125	0.00985304	0.00022280	0.00103567	-	-
DIR371			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
DIST_OL	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OL	CUSTOMER		1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000	-
DIST_OL	TOTAL		1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000	-
DIR373			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
DIST_SL	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_SL	CUSTOMER		1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000
DIST_SL	TOTAL		1.00000000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00000000
DIR902		Weighted TOTCUST	362,552	267,508	90,981	263	21	2,444	280	60	5	30	264	114	24	536	4	18	0	0
CUST_902	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_902	CUSTOMER		1.00000000	0.73784726	0.25094607	0.00072541	0.00005792	0.00674110	0.00077230	0.00016549	0.00001379	0.00008275	0.00072817	0.00031444	0.00006620	0.00147841	0.00001103	0.00004965	-	-
CUST_902	TOTAL		1.00000000	0.73784726	0.25094607	0.00072541	0.00005792	0.00674110	0.00077230	0.00016549	0.00001379	0.00008275	0.00072817	0.00031444	0.00006620	0.00147841	0.00001103	0.00004965	-	-
DIR903		Calculated	5,312,483	4,579,245	710,220	1,757	140	12,716	1,311	281	23	117	1,030	445	93	3,583	23	211	0	1,288
CUST_903	PRODUCTION	Weighted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	BULKTRAN	Average	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_903	CUSTOMER		1.00000000	0.86197829	0.13368889	0.00033073	0.00002635	0.00239361	0.00024678	0.00005289	0.00000433	0.00002202	0.00019388	0.00008376	0.00001751	0.00067445	0.00000433	0.00003972	-	0.00024245
CUST_903	TOTAL		1.00000000	0.86197829	0.13368889	0.00033073	0.00002635	0.00239361	0.00024678	0.00005289	0.00000433	0.00002202	0.00019388	0.00008376	0.00001751	0.00067445	0.00000433	0.00003972	-	0.00024245
CUST451		Spread by class; alloc. to	672,205	613,678	52,465	388	13	940	177	130	13	0	163	67	0	0	0	0	4,171	0
CUST_451	PRODUCTION	functions below:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	BULKTRAN	MISC_SERV_REV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_451	CUSTOMER		1.00000000	0.91293234	0.07804935	0.00057752	0.00001934	0.00139810	0.00026331	0.00019339	0.00001934	-	0.00024249	0.00009967	-	-	-	-	0.00620515	-
CUST_451	TOTAL		1.00000000	0.91293234	0.07804935	0.00057752	0.00001934	0.00139810	0.00026331	0.00019339	0.00001934	-	0.00024249	0.00009967	-	-	-	-	0.00620515	-
CUSTDEP		Spread by class; alloc. to	30,270,985	20,678,617	4,230,491	408,313	222,778	1,398,236	610,817	131,313	0	0	1,636,873	576,986	234,143	28,410	0	0	114,007	0
CUST_DEP	PRODUCTION	functions below:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	BULKTRAN	CUST_DEP_FXNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_DEP	CUSTOMER		1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-
CUST_DEP	TOTAL		1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-
FORF DISCOUNTS		Spread by class; alloc. to	4,066,117	2,436,674	534,321	17,749	2,117	148,851	133,541	24,934	680	8,034	441,949	227,797	74,360	0	0	0	15,111	0
FORF_DISC	PRODUCTION	functions below:	1.00000000	0.59926310	0.13140814	0.00436502	0.00052055	0.03660756	0.03284234	0.00613221	0.00016717	0.00197583	0.10869064	0.05602325	0.01828781	-	-	-	0.00371639	-
FORF_DISC	BULKTRAN	FORF_DISC_FXNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORF_DISC	TOTAL		1.00000000	0.59926310	0.13140814	0.00436502	0.00052055	0.03660756	0.03284234	0.00613221	0.00016717	0.00197583	0.10869064	0.05602325	0.01828781	-	-	-	0.00371639	-
YEAR END CUST ADJ		Spread by class; alloc. to	(14,546,115)	(50,187)	(288,785)	(9,299)	35,696	(896,325)	(894,357)	(90,648)	3,536	30,132	(1,080,979)	(9,522,851)	(1,654,946)	(111,061)	-	-	(18,040)	2,000
REVYEC	PRODUCTION	functions below:	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)
REVYEC	BULKTRAN	REVYEC_FXNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REVYEC	TOTAL		1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
FUELR		Set to Energy Allocator	5,345,293,331	2,091,539,565	603,403,096	8,410,151	1,175,732	391,502,601	69,820,169	14,217,943	537,017	20,502,998	324,156,302	1,394,143,498	262,252,953	107,541,884	2,157,806	1,924,773	43,114,247	8,892,595
FUELREV	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	ENERGY		1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
FUELREV	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUELREV	TOTAL		1.00000000	0.39128621	0.11288494	0.00157338	0.00021996	0.07324249	0.01306199	0.00265990	0.00010047	0.00383571	0.06064331	0.26081702	0.04906241	0.02011899	0.00040368	0.00036009	0.00806583	0.00166363
WEATHER		Spread by class; alloc. to	4,254,356	4,110,763	125,945	261	-	9,785	2,404	(974)	(94)	1,777	(1,066)	(2,519)	(1,200)	8,437	835	-	-	-
WEATHER_NORM	PRODUCTION	functions below:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	BULKTRAN	WEATHER_FXNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	ENERGY		1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-
WEATHER_NORM	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHER_NORM	TOTAL		1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-
CUSTOMER SPEC ADJ		Spread by class; alloc. to	(9,504,100)	-	-	-	-	-	(18,195)	(23,855)	-	-	(2,742,296)	(5,007,668)	(1,712,085)	-	-	-	-	-
CUST_SPEC	PRODUCTION	functions below:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	BULKTRAN	CUST_SPEC_FXNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	ENERGY		1.00000000	-	-	-	-	-	0.00191447	0.00250997	-	-	0.28853821	0.52689557	0.18014178	-	-	-	-	-
CUST_SPEC	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUST_SPEC	TOTAL		1.00000000	-	-	-	-	-	0.00191447	0.00250997	-	-	0.28853821	0.52689557	0.18014178	-	-	-	-	-

INTERNALLY DERIVED

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Bulk Transmission Plant		$505,374,228																		
Subtransmission Plant		$140,023,289																		
Total Transmisison Plant		$645,397,517																		
BULK_TRANS	BULKTRAN	78.30%	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
SUB_TRANS	SUBTRAN	21.70%	1.00000000	0.51095336	0.11977610	0.00167323	0.00030285	0.06922202	0.01243885	0.00326510	-	0.00312013	0.04377844	0.21586148	-	0.01897515	0.00038099	0.00025231	-	-
TRANS_TOTAL	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL	BULKTRAN		0.78300000	0.40	0.09392468	0.00130592	0.00018188	0.05590474	0.01001766	0.00203148	0.00007714	0.00264749	0.03574265	0.13670128	0.02476471	0.01534359	0.00030645	0.00020241	0.00089921	0.00018449
TRANS_TOTAL	SUBTRAN		0.21700000	0.11	0.02599141	0.00036309	0.00006572	0.01502118	0.00269923	0.00070853	-	0.00067707	0.00949992	0.04684194	-	0.00411761	0.00008268	0.00005475	-	-
TRANS_TOTAL	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANS_TOTAL	TOTAL		1.00000000	0.51364110	0.11991609	0.00166901	0.00024760	0.07092592	0.01271689	0.00274001	0.00007714	0.00332456	0.04524257	0.18354322	0.02476471	0.01946120	0.00038913	0.00025716	0.00089921	0.00018449
DIST_CPD	DISTPRI	57.25%	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DISTSEC	DISTSEC	42.75%	1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
DIST_POLES	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES	DISTPRI		0.57249889	0.37	0.08773553	0.00122547	-	0.05093220	0.00915146	-	-	0.00230299	0.03184541	-	-	0.01396519	0.00028030	0.00018403	-	-
DIST_POLES	DISTSEC		0.42750111	0.32	0.06397192	-	-	0.03197544	-	-	-	0.00119517	-	-	-	0.00903232	-	0.00010679	0.00328710	0.00068163
DIST_POLES	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_POLES	TOTAL		1.00000000	0.69212707	0.15170745	0.00122547	-	0.08290763	0.00915146	-	-	0.00349816	0.03184541	-	-	0.02299750	0.00028030	0.00029083	0.00328710	0.00068163
DIST_CPD	DISTPRI	83.62%	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DISTSEC	DISTSEC	16.38%	1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
DIST_OHLINES	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES	DISTPRI		0.83623617	0.54757335	0.12815330	0.00179001	-	0.07439550	0.01336732	-	-	0.00336392	0.04651587	-	-	0.02039863	0.00040943	0.00026881	-	-
DIST_OHLINES	DISTSEC		0.16376383	0.12152997	0.02450587	-	-	0.01224890	-	-	-	0.00045784	-	-	-	0.00346003	-	0.00004091	0.00125920	0.00026111
DIST_OHLINES	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_OHLINES	TOTAL		1.00000000	0.66910333	0.15265917	0.00179001	-	0.08664441	0.01336732	-	-	0.00382176	0.04651587	-	-	0.02385866	0.00040943	0.00030972	0.00125920	0.00026111
DIST_CPD	DISTPRI	81.80%	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DISTSEC	DISTSEC	18.20%	1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
DIST_UGLINES	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES	DISTPRI		0.81797379	0.53561502	0.12535459	0.00175092	-	0.07277080	0.01307540	-	-	0.00329046	0.04550002	-	-	0.01995315	0.00040049	0.00026294	-	-
DIST_UGLINES	DISTSEC		0.18202621	0.13508258	0.02723868	-	-	0.01361486	-	-	-	0.00050889	-	-	-	0.00384588	-	0.00004547	0.00139962	0.00029023
DIST_UGLINES	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_UGLINES	TOTAL		1.00000000	0.67069759	0.15259327	0.00175092	-	0.08638566	0.01307540	-	-	0.00379935	0.04550002	-	-	0.02379903	0.00040049	0.00030842	0.00139962	0.00029023
DIST_CPD	DISTPRI	20.62%	1.00000000	0.65480707	0.15325013	0.00214056	-	0.08896471	0.01598511	-	-	0.00402270	0.05562528	-	-	0.02439339	0.00048961	0.00032146	-	-
DISTSEC	DISTSEC	79.38%	1.00000000	0.74210508	0.14964154	-	-	0.07479615	-	-	-	0.00279570	-	-	-	0.02112817	-	0.00024981	0.00768909	0.00159444
DIST_TRANSF	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF	DISTPRI		0.20623231	0.13504237	0.03160513	0.00044145	-	0.01834740	0.00329665	-	-	0.00082961	0.01147173	-	-	0.00503070	0.00010097	0.00006629	-	-
DIST_TRANSF	DISTSEC		0.79376769	0.58905904	0.11878062	-	-	0.05937077	-	-	-	0.00221914	-	-	-	0.01677086	-	0.00019829	0.00610335	0.00126562
DIST_TRANSF	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST_TRANSF	TOTAL		1.00000000	0.72410141	0.15038575	0.00044145	-	0.07771816	0.00329665	-	-	0.00304875	0.01147173	-	-	0.02180157	0.00010097	0.00026459	0.00610335	0.00126562

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Show under production as it is capturing load (LSE) charges for transmission service, whereas the bulktran and subtran buckets are capturing the costs and revenues as a transmission owner (TO).

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
TRAN_LSE	PRODUCTION	Same as BULK_TR.	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
TRAN_LSE	BULKTRAN																			
TRAN_LSE	SUBTRAN																			
TRAN_LSE	DISTPRI																			
TRAN_LSE	DISTSEC																			
TRAN_LSE	ENERGY																			
TRAN_LSE	CUSTOMER																			
TRAN_LSE	TOTAL		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
Production EPIS	PRODUCTION		871,218,449	448,142,556	104,506,913	1,453,060	202,373	62,203,371	11,146,321	2,260,360	85,836	2,945,776	39,769,674	152,103,040	27,554,876	17,072,313	340,978	225,211	1,000,517	205,273
	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL		871,218,449	448,142,556	104,506,913	1,453,060	202,373	62,203,371	11,146,321	2,260,360	85,836	2,945,776	39,769,674	152,103,040	27,554,876	17,072,313	340,978	225,211	1,000,517	205,273
RB_GUP_EPIS_P	PRODUCTION		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
RB_GUP_EPIS_P	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_P	TOTAL		1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
Transmission EPIS	PRODUCTION		12,011,524	6,178,560	1,440,841	20,033	2,790	857,600	153,675	31,164	1,183	40,614	548,306	2,097,051	379,900	235,377	4,701	3,105	13,794	2,830
	BULKTRAN		496,423,294	255,353,183	59,548,401	827,959	115,313	35,443,697	6,351,212	1,287,961	48,910	1,678,513	22,660,898	86,668,840	15,700,864	9,727,863	194,290	128,326	570,098	116,966
	SUBTRAN		137,444,760	70,227,862	16,462,597	229,976	41,625	9,514,203	1,709,655	448,771	-	428,845	6,017,117	29,669,029	-	2,608,035	52,365	34,678	-	-
	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL		645,879,579	331,759,605	77,451,840	1,077,968	159,728	45,815,500	8,214,542	1,767,896	50,093	2,147,972	29,226,322	118,434,920	16,080,764	12,571,275	251,357	166,110	583,892	119,796
RB_GUP_EPIS_T	PRODUCTION		0.01859716	0.00956612	0.00223082	0.00003102	0.00000432	0.00132780	0.00023793	0.00004825	0.00000183	0.00006288	0.00084893	0.00324681	0.00058819	0.00036443	0.00000728	0.00000481	0.00002136	0.00000438
RB_GUP_EPIS_T	BULKTRAN		0.76860039	0.39535726	0.09219737	0.00128191	0.00017854	0.05487663	0.00983343	0.00199412	0.00007573	0.00259880	0.03508533	0.13418730	0.02430927	0.01506142	0.00030082	0.00019868	0.00088267	0.00018109
RB_GUP_EPIS_T	SUBTRAN		0.21280246	0.10873213	0.02548865	0.00035607	0.00006445	0.01473061	0.00264702	0.00069482	-	0.00066397	0.00931616	0.04593585	-	0.00403796	0.00008108	0.00005369	-	-
RB_GUP_EPIS_T	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_T	TOTAL		1.00000000	0.51365551	0.11991684	0.00166899	0.00024730	0.07093505	0.01271838	0.00273719	0.00007756	0.00332565	0.04525042	0.18336997	0.02489747	0.01946381	0.00038917	0.00025718	0.00090403	0.00018548
Distribution EPIS	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		542,152,062	355,005,002	83,084,872	1,160,509	-	48,232,398	8,666,358	-	-	2,180,913	30,157,361	-	-	13,224,925	265,445	174,278	-	-
	DISTSEC		261,163,194	193,810,534	39,080,863	-	-	19,534,002	-	-	-	730,135	-	-	-	5,517,901	-	65,241	2,008,108	416,410
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		114,470,787	53,529,226	18,087,804	1,223,063	206,021	1,476,335	430,231	506,688	63,335	9,703	305,061	851,717	253,340	296,911	5,621	28,972	32,812,554	4,384,205
	TOTAL		917,786,043	602,344,762	140,253,539	2,383,572	206,021	69,242,735	9,096,590	506,688	63,335	2,920,751	30,462,421	851,717	253,340	19,039,737	271,066	268,492	34,820,663	4,800,615
RB_GUP_EPIS_D	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	DISTPRI		0.59071727	0.38680584	0.09052750	0.00126447	-	0.05255299	0.00944268	-	-	0.00237628	0.03285881	-	-	0.01440959	0.00028922	0.00018989	-	-
RB_GUP_EPIS_D	DISTSEC		0.28455782	0.21117180	0.04258167	-	-	0.02128383	-	-	-	0.00079554	-	-	-	0.00601219	-	0.00007109	0.00218799	0.00045371
RB_GUP_EPIS_D	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	CUSTOMER		0.12472492	0.05832430	0.01970808	0.00133262	0.00022448	0.00160858	0.00046877	0.00055208	0.00006901	0.00001057	0.00033239	0.00092801	0.00027603	0.00032351	0.00000612	0.00003157	0.03575186	0.00477694
RB_GUP_EPIS_D	TOTAL		1.00000000	0.65630194	0.15281725	0.00259709	0.00022448	0.07544540	0.00991145	0.00055208	0.00006901	0.00318239	0.03319120	0.00092801	0.00027603	0.02074529	0.00029535	0.00029254	0.03793985	0.00523065

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ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Gen & Int Plant	PRODUCTION	43,245,611	22,244,936	5,187,523	72,127	10,045	3,087,656	553,282	112,200	4,261	146,223	1,974,090	7,550,103	1,367,771	847,437	16,925	11,179	49,664	10,189
	BULKTRAN	6,703,412	3,448,141	804,107	11,180	1,557	478,611	85,763	17,392	660	22,666	306,000	1,170,326	212,015	131,359	2,624	1,733	7,698	1,579
	SUBTRAN	1,857,778	949,238	222,517	3,108	563	128,599	23,109	6,066	-	5,797	81,331	401,023	-	35,252	708	469	-	-
	DISTPRI	15,175,409	9,936,965	2,325,633	32,484	-	1,350,076	242,581	-	-	61,046	844,136	-	-	370,180	7,430	4,878	-	-
	DISTSEC	6,012,088	4,461,601	899,658	-	-	449,681	-	-	-	16,808	-	-	-	127,024	-	1,502	46,228	9,586
	ENERGY	17,297,093	6,768,114	1,952,581	27,215	3,805	1,266,882	225,934	46,009	1,738	66,347	1,048,953	4,511,376	848,637	348,000	6,983	6,228	139,515	28,776
	CUSTOMER	11,447,200	8,838,730	1,789,764	45,747	7,376	73,398	17,727	18,045	2,229	558	12,888	30,313	8,926	16,264	243	1,324	481,064	102,606
	TOTAL	101,738,591	56,647,725	13,181,784	191,861	23,346	6,834,903	1,148,396	199,712	8,888	319,443	4,267,398	13,663,140	2,437,350	1,875,515	34,912	27,313	724,169	152,736
RB_GUP_EPIS_G	PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
RB_GUP_EPIS_G	BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
RB_GUP_EPIS_G	SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
RB_GUP_EPIS_G	DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
RB_GUP_EPIS_G	DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
RB_GUP_EPIS_G	ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
RB_GUP_EPIS_G	CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
RB_GUP_EPIS_G	TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126
Production Land	Allocate on PROD_DEMAND	4,766,208	Source: JCOS, Sch 4, KY PSC Juris.																
Prod. GUP less Land	PRODUCTION	866,452,241	445,690,885	103,935,183	1,445,111	201,266	61,863,073	11,085,342	2,247,994	85,367	2,929,660	39,552,105	151,270,924	27,404,131	16,978,915	339,112	223,979	995,044	204,150
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	866,452,241	445,690,885	103,935,183	1,445,111	201,266	61,863,073	11,085,342	2,247,994	85,367	2,929,660	39,552,105	151,270,924	27,404,131	16,978,915	339,112	223,979	995,044	204,150
RB_GUP-Land_P	PRODUCTION	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
RB_GUP-Land_P	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_P	TOTAL	1.00000000	0.51438598	0.11995489	0.00166785	0.00023229	0.07139813	0.01279394	0.00259448	0.00009852	0.00338121	0.04564834	0.17458657	0.03162798	0.01959590	0.00039138	0.00025850	0.00114841	0.00023562
Transmission Land	Allocate on BULK_TRANS	35,467,646	Source: JCOS, Sch 4, KY PSC Juris.																
Trans. GUP less Land	PRODUCTION	12,011,524	6,178,560	1,440,841	20,033	2,790	857,600	153,675	31,164	1,183	40,614	548,306	2,097,051	379,900	235,377	4,701	3,105	13,794	2,830
	BULKTRAN	460,955,648	237,109,123	55,293,884	768,804	107,074	32,911,373	5,897,441	1,195,941	45,415	1,558,590	21,041,859	80,476,665	14,579,094	9,032,843	180,409	119,158	529,367	108,609
	SUBTRAN	137,444,760	70,227,862	16,462,597	229,976	41,625	9,514,203	1,709,655	448,771	-	428,845	6,017,117	29,669,029	-	2,608,035	52,365	34,678	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	610,411,933	313,515,545	73,197,322	1,018,813	151,489	43,283,177	7,760,770	1,675,876	46,599	2,028,049	27,607,283	112,242,745	14,958,994	11,876,254	237,476	156,941	543,161	111,439
RB_GUP-Land_T	PRODUCTION	0.01967774	0.01012195	0.00236044	0.00003282	0.00000457	0.00140495	0.00025176	0.00005105	0.00000194	0.00006653	0.00089826	0.00343547	0.00062237	0.00038560	0.00000770	0.00000509	0.00002260	0.00000464
RB_GUP-Land_T	BULKTRAN	0.75515504	0.38844117	0.09058454	0.00125948	0.00017541	0.05391666	0.00966141	0.00195924	0.00007440	0.00255334	0.03447157	0.13183993	0.02388403	0.01479795	0.00029555	0.00019521	0.00086723	0.00017793
RB_GUP-Land_T	SUBTRAN	0.22516722	0.11504995	0.02696965	0.00037676	0.00006819	0.01558653	0.00280082	0.00073519	-	0.00070255	0.00985747	0.04860493	-	0.00427258	0.00008579	0.00005681	-	-
RB_GUP-Land_T	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_T	TOTAL	1.00000000	0.51361307	0.11991463	0.00166906	0.00024817	0.07090814	0.01271399	0.00274548	0.00007634	0.00332243	0.04522730	0.18388033	0.02450639	0.01945613	0.00038904	0.00025711	0.00088983	0.00018256
Distribution Land	Allocate on DIST_CPD	7,723,751	Source: JCOS, Sch 4, KY PSC Juris.																
Dist. GUP less Land	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	534,428,310	349,947,435	81,901,207	1,143,976	-	47,545,257	8,542,893	-	-	2,149,842	29,727,725	-	-	13,036,517	261,663	171,795	-	-
	DISTSEC	261,163,194	193,810,534	39,080,863	-	-	19,534,002	-	-	-	730,135	-	-	-	5,517,901	-	65,241	2,008,108	416,410
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	114,470,787	53,529,226	18,087,804	1,223,063	206,021	1,476,335	430,231	506,688	63,335	9,703	305,061	851,717	253,340	296,911	5,621	28,972	32,812,554	4,384,205
	TOTAL	910,062,291	597,287,195	139,069,873	2,367,039	206,021	68,555,593	8,973,125	506,688	63,335	2,889,681	30,032,786	851,717	253,340	18,851,329	267,285	266,009	34,820,663	4,800,615
RB_GUP-Land_D	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D	DISTPRI	0.58724366	0.38453130	0.08999517	0.00125703	-	0.05224396	0.00938715	-	-	0.00236230	0.03266559	-	-	0.01432486	0.00028752	0.00018877	-	-
RB_GUP-Land_D	DISTSEC	0.28697288	0.21296403	0.04294306	-	-	0.02146447	-	-	-	0.00080229	-	-	-	0.00606321	-	0.00007169	0.00220656	0.00045756
RB_GUP-Land_D	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP-Land_D	CUSTOMER	0.12578346	0.05881930	0.01987535	0.00134393	0.00022638	0.00162223	0.00047275	0.00055676	0.00006959	0.00001066	0.00033521	0.00093589	0.00027838	0.00032625	0.00000618	0.00003184	0.03605528	0.00481748
RB_GUP-Land_D	TOTAL	1.00000000	0.65631463	0.15281358	0.00260096	0.00022638	0.07533066	0.00985990	0.00055676	0.00006959	0.00317526	0.03300080	0.00093589	0.00027838	0.02071433	0.00029370	0.00029230	0.03826185	0.00527504
General Land	Allocate on LABOR_M	1,520,831	Source: JCOS, Sch 4, KY PSC Juris.																
Gen. GUP less Land	PRODUCTION	42,599,158	21,912,409	5,109,977	71,049	9,895	3,041,500	545,011	110,523	4,197	144,037	1,944,581	7,437,241	1,347,325	834,769	16,672	11,012	48,921	10,037
	BULKTRAN	6,603,206	3,396,597	792,087	11,013	1,534	471,457	84,481	17,132	651	22,327	301,425	1,152,831	208,846	129,396	2,584	1,707	7,583	1,556
	SUBTRAN	1,830,007	935,048	219,191	3,062	554	126,677	22,763	5,975	-	5,710	80,115	395,028	-	34,725	697	462	-	-
	DISTPRI	14,948,560	9,788,423	2,290,869	31,998	-	1,329,894	238,954	-	-	60,134	831,518	-	-	364,646	7,319	4,805	-	-
	DISTSEC	5,922,217	4,394,907	886,210	-	-	442,959	-	-	-	16,557	-	-	-	125,126	-	1,479	45,536	9,443
	ENERGY	17,038,529	6,666,941	1,923,393	26,808	3,748	1,247,944	222,557	45,321	1,712	65,355	1,033,273	4,443,938	835,951	342,798	6,878	6,135	137,430	28,346
	CUSTOMER	11,276,083	8,706,605	1,763,010	45,063	7,266	72,300	17,462	17,776	2,196	549	12,695	29,860	8,793	16,020	239	1,304	473,873	101,072
	TOTAL	100,217,760	55,800,931	12,984,737	188,993	22,997	6,732,732	1,131,229	196,726	8,755	314,668	4,203,607	13,458,898	2,400,915	1,847,480	34,391	26,905	713,344	150,453
RB_GUP-Land_G	PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
RB_GUP-Land_G	BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
RB_GUP-Land_G	SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
RB_GUP-Land_G	DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
RB_GUP-Land_G	DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
RB_GUP-Land_G	ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
RB_GUP-Land_G	CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
RB_GUP-Land_G	TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
CWIP	PRODUCTION		12,329,196	6,341,965	1,478,947	20,563	2,864	880,282	157,739	31,988	1,215	41,688	562,807	2,152,512	389,948	241,602	4,825	3,187	14,159	2,905
	BULKTRAN		38,228,071	19,663,984	4,585,644	63,759	8,880	2,729,413	489,088	99,182	3,766	129,257	1,745,048	6,674,108	1,209,077	749,114	14,962	9,882	43,902	9,007
	SUBTRAN		10,584,459	5,408,165	1,267,765	17,710	3,205	732,678	131,658	34,559	-	33,025	463,371	2,284,777	-	200,842	4,033	2,671	-	-
	DISTPRI		13,814,591	9,045,892	2,117,088	29,571	-	1,229,011	220,828	-	-	55,572	768,440	-	-	336,985	6,764	4,441	-	-
	DISTSEC		6,474,932	4,805,080	968,919	-	-	484,300	-	-	-	18,102	-	-	-	136,803	-	1,618	49,786	10,324
	ENERGY		2,395,388	937,282	270,403	3,769	527	175,444	31,289	6,371	241	9,188	145,264	624,758	117,523	48,193	967	863	19,321	3,985
	CUSTOMER		4,058,371	2,380,514	638,637	32,759	5,472	42,060	11,750	13,446	1,677	287	8,375	22,599	6,709	8,667	155	809	775,525	108,929
	TOTAL		87,885,008	48,582,882	11,327,403	168,131	20,949	6,273,187	1,042,352	185,547	6,899	287,119	3,693,307	11,758,754	1,723,257	1,722,205	31,706	23,470	902,693	135,150
RB_GUP_CWIP	PRODUCTION		0.14028782	0.07216209	0.01682821	0.00023398	0.00003259	0.01001629	0.00179483	0.00036397	0.00001382	0.00047434	0.00640391	0.02449237	0.00443702	0.00274907	0.00005491	0.00003626	0.00016111	0.00003305
RB_GUP_CWIP	BULKTRAN		0.43497830	0.22374674	0.05217777	0.00072548	0.00010104	0.03105664	0.00556509	0.00112854	0.00004286	0.00147075	0.01985604	0.07594137	0.01375748	0.00852379	0.00017024	0.00011244	0.00049953	0.00010249
RB_GUP_CWIP	SUBTRAN		0.12043532	0.06153683	0.01442527	0.00020152	0.00003647	0.00833678	0.00149808	0.00039323	-	0.00037577	0.00527247	0.02599735	-	0.00228528	0.00004589	0.00003039	-	-
RB_GUP_CWIP	DISTPRI		0.15718939	0.10292872	0.02408929	0.00033647	-	0.01398431	0.00251269	-	-	0.00063233	0.00874370	-	-	0.00383438	0.00007696	0.00005053	-	-
RB_GUP_CWIP	DISTSEC		0.07367505	0.05467463	0.01102485	-	-	0.00551061	-	-	-	0.00020597	-	-	-	0.00155662	-	0.00001840	0.00056649	0.00011747
RB_GUP_CWIP	ENERGY		0.02725593	0.01066487	0.00307678	0.00004288	0.00000600	0.00199629	0.00035602	0.00007250	0.00000274	0.00010455	0.00165289	0.00710881	0.00133724	0.00054836	0.00001100	0.00000981	0.00021984	0.00004534
RB_GUP_CWIP	CUSTOMER		0.04617819	0.02708669	0.00726673	0.00037275	0.00006227	0.00047858	0.00013370	0.00015299	0.00001908	0.00000326	0.00009530	0.00025714	0.00007634	0.00009862	0.00000176	0.00000921	0.00882432	0.00123945
RB_GUP_CWIP	TOTAL		1.00000000	0.55280056	0.12888891	0.00191308	0.00023836	0.07137950	0.01186040	0.00211124	0.00007850	0.00326698	0.04202431	0.13379704	0.01960809	0.01959612	0.00036076	0.00026705	0.01027129	0.00153780
T&D Plant	PRODUCTION		12,011,524	6,178,560	1,440,841	20,033	2,790	857,600	153,675	31,164	1,183	40,614	548,306	2,097,051	379,900	235,377	4,701	3,105	13,794	2,830
	BULKTRAN		496,423,294	255,353,183	59,548,401	827,959	115,313	35,443,697	6,351,212	1,287,961	48,910	1,678,513	22,660,898	86,668,840	15,700,864	9,727,863	194,290	128,326	570,098	116,966
	SUBTRAN		137,444,760	70,227,862	16,462,597	229,976	41,625	9,514,203	1,709,655	448,771	-	428,845	6,017,117	29,669,029	-	2,608,035	52,365	34,678	-	-
	DISTPRI		542,152,062	355,005,002	83,084,872	1,160,509	-	48,232,398	8,666,358	-	-	2,180,913	30,157,361	-	-	13,224,925	265,445	174,278	-	-
	DISTSEC		261,163,194	193,810,534	39,080,863	-	-	19,534,002	-	-	-	730,135	-	-	-	5,517,901	-	65,241	2,008,108	416,410
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		114,470,787	53,529,226	18,087,804	1,223,063	206,021	1,476,335	430,231	506,688	63,335	9,703	305,061	851,717	253,340	296,911	5,621	28,972	32,812,554	4,384,205
	TOTAL		1,563,665,622	934,104,366	217,705,379	3,461,540	365,749	115,058,235	17,311,131	2,274,583	113,428	5,068,723	59,688,743	119,286,636	16,334,104	31,611,013	522,423	434,601	35,404,555	4,920,411
TDPLANT	PRODUCTION		0.00768165	0.00395133	0.00092145	0.00001281	0.00000178	0.00054846	0.00009828	0.00001993	0.00000076	0.00002597	0.00035065	0.00134111	0.00024295	0.00015053	0.00000301	0.00000199	0.00000882	0.00000181
TDPLANT	BULKTRAN		0.31747407	0.16330421	0.03808257	0.00052950	0.00007375	0.02266706	0.00406175	0.00082368	0.00003128	0.00107345	0.01449216	0.05542671	0.01004106	0.00622119	0.00012425	0.00008207	0.00036459	0.00007480
TDPLANT	SUBTRAN		0.08789907	0.04491233	0.01052821	0.00014707	0.00002662	0.00608455	0.00109336	0.00028700	-	0.00027426	0.00384808	0.01897402	-	0.00166790	0.00003349	0.00002218	-	-
TDPLANT	DISTPRI		0.34671867	0.22703383	0.05313468	0.00074217	-	0.03084572	0.00554233	-	-	0.00139474	0.01928632	-	-	0.00845764	0.00016976	0.00011145	-	-
TDPLANT	DISTSEC		0.16701985	0.12394628	0.02499311	-	-	0.01249244	-	-	-	0.00046694	-	-	-	0.00352882	-	0.00004172	0.00128423	0.00026630
TDPLANT	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDPLANT	CUSTOMER		0.07320669	0.03423317	0.01156757	0.00078218	0.00013176	0.00094415	0.00027514	0.00032404	0.00004050	0.00000621	0.00019509	0.00054469	0.00016202	0.00018988	0.00000359	0.00001853	0.02098438	0.00280380
TDPLANT	TOTAL		1.00000000	0.59738115	0.13922758	0.00221373	0.00023390	0.07358238	0.01107087	0.00145465	0.00007254	0.00324156	0.03817232	0.07628654	0.01044603	0.02021597	0.00033410	0.00027794	0.02264202	0.00314672
Electric Plant in Service	PRODUCTION		926,475,584	476,566,051	111,135,276	1,545,220	215,209	66,148,628	11,853,277	2,403,724	91,280	3,132,612	42,292,071	161,750,193	29,302,548	18,155,127	362,604	239,495	1,063,975	218,293
	BULKTRAN		503,126,706	258,801,324	60,352,508	839,139	116,870	35,922,308	6,436,975	1,305,353	49,570	1,701,179	22,966,898	87,839,165	15,912,879	9,859,223	196,914	130,059	577,797	118,545
	SUBTRAN		139,302,539	71,177,100	16,685,115	233,085	42,187	9,642,803	1,732,763	454,837	-	434,642	6,098,448	30,070,052	-	2,643,287	53,073	35,147	-	-
	DISTPRI		557,327,470	364,941,967	85,410,506	1,192,993	-	49,582,474	8,908,939	-	-	2,241,959	31,001,497	-	-	13,595,105	272,875	179,157	-	-
	DISTSEC		267,175,282	198,272,135	39,980,521	-	-	19,983,683	-	-	-	746,943	-	-	-	5,644,926	-	66,743	2,054,336	425,996
	ENERGY		17,297,093	6,768,114	1,952,581	27,215	3,805	1,266,882	225,934	46,009	1,738	66,347	1,048,953	4,511,376	848,637	348,000	6,983	6,228	139,515	28,776
	CUSTOMER		125,917,988	62,367,956	19,877,568	1,268,810	213,397	1,549,732	447,958	524,733	65,564	10,261	317,948	882,029	262,266	313,175	5,864	30,296	33,293,618	4,486,811
	TOTAL		2,536,622,662	1,438,894,647	335,394,075	5,106,461	591,467	184,096,509	29,605,848	4,734,655	208,152	8,333,943	103,725,815	285,052,816	46,326,330	50,558,841	898,314	687,126	37,129,242	5,278,421
RB_GUP_EPIS	PRODUCTION		0.36523981	0.18787424	0.04381230	0.00060916	0.00008484	0.02607744	0.00467286	0.00094761	0.00003598	0.00123495	0.01667259	0.06376597	0.01155180	0.00715720	0.00014295	0.00009442	0.00041945	0.00008606
RB_GUP_EPIS	BULKTRAN		0.19834511	0.10202594	0.02379247	0.00033081	0.00004607	0.01416147	0.00253762	0.00051460	0.00001954	0.00067065	0.00905412	0.03462839	0.00627325	0.00388675	0.00007763	0.00005127	0.00022778	0.00004673
RB_GUP_EPIS	SUBTRAN		0.05491654	0.02805979	0.00657769	0.00009189	0.00001663	0.00380143	0.00068310	0.00017931	-	0.00017135	0.00240416	0.01185437	-	0.00104205	0.00002092	0.00001386	-	-
RB_GUP_EPIS	DISTPRI		0.21971241	0.14386924	0.03367095	0.00047031	-	0.01954665	0.00351213	-	-	0.00088384	0.01222156	-	-	0.00535953	0.00010757	0.00007063	-	-
RB_GUP_EPIS	DISTSEC		0.10532717	0.07816383	0.01576132	-	-	0.00787807	-	-	-	0.00029446	-	-	-	0.00222537	-	0.00002631	0.00080987	0.00016794
RB_GUP_EPIS	ENERGY		0.00681895	0.00266816	0.00076976	0.00001073	0.00000150	0.00049944	0.00008907	0.00001814	0.00000069	0.00002616	0.00041352	0.00177850	0.00033455	0.00013719	0.00000275	0.00000246	0.00005500	0.00001134
RB_GUP_EPIS	CUSTOMER		0.04964002	0.02458701	0.00783623	0.00050020	0.00008413	0.00061094	0.00017660	0.00020686	0.00002585	0.00000405	0.00012534	0.00034772	0.00010339	0.00012346	0.00000231	0.00001194	0.01312518	0.00176881
RB_GUP_EPIS	TOTAL		1.00000000	0.56724820	0.13222072	0.00201309	0.00023317	0.07257544	0.01167136	0.00186652	0.00008206	0.00328545	0.04089131	0.11237494	0.01826300	0.01993156	0.00035414	0.00027088	0.01463727	0.00208089
Gross Utility Plant	PRODUCTION	Same as	926,475,584	476,566,051	111,135,276	1,545,220	215,209	66,148,628	11,853,277	2,403,724	91,280	3,132,612	42,292,071	161,750,193	29,302,548	18,155,127	362,604	239,495	1,063,975	218,293
	BULKTRAN	RB_GUP_EPIS	503,126,706	258,801,324	60,352,508	839,139	116,870	35,922,308	6,436,975	1,305,353	49,570	1,701,179	22,966,898	87,839,165	15,912,879	9,859,223	196,914	130,059	577,797	118,545
	SUBTRAN		139,302,539	71,177,100	16,685,115	233,085	42,187	9,642,803	1,732,763	454,837	-	434,642	6,098,448	30,070,052	-	2,643,287	53,073	35,147	-	-
	DISTPRI		557,327,470	364,941,967	85,410,506	1,192,993	-	49,582,474	8,908,939	-	-	2,241,959	31,001,497	-	-	13,595,105	272,875	179,157	-	-
	DISTSEC		267,175,282	198,272,135	39,980,521	-	-	19,983,683	-	-	-	746,943	-	-	-	5,644,926	-	66,743	2,054,336	425,996
	ENERGY		17,297,093	6,768,114	1,952,581	27,215	3,805	1,266,882	225,934	46,009	1,738	66,347	1,048,953	4,511,376	848,637	348,000	6,983	6,228	139,515	28,776
	CUSTOMER		125,917,988	62,367,956	19,877,568	1,268,810	213,397	1,549,732	447,958	524,733	65,564	10,261	317,948	882,029	262,266	313,175	5,864	30,296	33,293,618	4,486,811
	TOTAL		2,536,622,662	1,438,894,647	335,394,075	5,106,461	591,467	184,096,509	29,605,848	4,734,655	208,152	8,333,943	103,725,815	285,052,816	46,326,330	50,558,841	898,314	687,126	37,129,242	5,278,421
RB_GUP	PRODUCTION		0.36523981	0.18787424	0.04381230	0.00060916	0.00008484	0.02607744	0.00467286	0.00094761	0.00003598	0.00123495	0.01667259	0.06376597	0.01155180	0.00715720	0.00014295	0.00009442	0.00041945	0.00008606
RB_GUP	BULKTRAN		0.19834511	0.10202594	0.02379247	0.00033081	0.00004607	0.01416147	0.00253762	0.00051460	0.00001954	0.00067065	0.00905412	0.03462839	0.00627325	0.00388675	0.00007763	0.00005127	0.00022778	0.00004673
RB_GUP	SUBTRAN		0.05491654	0.02805979	0.00657769	0.00009189	0.00001663	0.00380143	0.00068310	0.00017931	-	0.00017135	0.00240416	0.01185437	-	0.00104205	0.00002092	0.00001386	-	-
RB_GUP	DISTPRI		0.21971241	0.14386924	0.03367095	0.00047031	-	0.01954665	0.00351213	-	-	0.00088384	0.01222156	-	-	0.00535953	0.00010757	0.00007063	-	-
RB_GUP	DISTSEC		0.10532717	0.07816383	0.01576132	-	-	0.00787807	-	-	-	0.00029446	-	-	-	0.00222537	-	0.00002631	0.00080987	0.00016794
RB_GUP	ENERGY		0.00681895	0.00266816	0.00076976	0.00001073	0.00000150	0.00049944	0.00008907	0.00001814	0.00000069	0.00002616	0.00041352	0.00177850	0.00033455	0.00013719	0.00000275	0.00000246	0.00005500	0.00001134
RB_GUP	CUSTOMER		0.04964002	0.02458701	0.00783623	0.00050020	0.00008413	0.00061094	0.00017660	0.00020686	0.00002585	0.00000405	0.00012534	0.00034772	0.00010339	0.00012346	0.00000231	0.00001194	0.01312518	0.00176881
RB_GUP	TOTAL		1.00000000	0.56724820	0.13222072	0.00201309	0.00023317	0.07257544	0.01167136	0.00186652	0.00008206	0.00328545	0.04089131	0.11237494	0.01826300	0.01993156	0.00035414	0.00027088	0.01463727	0.00208089
Net EPIS	PRODUCTION		534,126,495	274,747,181	64,071,085	890,842	124,071	38,135,635	6,833,585	1,385,781	52,624	1,805,996	24,381,987	93,251,312	16,893,340	10,466,692	209,047	138,073	613,397	125,849
	BULKTRAN		329,344,535	169,410,211	39,506,487	549,297	76,503	23,514,585	4,213,616	854,478	32,448	1,113,584	15,034,031	57,499,132	10,416,501	6,453,804	128,899	85,136	378,223	77,599
	SUBTRAN		87,885,210	44,905,243	10,526,548	147,052	26,616	6,083,591	1,093,191	286,954	-	274,213	3,847,477	18,971,031	-	1,667,635	33,484	22,174	-	-
	DISTPRI		392,066,859	256,728,150	60,084,296	839,242	-	34,880,112	6,267,230	-	-	1,577,166	21,808,829	-	-	9,563,839	191,961	126,032	-	-
	DISTSEC		186,945,970	138,733,554	27,974,883	-	-	13,982,839	-	-	-	522,646	-	-	-	3,949,827	-	46,701	1,437,445	298,075
	ENERGY		10,768,311	4,213,492	1,215,580	16,943	2,369	788,698	140,656	28,643	1,082	41,304	653,026	2,808,559	528,319	216,647	4,347	3,878	86,855	17,914
	CUSTOMER		87,426,472	43,052,725	13,802,616	886,445	149,113	1,081,326	312,839	366,670	45,817	7,154	222,020	616,341	183,272	218,405	4,094	21,148	23,317,137	3,139,350
	TOTAL		1,628,563,851	931,790,556	217,181,495	3,329,820	378,671	118,466,787	18,861,116	2,922,526	131,971	5,342,063	65,947,370	173,146,376	28,021,432	32,536,849	571,832	443,142	25,833,058	3,658,787
NP	PRODUCTION		0.32797394	0.16870519	0.03934208	0.00054701	0.00007618	0.02341673	0.00419608	0.00085092	0.00003231	0.00110895	0.01497147	0.05725984	0.01037315	0.00642695	0.00012836	0.00008478	0.00037665	0.00007728
NP	BULKTRAN		0.20223004	0.10402430	0.02425848	0.00033729	0.00004698	0.01443885	0.00258732	0.00052468	0.00001992	0.00068378	0.00923147	0.03530665	0.00639613	0.00396288	0.00007915	0.00005228	0.00023224	0.00004765
NP	SUBTRAN		0.05396485	0.02757352	0.00646370	0.00009030	0.00001634	0.00373556	0.00067126	0.00017620	-	0.00016838	0.00236250	0.01164893	-	0.00102399	0.00002056	0.00001362	-	-
NP	DISTPRI		0.24074393	0.15764083	0.03689404	0.00051533	-	0.02141771	0.00384832	-	-	0.00096844	0.01339145	-	-	0.00587256	0.00011787	0.00007739	-	-
NP	DISTSEC		0.11479192	0.08518767	0.01717764	-	-	0.00858599	-	-	-	0.00032092	-	-	-	0.00242534	-	0.00002868	0.00088265	0.00018303
NP	ENERGY		0.00661215	0.00258724	0.00074641	0.00001040	0.00000145	0.00048429	0.00008637	0.00001759	0.00000066	0.00002536	0.00040098	0.00172456	0.00032441	0.00013303	0.00000267	0.00000238	0.00005333	0.00001100
NP	CUSTOMER		0.05368317	0.02643601	0.00847533	0.00054431	0.00009156	0.00066398	0.00019209	0.00022515	0.00002813	0.00000439	0.00013633	0.00037846	0.00011254	0.00013411	0.00000251	0.00001299	0.01431761	0.00192768
NP	TOTAL		1.00000000	0.57215476	0.13335768	0.00204464	0.00023252	0.07274310	0.01158144	0.00179454	0.00008104	0.00328023	0.04049419	0.10631844	0.01720622	0.01997886	0.00035113	0.00027211	0.01586248	0.00224663

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Rate Base	PRODUCTION	520,563,678	266,648,084	62,349,306	759,229	40,951	37,429,013	6,523,334	1,307,138	52,510	1,799,344	23,483,724	92,107,599	16,576,025	10,409,037	208,193	137,494	607,361	125,335
	BULKTRAN	270,576,297	138,353,139	32,373,745	391,753	18,773	19,454,700	3,399,048	679,746	27,237	934,702	12,242,698	48,070,630	8,658,442	5,411,257	108,192	71,460	315,639	65,136
	SUBTRAN	71,634,108	36,363,900	8,554,647	103,292	5,777	4,993,792	873,920	226,071	-	228,511	3,106,294	15,743,396	-	1,388,129	27,903	18,478	-	-
	DISTPRI	301,116,581	196,852,793	46,217,278	562,517	-	27,080,178	4,739,264	-	-	1,242,644	16,646,260	-	-	7,525,142	151,223	99,283	-	-
	DISTSEC	142,954,881	105,844,789	21,412,264	-	-	10,803,891	-	-	-	409,843	-	-	-	3,093,276	-	36,616	1,120,483	233,719
	ENERGY	31,909,081	13,029,219	3,717,939	49,691	7,193	2,386,410	390,611	81,756	3,481	128,801	1,813,245	7,852,717	1,436,901	663,841	13,444	11,961	266,521	55,351
	CUSTOMER	68,620,340	34,279,791	10,827,478	595,860	35,303	845,118	237,555	274,252	36,224	5,688	170,231	484,048	143,023	173,238	3,243	16,752	18,030,563	2,461,972
	TOTAL	1,407,374,967	791,371,716	185,452,658	2,462,341	107,998	102,993,101	16,163,732	2,568,963	119,452	4,749,533	57,462,451	164,258,389	26,814,392	28,663,920	512,198	392,044	20,340,568	2,941,513
RATEBASE	PRODUCTION	0.36988272	0.18946485	0.04430184	0.00053946	0.00002910	0.02659491	0.00463511	0.00092878	0.00003731	0.00127851	0.01668619	0.06544638	0.01177797	0.00739607	0.00014793	0.00009770	0.00043156	0.00008906
RATEBASE	BULKTRAN	0.19225601	0.09830581	0.02300293	0.00027836	0.00001334	0.01382339	0.00241517	0.00048299	0.00001935	0.00066415	0.00869896	0.03415624	0.00615219	0.00384493	0.00007687	0.00005078	0.00022428	0.00004628
RATEBASE	SUBTRAN	0.05089909	0.02583810	0.00607844	0.00007339	0.00000410	0.00354830	0.00062096	0.00016063	-	0.00016237	0.00220715	0.01118636	-	0.00098632	0.00001983	0.00001313	-	-
RATEBASE	DISTPRI	0.21395619	0.13987231	0.03283935	0.00039969	-	0.01924162	0.00336745	-	-	0.00088295	0.01182788	-	-	0.00534693	0.00010745	0.00007054	-	-
RATEBASE	DISTSEC	0.10157555	0.07520724	0.01521433	-	-	0.00767663	-	-	-	0.00029121	-	-	-	0.00219790	-	0.00002602	0.00079615	0.00016607
RATEBASE	ENERGY	0.02267276	0.00925782	0.00264175	0.00003531	0.00000511	0.00169565	0.00027755	0.00005809	0.00000247	0.00009152	0.00128839	0.00557969	0.00102098	0.00047169	0.00000955	0.00000850	0.00018937	0.00003933
RATEBASE	CUSTOMER	0.04875768	0.02435726	0.00769339	0.00042338	0.00002508	0.00060049	0.00016879	0.00019487	0.00002574	0.00000404	0.00012096	0.00034394	0.00010162	0.00012309	0.00000230	0.00001190	0.01281149	0.00174934
RATEBASE	TOTAL	1.00000000	0.56230339	0.13177203	0.00174960	0.00007674	0.07318100	0.01148502	0.00182536	0.00008488	0.00337475	0.04082952	0.11671260	0.01905277	0.02036694	0.00036394	0.00027856	0.01445284	0.00209007
CUST_451	TOTAL	1.00000000	0.91293234	0.07804935	0.00057752	0.00001934	0.00139810	0.00026331	0.00019339	0.00001934	-	0.00024249	0.00009967	-	-	-	-	0.00620515	-
RB_GUP_EPIS_D	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	DISTPRI	0.59071727	0.38680584	0.09052750	0.00126447	-	0.05255299	0.00944268	-	-	0.00237628	0.03285881	-	-	0.01440959	0.00028922	0.00018989	-	-
RB_GUP_EPIS_D	DISTSEC	0.28455782	0.21117180	0.04258167	-	-	0.02128383	-	-	-	0.00079554	-	-	-	0.00601219	-	0.00007109	0.00218799	0.00045371
RB_GUP_EPIS_D	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB_GUP_EPIS_D	CUSTOMER	0.12472492	0.05832430	0.01970808	0.00133262	0.00022448	0.00160858	0.00046877	0.00055208	0.00006901	0.00001057	0.00033239	0.00092801	0.00027603	0.00032351	0.00000612	0.00003157	0.03575186	0.00477694
RB_GUP_EPIS_D	TOTAL	1.00000000	0.65630194	0.15281725	0.00259709	0.00022448	0.07544540	0.00991145	0.00055208	0.00006901	0.00318239	0.03319120	0.00092801	0.00027603	0.02074529	0.00029535	0.00029254	0.03793985	0.00523065
MISC_SERV_REV	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV	DISTPRI	0.58603823	0.53805656	0.04623570	0.00028118	-	0.00097387	0.00025086	-	-	-	0.00024006	-	-	-	-	-	-	-
MISC_SERV_REV	DISTSEC	0.31624552	0.29374524	0.02174801	-	-	0.00039442	-	-	-	-	-	-	-	-	-	-	0.00035785	-
MISC_SERV_REV	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISC_SERV_REV	CUSTOMER	0.09771625	0.08113055	0.01006564	0.00029634	0.00001934	0.00002981	0.00001245	0.00019339	0.00001934	-	0.00000243	0.00009967	-	-	-	-	0.00584730	-
MISC_SERV_REV	TOTAL	1.00000000	0.91293234	0.07804935	0.00057752	0.00001934	0.00139810	0.00026331	0.00019339	0.00001934	-	0.00024249	0.00009967	-	-	-	-	0.00620515	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
364 Poles	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	135,758,626	88,895,708	20,805,027	290,599	-	12,077,726	2,170,116	-	-	546,116	7,551,612	-	-	3,311,613	66,469	43,641	-	-
	DISTSEC	101,374,804	75,230,758	15,169,882	-	-	7,582,445	-	-	-	283,414	-	-	-	2,141,864	-	25,324	779,480	161,636
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	237,133,430	164,126,465	35,974,909	290,599	-	19,660,171	2,170,116	-	-	829,530	7,551,612	-	-	5,453,477	66,469	68,965	779,480	161,636
365 Overhead Lines	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	219,442,876	143,692,746	33,629,649	469,731	-	19,522,671	3,507,818	-	-	882,752	12,206,572	-	-	5,352,955	107,442	70,541	-	-
	DISTSEC	42,974,470	31,891,573	6,430,766	-	-	3,214,325	-	-	-	120,144	-	-	-	907,972	-	10,735	330,435	68,520
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	262,417,346	175,584,319	40,060,414	469,731	-	22,736,996	3,507,818	-	-	1,002,896	12,206,572	-	-	6,260,927	107,442	81,277	330,435	68,520
TOTOHLINES	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES	DISTPRI	0.71104184	0.46559522	0.10896725	0.00152203	-	0.06325763	0.01136608	-	-	0.00286030	0.03955190	-	-	0.01734472	0.00034814	0.00022857	-	-
TOTOHLINES	DISTSEC	0.28895816	0.21443732	0.04324014	-	-	0.02161296	-	-	-	0.00080784	-	-	-	0.00610516	-	0.00007218	0.00222183	0.00046073
TOTOHLINES	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOHLINES	TOTAL	1.00000000	0.68003254	0.15220740	0.00152203	-	0.08487059	0.01136608	-	-	0.00366815	0.03955190	-	-	0.02344988	0.00034814	0.00030075	0.00222183	0.00046073
366 Underground Conduit	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	6,184,131	4,049,413	947,719	13,238	-	550,169	98,854	-	-	24,877	343,994	-	-	150,852	3,028	1,988	-	-
	DISTSEC	1,376,174	1,021,265	205,933	-	-	102,932	-	-	-	3,847	-	-	-	29,076	-	344	10,582	2,194
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	7,560,305	5,070,678	1,153,652	13,238	-	653,102	98,854	-	-	28,724	343,994	-	-	179,928	3,028	2,332	10,582	2,194
367 Underground Lines	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	9,696,779	6,349,519	1,486,033	20,757	-	862,671	155,004	-	-	39,007	539,386	-	-	236,537	4,748	3,117	-	-
	DISTSEC	2,157,854	1,601,354	322,905	-	-	161,399	-	-	-	6,033	-	-	-	45,592	-	539	16,592	3,441
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	11,854,633	7,950,874	1,808,937	20,757	-	1,024,070	155,004	-	-	45,040	539,386	-	-	282,129	4,748	3,656	16,592	3,441
TOTUGLINES	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES	DISTPRI	0.81797379	0.53561502	0.12535459	0.00175092	-	0.07277080	0.01307540	-	-	0.00329046	0.04550002	-	-	0.01995315	0.00040049	0.00026294	-	-
TOTUGLINES	DISTSEC	0.18202621	0.13508258	0.02723868	-	-	0.01361486	-	-	-	0.00050889	-	-	-	0.00384588	-	0.00004547	0.00139962	0.00029023
TOTUGLINES	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES	CUSTOMER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTUGLINES	TOTAL	1.00000000	0.67069759	0.15259327	0.00175092	-	0.08638566	0.01307540	-	-	0.00379935	0.04550002	-	-	0.02379903	0.00040049	0.00030842	0.00139962	0.00029023

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ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
		Excl. 580 -																		
Acct 581-589	PRODUCTION	Acct. 580 allocated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	on this: TOTOXEXP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		4,715,461	3,087,717	722,645	10,094	-	419,510	75,377	-	-	18,969	262,299	-	-	115,026	2,309	1,516	-	-
	DISTSEC		1,865,976	1,384,750	279,227	-	-	139,568	-	-	-	5,217	-	-	-	39,425	-	466	14,348	2,975
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		2,213,430	993,519	559,896	68,827	11,585	74,832	24,231	28,493	3,562	470	17,184	47,895	14,246	14,389	317	1,493	238,668	113,822
	TOTAL		8,794,867	5,465,987	1,561,769	78,921	11,585	633,909	99,608	28,493	3,562	24,656	279,483	47,895	14,246	168,840	2,626	3,475	253,015	116,797
TOTOXEXP	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP	DISTPRI		0.53616057	0.35108173	0.08216668	0.00114768	-	0.04769937	0.00857058	-	-	0.00215681	0.02982408	-	-	0.01307877	0.00026251	0.00017235	-	-
TOTOXEXP	DISTSEC		0.21216646	0.15744981	0.03174892	-	-	0.01586923	-	-	-	0.00059315	-	-	-	0.00448269	-	0.00005300	0.00163137	0.00033829
TOTOXEXP	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOXEXP	CUSTOMER		0.25167298	0.11296583	0.06366169	0.00782587	0.00131727	0.00850861	0.00275516	0.00323968	0.00040496	0.00005347	0.00195391	0.00544575	0.00161982	0.00163612	0.00003602	0.00016981	0.02713714	0.01294188
TOTOXEXP	TOTAL		1.00000000	0.62149736	0.17757728	0.00897355	0.00131727	0.07207721	0.01132574	0.00323968	0.00040496	0.00280344	0.03177799	0.00544575	0.00161982	0.01919758	0.00029853	0.00039517	0.02876851	0.01328017
		Excl. 590 -																		
Acct 591-598	PRODUCTION	Acct. 590 allocated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	on this: TOTMXEXP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		21,874,635	14,323,665	3,352,291	46,824	-	1,946,070	349,668	-	-	87,995	1,216,783	-	-	533,596	10,710	7,032	-	-
	DISTSEC		8,653,582	6,421,867	1,294,935	-	-	647,255	-	-	-	24,193	-	-	-	182,834	-	2,162	66,538	13,798
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		156,318	18,583	14,011	2,014	339	2,148	708	834	104	13	502	1,402	417	409	9	43	53,430	61,349
	TOTAL		30,684,535	20,764,116	4,661,237	48,838	339	2,595,473	350,377	834	104	112,201	1,217,285	1,402	417	716,840	10,719	9,237	119,968	75,147
TOTMXEXP	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP	DISTPRI		0.71288794	0.46680406	0.10925017	0.00152598	-	0.06342187	0.01139559	-	-	0.00286773	0.03965459	-	-	0.01738975	0.00034904	0.00022916	-	-
TOTMXEXP	DISTSEC		0.28201771	0.20928677	0.04220156	-	-	0.02109384	-	-	-	0.00078844	-	-	-	0.00595852	-	0.00007045	0.00216846	0.00044966
TOTMXEXP	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTMXEXP	CUSTOMER		0.00509436	0.00060563	0.00045661	0.00006563	0.00001105	0.00007001	0.00002308	0.00002719	0.00000340	0.00000044	0.00001637	0.00004570	0.00001359	0.00001334	0.00000030	0.00000140	0.00174127	0.00199935
TOTMXEXP	TOTAL		1.00000000	0.67669646	0.15190834	0.00159160	0.00001105	0.08458572	0.01141867	0.00002719	0.00000340	0.00365661	0.03967096	0.00004570	0.00001359	0.02336161	0.00034934	0.00030102	0.00390973	0.00244901
Acct 561-574	PRODUCTION		(0)	(0)	0	(0)	(0)	0	(0)	0	(0)	0	0	0	(0)	(0)	(0)	(0)	(0)	(0)
	BULKTRAN		(617,808)	(317,792)	(74,109)	(1,030)	(144)	(44,110)	(7,904)	(1,603)	(61)	(2,089)	(28,202)	(107,861)	(19,540)	(12,107)	(242)	(160)	(709)	(146)
	SUBTRAN		(171,219)	(87,485)	(20,508)	(286)	(52)	(11,852)	(2,130)	(559)	-	(534)	(7,496)	(36,960)	-	(3,249)	(65)	(43)	-	-
	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL		(789,027)	(405,277)	(94,617)	(1,317)	(195)	(55,962)	(10,034)	(2,162)	(61)	(2,623)	(35,698)	(144,821)	(19,540)	(15,355)	(307)	(203)	(709)	(146)
EXP_OM_TRAN	PRODUCTION		(0.00000000)	0.00000000	(0.00000000)	0.00000000	0.00000000	(0.00000000)	0.00000000	(0.00000000)	0.00000000	(0.00000000)	(0.00000000)	(0.00000000)	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
EXP_OM_TRAN	BULKTRAN		0.78300000	0.40276422	0.09392468	0.00130592	0.00018188	0.05590474	0.01001766	0.00203148	0.00007714	0.00264749	0.03574265	0.13670128	0.02476471	0.01534359	0.00030645	0.00020241	0.00089921	0.00018449
EXP_OM_TRAN	SUBTRAN		0.21700000	0.11087688	0.02599141	0.00036309	0.00006572	0.01502118	0.00269923	0.00070853	-	0.00067707	0.00949992	0.04684194	-	0.00411761	0.00008268	0.00005475	-	-
EXP_OM_TRAN	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_TRAN	TOTAL		1.00000000	0.51364110	0.11991609	0.00166901	0.00024760	0.07092592	0.01271689	0.00274001	0.00007714	0.00332456	0.04524257	0.18354322	0.02476471	0.01946120	0.00038913	0.00025716	0.00089921	0.00018449
Acct 580-598	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		28,650,671	18,760,662	4,390,719	61,328	-	2,548,898	457,984	-	-	115,253	1,593,702	-	-	698,887	14,028	9,210	-	-
	DISTSEC		11,350,624	8,423,356	1,698,525	-	-	848,983	-	-	-	31,733	-	-	-	239,818	-	2,836	87,276	18,098
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		2,646,632	1,136,378	643,943	79,451	13,374	86,341	27,971	32,891	4,111	542	19,836	55,288	16,445	16,599	366	1,723	321,958	189,416
	TOTAL		42,647,927	28,320,396	6,733,186	140,779	13,374	3,484,222	485,955	32,891	4,111	147,528	1,613,538	55,288	16,445	955,304	14,393	13,769	409,234	207,514
EXP_OM_DIST	PRODUCTION		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST	DISTPRI		0.67179516	0.43989622	0.10295269	0.00143802	-	0.05976606	0.01073872	-	-	0.00270243	0.03736879	-	-	0.01638736	0.00032892	0.00021595	-	-
EXP_OM_DIST	DISTSEC		0.26614714	0.19750914	0.03982667	-	-	0.01990678	-	-	-	0.00074407	-	-	-	0.00562320	-	0.00006649	0.00204643	0.00042436
EXP_OM_DIST	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_DIST	CUSTOMER		0.06205770	0.02664557	0.01509904	0.00186294	0.00031358	0.00202450	0.00065585	0.00077122	0.00009640	0.00001272	0.00046511	0.00129638	0.00038560	0.00038920	0.00000857	0.00004041	0.00754920	0.00444140
EXP_OM_DIST	TOTAL		1.00000000	0.66405093	0.15787840	0.00330096	0.00031358	0.08169734	0.01139457	0.00077122	0.00009640	0.00345922	0.03783391	0.00129638	0.00038560	0.02239976	0.00033749	0.00032285	0.00959563	0.00486575
Acct 560-598	PRODUCTION		(0)	(0)	0	(0)	(0)	0	(0)	0	(0)	0	0	0	(0)	(0)	(0)	(0)	(0)	(0)
	BULKTRAN		(617,808)	(317,792)	(74,109)	(1,030)	(144)	(44,110)	(7,904)	(1,603)	(61)	(2,089)	(28,202)	(107,861)	(19,540)	(12,107)	(242)	(160)	(709)	(146)
	SUBTRAN		(171,219)	(87,485)	(20,508)	(286)	(52)	(11,852)	(2,130)	(559)	-	(534)	(7,496)	(36,960)	-	(3,249)	(65)	(43)	-	-
	DISTPRI		28,650,671	18,760,662	4,390,719	61,328	-	2,548,898	457,984	-	-	115,253	1,593,702	-	-	698,887	14,028	9,210	-	-
	DISTSEC		11,350,624	8,423,356	1,698,525	-	-	848,983	-	-	-	31,733	-	-	-	239,818	-	2,836	87,276	18,098
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		2,646,632	1,136,378	643,943	79,451	13,374	86,341	27,971	32,891	4,111	542	19,836	55,288	16,445	16,599	366	1,723	321,958	189,416
	TOTAL		41,858,900	27,915,119	6,638,569	139,462	13,178	3,428,260	475,921	30,729	4,050	144,905	1,577,840	(89,533)	(3,095)	939,948	14,086	13,566	408,524	207,369
TDOMX	PRODUCTION		(0.00000000)	(0.00000000)	0.00000000	(0.00000000)	(0.00000000)	0.00000000	(0.00000000)	0.00000000	(0.00000000)	0.00000000	0.00000000	0.00000000	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)	(0.00000000)
TDOMX	BULKTRAN		(0.01475930)	(0.00759198)	(0.00177045)	(0.00002462)	(0.00000343)	(0.00105379)	(0.00018883)	(0.00003829)	(0.00000145)	(0.00004990)	(0.00067374)	(0.00257678)	(0.00046681)	(0.00028922)	(0.00000578)	(0.00000382)	(0.00001695)	(0.00000348)
TDOMX	SUBTRAN		(0.00409038)	(0.00208999)	(0.00048993)	(0.00000684)	(0.00000124)	(0.00028314)	(0.00005088)	(0.00001336)	-	(0.00001276)	(0.00017907)	(0.00088296)	-	(0.00007762)	(0.00000156)	(0.00000103)	-	-
TDOMX	DISTPRI		0.68445829	0.44818812	0.10489332	0.00146512	-	0.06089263	0.01094114	-	-	0.00275337	0.03807318	-	-	0.01669626	0.00033512	0.00022002	-	-
TDOMX	DISTSEC		0.27116393	0.20123213	0.04057739	-	-	0.02028202	-	-	-	0.00075809	-	-	-	0.00572920	-	0.00006774	0.00208500	0.00043236
TDOMX	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDOMX	CUSTOMER		0.06322747	0.02714783	0.01538365	0.00189806	0.00031949	0.00206267	0.00066821	0.00078576	0.00009822	0.00001296	0.00047388	0.00132082	0.00039287	0.00039654	0.00000874	0.00004117	0.00769150	0.00452511
TDOMX	TOTAL		1.00000000	0.66688611	0.15859398	0.00333172	0.00031482	0.08190038	0.01136964	0.00073411	0.00009676	0.00346175	0.03769426	(0.00213892)	(0.00007394)	0.02245516	0.00033652	0.00032409	0.00975956	0.00495399

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TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Acct 902-904	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	6,327,663	5,278,556	912,425	2,312	184	17,509	1,846	396	33	172	1,513	654	137	4,714	31	258	105,507	1,417
	TOTAL	6,327,663	5,278,556	912,425	2,312	184	17,509	1,846	396	33	172	1,513	654	137	4,714	31	258	105,507	1,417
TOTOX234	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTOX234	CUSTOMER	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
TOTOX234	TOTAL	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
Acct 901-905	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	6,390,174	5,330,703	921,439	2,335	186	17,682	1,864	399	33	174	1,528	660	138	4,760	31	261	106,549	1,431
	TOTAL	6,390,174	5,330,703	921,439	2,335	186	17,682	1,864	399	33	174	1,528	660	138	4,760	31	261	106,549	1,431
EXP_OM_CUSTACCT	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTACCT	CUSTOMER	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
EXP_OM_CUSTACCT	TOTAL	1.00000000	0.83420315	0.14419617	0.00036534	0.00002913	0.00276709	0.00029166	0.00006251	0.00000514	0.00002717	0.00023916	0.00010331	0.00002164	0.00074497	0.00000492	0.00004078	0.01667386	0.00022398
A&G Regulatory																			
Acct 907-910	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	734,968	468,237	106,167	263	21	1,901	196	42	4	18	154	67	14	536	4	32	157,123	193
	TOTAL	734,968	468,237	106,167	263	21	1,901	196	42	4	18	154	67	14	536	4	32	157,123	193
EXP_OM_CUSTSERV	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXP_OM_CUSTSERV	CUSTOMER	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
EXP_OM_CUSTSERV	TOTAL	1.00000000	0.63708460	0.14445074	0.00035723	0.00002858	0.00258637	0.00026673	0.00005716	0.00000476	0.00002382	0.00020958	0.00009050	0.00001905	0.00072876	0.00000476	0.00004287	0.21378253	0.00026197
O&M Expense	PRODUCTION	74,295,128	38,185,275	8,918,162	123,900	17,250	5,306,623	951,828	192,855	7,308	251,255	3,396,526	12,981,129	2,354,615	1,457,007	29,085	19,229	85,526	17,556
less Purch. Power & Fuel	BULKTRAN	3,254,195	1,652,001	392,608	5,416	734	233,164	42,627	8,540	312	10,983	152,367	578,018	106,484	64,195	1,273	851	3,833	790
	SUBTRAN	901,661	455,135	108,636	1,506	266	62,651	11,475	2,977	-	2,809	40,458	197,948	-	17,225	343	230	-	-
	DISTPRI	32,038,603	20,961,793	4,916,239	68,602	-	2,853,130	513,612	-	-	128,949	1,787,625	-	-	782,638	15,696	10,319	-	-
	DISTSEC	12,708,181	9,424,622	1,905,246	-	-	951,983	-	-	-	35,562	-	-	-	269,047	-	3,183	98,166	20,371
	ENERGY	22,683,205	8,885,297	2,563,346	35,712	5,022	1,662,460	295,868	60,282	2,283	87,129	1,373,555	5,906,408	1,110,628	456,842	9,168	8,179	183,225	37,801
	CUSTOMER	12,227,573	8,798,685	2,055,691	92,121	15,189	121,957	33,978	37,351	4,631	854	24,387	62,792	18,622	25,444	454	2,308	717,697	215,413
	TOTAL	158,108,547	88,362,807	20,859,928	327,258	38,461	11,191,968	1,849,389	302,005	14,533	517,541	6,774,917	19,726,296	3,590,349	3,072,398	56,019	44,298	1,088,446	291,932
EXP_OM_LPP	PRODUCTION	0.46989950	0.24151303	0.05640531	0.00078364	0.00010911	0.03356316	0.00602009	0.00121976	0.00004622	0.00158913	0.02148224	0.08210264	0.01489240	0.00921523	0.00018395	0.00012162	0.00054093	0.00011103
EXP_OM_LPP	BULKTRAN	0.02058203	0.01044853	0.00248315	0.00003426	0.00000464	0.00147471	0.00026961	0.00005401	0.00000197	0.00006946	0.00096368	0.00365583	0.00067349	0.00040602	0.00000805	0.00000538	0.00002424	0.00000500
EXP_OM_LPP	SUBTRAN	0.00570280	0.00287862	0.00068710	0.00000953	0.00000168	0.00039625	0.00007258	0.00001883	-	0.00001777	0.00025589	0.00125198	-	0.00010895	0.00000217	0.00000145	-	-
EXP_OM_LPP	DISTPRI	0.20263676	0.13257849	0.03109407	0.00043389	-	0.01804539	0.00324848	-	-	0.00081557	0.01130631	-	-	0.00495000	0.00009928	0.00006527	-	-
EXP_OM_LPP	DISTSEC	0.08037631	0.05960856	0.01205024	-	-	0.00602107	-	-	-	0.00022492	-	-	-	0.00170166	-	0.00002013	0.00062088	0.00012884
EXP_OM_LPP	ENERGY	0.14346603	0.05619745	0.01621257	0.00022587	0.00003176	0.01051467	0.00187130	0.00038127	0.00001444	0.00055107	0.00868742	0.03735667	0.00702447	0.00288942	0.00005799	0.00005173	0.00115885	0.00023908
EXP_OM_LPP	CUSTOMER	0.07733657	0.05564965	0.01300177	0.00058265	0.00009606	0.00077135	0.00021490	0.00023623	0.00002929	0.00000540	0.00015424	0.00039715	0.00011778	0.00016093	0.00000287	0.00001460	0.00453927	0.00136244
EXP_OM_LPP	TOTAL	1.00000000	0.55887432	0.13193422	0.00206983	0.00024326	0.07078661	0.01169696	0.00191011	0.00009192	0.00327333	0.04284979	0.12476426	0.02270813	0.01943221	0.00035431	0.00028018	0.00688417	0.00184640
O&M Labor	PRODUCTION	15,681,639	8,066,415	1,881,089	26,155	3,643	1,119,640	200,630	40,686	1,545	53,023	715,841	2,737,804	495,979	307,296	6,137	4,054	18,009	3,695
	BULKTRAN	2,430,778	1,250,358	291,584	4,054	565	173,553	31,099	6,307	239	8,219	110,961	424,381	76,881	47,633	951	628	2,792	573
	SUBTRAN	673,664	344,211	80,689	1,127	204	46,632	8,380	2,200	-	2,102	29,492	145,418	-	12,783	257	170	-	-
	DISTPRI	5,502,877	3,603,323	843,317	11,779	-	489,562	87,964	-	-	22,136	306,099	-	-	134,234	2,694	1,769	-	-
	DISTSEC	2,180,092	1,617,857	326,232	-	-	163,062	-	-	-	6,095	-	-	-	46,061	-	545	16,763	3,476
	ENERGY	6,272,238	2,454,240	708,041	9,869	1,380	459,394	81,928	16,684	630	24,058	380,369	1,635,906	307,731	126,191	2,532	2,259	50,591	10,435
	CUSTOMER	4,150,961	3,205,083	649,001	16,589	2,675	26,615	6,428	6,544	808	202	4,673	10,992	3,237	5,897	88	480	174,442	37,207
	TOTAL	36,892,249	20,541,487	4,779,953	69,572	8,466	2,478,459	416,429	72,419	3,223	115,836	1,547,435	4,954,501	883,827	680,096	12,660	9,904	262,597	55,385
LABOR_M	PRODUCTION	0.42506595	0.21864797	0.05098874	0.00070895	0.00009874	0.03034892	0.00543827	0.00110283	0.00004188	0.00143724	0.01940355	0.07421081	0.01344398	0.00832955	0.00016636	0.00010988	0.00048815	0.00010015
LABOR_M	BULKTRAN	0.06588859	0.03389216	0.00790366	0.00010989	0.00001531	0.00470432	0.00084297	0.00017095	0.00000649	0.00022278	0.00300770	0.01150326	0.00208392	0.00129115	0.00002579	0.00001703	0.00007567	0.00001552
LABOR_M	SUBTRAN	0.01826031	0.00933017	0.00218715	0.00003055	0.00000553	0.00126402	0.00022714	0.00005962	-	0.00005697	0.00079941	0.00394170	-	0.00034649	0.00000696	0.00000461	-	-
LABOR_M	DISTPRI	0.14916079	0.09767154	0.02285891	0.00031929	-	0.01327005	0.00238435	-	-	0.00060003	0.00829711	-	-	0.00363854	0.00007303	0.00004795	-	-
LABOR_M	DISTSEC	0.05909349	0.04385358	0.00884284	-	-	0.00441997	-	-	-	0.00016521	-	-	-	0.00124854	-	0.00001476	0.00045438	0.00009422
LABOR_M	ENERGY	0.17001506	0.06652455	0.01919214	0.00026750	0.00003740	0.01245233	0.00222074	0.00045222	0.00001708	0.00065213	0.01031028	0.04434282	0.00834135	0.00342053	0.00006863	0.00006122	0.00137131	0.00028284
LABOR_M	CUSTOMER	0.11251581	0.08687687	0.01759179	0.00044965	0.00007250	0.00072143	0.00017424	0.00017737	0.00002191	0.00000548	0.00012667	0.00029795	0.00008773	0.00015986	0.00000239	0.00001301	0.00472843	0.00100852
LABOR_M	TOTAL	1.00000000	0.55679683	0.12956523	0.00188583	0.00022947	0.06718102	0.01128771	0.00196299	0.00008736	0.00313984	0.04194473	0.13429654	0.02395698	0.01843465	0.00034316	0.00026846	0.00711794	0.00150126

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Production O&M Labor	PRODUCTION		15,681,639	8,066,415	1,881,089	26,155	3,643	1,119,640	200,630	40,686	1,545	53,023	715,841	2,737,804	495,979	307,296	6,137	4,054	18,009	3,695
	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY		6,272,238	2,454,240	708,041	9,869	1,380	459,394	81,928	16,684	630	24,058	380,369	1,635,906	307,731	126,191	2,532	2,259	50,591	10,435
	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL		21,953,877	10,520,655	2,589,130	36,023	5,022	1,579,034	282,558	57,369	2,175	77,081	1,096,210	4,373,710	803,710	433,487	8,669	6,312	68,600	14,130
LABOR_PROD	PRODUCTION		0.71429930	0.36742555	0.08568369	0.00119134	0.00016592	0.05099964	0.00913871	0.00185324	0.00007038	0.00241520	0.03260658	0.12470706	0.02259184	0.01399734	0.00027956	0.00018465	0.00082031	0.00016830
LABOR_PROD	BULKTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD	SUBTRAN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD	DISTPRI		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD	DISTSEC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD	ENERGY		0.28570070	0.11179074	0.03225131	0.00044951	0.00006284	0.02092543	0.00373182	0.00075994	0.00002870	0.00109587	0.01732584	0.07451561	0.01401716	0.00574801	0.00011533	0.00010288	0.00230441	0.00047530
LABOR_PROD	CUSTOMER		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABOR_PROD	TOTAL		1.00000000	0.47921629	0.11793500	0.00164086	0.00022876	0.07192507	0.01287053	0.00261317	0.00009908	0.00351106	0.04993241	0.19922267	0.03660901	0.01974535	0.00039490	0.00028752	0.00312472	0.00064360
Rent Revenues	PRODUCTION		2,688,058	1,382,699	322,446	4,483	624	191,922	34,391	6,974	265	9,089	122,705	469,299	85,018	52,675	1,052	695	3,087	633
	BULKTRAN		(36,262)	(18,653)	(4,350)	(60)	(8)	(2,589)	(464)	(94)	(4)	(123)	(1,655)	(6,331)	(1,147)	(711)	(14)	(9)	(42)	(9)
	SUBTRAN		(10,050)	(5,135)	(1,204)	(17)	(3)	(696)	(125)	(33)	-	(31)	(440)	(2,169)	-	(191)	(4)	(3)	-	-
	DISTPRI		3,938,393	2,578,888	603,559	8,430	-	350,378	62,956	-	-	15,843	219,074	-	-	96,071	1,928	1,266	-	-
	DISTSEC		2,729,992	2,025,941	408,520	-	-	204,193	-	-	-	7,632	-	-	-	57,680	-	682	20,991	4,353
	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER		168,043	78,581	26,553	1,795	302	2,167	632	744	93	14	448	1,250	372	436	8	43	48,169	6,436
	TOTAL		9,478,174	6,042,321	1,355,524	14,632	915	745,376	97,389	7,591	354	32,424	340,132	462,049	84,243	205,960	2,971	2,673	72,205	11,414
REV_RENT	PRODUCTION		0.28360505	0.14588246	0.03401981	0.00047301	0.00006588	0.02024887	0.00362843	0.00073581	0.00002794	0.00095893	0.01294610	0.04951363	0.00896985	0.00555750	0.00011100	0.00007331	0.00032570	0.00006682
REV_RENT	BULKTRAN		(0.00382587)	(0.00196798)	(0.00045893)	(0.00000638)	(0.00000089)	(0.00027316)	(0.00004895)	(0.00000993)	(0.00000038)	(0.00001294)	(0.00017464)	(0.00066795)	(0.00012100)	(0.00007497)	(0.00000150)	(0.00000099)	(0.00000439)	(0.00000090)
REV_RENT	SUBTRAN		(0.00106030)	(0.00054176)	(0.00012700)	(0.00000177)	(0.00000032)	(0.00007340)	(0.00001319)	(0.00000346)	-	(0.00000331)	(0.00004642)	(0.00022888)	-	(0.00002012)	(0.00000040)	(0.00000027)	-	-
REV_RENT	DISTPRI		0.41552235	0.27208697	0.06367885	0.00088945	-	0.03696682	0.00664217	-	-	0.00167152	0.02311355	-	-	0.01013600	0.00020345	0.00013357	-	-
REV_RENT	DISTSEC		0.28802934	0.21374804	0.04310115	-	-	0.02154349	-	-	-	0.00080525	-	-	-	0.00608553	-	0.00007195	0.00221468	0.00045925
REV_RENT	ENERGY		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REV_RENT	CUSTOMER		0.01772943	0.00829070	0.00280147	0.00018943	0.00003191	0.00022866	0.00006663	0.00007848	0.00000981	0.00000150	0.00004725	0.00013192	0.00003924	0.00004599	0.00000087	0.00000449	0.00508206	0.00067903
REV_RENT	TOTAL		1.00000000	0.63749843	0.14301536	0.00154374	0.00009658	0.07864128	0.01027509	0.00080090	0.00003737	0.00342095	0.03588583	0.04874872	0.00888809	0.02172992	0.00031341	0.00028207	0.00761805	0.00120420
Total Revenues	PRODUCTION		200,900,389	96,429,346	28,167,017	346,752	64,440	15,586,684	2,914,387	536,741	16,973	749,511	10,394,898	33,502,352	7,043,020	4,587,266	85,676	65,168	336,903	73,254
	BULKTRAN		34,727,840	7,738,978	5,393,328	54,699	(6,657)	2,971,887	897,750	138,080	(1,202)	111,388	3,301,633	10,507,680	2,577,496	908,785	13,699	13,793	86,837	19,668
	SUBTRAN		9,607,445	2,315,619	1,491,071	15,422	(1,738)	800,733	237,738	47,757	-	28,925	861,939	3,559,105	-	243,431	3,740	3,703	-	-
	DISTPRI		64,561,019	35,110,665	12,911,130	149,181	-	6,919,499	1,556,131	-	-	295,851	5,481,050	-	-	2,071,076	36,238	30,198	-	-
	DISTSEC		26,639,799	17,012,780	5,625,344	-	-	2,592,153	-	-	-	90,530	-	-	-	801,827	-	10,537	413,765	92,863
	ENERGY		174,253,425	77,172,126	21,778,695	296,951	72,684	13,516,677	1,979,238	425,742	22,292	764,704	9,039,776	36,688,568	6,605,386	3,829,212	78,438	70,160	1,581,343	331,434
	CUSTOMER		23,692,431	12,045,710	4,019,937	179,629	27,347	251,000	84,651	82,732	5,182	1,663	60,855	136,721	50,248	55,830	910	5,735	5,703,671	980,610
	TOTAL		534,382,347	247,825,223	79,386,521	1,042,634	156,077	42,638,633	7,669,895	1,231,051	43,244	2,042,571	29,140,151	84,394,425	16,276,150	12,497,428	218,702	199,294	8,122,518	1,497,829
REV	PRODUCTION		0.37594877	0.18045010	0.05270948	0.00064888	0.00012059	0.02916766	0.00545375	0.00100441	0.00003176	0.00140257	0.01945217	0.06269360	0.01317974	0.00858424	0.00016033	0.00012195	0.00063045	0.00013708
REV	BULKTRAN		0.06498688	0.01448210	0.01009264	0.00010236	(0.00001246)	0.00556135	0.00167998	0.00025839	(0.00000225)	0.00020844	0.00617841	0.01966323	0.00482332	0.00170063	0.00002564	0.00002581	0.00016250	0.00003681
REV	SUBTRAN		0.01797860	0.00433326	0.00279027	0.00002886	(0.00000325)	0.00149843	0.00044488	0.00008937	-	0.00005413	0.00161296	0.00666022	-	0.00045554	0.00000700	0.00000693	-	-
REV	DISTPRI		0.12081428	0.06570326	0.02416085	0.00027916	-	0.01294859	0.00291202	-	-	0.00055363	0.01025679	-	-	0.00387565	0.00006781	0.00005651	-	-
REV	DISTSEC		0.04985157	0.03183634	0.01052682	-	-	0.00485075	-	-	-	0.00016941	-	-	-	0.00150048	-	0.00001972	0.00077429	0.00017378
REV	ENERGY		0.32608380	0.14441369	0.04075489	0.00055569	0.00013602	0.02529402	0.00370379	0.00079670	0.00004171	0.00143101	0.01691631	0.06865602	0.01236079	0.00716568	0.00014678	0.00013129	0.00295920	0.00062022
REV	CUSTOMER		0.04433610	0.02254137	0.00752259	0.00033614	0.00005117	0.00046970	0.00015841	0.00015482	0.00000970	0.00000311	0.00011388	0.00025585	0.00009403	0.00010448	0.00000170	0.00001073	0.01067339	0.00183503
REV	TOTAL		1.00000000	0.46376012	0.14855753	0.00195110	0.00029207	0.07979050	0.01435282	0.00230369	0.00008092	0.00382230	0.05453053	0.15792892	0.03045787	0.02338668	0.00040926	0.00037294	0.01519982	0.00280292
RBASE		Source: Per Books	495,706,715	215,231,779	72,479,875	947,271	106,467	39,444,537	7,780,226	1,189,022	35,618	1,811,655	29,785,707	87,704,275	18,033,873	11,519,633	197,384	182,521	7,819,282	1,437,591
Initial Other Revenue		Revenues;	58,471,491	28,532,869	7,069,487	104,401	13,915	4,080,635	799,818	157,506	4,184	199,007	3,178,785	11,223,188	1,610,508	1,080,420	20,482	16,773	321,276	58,238
Initial Total Expense		Summary tab	499,531,792	251,534,326	66,523,816	954,945	148,306	37,300,311	6,093,639	1,093,417	47,694	1,832,275	23,713,169	79,062,278	14,318,809	10,510,511	196,100	163,446	5,048,220	990,529
Net Operating Income			54,646,414	(7,769,677)	13,025,545	96,726	(27,925)	6,224,861	2,486,405	253,111	(7,892)	178,387	9,251,323	19,865,185	5,325,572	2,089,541	21,767	35,848	3,092,338	505,300
RATEBASE	PRODUCTION		0.36988272	0.18946485	0.04430184	0.00053946	0.00002910	0.02659491	0.00463511	0.00092878	0.00003731	0.00127851	0.01668619	0.06544638	0.01177797	0.00739607	0.00014793	0.00009770	0.00043156	0.00008906
RATEBASE	BULKTRAN		0.19225601	0.09830581	0.02300293	0.00027836	0.00001334	0.01382339	0.00241517	0.00048299	0.00001935	0.00066415	0.00869896	0.03415624	0.00615219	0.00384493	0.00007687	0.00005078	0.00022428	0.00004628
RATEBASE	SUBTRAN		0.05089909	0.02583810	0.00607844	0.00007339	0.00000410	0.00354830	0.00062096	0.00016063	-	0.00016237	0.00220715	0.01118636	-	0.00098632	0.00001983	0.00001313	-	-
RATEBASE	DISTPRI		0.21395619	0.13987231	0.03283935	0.00039969	-	0.01924162	0.00336745	-	-	0.00088295	0.01182788	-	-	0.00534693	0.00010745	0.00007054	-	-
RATEBASE	DISTSEC		0.10157555	0.07520724	0.01521433	-	-	0.00767663	-	-	-	0.00029121	-	-	-	0.00219790	-	0.00002602	0.00079615	0.00016607
RATEBASE	ENERGY		0.02267276	0.00925782	0.00264175	0.00003531	0.00000511	0.00169565	0.00027755	0.00005809	0.00000247	0.00009152	0.00128839	0.00557969	0.00102098	0.00047169	0.00000955	0.00000850	0.00018937	0.00003933
RATEBASE	CUSTOMER		0.04875768	0.02435726	0.00769339	0.00042338	0.00002508	0.00060049	0.00016879	0.00019487	0.00002574	0.00000404	0.00012096	0.00034394	0.00010162	0.00012309	0.00000230	0.00001190	0.01281149	0.00174934
RATEBASE	TOTAL		1.00000000	0.56230339	0.13177203	0.00174960	0.00007674	0.07318100	0.01148502	0.00182536	0.00008488	0.00337475	0.04082952	0.11671260	0.01905277	0.02036694	0.00036394	0.00027856	0.01445284	0.00209007
NOI - Functionalized	PRODUCTION		24,345,458	(2,617,948)	4,379,197	29,824	(10,589)	2,262,194	1,003,460	128,788	(3,469)	67,581	3,780,826	11,139,367	3,292,143	758,798	8,847	12,572	92,336	21,530
	BULKTRAN		12,694,042	(1,358,349)	2,273,818	15,389	(4,854)	1,175,834	522,863	66,973	(1,799)	35,106	1,971,046	5,813,596	1,719,642	394,470	4,598	6,534	47,986	11,189
	SUBTRAN		3,221,661	(357,020)	600,848	4,058	(1,494)	301,823	134,432	22,274	-	8,583	500,106	1,903,985	-	101,192	1,186	1,690	-	-
	DISTPRI		6,992,030	(1,932,698)	3,246,140	22,097	-	1,636,715	729,023	-	-	46,672	2,680,010	-	-	548,568	6,426	9,078	-	-
	DISTSEC		1,572,451	(1,039,183)	1,503,922	-	-	652,983	-	-	-	15,393	-	-	-	225,494	-	3,348	170,345	40,149
	ENERGY		1,977,380	(127,921)	261,135	1,952	(1,860)	144,234	60,086	8,055	(230)	4,838	291,928	949,697	285,381	48,393	571	1,094	40,519	9,508
	CUSTOMER		3,843,393	(336,559)	760,484	23,407	(9,128)	51,079	36,542	27,021	(2,393)	214	27,407	58,540	28,406	12,629	138	1,532	2,741,152	422,923
	TOTAL		54,646,414	(7,769,677)	13,025,545	96,726	(27,925)	6,224,861	2,486,405	253,111	(7,892)	178,387	9,251,323	19,865,185	5,325,572	2,089,541	21,767	35,848	3,092,338	505,300

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION		Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
Total Expenses	PRODUCTION		187,101,519	96,909,252	23,861,372	320,829	56,816	13,746,083	2,355,340	475,151	18,634	666,711	8,380,882	30,361,966	5,645,765	3,876,660	76,403	52,596	245,450	51,609
	BULKTRAN		23,263,183	9,394,066	3,119,084	39,093	2,519	1,788,005	414,165	72,927	1,099	77,074	1,501,052	5,165,604	1,110,436	514,285	9,121	7,258	38,928	8,467
	SUBTRAN		6,670,425	2,750,938	890,102	11,307	1,153	496,798	113,349	26,075	-	20,537	404,882	1,808,484	-	142,227	2,559	2,014	-	-
	DISTPRI		58,127,425	36,455,452	9,692,387	128,410	-	5,432,937	1,020,834	-	-	244,363	3,562,024	-	-	1,540,230	29,668	21,120	-	-
	DISTSEC		24,869,386	17,781,791	4,133,029	-	-	1,993,740	-	-	-	73,712	-	-	-	583,010	-	7,189	244,324	52,591
	ENERGY		179,781,116	76,078,531	21,559,488	297,408	58,018	13,637,138	2,130,937	454,961	20,823	748,457	9,822,143	41,621,278	7,529,384	3,810,400	77,582	69,067	1,543,975	321,527
	CUSTOMER		19,718,738	12,164,295	3,268,354	157,899	29,800	205,611	59,012	64,303	7,137	1,421	42,186	104,947	33,225	43,699	768	4,203	2,975,543	556,335
	TOTAL		499,531,792	251,534,326	66,523,816	954,945	148,306	37,300,311	6,093,639	1,093,417	47,694	1,832,275	23,713,169	79,062,278	14,318,809	10,510,511	196,100	163,446	5,048,220	990,529
Total Revenue	PRODUCTION		211,446,977	94,291,305	28,240,568	350,653	46,227	16,008,278	3,358,799	603,939	15,165	734,292	12,161,708	41,501,333	8,937,907	4,635,458	85,250	65,168	337,786	73,140
	BULKTRAN		35,957,224	8,035,717	5,392,903	54,482	(2,335)	2,963,839	937,028	139,900	(701)	112,180	3,472,098	10,979,200	2,830,078	908,755	13,718	13,793	86,914	19,656
	SUBTRAN		9,892,086	2,393,917	1,490,950	15,364	(341)	798,621	247,781	48,349	-	29,120	904,988	3,712,469	-	243,419	3,745	3,703	-	-
	DISTPRI		65,119,455	34,522,754	12,938,527	150,507	-	7,069,652	1,749,857	-	-	291,035	6,242,034	-	-	2,088,798	36,094	30,198	-	-
	DISTSEC		26,441,837	16,742,608	5,636,952	-	-	2,646,722	-	-	-	89,105	-	-	-	808,503	-	10,537	414,669	92,740
	ENERGY		181,758,496	75,950,610	21,820,623	299,360	56,158	13,781,371	2,191,024	463,016	20,593	753,295	10,114,071	42,570,975	7,814,765	3,858,792	78,153	70,160	1,584,494	331,035
	CUSTOMER		23,562,131	11,827,737	4,028,838	181,305	20,672	256,690	95,554	91,324	4,744	1,635	69,593	163,487	61,630	56,327	906	5,735	5,716,695	979,258
	TOTAL		554,178,206	243,764,648	79,549,361	1,051,671	120,382	43,525,173	8,580,044	1,346,528	39,802	2,010,662	32,964,492	98,927,463	19,644,381	12,600,053	217,867	199,294	8,140,558	1,495,829
Total Other Revenue	PRODUCTION		(37,441,777)	(19,036,110)	(4,497,078)	(58,222)	(8,096)	(2,749,560)	(440,176)	(87,977)	(3,535)	(129,732)	(1,599,010)	(6,771,082)	(1,207,525)	(774,071)	(15,460)	(10,211)	(44,625)	(9,307)
	BULKTRAN		46,402,905	23,764,445	5,582,004	77,206	10,556	3,321,933	601,268	121,155	4,487	157,182	2,144,438	8,133,664	1,477,726	912,107	18,217	12,032	53,518	10,967
	SUBTRAN		12,860,667	6,544,144	1,544,676	21,470	3,824	892,587	161,931	42,247	-	40,200	569,702	2,786,946	-	244,773	4,915	3,255	-	-
	DISTPRI		5,034,536	3,360,378	744,203	11,517	-	388,954	93,829	-	-	17,632	315,143	-	-	99,569	1,999	1,312	-	-
	DISTSEC		3,206,342	2,422,107	470,478	-	-	218,768	-	-	-	8,184	-	-	-	59,139	-	699	22,503	4,463
	ENERGY		27,968,901	11,203,882	3,158,394	46,835	6,866	2,004,422	380,615	79,227	3,024	105,517	1,746,971	7,071,704	1,339,616	538,387	10,803	9,636	218,483	44,519
	CUSTOMER	Check (SB=0)	439,917	274,023	66,809	5,596	765	3,532	2,353	2,853	208	24	1,540	1,957	690	514	10	50	71,397	7,596
	TOTAL	-	58,471,491	28,532,869	7,069,487	104,401	13,915	4,080,635	799,818	157,506	4,184	199,007	3,178,785	11,223,188	1,610,508	1,080,420	20,482	16,773	321,276	58,238
Year End Mig Revenue	PRODUCTION		248,888,753	113,327,415	32,737,646	408,875	54,323	18,757,838	3,798,976	691,916	18,700	864,024	13,760,717	48,272,415	10,145,432	5,409,529	100,710	75,379	382,411	82,447
	BULKTRAN		(10,445,681)	(15,728,729)	(189,101)	(22,723)	(12,891)	(358,094)	335,760	18,745	(5,188)	(45,001)	1,327,660	2,845,536	1,352,352	(3,353)	(4,499)	1,760	33,395	8,689
	SUBTRAN		(2,968,582)	(4,150,227)	(53,726)	(6,105)	(4,165)	(93,966)	85,851	6,103	-	(11,080)	335,286	925,523	-	(1,354)	(1,170)	449	-	-
	DISTPRI		60,084,920	31,162,376	12,194,324	138,990	-	6,680,697	1,656,029	-	-	273,403	5,926,892	-	-	1,989,228	34,096	28,886	-	-
	DISTSEC		23,235,495	14,320,501	5,166,474	-	-	2,427,954	-	-	-	80,921	-	-	-	749,364	-	9,837	392,166	88,277
	ENERGY		153,789,595	64,746,728	18,662,228	252,525	49,292	11,776,950	1,810,409	383,788	17,570	647,778	8,367,100	35,499,271	6,475,149	3,320,406	67,351	60,524	1,366,011	286,516
	CUSTOMER		23,122,214	11,553,714	3,962,030	175,710	19,907	253,158	93,201	88,471	4,535	1,611	68,053	161,530	60,940	55,813	897	5,685	5,645,298	971,662
	TOTAL		495,706,715	215,231,779	72,479,875	947,271	106,467	39,444,537	7,780,226	1,189,022	35,618	1,811,655	29,785,707	87,704,275	18,033,873	11,519,633	197,384	182,521	7,819,282	1,437,591
RSALE	PRODUCTION		0.50208873	0.22861787	0.06604237	0.00082483	0.00010959	0.03784060	0.00766376	0.00139582	0.00003772	0.00174302	0.02775980	0.09738100	0.02046660	0.01091276	0.00020316	0.00015206	0.00077145	0.00016632
RSALE	BULKTRAN		(0.02107230)	(0.03172991)	(0.00038148)	(0.00004584)	(0.00002600)	(0.00072239)	0.00067734	0.00003781	(0.00001046)	(0.00009078)	0.00267832	0.00574036	0.00272813	(0.00000676)	(0.00000908)	0.00000355	0.00006737	0.00001753
RSALE	SUBTRAN		(0.00598858)	(0.00837234)	(0.00010838)	(0.00001232)	(0.00000840)	(0.00018956)	0.00017319	0.00001231	-	(0.00002235)	0.00067638	0.00186708	-	(0.00000273)	(0.00000236)	0.00000091	-	-
RSALE	DISTPRI		0.12121062	0.06286454	0.02459988	0.00028039	-	0.01347712	0.00334074	-	-	0.00055154	0.01195645	-	-	0.00401291	0.00006878	0.00005827	-	-
RSALE	DISTSEC		0.04687347	0.02888906	0.01042244	-	-	0.00489797	-	-	-	0.00016324	-	-	-	0.00151171	-	0.00001985	0.00079113	0.00017808
RSALE	ENERGY		0.31024311	0.13061499	0.03764772	0.00050942	0.00009944	0.02375790	0.00365218	0.00077422	0.00003544	0.00130678	0.01687913	0.07161346	0.01306246	0.00669833	0.00013587	0.00012210	0.00275568	0.00057799
RSALE	CUSTOMER		0.04664495	0.02330756	0.00799269	0.00035446	0.00004016	0.00051070	0.00018802	0.00017847	0.00000915	0.00000325	0.00013729	0.00032586	0.00012294	0.00011259	0.00000181	0.00001147	0.01138838	0.00196016
RSALE	TOTAL		1.00000000	0.43419178	0.14621524	0.00191095	0.00021478	0.07957233	0.01569522	0.00239864	0.00007185	0.00365469	0.06008736	0.17692775	0.03638013	0.02323881	0.00039819	0.00036820	0.01577401	0.00290008

Calculation of CUST_DEP Allocator

ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
CUST_DEP	PRODUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BULKTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SUBTRAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTPRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DISTSEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENERGY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CUSTOMER	1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-
	TOTAL	1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-
RB_GUP	PRODUCTION	0.36523981	0.18787424	0.04381230	0.00060916	0.00008484	0.02607744	0.00467286	0.00094761	0.00003598	0.00123495	0.01667259	0.06376597	0.01155180	0.00715720	0.00014295	0.00009442	0.00041945	0.00008606
	BULKTRAN	0.19834511	0.10202594	0.02379247	0.00033081	0.00004607	0.01416147	0.00253762	0.00051460	0.00001954	0.00067065	0.00905412	0.03462839	0.00627325	0.00388675	0.00007763	0.00005127	0.00022778	0.00004673
	SUBTRAN	0.05491654	0.02805979	0.00657769	0.00009189	0.00001663	0.00380143	0.00068310	0.00017931	-	0.00017135	0.00240416	0.01185437	-	0.00104205	0.00002092	0.00001386	-	-
	DISTPRI	0.21971241	0.14386924	0.03367095	0.00047031	-	0.01954665	0.00351213	-	-	0.00088384	0.01222156	-	-	0.00535953	0.00010757	0.00007063	-	-
	DISTSEC	0.10532717	0.07816383	0.01576132	-	-	0.00787807	-	-	-	0.00029446	-	-	-	0.00222537	-	0.00002631	0.00080987	0.00016794
	ENERGY	0.00681895	0.00266816	0.00076976	0.00001073	0.00000150	0.00049944	0.00008907	0.00001814	0.00000069	0.00002616	0.00041352	0.00177850	0.00033455	0.00013719	0.00000275	0.00000246	0.00005500	0.00001134
	CUSTOMER	0.04964002	0.02458701	0.00783623	0.00050020	0.00008413	0.00061094	0.00017660	0.00020686	0.00002585	0.00000405	0.00012534	0.00034772	0.00010339	0.00012346	0.00000231	0.00001194	0.01312518	0.00176881
	TOTAL	1.00000000	0.56724820	0.13222072	0.00201309	0.00023317	0.07257544	0.01167136	0.00186652	0.00008206	0.00328545	0.04089131	0.11237494	0.01826300	0.01993156	0.00035414	0.00027088	0.01463727	0.00208089
CUST_DEP_FXNL	PRODUCTION	0.34439707	0.22625024	0.04630850	0.00408167	0.00267778	0.01659699	0.00807878	0.00220231	-	-	0.02204756	0.01081578	0.00489252	0.00033701	-	-	0.00010792	-
CUST_DEP_FXNL	BULKTRAN	0.18702637	0.12286620	0.02514804	0.00221657	0.00145418	0.00901307	0.00438722	0.00119597	-	-	0.01197303	0.00587356	0.00265691	0.00018302	-	-	0.00005861	-
CUST_DEP_FXNL	SUBTRAN	0.05114060	0.03379140	0.00695245	0.00061569	0.00052492	0.00241942	0.00118099	0.00041672	-	-	0.00317922	0.00201070	-	0.00004907	-	-	-	-
CUST_DEP_FXNL	DISTPRI	0.24692365	0.17325659	0.03558935	0.00315126	-	0.01244047	0.00607202	-	-	-	0.01616160	-	-	0.00025237	-	-	-	-
CUST_DEP_FXNL	DISTSEC	0.11611639	0.09412991	0.01665932	-	-	0.00501400	-	-	-	-	-	-	-	0.00010479	-	-	0.00020838	-
CUST_DEP_FXNL	ENERGY	0.00567082	0.00321317	0.00081361	0.00007189	0.00004734	0.00031787	0.00015399	0.00004215	-	-	0.00054684	0.00030166	0.00014169	0.00000646	-	-	0.00001415	-
CUST_DEP_FXNL	CUSTOMER	0.04872511	0.02960925	0.00828270	0.00335153	0.00265524	0.00038883	0.00030531	0.00048076	-	-	0.00016575	0.00005898	0.00004379	0.00000581	-	-	0.00337714	-
CUST_DEP_FXNL	TOTAL	1.00000000	0.68311677	0.13975398	0.01348860	0.00735946	0.04619064	0.02017831	0.00433792	-	-	0.05407400	0.01906068	0.00773491	0.00093852	-	-	0.00376620	-

REVYEC_EXP_OM allocator is the basis to allocate the O&M portion of the Customer Annualization (Year End Customer) Adjustment. It is spread to the functions within each tariff class using total O&M.

ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
REVYEC Total	TOTAL	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)
EXP_OM	PRODUCTION	0.37087255	0.19945269	0.04577965	0.00063219	0.00011225	0.02673002	0.00428330	0.00090870	0.00003993	0.00131306	0.01521613	0.05806686	0.01013127	0.00742941	0.00015023	0.00009891	0.00043749	0.00009044
	BULKTRAN	0.00778137	0.00412843	0.00096742	0.00001325	0.00000228	0.00056352	0.00009233	0.00001933	0.00000081	0.00002752	0.00032865	0.00124312	0.00022090	0.00015715	0.00000315	0.00000210	0.00000944	0.00000196
	SUBTRAN	0.00215633	0.00113754	0.00026769	0.00000368	0.00000083	0.00015142	0.00002485	0.00000674	-	0.00000704	0.00008725	0.00042569	-	0.00004217	0.00000085	0.00000057	-	-
	DISTPRI	0.08403890	0.05589666	0.01289441	0.00017877	-	0.00734189	0.00118143	-	-	0.00034422	0.00409383	-	-	0.00203914	0.00004142	0.00002713	-	-
	DISTSEC	0.03371243	0.02514577	0.00500006	-	-	0.00245115	-	-	-	0.00009499	-	-	-	0.00070141	-	0.00000837	0.00025697	0.00005372
	ENERGY	0.47033788	0.19613919	0.05564857	0.00077064	0.00013747	0.03542290	0.00564476	0.00120319	0.00005267	0.00192468	0.02609098	0.11200574	0.02027722	0.00985226	0.00020021	0.00017793	0.00396551	0.00082397
	CUSTOMER	0.03110055	0.02254341	0.00520724	0.00024078	0.00005067	0.00031163	0.00007820	0.00009030	0.00001297	0.00000226	0.00005585	0.00014415	0.00004116	0.00006556	0.00000120	0.00000604	0.00167805	0.00057110
	TOTAL	1.00000000	0.50444369	0.12576503	0.00183931	0.00030350	0.07297254	0.01130487	0.00222826	0.00010639	0.00371376	0.04587268	0.17188556	0.03067055	0.02028710	0.00039706	0.00032105	0.00634746	0.00154119
REVYEC_EXP_OM	PRODUCTION	0.34175473	0.00136419	0.00722671	0.00021973	(0.00090757)	0.02257139	0.02329576	0.00254138	(0.00009125)	(0.00073241)	0.02465018	0.22116119	0.03758193	0.00279609	-	-	0.00008548	(0.00000807)
REVYEC_EXP_OM	BULKTRAN	0.00732937	0.00002824	0.00015272	0.00000460	(0.00001843)	0.00047585	0.00050216	0.00005406	(0.00000186)	(0.00001535)	0.00053241	0.00473471	0.00081944	0.00005915	-	-	0.00000185	(0.00000018)
REVYEC_EXP_OM	SUBTRAN	0.00210115	0.00000778	0.00004226	0.00000128	(0.00000669)	0.00012786	0.00013517	0.00001885	-	(0.00000393)	0.00014135	0.00162134	-	0.00001587	-	-	-	-
REVYEC_EXP_OM	DISTPRI	0.02231253	0.00038232	0.00203549	0.00006214	-	0.00619965	0.00642549	-	-	(0.00019200)	0.00663201	-	-	0.00076744	-	-	-	-
REVYEC_EXP_OM	DISTSEC	0.00328750	0.00017199	0.00078930	-	-	0.00206980	-	-	-	(0.00005298)	-	-	-	0.00026398	-	-	0.00005021	(0.00000479)
REVYEC_EXP_OM	ENERGY	0.62056071	0.00134153	0.00878460	0.00026785	(0.00111154)	0.02991183	0.03070039	0.00336496	(0.00012035)	(0.00107356)	0.04226749	0.42660001	0.07521828	0.00370794	-	-	0.00077480	(0.00007352)
REVYEC_EXP_OM	CUSTOMER	0.00265401	0.00015419	0.00082201	0.00008369	(0.00040972)	0.00026314	0.00042530	0.00025255	(0.00002964)	(0.00000126)	0.00009047	0.00054903	0.00015268	0.00002468	-	-	0.00032787	(0.00005096)
REVYEC_EXP_OM	TOTAL	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)

KENTUCKY POWER COMPANY
COST-OF-SERVICE STUDY
TWELVE MONTHS ENDING
MARCH 31, 2020

ALLOCATOR	FUNCTION	Total	RS	GS-SEC	GS-PRI	GS-SUB	LGS-SEC	LGS-PRI	LGS-SUB	LGS-TRA	IGS-SEC	IGS-PRI	IGS-SUB	IGS-TRA	PS-SEC	PS-PRI	MW	OL	SL
REVYEC_FXNL is a spreading of the REVYEC allocator to each function within the tariff classes using the RSALE allocator.																			
REVYEC TOTAL		1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)
RSALE	PRODUCTION	0.50208873	0.22861787	0.06604237	0.00082483	0.00010959	0.03784060	0.00766376	0.00139582	0.00003772	0.00174302	0.02775980	0.09738100	0.02046660	0.01091276	0.00020316	0.00015206	0.00077145	0.00016632
	BULKTRAN	(0.02107230)	(0.03172991)	(0.00038148)	(0.00004584)	(0.00002600)	(0.00072239)	0.00067734	0.00003781	(0.00001046)	(0.00009078)	0.00267832	0.00574036	0.00272813	(0.00000676)	(0.00000908)	0.00000355	0.00006737	0.00001753
	SUBTRAN	(0.00598858)	(0.00837234)	(0.00010838)	(0.00001232)	(0.00000840)	(0.00018956)	0.00017319	0.00001231	-	(0.00002235)	0.00067638	0.00186708	-	(0.00000273)	(0.00000236)	0.00000091	-	-
	DISTPRI	0.12121062	0.06286454	0.02459988	0.00028039	-	0.01347712	0.00334074	-	-	0.00055154	0.01195645	-	-	0.00401291	0.00006878	0.00005827	-	-
	DISTSEC	0.04687347	0.02888906	0.01042244	-	-	0.00489797	-	-	-	0.00016324	-	-	-	0.00151171	-	0.00001985	0.00079113	0.00017808
	ENERGY	0.31024311	0.13061499	0.03764772	0.00050942	0.00009944	0.02375790	0.00365218	0.00077422	0.00003544	0.00130678	0.01687913	0.07161346	0.01306246	0.00669833	0.00013587	0.00012210	0.00275568	0.00057799
	CUSTOMER	0.04664495	0.02330756	0.00799269	0.00035446	0.00004016	0.00051070	0.00018802	0.00017847	0.00000915	0.00000325	0.00013729	0.00032586	0.00012294	0.00011259	0.00000181	0.00001147	0.01138838	0.00196016
	TOTAL	1.00000000	0.43419178	0.14621524	0.00191095	0.00021478	0.07957233	0.01569522	0.00239864	0.00007185	0.00365469	0.06008736	0.17692775	0.03638013	0.02323881	0.00039819	0.00036820	0.01577401	0.00290008
REVYEC_FXNL	PRODUCTION	0.53394795	0.00181667	0.00896722	0.00027594	(0.00125209)	0.02930315	0.03002191	0.00362640	(0.00012763)	(0.00098794)	0.03433234	0.36032818	0.06400564	0.00358540	-	-	0.00006065	(0.00000789)
REVYEC_FXNL	BULKTRAN	0.03534378	(0.00025214)	(0.00005180)	(0.00001534)	0.00029711	(0.00055941)	0.00265339	0.00009824	0.00003541	0.00005146	0.00331245	0.02124043	0.00853173	(0.00000222)	-	-	0.00000530	(0.00000083)
REVYEC_FXNL	SUBTRAN	0.00833111	(0.00006653)	(0.00001472)	(0.00000412)	0.00009600	(0.00014679)	0.00067845	0.00003198	-	0.00001267	0.00083652	0.00690854	-	(0.00000090)	-	-	-	-
REVYEC_FXNL	DISTPRI	0.04325011	0.00049954	0.00334017	0.00009380	-	0.01043646	0.01308699	-	-	(0.00031261)	0.01478731	-	-	0.00131845	-	-	-	-
REVYEC_FXNL	DISTSEC	0.00589553	0.00022956	0.00141516	-	-	0.00379291	-	-	-	(0.00009253)	-	-	-	0.00049667	-	-	0.00006220	(0.00000844)
REVYEC_FXNL	ENERGY	0.36813901	0.00103791	0.00511180	0.00017042	(0.00113613)	0.01839773	0.01430700	0.00201147	(0.00011992)	(0.00074068)	0.02087552	0.26498338	0.04085050	0.00220074	-	-	0.00021666	(0.00002741)
REVYEC_FXNL	CUSTOMER	0.00509251	0.00018521	0.00108525	0.00011858	(0.00045885)	0.00039548	0.00073654	0.00046368	(0.00003096)	(0.00000184)	0.00016979	0.00120573	0.00038446	0.00003699	-	-	0.00089539	(0.00009295)
REVYEC_FXNL	TOTAL	1.00000000	0.00345023	0.01985308	0.00063929	(0.00245396)	0.06161952	0.06148427	0.00623179	(0.00024310)	(0.00207148)	0.07431392	0.65466627	0.11377234	0.00763513	-	-	0.00124020	(0.00013752)
FORF_DISC_FXNL Calculation - In order to properly assign forfeited discounts to the various functions within the customer classes, allocate it using the RSALE allocator																			
FORF_DISC TOTAL		1.00000000	0.59926310	0.13140814	0.00436502	0.00052055	0.03660756	0.03284234	0.00613221	0.00016717	0.00197583	0.10869064	0.05602325	0.01828781	-	-	-	0.00371639	-
RSALE	PRODUCTION	0.50208873	0.22861787	0.06604237	0.00082483	0.00010959	0.03784060	0.00766376	0.00139582	0.00003772	0.00174302	0.02775980	0.09738100	0.02046660	0.01091276	0.00020316	0.00015206	0.00077145	0.00016632
	BULKTRAN	(0.02107230)	(0.03172991)	(0.00038148)	(0.00004584)	(0.00002600)	(0.00072239)	0.00067734	0.00003781	(0.00001046)	(0.00009078)	0.00267832	0.00574036	0.00272813	(0.00000676)	(0.00000908)	0.00000355	0.00006737	0.00001753
	SUBTRAN	(0.00598858)	(0.00837234)	(0.00010838)	(0.00001232)	(0.00000840)	(0.00018956)	0.00017319	0.00001231	-	(0.00002235)	0.00067638	0.00186708	-	(0.00000273)	(0.00000236)	0.00000091	-	-
	DISTPRI	0.12121062	0.06286454	0.02459988	0.00028039	-	0.01347712	0.00334074	-	-	0.00055154	0.01195645	-	-	0.00401291	0.00006878	0.00005827	-	-
	DISTSEC	0.04687347	0.02888906	0.01042244	-	-	0.00489797	-	-	-	0.00016324	-	-	-	0.00151171	-	0.00001985	0.00079113	0.00017808
	ENERGY	0.31024311	0.13061499	0.03764772	0.00050942	0.00009944	0.02375790	0.00365218	0.00077422	0.00003544	0.00130678	0.01687913	0.07161346	0.01306246	0.00669833	0.00013587	0.00012210	0.00275568	0.00057799
	CUSTOMER	0.04664495	0.02330756	0.00799269	0.00035446	0.00004016	0.00051070	0.00018802	0.00017847	0.00000915	0.00000325	0.00013729	0.00032586	0.00012294	0.00011259	0.00000181	0.00001147	0.01138838	0.00196016
	TOTAL	1.00000000	0.43419178	0.14621524	0.00191095	0.00021478	0.07957233	0.01569522	0.00239864	0.00007185	0.00365469	0.06008736	0.17692775	0.03638013	0.02323881	0.00039819	0.00036820	0.01577401	0.00290008
FORF_DISC_FXNL	PRODUCTION	0.50660098	0.31553397	0.05935431	0.00188409	0.00026560	0.01740871	0.01603646	0.00356845	0.00008777	0.00094232	0.05021406	0.03083519	0.01028829	-	-	-	0.00018175	-
FORF_DISC_FXNL	BULKTRAN	(0.03514568)	(0.04379301)	(0.00034285)	(0.00010471)	(0.00006303)	(0.00033234)	0.00141733	0.00009667	(0.00002435)	(0.00004908)	0.00484475	0.00181766	0.00137139	-	-	-	0.00001587	-
FORF_DISC_FXNL	SUBTRAN	(0.00959198)	(0.01155535)	(0.00009741)	(0.00002813)	(0.00002036)	(0.00008721)	0.00036240	0.00003147	-	(0.00001208)	0.00122349	0.00059120	-	-	-	-	-	-
FORF_DISC_FXNL	DISTPRI	0.14463021	0.08676443	0.02210867	0.00064047	-	0.00620020	0.00699052	-	-	0.00029818	0.02162774	-	-	-	-	-	-	-
FORF_DISC_FXNL	DISTSEC	0.05176706	0.03987212	0.00936697	-	-	0.00225333	-	-	-	0.00008825	-	-	-	-	-	-	0.00018639	-
FORF_DISC_FXNL	ENERGY	0.29727636	0.18027229	0.03383517	0.00116363	0.00024100	0.01092991	0.00764220	0.00197933	0.00008246	0.00070648	0.03053228	0.02267603	0.00656633	-	-	-	0.00064924	-
FORF_DISC_FXNL	CUSTOMER	0.04446305	0.03216864	0.00718328	0.00080967	0.00009733	0.00023495	0.00039343	0.00045627	0.00002129	0.00000176	0.00024833	0.00010318	0.00006180	-	-	-	0.00268312	-
FORF_DISC_FXNL	TOTAL	1.00000000	0.59926310	0.13140814	0.00436502	0.00052055	0.03660756	0.03284234	0.00613221	0.00016717	0.00197583	0.10869064	0.05602325	0.01828781	-	-	-	0.00371639	-
WEATHER_FXNL Calculation - In order to properly assign the weather normalization load adjustment to the various functions within the customer classes, allocate it using the RSALE allocator																			
WEATHER_NORM TOTAL		1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-
RSALE	PRODUCTION	0.50208873	0.22861787	0.06604237	0.00082483	0.00010959	0.03784060	0.00766376	0.00139582	0.00003772	0.00174302	0.02775980	0.09738100	0.02046660	0.01091276	0.00020316	0.00015206	0.00077145	0.00016632
	BULKTRAN	(0.02107230)	(0.03172991)	(0.00038148)	(0.00004584)	(0.00002600)	(0.00072239)	0.00067734	0.00003781	(0.00001046)	(0.00009078)	0.00267832	0.00574036	0.00272813	(0.00000676)	(0.00000908)	0.00000355	0.00006737	0.00001753
	SUBTRAN	(0.00598858)	(0.00837234)	(0.00010838)	(0.00001232)	(0.00000840)	(0.00018956)	0.00017319	0.00001231	-	(0.00002235)	0.00067638	0.00186708	-	(0.00000273)	(0.00000236)	0.00000091	-	-
	DISTPRI	0.12121062	0.06286454	0.02459988	0.00028039	-	0.01347712	0.00334074	-	-	0.00055154	0.01195645	-	-	0.00401291	0.00006878	0.00005827	-	-
	DISTSEC	0.04687347	0.02888906	0.01042244	-	-	0.00489797	-	-	-	0.00016324	-	-	-	0.00151171	-	0.00001985	0.00079113	0.00017808
	ENERGY	0.31024311	0.13061499	0.03764772	0.00050942	0.00009944	0.02375790	0.00365218	0.00077422	0.00003544	0.00130678	0.01687913	0.07161346	0.01306246	0.00669833	0.00013587	0.00012210	0.00275568	0.00057799
	CUSTOMER	0.04664495	0.02330756	0.00799269	0.00035446	0.00004016	0.00051070	0.00018802	0.00017847	0.00000915	0.00000325	0.00013729	0.00032586	0.00012294	0.00011259	0.00000181	0.00001147	0.01138838	0.00196016
	TOTAL	1.00000000	0.43419178	0.14621524	0.00191095	0.00021478	0.07957233	0.01569522	0.00239864	0.00007185	0.00365469	0.06008736	0.17692775	0.03638013	0.02323881	0.00039819	0.00036820	0.01577401	0.00290008
WEATHER_FXNL	PRODUCTION	0.52401823	0.50876495	0.01337143	0.00002652	-	0.00109376	0.00027592	(0.00013317)	(0.00001154)	0.00019923	(0.00011579)	(0.00032583)	(0.00015867)	0.00093128	0.00010014	-	-	-
WEATHER_FXNL	BULKTRAN	(0.07075413)	(0.07061156)	(0.00007724)	(0.00000147)	-	(0.00002088)	0.00002439	(0.00000361)	0.00000320	(0.00001038)	(0.00001117)	(0.00001921)	(0.00002115)	(0.00000058)	(0.00000447)	-	-	-
WEATHER_FXNL	SUBTRAN	(0.01866754)	(0.01863177)	(0.00002194)	(0.00000040)	-	(0.00000548)	0.00000624	(0.00000117)	-	(0.00000255)	(0.00000282)	(0.00000625)	-	(0.00000023)	(0.00000116)	-	-	-
WEATHER_FXNL	DISTPRI	0.14578745	0.13989840	0.00498067	0.00000902	-	0.00038955	0.00012028	-	-	0.00006304	(0.00004987)	-	-	0.00034246	0.00003390	-	-	-
WEATHER_FXNL	DISTSEC	0.06668900	0.06428956	0.00211021	-	-	0.00014157	-	-	-	0.00001866	-	-	-	0.00012901	-	-	-	-
WEATHER_FXNL	ENERGY	0.29941886	0.29066988	0.00762244	0.00001638	-	0.00068671	0.00013149	(0.00007387)	(0.00001084)	0.00014937	(0.00007041)	(0.00023962)	(0.00010127)	0.00057163	0.00006697	-	-	-
WEATHER_FXNL	CUSTOMER	0.05350813	0.05186851	0.00161826	0.00001140	-	0.00001476	0.00000677	(0.00001703)	(0.00000280)	0.00000037	(0.00000057)	(0.00000109)	(0.00000095)	0.00000961	0.00000089	-	-	-
WEATHER_FXNL	TOTAL	1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-
WEATHER_FXNL_OM	PRODUCTION	0.39437028	0.38204613	0.01077607	0.00002112	-	0.00084249	0.00021411	(0.00009333)	(0.00000825)	0.00014770	(0.00008314)	(0.00019999)	(0.00009317)	0.00072627	0.00007426	-	-	-
WEATHER_FXNL_OM	BULKTRAN	0.00816819	0.00790789	0.00022772	0.00000044	-	0.00001776	0.00000462	(0.00000199)	(0.00000017)	0.00000310	(0.00000180)	(0.00000428)	(0.00000203)	0.00001536	0.00000156	-	-	-
WEATHER_FXNL_OM	SUBTRAN	0.00225078	0.00217893	0.00006301	0.00000012	-	0.00000477	0.00000124	(0.00000069)	-	0.00000079	(0.00000048)	(0.00000147)	-	0.00000412	0.00000042	-	-	-
WEATHER_FXNL_OM	DISTPRI	0.11063632	0.10706851	0.00303521	0.00000597	-	0.00023141	0.00005906	-	-	0.00003872	(0.00002237)	-	-	0.00019934	0.00002047	-	-	-
WEATHER_FXNL_OM	DISTSEC	0.04949950	0.04816603	0.00117696	-	-	0.00007726	-	-	-	0.00001068	-	-	-	0.00006857	-	-	-	-
WEATHER_FXNL_OM	ENERGY	0.39065203	0.37569920	0.01309912	0.00002575	-	0.00111648	0.00028216	(0.00012357)	(0.00001088)	0.00021650	(0.00014256)	(0.00038576)	(0.00018647)	0.00096311	0.00009896	-	-	-
WEATHER_FXNL_OM	CUSTOMER	0.04442290	0.04318128	0.00122573	0.00000804	-	0.00000982	0.00000391	(0.00000927)	(0.00000268)	0.00000025	(0.00000031)	(0.00000050)	(0.00000038)	0.00000641	0.00000059	-	-	-
WEATHER_FXNL_OM	TOTAL	1.00000000	0.96624797	0.02960383	0.00006145	-	0.00230000	0.00056509	(0.00022885)	(0.00002198)	0.00041775	(0.00025064)	(0.00059200)	(0.00028205)	0.00198318	0.00019626	-	-	-

Kentucky Power Company
Proposed Revenue Allocation
Twelve Months Ended March 31, 2020

					Proposed Revenue Allocation					
Current Class (1)	**Current Revenue** (2)	**Rate Base** (3)	**Current Income** (4)	**Current ROR %** (5)	**Income Increase** (6)	**Income** (7)	**ROR %** (8)	**Revenue Increase** (9)	**Sales Revenue** (10)	**Percent Increase** (11)
RS	219,292,354	791,371,716	(853,512)	-0.11	29,137,847	28,284,335	3.57	39,415,631	258,707,985	17.97
GS	73,397,430	188,022,996	13,634,790	7.25	6,922,898	20,557,688	10.93	9,364,809	82,762,239	12.76
LGS	58,155,908	151,021,365	9,635,765	6.38	5,560,519	15,196,284	10.06	7,521,879	65,677,787	12.93
IGS	115,641,810	253,284,765	14,235,869	5.62	9,325,798	23,561,667	9.30	12,615,284	128,257,094	10.91
MW	182,521	392,044	37,267	9.51	14,435	51,702	13.19	19,527	202,048	10.70
OL	7,801,242	20,340,568	3,093,171	15.21	748,928	3,842,099	18.89	1,013,097	8,814,339	12.99
SL	1,439,592	2,941,513	510,434	17.35	108,305	618,739	21.03	146,508	1,586,100	10.18
Total	475,910,856	1,407,374,967	40,293,784	2.86	51,818,730	92,112,514	6.54	70,096,735	546,007,591	14.73

Gross Rev Conversion Factor: 1.35273

Kentucky Power Company
Proposed Revenue Allocation
Twelve Months Ended March 31, 2020

					Current Equalized Rate of Return							
Current Class (1)	Current Revenue (2)	Rate Base (3)	Current Income (4)	Current ROR % (5)	Percent Increase (6)	Revenue Increase (7)	Income Increase (8)	Income (9)	ROR % (10)	Sales Revenue (11)	Current Subsidy (12)=(11)-(2)	Relative ROR
RS	219,292,354	791,371,716	(853,512)	-0.11	14.50	31,803,815	23,510,843	22,657,331	2.86	251,096,169	31,803,815	-0.04
GS	73,397,430	188,022,996	13,634,790	7.25	-15.21	(11,162,192)	(8,251,606)	5,383,184	2.86	62,235,238	(11,162,192)	2.53
LGS	58,155,908	151,021,365	9,635,765	6.38	-12.36	(7,185,639)	(5,311,955)	4,323,810	2.86	50,970,269	(7,185,639)	2.23
IGS	115,641,810	253,284,765	14,235,869	5.62	-8.17	(9,447,749)	(6,984,211)	7,251,658	2.86	106,194,061	(9,447,749)	1.97
MW	182,521	392,044	37,267	9.51	-19.30	(35,229)	(26,043)	11,224	2.86	147,292	(35,229)	3.33
OL	7,801,242	20,340,568	3,093,171	15.21	-43.54	(3,396,449)	(2,510,811)	582,360	2.86	4,404,793	(3,396,449)	5.32
SL	1,439,592	2,941,513	510,434	17.35	-40.05	(576,557)	(426,217)	84,217	2.86	863,035	(576,557)	6.07
Total	475,910,856	1,407,374,967	40,293,784	2.86	0.00	0	0	40,293,784	2.86	475,910,856	0	1.00

Gross Rev Conversion Factor: 1.352730

Kentucky Power Company
Proposed Revenue Allocation
Twelve Months Ended March 31, 2020

					Equalized Rate of Return						100% of		
Current Class (1)	Current Revenue (2)	Rate Base (3)	Current Income (4)	Current ROR % (5)	Percent Increase (6)	Revenue Increase (7)	Income Increase (8)	Income (9)	ROR % (10)	Sales Revenue (11)	Current Subsidy (12)	Proposed Increase (13)=(7)-(12)	Percent Increase (14)
RS	219,292,354	791,371,716	(853,512)	-0.11	32.48	71,219,446	52,648,691	51,795,179	6.54	290,511,800	31,803,815	39,415,631	17.97
GS	73,397,430	188,022,996	13,634,790	7.25	-2.45	(1,797,383)	(1,328,709)	12,306,081	6.54	71,600,047	(11,162,192)	9,364,809	12.76
LGS	58,155,908	151,021,365	9,635,765	6.38	0.58	336,240	248,564	9,884,329	6.54	58,492,148	(7,185,639)	7,521,879	12.93
IGS	115,641,810	253,284,765	14,235,869	5.62	2.74	3,167,535	2,341,587	16,577,456	6.54	118,809,345	(9,447,749)	12,615,284	10.91
MW	182,521	392,044	37,267	9.51	-8.60	(15,702)	(11,608)	25,659	6.54	166,819	(35,229)	19,527	10.70
OL	7,801,242	20,340,568	3,093,171	15.21	-30.55	(2,383,352)	(1,761,883)	1,331,288	6.54	5,417,890	(3,396,449)	1,013,097	12.99
SL	1,439,592	2,941,513	510,434	17.35	-29.87	(430,049)	(317,912)	192,522	6.54	1,009,543	(576,557)	146,508	10.18
Total	475,910,856	1,407,374,967	40,293,784	2.86	14.73	70,096,735	51,818,730	92,112,514 92,112,514	6.54	546,007,591	0	70,096,735	14.73

Gross Rev Conversion Factor: 1.352730

KY Verification - Stegall.docx

DocVerify ID:	0400DF60-6EB9-4B97-8E8D-27C0A35C8F46
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Pages:	1
Remote Notary:	Yes / State: OH

E-Signature Summary

E-Signature 1: Jason Stegall (JMS)
June 18, 2020 12:21:24 -8:00 [BEEDEE39CAC8] [161.235.2.86]
jmstegall@aep.com (Principal) (Personally Known)

E-Signature Notary: Sarah Smithhisler (SRS)
June 18, 2020 12:21:24 -8:00 [3AA331D87688] [161.235.221.85]
srsmithhisler@aep.com
I, Sarah Smithhisler, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Jason M. Stegall, being duly sworn, deposes and says he is a Regulatory Pricing and Analysis Manager for American Electric Power Service Company that he 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 his information, knowledge and belief after reasonable inquiry.

Signed on 2020/06/18 12:21:24 -8:00

Jason M. Stegall

STATE OF OHIO	)
	) Case No. 2020-00174
COUNTY OF FRANKLIN	)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Jason Stegall, this 18th day of June 2020.

Signed on 2020/06/18 12:21:24 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

My Commission Expires: April 29, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2020-00174
Regulatory Assets And Liabilities; (4) Approval of A	)	
Certificate Of Public Convenience And Necessity;	)	
And (5) All Other Required Approvals And Relief	)	

DIRECT TESTIMONY OF

FRANZ D. MESSNER

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
FRANZ D. MESSNER ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

TABLE OF CONTENTS

DIRECT TESTIMONY OF
FRANZ D. MESSNER ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2020-00174

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Franz D. Messner, and my business address is 1 Riverside Plaza, Columbus, Ohio, 43215.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by American Electric Power Service Corporation ("AEPSC") as Managing Director of Corporate Finance. AEPSC supplies engineering, financing, accounting, planning, advisory, and other services to the subsidiaries of the American Electric Power ("AEP") system, one of which is Kentucky Power Company ("Kentucky Power" or the "Company").

II. BACKGROUND

Q. WOULD YOU PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I earned a Bachelor of Science in Systems Engineering from the United States Naval Academy in 1990. I earned a Master of Business Administration from the Fisher College of Business at the Ohio State University in 1999. Prior to joining AEP, I served for approximately seven years as a U.S. Naval officer and completed both chief engineer and submarine officer qualifications.

In June 1999, I was hired by AEPSC as an associate in a finance associate development program. My primary roles have been in the areas of financial analysis, budgeting, and forecasting. In July 2007, I was named Manager in Corporate Planning and Budgeting and subsequently promoted to Director in November 2009. In May 2016, I assumed my current position as Managing Director of Corporate Finance.

Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGING DIRECTOR OF CORPORATE FINANCE?

A. I am responsible for planning and executing the corporate finance programs of the regulated AEP System operating companies, including Kentucky Power. My responsibilities also include preparing recommendations for the payment of dividends by those companies, maintaining capitalization targets, and managing the relationships of AEP and its subsidiaries with the credit rating agencies.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN ANY REGULATORY PROCEEDINGS?

A. Yes. I submitted testimony before the Indiana Utility Regulatory Commission in Causes No. 44967 and No. 45235 and before the Michigan Public Service Commission in Cause No. U-18370 on behalf of Indiana Michigan Power Company ("I&M"). I submitted testimony and testified on I&M's behalf before the Michigan Public Service Commission in Cause No. U-20359. I also submitted testimony before the Public Utilities Commission of Ohio on Ohio Power Company's behalf in Case Nos. 19-1098-EL-UNC, 20-1006-EL-UNC, and 20-585-EL-AIR, *et al*. Additionally, I have prepared or had prepared under my direct supervision financing applications submitted on behalf of Kentucky Power Company to the Public Service Commission of Kentucky ("Commission").

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY ON THIS PROCEEDING?

A. The purpose of my testimony in this proceeding is to present and support Kentucky Power's capital structure and weighted average cost of capital.

Q. ARE YOU SPONSORING ANY SCHEDULES OR WORKPAPERS?

A. Yes. I am sponsoring the following Section V Workpapers:

- Section V Workpaper S-2 Page 1 – Cost of Capital
- Section V Workpaper S-3 Page 1 (Column 3, Lines 1-4) – Capitalization
- Section V Workpaper S-3 Page 2 – Long-Term Debt
- Section V Workpaper S-3 Page 3 – Schedule of Short-Term Debt

IV. PROPOSED COST OF CAPITAL AND CAPITAL STRUCTURE

Q. PLEASE SUMMARIZE KENTUCKY POWER'S PROPOSED CAPITAL STRUCTURE AND WEIGHTED AVERAGE COST OF CAPITAL.

A. Based on the test year ended March 31, 2020, with one known and measurable adjustment described below, Kentucky Power's proposed capital structure, and weighted average cost of capital of 6.58%, are set forth in Table 1 below:

Table 1 Line No. (1)	Description (2)	Reapportioned Kentucky Jurisdictional Capital (3)	Percentage of Total (4)	Annual Cost Percentage Rate (5)	Weighted Average Cost Percent (6) = (4) X (5)
1	Long Term Debt	$752,127,351	53.73%	4.040%	2.17%
2	Short Term Debt	0	0.00%	2.230%	0.00%
3	Accounts Receivable Financing 4/	42,248,932	3.02%	2.802%	0.08%
4	Common Equity	605,509,950	43.25%	**10.00%**	4.33%
		-------------------	-------------------		-------------------
5	Total	$1,399,886,232	100.00%		**6.58%**
		==========	==========		==========

Q. HOW WAS THE COMPANY'S PROPOSED CAPITAL STRUCTURE DEVELOPED?

Development of the proposed capital structure, as shown in Table 1, begins with the per books balance for each category of capital as of the end of the test year, March 31, 2020. The per books balances are then adjusted to account for known and measurable changes to the Company's capitalization. The capitalization adjustments are shown in Section V, Workpaper S-3, page 1 and detailed in the testimonies of Company Witnesses West and Whitney.

Q. PLEASE EXPLAIN HOW THE PROPOSED WEIGHTED AVERAGE COST OF CAPITAL OF 6.58% WAS CALCULATED.

A. The proposed weighted average cost of capital is based on the summation of the weighted average cost for each source of capital in the Company's capital structure, including long-term debt, short-term debt, common stock, and accounts receivable financing. The calculation is shown on Section V, Workpaper S-2, page 1. The Company began with the Reapportioned Kentucky Jurisdictional capitalization as calculated on Section V Workpaper S-3, page 1, column 16 for each source of capital. Next, the Company divided the dollar amount of each component of capital by the Company's total dollar amount of capital to derive the percentage of the Company's total capital each component represents. The percentage of total capital was then multiplied by the respective annual cost percentage rate for each source of capital.

Q. PLEASE EXPLAIN WHAT RATES WERE USED IN CALCULATING THE COMPANY'S PER BOOKS WEIGHTED AVERAGE COST OF CAPITAL AS OF MARCH 31, 2020.

A. The weighted cost of long-term debt was determined by taking the sum of each debt instrument's actual annualized cost and dividing that amount by the total debt outstanding as of March 31, 2020. The annualized cost for each debt instrument was calculated by multiplying the effective cost rate (yield to maturity) by the net proceeds outstanding. Please refer to Section V, Workpaper S-3, page 2.

The cost of short-term debt used in the calculation is the Company's actual short-term interest expense for the twelve months ended March 31, 2020 divided by the actual average borrowings outstanding during the same time period. Please refer to Section V, Workpaper S-3, page 3. As mentioned earlier, the per books balances are adjusted to account for known and measurable changes to the Company's capitalization as shown in Section V, Schedule 3 and detailed in the testimonies of Company Witnesses West and Whitney. Though the per books short-term debt balance on March 31, 2020 was approximately $10.7 million, the adjusted balance included in the weighted average cost of capital calculation was zero due to the Mitchell Coal Stock Adjustment shown in Section V, Workpaper S-3, page 1, columns 11 and 16.

The cost of accounts receivable financing used in the derivation of the weighted average cost of capital was calculated using the thirteen-month average cost of receivable factoring experienced by the Company during the test year.

The 10.00% cost of common equity used in the calculation is recommended by Company Witness Mattison based on the range identified by Company Witness McKenzie.

Q. DID YOU MAKE ANY ADJUSTMENTS TO THE WEIGHTED COST OF LONG TERM DEBT AS OF MARCH 31, 2020?

A. Yes. The $65 million WVEDA Mitchell Project, Series 2014A Bonds were refinanced on June 19, 2020. The bonds' coupon increased to 2.35% from the 2.00% rate they bore on March 31, 2020. The Company's resulting adjusted weighted average cost of long-term debt is 4.04%. That is 128 basis points lower than the weighted average cost of long-term debt of 5.32% at the time of the Company's application in Case No. 2017-00179. It also is 32 basis points lower than the 4.36% weighted average cost of long-term debt in the August 7, 2017 supplemental filing in Case No. 2017-00179 to reflect Kentucky Power's June 2017 refinancing of the Company's $325 million 6.00% Senior Unsecured Notes (due September 15, 2017) and $65 million WVEDA Mitchell Project, Series 2914A Bonds.

Q. DID THE ADJUSTMENT OF KENTUCKY POWER'S WEIGHTED COST OF LONG TERM DEBT AFFECT THE COMPANY'S WEIGHTED AVERAGE COST OF CAPITAL?

A. Yes, but only minimally. Kentucky Power's March 31, 2020 unadjusted weighted average cost of capital was 6.56%. Its March 31, 2020 adjusted weighted average cost of capital to reflect the June 19, 2020 refinancing of the WVEDA Mitchell Project, Series 2014A Bonds is 6.58%.

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

A. Yes, it does.

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Created:	June 17, 2020 12:20:10 -8:00
Pages:	1
Remote Notary:	Yes / State: OH

E-Signature Summary

E-Signature 1: Franz D. Messner (FDM)
June 18, 2020 08:06:54 -8:00 [B00121F792F8] [161.235.2.87]
fdmessner@aep.com (Principal) (Personally Known)

E-Signature Notary: Sarah Smithhisler (SRS)
June 18, 2020 08:06:54 -8:00 [22D8FAF2A1F4] [161.235.221.85]
srsmithhisler@aep.com
I, Sarah Smithhisler, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Franz D. Messner, being duly sworn, deposes and says he is a Managing Director of Corporate Finance for American Electric Power Service Company that he 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 his information, knowledge and belief after reasonable inquiry.

B00121F792F8

Signed on 2020/06/18 08:06:54 -8:00

____

Franz D. Messner

STATE OF OHIO	)
	) Case No. 2020-00174
COUNTY OF FRANKLIN	)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Franz Messner, this 18th day of June 2020.

22D8FAF2A1F4

Signed on 2020/06/18 08:06:54 -8:00

NOTARY PUBLIC
STATE OF OHIO
Sarah Smithhisler
Commission # 2019-RE-775042
Electronic Notary Public
State of Ohio
My Comm Exp. Apr 29, 2024
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My Commission Expires: April 29, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2020-00174
Regulatory Assets And Liabilities; (4) Approval Of A	)	
Certificate Of Public Convenience And Necessity;	)	
And (5) All Other Required Approvals And Relief	)	

DIRECT TESTIMONY OF

ADRIEN M. MCKENZIE, CFA

ON BEHALF OF KENTUCKY POWER COMPANY

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CASE NO. 2020-00174

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I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is Adrien M. McKenzie, and my business address is 3907 Red River, Austin, Texas 78751.

Q2. IN WHAT CAPACITY ARE YOU EMPLOYED?

A2. I am President of Financial Concepts and Applications, Inc. ("FINCAP"), a firm engaged in financial, economic, and policy consulting to business and government.

Q3. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A3. A description of my background and qualifications, including a resume containing the details of my experience, is attached as Exhibit AMM-1.

Q4. FOR WHOM ARE YOU TESTIFYING IN THIS CASE?

A4. I am testifying on behalf of Kentucky Power Company ("Kentucky Power" or "the Company"), which is an operating subsidiary of American Electric Power Company, Inc. ("AEP").

A. Overview

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. As discussed in the testimony of Mr. Brett Mattison, Kentucky Power is requesting that the Kentucky Public Service Commission ("Commission") authorize a return on equity ("ROE") of 10.0% for the Company in this proceeding. The purpose of my testimony is evaluate the reasonableness of the 10.0% ROE requested by the Company, based on my independent assessment of the fair ROE for the jurisdictional electric utility operations of

Kentucky Power. In addition, I also examine the reasonableness of the Company's capital structure, considering both the specific risks faced by Kentucky Power and other industry guidelines.

Q6. ARE YOU SPONSORING ANY EXHIBITS?

A6. Yes. I am sponsoring the following exhibits:

- Exhibit AMM-1 Qualifications of Adrien M. McKenzie
- Exhibit AMM-2 ROE Analyses – Summary of Results
- Exhibit AMM-3 Regulatory Mechanisms – Electric Group
- Exhibit AMM-4 DCF Model – Electric Group
- Exhibit AMM-5 Sustainable Growth Rate – Electric Group
- Exhibit AMM-6 CAPM – Electric Group
- Exhibit AMM-7 Empirical CAPM – Electric Group
- Exhibit AMM-8 Electric Utility Risk Premium
- Exhibit AMM-9 Expected Earnings Approach
- Exhibit AMM-10 Flotation Cost Study
- Exhibit AMM-11 DCF Model – Non-Electric Group
- Exhibit AMM-12 Capital Structure

Q7. PLEASE SUMMARIZE THE INFORMATION AND MATERIALS YOU RELIED ON TO SUPPORT THE OPINIONS AND CONCLUSION CONTAINED IN YOUR TESTIMONY.

A7. To prepare my testimony, I reference information from a variety of sources that would normally be relied upon by a person in my capacity. I am familiar with the organization, finances, and operations of Kentucky Power from my participation in prior proceedings before the Commission. In connection with this filing, I consider and rely on corporate disclosures, publicly available financial reports and filings, and other published information relating to the Company. I also review information relating generally to capital market conditions and specifically to investor perceptions, requirements, and expectations for utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for Kentucky Power, and they form the basis of my analyses and conclusions.

Q8. HOW IS YOUR TESTIMONY ORGANIZED?

A8. First, I summarize the results of my analyses and present my evaluation of the reasonableness of the 10.0% ROE requested by Kentucky Power, giving special attention to the importance of financial strength and the implications of regulatory mechanisms and other risk factors. My ROE evaluation considers the implications of current capital market conditions, the specific risks for the Company's jurisdictional utility operations in Kentucky, and the Company's requirements for financial strength, as well as accounting for flotation costs, which are properly considered in setting a fair and reasonable ROE. I also comment on the reasonableness of the Company's proposed capital structure.

Next, I review Kentucky Power's operations and finances. I then examine current conditions in the capital markets and their implications in evaluating a fair and reasonable ROE for the Company. With this as a background, I conduct well-accepted quantitative analyses to estimate the current cost of equity for a reference group of comparable-risk electric utilities. These include the discounted cash flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the empirical form of Capital Asset Pricing Model ("ECAPM"), an equity risk premium approach based on allowed ROEs, and reference to expected earned rates of return for electric utilities, which are all methods that are commonly relied on in regulatory proceedings. In addition, I discuss the issue of stock flotation expenses and the implications of these legitimate costs on the estimation of a reasonable ROE for the Company. Consistent with the fact that utilities must compete for capital with firms outside their own industry, I also corroborate my utility quantitative analyses by applying the DCF model to a group of low risk non-utility firms.

Finally, I examine the reasonableness of the Kentucky Power's capital structure in light of industry benchmarks and the imperative of ensuring the Company's ongoing financial flexibility and access to capital, particularly during times of heightened uncertainty.

Q9. WHAT IS YOUR CONCLUSION REGARDING THE 10.0% ROE REQUESTED BY KENTUCKY POWER?

A9. Considering the results of my analyses, along with heightened economic and financial market uncertainties and Kentucky Power's specific risk exposures and need for financial strength, my testimony demonstrates that an ROE of 10.3% is warranted for the Company. Accordingly, I conclude that Kentucky Power's requested ROE of 10.0% understates investors' required return for the Company. Kentucky Power's requested ROE represents a reasonable compromise between balancing the impact on customers and the need to provide the Company with a return that is adequate to compensate investors.

II. RETURN ON EQUITY FOR KENTUCKY POWER

Q10. WHAT IS THE PURPOSE OF THIS SECTION?

A10. This section presents my conclusions regarding the fair ROE applicable to Kentucky Power's electric utility operations. I also describe the relationship between ROE and preservation of a utility's financial integrity and the ability to attract capital. In addition, I discuss the impact of regulatory mechanisms.

A. Importance of Financial Strength

Q11. WHAT IS THE ROLE OF THE ROE IN SETTING A UTILITY'S RATES?

A11. The ROE is the cost of attracting and retaining common equity investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. Moreover, a fair and reasonable ROE is integral in meeting sound regulatory economics and the standards set forth by the U.S. Supreme Court. The *Bluefield* case set the standard against which just and reasonable rates are measured:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties. . . . The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary for the proper discharge of its public duties.[1]

The *Hope* case expanded on the guidelines as to a reasonable ROE, reemphasizing the findings in *Bluefield* and establishing that the rate-setting process must produce an end-result that allows the utility a reasonable opportunity to cover its capital costs. The Court stated:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. . . . By that standard, the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain credit and attract capital.[2]

In summary, the Supreme Court's findings in *Hope* and *Bluefield* established that a just and reasonable ROE must be sufficient to: 1) fairly compensate the utility's investors, 2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and 3) maintain the utility's financial integrity. These standards should allow the utility to fulfill its obligation to provide reliable service while meeting the needs of customers

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[1] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) ("*Bluefield*").

[2] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

through necessary system replacement and expansion, but the Supreme Court's requirements can only be met if the utility has a reasonable opportunity to actually earn its allowed ROE.

While the *Hope* and *Bluefield* decisions did not establish a particular method to be followed in fixing rates (or in determining the allowed ROE),[3] these and subsequent cases enshrined the importance of an end result that meets the opportunity cost standard of finance. Under this doctrine, the required return is established by investors in the capital markets based on expected returns available from comparable risk investments. Coupled with modern financial theory, which has led to the development of formal risk-return models (*e.g.*, DCF and CAPM), practical application of the *Bluefield* and *Hope* standards involves the independent, case-by-case consideration of capital market data in order to evaluate an ROE that will produce a balanced and fair end result for investors and customers.

Q12. THROUGHOUT YOUR TESTIMONY YOU REFER REPEATEDLY TO THE CONCEPTS OF "FINANCIAL STRENGTH," "FINANCIAL INTEGRITY," AND "FINANCIAL FLEXIBILITY." WOULD YOU BRIEFLY DESCRIBE WHAT YOU MEAN BY THESE TERMS?

A12. These terms are generally synonymous, and refer to the utility's ability to attract and retain the capital that is necessary to provide service at reasonable cost, consistent with the Supreme Court standards. Kentucky Power's plans call for a continuation of capital investments in the distribution system and technology to preserve and enhance service reliability for its customers. The Company must generate adequate cash flow from operations to fund these requirements and for repayment of maturing debt, together with access to capital from external sources under reasonable terms, on a sustainable basis.

[3] *Id.* at 602 (*finding*, "the Commission was not bound to the use of any single formula or combination of formulae in determining rates." and, "[I]t is not theory but the impact of the rate order which counts.")

Rating agencies and potential debt investors tend to place significant emphasis on maintaining strong financial metrics and credit ratings that support access to debt capital markets under reasonable terms. This emphasis on financial metrics and credit ratings is shared by equity investors who also focus on cash flows, capital structure and liquidity, much like debt investors. Investors understand the important role that a supportive regulatory environment plays in establishing a sound financial profile that will permit the utility access to debt and equity capital markets on reasonable terms in both favorable financial markets and during times of potential disruption and crisis.

Q13. WHAT PART DOES REGULATION PLAY IN ENSURING THAT KENTUCKY POWER HAS ACCESS TO CAPITAL UNDER REASONABLE TERMS AND ON A SUSTAINABLE BASIS?

A13. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity, particularly during times of adverse conditions. Security analysts study commission orders and regulatory policy statements to advise investors about where to put their money. As Moody's Investors Service ("Moody's") noted, "the regulatory environment is the most important driver of our outlook because it sets the pace for cost recovery."[4] Similarly, S&P Global Ratings ("S&P") observed that, "[r]egulatory advantage is the most heavily weighted factor when S&P Global Ratings analyzes a regulated utility's business risk profile."[5] The Value Line Investment Survey ("Value Line") summarizes these sentiments:

> As we often point out, the most important factor in any utility's success, whether it provides electricity, gas, or water, is the regulatory climate in which it operates. Harsh regulatory conditions can make it nearly

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[4] Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, Industry Outlook (Feb. 19, 2014).

[5] S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

> impossible for the best run utilities to earn a reasonable return on their investment.[6]

More recently, the investment community has emphasized the need for supportive regulatory actions to bolster cash flows in response to concerns over the negative impact of the Tax Cuts and Jobs Act of 2017 ("TCJA") for utilities' financial strength.[7] In addition, the ROE set by regulators impacts investor confidence in not only the jurisdictional utility, but also in the ultimate parent company that is the entity that actually issues common stock.

Q14. DO CUSTOMERS BENEFIT BY ENHANCING THE UTILITY'S FINANCIAL FLEXIBILITY?

A14. Yes. Providing an ROE that is sufficient to maintain Kentucky Power's ability to attract capital under reasonable terms, even in times of financial and market stress, is not only consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope* and *Bluefield* decisions, it is also in customers' best interests. Customers enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to ensure safe and reliable service.

B. Conclusions and Recommendations

Q15. WHAT ARE YOUR FINDINGS REGARDING THE 10.0% ROE REQUESTED BY KENTUCKY POWER?

A15. Based on the results of my analyses and the economic requirements necessary to support continuous access to capital under reasonable terms, I conclude that 10.0% understates investors' required ROE for Kentucky Power. The bases for my conclusion are summarized below:

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[6] Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at p. 1780.

[7] Moody's cited the loss of bonus depreciation as a key factor leading to weakened credit metrics for Kentucky Power. Moody's Investors Service, *Kentucky Power Company*, Credit Opinion (Apr. 14, 2020).

- In order to reflect the risks and prospects associated with Kentucky Power's jurisdictional utility operations, my analyses focused on a proxy group of 23 other electric utilities ("Electric Group").
- Because investors' required return on equity is unobservable and no single method should be viewed in isolation, I applied the DCF, CAPM, ECAPM, and risk premium methods to estimate a fair and reasonable ROE for Kentucky Power, as well as referencing the expected earnings approach.
- As summarized on Exhibit AMM-2, considering the results of these analyses, and giving less weight to extremes at the high and low ends of the range, I concluded that the cost of equity for the proxy group of utilities is in the 9.3% to 10.4% range.
- Adding a flotation cost adjustment of 10 basis points to this bare bones cost of equity range resulted in an ROE range for the proxy group of 9.4% to 10.5%;
- An ROE of 10.0% falls at the middle of the proxy group range.

Q16. DO YOUR QUANTITATIVE RESULTS FULLY REFLECT THE IMPLICATIONS OF THE CORONAVIRUS PANDEMIC ("COVID-19")?

A16. No. The threat posed by the global pandemic has clearly led to a fundamental reevaluation of risks and required returns, including for utility common stocks, but the high degree of uncertainty, extreme short-term volatility, and lack of consistent data greatly complicates any ability to account for this heightened risk through the application of standard market-based methods (e.g., DCF, CAPM) at this time. For example, the Federal Energy Regulatory Commission ("FERC") noted that dislocations in the economy and capital markets can undermine the reliability of quantitative methodologies used to estimate the cost of equity, concluding that "any DCF analysis may be affected by potentially unrepresentative financial inputs to the DCF formula, including those produced by historically anomalous capital market conditions."[8] As my testimony demonstrates:

[8] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234, at P 41 (2014).

- The turmoil in financial markets has resulted in a fundamental shift in investors' risk perceptions, which has increased the cost of common equity capital:
    - The dramatic increase in market volatility that has accompanied the coronavirus pandemic is indicative of significantly higher investment risks.
    - Widening yield spreads between bonds of differing risk indicate that the cost investors require to compensate for additional risk has increased.
    - Rising beta values supports the view that the forward-looking risks of electric utility stocks have increased, which implies a higher ROE.
    - Because of the "flight to quality", government bond yields have fallen sharply at the same time that the required returns for common stocks have moved sharply higher to compensate for increased perceptions of risk. As a result trends in Treasury bond yields have virtually no relevance in evaluating long-term capital costs for Kentucky Power in the current capital market climate.
- Unprecedented Federal Reserve monetary policies have placed downward pressure on interest rates, and emphasize the need to consider the impact of projected bond yields in evaluating the results of quantitative methods.
- Continued support for Kentucky Power's financial integrity is imperative to ensure that the Company has the capability to confronting potential challenges associated with funding infrastructure development necessary to meet the needs of its customers, even during times of capital market turmoil.
- In order to consider Kentucky Power's specific risk exposures, capital market expectations, and the economic requirements necessary to maintain financial integrity and support additional capital investment even under adverse circumstances, an ROE of 10.3% is warranted. An ROE of 10.3% falls approximately at the midpoint of the upper end of my recommended range.

Thus, while investors are faced with unprecedented risks associated with the global threat to economic growth and financial stability posed by COVID-19, Kentucky Power's 10.0% requested ROE does not fully consider this impact.

Q17. DO YOU CONSIDER THE IMPLICATIONS OF COST RECOVERY MECHANISMS IN EVALUATING A FAIR ROE FOR KENTUCKY POWER?

A17. Yes. Adjustment mechanisms, cost trackers, and future test years have become increasingly prevalent in the utility industry in recent years, along with alternatives to traditional ratemaking such as formula rates. In response to the increasing risk sensitivity of investors to uncertainty over fluctuations in costs and the importance of advancing other public interest goals such as reliability, energy conservation, and safety, utilities and their regulators have sought to mitigate some of the cost recovery uncertainty and align the interest of utilities and their customers through a variety of adjustment mechanisms. Based largely on the expanded use of ratemaking mechanisms to address operational risks and investment recovery, Moody's upgraded most regulated utilities in January 2014.[9] This is consistent with the view that investors perceive the impact of regulatory mechanisms to have an across-the-board impact on risk perceptions for virtually all utilities.

Reflective of this trend, companies in the electric utility industry operate under a wide variety of cost adjustment mechanisms, in addition to the standard fuel cost recovery clauses that they all have. These enhanced tools encompass revenue decoupling and adjustment clauses designed to address capital investment outside of a traditional rate case, as well as riders to recover environmental compliance costs, bad debt expenses, certain taxes and fees, and post-retirement employee benefit costs. *RRA Regulatory Focus* concluded in its most recent review of adjustment clauses that:

> More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation capacity or delivery infrastructure to be reflected in rates, effectively including these items in rate base without a full rate case. In some instances, these mechanisms may even provide the utilities a cash return on construction work in progress.

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[9] Moody's Investors Service, *US utility sector upgrades driven by stable and transparent regulatory frameworks*, Sector Comment (Feb. 3, 2014).

> . . . [C]ertain types of adjustment clauses are more prevalent than others. For example, those that address electric and fuel and gas commodity charges are in place in all jurisdictions. Also, about two-thirds of all utilities have riders in place to recover costs related to energy efficiency programs, and roughly half of the utilities utilize some type of decoupling mechanism.[10]

Q18. HAVE SIMILAR REGULATORY MECHANISMS BEEN APPROVED FOR KENTUCKY POWER?

A18. Yes. In addition to a fuel adjustment clause, Kentucky Revised Statute 278.183 provides, in part, that "a utility shall be 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 by-products from facilities utilized for production of energy from coal." Consistent with this statutory provision, the Commission has approved an environmental surcharge for the Company that allows for recovery of related costs. In addition, Kentucky Power operates under a Demand Side Management ("DSM") rate mechanism that provides for recovery of the full costs associated with DSM programs – including any new revenues lost due to reduced sales – as well as a rider to address the decommissioning costs associated with Big Sandy Unit 2 and the Big Sandy Unit 1 coal related assets.

Q19. DOES THE FACT THAT KENTUCKY POWER OPERATES UNDER CERTAIN REGULATORY MECHANISMS WARRANT ANY ADJUSTMENT IN YOUR EVALUATION OF A FAIR AND REASONABLE ROE?

A19. No. Investors recognize that Kentucky Power is exposed to significant risks associated with the ability to recover rising costs and investment on a timely basis, and concerns over these risks have become increasingly pronounced in the industry. The Commission's rate adjustment mechanisms are a tool to address these risks, but they do not eliminate them.

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[10] S&P Global Market Intelligence, *Adjustment Clauses, A State-by-State Overview*, RRA Regulatory Focus (Nov. 12, 2019).

In addition, investors also recognize that the periodic reviews accompanying trackers expose the Company to an increased risk of retroactive disallowances. While the regulatory mechanisms approved for Kentucky Power partially attenuate exposure to attrition in an era of rising costs and investment, this leveling of the playing field only serves to address factors that could otherwise impair the Company's opportunity to earn its authorized return.

Q20. DO THE COMPANY'S REGULATORY MECHANISMS SET IT APART FROM OTHER FIRMS OPERATING IN THE UTILITY INDUSTRY?

A20. No. A broad array of adjustment mechanisms are also available to the companies in my proxy group of electric utilities.[11] As summarized on page 1 of Exhibit AMM-3, these mechanisms are ubiquitous and wide ranging. For example, 18 of the 23 firms in my proxy group have utilities that operate under some form of decoupling mechanism that accounts for the impact of various factors affecting sales volumes and revenues. Most of the companies also have adjustment clauses to effectively recover certain capital expenditures, conservation program impacts, renewable energy outlays, environmental compliance costs, and transmission-related charges.

As detailed on pages 2-3 of Exhibit AMM-3, 51 of the 88 jurisdictional operating utilities owned by the firms in the proxy group benefit from capital cost trackers that allow for recovery of new capital investment in generation facilities or other infrastructure outside of a traditional rate case. In addition, one-half of these utilities operate under a full or partial decoupling mechanism that accounts for various factors affecting sales volumes and revenues and 56 operate in jurisdictions that allow for some form of future test period. Other mechanisms automatically recover storm, pension, and bad debt costs, along with various taxes and franchise fees.

[11] Because this information is widely referenced by the investment community, it is also directly relevant to an evaluation of the risks and prospects that determine the cost of equity.

Q21. WHAT OTHER CONSIDERATIONS ARE RELEVANT TO INVESTORS' ASSESSMENT OF KENTUCKY POWER?

A21. While recognizing that the regulatory framework is generally credit supportive for Kentucky Power, investors are also exposed to considerable uncertainty due to ongoing environmental considerations. Notwithstanding the environmental recovery riders approved for the Company, Moody's concluded that Kentucky Power "remains exposed to carbon transition risks because a sizeable portion of its rate base is represented by coal-fired generation."[12] Similarly, S&P noted that "[t]he company's reliance on coal-fired generation exposes it to heightened risks, including the cost of operation older units in the fact of disruptive technological advances, and the potential for significant capital investments to meet increasing environmental regulation."[13]

In addition, relatively high exposure to industrial sales also increases the uncertainties investors are likely to associate with Kentucky Power, particularly given the unprecedented level of uncertainty surrounding the trajectory of the economy.

Q22. WHAT DO THE DCF RESULTS FOR YOUR SELECT GROUP OF NON-UTILITY FIRMS INDICATE WITH RESPECT TO YOUR EVALUATION?

A22. Average and midpoint DCF estimates for a low-risk group of firms in the competitive sector of the economy range from 9.5% to 10.8%, before consideration of flotation costs.[14] While I do not base my recommended ROE range directly on these results, they confirm that Kentucky Power's requested ROE of 10.0% falls in a reasonable range to maintain the Company's financial integrity, provide a return commensurate with investments of comparable risk, and support the Company's ability to attract capital.

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[12] Moody's Investors Service, *Kentucky Power Co.*, Credit Opinion (Apr. 14, 2020).
[13] S&P Global Ratings, *Kentucky Power Co.*, RatingsDirect (Apr. 8, 2020).
[14] Exhibit AMM-12, page 3.

Q23. DOES THE CAPITAL STRUCTURE HAVE IMPLICATIONS FOR THE RATES PAID BY CUSTOMERS?

A23. Yes. Because the cost of equity exceeds the cost of debt, the relative proportion of debt and equity in a utility's capital structure will impact the overall weighted average cost of capital, which is used to calculate the return component of a utility's revenue requirements.

Q24. WHAT IS YOUR CONCLUSION AS TO THE REASONABLENESS OF THE COMPANY'S CAPITAL STRUCTURE?

A24. Based on my evaluation, I conclude that the Company's proposed common equity ratio of 43.25% represents a reasonable basis from which to calculate Kentucky Power's overall rate of return. This conclusion was based on the following findings:

- Kentucky Power's common equity ratio is well within the range of capitalizations maintained by the firms in the proxy group of utilities and by other electric utility operating companies based on data at year-end 2019 and near-term expectations.
- While the Company's proposed equity ratio is within the range of comparable company capitalizations, it is below the average equity ratios maintained by these companies.
- Kentucky Power's requested capitalization is consistent with the Company's need to maintain its credit standing and financial flexibility as it seeks to raise additional capital to fund significant system investments and meet the requirements of its of customers.

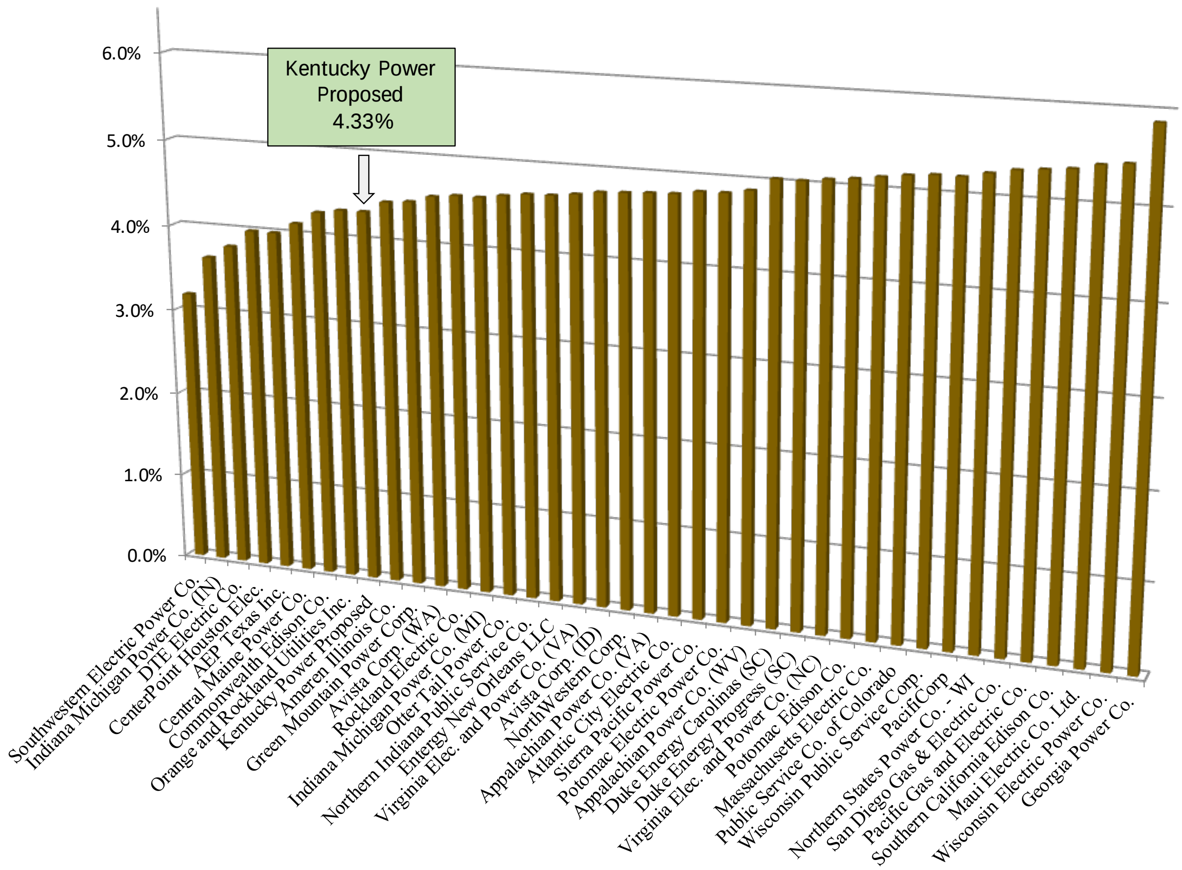
As noted above, Kentucky Power's capital structure contains relatively less common equity than the firms in my proxy group, which reduces the equity return component of the revenue requirements, and in turn, the overall rate of return.

Q25. HOW DOES KENTUCKY POWER'S REQUESTED 4.33% WEIGHTED COST OF EQUITY COMPARE WITH THOSE RECENTLY APPROVED FOR ELECTRIC UTILITIES IN OTHER JURISDICTIONS?

A25. The bar chart below shows the weighted costs of equity approved by state regulators for investor-owned electric utilities across the country during 2019 and for the first quarter of

2020. These observations represent all decisions reported by S&P Global Market Intelligence that specify an ROE and an equity ratio for electric utilities during this period:

FIGURE 2
WEIGHTED COST OF EQUITY – ELECTRIC UTILITIES



Source: S&P Global Market Intelligence, *Major Rate Case Decisions*, RRA Regulatory Focus (Jan. 31 & Apr. 27, 2020).
Authorized Return on Equity * Common Equity/Total Capital. Excludes decisions where data unavailable or where capital structure contained cost-free items or tax credit balances.
(a) Condenses multiple decisions and/or removes limited-issue adders.

As shown above, when the Company's capital structure is considered along with the requested ROE of 10.0%, the resulting weighted cost of equity of 4.33% for Kentucky Power falls at the lower end of the distribution of these weighted costs of equity allowed by state regulators for other electric utilities.[15]

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[15] Unlike Kentucky Power, which is an integrated electric utility, certain of the observations reflected in Figure 2 are for distribution-only utilities.

III. FUNDAMENTAL ANALYSES

Q26. WHAT IS THE PURPOSE OF THIS SECTION?

A26. As a predicate to subsequent quantitative analyses, this section briefly reviews the operations and finances of Kentucky Power. In addition, it examines conditions in the capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of electric utilities is essential in developing an informed opinion of investors' expectations and requirements that are the basis of a fair rate of return.

A. Kentucky Power Company

Q27. BRIEFLY DESCRIBE KENTUCKY POWER AND ITS ELECTRIC UTILITY OPERATIONS.

A27. Headquartered in Ashland, Kentucky, Kentucky Power is a wholly-owned subsidiary of AEP principally engaged in the generation, transmission, and distribution of electric power. The Company provides electric service to approximately 165,000 retail customers in eastern Kentucky. In addition to providing retail electric utility service, the Company also sells electric power at wholesale to municipalities. At December 31, 2019, Kentucky Power's total assets amounted to $2.6 billion, with annual revenues amounting to approximately $619 million.[16]

Kentucky Power has approximately 1,060 megawatts (MW) of generating capacity. Over the past few years, in an effort to address both environmental and reliability issues, Kentucky Power has significantly transformed the makeup of its generation resources. In 2013, it acquired, based on the Commission's determination that the acquisition was the least cost alternative, a 50% interest (780 MW) in the cleaner-burning coal-fired Mitchell plant. In May 2015, it closed 800 MW of coal capacity at Big Sandy Unit 2 and, in 2016, completed the conversion of Big Sandy Unit 1 to a 285 MW natural gas fired facility. The

[16] *Kentucky Power Co.*, 2019 Annual Report.

Company also purchases a share of the Rockport plant (393 MW) under a long-term unit power agreement, and operates under a Power Coordination Agreement with its affiliate, AEP Generating Company.

The Company's transmission and distribution facilities consist of over 11,000 miles of transmission and distribution lines. It is a member of the PJM Interconnection, LLC ("PJM"), a FERC-approved regional transmission organization, and provides transmission service pursuant to the PJM Open Access Transmission Tariff. The Company's retail utility operations are subject to the jurisdiction of the Commission, with wholesale transmission operations being regulated by FERC.

Q28. PLEASE DESCRIBE THE AEP SYSTEM.

A28. AEP delivers electricity to more than 5 million customers across eleven states. AEP is one of the largest electric utilities in the U.S., with its combined utility system including approximately 26,000 MW of generating capacity, 40,000 miles of transmission lines, and 221,000 miles of distribution lines. Coal-fired power plants account for approximately 45% of AEP's generating capacity, while natural gas represents 28% and nuclear 7%. The remaining capacity comes from wind, hydro, pumped storage and other sources, including energy efficiency. AEP's revenues totaled approximately $15.6 billion in the most recent fiscal year, with total assets at year-end 2019 of $75.9 billion.

Q29. WHERE DOES KENTUCKY POWER OBTAIN THE CAPITAL USED TO FINANCE ITS INVESTMENT IN ELECTRIC UTILITY PLANT?

A29. As a wholly-owned subsidiary of AEP, the Company obtains common equity capital solely from its parent, whose common stock is publicly traded on the New York Stock Exchange. In addition to capital supplied by AEP, Kentucky Power also issues debt securities directly under its own name.

Q30. WHAT CREDIT RATINGS HAVE BEEN ASSIGNED TO THE COMPANY?

A30. Kentucky Power is assigned an issuer credit rating of "A-" by S&P, while Moody's currently has assigned the Company a long-term issuer rating of "Baa3." Meanwhile, Fitch Ratings, Inc. ("Fitch") has assigned Kentucky Power a long-term issuer default rating of "BBB."

Q31. DOES KENTUCKY POWER ANTICIPATE THE NEED FOR ADDITIONAL CAPITAL GOING FORWARD?

A31. Yes. Kentucky Power will require capital investment to provide for necessary maintenance and replacements of its utility infrastructure, as well as to fund investment in new facilities. Capital expenditures are expected to total approximately $886 million through 2024,[17] which represents approximately 63% of Kentucky Power's total adjusted capitalization. Moody's informed investors that the Company's financial profile will continue to be pressured by a "heightened capital expenditure program,"[18] while S&P cited "the potential for significant capital investment to meet increasing environmental regulation."[19]

B. Outlook for Capital Costs

Q32. PRIOR TO THE RECENT DISLOCATIONS RELATED TO COVID-19, WHAT WAS THE GENERAL STATE OF ECONOMIC AND CAPITAL MARKET CONDITIONS?

A32. In the third quarter of 2019, U.S. real GDP growth continued to slow to 2.1% from its recent apex of 3.2% in the second quarter of 2018. The unemployment rate remained in the neighborhood of 3.5% toward the end of 2019, which is indicative of a strong labor market and an economy that remains at full employment. Inflation, as evidenced by the Consumer Price Index, remained steady at around 2.1% in November 2019. Investors

[17] American Electric Power Co., *Investor Meetings* (Mar. 17, 2020).
[18] Moody's Investors Service, *Kentucky Power Company*, Credit Opinion (Apr. 14, 2020).
[19] S&P Global Ratings, *Kentucky Power Co.*, RatingsDirect (Apr. 8, 2020).

faced uncertainty as capital markets responded to the implications of an economy at or near full employment, along with the ramifications of the Trump Administration's tariff policies. While fears of an escalating international trade war with China had eased more recently as the U.S. and China concluded the first phase of a trade agreement, uncertainty over trade policy remained elevated and investors continued to confront signs of global economic weakness. Economic activity remained weak in the Eurozone (which faces uncertain developments surrounding Brexit) and in many emerging market economies, including Brazil and Mexico. These signs of softening global growth were accompanied by continued indications of an economic slowdown in China. Finally, investors were also faced with the implications of heightened geopolitical tensions in the Middle East, which led to ongoing concerns over possible disruptions in crude oil supplies and attendant price volatility.

Q33. HOW HAVE COMMON EQUITY MARKETS BEEN IMPACTED BY COVID-19?

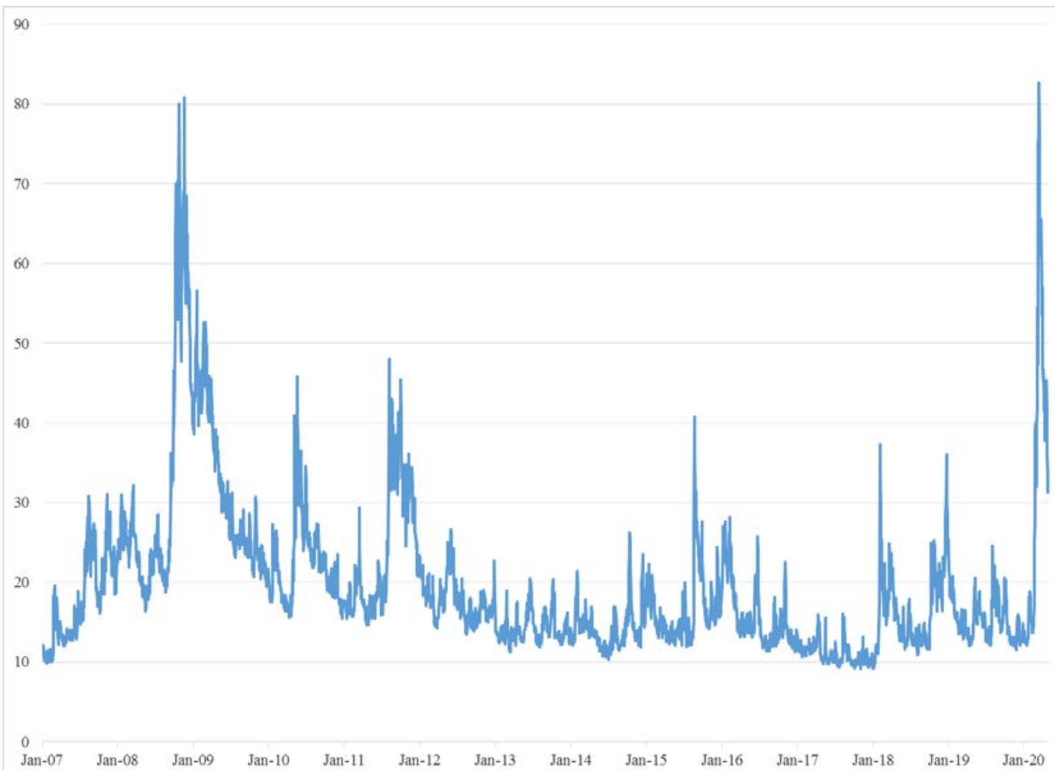
A33. The threat posed by COVID-19 led to extreme volatility in capital markets worldwide as investors dramatically revised their risk perceptions and return requirements in the face of the severe disruptions to commerce and the economy. Simultaneously, energy markets have been roiled by the threat to demand posed by a worldwide economic slowdown and a breakdown of Russia's partnership with the Organization of the Petroleum Exporting Countries. These simultaneous demand and supply shocks produced sharp declines in oil prices, which further confounded investors and destabilized the economic outlook and asset prices.

Despite the actions of the world's central banks to ease market strains and bolster the economy, global financial markets have experienced precipitous declines in asset values. On March 12, 2020, the Dow Jones Industrial Average ("DJIA") suffered its worst decline since the 1987 "Black Monday" crash, falling by almost 10% in a single session, and pushing the index into a bear market, defined as a 20% drop from a previous high. On

March 16, 2020, the DJIA experienced its greatest fall, point-wise, in history, ending the day with a decline of 2,997 points. Similarly, between February 19 and March 23, 2020, the S&P 500 lost more than 30% of its total value.

The Chicago Board Options Exchange Volatility Index, commonly known as the "VIX", is a key measure of expectations of near-term volatility and market sentiment based on options prices for the S&P 500 Composite Stock Index ("S&P 500"). Figure AMM-1 illustrates the dramatic increase in volatility in response to COVID-19:

FIGURE AMM-1
CBOE VIX INDEX – 2007-2020



The VIX has moderated since peaking at levels not seen since the 2008-2009 Financial Crisis, but it remains elevated relative to recent experience.

Q34. HAVE UTILITIES AND THEIR INVESTORS FACED SIMILAR TURMOIL?

A34. Yes. As of March 23, 2020, the Dow Jones Utility Average ("DJUA") had fallen approximately 36% from the previous high reached on February 18, 2020, demonstrating the fact that regulated utilities and their investors are not immune from the impact of financial market turmoil. As with the broader market, utility stock prices have recovered from these lows, but as of April 2020 the DJUA remains 19% below its previous high. While equity markets have recovered from the lows reached in March 2020, the pronounced selloff and ongoing volatility evidences investors' trepidation to commit capital and marks a significant upward revision in their perceptions of risk and required returns.

Concerns over weakening credit quality prompted S&P to revise its outlook for the regulated utility industry from "stable" to "negative."[20] As S&P explained:

> Even before the current downturn and COVID-19, a confluence of factors, including the adverse impacts of tax reform, historically high capital spending, and associated increased debt, resulted in little cushion in ratings for unexpected operating challenges.[21]

While recognizing regulatory protections that should mitigate the impact of COVID-19, S&P noted that "the timing and extent of these protections adds uncertainty to already stretched financial profiles."[22] S&P warned investors that pressure on electric utility finances "sets the stage for downgrades" that could lower the median rating to triple-B.[23] Meanwhile Moody's noted that utilities were forced to seek alternatives to volatile commercial paper markets in order to fund operations, and emphasized the importance of maintaining adequate liquidity in the sector to weather a prolonged period of financial volatility and turbulent capital markets.[24]

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[20] S&P Global Ratings, *COVID-10: The Outlook For North American Regulated Utilities Turns Negative*, RatingsDirect (Apr. 2, 2020).
[21] S&P Global Ratings, *North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic*, RatingsDirect (May 11, 2020).
[22] *Id.*
[23] *Id.*
[24] Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

Q35. WHAT HAS BEEN THE RECENT DIRECTION OF FEDERAL RESERVE MONETARY POLICIES?

A35. In early 2019, the Federal Reserve indicated its intention to adopt a more patient and accommodative stance to future policy adjustments, while observing that the appropriate target range for the federal funds rate would depend on future data. In the second half of 2019, the Federal Reserve lowered the target range for its benchmark federal funds rate by 75 basis points, reversing their policy of steady rate increases in 2016 and 2017. At the December 2019 meeting of the Federal Open Market Committee ("FOMC"), economic projections by Federal Reserve members and bank presidents indicated a strong expectation that the target federal funds rate would increase during the 2020–2022 time frame and beyond.

Even prior to COVID-19, the Federal Reserve continued to exert considerable influence over capital market conditions through its massive holdings of Treasuries and mortgage-backed securities, which exceeded $3.7 trillion.[25] While beginning a gradual balance sheet normalization program in October 2017, the Federal Reserve ended the reduction in its holdings of Treasury securities in 2019 and in October 2019 had indicated its intention to purchase Treasury bills at least into the second quarter of 2020 in order to maintain ample reserve balances.

Q36. WHAT ACTIONS HAS THE FEDERAL RESERVE TAKEN IN RESPONSE TO THE THREAT TO THE ECONOMY POSED BY COVID-19?

A36. In response to the economic shock posed by the spread of COVID-19, the FOMC announced a 50 basis point reduction in the target range for the federal funds range on March 3, 2020, noting that "the risks to the U.S. outlook have changed materially."[26]

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[25] *Factors Affecting Reserve Balances*, H.4.1 (Jan. 2, 2020). https://www.federalreserve.gov/releases/h41/current/. Prior to the initiation of the stimulus program in 2009, the Federal Reserve's holdings of U.S. Treasury bonds and notes amounted to approximately $400-$500 billion.

[26] https://www.federalreserve.gov/monetarypolicy/fomcpresconf20200303.htm.

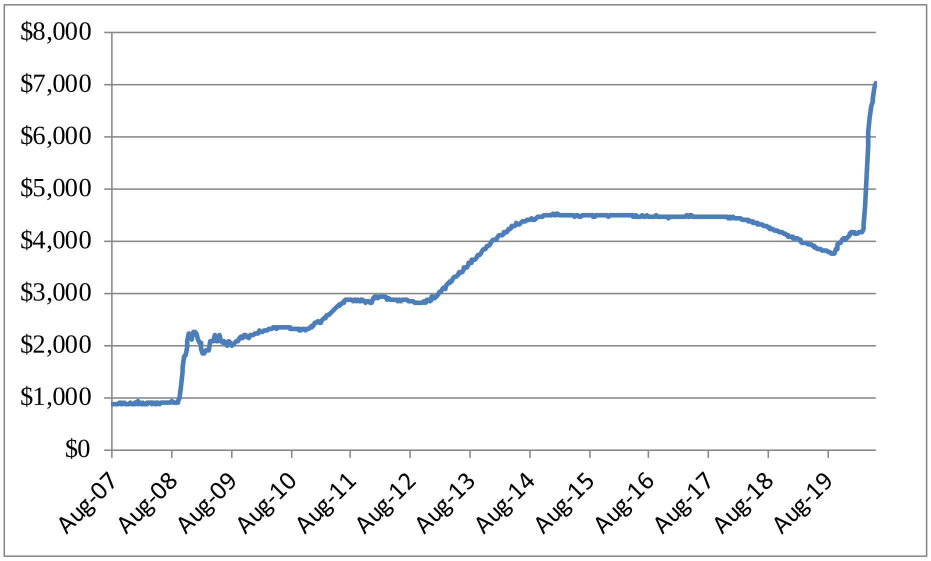
Twelve days later, on March 15, 2020, the FOMC moved to reduce the federal funds rate by a further 100 basis points, to a target range of 0% to 0.25%. In addition, the Federal Reserve has announced a broad range of unprecedented programs designed to support financial market liquidity and economic stability. To start, the quantitative easing ("QE") measures initially adopted in response to the 2008 financial crisis were reintroduced by directing the purchase of Treasury securities and agency mortgage-backed securities "in the amounts needed to support the smooth functioning of markets,"[27] while continuing to reinvest all principal payments from its existing holdings. In addition, the Federal Reserve has also announced wide-raging initiatives designed to support credit markets and ensure liquidity, including credit facilities to support households, businesses, and state and local governments, as well as the purchase of corporate bonds on the secondary market.[28]

Prior to the initiation of QE in 2009, the Federal Reserve's holdings of U.S. Treasury bonds and notes amounted to approximately $900 billion. With the implementation of its asset purchase program, balances of Treasury securities and mortgage backed instruments climbed steadily. Although the Federal Reserve had begun a process of normalizing its monetary policies by reducing its balance sheet holdings, its response to COVID-19 dramatically reversed this stance. Figure AMM-2 below charts the course of the Federal Reserve's asset purchase program:

[27] Federal Reserve, *Press Release* (Mar. 23, 2020), https://www.federalreserve.gov/monetarypolicy/files/monetary20200323a1.pdf.

[28] *See, e.g., Federal Reserve takes additional actions to provide up to $2.3 trillion in loans to support the economy*, Press Release (Apr. 9, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm.

FIGURE AMM-2
FEDERAL RESERVE BALANCE SHEET (BILLION $)



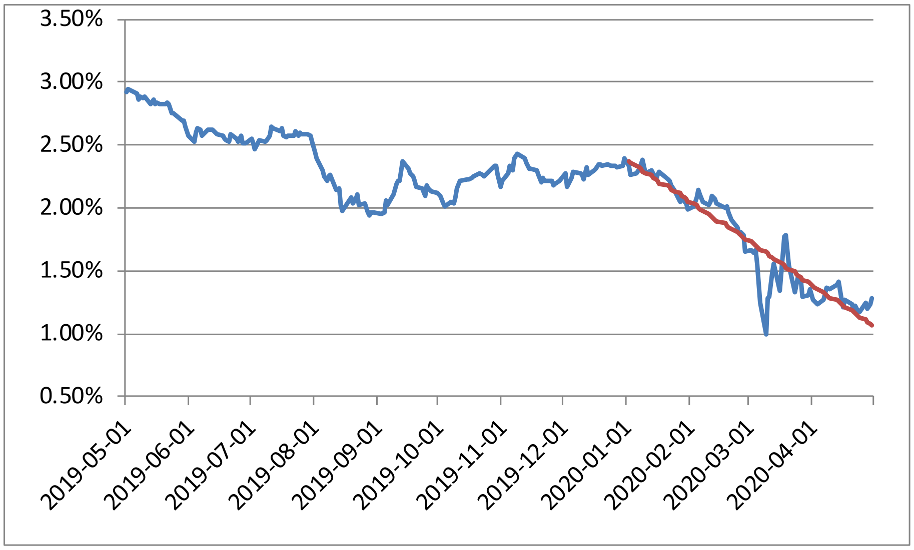
Source: https://www.federalreserve.gov/monetarypolicy/bst_recenttrends_accessible.htm.

As illustrated above, the Federal Reserve's asset holdings now amount to approximately $7 trillion, which is an all-time high, and the resulting effect on capital market conditions has likely never been more pronounced. While the Federal Reserve's aggressive monetary stimulus may help to ensure market liquidity and support the economy, these actions also support financial asset prices, which in turn place artificial downward pressure on bond yields.

Q37. DO TRENDS IN THE YIELDS ON TREASURY NOTES AND BONDS ACCURATELY REFLECT THE EXPECTATIONS AND REQUIREMENTS OF KENTUCKY POWER'S EQUITY INVESTORS?

A37. No. Not surprisingly, investors have reacted to the threat of a global economic recession and resulting equity market volatility by seeking a safe haven in U.S. government bonds. As a result of this "flight to safety," and in response to the Federal Reserve's monetary policies, Treasury bond yields have been pushed dramatically lower in the face of extreme risks in other sectors of the capital markets. Monthly average yields on 30-year Treasury bonds are plotted in Figure AMM-3, below:

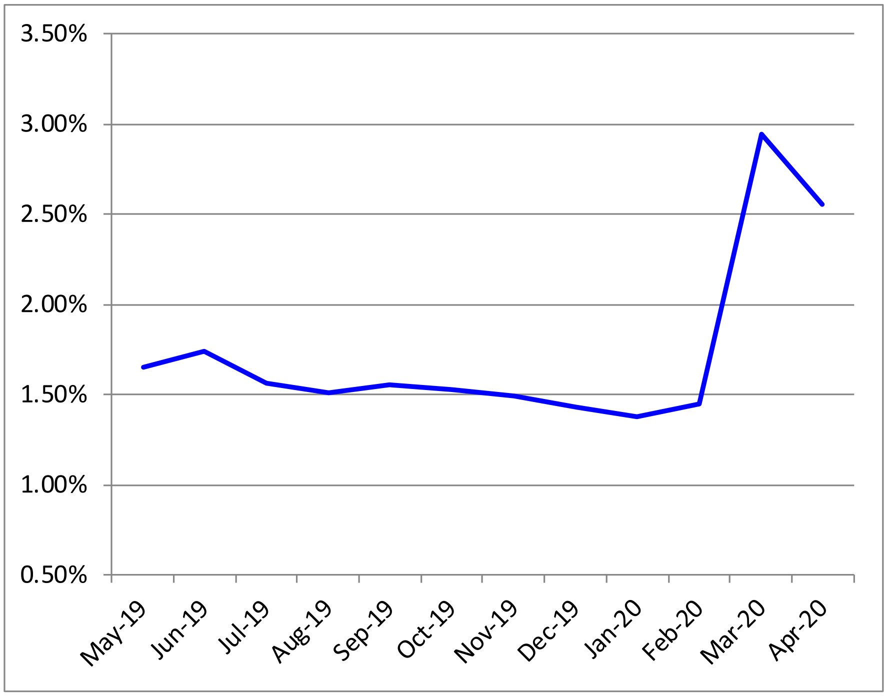
FIGURE AMM-3
30-YEAR TREASURY BOND YIELD
(MAY 2019 – APRIL 2020)



As shown above, beginning in January 2020, the yields on 30-year Treasury bonds began a general decline. In response to accelerating concerns over economic uncertainties and the Federal Reserve's actions to increase liquidity in the face of financial market turmoil related to COVID-19, the fall in Treasury bond yields became increasingly pronounced, with daily yields on 30-year notes falling below 1% in March 2020. Meanwhile, the price of 3-month Treasury bills rose high enough to push yields to 0%.

While the yields on Treasury securities have fallen significantly, the required returns for risky assets, such as common stocks, have moved sharply higher to compensate for increased perceptions of risk. This "risk-off" behavior has caused the spread between the observable yields on public utility bonds and 30-year Treasury bonds to spike dramatically. Figure AMM-4 plots the monthly spread between Moody's Baa public utility bond yields and 30-year Treasury bond yields since May 2019.

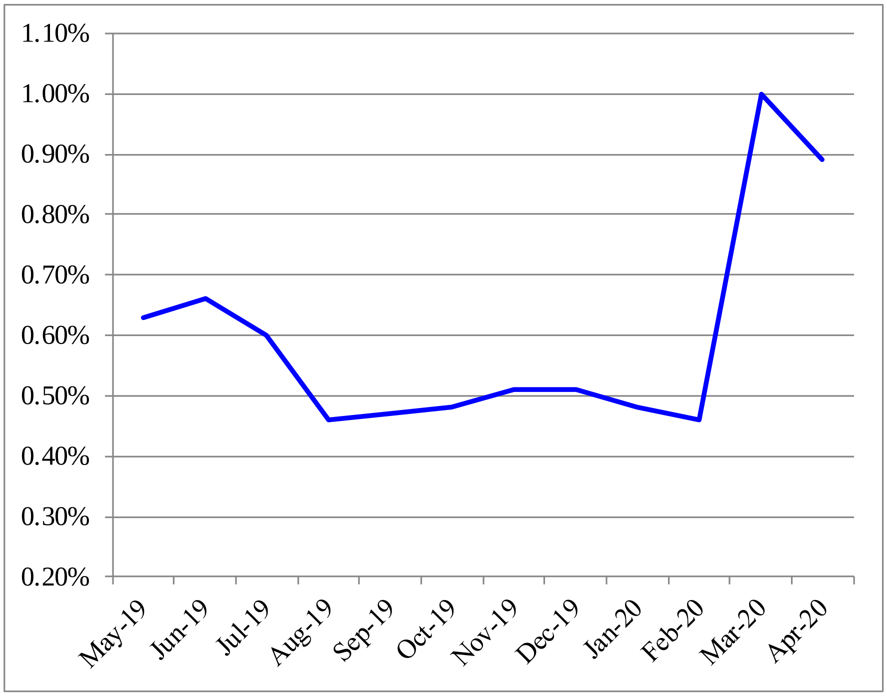
FIGURE AMM-4
YIELD SPREAD – Baa UTILITY V. 30-YEAR TREASURY BONDS
(MAY 2019 – APRIL 2020)



As illustrated above, the gap between the yields on these two debt instruments has widened significantly, reflecting the extent of the uncertainties facing investors. During January 2020, this yield spread averaged 143 basis points, versus 294 and 255 basis points in March and April of 2020. The difference (approximately 110 to 150 basis points), is the additional "cost" investors are now requiring to assume additional risk.

While the cost of equity cannot be directly observed in capital markets like the yields on bonds, there is every reason to believe that the required return to attract risk capital to utilities has increased relative to the yield on utility bonds. As illustrated below in Figure AMM-5, the spread between public utility bonds of different ratings has also expanded:

FIGURE AMM-5
YIELD SPREAD – BBB / AA UTILITY BONDS
(MAY 2019 – APRIL 2020)



Source: Moody's Investors Service.

If investors require additional return to bear the risk of BBB bonds relative to AA bonds, it is likely that they also require an even greater additional premium to shift from the relative safety of bonds to the higher risk of utility equity.

Q38. WHAT DOES THIS IMPLY WITH RESPECT TO THE ROE FOR A UTILITY SUCH AS KENTUCKY POWER?

A38. Focusing solely on the decrease in Treasury bond yields since the start of COVID-19 pandemic might suggest that investors' required returns have fallen, but the exact opposite is true. Widening spreads between the yields on utility bonds and Treasury securities supports a conclusion that increased perceptions of risk have pushed required returns for common stocks higher at the same time that Treasury bond yields have declined because of a "flight to quality." The fact that prices of Treasury bonds have been driven sharply higher is the mirror image of higher, not lower returns for more risky asset classes, such as the common stock of utilities like Kentucky Power.

Q39. DOES THE PROSPECT OF ECONOMIC RECESSION IMPLY LOWER CAPITAL COSTS?

A39. No. Investors' required rates of return for Kentucky Power and other financial assets are a function of risk, with greater exposure to uncertainty requiring higher—not lower—rates of return to induce long-term investment. With respect to credit markets, S&P observed that conditions "look set to remain extraordinarily difficult for borrowers at least into the second half of the year, with the economic stop associated with COVID-19-containment measures continuing with no clear end in sight."[29] And while regulated utilities are favorably positioned relative to other industry sectors, S&P nevertheless noted that "access to the equity markets remains extraordinarily challenging."[30]

It is important not to confuse investors' expectations for future growth and cash flows, which is one consideration in estimating the cost of common equity, with their required rate of return. In fact, trends in growth rates say nothing at all about investors' overall risk perceptions. The fact that investors' required rates of return for long-term capital can rise in tandem with expectations of declining growth that might accompany an economic slowdown is demonstrated in the equity markets, where perceptions of greater risks led investors to sharply reevaluate what they are willing to pay for common stocks. While the precipitous decline in utility stock prices may in part be attributed to somewhat diminished expectations of future cash flows, there is also every indication that investors' discount rate, or cost of common equity, has moved significantly higher to accommodate the greater risks they now associate with equity investments.

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[29] S&P Global Ratings, *Credit Conditions North America: Unprecedented Uncertainty Slams Credit* (Mar. 31, 2020).

[30] S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative,* RatingsDirect (Apr. 2, 2020).

Q40. DO THESE ECONOMIC PRESSURES HAVE PARTICULAR SIGNIFICANCE FOR KENTUCKY POWER?

A40. Yes. Even before COVID-19, the Company's service territory faced weak economic conditions and higher unemployment than national and statewide averages. Moody's pointed to the "lower cash flow and cash flow-based credit metrics the company has demonstrated in recent years as a result of under earning and required refunds in an economically challenged service territory."[31] Investors also recognize that Kentucky Power's service area is characterized by a high concentration of sales to industrial customers relative to other electric utilities. During 2019, almost 26% of the Company's total energy sales were to industrial customers,[32] with 12% of Kentucky Power's revenues attributable to a single customer, Marathon Petroleum Company.[33] Because these sales are more sensitive to business cycle changes, the price of alternative energy sources, and pressure from competitors, they are generally considered to be more risky than sales to residential or commercial customers.[34] As illustrated in the following table, the Company has approximately twice the exposure to industrial revenues as compared to the firms in the proxy group:

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[31] Moody's Investors Service, *Kentucky Power Company*, Credit Opinion (Apr. 14, 2020).

[32] Kentucky Power Co., 2019 FERC Form 1 at 300.

[33] Kentucky Power Company, 2019 Annual Report.

[34] For example, Seeking Alpha reported that production at Marathon's Catlettsburg refinery was cut by as much as one-third due to lower gasoline demand stemming from the COVID-19 pandemic. Carl Surran, *Marathon raises rates at Catlettsburg as demand claws back*, Seeking Alpha (May 11, 2020).

TABLE AMM-1
INDUSTRIAL REVENUE CONCENTRATION

Company	Industrial to Total Elec. Revenue	Company	Industrial to Total Elec. Revenue
Alliant Energy	28%	Eversource Energy	5%
Ameren Corp.	8%	Exelon Corp.	17%
American Elec Pwr	19%	Fortis Inc.	13%
Avangrid, Inc.	6%	NextEra Energy, Inc.	10%
Black Hills Corp.	18%	OGE Energy Corp.	10%
CMS Energy Corp.	15%	PPL Corp.	13%
Consolidated Edison	1%	Pub Sv Enterprise Grp.	3%
Dominion Energy	7%	Sempra Energy	11%
DTE Energy Co.	13%	Southern Company	18%
Duke Energy Corp.	14%	WEC Energy Group	21%
Entergy Corp.	27%	Xcel Energy Inc.	18%
Evergy Inc.	12%		
		Average-Electric Group	**13%**
		Kentucky Power	**26%**

Sources:
The Value Line Investment Survey (Feb. 14, Mar. 13, & Apr. 24, 2020).
Aggregate data from most recent FERC Form 1's for electric operating companies of Avangrid, Consolidated Edison, Fortis, PPL, Public Service Enterprise Group, and Sempra Energy.

As S&P recognized with respect to the Company, "[i]ndustrial customers contribute about one-half of the energy sales, leading to less stable operating cash flow."[35] This exposure to a relatively high concentration of industrial sales implies a significant degree of risk to Kentucky Power's operations that must be offset by sufficient financial fitness.

[35] S&P Global Ratings, *Kentucky Power Co*, RatingsDirect (Apr. 8, 2020).

Q41. IS THERE ANY DIRECT EVIDENCE THAT THE RISKS ASSOCIATED WITH ELECTRIC UTILITY COMMON STOCKS HAVE INCREASED AS A RESULT OF RECENT MARKET TURMOIL?

A41. Yes. Beta is a widely-referenced measure of equity risk that is based on the relative volatility of a utility's common stock price relative to the market as a whole, and reflects the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. Beta is the only relevant measure of investment risk under modern capital market theory, and is widely cited in academics and in the investment industry as a guide to investors' risk perceptions.

While beta values are typically calculated based on historical price movements over a five-year period, this backward-looking view can obscure the implications of more current data affecting investors' forward-looking assessment of risk. Table AMM-2, below, compares beta values measured using a one-year lookback period as of April 30, 2020 with those as of December 31, 2019 for the thirty-seven companies included in Value Line's electric utility industry groups:

TABLE AMM-2
COMPARISON OF BETA VALUES

Company	Year ended Mar. 31, 2020	Year ended Dec. 31, 2019
ALLETE	1.02	0.62
Alliant Energy	1.06	0.46
Ameren Corp.	1.00	0.57
American Elec Pwr	1.03	0.55
Avangrid, Inc.	0.75	0.57
Avista Corp.	1.02	0.52
Black Hills Corp.	1.24	0.56
CenterPoint Energy	1.37	0.80
CMS Energy Corp.	1.02	0.43
Consolidated Edison	0.81	0.45
Dominion Energy	0.87	0.45
DTE Energy Co.	1.10	0.55
Duke Energy Corp.	1.07	0.43
Edison International	1.10	0.53
El Paso Electric Co.	0.45	0.76
Entergy Corp.	1.19	0.42
Evergy Inc.	1.13	0.45
Eversource Energy	1.06	0.54
Exelon Corp.	1.08	0.75
FirstEnergy Corp.	1.00	0.59
Fortis Inc.	0.76	0.35
Hawaiian Elec.	0.77	0.51
IDACORP, Inc.	1.11	0.44
MGE Energy	0.66	0.60
NextEra Energy, Inc.	1.05	0.33
NorthWestern Corp.	1.26	0.60
OGE Energy Corp.	1.23	0.67
Otter Tail Corp.	1.12	0.83
Pinnacle West Capital	1.14	0.47
PNM Resources	1.45	0.57
Portland General Elec.	1.11	0.49
PPL Corp.	1.39	0.80
Pub Sv Enterprise Grp.	1.10	0.63
Sempra Energy	1.07	0.51
Southern Company	1.11	0.49
WEC Energy Group	1.08	0.42
Xcel Energy Inc.	1.04	0.54
Average	**1.05**	**0.55**

Source: Bloomberg Terminal. Based on weekly price changes relative to the NYSE Composite, including Blume adjustment.

As illustrated above, beta values measured using current data have increased substantially from those indicated at year-end 2019. In fact, with an average beta greater than 1.00, price movements for electric utility stocks as a whole over this more time period suggest that the industry is as risky as the NYSE Composite Index as a whole.

Q42. HOW DO INTEREST RATES ON LONG-TERM BONDS COMPARE WITH THOSE PROJECTED FOR THE NEXT FEW YEARS?

A42. Table AMM-3 below compares current interest rates on 10-year and 30-year Treasury bonds, triple-A rated corporate bonds, and double-A rated utility bonds with the average of near-term projections from the Blue Chip Financial Forecasts, Energy Information Administration ("EIA"), IHS Markit, and The Value Line Investment Survey ("Value Line"):

TABLE AMM-3
INTEREST RATE TRENDS

	Apr. 2020	Average 2021-25	Change (bp)
10-Yr. Treasury	0.66%	2.93%	227
30-Yr. Treasury	1.27%	3.25%	198
Aaa Corporate	2.43%	3.92%	149
Aa Utility	2.93%	4.45%	152

Source:
Energy Information Administration, Annual Energy Outlook 2020 (Jan. 29, 2020).
IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020).
Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020).
Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2019).

As evidenced above, there is a clear consensus that the cost of permanent capital will be higher in the 2021-2025 timeframe than it is currently. As a result, current cost of capital estimates are likely to understate investors' requirements during the time the rates set in this proceeding are effective.

Q43. QUANTITATIVE METHODS SUCH AS THE DCF MODEL AND CAPM ARE ALREADY FORWARD-LOOKING. WHY SHOULD THE COMMISSION ALSO CONSIDER EXPECTED TRENDS IN LONG-TERM CAPITAL COSTS?

A43. While I agree that investors' future expectations are reflected in current capital market data, this does not provide a rationale for ignoring evidence that suggests long-term capital costs are expected to increase. In fact, the application of financial models to estimate the cost of equity is concerned only with investors' forward-looking expectations and this process inherently involves relying on projections (e.g., EPS growth rates, market returns) which might differ from what actually transpires. Securities are priced based on expectations over the foreseeable horizon, which includes future prospects for interest rates.

Investors would certainly consider current yields as one guide, but expectations of future trends are what ultimately shape the prices paid for common stock and the underlying cost of equity. Moreover, investors recognize that bond yields can and do shift over time with changes in underlying economic and capital market conditions, which supports consideration of interest rate forecasts in evaluating the cost of equity. The fact that recognized research organizations such as IHS Markit, Blue Chip Financial Forecasts, and Value Line devote considerable expertise and resources to evaluating future trends in capital markets, and investors' reliance on such services, evidences the relevance of projected interest rates in applying the financial models presented in my testimony. This is particularly the case in light of the unprecedented monetary policy measures taken by the Federal Reserve in response to the COVID-19 pandemic, which serve to artificially suppress interest rates in an effort to address near-term economic risks.

Q44. WOULD IT BE REASONABLE TO DISREGARD THE IMPLICATIONS OF CURRENT CAPITAL MARKET CONDITIONS IN ESTABLISHING A FAIR ROE FOR KENTUCKY POWER?

A44. No. Current capital market conditions reflect the reality of the situation in which Kentucky Power and other businesses must attract and retain capital. The standards underlying a fair rate of return require that Kentucky Power's authorized ROE reflect a return competitive with other investments of comparable risk and preserve the Company's ability to maintain access to capital on reasonable terms. These standards can only be met by considering the requirements of investors in today's capital markets. As S&P concluded, challenges posed by the COVID-19 crisis "have the potential to significantly impact the financial performance of the investor-owned utilities, increasing the overall level of investor risk, and will have to be addressed by state regulators."[36]

The events since early March 2020 undoubtedly mark a significant transition in investors' expectations, and there has been little indication that the challenges confronting the economy and financial markets will be resolved quickly. While market dislocations may complicate the evaluation of the cost of common equity, this provides no basis to ignore the upward shift in investors' risk perceptions and required rates of return for long-term capital. If the increase in investors' required rate of return is not incorporated in the allowed ROE, the results will fail to meet the comparable earnings standard that is fundamental in determining the cost of capital. From a more practical perspective, failing to provide investors with the opportunity to earn a rate of return commensurate with Kentucky Power's risks will only serve to weaken its financial integrity, while hampering the Company's ability to attract the capital needed to meet the economic and reliability needs of its service area.

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[36] S&P Global Market Intelligence, *State Regulatory Evaluations*, RRA Regulatory Focus (Mar. 25, 2020).

Q45. IS IT POSSIBLE THAT THE ECONOMIC DISLOCATION CAUSED BY COVID-19 IS A TEMPORARY ABERRATION THAT WILL SOON ABATE?

A45. No one knows the future of our complex global economy. Although there is continued hope for a swift economic rebound as COVID-19 containment measures are gradually lifted, residual impacts of the unprecedented economic and health crisis could linger indefinitely. In any event, it would be imprudent to gamble the interests of customers and the economy of Kentucky in the hope that the harsh economic reality will suddenly be resolved. Kentucky Power must raise capital in the real world of financial markets. To ignore the current reality would be unwise given the importance of reliable electric power for customers and the economy.

IV. COMPARABLE RISK PROXY GROUP

Q46. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A46. This section describes the procedures underlying my identification of a proxy group of publicly traded companies.

Q47. CAN QUANTITATIVE METHODS BE APPLIED DIRECTLY TO KENTUCKY POWER TO ESTIMATE THE COST OF EQUITY?

A47. No. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices and beta values. Moreover, even for a firm with publicly traded stock, the cost of common equity can only be estimated. As a result, applying quantitative models using observable market data only produces an estimate that inherently includes some degree of observation error. Thus, the accepted approach to increase confidence in the results is to apply quantitative methods to a proxy group of publicly traded companies that investors regard as risk-comparable. The results of the analysis on the sample of companies are relied upon to establish a range of reasonableness for the cost of equity for the specific company at issue.

Q48. HOW DO YOU IDENTIFY THE PROXY GROUP OF ELECTRIC UTILITIES RELIED ON FOR YOUR ANALYSES?

A48. In order to reflect the risks and prospects associated with Kentucky Power's jurisdictional utility operations, I began with the following criteria to identify a proxy group of utilities:

1. Companies that are included in the Electric Utility Industry groups compiled by Value Line.
2. Electric utilities that paid common dividends over the last six months and have not announced a dividend cut since that time.
3. Electric utilities with no ongoing involvement in a major merger or acquisition that would distort quantitative results.

In addition, my analysis also considered credit ratings from S&P and Moody's, along with Value Line's Safety Rank in evaluating relative risk. Specifically, I limited the proxy group to those companies with ratings that fall within one "notch" higher or lower than the A- corporate credit rating assigned to Kentucky Power by S&P, which results in a ratings range of BBB+ to A. Meanwhile, considering the long term issuer rating of Baa3 rating assigned to the Company by Moody's, I limited the proxy group to include only those utilities with a Moody's ratings in the range of Baa3 to Baa1. These criteria result in a proxy group composed of 23 companies, which I refer to as the "Electric Group."

Q49. HOW DO YOU EVALUATE THE RISKS OF THE ELECTRIC GROUP RELATIVE TO KENTUCKY POWER?

A49. My evaluation of relative risk considers four objective, published benchmarks that are widely relied on in the investment community. Credit ratings are assigned by independent rating agencies for the purpose of providing investors with a broad assessment of the creditworthiness of a firm. Ratings generally extend from triple-A (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show relative standing within a category. Because the rating agencies' evaluation includes all of the factors normally considered important in assessing a firm's relative credit standing, corporate credit ratings provide a broad, objective measure of overall investment risk that is readily available to investors. Widely cited in the investment community and referenced by investors, credit ratings are also frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of common equity.

While credit ratings provide the most widely referenced benchmark for investment risks, other quality rankings published by investment advisory services also provide relative assessments of risks that are considered by investors in forming their expectations for common stocks. Value Line's primary risk indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock, and incorporates elements of stock price stability and financial strength. Given that Value Line is perhaps the most widely available source of investment advisory information, its Safety Rank provides useful guidance regarding the risk perceptions of investors.

The Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. These objective, published indicators incorporate consideration of a broad spectrum of risks, including financial and business position, relative size, and exposure to firm-specific factors.

Finally, beta measures a utility's stock price volatility relative to the market as a whole, and reflects the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. Beta is the only relevant measure of investment risk under modern capital market theory, and is widely cited in academics and in the investment industry as a guide to investors' risk perceptions.

Moreover, in my experience Value Line is the most widely referenced source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

> Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. … Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00.[37]

Q50. HOW DO THE OVERALL RISKS OF YOUR PROXY GROUP COMPARE TO KENTUCKY POWER?

A50. Table AMM-4 compares the Electric Group with Kentucky Power across the four key measures of investment risk discussed above. Because Kentucky Power has no publicly traded common stock, the Value Line risk measures shown reflect those published for its parent, AEP:

[37] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 71.

TABLE AMM-4
COMPARISON OF RISK INDICATORS

		(a)	(b)	(c)		
		S&P	Moody's	Value Line		
	Company	Corporate Rating	Long-term Rating	Safety Rank	Financial Strength	Beta
1	Alliant Energy	A-	Baa2	2	A	0.55
2	Ameren Corp.	BBB+	Baa1	2	A	0.50
3	American Elec Pwr	A-	Baa1	1	A+	0.50
4	Avangrid, Inc.	BBB+	Baa1	2	B++	0.40
5	Black Hills Corp.	BBB+	Baa2	2	A	0.65
6	CMS Energy Corp.	BBB+	Baa1	2	B++	0.50
7	Consolidated Edison	A-	Baa2	1	A+	0.40
8	Dominion Energy	BBB+	Baa2	2	B++	0.50
9	DTE Energy Co.	BBB+	Baa2	2	B++	0.50
10	Duke Energy Corp.	A-	Baa1	2	A	0.45
11	Entergy Corp.	BBB+	Baa2	2	B++	0.60
12	Evergy Inc.	A-	Baa2	2	B++	n/a
13	Eversource Energy	A-	Baa1	1	A	0.55
14	Exelon Corp.	BBB+	Baa2	2	B++	0.65
15	Fortis Inc.	A-	Baa3	2	B++	0.60
16	NextEra Energy, Inc.	A-	Baa1	1	A+	0.50
17	OGE Energy Corp.	BBB+	Baa1	2	A	0.70
18	PPL Corp.	A-	Baa2	2	B++	0.65
19	Pub Sv Enterprise Grp.	BBB+	Baa1	1	A++	0.60
20	Sempra Energy	BBB+	Baa1	2	A	0.65
21	Southern Company	A-	Baa2	2	A	0.50
22	WEC Energy Group	A-	Baa1	1	A+	0.45
23	Xcel Energy Inc.	A-	Baa1	1	A+	0.45
	Range	**BBB+ to A-**	**Baa3 to Baa1**	**1 to 2**	**B++ to A+**	**0.40 to 0.70**
	Kentucky Power	**A-**	**Baa3**	**1**	**A+**	**0.55**

(a) Issuer credit rating from www.standardandpoors.com (retrieved May 1, 2020).
(b) Long-term rating from www.moodys.com (retrieved May 1, 2020).
(c) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).

Q51. WHAT DOES THIS COMPARISON INDICATE REGARDING INVESTORS' ASSESSMENT OF THE RELATIVE RISKS ASSOCIATED WITH YOUR ELECTRIC GROUP?

A51. As shown above, Kentucky Power's A- rating from S&P is consistent with the range maintained by the Electric Group,[38] with the Company's Baa3 rating from Moody's falling at the bottom of the proxy group range. With respect to Value Line's Safety Rank, Financial Strength and beta measures, the values for Kentucky Power are consistent with the range applicable to the Electric Group. Considered together, a comparison of these objective measures, which incorporate a broad spectrum of risks, including financial and business position, relative size, and exposure to company specific factors, indicates that investors would likely conclude that the overall investment risks for Kentucky Power are generally comparable to those of the firms in the Electric Group.

V. CAPITAL MARKET ESTIMATES

Q52. WHAT IS THE PURPOSE OF THIS SECTION?

A52. This section presents capital market estimates of the cost of equity. First, I address the concept of the cost of common equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe various quantitative analyses conducted to estimate the cost of common equity for the proxy group of comparable risk utilities. Finally, I examine flotation costs, which are properly considered in evaluating a fair and reasonable rate of return on equity.

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[38] While S&P assigns Kentucky Power a corporate credit rating of A-, consistent with AEP and its other operating subsidiaries, it also indicates that the Company's stand-alone credit profile is "bbb," which suggests greater risk. S&P Global Ratings, *Kentucky Power Co.*, RatingsDirect (Apr. 8, 2020). This is consistent with Fitch, which has assigned Kentucky Power a long-term issuer default rating of "BBB."

A. Economic Standards

Q53. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE COST OF EQUITY CONCEPT?

A53. The fundamental economic principle underlying the cost of equity concept is the notion that investors are risk averse. In capital markets where relatively risk-free assets are available (*e.g.*, U.S. Treasury securities), investors can be induced to hold riskier assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Because all assets compete with each other for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to invest and hold them.

Given this risk-return tradeoff, the required rate of return (k) from an asset (i) can generally be expressed as:

$$k_i = R_f + RP_i$$

where: R_f = Risk-free rate of return, and
RP_i = Risk premium required to hold riskier asset i.

Thus, the required rate of return for a particular asset at any time is a function of: (1) the yield on risk-free assets, and (2) the asset's relative risk, with investors demanding correspondingly larger risk premiums for bearing greater risk.

Q54. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF PRINCIPLE ACTUALLY OPERATES IN THE CAPITAL MARKETS?

A54. Yes. The risk-return tradeoff can be readily documented in segments of the capital markets where required rates of return can be directly inferred from market data and where generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. Comparing the observed yields on government securities, which are considered free of default risk, to the yields on bonds of various rating categories demonstrates that the risk-return tradeoff does, in fact, exist.

Q55. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?

A55. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets – including common stock – required rates of return cannot be directly observed. Yet there is every reason to believe that investors exhibit risk aversion in deciding whether or not to hold common stocks and other assets, just as when choosing among fixed-income securities.

Q56. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES BETWEEN FIRMS?

A56. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to different securities issued by the same firm. The securities issued by a utility vary considerably in risk because they have different characteristics and priorities. As noted earlier, common shareholders are the last in line and they receive only the net revenues, if any, remaining after all other claimants have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by the utility's senior, long-term debt.

Q57. WHAT ARE THE CHALLENGES IN DETERMINING A JUST AND REASONABLE ROE FOR A REGULATED ENTERPRISE?

A57. The actual return investors require is unobservable. Different methodologies have been developed to estimate investors' expected and required return on capital, but all such methodologies are merely theoretical tools and generally produce a range of estimates, based on different assumptions and inputs. The DCF method, which is frequently referenced and relied on by regulators, is only one theoretical approach to gain insight into the return investors require; there are numerous other methodologies for estimating the cost of capital and the ranges produced by the different approaches can vary widely.

Q58. IS IT CUSTOMARY TO CONSIDER THE RESULTS OF MULTIPLE APPROACHES WHEN EVALUATING A JUST AND REASONABLE ROE?

A58. Yes. In my experience, financial analysts and regulators routinely consider the results of alternative approaches in determining allowed ROEs. It is widely recognized that no single method can be regarded as failsafe; with all approaches having advantages and shortcomings. As the FERC has noted, "[t]he determination of rate of return on equity starts from the premise that there is no single approach or methodology for determining the correct rate of return."[39] Similarly, a publication of the Society of Utility and Regulatory Financial Analysts concluded that:

> Each model requires the exercise of judgment as to the reasonableness of the underlying assumptions of the methodology and on the reasonableness of the proxies used to validate the theory. Each model has its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises, most of which cannot be validated empirically. Investors clearly do not subscribe to any singular method, nor does the stock price reflect the application of any one single method by investors.[40]

As this treatise succinctly observed, "no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models."[41] Similarly, *New Regulatory Finance* concluded that:

> There is no single model that conclusively determines or estimates the expected return for an individual firm. Each methodology possesses its own

[39] *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).

[40] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.

[41] *Id.*

> way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises that cannot be validated empirically. Investors do not necessarily subscribe to any one method, nor does the stock price reflect the application of any one single method by the price-setting investor. There is no monopoly as to which method is used by investors. In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities.[42]

Thus, while the DCF model is a recognized approach to estimating the ROE, it is not without shortcomings and does not otherwise eliminate the need to ensure that the "end result" is fair. The Indiana Utility Regulatory Commission has recognized this principle:

> There are three principal reasons for our unwillingness to place a great deal of weight on the results of any DCF analysis. One is. . . the failure of the DCF model to conform to reality. The second is the undeniable fact that rarely if ever do two expert witnesses agree on the terms of a DCF equation for the same utility – for example, as we shall see in more detail below, projections of future dividend cash flow and anticipated price appreciation of the stock can vary widely. And, the third reason is that the unadjusted DCF result is almost always well below what any informed financial analysis would regard as defensible, and therefore require an upward adjustment based largely on the expert witness's judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[43]

More recently, the FERC recognized the potential for any application of the DCF model to produce unreliable results.[44]

As this discussion indicates, consideration of the results of alternative approaches reduces the potential for error associated with any single quantitative method. Just as investors inform their decisions through the use of a variety of methodologies, my

[42] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 429.
[43] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).
[44] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

evaluation of a fair ROE for the Company considered the results of multiple financial models.

Q59. DOES THE FACT THAT KENTUCKY POWER IS A SUBSIDIARY OF AEP IN ANY WAY ALTER THESE FUNDAMENTAL STANDARDS UNDERLYING A FAIR AND REASONABLE ROE?

A59. No. While the Company has no publicly traded common stock and AEP is Kentucky Power's only shareholder, this does not change the standards governing the determination of a fair ROE for the Company. Ultimately, the common equity that is required to support the utility operations of Kentucky Power must be raised in the capital markets, where investors consider the Company's ability to offer a rate of return that is competitive with other risk-comparable alternatives. Kentucky Power must compete with other investment opportunities and unless there is a reasonable expectation that investors will have the opportunity to earn returns commensurate with the underlying risks, capital will be allocated elsewhere, the Company's financial integrity will be weakened, and investors will demand an even higher rate of return. Kentucky Power's ability to offer a reasonable return on investment is a necessary ingredient in ensuring that customers continue to enjoy economical rates and reliable service.

Q60. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO ESTIMATING THE COST OF COMMON EQUITY FOR A UTILITY?

A60. Although the cost of common equity cannot be observed directly, it is a function of the returns available from other investment alternatives and the risks to which the equity capital is exposed. Because it is not readily observable, the cost of common equity for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the company specifically, and employing various quantitative methods that focus on investors' required rates of return. These various quantitative methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market data.

B. Discounted Cash Flow Analyses

Q61. HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF COMMON EQUITY?

A61. DCF models are based on the assumption that the price of a share of common stock is equal to the present value of the expected cash flows (i.e., future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:

$$P_0 = \frac{D_1}{k_e - g}$$

where: P_0 = Current price per share;
D_1 = Expected dividend per share in the coming year;
k_e = Cost of equity; and,
g = Investors' long-term growth expectations.

The cost of common equity (k_e) can be isolated by rearranging terms within the equation:

$$k_e = \frac{D_1}{P_0} + g$$

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield (D_1/P_0); and 2) growth (g). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

Q62. WHAT STEPS ARE REQUIRED TO APPLY THE CONSTANT GROWTH DCF MODEL?

A62. The first step in implementing the constant growth DCF model is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial, step is to estimate investors' long-term growth expectations (*g*) for the firm. The final step is to sum the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

Q63. HOW DO YOU DETERMINE THE DIVIDEND YIELD FOR THE ELECTRIC GROUP?

A63. Estimates of dividends to be paid by each of these utilities over the next twelve months, obtained from Value Line, serve as D_1. This annual dividend is then divided by a 30-day average stock price as of May 1, 2020 for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Electric Group are presented on page 1 of Exhibit AMM-4. As shown there, dividend yields for the firms in the Electric Group range from 2.4% to 6.8%, and average 3.9%.

Q64. WHAT IS THE NEXT STEP IN APPLYING THE CONSTANT GROWTH DCF MODEL?

A64. The next step is to evaluate growth expectations, or "*g*," for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep, and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock prices. A wide variety of techniques can be used to derive growth rates, but the only "*g*" that matters in applying the DCF model is the value that investors expect.

Q65. WHAT ARE INVESTORS MOST LIKELY TO CONSIDER IN DEVELOPING THEIR GROWTH EXPECTATIONS?

A65. Implementation of the DCF model is solely concerned with replicating the forward-looking evaluation of real-world investors. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. This is because utilities have significantly altered their dividend policies in response to more accentuated business risks and capital requirements in the industry, with the payout ratio for electric utilities falling significantly from historical levels. As a result, dividend growth in the utility industry has lagged growth in earnings as utilities conserve financial resources.

A measure that plays a pivotal role in determining investors' long-term growth expectations are future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts indicate that growth in earnings is far more influential than trends in dividends per share ("DPS").

The availability of projected EPS growth rates also is key to investors relying on this measure as compared to future trends in DPS. Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of earnings forecasts attests to their relative influence. The fact that securities analysts focus on EPS growth, and that DPS growth rates are not routinely published, indicates that projected EPS growth rates are likely to provide a superior indicator of the future long-term growth expected by investors.

Q66. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS CONSIDER HISTORICAL TRENDS?

A66. Yes. Professional security analysts study historical trends extensively in developing their projections of future earnings. Hence, to the extent there is any useful information in historical patterns, that information is incorporated into analysts' growth forecasts.

Q67. DID PROFESSOR MYRON J. GORDON, A PIONEER OF THE DCF APPROACH, RECOGNIZE THE PIVOTAL ROLE THAT EARNINGS PLAY IN FORMING INVESTORS' EXPECTATIONS?

A67. Yes. Dr. Gordon specifically recognized that "it is the growth that investors expect that should be used" in applying the DCF model and he concluded:

> A number of considerations suggest that investors may, in fact, use earnings growth as a measure of expected future growth."[45]

Q68. ARE ANALYSTS' ASSESSMENTS OF GROWTH RATES APPROPRIATE FOR ESTIMATING INVESTORS' REQUIRED RETURN USING THE DCF MODEL?

A68. Yes. In applying the DCF model to estimate the cost of common equity, the only relevant growth rate is the forward-looking expectations of investors that are captured in current stock prices. Investors, just like securities analysts and others in the investment community, do not know how the future will actually turn out. They can only make investment decisions based on their best estimate of what the future holds in the way of long-term growth for a particular stock, and securities prices are constantly adjusting to reflect their assessment of available information.

Any claims that analysts' estimates are not relied upon by investors are illogical given the reality of a competitive market for investment advice. If financial analysts' forecasts do not add value to investors' decision making, then it is irrational for investors

[45] Gordon, Myron J., "The Cost of Capital to a Public Utility," *MSU Public Utilities Studies* at 89 (1974).

to pay for these estimates. Similarly, those financial analysts who fail to provide reliable forecasts will lose out in competitive markets relative to those analysts whose forecasts investors find more credible. The reality that analyst estimates are routinely referenced in the financial media and in investment advisory publications, as well as the continued success of services such as Thomson Reuters and Value Line, implies that investors use them as a basis for their expectations.

While the projections of securities analysts may be proven optimistic or pessimistic in hindsight, this is irrelevant in assessing the expected growth that investors have incorporated into current stock prices, and any bias in analysts' forecasts – whether pessimistic or optimistic – is irrelevant if investors share analysts' views. Earnings growth projections of security analysts provide the most frequently referenced guide to investors' views and are widely accepted in applying the DCF model. As explained in *New Regulatory Finance*:

> Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of *g* [growth]. <u>The accuracy of these forecasts in the sense of whether they turn out to be correct is not an issue here, as long as they reflect widely held expectations</u>.[46]

Q69. HAS THE COMMISSION ALSO RECOGNIZED THAT ANALYSTS' GROWTH RATE ESTIMATES ARE AN IMPORTANT AND MEANINGFUL GUIDE TO INVESTORS' EXPECTATIONS?

A69. Yes. The Commission has indicated its preference for relying on analysts' projections in establishing investors' expectations:

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[46] Roger A. Morin, *New Regulatory Finance, Pub. Util. Reports, Inc.* (2006) at 298 (emphasis added).

> KU's argument concerning the appropriateness of using investors' expectations in performing a DCF analysis is more persuasive than the AG's argument that analysts' projections should be rejected in favor of historical results. The Commission agrees that analysts' projections of growth will be relatively more compelling in forming investors' forward-looking expectations than relying on historical performance, especially given the current state of the economy.[47]

Similarly, the FERC has expressed a clear preference for projected EPS growth rates in applying the DCF model to estimate the cost of equity for both electric and natural gas pipeline utilities:

> Opinion No. 414-A held that the IBES five-year growth forecasts for each company in the proxy group are the best available evidence of the short-term growth rates expected by the investment community. It cited evidence that (1) those forecasts are provided to IBES by professional security analysts, (2) IBES reports the forecast for each firm as a service to investors, and (3) the IBES reports are well known in the investment community and used by investors. The Commission has also rejected the suggestion that the IBES analysts are biased and stated that "in fact the analysts have a significant incentive to make their analyses as accurate as possible to meet the needs of their clients since those investors will not utilize brokerage firms whose analysts repeatedly overstate the growth potential of companies."[48]

The Public Utility Regulatory Authority of Connecticut has also noted that "there is not growth in DPS without growth in EPS," and concluded that securities analysts' growth projections have a greater influence over investors' expectations and stock prices.[49] In addition, the Regulatory Commission of Alaska ("RCA") has previously determined that analysts' EPS growth rates provide a superior basis on which to estimate investors' expectations:

> We also find persuasive the testimony . . . that projected EPS returns are more indicative of investor expectations of dividend growth than historical

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[47] *Kentucky Utilities Co.*, Case No. 2009-00548 (Ky PSC Jul. 30, 2010) at 30-31.
[48] *Kern River Gas Transmission Co.*, 126 FERC ¶ 61,034at P 121 (2009) (footnote omitted).
[49] Public Utility Regulatory Authority of Connecticut, *Decision*, Docket No. 13-02-20 (Sept. 24, 2013).

> growth data because persons making the forecasts already consider the historical numbers in their analyses.[50]

The RCA has concluded that arguments against exclusive reliance on analysts' EPS growth rates to apply the DCF model "are not convincing."[51]

Q70. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE WAY OF GROWTH FOR THE FIRMS IN THE ELECTRIC GROUP?

A70. The earnings growth projections for each of the firms in the Electric Group reported by Value Line, IBES,[52] and Zacks Investment Research ("Zacks") are displayed on page 2 of Exhibit AMM-4.

Q71. HOW ELSE ARE INVESTORS' EXPECTATIONS OF FUTURE GROWTH PROSPECTS OFTEN ESTIMATED WHEN APPLYING THE CONSTANT GROWTH DCF MODEL?

A71. In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are never met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is frequently proposed in regulatory proceedings.

The sustainable growth rate is calculated by the formula, $g = br+sv$, where "b" is the expected retention ratio, "r" is the expected earned return on equity, "s" is the percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate. Under DCF theory, the "sv" factor is a component of the growth rate

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[50] Regulatory Commission of Alaska, U-07-76(8) at 65, n. 258.

[51] Regulatory Commission of Alaska, U-08-157(10) at 36.

[52] Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters and made available at, for instance, https://finance.yahoo.com.

designed to capture the impact of issuing new common stock at a price above, or below, book value. The sustainable, "br+sv" growth rates for each firm in the Electric Group are summarized on page 2 of Exhibit AMM-4, with the underlying details being presented in Exhibit AMM-5.[53]

Q72. ARE THERE SIGNIFICANT SHORTCOMINGS ASSOCIATED WITH THE "BR+SV" GROWTH RATE?

A72. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop estimates of investors' expectations for four separate variables; namely, "b", "r", "s", and "v." Given the inherent difficulty in forecasting each parameter and the difficulty of estimating the expectations of investors, the potential for measurement error is significantly increased when using four variables, as opposed to referencing a direct projection for EPS growth. Second, empirical research in the finance literature indicates that sustainable growth rates are not as significantly correlated to measures of value, such as share prices, as are analysts' EPS growth forecasts.[54] The "sustainable growth" approach is included for completeness, but evidence indicates that analysts' forecasts provide a superior and more direct guide to investors' growth expectations. Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates in evaluating the results of the DCF model.

Q73. WHAT COST OF COMMON EQUITY ESTIMATES ARE IMPLIED FOR THE ELECTRIC GROUP USING THE DCF MODEL?

A73. After combining the dividend yields and respective growth projections for each utility, the resulting cost of common equity estimates are shown on page 3 of Exhibit AMM-4.

[53] Because Value Line reports end-of-year book values, an adjustment factor is incorporated to compute an average rate of return over the year, which is consistent with the theory underlying this approach.
[54] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 307.

Q74. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF MODEL, IS IT APPROPRIATE TO ELIMINATE ILLOGICAL ESTIMATES AT THE EXTREME LOW OR HIGH END OF THE RANGE?

A74. Yes. In applying quantitative methods to estimate the cost of equity, it is essential that the resulting values pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated when evaluating the results of this method.

Q75. HOW DO YOU EVALUATE DCF ESTIMATES AT THE LOW END OF THE RANGE?

A75. I base my evaluation of DCF estimates at the low end of the range on the fundamental risk-return tradeoff, which holds that investors will only take on more risk if they expect to earn a higher rate of return to compensate them for the greater uncertainly. Because common stocks lack the protections associated with an investment in long-term bonds, a utility's common stock imposes far greater risks on investors. As a result, the rate of return that investors require from a utility's common stock is considerably higher than the yield offered by senior, long-term debt. Consistent with this principle, DCF results that are not sufficiently higher than the yield available on less risky utility bonds must be eliminated.

Q76. HAVE SIMILAR TESTS BEEN APPLIED BY REGULATORS?

A76. Yes. The FERC has noted that adjustments are justified where applications of the DCF approach produce illogical results. The FERC evaluates DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.[55] The FERC affirmed that "[t]he purpose of the low-end outlier test is to exclude from the proxy group those companies whose ROE estimates are below the average bond yield or are above the average bond

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[55] *See, e.g., Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010) ("*SoCal Edison*").

yield but are sufficiently low that an investor would consider the stock to yield essentially the same return as debt."[56] In public utility ROE cases, the Commission has used 100 basis points above the cost of debt as an approximation of this threshold, but has also considered the distribution of proxy group companies to inform its decision on which companies are outliers. As the Presiding Judge explained, this is a flexible test.

Q77. WHAT INTEREST RATE BENCHMARKS DO YOU CONSIDER IN EVALUATING THE DCF RESULTS FOR KENTUCKY POWER?

A77. Utility bonds rated "Baa" represent the lowest ratings grade for which Moody's publishes an index of average yields, and the closest available approximation for the risks of common stock, which are significantly greater than those of long-term debt. Monthly yields for Baa utility bonds reported by Moody's averaged 3.79% during the six-months ending April 2020. As documented earlier, current forecasts anticipate higher long-term rates over the near-term. As shown in Table AMM-5 below, forecasts of IHS Markit and the EIA imply an average Baa bond yield of approximately 5.1% over the period 2021-2025:

[56] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 122 (2014).

TABLE AMM-5
IMPLIED BAA UTILITY BOND YIELD

	2021-25
Projected Aa Utility Yield	
IHS Global Insight (a)	4.30%
EIA (b)	4.60%
Average	4.45%
Current Baa - AA Yield Spread (c)	0.64%
Implied Baa Utility Yield	**5.09%**

(a) IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020).
(b) Energy Information Administration, Annual Energy Outlook 2020 (Jan. 29, 2020).
(c) Based on monthly average bond yields from Moody's Investors Service for the six-month period Nov. 2019 - Apr. 2020.

Q78. WHAT ELSE SHOULD BE CONSIDERED IN EVALUATING DCF ESTIMATES AT THE LOW END OF THE RANGE?

A78. While the FERC historically referenced a fixed spread over public utility bond yields in evaluating low-end values, this static test ignores the implications of the inverse relationship between equity risk premiums and bond yields. As discussed earlier, the premium that investors demand to bear the higher risks of common stock is not constant. As demonstrated empirically in the application of the risk premium method,[57] equity risk premiums expand when interest rates fall, and vice versa.

For example, based on a review of its precedent for evaluating low-end values, the FERC established a 100 basis point risk premium over Moody's bond yield averages as a threshold to eliminate DCF results in *SoCal Edison*, citing prior decisions in *Atlantic Path*

[57] Exhibit AMM-8, page 4.

15,[58] *Startrans*,[59] and *Pioneer*[60] in support of this policy.[61] Because bond yields declined significantly between the time of those findings and the study period in this case, the inverse relationship implies a significant increase in the equity risk premium that investors require to accept the higher uncertainties associated with an investment in utility common stocks versus bonds. As shown on page 4 of Exhibit AMM-4, recognizing the inverse relationship between equity risk premiums and bond yields would indicate a current low-end threshold in the range of approximately 6.0% to 6.8%. The impact of widening equity risk premiums should be considered in evaluating low-end cost of equity estimates.

Q79. WHAT DO YOU CONCLUDE REGARDING THE REASONABLENESS OF DCF VALUES AT THE LOW END OF THE RANGE OF RESULTS?

A79. As highlighted on page 3 of Exhibit AMM-4, after considering this test and the distribution of individual estimates, I eliminate six low-end DCF estimates ranging from 1.8% to 6.5%. Based on my professional experience and the risk-return tradeoff principle that is fundamental to finance, it is inconceivable that investors are not requiring a substantially higher rate of return for holding common stock. As a result, consistent with the threshold established by utility bond yields, the values below the threshold provide little guidance as to the returns investors require from utility common stocks and should be excluded.

Q80. DO YOU ALSO RECOMMEND EXCLUDING ESTIMATES AT THE HIGH END OF THE RANGE OF DCF RESULTS?

A80. While I typically recommend the exclusion of high end estimates that are clearly implausible, in this case, no such values exist. The upper end of the DCF range for the Electric Group is set by a cost of equity estimate of 13.6%. While a 13.6% cost of equity estimate may exceed the majority of the remaining values, low-end DCF estimates in the

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[58] *Atl. Path 15, LLC*, 122 FERC ¶ 61,135 (2008) ("*Atlantic Path 15*").
[59] *Startrans IO, LLC*, 122 FERC ¶ 61,306 (2008) ("*Startrans*").
[60] *Pioneer Transmission, LLC*, 126 FERC ¶ 61,281 (2009) ("*Pioneer*").
[61] *SoCal Edison* at P 54.

6.8% to 7.5% range are assuredly far below investors' required rate of return. Taken together and considered along with the balance of the results, the remaining values provide a reasonable basis on which to frame the range of plausible DCF estimates and evaluate investors' required rate of return.

Q81. WHAT COST OF COMMON EQUITY ESTIMATES ARE IMPLIED BY YOUR DCF RESULTS FOR THE ELECTRIC GROUP?

A81. As shown on page 3 of Exhibit AMM-4 and summarized in Table AMM-6 below, after eliminating illogical values, application of the constant growth DCF model result in the following cost of equity estimates:

TABLE AMM-6
DCF RESULTS – ELECTRIC GROUP

Growth Rate	Average	Midpoint
Value Line	9.7%	10.2%
IBES	9.1%	8.7%
Zacks	9.2%	9.4%
br + sv	8.6%	9.6%

C. Capital Asset Pricing Model

Q82. PLEASE DESCRIBE THE CAPM.

A82. The CAPM is a theory of market equilibrium that measures risk using the beta coefficient. Assuming investors are fully diversified, the relevant risk of an individual asset (*e.g.*, common stock) is its volatility relative to the market as a whole, with beta reflecting the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. The CAPM is mathematically expressed as:

$$R_j = R_f + \beta_j(R_m - R_f)$$

where: R_j = required rate of return for stock j;
R_f = risk-free rate;
R_m = expected return on the market portfolio; and,
β_j = beta, or systematic risk, for stock j.

Under the CAPM formula above, a stock's required return is a function of the risk-free rate (R_f), plus a risk premium that is scaled to reflect the relative volatility of a firm's stock price, as measured by beta (β). Like the DCF model, the CAPM is an *ex-ante,* or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data.

Q83. HOW DO YOU APPLY THE CAPM TO ESTIMATE THE COST OF COMMON EQUITY?

A83. Application of the CAPM to the Electric Group based on a forward-looking estimate for investors' required rate of return from common stocks is presented in Exhibit AMM-6. In order to capture the expectations of today's investors in current capital markets, the expected market rate of return is estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.

I obtain the dividend yield for each company from Value Line. The growth rate is equal to the average of the EPS growth projections for each firm published by IBES, Value Line, and Zacks. In order to address potential concerns regarding the veracity and accuracy of the growth estimates, I removed any growth rates greater than +/- 50%. In addition, I verified all growth rates reported on *Yahoo! Finance* that were negative or greater than 20% against comparable IBES estimates published by Thomson Reuters through an alternative source.[62] In those cases where negative values or estimates greater than 20% from *Yahoo! Finance* were not confirmed by an alternative source, they were removed from the analysis. Each company's dividend yield and growth rate are then weighted by the company's proportionate share of total market value.

Based on the weighted average of the projections for the individual firms, these estimates imply an average growth rate over the next five years of 9.3%. Combining this average growth rate with a year-ahead dividend yield of 3.1% results in a current cost of common equity estimate for the market as a whole (R_m) of 12.5%. Subtracting a 1.9% risk-free rate based on the average yield on 30-year Treasury bonds for the six-months ending April 2020 produces a market equity risk premium of 10.6%.

Q84. WHAT IS THE SOURCE OF THE BETA VALUES YOU USED TO APPLY THE CAPM?

A84. As indicated earlier in my discussion of risk measures for the Electric Group, I rely on the beta values reported by Value Line, which in my experience is the most widely referenced source for beta in regulatory proceedings.

Q85. WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE CAPM?

A85. Financial research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size. Accordingly, a modification is required to account for this size effect. As explained by *Morningstar*:

[62] Thomson Reuters StockReports+, *Company in Context Report* (*available at* www.fidelity.com).

> One of the most remarkable discoveries of modern finance is that of a relationship between company size and return. … The relationship between company size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks. … This size-rated phenomenon has prompted a revision to the CAPM, which includes a size premium.[63]

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, researchers have developed size premiums that need to be added to the theoretical CAPM cost of equity estimates to account for the level of a firm's market capitalization in determining the CAPM cost of equity.[64] Accordingly, my CAPM analysis also incorporates an adjustment to recognize the impact of size distinctions, as measured by the average market capitalization for the Electric Group.

Q86. ARE YOU RECOMMENDING THAT THE COMMISSION AWARD KENTUCKY POWER A PREMIUM TO THE ROE BECAUSE OF ITS RELATIVE SIZE?

A86. No. I am not proposing to apply a general size risk premium in evaluating a fair and reasonable ROE for the Company and my recommendation does not include any adjustment related to the relative size of Kentucky Power. Rather, the size adjustment is specific to the CAPM and merely corrects for an observed inability of the beta measure to fully reflect the risks perceived by investors for the firms in the Electric Group. As the FERC has recognized, "[t]his type of size adjustment is a generally accepted approach to CAPM analyses."[65]

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[63] Morningstar, *Ibbotson SBBI 2015 Classic Yearbook*, at pp. 99, 108.

[64] Originally compiled by Ibbotson Associates and published in their annual yearbook entitled, "Stocks, Bonds, Bills and Inflation," these size premia are now developed by Duff & Phelps and presented in its *Valuation Handbook – Guide to Cost of Capital*.

[65] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117 (2015).

Q87. WHAT IS THE IMPLIED ROE FOR THE ELECTRIC GROUP USING THE CAPM APPROACH?

A87. As shown on page 1 of Exhibit AMM-6, after adjusting for the impact of firm size the CAPM approach implies an average and midpoint cost of equity estimates of 8.0% and 8.3%, respectively, for the Electric Group.

Q88. DO YOU ALSO APPLY THE CAPM USING FORECASTED BOND YIELDS?

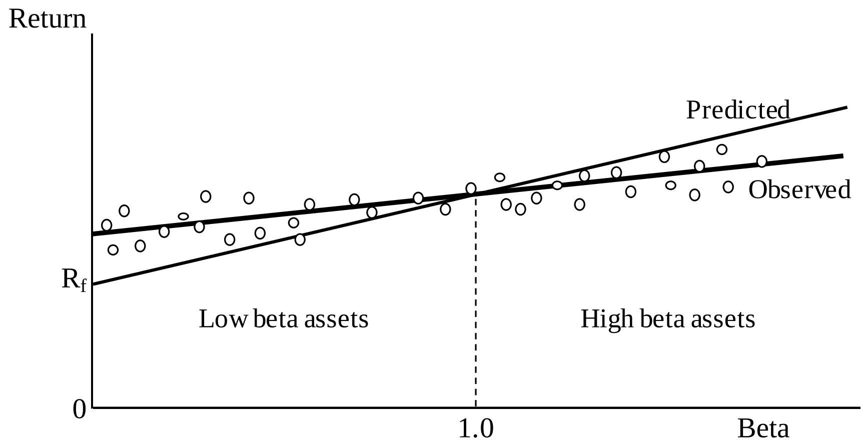
A88. Yes. As discussed earlier, there is general consensus that interest rates will increase over the period when the rates established in this proceeding will be in effect. Accordingly, in addition to the use of current bond yields, I also apply the CAPM based on the forecasted long-term Treasury bond yields developed based on projections published by Value Line, IHS Global Insight and Blue Chip. As shown on page 2 of Exhibit AMM-6, incorporating a forecasted Treasury bond yield for 2021-2025 implies an average cost of equity estimate of 8.4% for the Electric Group after adjusting for the impact of relative size, with a midpoint of 8.8%.

D. Empirical Capital Asset Pricing Model

Q89. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL APPLICATIONS OF THE CAPM?

A89. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending to have lower returns than predicted by the CAPM. This is illustrated graphically in the figure below:

FIGURE AMM-6
CAPM – PREDICTED VS. OBSERVED RETURNS



Because the betas of utility stocks, including those in the Electric Group, are generally less than 1.0, this implies that cost of equity estimates based on the traditional CAPM would understate the cost of equity. This empirical finding is widely reported in the finance literature, as summarized in *New Regulatory Finance*:

> As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical relationships.[66]

As discussed in *New Regulatory Finance*,[67] based on a review of the empirical evidence, the expected return on a security is related to its risk by the ECAPM, which is represented by the following formula:

$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

Like the CAPM formula presented earlier, the ECAPM represents a stock's required return as a function of the risk-free rate (R_f), plus a risk premium. In the formula

[66] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 189.
[67] *Id.* at 190.

above, this risk premium is composed of two parts: (1) the market risk premium (R_m - R_f) weighted by a factor of 25%, and (2) a company-specific risk premium based on the stocks relative volatility [(β)(R_m - R_f)] weighted by 75%. This ECAPM equation, and its associated weighting factors, recognizes the observed relationship between standard CAPM estimates and the cost of capital documented in the financial research, and corrects for the understated returns that would otherwise be produced for low beta stocks.

Q90. IS THE USE OF THE ECAPM CONSISTENT WITH THE USE OF VALUE LINE BETAS?

A90. Yes. Value Line beta values are adjusted for the observed tendency of beta to converge toward the mean value of 1.00 over time. The purpose of this adjustment is to refine beta values determined using historical data to better match forward-looking estimates of beta, which are the relevant parameter in applying the CAPM or ECAPM models. Meanwhile, the ECAPM does not involve any adjustment to beta whatsoever. Rather, it represents a formal recognition of findings in the financial literature that the observed risk-return tradeoff illustrated in Figure AMM-6 is flatter than predicted by the CAPM. In other words, even if a firm's beta value is estimated with perfect precision, the CAPM would still understate the return for low-beta stocks and overstate the return for high-beta stocks. The ECAPM and the use of adjusted betas represent two separate and distinct issues in estimating returns.

Q91. HAVE OTHER REGULATORS RELIED ON THE ECAPM?

A91. Yes. The ECAPM approach has been relied on by the Staff of the Maryland Public Service Commission ("MDPSC"). For example, MDPSC Staff Witness Julie McKenna noted that "the ECAPM model adjusts for the tendency of the CAPM model to underestimate returns for low Beta stocks," and concluded that, "I believe under current economic conditions that the ECAPM gives a more realistic measure of the ROE than the CAPM model does."[68] The staff of the Colorado Public Utilities Commission has recognized that, "[t]he ECAPM is an empirical method that attempts to enhance the CAPM analysis by flattening the risk-return relationship,"[69] and relied on the exact same standard ECAPM equation presented above.[70] The New York Public Service Commission also relies on the ECAPM approach, which it refers to as the "zero-beta CAPM".[71] The Regulatory Commission of Alaska has also relied on the ECAPM, noting that:

> Tesoro averaged the results it obtained from CAPM and ECAPM while at the same time providing empirical testimony that the ECAPM results are more accurate then [sic] traditional CAPM results. The reasonable investor would be aware of these empirical results. Therefore, we adjust Tesoro's recommendation to reflect only the ECAPM result.[72]

The Wyoming Office of Consumer Advocate, an independent division of the Wyoming Public Service Commission, has also relied on this same ECAPM formula in estimating the cost of equity for a natural gas utility, as have witnesses for the Office of Arkansas Attorney General.[73] More recently, the Montana Public Service Commission determined that "[t]he evidence . . . has convinced the Commission that the Empirical Capital Asset Pricing Model ("ECAPM") should be the primary method for estimating . . . the cost of equity" for a utility under its jurisdiction.[74]

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[68] *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at 9.
[69] Proceeding No. 13AL-0067G, *Answer Testimony and Schedules of Scott England* (July 31, 2013) at 47.
[70] *Id.* at 48.
[71] *See, e.g., Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plan,* CASE 17-E-0459 (Jun. 14, 2018) at 38.
[72] Regulatory Commission of Alaska, Order No. P-97-004(151) (Nov. 27, 2002) at 145.
[73] Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53; Docket No. 17-071-U, *Direct Testimony of Marlon F. Griffing, PH.D.* (May 29, 2018) at 33-35.
[74] Montana Public Service Commission, Docket No. D2017.9.80, Order No. 7575c (Sep. 26, 2018) at P 114.

Q92. WHAT COST OF EQUITY ESTIMATES ARE INDICATED BY THE ECAPM?

A92. My applications of the ECAPM are based on the same forward-looking market rate of return, risk-free rates, and beta values discussed earlier in connections with the CAPM. As shown on page 1 of Exhibit AMM-7, applying the forward-looking ECAPM approach to the firms in the Electric Group results in an average cost of equity estimate of 9.1% after incorporating the size adjustment corresponding to the market capitalization of the individual utilities. The midpoint of the size adjusted ECAPM range is 9.3%.

As shown on page 2 of Exhibit AMM-7, incorporating a forecasted Treasury bond yield for 2021-2025 implies an average and midpoint cost of equity for the Electric Group of 9.5% and 9.8%, after adjusting for the impact of relative size

E. Utility Risk Premium

Q93. BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.

A93. The risk premium method of estimating investors' required return extends to common stocks the risk-return tradeoff observed with bonds. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and by then adding this equity risk premium to the current yield on bonds. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk premium methods directly estimate investors' required rate of return by adding an equity risk premium to observable bond yields.

Q94. IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED METHOD FOR ESTIMATING THE COST OF EQUITY?

A94. Yes. The risk premium approach is based on the fundamental risk-return principle that is central to finance, which holds that investors will require a premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for Kentucky Power.

Q95. HOW DO YOU IMPLEMENT THE RISK PREMIUM METHOD?

A95. Estimates of equity risk premiums for utilities are based on surveys of previously authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such ROEs should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. Thus, when considered in the context of a complete and rigorous analysis, this data provides a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities.

Q96. IS IT CIRCULAR TO CONSIDER RISK PREMIUMS BASED ON AUTHORIZED RETURNS IN ASSESSING A FAIR ROE FOR KENTUCKY POWER?

A96. No. In establishing authorized ROEs, regulators typically consider the results of alternative market-based approaches. Because allowed risk premiums consider objective market data (*e.g.*, stock prices dividends, beta, and interest rates), and are not based strictly on past actions of other regulators, this mitigates concerns over any potential for circularity.

Q97. HOW DO YOU CALCULATE THE EQUITY RISK PREMIUMS BASED ON ALLOWED ROES?

A97. The ROEs authorized for electric utilities by regulatory commissions across the U.S. are compiled by Regulatory Research Associates and published in its *Regulatory Focus* report. On page 3 of Exhibit AMM-8, the average yield on public utility bonds is subtracted from the average allowed ROE for electric utilities to calculate equity risk premiums for each year between 1974 and 2019.[75] As shown there, over this period these equity risk premiums for electric utilities average 3.79%, and the yield on public utility bonds average 8.10%.

Q98. IS THERE ANY CAPITAL MARKET RELATIONSHIP THAT MUST BE CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM METHOD?

A98. Yes. As discussed earlier, the magnitude of equity risk premiums is not constant and financial research has documented that equity risk premiums tend to move inversely with interest rates.[76] In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1% increase or decrease in interest rates, the cost of equity may only rise or fall some fraction of 1%. Therefore, when implementing the risk premium method, adjustments may be required to incorporate this inverse relationship if current interest rate levels have diverged from the average interest rate level represented in the data set.

Current bond yields are lower than those prevailing over the risk premium study periods. Given that equity risk premiums move inversely with interest rates, these lower bond yields also imply an increase in the equity risk premium that investors require to accept the higher uncertainties associated with an investment in utility common stocks versus bonds. In other words, higher required equity risk premiums offset the impact of declining interest rates on the ROE. This relationship is illustrated in the figure on page 4 of Exhibit AMM-8.

[75] My analysis encompasses the entire period for which published data is available.

[76] Other regulators have also recognized that the cost of equity does not move in tandem with interest rates. *See, e.g.*, California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan Rider Schedule FRP-7; *Coakley v. Bangor Hydro-Elec. Co.*, 147 FERC ¶ 61,234 at P 147 (2014).

Q99. WHAT COST OF EQUITY IS IMPLIED BY THE RISK PREMIUM METHOD USING SURVEYS OF ALLOWED ROES?

A99. Based on the regression output between the interest rates and equity risk premiums displayed on page 4 of Exhibit AMM-8, the equity risk premium for electric utilities increased (decreased) approximately 43 basis points for each percentage point decrease (increase) in the yield on average public utility bonds. As illustrated on page 1 of Exhibit AMM-8, with an average yield on public utility bonds for the six-months ending April 2020 of 3.43%, this implies a current equity risk premium of 5.81% for electric utilities. Adding this equity risk premium to the average yield on Baa-rated utility bonds of 3.79% implies a current cost of equity of 9.60%.

Q100. WHAT RISK PREMIUM COST OF EQUITY ESTIMATE IS PRODUCED AFTER INCORPORATING FORECASTED BOND YIELDS?

A100. As shown on page 2 of Exhibit AMM-8, incorporating a forecasted yield for 2021-2025 and adjusting for changes in interest rates since the study period implies an equity risk premium of 5.37% for electric utilities, which is less than the current equity risk premium. This lower equity risk premium is consistent with the inverse relationship I described above. Adding this equity risk premium to the implied average yield on Baa public utility bonds for 2021-2025 of 5.09% results in an implied cost of equity of 10.46%.

F. Expected Earnings Approach

Q101. WHAT OTHER ANALYSES DO YOU CONDUCT TO EVALUATE A FAIR ROE FOR KENTUCKY POWER?

A101. I also evaluate the ROE using the expected earnings method. Reference to rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a fair and reasonable rate of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it avoids the complexities and limitations of capital market methods, such as the DCF and CAPM methodologies, and instead focuses on the returns earned on book equity, which are readily available to investors.

Q102. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS APPROACH?

A102. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. Such an outcome would violate the *Hope* and *Bluefield* standards and undermine the utility's access to capital on reasonable terms.

Q103. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY IMPLEMENTED?

A103. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (*e.g.*, Value Line). Because these returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Moreover, regulators do not set the returns that investors earn in the capital markets, which are a function of dividend payments and fluctuations in common stock prices- both of which are outside their control. Regulators can only establish the allowed ROE, which is applied to the book value of a utility's investment in rate base, as determined from its accounting records. This is directly analogous to the expected earnings approach, which measures the return that investors expect the utility to earn on book value. As a result, the expected earnings approach provides a meaningful guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This expected earnings test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q104. WHAT ROE IS INDICATED FOR KENTUCKY POWER BASED ON THE EXPECTED EARNINGS APPROACH?

A104. For the firms in the Electric Group, the year-end returns on common equity projected by Value Line over its forecast horizon are shown in Exhibit AMM-9. As I explained earlier in my discussion of the br+sv growth rates used in applying the DCF model, Value Line's returns on common equity are calculated using year-end equity balances, which understates the average return earned over the year.[77] Accordingly, these year-end values are converted to average returns using the same adjustment factor discussed earlier and developed in Exhibit AMM-5. As shown in Exhibit AMM-9, after excluding illogical values, Value

[77] For example, to compute the annual return on a passbook savings account with a beginning balance of $1,000 and an ending balance of $5,000, the interest income would be divided by the average balance of $3,000. Using the $5,000 balance at the end of the year would understate the actual return.

Line's projections for the Electric Group suggest an average ROE of approximately 11.0%, with a midpoint value of 10.6%.

G. Flotation Costs

Q105. WHAT OTHER CONSIDERATIONS ARE RELEVANT IN SETTING THE RETURN ON EQUITY FOR A UTILITY?

A105. The common equity used to finance the investment in utility assets is provided from either the sale of stock in the capital markets or from retained earnings not paid out as dividends. When equity is raised through the sale of common stock, there are costs associated with "floating" the new equity securities. These flotation costs include services such as legal, accounting, and printing, as well as the fees and discounts paid to compensate brokers for selling the stock to the public. Also, some argue that the "market pressure" from the additional supply of common stock and other market factors may further reduce the amount of funds a utility nets when it issues common equity. While Kentucky Power has no publicly traded stock and does not incur flotation costs directly, equity capital is provided by investors through AEP's sale of common shares. Thus, these expenses are also relevant when evaluating the fair and reasonable ROE for a wholly-owned subsidiary, such as the Company.

Q106. IS THERE AN ESTABLISHED MECHANISM FOR A UTILITY TO RECOGNIZE EQUITY ISSUANCE COSTS?

A106. No. While debt flotation costs are recorded on the books of the utility, amortized over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation costs are recorded and ultimately recognized. No rate of return is authorized on flotation costs necessarily incurred to obtain a portion of the equity capital used to finance plant. In other words, equity flotation costs are not included in a utility's rate base because neither that portion of the gross proceeds from the sale of common stock used to pay flotation costs is available to invest in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect all of the costs incurred for the use of investors' funds. Because there is no accounting convention to accumulate the flotation costs associated with equity issues, they must be accounted for indirectly, with an upward adjustment to the cost of equity being the most appropriate mechanism.

Q107. IS THERE ACADEMIC EVIDENCE THAT SUPPORTS A FLOTATION COST ADJUSTMENT?

A107. The financial literature and evidence in this case provides a sound theoretical and practical basis to include consideration of flotation costs for Kentucky Power. An adjustment for flotation costs associated with past equity issues is appropriate, even when the utility is not contemplating any new sales of common stock. The need for a flotation cost adjustment to compensate for past equity issues has been recognized in the financial literature. In a *Public Utilities Fortnightly* article, for example, Brigham, Aberwald, and Gapenski demonstrated that even if no further stock issues are contemplated, a flotation cost adjustment in all future years is required to keep shareholders whole, and that the flotation cost adjustment must consider total equity, including retained earnings.[78] Similarly, *New Regulatory Finance* contains the following discussion:

> Another controversy is whether the flotation cost allowance should still be applied when the utility is not contemplating an imminent common stock issue. Some argue that flotation costs are real and should be recognized in calculating the fair rate of return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been

[78] E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, *Common Equity Flotation Costs and Rate Making*, Pub. Util. Fortnightly (May 2, 1985).

> compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. … The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.[79]

Q108. CAN YOU ILLUSTRATE WHY INVESTORS WILL NOT HAVE THE OPPORTUNITY TO EARN THEIR REQUIRED ROE UNLESS A FLOTATION COST ADJUSTMENT IS INCLUDED?

A108. Yes. Assume a utility sells $10 worth of common stock at the beginning of year 1. If the utility incurs flotation costs of $0.48 (5% of the net proceeds), then only $9.52 is available to invest in rate base. Assume that common shareholders' required rate of return is 10.5%, the expected dividend in year 1 is $0.50 (*i.e.*, a dividend yield of 5%), and that growth is expected to be 5.5% annually. As developed in Table AMM-7 below, if the allowed rate of return on common equity is only equal to the utility's 10.5% "bare bones" cost of equity, common stockholders will not earn their required rate of return on their $10 investment, since growth will really only be 5.25%, instead of 5.5%:

TABLE AMM-7
NO FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	EPS	DPS	Payout Ratio
1	$ 9.52	$ -	$ 9.52	$10.00	1.050	10.50%	$ 1.00	$ 0.50	50.0%
2	$ 9.52	$ 0.50	$ 10.02	$10.52	1.050	10.50%	$ 1.05	$ 0.53	50.0%
3	$ 9.52	$ 0.53	$ 10.55	$11.08	1.050	10.50%	$ 1.11	$ 0.55	50.0%
Growth			**5.25%**	**5.25%**			**5.25%**	**5.25%**	

The reason that investors never really earn 10.5% on their investment in the above example is that the $0.48 in flotation costs initially incurred to raise the common stock is not treated like debt issuance costs (*i.e.*, amortized into interest expense and therefore increasing the embedded cost of debt), nor is it included as an asset in rate base.

[79] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 335.

Including a flotation cost adjustment allows investors to be fully compensated for the impact of these costs. One commonly referenced method for calculating the flotation cost adjustment is to multiply the dividend yield by a flotation cost percentage. Thus, with a 5% dividend yield and a 5% flotation cost percentage, the flotation cost adjustment in the above example would be approximately 25 basis points. As shown in Table AMM-8 below, by allowing a rate of return on common equity of 10.75% (an 10.5% cost of equity plus a 25 basis point flotation cost adjustment), investors earn their 10.5% required rate of return, since actual growth is now equal to 5.5%:

TABLE AMM-8
INCLUDING FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	EPS	DPS	Payout Ratio
1	$ 9.52	$ -	$ 9.52	$10.00	1.050	10.75%	$ 1.02	$ 0.50	48.9%
2	$ 9.52	$ 0.52	$ 10.04	$10.55	1.050	10.75%	$ 1.08	$ 0.53	48.9%
3	$ 9.52	$ 0.55	$ 10.60	$11.13	1.050	10.75%	$ 1.14	$ 0.56	48.9%
Growth			**5.50%**	**5.50%**			**5.50%**	**5.50%**	

The only way for investors to be fully compensated for issuance costs is to include an ongoing adjustment to account for past flotation costs when setting the return on common equity. This is the case regardless of whether or not the utility is expected to issue additional shares of common stock in the future.

Q109. WHAT IS THE MAGNITUDE OF THE ADJUSTMENT TO THE "BARE BONES" COST OF EQUITY TO ACCOUNT FOR ISSUANCE COSTS?

A109. The most common method used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a utility's dividend yield. In Exhibit AMM-10, I present a survey of the most recent open-market common stock issues for each company in Value Line's electric and gas utility industries. This data includes AEP's 2009 public offering where it incurred issuance costs equal to approximately 3.02% of the gross proceeds. For all companies in the electric and gas industries, flotation costs averaged

2.9%. Applying this 2.9% expense percentage to the Electric Group dividend yield of 3.9% produces a flotation cost adjustment on the order of 10 basis points.

Q110. HAVE OTHER REGULATORS RECOGNIZED FLOTATION COSTS IN EVALUATING A FAIR AND REASONABLE ROE?

A110. Yes. For example, in Docket No. UE-991606 the Washington Utilities and Transportation Commission concluded that a flotation cost adjustment of 25 basis points should be included in the allowed return on equity:

> The Commission also agrees with both Dr. Avera and Dr. Lurito that a 25 basis point markup for flotation costs should be made. This amount compensates the Company for costs incurred from past issues of common stock. Flotation costs incurred in connection with a sale of common stock are not included in a utility's rate base because the portion of gross proceeds that is used to pay these costs is not available to invest in plant and equipment.[80]

In Case No. INT-G-16-02 the staff of the Idaho Public Utilities Commission supported the use of the same flotation cost methodology that I recommend above, concluding:

> [I]s the standard equation for flotation cost adjustments and is referred to as the “conventional” approach. Its use in regulatory proceedings is widespread, and the formula is outlined in several corporate finance textbooks.[81]

More recently, the Wyoming Office of Consumer Advocate, an independent division of the Wyoming Public Service Commission, recommended a 10 basis point flotation cost adjustment for a wholly-owned gas utility that, like Kentucky Power, does not issue common stock directly.[82] Similarly, the South Dakota Public Utilities Commission has recognized the impact of issuance costs, concluding that, “recovery of

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[80] *Third Supplemental Order*, Washington Utilities and Transportation Commission Docket No. UE-991606, *et al.* (September 2000) at 95.
[81] Case No. INT-G-16-02, *Direct Testimony of Mark Rogers* (Dec. 16, 2016) at 18.
[82] Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53.

reasonable flotation costs is appropriate."[83] Another example of a regulator that approves common stock issuance costs is the Mississippi Public Service Commission, which routinely includes a flotation cost adjustment in its Rate Stabilization Adjustment Rider formula.[84] The Public Utilities Regulatory Authority of Connecticut,[85] the Minnesota Public Utilities Commission,[86] and the Virginia State Corporation Commission[87] have also recognized that flotation costs are a legitimate expense worthy of consideration in setting a fair and reasonable ROE.

VI. NON-UTILITY ROE BENCHMARK

Q111. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A111. This section presents the results of my DCF analysis applied to a group of low-risk firms in the competitive sector, which I refer to as the "Non-Utility Group." This analysis is not directly considered in arriving at my recommended ROE range of reasonableness; however, it is my opinion that this is a relevant consideration in evaluating a fair and reasonable ROE for the Company.

Q112. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR CAPITAL?

A112. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Clearly, the total capital invested in utility stocks is only the tip of the iceberg of total common stock investment, and there are a plethora of other enterprises available to investors beyond those in the utility industry. Utilities must compete for capital, not just against firms in their own industry, but with

[83] *Northern States Power Co*, EL11-019, Final Decision and Order at P 22 (2012).

[84] *See*, *e.g.*, Entergy Mississippi Formula Rate Plan FRP-7, https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf (last visited May 2, 2020).

[85] *See*, *e.g.*, Docket No. 14-05-06, Decision (Dec. 17, 2014) at 133-134.

[86] *See*, *e.g.*, Docket No. E001/GR-10-276, Findings of Fact, Conclusions, and Order at 9.

[87] Roanoke Gas Company, Case No. PUR-2018-00013, *Final Order*, (Jan. 24, 2020) at 6.

other investment opportunities of comparable risk. Indeed, modern portfolio theory is built on the assumption that rational investors will hold a diverse portfolio of stocks, not just companies in a single industry.

Q113. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO CONSIDER INVESTORS' REQUIRED ROE FOR NON-UTILITY COMPANIES?

A113. Yes. The cost of equity capital in the competitive sector of the economy forms the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks and uncertainties." It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[88]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

Q114. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY GROUP HELP TO IMPROVE THE RELIABILITY OF DCF RESULTS?

A114. Yes. The estimates of growth from the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry, or by the industry falling into favor or disfavor by analysts. The result of such distortions would be to bias the DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from more than one industry, it helps to insulate against any possible distortion that may be present in results for a particular sector.

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[88] *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 391, (1944).

Q115. WHAT CRITERIA DO YOU APPLY TO DEVELOP THE NON-UTILITY GROUP?

A115. My comparable risk proxy group is composed of those United States companies followed by Value Line that:

1) Pay common dividends.
2) Have a Safety Rank of “1” or “2”.
3) Have a Financial Strength Rating of “B++” or greater.
4) Have a beta of 0.80 or less.
5) Have investment grade credit ratings from S&P and Moody’s.[89]

Q116. HOW DO THE OVERALL RISKS OF THIS NON-UTILITY GROUP COMPARE WITH THE ELECTRIC GROUP?

A116. Table AMM-9 compares the Non-Utility Group with the Electric Group and Kentucky Power across the four key risk measures discussed earlier:

TABLE AMM-9
COMPARISON OF RISK INDICATORS

	S&P Corporate Rating	Moody's Long-term Rating	Value Line Safety Rank	Value Line Financial Strength	Value Line Beta
Non-Utility Group	BBB+ to AAA	Baa3 to Aaa	1 to 2	B++ to A++	0.60 to 0.80
Electric Group	BBB+ to A-	Baa3 to Baa1	1 to 2	B++ to A+	0.40 to 0.70
Kentucky Power	A-	Baa3	1	A+	0.55

As shown above, the risk indicators for the Non-Utility Group generally suggest comparable or less risk than for the proxy group and Kentucky Power.

The companies that make up the Non-Utility Group are representative of the pinnacle of corporate America. These firms, which include household names such as Coca-

[89] Credit rating firms, such as S&P, use designations consisting of upper- and lower-case letters 'A' and 'B' to identify a bond's credit quality rating. 'AAA', 'AA', 'A', and 'BBB' ratings are considered investment grade. Credit ratings for bonds below these designations ('BB', 'B', 'CCC', etc.) are considered speculative grade, and are commonly referred to as "junk bonds". The term “investment grade” refers to bonds with ratings in the ‘BBB’ category and above.

Cola, Procter & Gamble, and Walmart, have long corporate histories, well-established track records, and exceedingly conservative risk profiles. Many of these companies pay dividends on par with utilities, with the average dividend yield for the group of 2.9%.[90] Moreover, because of their significance and name recognition, these companies receive intense scrutiny by the investment community, which increases confidence that published growth estimates are representative of the consensus expectations reflected in common stock prices.

Q117. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-UTILITY GROUP?

A117. I apply the DCF model to the Non-Utility Group using analysts' EPS growth projections, as described earlier for the Electric Group, with the results being presented on page 3 of Exhibit AMM-11. As summarized in Table AMM-10, below, application of the constant growth DCF model results in the following cost of equity estimates:

TABLE AMM-10
DCF RESULTS – NON-UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	10.5%	10.8%
IBES	9.5%	10.6%
Zacks	9.5%	10.5%

As discussed earlier, reference to the Non-Utility Group is consistent with established regulatory principles. Required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair and reasonable ROE for Kentucky Power.

[90] Exhibit AMM-11, page 1.

VII. CAPITAL STRUCTURE

Q118. IS AN EVALUATION OF THE CAPITAL STRUCTURE MAINTAINED BY A UTILITY RELEVANT IN ASSESSING ITS RETURN ON EQUITY?

A118. Yes. Other things equal, a higher debt ratio and lower common equity ratio, translates into increased financial risk for all investors. A greater amount of debt means more investors have a senior claim on available cash flow, thereby reducing the certainty that each will receive his contractual payments. This increases the risks to which lenders are exposed, and they require correspondingly higher rates of interest. From common shareholders' standpoint, a higher debt ratio means that there are proportionately more investors ahead of them, thereby increasing the uncertainty as to the amount of cash flow that will remain.

Q119. WHAT COMMON EQUITY RATIO IS IMPLICIT IN KENTUCKY POWER'S CAPITAL STRUCTURE?

A119. The capital structure used to compute the overall rate of return for Kentucky Power includes 43.25% common equity.

Q120. HOW DOES THIS COMPARE TO THE AVERAGE EQUITY RATIOS MAINTAINED BY THE ELECTRIC GROUP?

A120. As shown on page 1 of Exhibit AMM-12, common equity ratios for the individual firms in the Electric Group range from a low of 27.8% to a high of 67.7% at year-end 2019, and averaged 45.8%. Meanwhile, the three-to-five year forecasts published by Value Line result in an average common equity ratio of 46.81% for the Electric Group, with the individual equity ratios ranging from 33.0% to 60.0%.

Q121. WHAT CAPITALIZATION RATIOS ARE MAINTAINED BY OTHER UTILITY OPERATING COMPANIES?

A121. Page 2 of Exhibit AMM-12 displays capital structure data at year-end 2019 for the group of electric utility operating companies owned by the firms in the Electric Group used to estimate the cost of equity. As shown there, common equity ratios for these utilities range from 39.4% to 73.0% and average 52.7%. Of the 75 operating companies, 74 have equity ratios greater than the 43.25% common equity requested by Kentucky Power.

Q122. WHAT OTHER FACTORS DO INVESTORS CONSIDER IN THEIR ASSESSMENT OF A COMPANY'S CAPITAL STRUCTURE?

A122. Utilities, including Kentucky Power, are facing significant capital investment plans. Coupled with the potential for turmoil in capital markets, this warrants a stronger balance sheet to deal with an uncertain environment. A conservative financial profile, in the form of a reasonable common equity ratio, is consistent with the need to accommodate these uncertainties and maintain the continuous access to capital under reasonable terms that is required to fund operations and necessary system investment, even during times of adverse capital market conditions.

Q123. DO ONGOING ECONOMIC AND CAPITAL MARKET UNCERTAINTIES ALSO INFLUENCE THE APPROPRIATE CAPITAL STRUCTURE FOR KENTUCKY POWER?

A123. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal to meet funding needs, and utilities with higher financial leverage may be foreclosed or have limited access to additional borrowing, especially during times of stress. As Moody's observed:

> Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to capital markets to assure adequate sources of funding and to maintain financial flexibility. During times of distress and when capital markets are exceedingly volatile and tight, liquidity becomes critically important because access to capital markets may be difficult.[91]

Confirming this view, S&P noted that "availability to the equity market remains extraordinarily challenging" for utilities, and concluded that "lack of access to the equity

[91] Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

market" will also pose a risk to financial standing in the industry.[92] As a result, the Company's capital structure must maintain adequate equity to preserve the flexibility necessary to maintain continuous access to capital even during times of unfavorable market conditions.

Q124. WHAT DOES THIS EVIDENCE SUGGEST WITH RESPECT TO KENTUCKY POWER'S PROPOSED CAPITAL STRUCTURE?

A124. Based on my evaluation, I conclude that Kentucky Power's actual capital structure represents a reasonable mix of capital sources from which to calculate the Company's overall rate of return. Nonetheless, this common equity ratio falls somewhat below the historical (45.8%) and projected (46.8%) averages maintained by the Electric Group, and well below the historical average maintained by other utility operating companies (52.7%).

Q125. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A125. Yes.

[92] S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative* (Apr. 2, 2020).

QUALIFICATIONS OF ADRIEN M. MCKENZIE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Adrien M. McKenzie. My business address is 3907 Red River St., Austin, Texas 78751.

Q. PLEASE STATE YOUR OCCUPATION.

A. I am a principal in FINCAP, Inc., a firm engaged primarily in financial, economic, and policy consulting in the field of public utility regulation.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received B.A. and M.B.A. degrees with a major in finance from The University of Texas at Austin, and hold the Chartered Financial Analyst (CFA®) designation. Since joining FINCAP in 1984, I have participated in consulting assignments involving a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation. I have extensive experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. I have personally sponsored direct and rebuttal testimony in over 130 proceedings filed with the Federal Energy Regulatory Commission ("FERC") and regulatory agencies in Alaska, Arkansas, Colorado, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, Texas, Virginia, Washington, West Virginia, and Wyoming. My testimony addressed the establishment of risk-comparable proxy groups, the application of alternative quantitative methods, and the consideration of regulatory standards and policy objectives in establishing a fair rate of return on equity for regulated electric, gas, and water utility operations. In connection with these assignments, my responsibilities have included critically evaluating the positions of other parties and preparation of rebuttal testimony, representing clients in settlement negotiations and hearings, and assisting in the preparation of legal briefs.

FINCAP was formed in 1979 as an economic and financial consulting firm serving clients in both the regulated and competitive sectors. FINCAP conducts assignments ranging from broad qualitative analyses and policy consulting to technical analyses and research. The firm’s experience is in the areas of public utilities, valuation of closely-held businesses, and economic evaluations (e.g., damage and cost/benefit analyses). Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. I am a member of the CFA Institute, the CFA Society of Austin. A resume containing the details of my qualifications and experience is attached below.

ADRIEN M. McKENZIE

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Summary of Qualifications

Adrien McKenzie has an MBA in finance from the University of Texas at Austin and holds the Chartered Financial Analyst (CFA®) designation. He has over 30 years of experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. Assignments have included a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation.

Employment

President FINCAP, Inc. (June 1984 to June 1987) (April 1988 to present)	Economic consulting firm specializing in regulated industries and valuation of closely-held businesses. Assignments have involved electric, gas, telecommunication, and water/sewer utilities, with clients including utilities, consumer groups, municipalities, regulatory agencies, and cogenerators. Areas of participation have included rate of return, revenue requirements, rate design, tariff analysis, avoided cost, forecasting, and negotiations. Develop cost of capital analyses using alternative market models for electric, gas, and telephone utilities. Prepare pre-filed direct and rebuttal testimony, participate in settlement negotiations, respond to interrogatories, evaluate opposition testimony, and assist in the areas of cross-examination and the preparations of legal briefs. Other assignments have involved preparation of technical reports, valuations, estimation of damages, industry studies, and various economic analyses in support of litigation.
Manager, McKenzie Energy Company (Jan. 1981 to May. 1984)	Responsible for operations and accounting for firm engaged in the management of working interests in oil and gas properties.

Education

M.B.A., Finance, University of Texas at Austin (Sep. 1982 to May. 1984)	Program included coursework in corporate finance, accounting, financial modeling, and statistics. Received Dean's Award for Academic Excellence and Good Neighbor Scholarship. Professional Report: *The Impact of Construction Expenditures on Investor-Owned Electric Utilities*
B.B.A., Finance, University of Texas at Austin (Jan. 1981 to May 1982)	Electives included capital market theory, portfolio management, and international economics and finance. Elected to Beta Gamma Sigma business honor society. Dean's List 1981-1982.
Simon Fraser University, Vancouver, Canada and University of Hawaii at Manoa, Honolulu, Hawaii (Jan. 1979 to Dec 1980)	Coursework in accounting, finance, economics, and liberal arts.

Professional Associations

Received Chartered Financial Analyst (CFA®) designation in 1990.

Member – CFA Institute.

Bibliography

“A Profile of State Regulatory Commissions,” A Special Report by the Electricity Consumers Resource Council (ELCON), Summer 1991.

“The Impact of Regulatory Climate on Utility Capital Costs: An Alternative Test,” with Bruce H. Fairchild, *Public Utilities Fortnightly* (May 25, 1989).

Presentations

“ROE at FERC: Issues and Methods,” *Expert Briefing on Parallels in ROE Issues between AER, ERA, and FERC*, Jones Day (Sydney, Melbourne, and Perth, Australia) (April 15, 2014).

Cost of Capital Working Group eforum, Edison Electric Institute (April 24, 2012).

“Cost-of-Service Studies and Rate Design,” General Management of Electric Utilities (A Training Program for Electric Utility Managers from Developing Countries), Austin, Texas (October 1989 and November 1990 and 1991).

Representative Assignments

Mr. McKenzie has prepared and supported prefiled testimony submitted in over 250 regulatory proceedings. In addition to filings before regulators in over thirty state jurisdictions, Mr. McKenzie has considerable expertise in preparing expert analyses and testimony before the Federal Energy Regulatory Commission ("FERC") on the issue of rate of return on equity ("ROE"), and has broad experience in applying and evaluating the results of quantitative methods to estimate a fair ROE, including discounted cash flow approaches, the Capital Asset Pricing Model, risk premium methods, and other quantitative benchmarks. Other representative assignments have included developing cost of service and cost allocation studies, the application of econometric models to analyze the impact of anti-competitive behavior and estimate lost profits; development of explanatory models for nuclear plant capital costs in connection with prudency reviews; and the analysis of avoided cost pricing for cogenerated power.

ROE ANALYSES

SUMMARY OF RESULTS

Method	Average		Midpoint
DCF			
Value Line	9.7%		10.2%
IBES	9.1%		8.7%
Zacks	9.2%		9.4%
Internal br + sv	8.6%		9.6%
CAPM			
Current Bond Yield	8.0%		8.3%
Projected Bond Yield	8.4%		8.8%
Empirical CAPM			
Current Bond Yield	9.1%		9.3%
Projected Bond Yield	9.5%		9.8%
Utility Risk Premium			
Current Bond Yields		9.6%	
Projected Bond Yield		10.5%	
Expected Earnings	11.0%		10.6%
Recommended Cost of Equity Range			
Cost of Equity Range	9.3%	--	10.4%
Flotation Cost Adjustment			
Dividend Yield		3.9%	
Flotation Cost Percentage		2.9%	
Adjustment		0.1%	
Recommended ROE Range	**9.4%**	**--**	**10.5%**

REGULATORY MECHANISMS

ELECTRIC GROUP

		Type of Adjustment Clause										
				Decoupling				New Capital				
	Holding Company	Elec. Fuel/ Purch.	Conserv. Program Expense	Full	Partial	Renew-ables Expense	Environ-mental Compliance	Gener-ation Capacity	Generic Infra-structure	Trans-mission Expense	Other*	Future Test Year
1	Alliant Energy	✓	✓	--	--	✓	✓	--	--	✓	✓	C
2	Ameren Corp.	✓	✓	--	--	✓	✓	--	✓	✓	✓	O,P
3	American Elec Pwr	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	C,O,P
4	Avangrid, Inc.	D	✓	✓	--	✓	--	--	--	✓	✓	C
5	Black Hills Corp.	✓	✓	--	✓	✓	✓	✓	✓	✓		O
6	CMS Energy Corp.	✓	✓	--	--	✓	--	--	--	✓		C
7	Consolidated Edison	D	✓	✓	--	✓	--	--	✓	--	✓	C,P
8	Dominion Energy	✓	✓	--	--	✓	✓	✓	✓	✓	✓	--
9	DTE Energy Co.	✓	✓	--	--	✓	--	--	--	✓		C
10	Duke Energy Corp.	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	C,O,P
11	Entergy Corp.	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	O,P
12	Evergy Inc.	✓	✓	--	✓	✓	✓	--	✓	✓	✓	P
13	Eversource Energy	✓	✓	✓	✓	✓	--	--	✓	✓	✓	C
14	Exelon Corp.	D	✓	✓	✓	✓	✓	--	✓	✓	✓	O,P
15	Fortis Inc.	✓	✓	✓	✓	✓	✓	--	--	✓	✓	C
16	NextEra Energy, Inc.	✓	✓	--	--	--	✓	✓	✓	--	✓	C
17	OGE Energy Corp.	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	P
18	PPL Corp.	✓	✓	--	✓	✓	✓	--	✓	✓	✓	O
19	Pub Sv Enterprise Grp.	D	✓	--	--	✓	--	--	✓	--	✓	P
20	Sempra Energy	✓	✓	✓	--	--	--	--	✓	✓	✓	C
21	Southern Company	✓	✓	--	✓	✓	✓	--	✓	--	✓	C,O
22	WEC Energy Group	✓	✓	--	--	✓	--	--	--	--	✓	C
23	Xcel Energy Inc.	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	C,O

Sources:
Exhibit AMM-3, pages 2-5, contain operating company data that are aggregated into the parent company data on this page.

Notes:
D - Delivery-only utility.
C - Fully-forecasted test years commonly used in the state listed for this operating company.
O - Fully-forecasted test years occasionally used in the state listed for this operating company.
P - Partially-forecasted test years commonly or occasionally used in the state listed for this operating company.
* Recover mechanisms for other expenses, such as taxes, franchise fees, bad debts, storm costs, pensions, societal benefits, vegetation management, and decommissioning.

REGULATORY MECHANISMS

ELECTRIC GROUP OPERATING COS.

			Type of Adjustment Clause (a)										
					Decoupling				New Capital				
	HOLDING COMPANY/ Operating Company		Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Full	Partial	Renew-ables Expense	Environ-mental Compliance	Gener-ation Capacity	Generic Infra-structure	Trans-mission Expense	Other*	Future Test Year (b)
1	**ALLIANT ENERGY CORP.**												
	Interstate Power & Light	IA	✓	✓	--	--	✓	✓	--	--	✓	✓	--
	Wisconsin Power & Light	WI	✓	--	--	--	--	--	--	--	--	✓	C
2	**AMEREN CORP.**												
	Ameren Illinois	IL	D	✓	--	--	✓	✓	D	--	✓	✓	O
	Union Electric	MO	✓	✓	--	✓	✓	✓	--	✓	✓	✓	P
3	**AMERICAN ELEC PWR**												
	Southwestern Electric Power	AR	✓	✓	--	✓	--	✓	✓	--	✓	✓	P
	Southwestern Electric Power	TX	✓	✓	--	--	--	--	--	✓	✓	--	--
	Appalachian Power	VA	✓	✓	--	--	✓	--	✓	--	✓	✓	--
	Appalachian Power/Wheeling Power	WV	✓	✓	--	--	✓	--	--	--	--	✓	--
	Indiana Michigan Power	IN	✓	✓	--	✓	✓	✓	--	✓	✓	✓	--
	Kentucky Power	KY	✓	✓	--	✓	✓	✓	--	--	--	✓	O
	Southwestern Electric Power	LA	✓	✓	--	✓	--	✓	--	--	--	✓	O
	Indiana Michigan Power	MI	✓	✓	--	--	✓	--	--	--	--	✓	C
	Ohio Power	OH	D	✓	--	✓	✓	--	D	✓	✓	✓	P
	Public Service Oklahoma	OK	✓	✓	--	✓	✓	--	--	✓	✓	✓	--
	Kingsport Power	TN	✓	--	--	--	--	--	--	--	--	--	C
	AEP Texas	TX	D	✓	--	--	--	--	D	✓	✓	--	--
4	**AVANGRID**												
	United Illuminating	CT	D	✓	✓	--	--	--	D	--	✓	--	C
	Central Maine Power	ME	D	--	✓	--	--	--	D	--	--	✓	C
	New York State Electric & Gas	NY	D	--	✓	--	✓	--	D	--	--	✓	C
	Rochester Gas & Electric	NY	D	--	✓	--	✓	--	D	--	--	✓	C
5	**BLACK HILLS CORP.**												
	Black Hills Colorado Electric	CO	✓	✓	--	--	✓	--	✓	✓	--	✓	--
	Black Hills Power	SD	✓	✓	--	✓	✓	✓	--	--	✓	✓	--
	Cheyenne Light Fuel & Power	WY	✓	✓	--	✓	✓	--	--	--	--	✓	O
6	**CMS ENERGY**												
	Consumers Energy	MI	✓	✓	--	--	✓	--	--	--	✓	--	C

REGULATORY MECHANISMS

ELECTRIC GROUP OPERATING COS.

			Type of Adjustment Clause (a)										
					Decoupling				New Capital				
	HOLDING COMPANY/ Operating Company		Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Full	Partial	Renew-ables Expense	Environ-mental Compliance	Gener-ation Capacity	Generic Infra-structure	Trans-mission Expense	Other*	Future Test Year (b)
7	**CONSOLIDATED EDISON**												
	Rockland Electric	NJ	D	✓	--	--	✓	--	D	✓	--	✓	P
	Consolidated Edison of New York	NY	D	--	✓	--	✓	--	D	--	--	✓	C
	Orange & Rockland Utilities	NY	D	--	✓	--	✓	--	D	--	--	--	C
8	**DOMINION ENERGY**												
	Virginia Electric & Power	NC	✓	✓	--	--	✓	✓	--	--	--	--	--
	Virginia Electric & Power	VA	✓	✓	--	--	✓	✓	✓	✓	✓	✓	--
	South Carolina Electric & Gas	SC	✓	✓	--	--	--	✓	✓	--	--	--	--
9	**DTE ENERGY CO.**												
	DTE Electric	MI	✓	✓	--	--	✓	--	--	--	✓	--	C
10	**DUKE ENERGY**												
	Duke Energy Florida	FL	✓	✓	--	--	--	✓	✓	--	--	✓	C
	Duke Energy Indiana	IN	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--
	Duke Energy Kentucky	KY	✓	✓	--	✓	✓	✓	--	--	--	✓	O
	Duke Energy Carolinas	NC	✓	✓	--	--	✓	✓	--	--	--	--	--
	Duke Energy Progress	NC	✓	✓	--	--	✓	✓	--	--	--	--	--
	Duke Energy Ohio	OH	D	✓	--	✓	✓	--	D	✓	✓	✓	P
	Duke Energy Progress	SC	✓	✓	--	--	--	✓	--	--	--	--	--
	Duke Energy Carolinas	SC	✓	✓	--	--	--	✓	--	--	--	--	--
11	**ENTERGY CORP.**												
	Entergy Arkansas	AR	✓	✓	--	✓	✓	--	✓	✓	✓	✓	P
	Entergy New Orleans	LA	✓	✓	--	✓	--	✓	✓	--	✓	✓	O
	Entergy Louisiana	LA	✓	✓	--	✓	--	✓	✓	✓	✓	✓	O
	Entergy Mississippi	MS	✓	✓	--	✓	--	✓	--	--	✓	✓	O
	Entergy Texas	TX	✓	✓	--	--	--	--	--	✓	--	✓	--
12	**EVERGY, INC.**												
	Evergy Kansas Central Inc.	KS	✓	✓	--	✓	✓	✓	--	--	✓	✓	--
	Evergy Kansas South Inc.	KS	✓	✓	--	✓	✓	✓	--	--	✓	✓	--
	Evergy Metro Inc.	KS	✓	✓	--	--	--	--	--	✓	✓	✓	--
	Evergy Metro Inc.	MO	✓	✓	--	✓	✓	✓	--	✓	✓	✓	P
	Evergy Missouri West Inc.	MO	✓	✓	--	✓	✓	✓	--	✓	✓	✓	P

REGULATORY MECHANISMS

ELECTRIC GROUP OPERATING COS.

	HOLDING COMPANY/ Operating Company		Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Decoupling: Full	Decoupling: Partial	Renew-ables Expense	Environ-mental Compliance	New Capital: Gener-ation Capacity	New Capital: Generic Infra-structure	Trans-mission Expense	Other*	Future Test Year (b)
			Type of Adjustment Clause (a)										
13	**EVERSOURCE ENERGY**												
	Connecticut Light and Power	CT	D	✓	✓	--	--	--	D	✓	✓	--	C
	NSTAR Electric	MA	D	✓	✓	--	✓	--	D	✓	✓	✓	--
	Public Service Co. of New Hampshire	NH	✓	--	--	✓	--	--	--	✓	✓	--	--
14	**EXELON CORP.**												
	Delmarva Power & Light	DE	D	--	--	--	--	--	D	✓	✓	✓	P
	Potomac Electric Power	DC	D	--	--	✓	✓	--	D	✓	--	✓	P
	Commonwealth Edison	IL	D	✓	--	--	✓	✓	D	✓	✓	✓	O
	Baltimore Gas & Electric	MD	D	✓	✓	--	--	--	D	--	--	✓	P
	Delmarva Power & Light	MD	D	✓	✓	--	--	--	D	--	--	--	P
	Potomac Electric Power	MD	D	✓	✓	--	--	--	D	--	--	✓	P
	Atlantic City Electric	NJ	D	✓	--	--	✓	--	D	✓	--	✓	P
	PECO Energy	PA	D	✓	--	--	--	--	D	✓	--	✓	O
15	**FORTIS, INC.**												
	Tucson Electric Power	AZ	✓	✓	--	✓	✓	✓	--	--	--	✓	--
	UNS Electric	AZ	✓	✓	--	✓	✓	--	--	--	✓	✓	--
	Central Hudson Gas & Electric	NY	D	--	✓	--	✓	--	D	--	--	✓	C
16	**NEXTERA ENERGY**												
	Florida Power & Light	FL	✓	✓	--	--	--	✓	✓	--	--	✓	C
	Lone Star Transmission	TX	D	--	--	--	--	--	D	✓	--	--	--
	Gulf Power	FL	✓	✓	--	--	--	✓	✓	--	--	✓	C
17	**OGE ENERGY CORP.**												
	Oklahoma Gas & Electric	AR	✓	✓	--	✓	✓	✓	✓	--	✓	✓	P
	Oklahoma Gas & Electric	OK	✓	✓	--	✓	✓	✓	--	✓	✓	✓	--
18	**PPL CORP.**												
	Kentucky Utilities	KY	✓	✓	--	✓	✓	✓	--	--	--	✓	O
	Louisville Gas & Electric	KY	✓	✓	--	✓	✓	✓	--	--	--	✓	O
	PPL Electric Utilities	PA	D	✓	--	--	--	--	D	✓	✓	✓	O
	Kentucky Utilities	VA	✓	--	--	--	--	--	--	--	--	--	--

REGULATORY MECHANISMS

ELECTRIC GROUP OPERATING COS.

	HOLDING COMPANY/ Operating Company		Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Decoupling: Full	Decoupling: Partial	Renew-ables Expense	Environ-mental Compliance	New Capital: Gener-ation Capacity	New Capital: Generic Infra-structure	Trans-mission Expense	Other*	Future Test Year (b)
			Type of Adjustment Clause (a)										
19	**PUB SV ENTERPRISE GRP**												
	Public Service Electric & Gas	NJ	D	✓	--	--	✓	--	D	✓	--	✓	P
20	**SEMPRA ENERGY**												
	San Diego Gas & Electric	CA	✓	--	✓	--	--	--	--	--	--	✓	C
	Oncor Electric Delivery	TX	D	✓	--	--	--	--	D	✓	✓	--	--
21	**SOUTHERN CO.**												
	Alabama Power	AL	✓	--	--	--	✓	✓	✓	--	--	✓	C
	Georgia Power	GA	✓	--	--	--	--	--	✓	--	--	--	C
	Mississippi Power	MS	✓	✓	--	✓	--	✓	--	--	--	✓	O
22	**WEC ENERGY GROUP**												
	Wisconsin Electric Power	MI	✓	✓	--	--	✓	--	--	--	--	--	C
	Wisconsin Electric Power	WI	✓	--	--	--	✓	--	--	--	--	✓	C
	Wisconsin Public Service	WI	✓	--	--	--	--	--	--	--	--	✓	C
23	**XCEL ENERGY, INC.**												
	Public Service Co. of Colorado	CO	✓	✓	--	--	✓	✓	✓	✓	--	✓	--
	Northern States Power-Minnesota	MN	✓	✓	--	✓	✓	✓	--	--	✓	--	C
	Southwestern Public Service	NM	✓	✓	--	--	✓	--	--	--	--	✓	O
	Northern States Power-Minnesota	ND	✓	--	--	--	--	--	--	✓	--	✓	O
	Northern States Power-Minnesota	SD	✓	✓	--	✓	--	✓	✓	✓	--	✓	--
	Southwestern Public Service	TX	✓	✓	--	--	--	--	--	✓	✓	✓	--
	Northern States Power-Wisconsin	WI	✓	--	--	--	--	--	--	--	--	✓	C

Sources:
(a) S&P Global, Market Intelligence, RRA Regulatory Focus, *"Adjustment Clauses-A State-by-State Overview,"* Nov. 12, 2019.
(b) Edison Electric Institute, *"Alternative Regulation for Emerging Utility Challenges: 2015 Update,"* Nov. 11, 2015.

Notes:
D - Delivery-only utility.
C - Fully-forecasted test years commonly used in the state listed for this operating company.
O - Fully-forecasted test years occasionally used in the state listed for this operating company.
P - Partially-forecasted test years commonly or occasionally used in the state listed for this operating company.
* Recover mechanisms for other expenses, such as taxes, franchise fees, bad debts, storm costs, pensions, societal benefits, vegetation management, and decommissioning.

DCF MODEL - ELECTRIC GROUP

DIVIDEND YIELD

	Company	(a) Price	(b) Dividends	Yield
1	Alliant Energy	$ 48.61	$ 1.52	3.1%
2	Ameren Corp.	$ 72.87	$ 2.03	2.8%
3	American Elec Pwr	$ 80.76	$ 2.88	3.6%
4	Avangrid, Inc.	$ 43.29	$ 1.78	4.1%
5	Black Hills Corp.	$ 63.13	$ 2.20	3.5%
6	CMS Energy Corp.	$ 57.93	$ 1.66	2.9%
7	Consolidated Edison	$ 80.63	$ 3.09	3.8%
8	Dominion Energy	$ 75.05	$ 3.76	5.0%
9	DTE Energy Co.	$ 98.60	$ 4.20	4.3%
10	Duke Energy Corp.	$ 82.53	$ 3.83	4.6%
11	Entergy Corp.	$ 94.55	$ 3.76	4.0%
12	Evergy Inc.	$ 57.04	$ 2.08	3.6%
13	Eversource Energy	$ 82.05	$ 2.27	2.8%
14	Exelon Corp.	$ 36.17	$ 1.53	4.2%
15	Fortis Inc.	$ 37.25	$ 1.99	5.3%
16	NextEra Energy, Inc.	$ 230.83	$ 5.65	2.4%
17	OGE Energy Corp.	$ 30.29	$ 1.62	5.3%
18	PPL Corp.	$ 24.47	$ 1.66	6.8%
19	Pub Sv Enterprise Grp.	$ 47.99	$ 1.96	4.1%
20	Sempra Energy	$ 118.39	$ 4.26	3.6%
21	Southern Company	$ 54.90	$ 2.56	4.7%
22	WEC Energy Group	$ 90.42	$ 2.57	2.8%
23	Xcel Energy Inc.	$ 61.56	$ 1.75	2.8%
	Average			**3.9%**

(a) Average of closing prices for 30 trading days ended May 1, 2020.
(b) The Value Line Investment Survey, Summary & Index (May 1, 2020).

GROWTH RATES

		(a)	(b)	(c)	(d)
		Earnings Growth			**br+sv**
	Company	**V Line**	**IBES**	**Zacks**	**Growth**
1	Alliant Energy	6.5%	5.7%	5.5%	4.3%
2	Ameren Corp.	6.0%	6.5%	6.8%	6.2%
3	American Elec Pwr	5.0%	6.0%	5.8%	4.8%
4	Avangrid, Inc.	8.5%	6.3%	5.2%	1.5%
5	Black Hills Corp.	3.5%	5.8%	5.9%	3.8%
6	CMS Energy Corp.	7.5%	7.3%	7.0%	7.0%
7	Consolidated Edison	3.0%	2.4%	2.0%	3.2%
8	Dominion Energy	7.0%	4.9%	4.7%	4.6%
9	DTE Energy Co.	5.0%	6.0%	5.5%	5.1%
10	Duke Energy Corp.	6.0%	4.1%	4.6%	3.0%
11	Entergy Corp.	3.0%	6.0%	6.0%	5.1%
12	Evergy Inc.	n/a	3.9%	5.0%	2.8%
13	Eversource Energy	5.5%	5.7%	6.1%	4.8%
14	Exelon Corp.	8.0%	-2.5%	4.0%	4.6%
15	Fortis Inc.	2.5%	5.0%	5.9%	1.5%
16	NextEra Energy, Inc.	10.0%	7.7%	7.7%	5.2%
17	OGE Energy Corp.	4.5%	1.7%	3.4%	3.3%
18	PPL Corp.	2.5%	0.5%	n/a	5.6%
19	Pub Sv Enterprise Grp.	6.0%	2.4%	3.4%	5.0%
20	Sempra Energy	10.0%	4.2%	6.8%	7.4%
21	Southern Company	4.0%	4.4%	4.0%	4.2%
22	WEC Energy Group	6.0%	6.0%	5.9%	4.1%
23	Xcel Energy Inc.	6.0%	5.4%	5.7%	5.0%

(a) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(b) www.finance.yahoo.com (retreived May 1, 2020).
(c) www.zacks.com (retrieved May 1, 2020).
(d) See Exhibit AMM-5.

COST OF EQUITY ESTIMATES

		(a)	(a)	(a)	(a)
		Earnings Growth			**br+sv**
	Company	**V Line**	**IBES**	**Zacks**	**Growth**
1	Alliant Energy	9.6%	8.8%	8.6%	7.4%
2	Ameren Corp.	8.8%	9.3%	9.5%	9.0%
3	American Elec Pwr	8.6%	9.6%	9.3%	8.3%
4	Avangrid, Inc.	12.6%	10.4%	9.4%	5.6%
5	Black Hills Corp.	7.0%	9.3%	9.4%	7.3%
6	CMS Energy Corp.	10.4%	10.2%	9.8%	9.9%
7	Consolidated Edison	6.8%	6.2%	5.8%	7.0%
8	Dominion Energy	12.0%	9.9%	9.7%	9.6%
9	DTE Energy Co.	9.3%	10.2%	9.8%	9.3%
10	Duke Energy Corp.	10.6%	8.8%	9.3%	7.7%
11	Entergy Corp.	7.0%	10.0%	9.9%	9.1%
12	Evergy Inc.	n/a	7.5%	8.6%	6.5%
13	Eversource Energy	8.3%	8.5%	8.9%	7.6%
14	Exelon Corp.	12.2%	1.8%	8.2%	8.8%
15	Fortis Inc.	7.8%	10.4%	11.3%	6.8%
16	NextEra Energy, Inc.	12.4%	10.2%	10.2%	7.6%
17	OGE Energy Corp.	9.8%	7.0%	8.7%	8.7%
18	PPL Corp.	9.3%	7.3%	n/a	12.3%
19	Pub Sv Enterprise Grp.	10.1%	6.4%	7.5%	9.1%
20	Sempra Energy	13.6%	7.8%	10.4%	11.0%
21	Southern Company	8.7%	9.0%	8.7%	8.9%
22	WEC Energy Group	8.8%	8.8%	8.8%	7.0%
23	Xcel Energy Inc.	8.8%	8.2%	8.6%	7.8%
	Average (b)	**9.7%**	**9.1%**	**9.2%**	**8.6%**
	Midpoint (b) (c)	**10.2%**	**8.7%**	**9.4%**	**9.6%**

(a) Sum of dividend yield (Exhibit AMM-4, p. 1) and respective growth rate (Exhibit AMM-4, p. 2).
(b) Excludes highlighted figures.
(c) Average of low and high values.

LOW-END THRESHOLD ADJUSTMENT

Atlantic Path 15 / Startrans / So. Cal Edison		*Pioneer Transmission*	
Jun-07	6.54%	Apr-08	6.81%
Jul-07	6.49%	May-08	6.79%
Aug-07	6.51%	Jun-08	6.93%
Sep-07	6.45%	Jul-08	6.97%
Oct-07	6.36%	Aug-08	6.98%
Nov-07	6.27%	Sep-08	7.15%

	Current		**Projected**	
Historical Baa Bond Yield	6.69%	(a)	6.69%	(a)
Baa Bond Yield	3.79%	(b)	5.09%	(c)
Change in Bond Yield	-2.90%		-1.60%	
Risk Premium/Interest Rate Relationship	-0.43239	(d)	-0.43239	(d)
Adjustment to Low-end Threshold	1.25%		0.69%	
Baa Bond Yield	3.79%	(b)	5.09%	(c)
Original Threshold	1.00%		1.00%	
Adjustment	1.25%		0.69%	
Adjusted Low-end Threshold	**6.04%**		**6.78%**	

(a) Average Baa utility bond yield for 6-mo. periods ending Nov. 2007 and Sep. 2008.
(b) Average Baa utility bond yield for 6-months ended Mar. 2020.
(c) Average Baa utility bond yield for 2021-25 based on data from IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020), Energy Information Administration, Annual Energy Outlook 2020 (Jan. 29, 2020), and Moody's Investors Service at www.credittrends.com.
(d) Exhibit AMM-8, page 4.

BR+SV GROWTH RATE

ELECTRIC GROUP

		(a)	(a)	(a)			(b)	(c)		(d)	(e)		
		2024					Adjustment			"sv" Factor			
	Company	**EPS**	**DPS**	**BVPS**	**b**	**r**	**Factor**	**Adjusted r**	**br**	**s**	**v**	**sv**	**br + sv**
1	Alliant Energy	$3.00	$2.00	$28.80	33.3%	10.4%	1.0172	10.6%	3.5%	0.0197	0.3937	0.78%	4.3%
2	Ameren Corp.	$4.50	$2.45	$44.00	45.6%	10.2%	1.0402	10.6%	4.8%	0.0356	0.3714	1.32%	6.2%
3	American Elec Pwr	$5.25	$3.55	$50.00	32.4%	10.5%	1.0294	10.8%	3.5%	0.0268	0.4737	1.27%	4.8%
4	Avangrid, Inc.	$3.00	$2.20	$53.75	26.7%	5.6%	1.0090	5.6%	1.5%	-	(0.0238)	0.00%	1.5%
5	Black Hills Corp.	$4.25	$2.75	$47.00	35.3%	9.0%	1.0246	9.3%	3.3%	0.0133	0.3935	0.52%	3.8%
6	CMS Energy Corp.	$3.50	$2.15	$25.50	38.6%	13.7%	1.0421	14.3%	5.5%	0.0262	0.5750	1.50%	7.0%
7	Consolidated Edison	$5.25	$3.50	$62.50	33.3%	8.4%	1.0183	8.6%	2.9%	0.0096	0.3243	0.31%	3.2%
8	Dominion Energy	$5.50	$4.15	$41.00	24.5%	13.4%	1.0226	13.7%	3.4%	0.0220	0.5568	1.23%	4.6%
9	DTE Energy Co.	$8.25	$5.20	$78.00	37.0%	10.6%	1.0313	10.9%	4.0%	0.0242	0.4222	1.02%	5.1%
10	Duke Energy Corp.	$6.00	$4.10	$71.75	31.7%	8.4%	1.0209	8.5%	2.7%	0.0144	0.2243	0.32%	3.0%
11	Entergy Corp.	$7.00	$4.55	$63.00	35.0%	11.1%	1.0268	11.4%	4.0%	0.0240	0.4750	1.14%	5.1%
12	Evergy Inc.	$3.75	$2.55	$43.25	32.0%	8.7%	1.0129	8.8%	2.8%	0.0005	0.3346	0.02%	2.8%
13	Eversource Energy	$4.50	$2.85	$48.50	36.7%	9.3%	1.0338	9.6%	3.5%	0.0314	0.4121	1.29%	4.8%
14	Exelon Corp.	$3.75	$1.90	$42.25	49.3%	8.9%	1.0260	9.1%	4.5%	0.0051	0.1952	0.10%	4.6%
15	Fortis Inc.	$3.00	$2.50	$43.75	16.7%	6.9%	1.0209	7.0%	1.2%	0.0093	0.3269	0.30%	1.5%
16	NextEra Energy, Inc.	$12.50	$8.00	$97.50	36.0%	12.8%	1.0271	13.2%	4.7%	0.0067	0.6355	0.43%	5.2%
17	OGE Energy Corp.	$2.75	$1.95	$24.25	29.1%	11.3%	1.0168	11.5%	3.4%	(0.0002)	0.4895	-0.01%	3.3%
18	PPL Corp.	$3.00	$1.80	$23.00	40.0%	13.0%	1.0294	13.4%	5.4%	0.0045	0.4250	0.19%	5.6%
19	Pub Sv Enterprise Grp.	$4.25	$2.40	$38.00	43.5%	11.2%	1.0252	11.5%	5.0%	-	0.3920	0.00%	5.0%
20	Sempra Energy	$9.50	$5.60	$88.25	41.1%	10.8%	1.0529	11.3%	4.7%	0.0582	0.4652	2.71%	7.4%
21	Southern Company	$4.00	$2.86	$31.50	28.5%	12.7%	1.0217	13.0%	3.7%	0.0108	0.4750	0.51%	4.2%
22	WEC Energy Group	$4.75	$3.20	$38.25	32.6%	12.4%	1.0170	12.6%	4.1%	0.0001	0.5750	0.01%	4.1%
23	Xcel Energy Inc.	$3.50	$2.15	$32.75	38.6%	10.7%	1.0306	11.0%	4.2%	0.0161	0.4542	0.73%	5.0%

BR+SV GROWTH RATE

ELECTRIC GROUP

		(a)	(a)	(f)	(a)	(a)	(f)	(g)	(a)	(a)		(h)	(a)	(a)	(g)
		2019			2024			Chg	2024				Common Shares		
	Company	Eq Ratio	Tot Cap	Com Eq	Eq Ratio	Tot Cap	Com Eq	Equity	High	Low	Avg.	M/B	2019	2024	Growth
1	Alliant Energy	48.5%	$10,000	$4,850	48.0%	$12,000	$5,760	3.5%	$55.0	$40.0	$47.5	1.649	245.02	260.00	1.19%
2	Ameren Corp.	47.1%	$17,116	$8,062	51.5%	$23,400	$12,051	8.4%	$80.0	$60.0	$70.0	1.591	246.20	275.00	2.24%
3	American Elec Pwr	43.9%	$44,759	$19,649	46.5%	$56,700	$26,366	6.1%	$105.0	$85.0	$95.0	1.900	494.17	530.00	1.41%
4	Avangrid, Inc.	71.5%	$21,325	$15,247	60.0%	$27,800	$16,680	1.8%	$60.0	$45.0	$52.5	0.977	309.00	309.00	0.00%
5	Black Hills Corp.	42.9%	$5,502	$2,360	48.5%	$6,225	$3,019	5.0%	$90.0	$65.0	$77.5	1.649	61.48	64.00	0.81%
6	CMS Energy Corp.	29.4%	$17,082	$5,022	33.0%	$23,200	$7,656	8.8%	$70.0	$50.0	$60.0	2.353	283.86	300.00	1.11%
7	Consolidated Edison	48.5%	$37,050	$17,969	49.5%	$43,600	$21,582	3.7%	$100.0	$85.0	$92.5	1.480	334.00	345.00	0.65%
8	Dominion Energy	40.0%	$70,775	$28,310	40.5%	$87,600	$35,478	4.6%	$105.0	$80.0	$92.5	2.256	824.00	865.00	0.98%
9	DTE Energy Co.	42.3%	$27,607	$11,678	41.5%	$38,500	$15,978	6.5%	$155.0	$115.0	$135.0	1.731	192.21	206.00	1.40%
10	Duke Energy Corp.	44.5%	$101,375	$45,112	44.5%	$125,000	$55,625	4.3%	$105.0	$80.0	$92.5	1.289	733.00	775.00	1.12%
11	Entergy Corp.	37.1%	$27,557	$10,224	41.0%	$32,600	$13,366	5.5%	$140.0	$100.0	$120.0	1.905	199.15	212.00	1.26%
12	Evergy Inc.	49.4%	$17,337	$8,564	48.0%	$20,300	$9,744	2.6%	$75.0	$55.0	$65.0	1.503	226.64	227.00	0.03%
13	Eversource Energy	46.5%	$26,375	$12,264	46.0%	$37,400	$17,204	7.0%	$90.0	$75.0	$82.5	1.701	324.00	355.00	1.84%
14	Exelon Corp.	50.0%	$64,750	$32,375	51.0%	$82,300	$41,973	5.3%	$60.0	$45.0	$52.5	1.243	972.00	992.00	0.41%
15	Fortis Inc.	41.8%	$40,445	$16,906	44.5%	$46,800	$20,826	4.3%	$75.0	$55.0	$65.0	1.486	463.30	478.00	0.63%
16	NextEra Energy, Inc.	49.5%	$74,550	$36,902	50.0%	$96,800	$48,400	5.6%	$295.0	$240.0	$267.5	2.744	489.00	495.00	0.24%
17	OGE Energy Corp.	56.4%	$7,335	$4,137	54.5%	$8,975	$4,891	3.4%	$55.0	$40.0	$47.5	1.959	200.10	200.00	-0.01%
18	PPL Corp.	41.0%	$32,750	$13,428	45.5%	$39,600	$18,018	6.1%	$45.0	$35.0	$40.0	1.739	770.00	780.00	0.26%
19	Pub Sv Enterprise Grp.	51.5%	$29,050	$14,961	49.0%	$39,300	$19,257	5.2%	$70.0	$55.0	$62.5	1.645	506.00	506.00	0.00%
20	Sempra Energy	43.4%	$40,734	$17,679	51.5%	$58,300	$30,025	11.2%	$190.0	$140.0	$165.0	1.870	291.71	340.00	3.11%
21	Southern Company	39.0%	$70,300	$27,417	41.5%	$82,100	$34,072	4.4%	$70.0	$50.0	$60.0	1.905	1050.00	1080.00	0.57%
22	WEC Energy Group	47.4%	$21,355	$10,122	48.0%	$25,000	$12,000	3.5%	$100.0	$80.0	$90.0	2.353	315.43	315.50	0.00%
23	Xcel Energy Inc.	43.2%	$30,646	$13,239	43.0%	$41,800	$17,974	6.3%	$65.0	$55.0	$60.0	1.832	524.54	548.00	0.88%

(a) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) Product of average year-end "r" for 2024 and Adjustment Factor.
(d) Product of change in common shares outstanding and M/B Ratio.
(e) Computed as 1 - B/M Ratio.
(f) Product of total capital and equity ratio.
(g) Five-year rate of change in common equity.
(h) Average of High and Low expected market prices divided by 2024 BVPS.

CAPM - CURRENT BOND YIELD

ELECTRIC GROUP

		(a)	(b)		(c)		(d)		(d)	(e)	
		Market Return (R_m)									
	Company	Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium	Beta	Unadjusted K_e	Market Cap	Size Adjustment	CAPM Result
1	Alliant Energy	3.1%	9.3%	12.5%	1.9%	10.6%	0.55	7.7%	$13,400	0.50%	8.2%
2	Ameren Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$20,000	0.50%	7.7%
3	American Elec Pwr	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$47,000	-0.28%	6.9%
4	Avangrid, Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	0.40	6.1%	$16,000	0.50%	6.6%
5	Black Hills Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.65	8.8%	$4,200	1.10%	9.9%
6	CMS Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$18,000	0.50%	7.7%
7	Consolidated Edison	3.1%	9.3%	12.5%	1.9%	10.6%	0.40	6.1%	$31,000	0.50%	6.6%
8	Dominion Energy	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$70,000	-0.28%	6.9%
9	DTE Energy Co.	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$22,000	0.50%	7.7%
10	Duke Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.45	6.7%	$70,000	-0.28%	6.4%
11	Entergy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.60	8.2%	$24,000	0.50%	8.7%
12	Evergy Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	n/a	n/a	$16,000	0.50%	n/a
13	Eversource Energy	3.1%	9.3%	12.5%	1.9%	10.6%	0.55	7.7%	$29,000	0.50%	8.2%
14	Exelon Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.65	8.8%	$47,000	-0.28%	8.5%
15	Fortis Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	0.60	8.2%	$26,000	0.50%	8.7%
16	NextEra Energy, Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$129,000	-0.28%	6.9%
17	OGE Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.70	9.3%	$7,700	0.73%	10.0%
18	PPL Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.65	8.8%	$26,000	0.50%	9.3%
19	Pub Sv Enterprise Grp.	3.1%	9.3%	12.5%	1.9%	10.6%	0.60	8.2%	$30,000	0.50%	8.7%
20	Sempra Energy	3.1%	9.3%	12.5%	1.9%	10.6%	0.65	8.8%	$37,000	-0.28%	8.5%
21	Southern Company	3.1%	9.3%	12.5%	1.9%	10.6%	0.50	7.2%	$73,000	-0.28%	6.9%
22	WEC Energy Group	3.1%	9.3%	12.5%	1.9%	10.6%	0.45	6.7%	$31,000	0.50%	7.2%
23	Xcel Energy Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	0.45	6.7%	$33,000	-0.28%	6.4%
	Average (f)										**8.0%**
	Midpoint (f) (g)										**8.3%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Mar. 27, 2020).
(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from http://finance.yahoo.com (retrieved Mar. 27, 2020), www.valueline.com (retrieved Mar. 27, 2020), and www.zacks.com (retrieved Mar. 27, 2020).
(c) Average yield on 30-year Treasury bonds for the six-months ending Apr. 2020 based on data from http://www.fred.stlouisfed.org.
(d) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(e) Duff & Phelps, 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
(f) Excludes highlighted figures.
(g) Average of low and high values.

CAPM - PROJECTED BOND YIELD

ELECTRIC GROUP

		(a)	(b)		(c)		(d)		(d)	(e)	
		Market Return (R_m)									
		Div	Proj.	Cost of	Risk-Free	Risk		Unadjusted	Market	Size	CAPM
	Company	Yield	Growth	Equity	Rate	Premium	Beta	K_e	Cap	Adjustment	Result
1	Alliant Energy	3.1%	9.3%	12.5%	3.2%	9.3%	0.55	8.3%	$13,400	0.50%	8.8%
2	Ameren Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$20,000	0.50%	8.3%
3	American Elec Pwr	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$47,000	-0.28%	7.6%
4	Avangrid, Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	0.40	6.9%	$16,000	0.50%	7.4%
5	Black Hills Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.65	9.2%	$4,200	1.10%	10.3%
6	CMS Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$18,000	0.50%	8.3%
7	Consolidated Edison	3.1%	9.3%	12.5%	3.2%	9.3%	0.40	6.9%	$31,000	0.50%	7.4%
8	Dominion Energy	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$70,000	-0.28%	7.6%
9	DTE Energy Co.	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$22,000	0.50%	8.3%
10	Duke Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.45	7.4%	$70,000	-0.28%	7.1%
11	Entergy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.60	8.8%	$24,000	0.50%	9.3%
12	Evergy Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	n/a	n/a	$16,000	0.50%	n/a
13	Eversource Energy	3.1%	9.3%	12.5%	3.2%	9.3%	0.55	8.3%	$29,000	0.50%	8.8%
14	Exelon Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.65	9.2%	$47,000	-0.28%	8.9%
15	Fortis Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	0.60	8.8%	$26,000	0.50%	9.3%
16	NextEra Energy, Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$129,000	-0.28%	7.6%
17	OGE Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.70	9.7%	$7,700	0.73%	10.4%
18	PPL Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.65	9.2%	$26,000	0.50%	9.7%
19	Pub Sv Enterprise Grp.	3.1%	9.3%	12.5%	3.2%	9.3%	0.60	8.8%	$30,000	0.50%	9.3%
20	Sempra Energy	3.1%	9.3%	12.5%	3.2%	9.3%	0.65	9.2%	$37,000	-0.28%	8.9%
21	Southern Company	3.1%	9.3%	12.5%	3.2%	9.3%	0.50	7.8%	$73,000	-0.28%	7.6%
22	WEC Energy Group	3.1%	9.3%	12.5%	3.2%	9.3%	0.45	7.4%	$31,000	0.50%	7.9%
23	Xcel Energy Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	0.45	7.4%	$33,000	-0.28%	7.1%
	Average (f)										**8.4%**
	Midpoint (f) (g)										**8.8%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Mar. 27, 2020).
(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from http://finance.yahoo.com (retrieved Mar. 27, 2020), www.valueline.com (retrieved Mar. 27, 2020), and www.zacks.com (retrieved Mar. 27, 2020).
(c) Average yield on 30-year Treasury bonds for 2021-25 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020); IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020); & Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2019).
(d) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(e) Duff & Phelps, 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
(f) Excludes highlighted figures.
(g) Average of low and high values.

EMPIRICAL CAPM - CURRENT BOND YIELD

ELECTRIC GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(e)	(f)	
		Market Return (R_m)					Unadjusted RP		Beta Adjusted RP							
	Company	Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium	Weight	RP^1	Beta	Weight	RP^2	Total RP	Unadjusted K_e	Market Cap	Size Adjustment	ECAPM Result
1	Alliant Energy	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.55	75%	4.4%	7.0%	8.9%	$13,400	0.50%	9.4%
2	Ameren Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$20,000	0.50%	9.0%
3	American Elec Pwr	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$47,000	-0.28%	8.2%
4	Avangrid, Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.40	75%	3.2%	5.8%	7.7%	$16,000	0.50%	8.2%
5	Black Hills Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.65	75%	5.2%	7.8%	9.7%	$4,200	1.10%	10.8%
6	CMS Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$18,000	0.50%	9.0%
7	Consolidated Edison	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.40	75%	3.2%	5.8%	7.7%	$31,000	0.50%	8.2%
8	Dominion Energy	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$70,000	-0.28%	8.2%
9	DTE Energy Co.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$22,000	0.50%	9.0%
10	Duke Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.45	75%	3.6%	6.2%	8.1%	$70,000	-0.28%	7.8%
11	Entergy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.60	75%	4.8%	7.4%	9.3%	$24,000	0.50%	9.8%
12	Evergy Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	n/a	75%	n/a	n/a	n/a	$16,000	0.50%	n/a
13	Eversource Energy	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.55	75%	4.4%	7.0%	8.9%	$29,000	0.50%	9.4%
14	Exelon Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.65	75%	5.2%	7.8%	9.7%	$47,000	-0.28%	9.4%
15	Fortis Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.60	75%	4.8%	7.4%	9.3%	$26,000	0.50%	9.8%
16	NextEra Energy, Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$129,000	-0.28%	8.2%
17	OGE Energy Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.70	75%	5.5%	8.2%	10.1%	$7,700	0.73%	10.8%
18	PPL Corp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.65	75%	5.2%	7.8%	9.7%	$26,000	0.50%	10.2%
19	Pub Sv Enterprise Grp.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.60	75%	4.8%	7.4%	9.3%	$30,000	0.50%	9.8%
20	Sempra Energy	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.65	75%	5.2%	7.8%	9.7%	$37,000	-0.28%	9.4%
21	Southern Company	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.50	75%	4.0%	6.6%	8.5%	$73,000	-0.28%	8.2%
22	WEC Energy Group	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.45	75%	3.6%	6.2%	8.1%	$31,000	0.50%	8.6%
23	Xcel Energy Inc.	3.1%	9.3%	12.5%	1.9%	10.6%	25%	2.6%	0.45	75%	3.6%	6.2%	8.1%	$33,000	-0.28%	7.8%
	Average (f)															**9.1%**
	Midpoint (f) (g)															**9.3%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Mar. 27, 2020).
(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from http://finance.yahoo.com (retrieved Mar. 27, 2020), www.valueline.com (retrieved Mar. 27, 2020), and www.zacks.com (retrieved Mar. 27, 2020).
(c) Average yield on 30-year Treasury bonds for the six-months ending Apr. 2020 based on data from http://www.fred.stlouisfed.org.
(d) Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 190.
(e) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(f) Duff & Phelps, 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
(f) Excludes highlighted figures.
(g) Average of low and high values.

EMPIRICAL CAPM - PROJECTED BOND YIELD

ELECTRIC GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(e)	(f)	
		Market Return (R_m)														
		Div	Proj.	Cost of	Risk-Free	Risk	Unadjusted RP		Beta Adjusted RP				Unadjusted	Market	Size	ECAPM
	Company	Yield	Growth	Equity	Rate	Premium	Weight	*RP*[1]	Beta	Weight	*RP*[2]	Total RP	K_e	Cap	Adjustment	Result
1	Alliant Energy	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.55	75%	3.8%	6.1%	9.3%	$13,400	0.50%	9.8%
2	Ameren Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$20,000	0.50%	9.5%
3	American Elec Pwr	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$47,000	-0.28%	8.7%
4	Avangrid, Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.40	75%	2.8%	5.1%	8.3%	$16,000	0.50%	8.8%
5	Black Hills Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.65	75%	4.5%	6.8%	10.0%	$4,200	1.10%	11.1%
6	CMS Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$18,000	0.50%	9.5%
7	Consolidated Edison	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.40	75%	2.8%	5.1%	8.3%	$31,000	0.50%	8.8%
8	Dominion Energy	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$70,000	-0.28%	8.7%
9	DTE Energy Co.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$22,000	0.50%	9.5%
10	Duke Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.45	75%	3.1%	5.4%	8.6%	$70,000	-0.28%	8.4%
11	Entergy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.60	75%	4.2%	6.5%	9.7%	$24,000	0.50%	10.2%
12	Evergy Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	n/a	75%	n/a	n/a	n/a	$16,000	0.50%	n/a
13	Eversource Energy	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.55	75%	3.8%	6.1%	9.3%	$29,000	0.50%	9.8%
14	Exelon Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.65	75%	4.5%	6.8%	10.0%	$47,000	-0.28%	9.8%
15	Fortis Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.60	75%	4.2%	6.5%	9.7%	$26,000	0.50%	10.2%
16	NextEra Energy, Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$129,000	-0.28%	8.7%
17	OGE Energy Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.70	75%	4.9%	7.2%	10.4%	$7,700	0.73%	11.1%
18	PPL Corp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.65	75%	4.5%	6.8%	10.0%	$26,000	0.50%	10.5%
19	Pub Sv Enterprise Grp.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.60	75%	4.2%	6.5%	9.7%	$30,000	0.50%	10.2%
20	Sempra Energy	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.65	75%	4.5%	6.8%	10.0%	$37,000	-0.28%	9.8%
21	Southern Company	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.50	75%	3.5%	5.8%	9.0%	$73,000	-0.28%	8.7%
22	WEC Energy Group	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.45	75%	3.1%	5.4%	8.6%	$31,000	0.50%	9.1%
23	Xcel Energy Inc.	3.1%	9.3%	12.5%	3.2%	9.3%	25%	2.3%	0.45	75%	3.1%	5.4%	8.6%	$33,000	-0.28%	8.4%
	Average (f)															**9.5%**
	Midpoint (f) (g)															**9.8%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Mar. 27, 2020).
(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from http://finance.yahoo.com (retrieved Mar. 27, 2020), www.valueline.com (retrieved Mar. 27, 2020), and www.zacks.com (retrieved Mar. 27, 2020).
(c) Average yield on 30-year Treasury bonds for 2021-25 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020); IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020); & Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2019).
(d) Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 190.
(e) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(f) Duff & Phelps, 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
(f) Excludes highlighted figures.
(g) Average of low and high values.

ELECTRIC UTILITY RISK PREMIUM

CURRENT BOND YIELD

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	8.10%
(b) Average Utility Bond Yield	3.43%
Change in Bond Yield	-4.67%
(c) Risk Premium/Interest Rate Relationship	-0.4324
Adjustment to Average Risk Premium	2.02%
(a) Average Risk Premium over Study Period	3.79%
Adjusted Risk Premium	**5.81%**

Implied Cost of Equity	
(b) Baa Utility Bond Yield	3.79%
Adjusted Equity Risk Premium	5.81%
Risk Premium Cost of Equity	**9.60%**

(a) Exhibit AMM-8, page 3.
(b) Average bond yield on all utility bonds and 'Baa' subset for the six-months ending Apr. 2020 based on data from Moody's Investors Service at www.credittrends.com.
(c) Exhibit AMM-8, page 4.

PROJECTED BOND YIELD

Current Equity Risk Premium		
(a)	Avg. Yield over Study Period	8.10%
(b)	Average Utility Bond Yield 2021-25	4.45%
	Change in Bond Yield	-3.65%
(c)	Risk Premium/Interest Rate Relationship	-0.4324
	Adjustment to Average Risk Premium	1.58%
(a)	Average Risk Premium over Study Period	3.79%
	Adjusted Risk Premium	**5.37%**

Implied Cost of Equity		
(b)	Baa Utility Bond Yield 2021-25	5.09%
	Adjusted Equity Risk Premium	5.37%
	Risk Premium Cost of Equity	**10.46%**

(a) Exhibit AMM-8, page 3.
(b) Yields on all utility bonds and 'A' subset based on data from IHS Markit, Long-Term Macro Forecast - Baseline (Apr. 8, 2020); Energy Information Administration, Annual Energy Outlook 2020 (Jan. 29, 2020); & Moody's Investors Service at www.credittrends.com.
(c) Exhibit AMM-8, page 4.

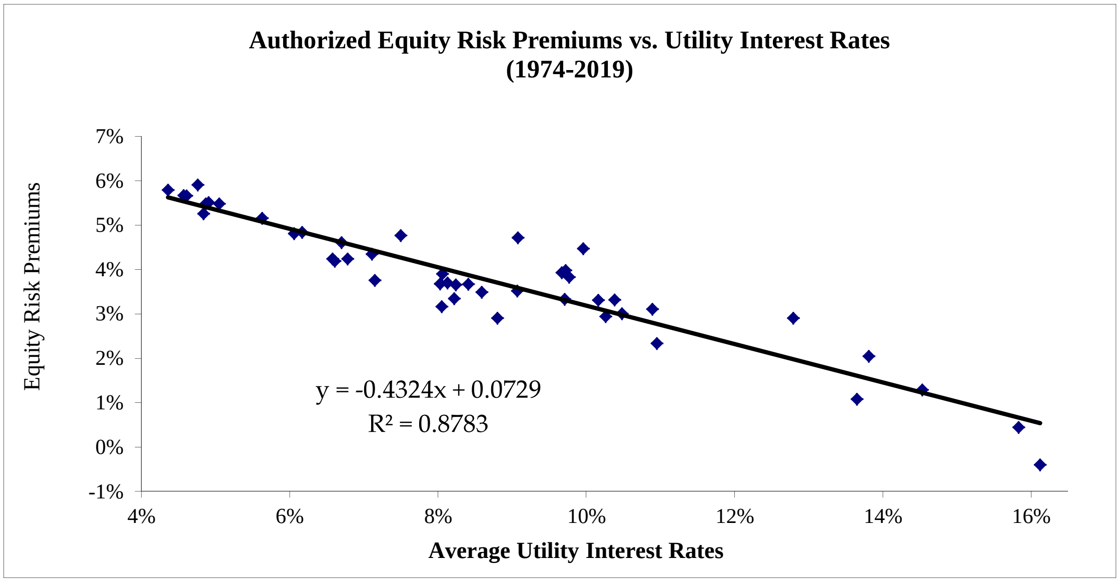
AUTHORIZED RETURNS

Year	(a) Allowed ROE	(b) Average Utility Bond Yield	Risk Premium
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.54%	9.21%	3.33%
1992	12.09%	8.57%	3.52%
1993	11.46%	7.56%	3.90%
1994	11.21%	8.30%	2.91%
1995	11.58%	7.91%	3.67%
1996	11.40%	7.74%	3.66%
1997	11.33%	7.63%	3.70%
1998	11.77%	7.00%	4.77%
1999	10.72%	7.55%	3.17%
2000	11.58%	8.09%	3.49%
2001	11.07%	7.72%	3.35%
2002	11.21%	7.53%	3.68%
2003	10.96%	6.61%	4.35%
2004	10.81%	6.20%	4.61%
2005	10.51%	5.67%	4.84%
2006	10.32%	6.08%	4.24%
2007	10.30%	6.11%	4.19%
2008	10.41%	6.65%	3.76%
2009	10.52%	6.28%	4.24%
2010	10.37%	5.56%	4.81%
2011	10.29%	5.13%	5.16%
2012	10.17%	4.26%	5.91%
2013	10.03%	4.55%	5.48%
2014	9.92%	4.41%	5.51%
2015	9.85%	4.37%	5.48%
2016	9.77%	4.11%	5.66%
2017	9.74%	4.07%	5.67%
2018	9.60%	4.34%	5.26%
2019	9.65%	3.86%	5.79%
Average	11.89%	8.10%	3.79%

(a) Major Rate Case Decisions, *Regulatory Focus* , Regulatory Research Associates; *UtilityScope Regulatory Service* , Argus.
(b) Moody's Investors Service.

ELECTRIC UTILITY RISK PREMIUM

REGRESSION RESULTS



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.937198678
R Square	0.878341361
Adjusted R Square	0.875576392
Standard Error	0.004891037
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.007599325	0.007599325	317.6677002	9.50082E-22
Residual	44	0.001052579	2.39222E-05		
Total	45	0.008651904			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.07294932	0.002093294	34.84905373	1.10828E-33	0.068730563	0.077168077	0.068730563	0.077168077
X Variable 1	-0.43238923	0.024259862	-17.82323484	9.50082E-22	-0.481281766	-0.38349669	-0.481281766	-0.383496686

EXPECTED EARNINGS APPROACH

UTILITY GROUP

	Company	(a) Expected Return on Common Equity	(b) Adjustment Factor	(c) Adjusted Return on Common Equity
1	Alliant Energy	10.5%	1.0172	10.7%
2	Ameren Corp.	10.0%	1.0402	10.4%
3	American Elec Pwr	10.5%	1.0294	10.8%
4	Avangrid, Inc.	6.0%	1.0090	6.1%
5	Black Hills Corp.	9.0%	1.0246	9.2%
6	CMS Energy Corp.	13.5%	1.0421	14.1%
7	Consolidated Edison	8.5%	1.0183	8.7%
8	Dominion Energy	13.5%	1.0226	13.8%
9	DTE Energy Co.	10.5%	1.0313	10.8%
10	Duke Energy Corp.	8.5%	1.0209	8.7%
11	Entergy Corp.	11.0%	1.0268	11.3%
12	Evergy Inc.	8.5%	1.0129	8.6%
13	Eversource Energy	9.5%	1.0338	9.8%
14	Exelon Corp.	9.0%	1.0260	9.2%
15	Fortis Inc.	7.0%	1.0209	7.1%
16	NextEra Energy, Inc.	13.0%	1.0271	13.4%
17	OGE Energy Corp.	11.0%	1.0168	11.2%
18	PPL Corp.	13.5%	1.0294	13.9%
19	Pub Sv Enterprise Grp.	11.0%	1.0252	11.3%
20	Sempra Energy	11.0%	1.0529	11.6%
21	Southern Company	13.0%	1.0217	13.3%
22	WEC Energy Group	12.5%	1.0170	12.7%
23	Xcel Energy Inc.	11.0%	1.0306	11.3%
	Average (d)	**10.7%**		**11.0%**
	Midpoint (d, e)	**10.3%**		**10.6%**

(a) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).
(b) Adjustment to convert year-end return to an average rate of return from Exhibit AMM-5.
(c) (a) x (b).
(d) Excludes highlighted figures.
(e) Average of low and high values.

FLOTATION COST STUDY

VALUE LINE ELECTRIC INDUSTRY

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
No.	**Sym**	**Company**	**Date**	**Shares Issued**	**Offering Price**	**Underwriting Discount (per share)**	**Underwriting Discount**	**Offering Expense**	**Total Flotation Costs**	**Gross Proceeds Before Flot. Costs**	**Flotation Cost (%)**
1	ALE	ALLETE	2/27/2014	3,220,000	$49.75	$1.74125	$5,606,825	$450,000	$6,056,825	$160,195,000	3.781%
2	LNT	Alliant Energy	11/14/2019	3,717,502	$52.63	$0.39500	$1,468,413	$500,000	$1,968,413	$195,652,130	1.006%
3	AEE	Ameren Corp.	8/5/2019	7,549,205	$74.30	$0.12000	$905,905	$750,000	$1,655,905	$560,905,932	0.295%
4	AEP	American Elec Pwr	4/2/2009	69,000,000	$24.50	$0.73500	$50,715,000	$400,000	$51,115,000	$1,690,500,000	3.024%
5	AGR	Avangrid, Inc.					N/A				
6	AVA	Avista Corp.	12/13/2006	3,162,500	$25.05	$0.48000	$1,518,000	$300,000	$1,818,000	$79,220,625	2.295%
7	BKH	Black Hills Corp.	11/19/2015	6,325,000	$40.25	$1.40875	$8,910,344	$1,200,000	$10,110,344	$254,581,250	3.971%
8	CNP	CenterPoint Energy	9/27/2018	60,550,459	$27.25	$0.75000	$45,412,844	$1,000,000	$46,412,844	$1,650,000,008	2.813%
9	CMS	CMS Energy Corp.	3/31/2005	23,000,000	$12.25	$0.42880	$9,862,400	$325,000	$10,187,400	$281,750,000	3.616%
10	ED	Consolidated Edison (a)	5/7/2019	5,800,000	$84.83	$0.59000	$3,422,000	$400,000	$3,822,000	$492,014,000	0.777%
11	D	Dominion Energy (a)	3/29/2018	20,000,000	$67.33	$1.89420	$37,884,000	$450,000	$38,334,000	$1,346,516,000	2.847%
12	DTE	DTE Energy Co.	10/29/2019	2,400,000	$126.00	$3.15000	$7,560,000	$300,000	$7,860,000	$302,400,000	2.599%
13	DUK	Duke Energy Corp. (a)	11/18/2019	25,000,000	$85.99	$2.66000	$66,500,000	$592,000	$67,092,000	$2,149,750,000	3.121%
14	EIX	Edison International	7/30/2019	28,000,000	$68.50	$1.62688	$45,552,500	$725,000	$46,277,500	$1,918,000,000	2.413%
15	EE	El Paso Electric Co.					N/A				
16	ETR	Entergy Corp.	6/8/2018	13,289,037	$75.25	$0.80000	$10,631,230	$650,000	$11,281,230	$1,000,000,034	1.128%
17	EVRG	Evergy Inc.					N/A				
18	ES	Eversource Energy	5/30/2019	15,600,000	$71.48	$1.69000	$26,364,000	$615,000	$26,979,000	$1,115,088,000	2.419%
19	EXC	Exelon Corp.	6/13/2014	57,500,000	$35.00	$1.05000	$60,375,000	$600,000	$60,975,000	$2,012,500,000	3.030%
20	FE	FirstEnergy Corp.	9/15/2003	32,200,000	$30.00	$0.97500	$31,395,000	$423,000	$31,818,000	$966,000,000	3.294%
21	FTS	Fortis Inc.					N/A				
22	HE	Hawaiian Elec.	3/20/2013	7,000,000	$26.75	$1.00312	$7,021,840	$450,000	$7,471,840	$187,250,000	3.990%
23	IDA	IDACORP, Inc.	12/10/2004	4,025,000	$30.00	$1.20000	$4,830,000	$300,000	$5,130,000	$120,750,000	4.248%
24	MGEE	MGE Energy	9/10/2004	1,265,000	$31.85	$1.03500	$1,309,275	$125,000	$1,434,275	$40,290,250	3.560%
25	NEE	NextEra Energy, Inc. (a)	11/3/2016	13,800,000	$124.00	$1.89000	$26,082,000	$750,000	$26,832,000	$1,711,200,000	1.568%
26	NWE	NorthWestern Corp. (a)	9/30/2015	1,100,000	$51.81	$1.33000	$1,463,000	$1,000,000	$2,463,000	$56,991,000	4.322%
27	OGE	OGE Energy Corp.	8/22/2003	5,324,074	$21.60	$0.79000	$4,206,018	$325,000	$4,531,018	$114,999,998	3.940%
28	OTTR	Otter Tail Corp.					N/A				
29	PNW	Pinnacle West Capital	4/9/2010	6,900,000	$38.00	$1.33000	$9,177,000	$190,000	$9,367,000	$262,200,000	3.572%
30	PNM	PNM Resources	1/7/2020	5,375,000	$47.21	$1.99000	$10,696,250	$750,000	$11,446,250	$253,753,750	4.511%
31	POR	Portland General Elec.	6/13/2013	12,765,000	$29.50	$0.95875	$12,238,444	$600,000	$12,838,444	$376,567,500	3.409%
32	PPL	PPL Corp.	5/10/2018	55,000,000	$27.00	$0.29430	$16,186,500	$1,000,000	$17,186,500	$1,485,000,000	1.157%
33	PEG	Pub Sv Enterprise Grp.	10/2/2003	9,487,500	$41.75	$1.25250	$11,883,094	$350,000	$12,233,094	$396,103,125	3.088%
34	SRE	Sempra Energy	1/5/2018	26,869,158	$107.00	$1.92600	$51,749,998	$1,500,000	$53,249,998	$2,874,999,906	1.852%
35	SO	Southern Company (a)	8/18/2016	32,500,000	$49.30	$1.66000	$53,950,000	$557,000	$54,507,000	$1,602,250,000	3.402%
36	WEC	WEC Energy Group					N/A				
37	XEL	Xcel Energy Inc. (a)	10/30/2019	10,300,000	$62.69	$0.63000	$6,489,000	$650,000	$7,139,000	$645,707,000	1.106%
		Average									**2.779%**
1	ATO	Atmos Energy Corp.	11/30/2018	7,008,087	$92.75	$0.97690	$6,846,200	$1,000,000	$7,846,200	$650,000,069	1.207%
2	CPK	Chesapeake Utilities	9/23/2016	960,488	$62.26	$2.33000	$2,237,937	$162,046	$2,399,983	$59,799,983	4.013%
3	NJR	New Jersey Resources	12/4/2019	5,700,000	$41.25	$1.23750	$7,053,750	$500,000	$7,553,750	$235,125,000	3.213%
4	NI	NiSource Inc.	5/3/2017	N/A	N/A	N/A	$10,000,000	$57,950	$10,057,950	$500,000,000	2.012%
5	NWN	Northwest Nat. Holding Co.	6/4/2019	1,250,000	$67.00	$2.17750	$2,721,875	$400,000	$3,121,875	$83,750,000	3.728%
6	OGS	ONE Gas, Inc.					N/A				
7	SJI	South Jersey Industries	4/20/2018	11,016,949	$29.50	$1.03250	$11,375,000	$700,000	$12,075,000	$324,999,996	3.715%
8	SWX	Southwest Gas	11/28/2018	3,100,000	$75.50	$2.54810	$7,899,110	$600,000	$8,499,110	$234,050,000	3.631%
9	SR	Spire Inc.	5/9/2018	2,000,000	$63.05	$2.10938	$4,218,760	$325,000	$4,543,760	$126,100,000	3.603%
10	UGI	UGI Corporation	3/18/2004	8,625,000	$32.10	$1.40440	$12,112,950	$1,149,550	$13,262,500	$276,862,500	4.790%
		Average									**3.324%**
		Average - Electric & Gas									**2.902%**

Column Notes:

(1-4) SEC Form 424B for each company.
(5) Column (2) * Column (4)
(6) SEC Form 424B for each company.
(7) Column (5) + Column (6)
(8) Column (2) * Column (3)
(9) Column (7) / Column (8)

Note (a): Underwriting discount computed as the difference between the current market price and the price offered to the issuing company by the underwriters.

DIVIDEND YIELD

	Company	Industry Group	(a) Price	(b) Dividends	Yield
1	Allstate Corp.	Insurance (Prop/Cas.)	$ 94.51	$ 2.16	2.3%
2	Amdocs Ltd.	IT Services	$ 58.04	$ 1.31	2.3%
3	Amer. Tower 'A'	Wireless Networking	$ 232.44	$ 4.58	2.0%
4	AT&T Inc.	Telecom. Services	$ 29.71	$ 2.09	7.0%
5	AvalonBay Communities	R.E.I.T.	$ 152.79	$ 6.44	4.2%
6	Bristol-Myers Squibb	Drug	$ 57.28	$ 1.80	3.1%
7	Brown-Forman 'B'	Beverage	$ 58.22	$ 0.70	1.2%
8	Campbell Soup	Food Processing	$ 48.07	$ 1.40	2.9%
9	Cboe Global Markets	Brokers & Exchanges	$ 93.51	$ 1.44	1.5%
10	Church & Dwight	Household Products	$ 67.99	$ 0.96	1.4%
11	Clorox Co.	Household Products	$ 183.19	$ 4.24	2.3%
12	CME Group	Brokers & Exchanges	$ 176.06	$ 3.40	1.9%
13	Coca-Cola	Beverage	$ 45.07	$ 1.64	3.6%
14	Colgate-Palmolive	Household Products	$ 68.53	$ 1.76	2.6%
15	Equity Residential	R.E.I.T.	$ 62.14	$ 2.43	3.9%
16	Federal Rlty. Inv. Trust	R.E.I.T.	$ 75.11	$ 4.24	5.6%
17	Gen'l Mills	Food Processing	$ 56.53	$ 1.99	3.5%
18	Hershey Co.	Food Processing	$ 136.06	$ 3.25	2.4%
19	Hormel Foods	Food Processing	$ 47.09	$ 0.98	2.1%
20	Intercontinental Exch.	Brokers & Exchanges	$ 84.22	$ 1.20	1.4%
21	Johnson & Johnson	Med Supp Non-Invasive	$ 139.85	$ 4.04	2.9%
22	Kellogg	Food Processing	$ 62.23	$ 2.30	3.7%
23	Kimberly-Clark	Household Products	$ 132.63	$ 4.28	3.2%
24	Lilly (Eli)	Drug	$ 145.21	$ 2.96	2.0%
25	Lockheed Martin	Aerospace/Defense	$ 359.49	$ 9.80	2.7%
26	McCormick & Co.	Food Processing	$ 146.23	$ 2.48	1.7%
27	McDonald's Corp.	Restaurant	$ 173.95	$ 5.10	2.9%
28	Northrop Grumman	Aerospace/Defense	$ 324.71	$ 5.28	1.6%
29	PepsiCo, Inc.	Beverage	$ 127.43	$ 4.09	3.2%
30	Procter & Gamble	Household Products	$ 114.48	$ 3.16	2.8%
31	Public Storage	R.E.I.T.	$ 191.11	$ 8.00	4.2%
32	Realty Income Corp.	R.E.I.T.	$ 51.20	$ 2.83	5.5%
33	Republic Services	Environmental	$ 76.21	$ 1.68	2.2%
34	Smucker (J.M.)	Food Processing	$ 112.83	$ 3.55	3.1%
35	Sysco Corp.	Retail/Wholesale Food	$ 47.72	$ 1.80	3.8%
36	Verizon Communic.	Telecom. Services	$ 55.77	$ 2.47	4.4%
37	Walmart Inc.	Retail Store	$ 122.18	$ 2.16	1.8%
38	Waste Management	Environmental	$ 95.96	$ 2.18	2.3%
	Average				**2.9%**

(a) Average of closing prices for 30 trading days ended May 1, 2020.
(b) The Value Line Investment Survey, *Summary & Index* (May 1, 2020).

GROWTH RATES

		(a)	(b)	(c)
		Earnings Growth		
	Company	**V Line**	**IBES**	**Zacks**
1	Allstate Corp.	9.00%	-0.74%	7.50%
2	Amdocs Ltd.	10.00%	5.60%	8.50%
3	Amer. Tower 'A'	7.50%	20.45%	14.71%
4	AT&T Inc.	5.50%	3.40%	5.53%
5	AvalonBay Communities	4.80%	2.54%	4.66%
6	Bristol-Myers Squibb	9.00%	12.15%	8.56%
7	Brown-Forman 'B'	11.00%	3.45%	n/a
8	Campbell Soup	2.00%	2.75%	7.16%
9	Cboe Global Markets	12.50%	3.24%	2.29%
10	Church & Dwight	9.00%	7.98%	8.21%
11	Clorox Co.	2.50%	4.28%	5.24%
12	CME Group	2.50%	5.13%	4.90%
13	Coca-Cola	6.50%	1.86%	5.91%
14	Colgate-Palmolive	5.50%	5.24%	5.47%
15	Equity Residential	1.20%	6.10%	5.20%
16	Federal Rlty. Inv. Trust	1.40%	6.70%	3.28%
17	Gen'l Mills	4.00%	5.69%	7.50%
18	Hershey Co.	4.50%	6.85%	7.67%
19	Hormel Foods	8.50%	4.00%	6.00%
20	Intercontinental Exch.	9.00%	9.05%	7.70%
21	Johnson & Johnson	12.00%	4.80%	6.00%
22	Kellogg	3.00%	2.16%	3.83%
23	Kimberly-Clark	7.00%	5.48%	5.04%
24	Lilly (Eli)	10.00%	12.52%	12.27%
25	Lockheed Martin	10.50%	8.78%	6.93%
26	McCormick & Co.	6.50%	2.80%	4.92%
27	McDonald's Corp.	8.00%	5.31%	7.49%
28	Northrop Grumman	10.00%	10.51%	n/a
29	PepsiCo, Inc.	6.00%	4.18%	5.61%
30	Procter & Gamble	8.50%	7.53%	7.17%
31	Public Storage	4.00%	17.00%	4.18%
32	Realty Income Corp.	6.30%	5.45%	3.23%
33	Republic Services	9.00%	7.35%	9.98%
34	Smucker (J.M.)	3.00%	1.55%	2.16%
35	Sysco Corp.	9.50%	7.40%	9.00%
36	Verizon Communic.	4.00%	1.90%	3.13%
37	Walmart Inc.	7.50%	5.68%	4.94%
38	Waste Management	8.50%	7.19%	8.47%

(a) The Value Line Investment Survey (various editions as of Apr. 24, 2020).
(b) www.finance.yahoo.com (retrieved May 2, 2020).
(c) www.zacks.com (retrieved May 2, 2019).

DCF COST OF EQUITY ESTIMATES

		(a)	(a)	(a)
		Earnings Growth		
	Company	**V Line**	**IBES**	**Zacks**
1	Allstate Corp.	11.3%	1.5%	9.8%
2	Amdocs Ltd.	12.3%	7.9%	10.8%
3	Amer. Tower 'A'	9.5%	22.4%	16.7%
4	AT&T Inc.	12.5%	10.4%	12.6%
5	AvalonBay Communities	9.0%	6.8%	8.9%
6	Bristol-Myers Squibb	12.1%	15.3%	11.7%
7	Brown-Forman 'B'	12.2%	4.7%	n/a
8	Campbell Soup	4.9%	5.7%	10.1%
9	Cboe Global Markets	14.0%	4.8%	3.8%
10	Church & Dwight	10.4%	9.4%	9.6%
11	Clorox Co.	4.8%	6.6%	7.6%
12	CME Group	4.4%	7.1%	6.8%
13	Coca-Cola	10.1%	5.5%	9.5%
14	Colgate-Palmolive	8.1%	7.8%	8.0%
15	Equity Residential	5.1%	10.0%	9.1%
16	Federal Rlty. Inv. Trust	7.0%	12.3%	8.9%
17	Gen'l Mills	7.5%	9.2%	11.0%
18	Hershey Co.	6.9%	9.2%	10.1%
19	Hormel Foods	10.6%	6.1%	8.1%
20	Intercontinental Exch.	10.4%	10.5%	9.1%
21	Johnson & Johnson	14.9%	7.7%	8.9%
22	Kellogg	6.7%	5.9%	7.5%
23	Kimberly-Clark	10.2%	8.7%	8.3%
24	Lilly (Eli)	12.0%	14.6%	14.3%
25	Lockheed Martin	13.2%	11.5%	9.7%
26	McCormick & Co.	8.2%	4.5%	6.6%
27	McDonald's Corp.	10.9%	8.2%	10.4%
28	Northrop Grumman	11.6%	12.1%	n/a
29	PepsiCo, Inc.	9.2%	7.4%	8.8%
30	Procter & Gamble	11.3%	10.3%	9.9%
31	Public Storage	8.2%	21.2%	8.4%
32	Realty Income Corp.	11.8%	11.0%	8.8%
33	Republic Services	11.2%	9.6%	12.2%
34	Smucker (J.M.)	6.1%	4.7%	5.3%
35	Sysco Corp.	13.3%	11.2%	12.8%
36	Verizon Communic.	8.4%	6.3%	7.6%
37	Walmart Inc.	9.3%	7.4%	6.7%
38	Waste Management	10.8%	9.5%	10.7%
	Average (b)	**10.5%**	**9.5%**	**9.5%**
	Midpoint (b,c)	**10.8%**	**10.6%**	**10.5%**

(a) Sum of dividend yield (p. 1) and respective growth rate (p. 2).
(b) Excludes highlighted figures.
(c) Average of low and high values.

CAPITAL STRUCTURE

ELECTRIC GROUP

		At Year-end 2019 (a)			Value Line Projected (b)		
	Company	**Debt**	**Preferred**	**Common Equity**	**Debt**	**Preferred**	**Common Equity**
1	Alliant Energy	53.4%	1.7%	44.9%	52.0%	0.0%	48.0%
2	Ameren Corp.	53.3%	0.0%	46.7%	48.0%	0.5%	51.5%
3	American Elec Pwr	57.3%	0.0%	42.7%	53.5%	0.0%	46.5%
4	Avangrid, Inc.	32.3%	0.0%	67.7%	40.0%	0.0%	60.0%
5	Black Hills Corp.	56.1%	0.0%	43.9%	51.5%	0.0%	48.5%
6	CMS Energy Corp.	72.2%	0.0%	27.8%	67.0%	0.0%	33.0%
7	Consolidated Edison	52.3%	0.0%	47.7%	50.5%	0.0%	49.5%
8	Dominion Energy	52.1%	0.0%	47.9%	59.5%	0.0%	40.5%
9	DTE Energy Co.	58.4%	0.0%	41.6%	58.5%	0.0%	41.5%
10	Duke Energy Corp.	54.8%	0.0%	45.2%	55.0%	0.5%	44.5%
11	Entergy Corp.	63.0%	0.8%	36.2%	58.0%	1.0%	41.0%
12	Evergy Inc.	51.3%	0.0%	48.7%	52.0%	0.0%	48.0%
13	Eversource Energy	53.5%	0.0%	46.5%	53.5%	0.5%	46.0%
14	Exelon Corp.	51.3%	0.0%	48.7%	49.0%	0.0%	51.0%
15	Fortis Inc.	52.9%	3.8%	43.3%	52.0%	3.5%	44.5%
16	NextEra Energy, Inc.	49.0%	0.0%	51.0%	50.0%	0.0%	50.0%
17	OGE Energy Corp.	43.6%	0.0%	56.4%	45.5%	0.0%	54.5%
18	PPL Corp.	62.8%	0.0%	37.2%	54.5%	0.0%	45.5%
19	Pub Sv Enterprise Grp.	50.0%	0.0%	50.0%	51.0%	0.0%	49.0%
20	Sempra Energy	50.6%	0.0%	49.4%	48.5%	0.0%	51.5%
21	Southern Company	58.5%	0.4%	41.1%	58.5%	0.0%	41.5%
22	WEC Energy Group	53.7%	0.1%	46.1%	52.0%	0.0%	48.0%
23	Xcel Energy Inc.	57.8%	0.0%	42.2%	57.0%	0.0%	43.0%
	Average	**53.9%**	**0.3%**	**45.8%**	**52.9%**	**0.3%**	**46.8%**
	Average - Ex. High and Low	**54.1%**	**0.1%**	**45.6%**	**52.9%**	**0.1%**	**46.9%**

(a) Most recent SEC Form 10-K reports.
(b) The Value Line Investment Survey (Feb. 14, Mar. 13 and Apr. 24, 2020).

ELECTRIC GROUP OPERATING SUBSIDIARIES

	At Year-End 2019 (a)		
Operating Company	**Debt**	**Preferred**	**Common Equity**
ALLIANT ENERGY CORP.			
Interstate Power & Light	47.5%	3.0%	49.4%
Wisconsin Power & Light	45.0%	0.0%	55.0%
AMEREN CORP.			
Ameren Illinois Co.	46.4%	0.8%	52.8%
Union Electric Co.	49.1%	0.9%	50.0%
AMERICAN ELEC PWR			
AEP Texas, Inc.	60.6%	0.0%	39.4%
Appalachian Power Co.	51.1%	0.0%	48.9%
Indiana Michigan Power Co.	54.5%	0.0%	45.5%
Kentucky Power Co.	52.7%	0.0%	47.3%
Kingsport Power Co.	45.4%	0.0%	54.6%
Ohio Power Co.	45.4%	0.0%	54.6%
Public Service Co. of Oklahoma	50.2%	0.0%	49.8%
Southwestern Electric Pwr Co.	52.1%	0.0%	47.9%
Wheeling Power Co.	46.5%	0.0%	53.5%
AVANGRID			
Central Maine Pwr	37.5%	0.0%	62.5%
NY State E&G	51.1%	0.0%	48.9%
Rochester G&E	48.8%	0.0%	51.2%
United Illuminating	42.4%	0.0%	57.6%
BLACK HILLS CORP.			
Black Hills Power	43.2%	0.0%	56.8%
Cheyenne Light Fuel & Power	51.7%	0.0%	48.3%
Black Hills/Colorado Electric Utility Co	27.0%	0.0%	73.0%
CMS ENERGY			
Consumers Energy Co.	48.7%	0.2%	51.1%
CONSOLIDATED EDISON			
Consolidated Edison of NY	51.4%	0.0%	48.6%
Orange & Rockland	52.0%	0.0%	48.0%
Rockland Electric	0.0%	0.0%	100.0%
DOMINION ENERGY			
Virginia Electric & Power	46.9%	0.0%	53.1%
Dominion Energy South Carolina	48.2%	0.0%	51.8%
DTE ENERGY CO.			
DTE Electric Co.	50.0%	0.0%	50.0%
DUKE ENERGY			
Duke Energy Carolinas	48.2%	0.0%	51.8%
Duke Energy Florida	54.1%	0.0%	45.9%
Duke Energy Indiana	47.0%	0.0%	53.0%
Duke Energy Ohio	41.6%	0.0%	58.4%
Duke Energy Progress	49.5%	0.0%	50.5%
Progress Energy Inc.	55.7%	0.0%	44.3%
Duke Energy Kentucky	50.6%	0.0%	49.4%
ENTERGY CORP.			
Entergy Arkansas Inc.	52.9%	0.0%	47.1%
Entergy Louisiana LLC	53.3%	0.0%	46.7%
Entergy Mississippi Inc.	51.1%	0.0%	48.9%
Entergy New Orleans Inc.	52.9%	0.0%	47.1%
Entergy Texas Inc.	51.7%	0.9%	47.4%
EVERGY, INC.			
Evergy Metro	49.5%	0.0%	50.5%
Evergy Kansas Central	46.7%	0.0%	53.3%

ELECTRIC GROUP OPERATING SUBSIDIARIES

		At Year-End 2019 (a)		
	Operating Company	**Debt**	**Preferred**	**Common Equity**
	EVERSOURCE ENERGY			
	Connecticut Light & Power	43.9%	1.4%	54.7%
	NSTAR Electric Co.	44.3%	0.6%	55.1%
	Public Service Co. of New Hampshire	52.4%	0.0%	47.6%
	EXELON CORP.			
	Delmarva Power and Light	49.8%	0.0%	50.2%
	Baltimore Gas & Electric Co.	47.0%	0.0%	53.0%
	Commonweath Edison Co.	44.9%	0.0%	55.1%
	PECO Energy Co.	46.2%	0.0%	53.8%
	Potomac Electric Power Co.	49.6%	0.0%	50.4%
	Atlantic City Electric Co.	51.0%	0.0%	49.0%
	FORTIS, INC.			
	Tucson Electric Power Co.	44.9%	0.0%	55.1%
	UNS Electric	42.5%	0.0%	57.5%
	Central Hudson Gas & Electric	49.2%	0.0%	50.8%
	International Transmission Co.	40.0%	0.0%	60.0%
	ITC Great Plains	40.0%	0.0%	60.0%
	ITC Midwest	40.0%	0.0%	60.0%
	Michigan Elec. Transmission Co.	40.0%	0.0%	60.0%
	NEXTERA ENERGY			
	Florida Power & Light	39.8%	0.0%	60.2%
	Gulf Power Co.	49.7%	0.0%	50.3%
	OGE ENERGY CORP.			
	Oklahoma G&E	44.9%	0.0%	55.1%
	PPL CORP.			
	Kentucky Utilities Co.	42.3%	0.0%	57.7%
	Louisville Gas & Electric Co.	42.1%	0.0%	57.9%
	PPL Electric Utilities Corp.	45.2%	0.0%	54.8%
	PUB SV ENTERPRISE GRP			
	Pub Service Electric & Gas Co.	45.2%	0.0%	54.8%
	SEMPRA ENERGY			
	San Diego Gas & Electric	47.3%	0.0%	52.7%
	Oncor Electric Delivery	43.4%	0.0%	56.6%
	SOUTHERN CO.			
	Alabama Power Co.	48.0%	1.6%	50.4%
	Georgia Power Co.	44.0%	0.0%	56.0%
	Mississippi Power Co.	49.0%	0.0%	51.0%
	WEC ENERGY GROUP			
	Wisconsin Electric Power Co.	43.5%	0.5%	56.0%
	Wisconsin Public Service Corp.	45.4%	0.0%	54.6%
	XCEL ENERGY, INC.			
	Northern States Power Co. (MN)	47.8%	0.0%	52.2%
	Northern States Power Co. (WI)	45.8%	0.0%	54.2%
	Public Service Co. of Colorado	43.7%	0.0%	56.3%
	Southwestern Public Service Co.	45.9%	0.0%	54.1%
(b)	**Minimum**	**27.0%**	**0.0%**	**39.4%**
(b)	**Maximum**	**60.6%**	**3.0%**	**73.0%**
(b)	**Average**	**47.1%**	**0.1%**	**52.7%**

(a) Data from year-end 2019 Company 10-Ks and FERC Form 1 reports.

(b) Exludes Consolidated Edison operating company Rockland Electric.

VERIFICATION

The undersigned, Adrien M. McKenzie, being duly sworn, deposes and says he is President of Financial Concepts and Applications, Inc., on behalf of Kentucky Power Company, that he 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 his information, knowledge and belief after reasonable inquiry.

Adrien M. McKenzie

STATE OF TEXAS)
) Case No. 2020-00174
COUNTY OF TRAVIS)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by BRUCE H. FAIRCHILD this 17th day of June 2020.

BRUCE H FAIRCHILD
Notary ID #131906507
My Commission Expires
February 25, 2023

Notary Public

Notary ID Number: 131906507

My Commission Expires: 2/25/2023