

**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) AN ORDER APPROVING ITS 2017 ) Case No. 2017-00179  
ENVIRONMENTAL COMPLIANCE PLAN; (3) AN )  
ORDER APPROVING ITS TARIFFS AND RIDERS; )  
(4) AN ORDER APPROVING ACCOUNTING )  
PRACTICES TO ESTABLISH REGULATORY )  
ASSETS AND LIABILITIES; AND (5) AN ORDER )  
GRANTING ALL OTHER REQUIRED APPROVALS )  
AND RELIEF )**

**DIRECT TESTIMONY OF  
ELLIOTT, HALL, MCKENZIE  
ON BEHALF OF KENTUCKY POWER COMPANY  
SECTION III**

**VOLUME 2 OF 4**

**June 28, 2017**

**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) An Order )  
Approving Its 2017 Environmental Compliance )  
Plan; (3) An Order Approving Its Tariffs And )  
Riders; (4) An Order Approving Accounting )  
Practices To Establish Regulatory Assets And )  
Liabilities; And (5) An Order Granting All Other )  
Required Approvals And Relief )

Case No. 2017-00179

**DIRECT TESTIMONY OF**  
**AMY J. ELLIOTT**  
**ON BEHALF OF KENTUCKY POWER COMPANY**



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

**CASE NO. 2017-00179**

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

**I. INTRODUCTION**

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

2 A. My name is Amy J. Elliott, and I am a Regulatory Consultant for Kentucky Power  
3 Company (“Kentucky Power” or the “Company”). My business address is 101 A  
4 Enterprise Drive, Frankfort, Kentucky 40601.

**II. BACKGROUND**

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

7 A. In 2000, I received a Bachelor of Arts degree in Economics from Transylvania  
8 University in Lexington, Kentucky. I worked for the Tennessee Department of  
9 Commerce and Insurance as an Insurance Examiner from 2002 through late 2005  
10 before moving back to Kentucky and consulting with insurance companies in  
11 connection with field audits. I accepted my present position with Kentucky Power  
12 in 2008. In 2012, I received a Master of Business Administration degree from the  
13 University of Massachusetts at Amherst.

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

16 A. My primary responsibility is to support the Company’s regulatory activities. As  
17 part of this responsibility, I manage the Company’s environmental surcharge and

1 prepare the environmental surcharge calculation forms utilized by the Company to  
2 implement the surcharge. Additionally, I manage the Company's periodic  
3 regulatory filings made with the Kentucky Public Service Commission  
4 ("Commission").

5 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY**  
6 **COMMISSIONS?**

7 A. Yes. I testified in Case No. 2014-00396, a combined general rate case and request  
8 for an amendment to the Company's Environmental Compliance Plan.  
9 Additionally, I filed testimony in the Company's past seven periodic reviews of the  
10 Environmental Surcharge: Case No. 2014-00052, Case No. 2014-00322, Case No.  
11 2015-00113, Case No. 2015-00280, Case No. 2016-00109, Case No. 2016-00336,  
12 and Case No. 2017-00072. Finally, I testified before the Commission in two six-  
13 month reviews of the Company's fuel adjustment clause, Case No. 2013-00261 and  
14 Case No. 2013-00444.

### III. PURPOSE OF YOUR TESTIMONY

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

16 A. The purpose of my testimony in this proceeding is to support the Company's  
17 application for approval of its Fifth Amended Environmental Compliance Plan  
18 ("2017 Plan"). In particular, my testimony covers the following topics:

- 19 • Changes to the Company's existing Environmental Compliance Plan  
20 included in the proposed Fifth Amendment;
- 21 • The calculation of the Company's monthly environmental base revenue  
22 requirement;
- 23 • The gross revenue conversion factor ("GRCF") utilized for environmental  
24 expenses;

- 1 • The weighted average cost of capital (“WACC”) used to calculate the  
2 environmental project revenue requirement;
- 3 • Changes to the Company’s Tariff E.S.; and
- 4 • Continued recovery of costs associated with the Mitchell flue gas  
5 desulfurization system (“FGD”) through the environmental surcharge.

6 I am also supporting the following adjustments to test year revenues and operating  
7 expenses:

- 8 • An adjustment to remove the capital cost of the Mitchell FGD and FGD-  
9 associated consumable inventories from rate base;
- 10 • An adjustment to remove Mitchell FGD expenses from test year expenses;
- 11 • An adjustment to remove Mitchell FGD revenues and to synchronize other  
12 environmental surcharge revenues and expenses during the test year;
- 13 • An adjustment to remove revenues received under the Company’s  
14 Capacity Charge Tariff from test year revenues; and
- 15 • An adjustment to annualize property taxes.

16 **Q. PLEASE IDENTIFY THE OTHER WITNESSES WHOSE TESTIMONY**  
17 **SUPPORTS KENTUCKY POWER’S ENVIRONMENTAL COMPLIANCE**  
18 **PLAN.**

19 A.

WITNESS	TITLE	SUBJECT
Adrien M. McKenzie	President, FinCap, Inc.	Cost of equity
Jeffrey B. Bartsch	Director, Tax Accounting & Regulatory Support	Tax consequences
Debra L. Osborne	Vice President Generating Assets for Appalachian and Kentucky Power Companies	Project descriptions, cost estimates, and cost-effectiveness of Rockport Unit 1 SCR
John M. McManus	Vice President, Environmental Services	Environmental laws and regulations

WITNESS	TITLE	SUBJECT
Zachary C. Miller	Principal Corporate Finance Analyst	WACC

1 **Q. HAVE YOU PREPARED ANY EXHIBITS TO YOUR TESTIMONY?**

2 A. Yes. I have prepared the following exhibits:

- 3 • Exhibit AJE-1 – 2017 Environmental Compliance Plan
- 4 • Exhibit AJE-2 – Environmental Surcharge Tariff (Tariff E.S.) showing  
5 changes from the current tariff
- 6 • Exhibit AJE-3 – Revised Monthly ES (Environmental Surcharge)  
7 Calculation Forms
- 8 • Exhibit AJE-4 – Total Base Revenue Requirement Summary
- 9 • Exhibit AJE-5 – Estimated revenue requirement associated with the  
10 installation of selective catalytic reduction (“SCR”) technology at Rockport  
11 Unit 1

**IV. KENTUCKY POWER’S 2017 ENVIRONMENTAL COMPLIANCE PLAN**

12 **Q. PLEASE EXPLAIN WHY THE COMPANY IS UPDATING ITS**  
13 **ENVIRONMENTAL COMPLIANCE PLAN.**

14 A. Kentucky Power is updating its Environmental Compliance Plan to add two new  
15 projects. First, the Company is adding Project 19 which is the SCR for Rockport  
16 Unit 1. Updating the plan allows Kentucky Power to recover costs associated with  
17 the Rockport Unit 1 SCR through the Company’s Environmental Surcharge Tariff  
18 (“Tariff E.S.”) The Company is also adding Project 20 to clarify the inclusion of  
19 consumables necessary to operate all approved projects in the Environmental  
20 Compliance Plan and to add the return on the consumable inventory to the  
21 environmental surcharge calculation.

1 A copy of the proposed 2017 Plan is included as EXHIBIT AJE-1.

2 **Q. HAS THE COMPANY REVISED ITS ENVIRONMENTAL SURCHARGE**  
3 **TARIFF TO REFLECT THE CHANGES PROPOSED IN THE 2017 PLAN?**

4 A. Yes. A copy of the Company's proposed Tariff E.S., with markups to show  
5 changes from the current Tariff E.S., is included as EXHIBIT AJE-2. The proposed  
6 changes to Tariff E.S. are described in more detail later in my testimony.

7 **Q. HAS THE COMPANY ALSO REVISED ITS ENVIRONMENTAL**  
8 **SURCHARGE CALCULATION FORMS USED FOR ITS MONTHLY**  
9 **FILING?**

10 A. Yes. The proposed revised calculation forms are included as EXHIBIT AJE-3.

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

13 A. Kentucky Power recovers the costs of the authorized environmental projects  
14 included in its Environmental Compliance Plan through a combination of base rates  
15 and the environmental surcharge. The authorized projects included in the  
16 Company's Environmental Compliance Plan are those projects necessary for the  
17 Company to comply with the Federal Clean Air act and federal, state, and local  
18 requirements applicable to coal combustion wastes and by-products from coal-fired  
19 generation facilities ("Environmental Requirements"). Tariff E.S. identifies for  
20 each month the amount of environmental costs included in base rates. The process  
21 for identifying the monthly environmental base rate amount is described below and  
22 reflected in EXHIBIT AJE-4. Pursuant to the Commission-approved Stipulation  
23 and Settlement Agreement in Case No. 2012-00578, costs associated with the

1 Mitchell FGD are excluded from the monthly environmental base rate amounts and  
2 instead included in their entirety through Tariff E.S.

3 Each month, the Company calculates the total costs associated with the  
4 approved environmental projects in the Environmental Compliance Plan. The  
5 monthly total cost currently includes expenses and credits related to the operation  
6 of approved projects, a return on the environmental compliance rate base, emission  
7 allowance expenses, a return on the Company's emission allowance inventory,  
8 costs associated with the consumption of consumables, depreciation, and property  
9 taxes for both the Rockport Plant and the Mitchell Plant. The Company then  
10 compares the total monthly environmental costs to the amount of environmental  
11 costs included in its base rates. If the total monthly environmental costs exceed the  
12 monthly base rate amount, customers are charged the difference through the  
13 environmental surcharge. If the total monthly environmental costs are less than the  
14 monthly base rate amount, customers are credited the difference through the  
15 environmental surcharge.

#### **Environmental Projects**

16 **Q. IS KENTUCKY POWER REQUESTING APPROVAL TO INCLUDE NEW**  
17 **ENVIRONMENTAL PROJECTS FOR ROCKPORT IN THE 2017 PLAN?**

18 A. Yes. The Company is proposing to update the current Environmental Compliance  
19 Plan to add the SCR for Rockport Unit 1. The SCR for Rockport Unit 1 is Project  
20 19 in the Company's Environmental Compliance Plan.

21 **Q. BRIEFLY DESCRIBE THE SCR FOR ROCKPORT UNIT 1.**

1 A. Rockport Unit 1 is a 1,310 MW coal-fired generating unit located near Rockport,  
2 Indiana. The Rockport Unit 1 SCR project will reduce the plant's nitrogen oxide  
3 (NOx) emissions and is required by a 2007 Consent Decree among several AEP  
4 entities, including Kentucky Power and Indiana Michigan Power Company (the  
5 partial owner of the Rockport Plant), the United States EPA, and several  
6 environmental plaintiffs (together with subsequent modifications the "Consent  
7 Decree"). More detail concerning the SCR and why its installation is required to  
8 comply with the Consent Decree and the Clean Air Act are provided in the  
9 testimonies of Company Witnesses McManus and Osborne.

10 **Q. DOES KENTUCKY POWER OWN ROCKPORT UNIT 1?**

11 A. No. Kentucky Power is a party to a FERC-approved unit power agreement  
12 ("UPA") with AEP Generating Company. Under the UPA, Kentucky Power  
13 receives 30% of AEP Generating Company's 50% share of the generation output  
14 from Rockport Unit 1 and is responsible for 30% of AEP Generating Company's  
15 Rockport Unit 1 costs. Kentucky Power's share equates to 15% of the Rockport  
16 Unit 1 costs.

17 **Q. IS THE SCR TECHNOLOGY AT ROCKPORT UNIT 1 IN SERVICE?**

18 A. No. Construction on the SCR for Unit 1 is nearing completion and must be in  
19 service no later than December 31, 2017 to comply with the Consent Decree.  
20 Company Witness Osborne provides additional detail on the installation status of  
21 the project as well as the cost-effectiveness of the project.

22 **Q. IS KENTUCKY POWER ADDING ANY OTHER PROJECTS TO ITS**  
23 **ENVIRONMENTAL COMPLIANCE PLAN?**

1 A. Yes. The Company is adding Project 20 to separately identify within the  
2 Environmental Compliance Plan the cost of consumables used in conjunction with  
3 approved projects. These costs include the costs of consumables used in the  
4 operation of the approved projects as well as the return on the consumable  
5 inventory. The consumables used in the operation of the approved projects include,  
6 but are not limited to, sodium bicarbonate, activated carbon, anhydrous ammonia,  
7 trona, lime hydrate, limestone, polymer, and urea.

8 **Q. HAS KENTUCKY POWER PREVIOUSLY RECOVERED THE COSTS OF**  
9 **CONSUMABLES USED IN THE OPERATION OF ENVIRONMENTAL**  
10 **COMPLIANCE PLAN PROJECTS THROUGH THE ENVIRONMENTAL**  
11 **SURCHARGE?**

12 A. Yes. The Company currently includes the cost of consumables used in operating  
13 environmental compliance plan projects through the environmental surcharge. The  
14 addition of Project 20 simply clarifies that consumables used in the projects are  
15 recoverable through Tariff E.S.

16 **Q. DOES PROJECT 20 CHANGE HOW THE COMPANY RECOVERS A**  
17 **RETURN ON THE INVENTORY OF CONSUMABLES USED TO**  
18 **OPERATE THE PROJECTS IN ITS ENVIRONMENTAL COMPLIANCE**  
19 **PLAN?**

20 A. Yes. While the Company recovers through the environmental surcharge the  
21 expenses related to the consumption of consumables required to operate approved  
22 environmental projects, the return on the inventory of those consumables is  
23 currently part of the Company's general rate base. Accordingly, Kentucky Power

1 currently recovers its allowed return on the consumable inventory through general  
2 rates.

3 To move the return on consumable inventory from base rates to the  
4 environmental surcharge, Project 20 will include the inventory of consumables  
5 used to operate approved environmental projects in the Company's environmental  
6 compliance rate base. The Company will then recover or credit through the  
7 environmental surcharge, as it does with all other costs associated with approved  
8 environmental projects, any monthly variation in the return on its consumables  
9 inventory between the actual return and the return included in monthly  
10 environmental compliance rate base.

11 **Q. WHY IS THE COMPANY PROPOSING THIS CHANGE?**

12 A. Consumables are required to operate the environmental projects included in the  
13 Company's Environmental Compliance Plan. Including both the costs incurred in  
14 the using consumables and a return on the consumables inventory in the Plan aligns  
15 the costs of operating its environmental projects with the costs recovered through  
16 the environmental surcharge.

17 **Q. IS THE COMPANY'S PROPOSED TREATMENT OF ENVIRONMENTAL**  
18 **PROJECT CONSUMABLES INVENTORY CONSISTENT WITH ITS**  
19 **TREATMENT OF EMISSION ALLOWANCE INVENTORY?**

20 A. Yes. The Company recovers a return on its emissions allowance inventory through  
21 the environmental surcharge.

**V. CALCULATION OF MONTHLY ENVIRONMENTAL  
BASE REVENUE REQUIREMENT**

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

3 A. The monthly environmental compliance base revenue requirement was calculated  
4 in a step-wise fashion. First, the Company identified Kentucky Power's share of  
5 the costs associated with Mitchell Non-FGD environmental projects in each month.  
6 Second, the Company added Kentucky Power's share of the monthly costs  
7 associated with the approved Rockport environmental project. Third, the Company  
8 added the monthly return on its share of the Non-FGD consumables inventory at  
9 Mitchell and Rockport. Finally, the Company included gains on allowances in each  
10 month. The derivation of the monthly environmental compliance base revenue  
11 requirement can be found at EXHIBIT AJE-4.

12 **Q. DID THE COMPANY INCLUDE THE RETURN ON NON-FGD**  
13 **CONSUMABLE INVENTORIES IN ITS ENVIRONMENTAL**  
14 **COMPLIANCE BASE REVENUE REQUIREMENT CALCULATION?**

15 A. Yes. Because the Company is requesting that the return on consumable inventories  
16 be recovered through the environmental surcharge, the Company included the  
17 return on consumable inventories during the test year in its environmental  
18 compliance base revenue requirement calculation.

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

1 A. No. The SCR at Rockport Unit 1 was not in service during the test year ended  
2 February 28, 2017. To properly identify the base level of environmental project  
3 costs, only the costs associated with projects that were in-service during the test  
4 year were included in the base revenue requirement calculation. The current  
5 revenue requirement, as calculated in each month's environmental surcharge filing,  
6 will include the actual costs associated with in-service and approved environmental  
7 projects. An estimate of the revenue requirement associated with the SCR for  
8 Rockport Unit 1 is included in EXHIBIT A.JE-5. Additionally, the costs associated  
9 with the Mitchell FGD were not included in the calculation of the environmental  
10 compliance revenue requirement. The bases for excluding the Mitchell FGD costs  
11 from the environmental compliance revenue requirement are described below.

**VI. COSTS ASSOCIATED WITH THE MITCHELL FGD**

12 **Q. WHY WERE THE MITCHELL FGD COSTS NOT INCLUDED IN THE**  
13 **BASE ENVIRONMENTAL COSTS?**

14 A. Paragraph 6 of the Commission-approved Stipulation and Settlement Agreement in  
15 Case No. 2012-00578 requires that all costs associated with the Mitchell FGD  
16 system be recovered through the environmental surcharge and excluded from base  
17 rates. Pursuant to the Stipulation and Settlement Agreement, this recovery  
18 mechanism is to remain in place at least until the Commission sets new base rates  
19 that include Mitchell FGD costs for a period commencing after June 30, 2020.

20 **Q. DID YOU PREPARE ANY RATE CASE ADJUSTMENTS TO REMOVE**  
21 **KENTUCKY POWER'S SHARE OF THE COSTS ASSOCIATED WITH**  
22 **THE MITCHELL FGD FROM THE TEST YEAR DATA AND THE**

1           **PROPOSED ENVIRONMENTAL COMPLIANCE RATE BASE**  
2           **AMOUNTS?**

3    A.    Yes. Please refer to Adjustments W03 and W04 within Section V, Exhibit 2. I  
4           prepared Adjustment W03 to remove costs associated with the Mitchell FGD  
5           operating and maintenance expenses. Because Paragraph 6 of the Stipulation and  
6           Settlement Agreement requires that the Company recover all costs associated with  
7           the Mitchell FGD via the environmental surcharge, the Mitchell FGD operating  
8           expense adjustment also includes the costs associated with gypsum disposal,  
9           limestone, lime hydrate, and polymer in addition to the depreciation, maintenance,  
10          and property tax expenses. After allocating the FGD expenses to retail customers  
11          as prescribed in Order Dated March 31, 2003 in Case No. 2002-00169, this  
12          adjustment reduces test year operating expenses by a total of \$13,308,197.

13                 Additionally, I prepared Adjustment W04 to remove the rate base amount  
14                 of the Mitchell FGD. The rate base deduction was calculated by determining the  
15                 accumulated depreciation, provided by Company Witness Cash, and accumulated  
16                 deferred income tax amounts, provided by Company Witness Bartsch from the  
17                 electric plant in service amount for the FGD. This adjustment also removes the  
18                 consumable inventory of the limestone that is used in conjunction with the FGD.  
19                 The production demand allocation factor was then applied to the rate base amount  
20                 and the production demand energy allocation factor was applied to the consumable  
21                 inventory. This adjustment results in a reduction of test-year base rate amount of  
22                 \$201,813,677.

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

3 A. The Company uses a 3.05% depreciation rate for projects within account 312 –  
4 Boiler Plant Equipment. This is the depreciation rate utilized in developing the  
5 depreciation expense for the Mitchell FGD and is the same depreciation rate  
6 approved by the Commission in Case No. 2014-00396.

7 **VII. WEIGHTED AVERAGE COST OF CAPITAL**

8 **Q WHAT WEIGHTED AVERAGE COST OF CAPITAL (“WACC”) DID**  
9 **KENTUCKY POWER USE IN CALCULATING THE REVENUE**  
10 **REQUIREMENT FOR THE NON-ROCKPORT ENVIRONMENTAL**  
11 **PROJECTS, INCLUDING THE MITCHELL FGD?**

12 A. Kentucky Power used a 7.28% WACC. The WACC is calculated in Section V,  
13 Schedule 2, Page 1, of the Application and described in the testimony of Company  
14 Witness Miller. In calculating the WACC for the non-Rockport environmental  
15 projects, Kentucky Power used the 10.31% rate of return on equity proposed by the  
16 Company in this case. The basis for using a 10.31% rate of equity is included in  
17 the testimony of Company Witness McKenzie.

18 **Q WHAT WACC DID KENTUCKY POWER USE IN CALCULATING THE**  
19 **REVENUE REQUIREMENT FOR THE ROCKPORT ENVIRONMENTAL**  
20 **PROJECTS?**

21 A. The Company calculated the Rockport average weighted cost of capital each month  
22 using information included within the Unit Power Bill. In calculating the WACC  
23 associated with the Rockport environmental projects, the Company’s return on

1 equity for environmental projects at the Rockport Plant is 12.16% as established by  
2 the FERC-approved Rockport UPA.

**VIII. GROSS REVENUE CONVERSION FACTOR**

3 **Q. IS THE COMPANY PROPOSING ANY CHANGES TO ITS GROSS**  
4 **REVENUE CONVERSION FACTOR?**

5 A. Yes. The Company is proposing to remove the Section 199 manufacturing  
6 deduction from the GRCF calculation. The rationale for removing the Section 199  
7 deduction is described in the testimony of Company Witness Bartsch.

8 **Q. IS THE COMPANY ALSO PROPOSING A GROSS-UP FOR ITS**  
9 **ENVIRONMENTAL EXPENSES?**

10 A. Yes. The Company is proposing to apply a gross-up factor to the costs incurred by  
11 the Company to operate the approved environmental projects. This gross-up factor  
12 accounts for uncollectable accounts expense and the Commission maintenance  
13 assessment fee expense. This change will ensure that the Company properly  
14 recovers all costs incurred to operate the approved environmental projects. The  
15 derivation of the gross-up factor is found on ES Form 3.15 in **EXHIBIT AJE-3**.

16 **Q. HAS THE COMPANY USED A SIMILAR GROSS-UP FACTOR IN OTHER**  
17 **CIRCUMSTANCES?**

18 A. Yes. The Company used a similar gross-up factor for expenses included in the  
19 calculation of the Big Sandy 1 Operation Rider revenue requirement.

**IX. CHANGES TO THE ENVIRONMENTAL SURCHARGE  
TARIFF (TARIFF E.S.)**

1 **Q. ARE THERE ANY PROPOSED CHANGES TO TARIFF E.S.?**

2 A. Yes. First, the Company is updating Tariff E.S. to reflect the new monthly base  
3 environmental costs as described above. Next, the Company is modifying the  
4 Tariff to reflect the return on equity proposed in this case and to include a return on  
5 inventory of consumables. Finally, the Company is updating the list of  
6 environmental projects to match those included in the 2017 Plan. A copy of the  
7 Company's proposed Tariff E.S., with markups to show changes from the current  
8 Tariff E.S., is included as EXHIBIT AJE-2.

**X. RATE CASE ADJUSTMENTS**

9 **Q. IN ADDITION TO THE ENVIRONMENTAL COMPLIANCE**  
10 **ADJUSTMENTS DESCRIBED ABOVE, DID YOU PREPARE ANY**  
11 **ADDITIONAL ADJUSTMENTS?**

12 A. Yes. I prepared adjustments to test year revenue amounts to remove FGD-related  
13 revenues and deferrals and an adjustment remove the revenues recovered through  
14 the Capacity Charge tariff. I also annualized the Company's property tax  
15 expense.

16 **Q. PLEASE EXPLAIN THE ENVIRONMENTAL SURCHARGE REVENUE**  
17 **ADJUSTMENT.**

18 A. Because the costs associated with the Mitchell FGD have been removed from cost  
19 of service, any associated revenues must also be removed. This adjustment is  
20 calculated by first determining the total test year revenues associated with the  
21 Company's Environmental Compliance Plan by adding the total amount of

1 environmental surcharge revenue for the test year to the test year annual  
2 environmental compliance base revenue amount. The Company next deducted the  
3 going-forward annual environmental compliance base revenue amount as set forth  
4 in EXHIBIT AJE-4. This calculation results in a \$37,183,002 reduction to base rates  
5 that simultaneously removes the FGD revenues and synchronizes the  
6 environmental compliance costs and revenues. In addition to the removal of the  
7 FGD revenues, adjustment W05 removes \$538,417 of deferred environmental  
8 surcharge amounts.

9 **Q. PLEASE EXPLAIN THE CAPACITY CHARGE REVENUE**  
10 **ADJUSTMENT.**

11 A. In accordance with the Stipulation and Settlement Agreement approved by the  
12 Commission in Case No. 2004-00420, revenues associated with its Capacity  
13 Charge tariff (“Tariff C.C.”) are not to be used when designing rates in a general  
14 rate case proceeding. Accordingly, the Company has removed \$6,396,832 in  
15 revenues received through Tariff C.C. or booked as accounting deferrals from its  
16 test year revenue amounts. Please see Adjustment W01 within Section V, Exhibit  
17 2 for a calculation of the revenue adjustment.

18 **Q. PLEASE ALSO EXPLAIN THE PROPERTY TAX ANNUALIZATION**  
19 **ADJUSTMENT.**

20 A. Property tax expense reflected in the test year is based upon the actual property tax  
21 amounts collected during the test year. The Company adjusted the property tax  
22 expense on a going forward basis using the most recent assessable property value  
23 (from December 31, 2016) and the most recent property tax rates. This adjustment

1 increases property taxes by a jurisdictional amount of \$595,507 to reflect increased  
2 property tax expense going forward. Please see Adjustment W57 within Section  
3 V, Exhibit 2 for a calculation of the property tax adjustment.

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

5 A. Yes.

Kentucky Power Company's Previously Approved Environmental Compliance Projects				
Project	Plant	Pollutant	Description	In-Service Year
1	Mitchell	NO <sub>x</sub> , SO <sub>2</sub> , and SO <sub>3</sub>	Mitchell Units 1 and 2 Water Injection, Low NO <sub>x</sub> Burners, Low NO <sub>x</sub> Burner Modification, SCR, FGD, Landfill, Coal Blending Facilities and SO <sub>3</sub> Mitigation	1993-1994-2002-2007
2	Mitchell	SO <sub>2</sub> , NO <sub>x</sub> , and Gypsum	Mitchell Plant Common CEMS, Replace Burner Barrier Valves and Gypsum Material Handling Facilities	1993-2004-2007
3	Rockport	SO <sub>2</sub> / NO <sub>x</sub>	Continuous Emission Monitors (CEMS) - Rockport Plant	1994
4	Rockport	NO <sub>x</sub> , Fly Ash, and Bottom Ash	Rockport Units 1 and 2 Low NOX Burners, Over Fire Air, and Landfill	2003-2008
5	Mitchell and Rockport	SO <sub>2</sub> /NO <sub>x</sub> /Particulates/VOC and etc.	Title V Air Emission Fees at Mitchell and Rockport Plants	Annual
6	Big Sandy, Mitchell, and Rockport	NO <sub>x</sub>	Costs Associated with Nox Allowances	As-Needed
7	Big Sandy, Mitchell, and Rockport	SO <sub>2</sub>	Costs Associated with SO <sub>2</sub> Allowances	As-Needed

Kentucky Power Company's Proposed Environmental Compliance Projects				
Project	Plant	Pollutant	Description	In-Service Year
8	Big Sandy, Mitchell, and Rockport	SO <sub>2</sub> / NO <sub>x</sub>	Costs associated with the CSAPR Allowances	As-Needed
9	Mitchell	Particulates	Precipitator Modifications - Mitchell Plant Units 1 and 2	2007-2013
10	Mitchell	Particulates	Bottom Ash and Fly Ash Handling - Mitchell Plant Units 1 and 2	2008 & 2010
11	Mitchell	Mercury	Mercury Monitoring (MATS) - Mitchell Plant Units 1 and 2	2014
12	Mitchell	Selenium	Dry Fly Ash Handling Conversion - Mitchell Plant Units 1 and 2	2015
13	Mitchell	Fly Ash, Bottom Ash, Gypsum, and WWTP Solids	Coal Combustion Waste Landfill - Mitchell Plant Units 1 and 2	2014 & 2015
14	Mitchell	Particulates	Electrostatic Precipitator Upgrade - Mitchell Plant Unit 2	2015
15	Rockport	Particulates	Precipitator Modifications - Rockport Plant Units 1 & 2	2004-2009
16	Rockport	Mercury	Activated Carbon Injection (ACI) and Mercury Monitoring - Rockport Plant Units 1 & 2	2009-2010
17	Rockport	HAPS	Dry Sorbent Injection - Rockport Plant Units 1 and 2	2015
18	Rockport	Fly Ash and Bottom Ash	Coal Combustion Waste Landfill Upgrade To Accept Type 1 Ash -- Rockport Plant	2013 and 2015
19	Rockport	NO <sub>x</sub>	SCR Unit 1	2017
20	Rockport and Mitchell	Consumables	Cost of consumables used in conjunction with approved ECP projects. The costs include the cost of the consumables used as well as the return on the consumable inventory. Consumables include, but are not limited to, sodium bicarbonate, activated carbon, anhydrous ammonia, trona, lime hydrate, limestone, polymer, and urea.	As-Needed

**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.~~, S.G.S.-T.O.D., ~~M.G.S.~~, M.G.S.-T.O.D., L.G.S., L.G.S.-T.O.D., ~~Pilot K-12 School~~, I.G.S., C.S.- I.R.P., M.W., O.L., and S.L.,

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**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.

- 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)

DATE OF ISSUE: June 28, 2017

DATE EFFECTIVE: Service Rendered On And After July 29, 2017

ISSUED BY: JOHN A. ROGNESS III

TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

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

**RATE (Cont'd)**

2. Base Period Revenue Requirement, BRR

BRR = The Following Monthly Amounts:

<u>Billing Month</u>	<u>Base Net</u> <u>Environmental Costs</u>
JANUARY 2016	\$ <del>2,646,292</del> 4,136,938
FEBRUARY 2016	<del>2,624,660</del> 4,052,130
MARCH 2016	<del>2,736,994</del> 3,858,141
APRIL 2016	<del>2,795,854</del> 4,164,851
MAY 2016	<del>2,782,209</del> 4,093,983
JUNE 2016	<del>2,723,098</del> 4,323,338
JULY 2016	<del>3,416,840</del> 4,243,526
AUGUST 2016	<del>3,184,443</del> 4,382,364
SEPTEMBER 2016	<del>3,236,974</del> 4,118,637
OCTOBER 2016	<del>2,982,958</del> 4,303,417
NOVEMBER 2016	<del>2,895,369</del> 4,193,118
DECEMBER 2016	\$ <del>2,876,988</del> 4,356,104
	\$ <del>34,902,677</del> 50,226,547

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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<sub>KP(c)</sub> = Environmental Compliance Rate Base for Mitchell.
- ROR<sub>KP(c)</sub> = 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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**TARIFF E.S. (Cont'd)**  
**(Environmental Surcharge)**

**RATE (Cont'd)**

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

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

*The Environmental Compliance Rate Base for both Kentucky Power and Rockport reflects the current cost associated with the 1997 Plan, the 2003 Plan, the 2005 Plan, the 2007 Plan, and the 2014 2015 Plan, and the 2017 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 should reflect the current operating expenses associated with the 1997 Plan, the 2003 Plan, the 2005 Plan, the 2007 Plan, and the 2015 Plan and the 2017 Plan.*

The Rate of Return for Kentucky Power is ~~10.25~~ 10.31% rate of return on equity as authorized by the Commission in its Order Dated ~~June 22, 2015 XXXX XX, 2017~~ in Case No. ~~2014-00396~~ 2017-00179.

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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DATE OF ISSUE: June 28, 2017

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TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

**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

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

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

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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TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

**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 CASPR SO<sub>2</sub> allowance inventory
- over/under recovery balances between the actual costs incurred less the amount collected through the environmental surcharge
- costs associated with any Commission's consultant approved by the Commission
- costs associated with the consumption of Title IV and CSAPR SO<sub>2</sub> allowances
- costs associated with the consumption of NO<sub>x</sub> allowances
- return on NO<sub>x</sub> allowance inventory
- costs associated with maintaining approved pollution control equipment including material and contract labor (excluding plant labor)
- Costs associated with consumables used in conjunction with approved environmental projects.
- *Return on inventories of consumables used in conjunction with approved environmental projects.*

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

DATE OF ISSUE: June 28, 2017

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TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

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

**RATE (Cont'd)**

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

- Continuous Emissions Monitors
- Air Emission Fees
- Costs Associated with the Rockport Unit Power Agreement
- Activated Carbon Injection
- Mercury Monitoring
- Precipitator Modifications
- Dry Sorbent Injection
- Coal Combustion Waste Landfill
- Low NO<sub>x</sub> burners, over Fire Air Landfill
- *Selective Catalytic Reduction Technology 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<sub>x</sub> burners, Low NO<sub>x</sub> burner Modification, SCR, FGD, Landfill, Coal Blending Facilities and SO<sub>3</sub> Mitigation
- Mitchell Plant Common CEMS, Replace Burner Barrier Valves and Gypsum Material Handling Facilities
- Air Emission Fees
- Precipitator Modifications and Upgrades
- Coal Combustion Waste Landfill
- Bottom Ash and Fly Ash Handling
- Mercury Monitoring (MATS)
- Dry Fly Ash Handling Conversion

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

DATE OF ISSUE: June 28, 2017

DATE EFFECTIVE: Service Rendered On And After July 29, 2017

ISSUED BY: JOHN A. ROGNESS III

TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

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KENTUCKY POWER COMPANY

P.S.C. KY. NO. 11 ORIGINAL SHEET NO. 29-7  
CANCELLING P.S.C. KY. NO. 11 \_\_\_\_\_ SHEET NO. 29-7

**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.

DATE OF ISSUE: June 28, 2017

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ISSUED BY: JOHN A. ROGNESS III

TITLE: Director Regulatory Services

By Authority Of an Order of the Public Service Commission

In Case No. 2017-00179 Dated XXXXXXXX

**KENTUCKY POWER COMPANY**

**Environmental Surcharge**

**Summary**

**Month Ended:** **SAMPLE ONLY**

Residential Environmental Surcharge Factor =  $\frac{X}{X}$  = X

All Other Classes Environmental Surcharge =  $\frac{X}{X}$  = 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

<u>CALCULATION OF E(m)</u>			
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 33)	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	
<u>SURCHARGE FACTORS</u>		<u>Residential</u>	<u>All Other Classifications</u>
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	\$4,136,938
FEBRUARY	\$4,052,130
MARCH	\$3,858,141
APRIL	\$4,164,851
MAY	\$4,093,983
JUNE	\$4,323,338
JULY	\$4,243,526
AUGUST	\$4,382,364
SEPTEMBER	\$4,118,637
OCTOBER	\$4,303,417
NOVEMBER	\$4,193,118
DECEMBER	\$4,356,104
TOTAL	\$50,226,547



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 -	X	X	X	X	X
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, Line 21	X	X	X	X	X***

\* Includes only Mitchell and Rockport allowance consumption.

\*\* Big Sandy consumption is recovered through BS1OR and not included in E(m).

\*\*\* Inventory represents entire Kentucky Power SO2 allowance inventory.

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

SAMPLE ONLY

	(1)	(2)	(3)	(4)	(5)
	Total Allowance Inventory (Quantity)	Total Allowance Inventory (Dollar Value)	Current Allowance Inventory (Quantity)	Current Allowance Inventory (Dollar Value)	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
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, Line 22	X	X	X	X	X***
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X

\* Includes only Mitchell and Rockport allowance

\*\* Big Sandy consumption is recovered through BS1OR and not included in E(m).

\*\*\* Inventory represents entire Kentucky Power SO2 allowance inventory.

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
NOx Consumed By Kentucky Power --Mitchell and Rockport Plants	X	X	X	X	X*
NOx Consumed By Kentucky Power--Big Sandy Plant	X	X	X	X	X**
ENDING INVENTORY - Record Balance on ES FORM 3.13, Line 23	X	X	X	X	X***

\* Includes only Mitchell and Rockport allowance consumption.

\*\* Big Sandy consumption is recovered through BS1OR and not included in E(m).

\*\*\* Inventory represents entire Kentucky Power ANNX 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)					
NOx Emissions Allowance Adjustment	X	X	X	X	X
Withdrawals -	X	X	X	X	X
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
NOx Consumed By Kentucky Power --Rockport and Mitchell Plants only	X	X	X	X	X*
NOx Consumed by Kentucky Power--Big Sandy Plant	X	X	X	X	X**
ENDING INVENTORY - Record Balance on ES FORM 3.13, Line 24	X	X	X	X	X***

\* Includes only Mitchell and Rockport allowance consumption.

\*\* Big Sandy consumption is recovered through BS1OR and not included in E(m).

\*\*\* Inventory represents entire Kentucky Power ANNX allowance inventory.

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		<b>X</b>	<b>X</b>	<b>X</b>
5	*SO2 Emission Allowance Inventory		X	X	X
6	*CSAPR SO2 Emission Allowance Inventory		X	X	X
7	*CSAPR NOx Emission Allowance Inventory		X	X	X
8	*CSAPR AN Emission Allowance Inventory		X	X	X
9	Limestone Inventory (1540006)		X	X	X
10	Urea Inventory (1540012)		X	X	X
11	Urea-In Transit-Inventory (1540023)		X	X	X
12	Cash Working Capital Allowance		X	X	X
13	<b>Total Rate Base</b>		<b>X</b>	<b>X</b>	<b>X</b>
14	Weighted Average Cost of Capital	10.0620%			
15	Monthly Weighted Avg. Cost of Capital		0.84%	0.84%	0.84%
16	<b>Total Monthly Return on Rate Base</b>		<b>X</b>	<b>X</b>	<b>X</b>
17	Monthly Disposal (5010000)		X	X	X
18	Monthly Fly Ash Sales (5010012)		X	X	X
19	Monthly Urea Expense (5020002)		X	X	X
20	Monthly Trona Expense (5020003)		X	X	X
21	Monthly Lime Stone Expense (5020004)		X	X	X
22	Monthly Polymer Expense (5020005)*		X	X	X
23	Monthly Lime Hydrate Expense (5020007)		X	X	X
24	Monthly WV Air Emission Fee		X	X	X
25	SO2 Consumption **		X	X	X
26	CSAPR SO2 Consumption **		X	X	X
27	CSAPR Annual NOx Consumption		X	X	X
28	CSAPR Seasonal NOx consumption		X	X	X
29	<b>Monthly Operation Costs</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
30	Monthly FGD Maintenance Expense		X	X	X
31	Monthly Non-FGD Maintenance Expense		X	X	X
32	<b>Monthly Maintenance Expense</b>		<b>X</b>	<b>X</b>	<b>X</b>
33	Monthly Depreciation Expense		X	X	X
34	Monthly Catalyst Amortization Expense		X	X	X
35	Monthly Property Tax		X	X	X
36	<b>Monthly Other Expenses</b>		<b>X</b>	<b>X</b>	<b>X</b>
37	<b>Total Monthly Operation, Maintenance, and Other Expenses</b>		<b>X</b>	<b>X</b>	<b>X</b>
38	<b>Gross-Up for Uncollectible Expense and KPSC Maintenance Fee</b>	1.00537	X	X	X
39	<b>Total Revenue Requirement</b>		<b>X</b>	<b>X</b>	<b>X</b>

\* 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)
		<b>As of 2/28/2017</b>							
1	L/T DEBT	\$648,913,758	54.45%	5.32%		2.90%	1.005370		2.9156%
2	S/T DEBT	\$0	0.00%	0.80%		0.00%	1.005370		0.0000%
3	ACCTS REC								
3	FINANCING	\$46,105,009	3.87%	1.95%		0.08%	1.005370		0.0804%
4	C EQUITY	\$496,766,726	41.68%	<b>10.31%</b>		4.30%	<b>1.643250</b>		7.0660%
5	TOTAL	<b>\$1,191,785,493</b>	<b>100.00%</b>			<b>7.28%</b>			<b>10.0620%</b>

						<b>Debt</b>	<b>Equity</b>
6	Operating Revenues					100.0000	100.0000
7	Less Uncollectible Accounts Expense					0.3400	0.3400
8	KPSC Maintenance Assessment Fee					0.1941	0.1941
9	Income Before Income Taxes					99.4659	99.4659
10	Less State Income Taxes (Ln 4 x 5.7348)						5.8428
11	Income Before Federal Income Taxes						93.6231
14	Less Federal Income Taxes (Ln 13*35%)						32.7681
15	Operating Income Percentage						60.8550
16	Gross Up Factor (100.00/Ln 9)					1.005370	1.6433

E.S. 3.20

**Kentucky Power Company  
Rockport Environmental Costs  
SAMPLE ONLY**

Ln. No.	Cost Component		Total Costs
1	Utility Plant at Original Cost		X
2	Less Accumulated Depreciation		X
3	Less Accumulated Deferred Income Tax		X
4	Net Utility Plant		X
5	Cash Working Capital Allowance		X
6	<b>Total Rate Base</b>		X
7	Weighted Average Cost of Capital	X	
8	Monthly Weighted Avg. Cost of Capital		X
9	Monthly Return on Rate Base		X
10	Monthly Sodium Bicarbonate (5020028)		X
11	Monthly Brominated Activated Carbon (5020008)		X
12	Monthly IN Air Emission Fee		X
13	Property Tax		X
14	<b>Total Monthly Operation Costs</b>		X
15	Monthly Maintenance Expense		X
16	<b>Total Monthly Maintenance Expense</b>		X
17	Monthly Depreciation Expense		X
18	Total Monthly Other Expenses		X
19	Total Revenue Requirement		X
20	<b>KPCo Share of Environmental Revenue Requirement</b>	<b>15%</b>	X

\*

\*Indiana does not currently assess property taxes on environmental controls.

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

SAMPLE ONLY

LINE NO.	Component	Balances <b>As of xxxxxxx</b>	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								
4	OFFSETS	X	X	X		X			X
5	DEBT	X	X	X		X			X
6	EQUITY	X	X	12.1600%	1/	X	X	2/	X
6	TOTAL	X	X			X			X
<p>WACC = Weighted Average Cost of Capital</p> <p>1/ Cost Rates per the Provisions of the Rockport Unit Power Agreement</p> <p>2/ Gross Revenue Conversion Factor (GRCF) Calculation:</p> <p>7 OPERATING REVENUE X</p> <p>8 <b>LESS: INDIANA ADJUSTED GROSS INCOME</b></p> <p>9 <b>(LINE 1 X .065)</b> X</p> <p>10 INCOME BEFORE FED INC TAX X</p> <p>11 LESS: FEDERAL INCOME TAX X</p> <p>12 <b>(LINE 4 X .35)</b> X</p> <p>13 OPERATING INCOME PERCENTAGE X</p> <p>14 GROSS REVENUE CONVERSION</p> <p>15 FACTOR (100% / LINE 13) X</p>									

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.20, Line 7.

**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	<b>Non-FGD Total</b>	X	X
Rockport	Precipitator Modifications - Rockport Plant Units 1 & 2	X	X
Rockport	*Activated Carbon Injection (ACI) and Mercury Monitoring - Rockport Plant	X	X
Rockport	*Dry Sorbent Injection - Rockport Plant Units 1 and 2	X	X
Rockport	Coal Combustion Waste Landfill Upgrade To Accept Type 1 Ash -- Rockport	X	X
Rockport	Continuous Emission Monitors (CEMS) - Rockport Plant	X	X
Rockport	Rockport Units 1 and 2 Low NOX Burners	X	X
Rockport	Over Fire Air	X	X
Rockport	Landfill	X	X
Rockport	<b>Total</b>	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 Monthly Revenues and Percentage of Total Revenues (Line 1) are to be recorded on ES FORM 1.00, Line 4. 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 201x**

<u>Line No.</u>	<u>Revenue Category</u> (1)	<u>Total</u> (2)	Percentage of <u>Total</u> (3)	<b>Residential/ All Other Classes to be used in <u>201x</u></b> (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  
Cash Working Capital Calculation  
SAMPLE ONLY

ES 3.33

		<u>Rockport</u>	<u>Mitchell Non-FGD</u>	<u>Mitchell FGD</u>
1	May 2017	X	X	X
2	April 2017	X	X	X
3	March 2017	X	X	X
4	February 2017	X	X	X
5	January 2017	X	X	X
6	December 2016	X	X	X
7	November 2016	X	X	X
8	October 2016	X	X	X
9	September 2016	X	X	X
10	August 2016	X	X	X
11	July 2016	X	X	X
12	June 2016	X	X	X
	1/8 of 12-Month Total	X	X	X

<u>Ln No</u> (1)	<u>Month / Year</u> (2)	<u>Mitchell Non- FGD Costs</u> (3)	<u>Kentucky Power's share of Rockport Environmental Costs</u> (4)	<u>Gains on Sale of Allowances</u> (5)	<u>Adjusted Environmental Base</u> (6)
1	March 2016	\$3,477,986	\$ 514,231	\$ 134,076	\$3,858,141
2	April 2016	\$3,413,744	\$ 751,107	\$ -	\$4,164,851
3	May 2016	\$3,344,436	\$ 749,547	\$ -	\$4,093,983
4	June 2016	\$3,421,619	\$ 901,719	\$ -	\$4,323,338
5	July 2016	\$3,460,296	\$ 902,730	\$ 119,500	\$4,243,526
6	August 2016	\$3,492,141	\$ 890,223	\$ -	\$4,382,364
7	September 2016	\$3,370,617	\$ 761,093	\$ 13,073	\$4,118,637
8	October 2016	\$3,465,379	\$ 838,038	\$ -	\$4,303,417
9	November 2016	\$3,339,166	\$ 853,952	\$ -	\$4,193,118
10	December 2016	\$3,426,802	\$ 934,402	\$ 5,100	\$4,356,104
11	January 2016	\$3,288,715	\$ 848,223	\$ -	\$4,136,938
12	February 2016	\$3,237,579	\$ 814,551	\$ -	\$4,052,130
13	<b>Total</b>	<b><u>\$40,738,480</u></b>	<b><u>\$9,759,816</u></b>	<b><u>\$271,749</u></b>	<b><u>\$50,226,547</u></b>

Kentucky Power Company  
Estimated Rockport SCR Revenue Requirement

Expense Month (1)	Year (2)	Environmental Utility Plant at Original Cost (3)	Accumulated Depreciation (4)	ADFIT (5)	Rate Base (6)	WACC (7)	Monthly Return on Rate Base (8)	Monthly O & M (9)	Monthly Depreciation (10)	Total SCR Monthly Environmental Revenue Requirement (11)	KPCo Share of Rockport (12)	Average Retail Allocation for Test Year (13)	Proposed Revenue Increase (14)
November	2017	\$268,517,000	(\$3,938,250)	(\$43,311,512)	\$221,267,238	8.52%	\$1,570,997	\$51,350	\$787,650	\$2,409,997	15%	92.1%	\$332,941
December	2017	\$268,517,000	(\$4,725,900)	(\$47,098,553)	\$216,692,547	8.52%	\$1,538,517	\$51,350	\$787,650	\$2,377,517	15%	92.1%	\$328,454
January	2018	\$268,517,000	(\$5,513,550)	(\$47,105,562)	\$215,897,888	8.52%	\$1,532,875	\$51,350	\$787,650	\$2,371,875	15%	92.1%	\$327,675
February	2018	\$268,517,000	(\$6,301,200)	(\$47,112,572)	\$215,103,228	8.52%	\$1,527,233	\$51,350	\$787,650	\$2,366,233	15%	92.1%	\$326,895
March	2018	\$268,517,000	(\$7,088,850)	(\$47,119,581)	\$214,308,569	8.52%	\$1,521,591	\$51,350	\$787,650	\$2,360,591	15%	92.1%	\$326,116
April	2018	\$268,517,000	(\$7,876,500)	(\$47,126,590)	\$213,513,910	8.52%	\$1,515,949	\$51,350	\$787,650	\$2,354,949	15%	92.1%	\$325,336
May	2018	\$268,517,000	(\$8,664,150)	(\$47,133,600)	\$212,719,250	8.52%	\$1,510,307	\$51,350	\$787,650	\$2,349,307	15%	92.1%	\$324,557
June	2018	\$268,517,000	(\$9,451,800)	(\$47,140,609)	\$211,924,591	8.52%	\$1,504,665	\$51,350	\$787,650	\$2,343,665	15%	92.1%	\$323,777
July	2018	\$268,517,000	(\$10,239,450)	(\$47,147,618)	\$211,129,932	8.52%	\$1,499,023	\$51,350	\$787,650	\$2,338,023	15%	92.1%	\$322,998
August	2018	\$268,517,000	(\$11,027,100)	(\$47,154,628)	\$210,335,272	8.52%	\$1,493,380	\$51,350	\$787,650	\$2,332,380	15%	92.1%	\$322,218
September	2018	\$268,517,000	(\$11,814,750)	(\$47,161,637)	\$209,540,613	8.52%	\$1,487,738	\$51,350	\$787,650	\$2,326,738	15%	92.1%	\$321,439
October	2018	\$268,517,000	(\$12,602,400)	(\$47,168,647)	\$208,745,953	8.52%	\$1,482,096	\$51,350	\$787,650	\$2,321,096	15%	92.1%	\$320,659

Estimated Total Annual Revenue Requirement **\$3,903,065**

**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) An Order )  
Approving Its 2017 Environmental Compliance )  
Plan; (3) An Order Approving Its Tariffs And )  
Riders; (4) An Order Approving Accounting )  
Practices To Establish Regulatory Assets And )  
Liabilities; And (5) An Order Granting All Other )  
Required Approvals And Relief )

Case No. 2017-00179

**DIRECT TESTIMONY OF**  
**BRAD N. HALL**  
**ON BEHALF OF KENTUCKY POWER COMPANY**



**DIRECT TESTIMONY OF  
BRAD N. HALL, ON BEHALF OF  
KENTUCKY POWER COMPANY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**CASE NO. 2017-00179**

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**DIRECT TESTIMONY OF  
BRAD N. HALL, ON BEHALF OF  
KENTUCKY POWER COMPANY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**I. INTRODUCTION**

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

2 A. My name is Brad N. Hall, and I am the Manager, External Affairs, for Kentucky  
3 Power Company (“Kentucky Power” or “Company”). My business address is 855  
4 Central Avenue, Suite 200, Ashland, Kentucky 41101.

**II. BACKGROUND**

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

7 A. I was born and raised in Floyd County, within the Company’s service territory,  
8 and I graduated from Wheelwright High School in Wheelwright, Kentucky. I  
9 hold a Master’s Degree in Business Administration from Morehead State  
10 University and a Bachelors of Business Administration with a double emphasis in  
11 Accounting and Computer Science from the University of Pikeville. I am also a  
12 graduate of the University of Oklahoma’s Economic Development Institute and  
13 the U.S. Chamber of Commerce’s Institute for Non-Profit Management.

14 I have over twenty years of economic development and management  
15 experience. Prior to joining Kentucky Power, I served two years as the President  
16 & Chief Executive Officer (“CEO”) of the Southeast Kentucky Chamber of  
17 Commerce, four years as the President & CEO of the Pike County Chamber of  
18 Commerce, five years as the Director of Operations for Southeast Telephone

1 Company, five years as the Controller and Office Manager for Mountain Water  
2 District, two years as Senior Accountant – Plant Assets for the University of  
3 Kentucky, and three years as Accountant and Pager Department Manager for  
4 Eastern Telephone Company. I joined Kentucky Power in my current role five  
5 years ago.

6 **Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGER, EXTERNAL**  
7 **AFFAIRS?**

8 A. I am responsible for the creation, implementation, and management of Kentucky  
9 Power’s economic development and government relations efforts for the  
10 Company’s twenty county service territory. I also serve as the Company’s  
11 environmental affairs manager.

12 With regard to economic development, I am responsible for the  
13 administration of the Kentucky Power Economic Advancement Program  
14 (“KEAP”) and the Kentucky Power Economic Growth Grants (“K-PEGG”)  
15 program. I also serve as the Company’s representative in regional economic  
16 development activities including Shaping our Economic Region (“SOAR”), One  
17 East Kentucky, and Ashland Alliance. I work with the economic development  
18 organizations in the Company’s service territory to identify and support projects  
19 that will attract new businesses to and promote business expansion within the  
20 region.

21 With regards to government relations, I am responsible for coordinating  
22 the Company’s relationships with federal, state, and local officials. In this role, I  
23 keep Kentucky Power officials apprised of how proposed legislation and

1 regulations will affect the Company’s operations and provide elected officials  
 2 with an understanding of how their proposed actions will affect the Company and  
 3 its ability to provide safe, reliable, and low-cost electric service to its customers.

4 Finally, as environmental affairs manager, I am responsible for ensuring  
 5 that the Company remains apprised of how environmental regulations affect its  
 6 operations and that its operations comply with those regulations.

7 **Q. HAVE YOU PREVIOUSLY TESTIFIED FOR KENTUCKY POWER**  
 8 **BEFORE THIS COMMISSION?**

A. Yes. I filed testimony in Case No. 2014-00336 in support of Kentucky Power’s  
 Economic Development Rider tariff.

**III. PURPOSE OF TESTIMONY**

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

11 A. The purpose of my testimony is to describe Kentucky Power’s economic  
 12 development efforts and successes within the Company’s service territory. In  
 13 addition, my testimony covers the following specific topics:

- 14 • The development, operation, and status of the Company’s Kentucky  
 15 Power Economic Growth Grants (“K-PEGG”) program.
- 16 • The Company’s proposal to revise the Kentucky Economic Development  
 17 Surcharge (“KEDS”) Tariff and increase the KEDS rate by \$0.10 per  
 18 customer per month with a corresponding Company match.
- 19 • The Company’s implementation of the Kentucky Power Economic  
 20 Advancement Program (“KEAP”).

- 1           • American Electric Power Company, Inc.’s (“AEP”) investment in  
2           economic development within the Company’s service territory.

3           Additionally, I will describe the potential economic development benefits of the  
4           Company’s proposed changes to its Green Pricing Option Rider.

5   **Q.    ARE YOU SPONSORING ANY EXHIBITS TO YOUR TESTIMONY?**

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

- 7           • **EXHIBIT BNH-1** – InSite Consulting Regional Blueprint for Economic  
8           Development report;
- 9           • **EXHIBIT BNH-2** – Detailed description of K-PEGG Program grant  
10          recipients; and
- 11          • **EXHIBIT BNH-3** – Detailed description of KEAP grant recipients.

12 **Q.    WERE THESE EXHIBITS PREPARED OR ASSEMBLED BY YOU OR**  
13 **UNDER YOUR SUPERVISION?**

14 A.    Yes.

**IV.    THE NEED FOR ECONOMIC DEVELOPMENT IN**  
**THE COMPANY’S SERVICE TERRITORY**

15 **Q.    CAN YOU PLEASE DESCRIBE THE ECONOMIC TRENDS IN THE**  
16 **COMPANY’S SERVICE TERRITORY?**

17 A.    The region the Company serves has seen a downturn in economic activity since  
18       2008. This economic downturn is widespread, but has been primarily driven by a  
19       decrease in coal and steel production in the region.

20 **Q.    CAN YOU QUANTIFY THE REDUCTION IN COAL PRODUCTION IN**  
21 **THE REGION?**

1 A. Yes. According to the Kentucky Energy and Environment Cabinet's fourth  
2 quarter 2016 Coal Report, the number of employed coal miners in Eastern  
3 Kentucky has dropped from an annual average of 14,373 in 2008 to 3,833 in the  
4 2016. Production has dropped even more steeply: from 91,045,224 tons in 2008  
5 to 16,689,541 tons in 2016.

6 **Q. HOW HAS A DECREASE IN STEEL PRODUCTION CONTRIBUTED TO**  
7 **THE ECONOMIC DOWNTURN?**

8 A. As prices for steel have decreased in the global market, steel producers in the  
9 region have reduced output. AK Steel idled its blast furnace and related steel-  
10 making operations in Ashland, Kentucky in December 2015. Idling the blast  
11 furnace resulted in the loss of over 600 jobs. Additionally, Kentucky Electric  
12 Steel has reduced its operations as the market has softened.

13 **Q. WHAT HAS BEEN THE IMPACT OF THIS DOWNWARD ECONOMIC**  
14 **TREND ON THE COMPANY?**

15 A. The primary impact of the downward economic trend is the loss of load and  
16 customers. Between 2008 and 2016, the Company lost 6,931 customers. During  
17 that same period, the Company has seen its total annual sales fall from  
18 approximately 7.24 GWh to 5.80 GWh. At the same time, population in the  
19 Company's service territory has decreased by approximately 16,500 individuals.

20 **Q. ARE THERE ANY LESSONS TO BE LEARNED IN THIS DOWNWARD**  
21 **ECONOMIC TREND?**

22 A. Yes. The decrease in production from the coal and steel manufacturing sectors  
23 and its impact on the communities Kentucky Power serves show that the region

1 would benefit from diversifying its economic base. Greater economic diversity  
2 will give the region a broader economic platform that in turn will allow it to better  
3 weather downturns in specific industries. Greater diversity of industries based in  
4 the region also provides increased opportunities for growth and would take  
5 advantage of the myriad of talents found within the communities Kentucky Power  
6 serves. Kentucky Power’s economic development efforts are focused on helping  
7 communities within its service territory to attract and expand businesses to aid in  
8 diversifying the region’s economic base.

**V. KENTUCKY POWER ECONOMIC DEVELOPMENT HISTORY**

9 **Q. WHY IS KENTUCKY POWER ENGAGED IN ECONOMIC**  
10 **DEVELOPMENT?**

11 A. Since 2012 Kentucky Power has worked hard to attract new businesses to its  
12 service territory while also working to retain and expand existing businesses.  
13 New diversified economic activity in the Company’s service territory benefits  
14 both customers and the Company. Increased economic activity means new jobs  
15 and opportunity for the service territory, and new customers allow the Company  
16 to spread its fixed costs more broadly.

17 **Q. PLEASE DESCRIBE KENTUCKY POWER’S RECENT ECONOMIC**  
18 **DEVELOPMENT EFFORTS.**

19 A. I was hired in 2012 by Kentucky Power to reinitiate the Company’s economic  
20 development efforts. Between 2001 and 2012, the Company lacked an employee  
21 devoted to economic development efforts. As a first step after I was employed,  
22 Kentucky Power commissioned InSite Consulting to perform a “gap analysis” of

1 economic development efforts in the Company’s service territory and to develop a  
2 plan of action to close the gaps. Kentucky Power invested over \$175,000 in  
3 shareholder funds for InSite’s services.

4 As I describe below, Kentucky Power in 2014 began the Kentucky Power  
5 Economic Advancement Program (“KEAP”). It provides economic development  
6 grant assistance to Lawrence County and its contiguous Kentucky counties. Also  
7 in 2014, the Company partnered with several banks in the communities it served  
8 to participate in its Local Bank Financing Program as part of a larger financing  
9 note issuance. The Local Bank Financing Program capitalizes on substantial local  
10 bank deposits and employs an otherwise under-utilized financial resource. The  
11 program provides investment-grade lending opportunities for local banks in the  
12 Company’s service territory and thereby aids in diversifying and strengthening  
13 their loan portfolio. The Local Bank Financing Program also aids in the  
14 economic development of the Company’s service territory by deploying local  
15 capital to fund local infrastructure development.

16 In 2016, Kentucky Power implemented the K-PEGG program through  
17 which the Company issued economic grants throughout its service territory. The  
18 K-PEGG Program is funded by revenues collected by the Company through the  
19 Kentucky Economic Development Surcharge and a dollar-for-dollar match of  
20 those revenues by the Company from shareholder funds. The Company also in  
21 2016 moved its corporate headquarters to Ashland, Kentucky within its service  
22 territory. Finally, Kentucky Power recently hired Jacob Colley as another  
23 external affairs manager. Prior to joining Kentucky Power, Mr. Colley served as

1 President and CEO of the Southeast Kentucky Chamber of Commerce. Mr.  
2 Colley will be based in Pikeville and, as part of his job, will assist me to  
3 implement the Company's economic development efforts.

4 **Q. PLEASE DESCRIBE THE COMPANY'S LOCAL BANK FINANCING**  
5 **PROGRAM.**

6 A. As part of a \$200,000,000 financing package approved by the Commission in  
7 Case No. 2014-00210, the Company entered into a four-year variable rate \$75  
8 million loan facility with local Kentucky banks. The use of local bank financing  
9 is an innovative opportunity for the Company to partner locally to fund Kentucky  
10 Power spending with Kentucky capital. The program provided investment-grade  
11 lending opportunities for local banks in the Company's service territory  
12 diversifying and strengthening their loan portfolios. Twelve different banks  
13 participated in the loan facility.

14 **VI. INSITE ECONOMIC DEVELOPMENT GAP ANALYSIS**

15 **Q. WHAT IS AN ECONOMIC DEVELOPMENT GAP ANALYSIS?**

16 A. An economic development gap analysis, like the one performed by InSite for  
17 Kentucky Power, is a comprehensive review of the current state of economic  
18 development efforts in a region. It evaluates the desired economic development  
19 framework against the current state of economic development efforts and  
20 identifies where gaps exist.

21 **Q. WHAT DID THE GAP ANALYSIS PERFORMED BY INSITE**  
22 **CONSULTING SHOW?**

1 A. InSite’s analysis identified the following key gaps in economic development  
2 efforts in the Company’s service territory:

- 3 • A lack of functional and properly trained local or regional economic  
4 development organizations;
- 5 • Limited competitive and marketable industrial parks and buildings;
- 6 • Insufficient marketing infrastructure for available opportunities; and
- 7 • Insufficient workforce development and training.

8 A copy of the InSite gap analysis report is included as **EXHIBIT BNH-1**.

9 **Q. HOW DID THE RESULTS OF THE GAP ANALYSIS DRIVE KENTUCKY**  
10 **POWER’S ECONOMIC DEVELOPMENT EFFORTS?**

11 A. The InSite gap analysis report provided Kentucky Power with a road map for its  
12 economic development program, and the Company’s efforts are directed at  
13 closing the gaps identified in the InSite Report. Closing these gaps provides the  
14 region with the best chance of attracting new business opportunities and,  
15 importantly, jobs. Kentucky Power’s program provides funding, through the K-  
16 PEGG Program, KEAP grants, and economic development funds provided by  
17 AEP, for economic development agencies to close the gaps identified by InSite.  
18 The economic development projects funded by the Company are discussed in  
19 more detail below. However, in general, these projects are smaller projects  
20 designed to help regional economic development entities add incremental  
21 capabilities or to improve properties to make them competitive for new or  
22 expanded businesses.

1 **Q. WHAT TYPES OF PROJECTS ARE SUPPORTED BY KENTUCKY**  
2 **POWER’S ECONOMIC DEVELOPMENT EFFORTS?**

3 A. There are four types of projects supported by Kentucky Power’s economic  
4 development efforts:

5 (1) economic development agency support projects;

6 (2) workforce training projects;

7 (3) site development projects; and

8 (4) marketing and promotional projects.

9 These projects are designed to address the four key gaps identified in the InSite  
10 report.

11 **Q. CAN YOU GENERALLY DESCRIBE THESE PROJECT CATEGORIES?**

12 A. Yes. Economic development agency support projects are those that are designed  
13 to provide local economic agencies with resources necessary to best attract and  
14 retain businesses in the area. These projects range from initial investments to help  
15 economic development agencies get off the ground to on-going budgetary support  
16 for those organizations. These projects also include funding for education  
17 projects that provide key personnel within the economic development  
18 organizations opportunities to receive the best training available. This training  
19 equips economic development professionals in the region with the tools necessary  
20 to maximize their communities’ economic development potential and attract new  
21 businesses and jobs.

22 Workforce training programs are projects that allow local and regional  
23 economic development organizations to provide advanced training to workers.

1        These projects provide valuable tools to workers in the region in industries that  
2        have seen contraction. These tools allow workers to develop new skills that will  
3        allow them to compete in the modern workforce.

4                Site development projects address a lack of adequate building stock and  
5        industrial sites within the Company’s service territory. Projects addressing this  
6        need help local economic development organizations make the necessary  
7        infrastructure improvements in the region that will help them attract new  
8        businesses to their communities. These projects also assist communities in their  
9        efforts to obtain site certifications that will make the communities more  
10       competitive in economic development efforts.

11               Finally, marketing and promotion projects provide assistance to economic  
12       development organizations to allow them to promote their communities as viable  
13       options and attract companies looking to relocate or expand. These types of  
14       projects include targeted promotion of the sites and buildings that are ready for  
15       development and support for key regional organizations with the responsibility for  
16       economic development marketing in the service territory.

17    **Q.    CAN YOU ASSESS THE SUCCESS OF KENTUCKY POWER’S**  
18    **ECONOMIC DEVELOPMENT EFFORTS?**

19    A.    It is still early and there is much work to be done, but economic development  
20       momentum in the service territory is building. When Kentucky Power  
21       commissioned the InSite study in 2012, there were zero active economic  
22       development projects – defined as instances where communities were actively  
23       involved in potential business relocation or expansion efforts – within the region.

1 Currently, there are 23 active economic development projects in the service  
2 territory. Successful economic development projects have resulted in the creation  
3 of approximately 830 full-time jobs in the service territory, including  
4 approximately 550 full time (and 1,000 construction) jobs with Braidy Industries  
5 in Greenup County, 115 jobs with Logan Corporation in Magoffin County, 75  
6 jobs with RCL Chemical in Floyd and Pike Counties, 65 jobs with Steel Ventures  
7 in Greenup County, 18 jobs with Quality Metal in Lawrence County, and 15 jobs  
8 with Thoroughbred Aviation Maintenance in Martin County. This is great  
9 progress, but much work remains. The Company’s priority is to expand this  
10 success throughout the region it serves.

**VII. KENTUCKY POWER ECONOMIC GROWTH GRANT PROGRAM**

11 **Q. PLEASE DESCRIBE THE KENTUCKY POWER ECONOMIC GROWTH**  
12 **GRANT (“K-PEGG”) PROGRAM.**

13 A. The K-PEGG Program provides grant funding targeted specifically at projects  
14 designed to enhance the economic development potential of the communities in  
15 the Company’s service territory. The program is focused on the four “gap-filling”  
16 project types described earlier in my testimony: (1) economic development  
17 agency support projects; (2) workforce training projects; (3) site development  
18 projects; and (4) marketing and promotional projects.

19 **Q. HOW IS THE K-PEGG PROGRAM FUNDED?**

20 A The K-PEGG Program is a joint effort between Kentucky Power and its  
21 customers. In Case No. 2014-00396, the Commission approved the Company’s  
22 Kentucky Economic Development Surcharge Tariff (“Tariff KEDS”) . Under

1           Tariff KEDS, the Company collects from each of its customers \$0.15 monthly to  
2           support economic development activities within the service territory. The  
3           Company matches, on a dollar-for-dollar basis, the amounts collected through  
4           Tariff KEDS.

5                     As of February 28, 2017, the Company had collected \$493,529.46 through  
6           Tariff KEDS and had contributed a matching total of \$493,529.46. Since  
7           inception, a total of \$987,058.92 has been deposited into the KEDS program  
8           account. Kentucky Power maintains the KEDS program funds in a segregated  
9           account.

10                    Kentucky Power distributes the funds in the KEDS program account  
11           through the K-PEGG Program. Through this program, Kentucky Power issues  
12           grants to economic development entities in the Company’s service territories. As  
13           of May 13, 2017, the Company has approved 17 K-PEGG Program grants totaling  
14           \$831,200.

15   **Q.    WHO IS ELIGIBLE TO PARTICIPATE IN THE K-PEGG PROGRAM?**

16   A.    The K-PEGG program is open to communities within the Company’s service  
17           territory and to non-profit community economic development organizations such  
18           as chambers of commerce, area development districts, and broader regional  
19           economic development organizations such as SOAR, One East Kentucky, and  
20           Ashland Alliance. Kentucky Power does not issue grants directly to companies  
21           because it prefers to rely on the expertise of local economic development agencies  
22           to determine what projects and prospects are worth funding.

23   **Q.    PLEASE DESCRIBE THE K-PEGG APPLICATION PROCESS.**

1 A. Kentucky Power reviews applications for grants under the K-PEGG Program  
2 throughout the year. If there are funds available in the K-PEGG Program account  
3 and the application is approved by the review team, Kentucky Power will issue a  
4 grant.

5 Each review team member reviews each K-PEGG application  
6 independently and then provides a “yes” or “no” vote supplemented by written  
7 support for their vote. Once all votes are received, a conference call is held to  
8 discuss any potential concerns, provide feedback, and issue a funding  
9 recommendation for the project. This recommendation is then forwarded to the  
10 Kentucky Power President & COO for final review and acknowledgement of the  
11 team’s recommendation. If the Company President accepts the team’s  
12 recommendation, I contact the applicant with the Company’s decision. If the  
13 Company President rejects the recommendation, the application is returned to the  
14 team for additional evaluation and a determination of whether additional support  
15 is necessary for the application or if the application should be denied.

16 **Q. WHO SERVES ON THE K-PEGG PROGRAM REVIEW TEAM?**

17 A. The K-PEGG application review team comprises nine members. Seven members  
18 of the team are Kentucky Power employees and the remaining two are external  
19 economic development professionals. The review team currently includes:

20 Kentucky Power Representatives

- 21 • Director, Customer Services
- 22 • Manager, Corporate Communications
- 23 • Manager, Reliability Services

- 1 • Manager, Distribution Services – Pikeville Area
- 2 • Director, Regulatory Services
- 3 • Managers, External Affairs

4 External Representatives

- 5 • Representative from the Kentucky Association of Economic Development
- 6 • Representative from the Kentucky Cabinet for Economic Development

7 **Q. PLEASE DESCRIBE THE PROJECTS THAT HAVE RECEIVED**  
 8 **GRANTS UNDER THE K-PEGG PROGRAM.**

9 A. Since the launch of the K-PEGG program in January 2016, the Company has  
 10 received a total of 23 grant requests. Of the 23 requests, the Company has  
 11 approved 17 and denied 5. One of the applicants withdrew its K-PEGG  
 12 application and submitted a similar request for a KEAP grant as described later in  
 13 my testimony. The Company only distributes grant funding when sufficient funds  
 14 are available in the K-PEGG Account.

15 Recipients of grants through the K-PEGG Program are listed below:

DATE	RECIPIENT	PROJECT DESCR.	PROJECT TYPE	AMT
2/23/16	One East KY	Support One East KY Budget Req'ts (2015/2016 budget)	EDA Support	\$10,000
2/23/16	One East KY	Support One East KY Budget Req'ts (2016/2017 budget)	EDA Support	\$50,000
2/17/16	Perry County Economic Dev. Board	Support PCEDB Budget Req'ts	EDA Support	\$25,000
2/28/16	City of Hazard	Sewer Upgrades at Coalfields Ind. Park.	Site Development	\$56,000
2/28/16	SOAR	Support SOAR Budget Req'ts	EDA Support	\$25,000

DATE	RECIPIENT	PROJECT DESCR.	PROJECT TYPE	AMT
4/29/16	City of Pikeville	City Broadband Project Engineering Design	Site Development	\$75,000
6/27/16	One East Kentucky	Aerospace Assessment & Marketing Plan	EDA Support; Mkting/Promotion	\$37,500
6/27/16	Big Sandy Regional Ind. Dev. Auth.	Acquisition of Ind. Prop. in Martin Co.	Site Development	\$100,000
7/20/16	Big Sandy Community & Technical College	Equipment for Advanced Technology Center	Workforce Training	\$75,000
7/20/16	Ashland Alliance	Aerospace Cert./ Marketing Plan	EDA Support; Mkting/Promotion	\$84,000
8/15/16	Floyd Co. Fiscal Ct.	Bridge funding for RCL Chemicals Gas to Liquids Project	Site Development	\$100,000
8/15/16	Ashland Alliance	Wurltand Riverport Ind. Park Infrastructure Improvement	Site Development	\$15,000
4/5/17	One East KY	Support One East KY Budget Req'ts (2017/2018 budget)	EDA Support	\$50,000
4/5/17	SOAR	Support SOAR Budget Req'ts	EDA Support	\$25,000
4/5/17	Hazard - Perry County Economic Dev. Alliance	Support HPCEDA Budget Req'ts	EDA Support	\$25,000
4/5/17	Southeast Kentucky Econ. Dev. Corp.	Consulting Services for Companies to receive ISO 9100 and/or AS 9100 certifications	Workforce Training	\$60,000
4/5/17	Pike Co. Fiscal Court	Creation of Teleworks Hubs	Workforce Training	\$18,700

1 Further details of the projects funded by Kentucky Power through the K-PEGG  
2 Program are included in **EXHIBIT BNH-2**.

3 **Q. HAVE THERE BEEN ANY GRANT APPLICATIONS THAT HAVE BEEN**  
4 **DENIED?**

1 A. Yes. The Company has denied five K-PEGG requests since the program's  
2 inception in January 2016. All five were denied primarily for lack of detail as to  
3 how the funds would be used. The Company provided feedback to the denied  
4 applicants on how they could refine their applications to make them more  
5 successful.

6 **Q. HOW DOES KENTUCKY POWER TRACK THE UTILIZATION OF K-  
7 PEGG FUNDS?**

8 A. Every K-PEGG grant recipient is required to provide a quarterly progress report  
9 to the Company until the project funded by the grant is complete. These reports  
10 provide the Company with information that allows it to ensure that funds provided  
11 are being used as planned. All of the money provided through the K-PEGG  
12 Program must be directed towards the project identified in the application and not  
13 for unrelated administrative expenses.

14 **Q. HAVE ANY OF THE PROJECTS FUNDED THROUGH THE K-PEGG  
15 PROGRAM RESULTED IN NEW JOBS?**

16 A. Yes. Before describing these early success stories, it's important to recognize that  
17 many of the projects funded through the K-PEGG Program are not designed to  
18 result in direct job creation. Instead, those projects are designed to assist the local  
19 economic development organizations create and maintain the institutional  
20 infrastructure necessary for them to compete for businesses and jobs for the  
21 service territory.

22 That said, there are four projects worth noting as early success stories.  
23 First, Logan Corporation, a mining equipment manufacturer facing economic

1 difficulty as a result of the downturn in the coal mining industry, transitioned its  
2 business to manufacturing dump truck beds. Logan’s facility in Martin County  
3 was of insufficient size to meet the growing demand for its new product. Logan  
4 identified an existing, vacant facility in Magoffin County that would meet its  
5 needs, but needed someone to purchase its Martin County facility to make the  
6 deal work economically. Kentucky Power issued a grant through the K-PEGG  
7 Program to the Big Sandy Regional Industrial Development Authority  
8 (“BSRIDA”) to allow it to purchase the Logan facility in Martin county. This  
9 allowed Logan to purchase the larger facility in Magoffin County for its new  
10 truck bed business. As a result of this investment, none of the 35 jobs at the  
11 Martin County facility will leave the service territory, and Logan Corporation will  
12 be adding an additional 80 jobs at the new facility in Magoffin County. In  
13 addition, the BSRIDA now owns a facility it can market to prospective new  
14 businesses.

15 Second, Kentucky Power provided a grant through the K-PEGG Program  
16 to the Ashland Alliance to offset the costs of expanding a natural gas line in  
17 Greenup County to support the development of a new galvanizing facility for  
18 Steel Ventures, Inc. This new facility will result in 65 new jobs.

19 Third, Kentucky Power issued a grant to the Floyd County Fiscal Court to  
20 support site development work necessary for RCL Chemical Conversion, LLC to  
21 locate natural gas to liquids facilities in Floyd and Pike Counties. Once  
22 constructed, the new facilities will result in 100 new jobs.

1           In each of these instances, the funds provided by Kentucky Power through  
2 the K-PEGG Program allowed local economic development authorities to close  
3 gaps in the packages they offered. Closing these gaps made it possible for the  
4 new business prospects to locate within the service territory.

5           Finally, both Ashland Alliance and One East Kentucky utilized K-PEGG  
6 funding to obtain “AEROready” certifications for the communities they serve.  
7 These independent certifications will help the communities demonstrate to  
8 aerospace-related companies that the region has the skilled workforce and assets  
9 necessary to the aviation and aerospace industry. The organizations used K-  
10 PEGG funding to complete the studies necessary to obtain the AEROready  
11 certification. The AEROready certifications played a key role in attracting Braidy  
12 Industries to Greenup County and Thoroughbred Aviation to Maintenance to  
13 Martin County.

#### **VIII. NEED TO EXPAND K-PEGG PROGRAM**

14 **Q. IS KENTUCKY POWER PROPOSING TO EXPAND THE K-PEGG**  
15 **PROGRAM?**

16 A. Yes. While the early results of the K-PEGG Program show promise, additional  
17 work is necessary to make the region’s economic development efforts more  
18 competitive. In order to expand the impact that the K-PEGG Program has on the  
19 economic development efforts in the region, Kentucky Power is proposing to  
20 expand the program by increasing the per customer surcharge from \$0.15 per  
21 month to \$0.25 per month. The Company’s matching contribution will  
22 correspondingly increase. The Company estimates that this increase will result in

1 adding approximately \$400,000 annually to the amount available for economic  
2 development through the K-PEGG Program.

3 **Q. HOW WILL THE ADDITIONAL FUNDING FOR THE K-PEGG**  
4 **PROGRAM IMPACT THE COMPANY'S ECONOMIC DEVELOPMENT**  
5 **EFFORTS?**

6 A. Increasing the scope of the K-PEGG Program will allow the Company to better  
7 fill the gaps identified in the InSite report. Expanded funding will allow the  
8 Company to support more economic development projects and perhaps more  
9 importantly, give the Company more flexibility to respond to economic  
10 development opportunities as they arise.

11 As discussed above, the Company can only issue grants for economic  
12 development projects if there are funds available in the segregated K-PEGG  
13 account. In 2016 alone, Kentucky Power had to delay its review of two  
14 applications because there were insufficient funds in the Company's K-PEGG  
15 account. Increasing the funds available makes it less likely that funds will be  
16 exhausted when economic development opportunities arise.

17 Also, additional funds in the K-PEGG account will also make it more  
18 likely that the Company will have resources available to support larger economic  
19 development projects in the region as they become available. Simply put,  
20 increasing the amount of funds available in the K-PEGG Program will allow  
21 Kentucky Power to capitalize on the momentum building in the region for  
22 economic development.

**IX. KENTUCKY POWER ECONOMIC ADVANCEMENT PROGRAM**

1 **Q. PLEASE DESCRIBE THE KENTUCKY POWER ECONOMIC**  
2 **ADVANCEMENT PROGRAM.**

3 A. The Kentucky Power Economic Advancement Program (“KEAP”) is an economic  
4 development program through which the Company provides economic  
5 development funding for Lawrence County and the six Kentucky counties  
6 contiguous to Lawrence County – Boyd, Carter, Elliot, Johnson, Martin, and  
7 Morgan Counties (the “KEAP Counties”). Through KEAP, the Company  
8 provides \$233,000 per year in economic development funding to the seven  
9 counties. KEAP originated in the Stipulation and Settlement Agreement relating  
10 to the transfer of an undivided fifty-percent interest in the Mitchell Generating  
11 Station to Kentucky Power approved by the Commission in Case No. 2012-00578  
12 with certain modifications.

13 **Q. PLEASE DESCRIBE HOW THE COMPANY IMPLEMENTS THE KEAP**  
14 **PROGRAM.**

15 A. Kentucky Power created KEAP to implement its economic development  
16 obligations under the Stipulation and Settlement Agreement. Through KEAP,  
17 Kentucky Power annually makes \$200,000 in grants to economic development  
18 projects in the KEAP Counties. The Company also makes annual contributions of  
19 \$16,500 each to Ashland Community and Technical College and to Big Sandy  
20 Community and Technical College, the two community and technical colleges  
21 that serve the KEAP program area, for job training. Prior to disbursing money,  
22 the Company reviews each college’s planned job training programs to ensure they

1 meet the goals of the KEAP Program. The Company’s annual total contributions  
 2 through the KEAP Program (in grants and in contributions to community and  
 3 technical colleges) is \$233,000.

4 Unlike the K-PEGG Program, where applications are accepted year round,  
 5 the Company issues KEAP grants based on applications received during a fixed  
 6 application period. Since inception, the KEAP program has provided a total of  
 7 \$931,150 in economic development funding for the KEAP Counties.

8 **Q. CAN YOU DESCRIBE THE TYPES OF PROJECTS THAT HAVE**  
 9 **RECEIVED KEAP GRANTS?**

10 A. Like the projects funded through the K-PEGG Program, Kentucky Power has  
 11 issued KEAP grants for projects that are consistent with filling the gaps identified  
 12 in the InSite Report described above. Recipients of KEAP grant funding are  
 13 listed below:

YEAR	RECIPIENT	PROJECT DESCR.	PROJECT TYPE	AMT
2014	Gateway, FIVCO, & Big Sandy Area Dev. Districts	Economic Development Training	EDA Support	\$8,000
2014	City of Paintsville	Improve parking at Teays Branch property	Site Development	\$100,000
2014	SE KY Chamber of Commerce (Louisa Chapter)	Upgrade existing building to support metal fabrication facility	Site Development	\$92,000
2015	NE KY Regional Ind. Authority	Prepare “build ready” site at EastPark Industrial Park	Site Development	\$100,000
2015	SE KY Chamber of Commerce (Louisa Chapter)	Upgrade industrial facility owned by Lawrence County	Site Development	\$90,300

YEAR	RECIPIENT	PROJECT DESCR.	PROJECT TYPE	AMT
2015	Gateway, FIVCO, & Big Sandy Area Dev. Districts	Economic Development Training	EDA Support	\$9,700
2016	Ashland Alliance & NE KY Regional Ind. Authority	Upgrade spec building at EastPark Industrial Park	Site Development	\$45,000
2016	Gateway, FIVCO, & Big Sandy Area Dev. Districts	Economic Development Training	EDA Support	\$10,400
2016	City of Olive Hill	Upgrade wastewater treatment facility to support additional users	Site Development	\$25,000
2016	FIVCO ADD	Marketing property in EastPark Industrial Park	Mkting/Promotion	\$4,000
2016	SE KY Chamber of Commerce (Louisa Chapter)	Upgrade equipment at facility used for metal manufacturing	Site Development	\$92,750
2017	East Kentucky Advanced Manufacturing Institute (eKAMI)	eKAMI startup funding	Site Development	\$50,000
2017	Ashland Alliance	Build Ready site certifications and marketing support	Site Development/ Mkting/Promotion	\$17,500
2017	One East KY	MRO Aerospace Project	Site Development	\$88,200
2017	Ashland CTC	Equipment for Fiber Optic Technology Program	Workforce Training	\$25,000
2017	Paintsville-Johnson Co. Chamber of Commerce	AS/ISO Certifications for American Metal Works	Workforce Training/Site Development	\$20,000
2017	Gateway, FIVCO, & Big Sandy Area Dev. Districts	Economic Development Training and Certifications	EDA Support	\$3,300
2017	Lawrence County Fiscal Court	Teleworks Hubs	Workforce Training	\$18,000

- 1           Details of the projects funded by Kentucky Power through KEAP grants are
- 2           included in **EXHIBIT BNH-3**.

1 **Q. HAS THE COMPANY BEEN ABLE TO QUANTIFY ANY SUCCESSES**  
2 **ASSOCIATED WITH THE KEAP PROGRAM?**

3 A. Yes. As with the K-PEGG Program grants, many of KEAP Program grants are  
4 designed to bolster the economic development infrastructure in the region. For  
5 example, through funding provided by Kentucky Power through the KEAP grants,  
6 economic development professionals from three local economic development  
7 agencies have received economic development training from the renowned  
8 University of Oklahoma Economic Development Institute. Kentucky Power's  
9 KEAP grants have also paved the way for Quality Metals to create 18 jobs in  
10 Lawrence County and for Thoroughbred Aviation Maintenance to create a facility  
11 in Martin County with 15 jobs.

12 Additionally, funding provided through KEAP grants have assisted  
13 economic development agencies in the Ashland, Louisa, Olive Hill, and  
14 Paintsville areas to improve infrastructure in those communities to attract new and  
15 support expansion of existing business. After these infrastructure improvements,  
16 economic development activity in these areas increase. In 2012, no sites in the  
17 KEAP Counties were actively involved in the site selection process. In 2016, that  
18 number had risen to four.

19 **Q. IN 2016, KENTUCKY POWER ONLY ISSUED GRANTS FOR \$177,150.**  
20 **HOW DID THE COMPANY ADDRESS THIS SHORTFALL?**

21 A. In 2016, for the first time since the program was created, the Company only  
22 received grant applications for \$177,500 and was unable to provide the full

1 \$200,000 in grants. In 2017, the Company issued a total of \$222,000 in KEAP  
2 grants to make up for most of the 2016 shortfall.

3 **Q. WHEN IS THE KEAP SCHEDULED TO WIND DOWN?**

4 A. The Stipulation and Settlement Agreement requires Kentucky Power to provide  
5 economic development support to the KEAP Counties for five years. Kentucky  
6 Power made its first contributions under the KEAP in calendar year 2014.  
7 Accordingly, KEAP will continue through the end of 2018.

8 **Q. IS KENTUCKY POWER PLANNING TO CONTINUE IMPLEMENTING**  
9 **THE KEAP AFTER 2018?**

10 A. No. The Company plans to eliminate the KEAP after 2018 and transition all of its  
11 economic development efforts to the expanded K-PEGG program. The K-PEGG  
12 program is available to all economic development organizations within the  
13 Company's service territory, not just the KEAP Counties. Combining the  
14 Company's economic development efforts into a single program serving the entire  
15 region will allow the Company to more efficiently utilize its economic  
16 development resources throughout the service territory and to ensure the funds go  
17 to address the most urgent needs. Economic development organizations in the  
18 KEAP Counties will participate in the K-PEGG program, as they are able to  
19 participate now.

20 **X. OTHER KENTUCKY POWER ECONOMIC**  
**DEVELOPMENT ACTIVITIES**

21 **Q. DOES KENTUCKY POWER ENGAGE IN ECONOMIC DEVELOPMENT**  
22 **ACTIVITIES BEYOND THE K-PEGG PROGRAM AND KEAP?**

1 A. Yes. While the KEAP and K-PEGG Programs are Kentucky Power’s primary  
2 economic development vehicles, the Company also participates in economic  
3 development activities through the use of corporate economic development funds.  
4 Additionally, the Company is actively redeveloping a portion of the Big Sandy  
5 Plant property for use as an economic development site. Finally, AEP has created  
6 the Appalachian Sky Initiative to attract aerospace industry to the region.

7 **Q. CAN YOU DESCRIBE THE USE OF CORPORATE ECONOMIC**  
8 **DEVELOPMENT FUNDS?**

9 A Yes. Every year Kentucky Power is allocated funds from AEP’s Economic and  
10 Business Development group for use within the service territory. These funds are  
11 wholly shareholder-provided funds.

12 Between 2012 and 2016, the Company has received over \$300,000 from  
13 AEP’s Economic and Business Development Group. These funds have been used  
14 for economic development training for local economic development agencies,  
15 marketing of economic development opportunities in the region, and  
16 memberships in statewide economic development agencies that allow the  
17 Company to leverage its economic development efforts. Additionally, the  
18 funding for the InSite Gap Analysis Report described above was provided through  
19 AEP’s Economic and Business Development Group.

20 **Q. HAS KENTUCKY POWER BEEN ALLOCATED ANY FUNDING FROM**  
21 **AEP’S ECONOMIC AND BUSINESS DEVELOPMENT GROUP FOR**  
22 **2017?**

1 A. Yes. AEP's Economic and Business Development Group has allocated \$54,000  
2 to Kentucky Power for 2017. Kentucky Power will use this money to continue its  
3 efforts in closing the gaps identified in the 2012 InSite report.

4 **Q. PLEASE DESCRIBE HOW THE COMPANY IS REDEVELOPING A**  
5 **PORTION OF THE BIG SANDY PLANT PROPERTY AS SITE**  
6 **AVAILABLE FOR ECONOMIC DEVELOPMENT.**

7 A. Kentucky Power retired Big Sandy Unit 2 in 2015 and converted Big Sandy Unit  
8 1 to natural gas in 2016. As a result of the retirement and conversion, Kentucky  
9 Power no longer requires the same amount of space to operate the Big Sandy  
10 Plant. Because the property is flat, served by utilities, served by rail, and well-  
11 located along US-23, the Company has begun redeveloping a portion of the  
12 property as a potential economic development location. To facilitate this  
13 redevelopment, the Company has advanced the timeline for demolition of Big  
14 Sandy Unit 2 and reconditioning of the coal storage yard.

15 **Q. HAS THE BIG SANDY PROPERTY BEEN MARKETED TO ECONOMIC**  
16 **DEVELOPMENT TARGETS?**

17 A. Yes. Kentucky Power is working with one of its regional economic development  
18 partners, One East Kentucky, to market the site to companies interested in  
19 relocating to the region. One East Kentucky has already submitted information  
20 on the site to a large chemical manufacturing company looking to expand its  
21 operations. The chemical manufacturing company has indicated that it plans to  
22 create 100 jobs. The Big Sandy site has also been marketed by the Kentucky  
23 Cabinet for Economic Development to a company interested in locating a facility

1 with rail access. The Cabinet indicated that the target company plans to create  
2 1,000 jobs.

3 **Q. PLEASE DESCRIBE THE APPALACHIAN SKY INITIATIVE.**

4 A. Appalachian Sky is an initiative led by AEP to promote the Central Appalachian  
5 region, including Kentucky Power's service territory, as a location for the  
6 aerospace industry. Appalachian Sky leverages the regional workforce and the  
7 skills necessary for the aerospace industry to diversify the economy of the region.  
8 Additional information regarding the Appalachian Sky Initiative is included in the  
9 testimony of Company Witness Satterwhite.

10 **XI. RENEWABLE POWER OPTION RIDER**

11 **Q. ARE YOU FAMILIAR WITH THE CHANGES TO THE GREEN**  
12 **PRICING OPTION RIDER THE COMPANY IS PROPOSING IN THIS**  
13 **CASE?**

14 A. Yes. The Company is proposing to amend to rename its current Green Pricing  
15 Option Rider as the Renewable Power Option Rider and incorporate additional  
16 options for customers wishing to obtain power from renewable sources.  
17 Additional detail regarding the design and operation of the Renewable Power  
18 Option Rider is provided in the testimony of Company Witness Vaughan.

19 **Q. WILL THE RENEWABLE POWER OPTION RIDER ASSIST IN THE**  
20 **COMPANY'S ECONOMIC DEVELOPMENT EFFORTS?**

21 A. Yes. The rider provides an additional economic development tool. Importantly,  
22 it does so at no costs to those customers who choose not to participate. Many  
23 companies that might be a good fit for the Company's service territory have

1 established internal renewable energy requirements. This is especially true in  
2 high-tech companies that require data centers to run their operations. These data  
3 centers are large loads that would be attractive to the service territory. For  
4 example, Google has recently announced that it will obtain all of its power from  
5 renewable sources by the end of 2017. Other companies that have announced  
6 their intention to source their energy solely from renewable resources include  
7 Facebook, Bank of America, Microsoft, Philips Lighting, and Walmart. Without  
8 the changes proposed in the Renewable Power Option Rider, the communities in  
9 Kentucky Power’s service territory cannot compete for these opportunities.

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

11 A. Yes.

# SOUTHEAST KENTUCKY CHAMBER OF COMMERCE



Southeast Kentucky  
Chamber of Commerce  
— The Power To Be Heard —

## REGIONAL BLUEPRINT FOR ECONOMIC DEVELOPMENT



*A unit of American Electric Power*



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August 2013

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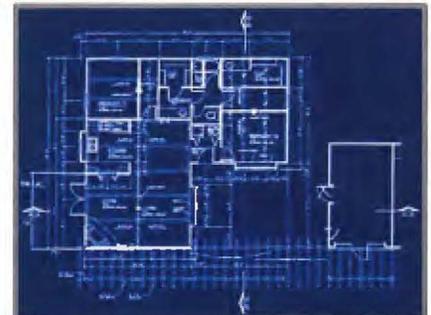
## SECTION 1: PROJECT INTRODUCTION

Kentucky Power Company retained InSite Consulting, an economic development and site selection consulting firm based in Greer, South Carolina, to develop initiatives and execution items to assist the Southeast Kentucky Chamber of Commerce with forming a regional economic development program for the eight-county region. The eight counties are: Letcher, Lawrence, Floyd, Martin, Johnson, Knott, Pike and Magoffin. This effort included specific focus on the eight-county region "getting on the map" for manufacturing projects. The purpose of the project was to guide the efforts of a customized plan for the region and its stakeholders that determined the best of class strategies, initiatives, methods, and techniques to encourage capital investment, create jobs in desired sectors, and stimulate sustainable economic growth throughout the southeast Kentucky region. InSite's competitive assessment identifies specific economic development weaknesses and makes recommendations to mitigate those identified weaknesses. InSite's assessment is a true "gap analysis" with three layers of evaluation: baseline of what is desired in a location; what you have to offer as a location; and what the resulting "gaps" are. A customized implementation plan was developed for the region to mitigate the location-specific gaps. Results: region and organizations that is truly "client ready and desired". The scope of services included:

- Alignment meeting
- Extensive and exhaustive tour and inventory, to include: local and public officials focus group meeting; stakeholders focus group meeting; product evaluation; and quality of life tour completed for:
  - Letcher, Johnson, Lawrence, Floyd, Magoffin, Knott, Martin and Pike counties
- Stakeholder and existing company discussions:
  - Over 26 one-on-one meetings and 122 individuals
- Exhaustive desktop, program and statistical analysis
- Development of a spreadsheet containing economic data relevant to choosing a location:
  - Benchmarking the southeastern Kentucky regional data against Johnson City, TN; Florence, SC; Charleston, WV; and Clarksville, TN-KY
- Recommendations for economic development excellence to include a newly formed regional public / private organization

This is a "working plan" that houses a check-list / step-by-step guide of initiatives that can actually be implemented, along with a suggested prioritized approach. With the proper strategy, the unique assets of the Southeast Kentucky region can be leveraged to recruit quality jobs benefiting all stakeholders. The Southeast Chamber of Commerce must utilize the following working plan to push forward and enhance initiatives that have lain dormant in an incomplete state or have never been addressed. Based on our research, the consulting team's work experience, and community-level SWOT methodology, the following economic development initiatives will lead the region's future economic development efforts, beginning with a solid foundation and producing sustainable results. There are four (4) basic outcomes to ensure the successful development of a champion economic development organization:

- Asset inventory
- A client readiness assessment and gap to success analysis for each county
- Organizational development and execution model
- A Regional Organization Blueprint for the future outlining the organizational structure and strategic plan recommendations that takes into account each county's unique asset and potential liabilities



## SECTION 2: EXECUTIVE SUMMARY

### ORGANIZATIONAL STRATEGIES

It is imperative to first detail the baselines of a legitimate, functional economic development entity. The following are the critical elements that must exist to legitimize having tax-based funds dedicated to an economic development department whose sole purpose is to create jobs and investment for the county:

- Defined program of work for economic development
- Full staff at a minimum of two individuals to accommodate a professional, responsive, functioning economic development focused entity. This staff does not share responsibilities with any other county department and has only an economic development focus – estimated cost of at least \$200,000
- Ability to work projects from finish to end (RFI to site visit)
- All individuals proficient in Word, Excel and PowerPoint
- Up-to-date technology to support the efforts of a functioning, professional organization such as smartphones, laptops, and the latest versions of Microsoft Office
- Business retention and expansion program
- Small business and entrepreneurial program
- Product databases, development and management
- Marketing materials for the community and industrial park to include a fully assembled and producible prospect package
- Proactive recruitment plan
- Internal or external communication plans
- Formalized future product development plan to include enhancing the existing and developing new
- Stand-alone economic development website / presence for economic development
- Ability to track business successes and losses
- Formalized incentive package

When inventorying each county and the region as a whole, it is important to note that none of the above is being executed at the local or regional level. So in essence, the counties / region are “out of business”. There is no economic development program in place with a formalized business plan to be the resource and Champion for economic development in Southeast Kentucky. We are not advocating that any of the above elements be executed at the local level. What we are saying is imperative is that the local leaders strongly commit to regional economic development efforts for the eight county southeast Kentucky region (Letcher, Lawrence, Floyd, Martin, Johnson, Knott, Pike and Magoffin) in both resource allocation and plan execution to reach short- and long-term goals. The following recommended strategies provide a best of class plan for the successful implementation of a Southeast Kentucky regional economic development effort to be called One East Kentucky (OEK):

### REGIONAL STRUCTURE

A new regional public / private economic development organization must be created (One East Kentucky) within the Southeast Kentucky Chamber of Commerce for the eight county region to execute as a functioning economic development entity. Proposed funding from the private sector would come directly from existing chamber membership and targeted new investors under a new President’s Club for economic development with three funding levels.

### FUNDING / BUDGET DEVELOPMENT

InSite recommends funding from local communities come directly from a county \$0.20 per capita rate, multi-county coal severance monies annually and private sector contributions of at least fifty (50) percent of total contributions. Based on our benchmarking of best practices for economic development programs, the One East Kentucky (OEK) Regional Economic Development Program should have an annual budget in the range of \$700,000 to \$900,000.

## SECTION 2: EXECUTIVE SUMMARY

### PERSONNEL

To successfully implement a quality regional economic development program, there are four main priorities with regard to personnel: President of Economic Development; Vice President of Research; Vice President, Business Retention and Expansion; and Vice President, Project Management.

### PROCESS RECOMMENDATIONS

InSite recommends comprehensive procedures be incorporated into project response and execution models for project management including Request For Information (a Request For Information / RFI is a community questionnaire issued by a consultant to a region on behalf of prospective companies to gather critical location information) team training, client visit team training and local company involvement.

### REGIONAL BRAND

One East Kentucky must develop a new business brand highlighting the region's business assets such as highway access, trainable workforce, proximity to markets, UPIKE, healthcare facilities, etc.

### PROFESSIONAL DEVELOPMENT

InSite recommends hiring an outside site selection consultant to conduct basic economic development training for community stakeholders including but not limited to OEK personnel, OEK board members, county officials, city officials, utilities, business leaders, etc.

## PROGRAM OF WORK STRATEGIES

### BUSINESS RETENTION AND EXPANSION PROGRAM (BRE)

One East Kentucky must develop a formalized business retention and expansion program (BRE) staffed by a full-time BRE Vice President. The BRE program will include incentive grants facilitation, industry appreciation event, publication of industry directories, visitation program, milestone achievement awards, creation of a manufacturing managers association, a human resources managers association, a dedicated project management website tab for local companies and adding a vertical marketing element to the program.

### PRODUCT AND INFRASTRUCTURE STRATEGIES

Our team evaluated the region's product from the perspective of a site selection consultant conducting a client site evaluation. The consulting team's review of the region's product development offerings reveals an inadequate inventory of viable sites and buildings within the region. Information on most sites and buildings was not readily available, and when information was available, it was inaccurate. There are currently no viable (at least 24 ft. clear height; a infrastructure in place with excess capacity; no interior walls; no existing structures; no pits; not a special use; in an industrial park – all are examples of viability), available industrial buildings in the eight-county region listed on the ThinkKentucky.com website. Presently, there is no local or regional mechanism for providing prospective companies with online product information. The lack of product information is at a critical, emergency level. Without viable, fully infrastructured (water in excess, sewer in excess, natural gas, electric, and fiber) product in a community, an economic development program will not attract quality companies.

During our analysis, the consulting team discovered several properties throughout the region that may be viable product development offerings in the future with proper due diligence by the respective landowner. Our team recommends regional inventory and evaluation for available sites, parks and buildings that could be marketed to prospective companies. These efforts are currently underway through Kentucky Power's Regional Product Development Program. This program will identify, evaluate and prioritize marketable properties in the region.



## **SECTION 2: EXECUTIVE SUMMARY**

Please note for several business parks in the region, InSite has recommended changing the name of the park for marketing purposes. Due to the large percentage of companies utilizing web searches to identify potential locations, it is crucial that these business parks present a national or global presence in order to maximize internet search results. In addition, clients prefer the park name, their "home", to have a global location impact – an indicator to their suppliers, customers, etc., as to where they are in the world. The following recommendations for the respective landowners focus on a select group of properties within the region:

### **GATEWAY REGIONAL BUSINESS PARK**

This is a 200 acre regional business park located on Hwy. 23 in Letcher County. This site has all utilities and is owned by the Appalachian Industrial Authority. The state site flyer indicates a negative 15,000 gallons in excess sewer capacity which would contribute to the park not being short listed in a competitive site search. InSite recommends: rename the park, increase excess sewer capacity, create new park website, develop comprehensive incentive package for the park, and provide all park information on the website.

### **HONEY BRANCH REGIONAL BUSINESS PARK**

Consisting of approximately 300 acres, this regional business park, located in Martin County, has all utilities on site. Excess sewer capacity is listed at only 37,000 gallons per day which is a significant weakness in a competitive site selection search. The park is adjacent to the Big Sandy Federal Prison, a high security penitentiary housing approximately 1,400 inmates. Our recommendations with regard to making this site marketable: be cognizant that the adjacent prison limits the marketability of the site, so prioritize efforts listed respectively; improve 37,000 gallons per day excess sewer capacity; change the name of the park - create a global, recognizable identity; develop a master plan for the park; develop at least one pad ready site in the park; complete InSite's Site Questionnaire; market as a Permitted Business Ready Park; develop a new marketing piece for the site; and develop a comprehensive incentive package for the park.

### **STONE CREST SITE**

Owned by the City of Prestonsburg and with all utilities on site, this 30 acre site sits adjacent to the Stone Crest golf course. This is a unique site as road access is not great but, if marketed properly, could be positioned as a headquarters location, to include outdoor or sporting equipment companies. Our recommendations with regard to making this site marketable: needs to be master planned; rename it to Southeast Kentucky Vista Corporate Park - create a global, recognizable identity; conduct a site evaluation process to validate marketability; complete InSite's Site Questionnaire; market as a Permitted Business Ready Park; develop a master plan for the park; create protective covenants for the park; develop a marketing piece for the site; develop a comprehensive incentive package for the park; create a forgivable loan / grant program for the land.

### **MARION'S BRANCH SITE**

Marion's Branch consists of 1,000 acres (400 acres developable) owned by the City of Pikeville. Water and natural gas service are available on site with plans to extend sewer and telecommunications service within twelve months. Rail accessibility is provided by an off loading site adjacent to the Marion's Branch Park. Currently, road access to the site is a weakness. The current access road goes through a residential area and would not meet industrial standards. Plans have been completed for the construction of a new road served directly by Hwy. 23. Presently, Marion's Branch would not compete favorably in a competitive site selection search due to access. However, considering the early developmental stages of the site and planned infrastructure improvements, this site has the potential to become a significant job creation tool for the entire region. The following represents some of our recommendations with regard to marketing initiatives for the Marion's Branch Site: complete InSite's Site Questionnaire; construct new entrance road as soon as possible; develop an entrance sign for the park; create protective covenants for the park; create a name for the park - create a global, recognizable identity; provide the most competitive telecommunications infrastructure possible; change the master plan for the park by eliminating residential development; include provisions to ensure the park is pedestrian friendly; and market as a Permitted Business Ready Park.



## **SECTION 2: EXECUTIVE SUMMARY**

### **MAGOFFIN COUNTY SITE (GIFFORD SITE)**

Magoffin County owns 200 acres (80 useable acres) located on the Mountain Parkway. At the time of our site visit, there was limited access to the site, no natural gas service and limited water and sewer service information. However, this site possesses Mountain Parkway frontage with a planned interchange and improvements of the parkway from two lanes to a four lane highway at the site's entrance. Magoffin County also owns the site's mineral rights and may have the opportunity to provide low cost natural gas to potential companies. For this site to be viable, the following list of items must be addressed before attempting to market to prospective companies; site due diligence – must be completed before any other steps are taken; master plan the site; create a forgivable loan/grant program for the land; develop protective covenants for the park; market the availability of inexpensive natural gas; develop a comprehensive incentive package for the park.

### **SMALL BUSINESS AND ENTREPRENEUR PROGRAM (SBE)**

Empowering and supporting small business and entrepreneurial efforts should be a critical element of the region's sustainable economic development goals. Small businesses and entrepreneurs are primary mobilizers of resources for the local economy and are stabilizing factors in society as a whole. They are a source of innovation in services, products and technologies. These entities provide a tremendous employment base for all thriving communities. One East Kentucky should serve as a clearinghouse of information for small business. Small Business program of work recommendations include providing a dedicated entrepreneur / small business tab on the OEK website, and developing a database of all available commercial and retail buildings in the region.

### **MARKETING AND COMMUNICATIONS**

A region's identity and "marketing toolbox" is critical to the success of any economic development program. These key items that will assist in the communication of the location assets of the region:

#### **WEBSITE**

Currently, there is no dedicated economic development website for the region. Therefore, our consulting team recommends developing a stand – alone One East Kentucky website that features existing companies, new buildings and sites database, incentives tab, a BRE tab, and a workforce tab, etc.

#### **SALES MESSAGE**

InSite recommends utilizing "talking points" (see Asset Section) as a consistent economic development message in all written and verbal communication, including the region sound bite.

#### **SALES MATERIALS**

Incorporate new regional identity in all marketing materials including the development of site / building brochures; a profile of taxes and incentives; an existing industry testimonial piece; and a comprehensive prospect notebook.

#### **INTERNAL AND EXTERNAL COMMUNICATION PLANS**

A communication plan for internal and external audiences was developed that includes the development of an email blast template, a sequencing of communications to all established internal and external databases / targets on a consistent basis, company visitations and permission-based marketing campaign.

### **OTHER AREA PROGRAM RECOMMENDATIONS**

#### **FLOYD, JOHNSON, KNOTT, LAWRENCE, LETCHER, MAGOFFIN, MARTIN AND PIKE COUNTIES**

InSite recommends local communities assume the roles and responsibilities for the following program of work elements to include but not limited to: developing local incentive packages; compiling product information; providing RFI and prospect visit support; supporting regional airport initiative; developing fully infrastructured industrial parks; promoting tourism, etc.

## SECTION 3: ASSET INVENTORY

### REGIONAL ASSET INVENTORY

A critical element of InSite's methodology was to inventory the locational asset of the region. Leveraging these assets will be important in the implementation of the organizational recommendations, creating a quantifiable marketing approach to recruit jobs and investment to the area. The following are some of the key business assets discovered:

- Gateway Regional and Honey Branch Business Parks – fully infrastructured industrial parks
- Potential product examples: Marion's Branch; Holland site; Stonecrest Site; Scott Fork; Chestnut Mountain; East-Park; Coal Fields; Thunder Ridge; Gifford Site; RJ Property; and West Property Group
- Highway transportation - Great four-lane transportation access; quality access to West Virginia and Virginia
- Midway College building
- Brown Foods building
- Woodmark building
- Potential excess water capacity
- Potential excess sewer capacity
- Big Sandy Community and Technical College system
- Available, trainable labor force
- Southeast Kentucky Economic Development Corporation
- Access to higher education
- Access to technical colleges and vocational schools
- Apprentice program in development
- General aviation
- Rail access in limited locales
- Proximity to commercial airports (Huntington, WVA; Charleston, WVA; Lexington, KY; Blountville, TN)
- Southeast Kentucky Chamber of Commerce regional approach
- Renewed focus on economic development from Kentucky Power
- Competitive electric rates
- Eastern Kentucky Concentrated Employment Program, Inc. (EKCEP)
- H.O.M.E. Program
- Governor Patton
- Strong existing industry like Kellogg, Joy Mining, Booth Energy
- UPIKE
- Big Sandy Area Development District
- Kentucky River Area Development District
- Access to Federal and State political resources – Mitch McConnell, Senate Minority Leader; Hal Rogers, Chairman of House Appropriations Committee; Greg Stumbo, Speaker, Kentucky House of Representatives; Robert Stivers, President of the Kentucky Senate
- Hospital / access to medical care

### **SECTION 3: ASSET INVENTORY**

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- Pikeville Medical Center – Affiliate of Mayo Clinic Healthcare Network
- Access to recreational facilities (golf, trails, lakes, natural resources)
- Low cost of living
- Equine center
- Low crime rates



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## SECTION 4: IDENTIFIED GAPS

### IDENTIFIED GAPS

InSite's process and assessment identified specific economic development strengths within each organization with regard to attracting and retaining investment and jobs. We identified weaknesses and made recommendations to mitigate those identified weaknesses. InSite's assessment, in cooperation with property owners and local governments, is a true "gap analysis" with three (3) layers of evaluation: baseline of what is desired in a location; what each county has to offer as a location; and what the resulting "gaps" are. In addition, we developed a customized implementation plan for the Southeast Chamber of Commerce's new economic development department to mitigate location-specific gaps and become the target of companies that are looking for the region's location-specific assets. Results: in cooperation with owners and local government, a region of communities that is truly "client ready and desired". The following is a comprehensive listing of the existing gaps at the local and regional level to successful economic development efforts for the southeastern region. The recommendations to bridge these gaps follow the identified gaps.

### PROGRAM / PRESENCE / OPERATIONS

- No functional, local or regional economic development programs
- No Champion or vision for economic development, locally or regionally
- There is no entity within the Southeast Region representing the interests of economic development in assisting with job growth and capital investment. There is no entity quantifiably working for the best interest of the unemployed in the Southeast Region
- No local or regional economic development programs of work (adequate staff; Business Retention and Expansion; Small Business and Entrepreneurs; proactive marketing; Economic Development website presence; research capability; process execution; product development, etc.)
- No one-source contact person for economic development
- No unified plan to bring all entities together with a common vision
- No local commercial airport
- Dependency on mining
- Lack of globally recognized brand / identity
- Minimal use of "war horses" (UPIKE and Pikeville Medical Center) for economic development efforts
- Inability to work projects from finish to end (Request for Information (RFI) to site visit)
- Lack of leadership's understanding of what economic development means
- No entity is tracking business wins and losses in the region

### PRODUCT

- Limited competitive, marketable industrial parks
- Limited competitive, marketable existing buildings
- No future product development plans / program of work
- Gateway Regional Business Park deficiencies: lack of excess capacity; lack of fiber; lack of critical information available
- Honey Branch Regional Business Park deficiencies: lack of excess capacities; incompatible surrounding use; lack of critical information available
- Lack of information on all product: Marion's Branch; 850 acres in Johnson County (Holland Property); 40,000 SF former Midway College facility in Paintsville / Johnson County; 650 acres (Chestnut Mountain) in Knott County; 200 acre Gifford Site in Magoffin County; Stonecrest site owned by Prestonsburg; 100 acre Thunder Ridge site in Floyd County; Letcher-County rail served site; 86,000 SF Brown Foods building located in Louisa and Lawrence County; Louisa owned 9 acre site

## SECTION 4: IDENTIFIED GAPS

- Consistent theme of lots of “property” but no information which translates to not viable or marketable
- Minimal sewer capacity to key regional product
- Lack of diverse industrial base
- No comprehensive database of available product in the region

### MARKETING

- No proactive recruitment plans
- Misperception of great highway system in eastern Kentucky. Several individuals expressed that transportation was a challenge. As site selection experts, we see the transportation system of interstate quality highway systems to be a great asset.
- Billboards cast negative impression on the community. Limit the number of billboards as they distract from the natural and professional integrity of the area
- No dominant economic development web presence
- No internal or external communication plans at the local or regional level
- No marketing materials at the local or regional level for clients
- No formalized prospect packages

### WORKFORCE DEVELOPMENT / TRAINING

- Perception of lack of skilled trade workers
- Upgrade the unemployed minors' skills base
- Need more employer involvement with the community college
- Inability to breakdown the unemployed miner population by type and number of and workers

### BUSINESS CLIMATE

- Dependency on mining
- Loss of hope

### INCENTIVES

- Lack of formalized incentive programs with documentation at the local level

### POLITICAL CLIMATE

- Lack of harnessed political clout that resides at the state level to make things happen at the local level
- Local political system is a monumental gap; county entities work against one another – lack of consensus
- Too dependent on coal severance tax revenue



## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

The southeastern Kentucky region is in great need of an organization that creates an economic development presence in the United States. Currently, there is no Champion or vision for economic development locally or regionally. There is no vehicle to develop or execute a plan that brings all the entities touching economic development in the region together with a common vision. There is no arena for the economic development pillars such as UPIKE, Pikeville Medical Center, Appalachian Wireless, Kellogg, Joy Mining and Booth Energy to collaborate and be a force for business expansion and recruitment efforts, both within their own companies and new companies. There is an inability within the region for any entity to work an economic development project / prospect from start to finish – from the request for information (RFI) to the client visit.

InSite is recommending through the following strategies that the Southeast Kentucky Chamber develop an operating division, One East Kentucky (OEK), dedicated solely to the efforts of economic development for the region. The following strategies based upon our evaluation of the region and consulting experience, provide a vehicle for the assets of the entire region to be leveraged, the gaps to success to be addressed and the voice of southeast Kentucky to be heard through the new organization (OEK). These recommendations take into account each county's capabilities and do not duplicate any efforts that are currently being executed. It provides each county with a team to leverage and support their efforts and a vehicle to not only create a national presence, but also one to recruit new industry and grow existing companies. The following recommendations provide an economic development blueprint for creating jobs and capital investment in the region for OEK to follow, step-by-step, in order to successfully win projects.

### **ORGANIZATIONAL STRATEGIES**

When inventorying each county and the region as a whole, it is important to note that none of the above is being executed at the local or regional level. So in essence, the counties / region are "out of business". There is no economic development program in place with a formalized business plan to be the resource and Champion for economic development in Southeast Kentucky. We are not advocating that any of the above elements be executed at the local level. What we are saying is imperative is that the local leaders strongly commit to regional economic development efforts for the eight county southeast Kentucky region (Letcher, Lawrence, Floyd, Martin, Johnson, Knott, Pike and Magoffin) in both resource allocation and plan execution to reach short- and long-term goals. The following recommended strategies provide a best of class plan for the successful implementation of a Southeast Kentucky regional economic development effort to be called One East Kentucky (OEK):

### **REGIONAL STRUCTURE**

A new regional Champion, public / private organization, for economic development must be created, beginning with a new regional economic development entity (One East Kentucky) within the Southeast Kentucky Chamber of Commerce for the eight-county region. This organization must have a plan and provide a blueprint for proactive regional economic development. This public / private partnership will be funded from existing chamber members to include local industry and communities.

Proposed funding from the private sector would come directly from existing chamber membership and targeted new investors under a new President's Club for economic development with three funding levels ranging from \$5,000 to \$15,000 annually, with contributions equaling at least (50) percent of total contributions. Please note that all regional economic development supporters must be current members of the Southeast Kentucky Chamber or a local chamber. The regional economic development advisory board would be separate from the Chamber board and consist of chosen President level contributors (who must be members of the Chamber or a local chamber) and the immediate past Chairman of the Southeast Kentucky Chamber. The immediate past chairman of the Southeast Kentucky Chamber would become the chairman of the new One East Kentucky regional economic development organization. This board would consist of no more than nine members and would meet on a quarterly basis. All monies raised for economic development would be separate from normal Chamber dues. Key steps in this process include:

- Create a new, professional organization with a qualified plan, to include governing bylaws, that will appeal to investor communities and companies
- Develop a target list of key, potential investors
- Present the region's new economic development program of work to the target group of key, potential investors individually (entities most likely to contribute first)

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Once two or three champions have committed, have them present the economic development vision to a large group of potential investors (including communities) and explain how they can help diversify and grow the local economy. Utilize the new champions to deliver the message
- Develop the governing board of eleven members. These members must contribute at the President level and be directly involved in existing business and industry throughout the eight-county region
- After gaining local community and private sector financial support, meet with county judges and state legislative delegation for commitment of multi-county coal severance monies annually to assist in funding the regional economic development program

### **FUNDING / BUDGET DEVELOPMENT**

Proposed funding, which should be at least fifty-five percent, from the private sector would come directly from existing chamber membership and targeted new investors under a new President's Club for economic development with three funding levels ranging from \$5,000 to \$15,000 annually. Proposed funding from local communities would come directly from a \$0.20 per capita rate, multi-county coal severance monies of \$500,000 annually and occupational tax. Any communities joining after OEK's first organizational year may join the regional effort at a \$0.40 per capita rate. All monies raised for economic development would be dedicated to business expansion / recruitment efforts and remain as a separate accounting function from normal Chamber dues / financial operations. Based on our benchmarking of best practices for economic development programs, the One East Kentucky (OEK) Regional Economic Development Program should have an annual budget in the range of \$700,000 to \$900,000. Possible economic development budget items may include but not be limited to salaries, FICA, insurance fringe, retirement fringe, workers compensation, vehicle allowance, marketing, office supplies, postage, dues/publications, printing, travel, training, telephone, and professional services.

### **PERSONNEL**

There are several priorities with regard to staffing that need to be addressed by the new economic development operating unit (OEK). The first three staffing priorities are immediate needs:

- The number one priority is to hire a President of Economic Development to focus solely on retention and attraction of companies to the region. Professional qualifications would include but not be limited to; a Bachelor's degree in business, economics, marketing, finance, or closely related field, with an advanced degree preferred. The ideal candidate will have a proven track record of executive or senior leadership experience and may come from a variety of backgrounds such as: top executive within a progressive and comparably-sized economic development-focused organization; experience as a No. 2 or senior-level executive at a larger like enterprise as described above.
- The second priority is to hire a research person whose main function is to maintain the sites and building database respond to RFIs, update and manage website content and coordinate directly with the counties and Area Development Districts to meet various project needs.
- The third priority for a new staff position must be the addition of a business retention Vice President. The Business Retention and Expansion (BRE) VP's responsibility will be the implementation of the new BRE program (as outlined further in this document) and assisting with project RFIs and business attraction projects.
- The fourth priority for a new staff position would be the addition of a Project Manager whose responsibility would be to manage prospect leads and new projects.
- Utilize existing chamber communications manager for economic development marketing.
- Create and fund a formalized, consistent year-round internship program with the University of Pikeville and local Community / Technical Colleges to conduct research and assist with maintaining and updating the economic development website, available site and buildings database, target company database, research and other functions as necessary.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

### **PROCESS RECOMMENDATIONS**

InSite recommends the following process recommendations be incorporated into project response and execution models for project management:

- Develop relationships locally to extract key data / information
- Develop relationships at the ADD level
- Develop and train a Request for Information (RFI) Team:
  - Most RFIs request consistent information, so make sure individuals proficient and knowledgeable in specific areas are not only educated about the RFI process, but are always mobilized to submit information
  - Content and team includes but not limited to: utilities (water, sewer, electric, natural gas, and fiber – have them calculate the rates); rail; building or site owner; environmental; permitting; taxes; and incentives
  - Sit down with the RFI Team and go over their portion of the RFI to explain the necessary content. Supply them with an overview of the project details and timeline (no matter how brief or short)
  - Communicate the talking points detailed in the Marketing Section for their training purposes
- Develop and train a Consultant / Client Visit Team:
  - Any participant in the visit process should have first had professional economic development training.
  - Each time a consultant and or client visits, the following entities should be represented at all times: local company executives (1 – 2 individuals); new economic development organization professionals; electric utility provider representative; community college; land and / or building owner; all entities directly involved in the incentive decision making process; and only one state project manager.
  - Sit down before the visit with the Visit Team and go over in detail the project description, timeline and completed RFI. Highlight their specific role and purpose in the discussions. Communicate the talking points detailed in the Marketing Section for their training purposes. Discuss in detail what to say and what not to say.
  - Conduct a pre-visit trial run for logistic purposes.
  - Begin all community visits at a local manufacturing company's facility (Kellogg, Joy Mining, Booth Energy, etc.) as logistics allow. Always have a senior-level company executive conduct the community welcome. Perform the entire community orientation (focus on location orientation, transportation routes, regional labor force statistics, and incentives) and overview at the company's offices, to include PowerPoint presentation and refreshments. In addition, produce an electronic overview of the site/building clearly delineating all utilities and roads; provide all documents in hard copy and on a flash drive; make all documents accessible via password on a protected project website which will allow prospects real time access to information.
  - Minimize local government and maximize private business exposure to clients / prospects.
  - Have a tent (if possible) and table(s) on the actual, proposed site and or in the building to review the site and park and or building layouts. Include bottled water as refreshment.

### **REGIONAL BRAND**

InSite suggests One East Kentucky focus on an updated brand for the region to assist with website development, a new tag line, marketing materials, site and building brochures, etc.

- Develop a comprehensive and cohesive regional brand for business:
  - The brand should be concise and based upon the region's business assets such as highway access, trainable work force, proximity to markets, University of Pikeville, etc.
- Retain an economic development-focused marketing firm to assist with finalizing the brand for production and communication purposes (brochures, website, etc.) to include focused marketing message, tagline and website.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

### **PROFESSIONAL DEVELOPMENT**

Insite recommends hiring an outside site selection consultant immediately to train the following entities and individuals on basic economic development concepts and the business assets of the region:

- One East Kentucky (OEK) personnel
- OEK board members
- County officials
- City officials
- EKCEP
- Utilities
- Stakeholders
- Any participant in client / prospect visits

InSite recommends a site selection visit simulation with the new economic development team. This will assist with the efforts of training and mobilizing response and visit teams, as detailed in the Process Recommendations of this document.

### **PROGRAM OF WORK STRATEGIES**

Southeast Kentucky's regional economic development success depends on executing a focused program of work. The following regional program of work concentrates on four primary areas: Business Retention and Expansion Services; Product Development Services; Entrepreneurial & Small Business Services; and Marketing and Communication Services.

### **BUSINESS RETENTION AND EXPANSION PROGRAM**

In discussing the importance of a dedicated, formalized business retention and expansion program (BRE), the following should be emphasized: there must be an organization and staff who maintains ownership of the program; competing states are targeting the region's existing companies; a large percentage of closures arise from mergers and acquisition, consolidations, restructuring, and planned relocations - some of which can be minimized with a solid BRE plan; and a true program legitimizes the commitment to local companies. Considering the fact that, nationally, roughly 80 percent of all new jobs and capital investment are created by existing companies, InSite recommends the following strategies for One East Kentucky (OEK) for a dedicated business retention and expansion program. The strategies and program language include expanding existing chamber efforts:

### **COMMITTEES AND ASSOCIATIONS**

**Existing Industry Committee:** The Existing Industry Committee, comprised of local companies, is a committee dedicated to the retention and expansion of existing industry in the Southeast Kentucky eight county region. This committee:

- Meets throughout the year (quarterly) to refine and improve current programs, develop new programs, and discuss new ideas and opportunities pertaining to existing industry and the business retention program.
- Serves as a rapid response team that assists existing companies with small and large emergencies.
- Will be capable of addressing everything from regulatory issues to a potential facility closing.

**Manufacturing Managers Association (MMA):** OEK manages all operations of the Manufacturing Managers Association (MMA). Members must be comprised of only the top management (General Management) of private sector business and industry (including large commercial and distribution operations) in the region. The MMA will provide these leaders with the opportunity to foster working relationships between and among industry and at the same time work together to better the community. The MMA should meet on an every-other month schedule. During these lunch meetings, members will discuss industrial issues ranging from labor relations, to incentive legislation to facility planning.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

**Human Resource Managers Association (SHRM):** OEK should utilize the existing Society for Human Resource Management group (SHRM). Members must be comprised of only the top management (Human Resources) of private sector business and industry (including large commercial and distribution operations) in the region. The SHRM will provide these leaders with the opportunity to foster working relationships between and among industry and at the same time work together to better the region. The SHRM should continue to meet on their regular schedule. During these lunch meetings, members will discuss industrial issues ranging from ergonomics to OSHA regulations to labor needs and availability.

### **SERVICES AND PROGRAMS**

**Incentive Grants Facilitation:** One East Kentucky (OEK) is to coordinate and assist with all state and federal grant applications pertaining to facilitation of local funds to existing companies within the region. OEK will facilitate with the Area Development Districts and others to walk through the federal and state grant process from beginning to end. Beginning with assistance filling out the application to presenting the grant request to the appropriate governing bodies, OEK's role will be to there to make the process smooth and simple for existing industry. There should be no limit to the services provided to existing companies. OEK will utilize the numerous allies that collectively work together to make eastern Kentucky the natural place for industry to thrive. From the Employment Security Commission to the Community College, to the city and county, to utility companies and many more, OEK will mobilize the abundance of resources to aid in assisting the industrial base. Examples of assistance to local companies:

- Fast track permitting – develop permitting process upfront
- Provide information on local apprenticeship programs
- Employment issues
- Procurement information
- Utility issues
- Liaison to local officials and departments
- Provide information and contacts to the cities and county
- Provide information and contacts to state and federal departments
- Community grants and / or incentives
- Public hearing presentations
- Prepare press releases and communication assistance.

**Existing Industry Directories:** OEK will maintain and provide an online Manufacturers and Distributors Directory, Top 25 Employer Directory and Recent Announcements Summary for the region.

**Existing Industry Recognition Event:** OEK will host an annual existing industry appreciation event. A suggestion for an inclusive and up-to-date type of event is a family day for executives and their families (potential to coincide with an existing community festival or event). This type of event is considered a best practice for industry appreciation events. The day may include cookout, games, mobile recreational units, water sports, etc.

**Expand Visitation Program:** Expand annual visits and tours of the region's industrial facilities to provide an opportunity for the staff to establish and maintain rapport and solid working relationships with existing businesses. It further fosters a better understanding of businesses and their products. The insight and information received during company visits can be used to identify supplier linkages, create new inter-county business relationships and increase OEK's understanding of the local business community. Most important, it provides the company with the opportunity to learn more about the region's commitment to retaining and assisting local companies. Through the annual visitation program, OEK will give special attention to any management change within the industry and include contacting headquarters of existing companies to schedule a visit when traveling near their location.

**Communication Program:** OEK will communicate with regional companies via email blast on a bi-monthly basis. Email blast topics range from legislative updates, to new announcements, to available buildings within the region. This consistent communication helps maintain a close business relationship with local companies.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

**Expand Milestone Achievement Awards:** OEK will present Milestone Achievement Awards each year to manufacturers and distributors as well as significant office operations located in the eight county region. The purpose of the award is to recognize and thank local industry for their past, present and future commitment to the community. Manufacturers and industries operating in the region are eligible for the award. Awards will be presented to companies on their fifth year anniversaries (5, 10, 15, 20, etc.). Milestone Achievement Awards will be presented during an annual luncheon in honor of the recipients.

### **SUPPORTING BRE EFFORTS AND PROGRAMS**

- Develop a comprehensive business resource guide accessible online and in printed format to distribute to all local companies / industries. The guide may include:
  - Brief description of the Business Retention Program and its mission
  - Contact information for regional economic development office
  - Introduction to and explanation of the new existing business website tab
  - Pre-employment training programs
  - Overview of available incentives
- Develop a public relations strategy around getting the word out about local company / industry successes such as contract awards, safety achievements, new employees hired, capital investment spent, etc. This strategy would include local, regional, state and national exposure.
- Create a dedicated website tab for local companies to access important information about incentives, permitting, training and available site and building information.
- Concentrate on a vertical marketing element of the BRE program. Call on existing company executives / management to assist with lead development for target businesses. Solicit and mine leads from these organizations housing suggestions for suppliers, etc. that could potentially relocate to service their market or even other divisions of their company.
- Provide a brief introduction of the region's BRE program during the project management phase of recruiting new companies to the area.

### **PRODUCT DEVELOPMENT STRATEGIES**

The new regional economic development team will market all viable properties in the eight-county region. In light of the fact that the region does not own any property, the execution of the recommendations for the product to be viable and marketable, lies in the hands of the landowner. Therefore, it is the landowners' responsibility to provide viable, marketable sites and buildings. It will be the region's responsibility to market the product. The region's role in product strategies revolves around: inventory; marketing; and guidance and counsel on future product development to include speculative buildings, pad-ready sites, rail sites, and infrastructure development.

Product development initiatives do not happen by chance. All successful rural communities throughout the country made a deliberate decision, at some point in their history, to invest in themselves and not wait on other organizations. Those communities have utilized local sales tax, TIF financing, public bonds, and a dedicated economic development property tax; just to name a few, to fund long-term product development initiatives.

The consulting team's review of the region's product development offerings reveals an inadequate inventory of viable sites and buildings within the region. Information on most sites and buildings was not readily available, and when information was available, it was inaccurate. There are currently no viable (at least 24 ft. clear height; a infrastructure in place with excess capacity; no interior walls; no existing structures; no pits; not a special use; in an industrial park – all are examples of viability), available industrial buildings in the eight-county region listed on the ThinkKentucky.com website. Presently, there is no local or regional mechanism for providing prospective companies with online product information. The lack of product information is at a critical, emergency level. Without fully infrastructured (water in excess, sewer in excess, natural gas, electric, and fiber) product in a community, an economic development program will not attract quality companies.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

Having available product and enhancing a community's physical attributes assures the ability to attract new business and provide options for existing industry to expand. Our team evaluated southeast Kentucky's product from the perspective of a site selection consultant conducting a site evaluation and found most of the product to be in an "incomplete" state, negatively impacting marketability. From a viable building standpoint, there were numerous buildings (Browns Food, Midway College, Woodmark, Hobbs, East Park Shell, Martin County Business Center) within the region ranging in size from 7,500 SF to 300,000 SF, but lack of readily available building information at the local level severely restricts the competitiveness of those buildings in a national site search, in addition to our ability to determine marketability.

During our analysis, the consulting team discovered several properties throughout the region that may be viable product development offerings in the future with proper due diligence by the respective landowner. Our team recommends regional inventory and evaluation for available sites, parks and buildings that could be marketed to prospective companies. These efforts are currently underway through Kentucky Power's Regional Product Development Program. This program will identify, evaluate and prioritize marketable properties in the region. The following recommendations for the respective landowners focus on a select group of properties within the region:

### **GATEWAY REGIONAL BUSINESS PARK**

This is a 200 acre regional business park located on Hwy. 23 in Letcher County. This site has all utilities and is owned by the Appalachian Industrial Authority. The state site flyer indicates a negative 15,000 gallons in excess sewer capacity which would contribute to the park not being short-listed in a competitive site search. Our observations include:

- Has potential to be a tremendous asset
- Adjacent Letcher County-owned land must incorporate same protective covenants as the Gateway Park
- Lack of information with regard to the park is a weakness
- The excess water capacity is stated to be 373,000 GPD which is acceptable
- The excess sewer capacity is stated to be a negative 15,000 GPD, which is a fatal flaw, eliminating consideration for future projects
- Lack of fiber as stated is a fatal flaw, eliminating consideration for most future projects
- Presence of natural gas is an asset
- Access to the park is good
- The location of the future speculative building needs to be moved
- Flat acreage / pad ready sites are an asset
- Grass should be constantly maintained
- Highway visibility is excellent (50 acres)
- Existing tenants are a strength
- No marketing materials and plan for the industrial park is a weakness
- Location within the city limits is a weakness due to perception of higher taxes
- Surrounding uses are incompatible (industrial prefers to be near other industrial, not kid and pedestrian inhabited areas for safety purposes) with the DeVita Dialysis Center going in at the entrance of the industrial park
- Covenants in place are a strength
- Signage is good
- Lack of web-presence is a weakness
- Childers Oil Company presents the capability for automated fueling for trucks

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

Our recommendations with regard to making this site marketable:

- Develop a new website for the park (do not use the name Appalachian Industrial Authority).
- Change the name of the park. Create a global, recognizable identity.
- Develop a master plan for the park.
- Develop a park conceptual to include the layout of the park and sites.
- Develop at least one pad ready site in the park. A pad ready site has been graded by the community to accelerate a company's construction schedule.
- Complete the InSite's Site Questionnaire.
- Market as a Permitted Business Ready Park.
- Develop a new marketing piece for the site. Make this marketing piece accessible on the website.
- Develop a comprehensive incentive package for the park.

### **HONEY BRANCH REGIONAL BUSINESS PARK**

Consisting of approximately 300 acres, this regional business park, located in Martin County, has all utilities on site. Excess sewer capacity is listed at only 37,000 gallons per day which is a significant weakness in a competitive site selection search. The park is adjacent to the Big Sandy Federal Prison, a high security penitentiary housing approximately 1,400 inmates. Our additional observations include:

- Fully infrastructured – a tremendous strength
- Great access
- Available, flat sites are an asset
- Tenants include Chesapeake Energy; David Brown; and Logan Steel – all assets
- Lack of information with regard to the park is a tremendous liability
- The excess capacity for sewer is stated to be 37,000, which is a fatal flaw, eliminating consideration for future projects
- The excess capacity for water is stated to be 150,000, which will limit the parks' consideration for future projects
- Adjacent to the airport is a strength
- Presence of fiber is an asset
- Presence of natural gas is an asset
- Existing tenants are a strength
- No marketing materials and plan for the industrial park is a weakness

Our recommendations with regard to making this site marketable:

- Be cognizant that the adjacent prison limits the marketability of the site, so prioritize efforts listed below respectively.
- Improve 37,000 gallons per day excess sewer capacity.
- Change the name of the park. Create a global, recognizable identity.
- Develop a master plan for marketing purposes.
- Develop a park conceptual to include the layout of the park and sites.
- Develop at least one pad ready site in the park. A pad ready site has been graded by the community to accelerate a company's construction schedule.
- Complete InSite's Site Questionnaire.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Market as a Permitted Business Ready Park.
- Develop a new marketing piece for the site. Make this marketing piece accessible on the website.
- Develop a comprehensive incentive package for the park.

### **STONE CREST SITE**

Owned by the City of Prestonsburg and with all utilities on site, this 30 acre site sits adjacent to the Stone Crest golf course. This is a unique site as road access is not great, but if marketed properly, could be positioned as a headquarters location, to include outdoor or sporting equipment companies. Our additional observations include:

- City-owned is an asset
- Lack of information with regard to the park is a tremendous liability
- Excess sewer capacity of 741,000 gpd – excellent
- Excess water capacity of 1.6 mgd – excellent
- Excellent visibility
- Dual entrance is an asset
- Challenging terrain is a weakness
- Amenities on-site (golf course, lodge, residential, recreation) are an asset

Our recommendations with regard to making this site marketable:

- Rename it to Southeast Kentucky Vista Corporate Park; create a global, recognizable identity.
- A site evaluation process needs to occur to validate marketability; need to complete InSite's Site Questionnaire.
- Market as a Permitted Business Ready Park.
- Develop a master plan for the park.
- Develop a park conceptual to include the layout of the park and sites.
- Create protective covenants for the park.
- Develop a marketing piece for the site. Make this marketing piece accessible on the website.
- Develop a comprehensive incentive package for the park.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.
- Post on the One East Kentucky website.

### **MARION'S BRANCH SITE**

Marion's Branch consists of 1,000 acres (400 acres developable) owned by the City of Pikeville. Water and natural gas service are available on site with plans to extend sewer and telecommunications service within twelve months. Rail accessibility is provided by an off loading site adjacent to the Marion's Branch Park. Currently, road access to the site is a weakness. The current access road goes through a residential area and would not meet industrial standards. Plans have been completed for the construction of a new road served directly by Hwy. 23. Presently, Marion's Branch would not compete favorably in a competitive site selection search due to access. However, considering the early developmental stages of the site and planned infrastructure improvements, this site has the potential to become a significant job creation tool for the entire region. InSite recommends the following marketing initiatives for the Marion's Branch site:

- Complete InSite's Site Questionnaire.
- Construct new entrance road as soon as possible.
- Develop an entrance sign for the park.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Create protective covenants for the park.
- Create a name for the park. Create a global, recognizable identity.
- Provide the most competitive telecommunications infrastructure possible.
- Change the master plan for the park by eliminating residential development.
- Develop a park conceptual to include the layout of the park and sites
- Include provisions in the master plan to ensure the park utilizes a campus type atmosphere and is pedestrian friendly.
- Market as a Permitted Business Ready Park.
- Develop a new marketing piece for the site. Highlight rail access information, fully infrastructure and excess capacities on the site flyer. Make the marketing piece accessible via the website.
- Create a dedicated Marion's Branch website – the website should include a Google earth aerial view, detail excess capacities, illustrate regional workforce numbers, and provide all site certification documents via password.
- Invite all utility service providers, regional, and state officials individually for a comprehensive site and community overview.
- View site via helicopter with prospects / clients when possible.
- Develop a comprehensive incentive package for the park.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.
- Partner with the county to develop a Shell building program for the park.
- Post on the City of Pikeville website when marketable.
- Post on the One East Kentucky website when marketable.
- Post on the ThinkKentucky.com website when marketable.

### **SCOTT FORK SITE**

This is a 78 acre site owned by Pike County with frontage on Highway 119. Scott Fork has natural gas, water and fiber on site but does not have sewer service available. There are two pad ready sites in the park with the largest contiguous parcel of 20 acres. Scott Fork, due to lack of sewer service, would not be viable in a competitive site selection search. The site is not listed on ThinkKentucky.com and the county does not have an economic development website. InSite recommends the following marketing initiatives for the Scotts Fork site:

- Lack of information with regard to the park is a tremendous liability.
- Extend sewer service to the park as soon as possible.
- Change the name of the park (Kentucky Energy Business Park). Create a global, recognizable identity.
- Complete InSite's Site Questionnaire.
- Market as a Permitted Business Ready Park.
- Develop a master plan for the park.
- Develop a park conceptual to include the layout of the park and sites
- Create protective covenants for the park.
- Develop an entrance sign for the park.
- Develop a marketing piece for the site. Make this marketing piece accessible on the website.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Develop a comprehensive incentive package for the park.
- Post on the One East Kentucky website.
- Post on the ThinkKentucky.com website.

### **HOLLAND SITE**

The Holland site is a privately owned 850 acre tract located in Paintsville. All utilities (water, sewer, natural gas, electric and fiber) are on site. There is a 40,000 SF building (formerly Midway College Building) at the entrance to the Holland site (The Midway Building is not listed on the state or local economic development website). Information regarding excess capacities and topography was limited at the time of our team's visit. Information obtained included excess water capacity of 3 MGD and excess sewer capacity of 400,000 GPD, which are tremendous assets. Our team did not conduct an exhaustive review of the 850 acre site but recommends further site due diligence be conducted to determine the viability of developing it as a new business park. If this is a site the community desires to market, the following list of items must be addressed before attempting to market to prospective companies:

- Determine from the landowner the property's availability and willingness to enter into a marketing agreement.
- Site due diligence – must be completed before any other steps are taken: accessibility analysis; infrastructure evaluation; marketability study; Phase; wetlands delineation; archaeological study; endangered species analysis; and geotechnical study.
- Work with One East Kentucky to identify competitors' business parks within and outside of the region and develop a superior product offering for expanding and relocating companies.
- Name the park based upon a nationally recognized brand.
- Master plan the site to include existing companies located at the park entrance.
- Develop a park conceptual to include the layout of the park and sites.
- Leverage the park by aggressively marketing the former 40,000 SF Midway College Building to prospective private sector tenants.
- Complete InSite's Site Questionnaire.
- Develop "pad ready" sites in the new business park. A pad ready site has been graded by the community to accelerate a company's construction schedule.
- Develop a comprehensive incentive package for the park.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.
- Develop protective covenants for the park.
- Develop a marketing piece for the site. Make this marketing piece accessible on the website.
- Market as a Permitted Business Ready Site.

### **COAL FIELDS REGIONAL INDUSTRIAL PARK**

Consisting of approximately 385 acres, this regional business park, located in Perry County, has ample excess water and sewer capacity (1.4 MGD) on site. However, the lack of natural gas service in the park is a significant weakness in a competitive site selection search. Coal Fields currently has four tenants in the park and one available industrial building (300,000 SF Woodmark Facility). Our observations include:

- Poor road access
- Lack of natural gas to the park is a tremendous liability
- Tenants include Sykes; FedEx; Scott King Enterprises; and AODD Transport – excellent
- Excellent water and sewer capacity
- No marketing materials for the industrial park is a weakness

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

Our recommendations with regard to making this industrial park marketable:

- Extend natural gas service to the park.
- Change the name of the park. Create a global, recognizable identity.
- Develop a master plan for the park.
- Develop a park conceptual to include the layout of the park and sites.
- Develop at least one pad ready site in the park. A pad ready site has been graded by the community to accelerate a company's construction schedule.
- Complete InSite's Site Questionnaire.
- Market as a Permitted Business Ready Park.
- Develop a new marketing piece for the site. Make this marketing piece accessible on the website.
- Develop a comprehensive incentive package for the park.
- Develop new website for the park.

### **EASTPARK REGIONAL BUSINESS PARK**

This is an 800 acre regional business park located in the city of Ashland. This site has all utilities and is owned by the Northeast Kentucky Regional Industrial Authority. The state site flyer indicates an N/A in excess sewer capacity which could contribute to the park not being short-listed in a competitive site search. Our observations include:

- Lack of information on sewer capacity is a major weakness
- Excess water capacity of 13 MGD is excellent
- Presence of a 110,000 SF Speculative Building is an asset
- Access to the park is good
- Flat acreage is an asset
- Ability to assemble large tracts is a strength
- 15 miles from Tri-State Airport is a strength
- Surrounding uses are compatible
- Covenants in place are a strength
- Signage is good
- Lack of a stand-alone quality web-presence is a weakness

Our recommendations with regard to making this park marketable:

- Develop a new website for the park.
- Leverage the excess water capacity of 13 MGD.
- Develop at least one pad ready site in the park. A pad ready site has been graded by the community to accelerate a company's construction schedule.
- Complete InSite's Site Questionnaire.
- Market as a Permitted Business Ready Park.
- Develop a new marketing piece for the site. Make this marketing piece accessible on the website.
- Develop a comprehensive incentive package for the park.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.

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### **CHESTNUT MOUNTAIN**

Knott County owns the 65,000 SF Sportsplex and related baseball and soccer fields, located within the 650 acre Chestnut Mountain development. Chestnut Mountain is owned by a private development company. Currently the site is being marketed as a commercial and residential development. Other than the Knott County recreation complex (Since 2007), there have been no businesses or residences locate in Chestnut Mountain. Chestnut Mountain possesses four lane highway frontage on Hwy. 80. Limited information on natural gas availability, excess water and sewer capacity is a significant weakness. Our team did not conduct an exhaustive review of the 650 acre site but recommends further site due diligence be conducted to determine the viability of developing it as a new business park. If this is a site the community desires to market, the following list of items must be addressed before attempting to market to prospective companies:

- Determine from the landowner the property's availability as an industrial park and willingness to enter into a marketing agreement.
- Site due diligence – must be completed before any other steps are taken: accessibility analysis; infrastructure evaluation; marketability study; Phase; wetlands delineation; archaeological study; endangered species analysis; and geotechnical study.
- Work with One East Kentucky to identify competitors' business parks within and outside of the region and develop a superior product offering for expanding and relocating companies.
- Name the park based upon a nationally recognized brand.
- Master plan the site to accommodate industrial users.
- Develop a park conceptual to include the layout of the park and sites.
- Complete InSite's Site Questionnaire.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.
- Develop protective covenants for the park.
- Development a comprehensive incentive package for the park.
- Develop a marketing piece for the site. Make this marketing piece accessible on the website.
- Market as a Permitted Business Ready Site.

### **MAGOFFIN COUNTY SITE (GIFFORD SITE)**

Magoffin County owns 200 acres (80 useable acres) located on the Mountain Parkway. At the time of our site visit, there was limited access to the site, no natural gas service and limited water and sewer service information. However, this site possesses Mountain Parkway frontage with a planned interchange and improvement of the parkway from two lanes to a four lane highway at the site's entrance. Magoffin County also owns the site's mineral rights and may have the opportunity to provide low cost natural gas to potential companies. If this is a site the community desires to market, the following list of items must be addressed before attempting to market to prospective companies:

- Site due diligence – must be completed before any other steps are taken: accessibility analysis; infrastructure evaluation; marketability study; Phase; wetlands delineation; archaeological study; endangered species analysis; and geotechnical study.

Work with One East Kentucky to identify competitors' business parks within and outside of the region and develop a superior product offering for expanding and relocating companies.

- Name the park based upon a nationally recognized brand.
- Master plan the site to show improved road access and future interchange.
- Develop a park conceptual to include the layout of the park and sites.
- Complete InSite's Site Questionnaire.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Highlight the availability of low cost natural gas.
- Create a forgivable loan / grant program for the land. As new companies meet specific job creation and capital investment milestones, a portion of the land cost would be forgiven over a 3 – 5 year time frame.
- Develop protective covenants for the park.
- Develop a comprehensive incentive package for the park.
- Develop a marketing piece for the site. Make this marketing piece accessible on the website.
- Market as a Permitted Business Ready Site.

### **ENTREPRENEURIAL AND SMALL BUSINESS PROGRAM**

Continue to empower and support small business and entrepreneurial efforts should be a critical element of the region's sustainable economic development goals through the Chamber of Commerce. Small businesses and entrepreneurs are primary mobilizers of resources for the local economy and are stabilizing factors in society as a whole. They are a source of innovation in services, products and technologies. These entities provide a tremendous employment base for all thriving communities. One East Kentucky should serve as a clearinghouse of information for small business. Small Business program of work recommendations are listed below:

- Provide an entrepreneur /small business tab on the One East Kentucky website including information on financing, small business development center, available commercial and retail buildings, etc.
- Provide a comprehensive listing of all available commercial and retail buildings on the OEK website.
- Develop and / or inventory office and retail space similar to the Martin County Business Center (7,500 SF office building in Inez) throughout the region. Promote as a location for Kentucky Teleworks.

### **MARKETING AND COMMUNICATIONS**

A region's identity and "marketing toolbox" is critical to the success of any economic development program. These key items that will assist in the communication of the location assets of the region:

#### **WEBSITE**

Site selection consultants and prospective companies utilize web searches during the early phases of a site search. In a recent Corporate Executive's Survey conducted by DCI, corporations listed information on available incentives, workforce statistics / training, demographic information and a directory of available buildings and sites as the four most important areas for an economic development website. With those four categories in mind, our consulting team website recommendations follow:

- Develop a stand-alone One East Kentucky regional economic development website.
- Provide an overview of quality companies and business diversity in the region.
- Provide a Buildings and Sites listings and database by utilizing Kentucky Power's Location One (LOIS) system. Drop downs should include Available Buildings, Available Industrial / Business Parks, and Available Sites. Develop One East Kentucky building and sites information sheets.
- Provide an "Add my Building or Site" tab that allows owners or communities to list their property on the One East Kentucky database, with baseline parameters for inclusion.
- Profile Available Sites (industrial parks) and Buildings, Incentives and regional demographics links immediately on the homepage.
- Highlight a featured site and building on the home page – (Update every few months).
- Develop a Business Retention and Expansion (BRE) tab for existing companies. The dedicated business retention tab within the One East Kentucky website is designed to give companies an immediate mechanism to gain pertinent information on a variety of subjects. The section would also include comprehensive information on available incentives; pre-employment training; financial assistance; database of all programs offered to business and industry by your area colleges and universities; real estate assistance; and local contacts.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Under workforce tab, provide regional: population, labor force numbers, top ranking public schools, community colleges, University of Pikeville, medical school and training information. Provide information on innovative workforce programs (i.e. H.O.M.E., KY Teleworks, Work Keys and Apprenticeships) and quantify local skill sets.
- Provide an “Incentives” tab on the homepage. Include worker training information within this section.
- Under Incentives tab, provide detailed explanation of incentives. Highlight innovative regional incentive packages.
- Highlight Kentucky’s pre-employment training programs under the “Incentives” and “Workforce” tabs.
- Add a location map highlighting highway access on the homepage.
- Under maps tab, provide regional and transportation maps.
- Provide information about all commercial airports serving the region. Provide number of flights and provide a location map.
- Develop a secure project management client login that is dedicated to new and expansion projects that allows the region to share critical information in real-time with prospective companies.

### **SALES MESSAGE**

InSite recommends utilizing the following “talking points” (see Asset Section) as a consistent economic development message in all written and verbal communication, including the region sound bite:

- Fully infrastructured industrial parks and buildings
- Excess water and sewer capacity
- Excellent transportation routes
- Recognizable, strong, stable existing industry – examples Kellogg, Joy Mining, Booth Energy
- Available, trainable labor force; access to excellent Community College systems
- General aviation
- Rail access
- Proximity to commercial airports (Huntington, WVA; Charleston, WVA; Lexington, KY; Blountville, TN)
- Presence of University of Pikeville
- Promote the area as a region; market the region as a whole intensely

### **SALES MATERIALS**

- Incorporate new regional identity in all marketing materials.
- Develop a flyer detailing regional services offered by OEK.
- Develop new marketing flyers for all regional available product (buildings and sites). All information should be available on the website.
- Develop a one page, front and back profile of taxes and incentives per county.
- Develop a one page, front and back existing industry testimonial piece.

## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

- Develop a comprehensive prospect notebook for companies when they visit the region. The prospect notebook would include the following:
  - General Region Overview
  - Education
  - Regional Labor Force
  - Utilities
  - Regional Quality of Life
  - Transportation
  - Incentives
  - Sites / Buildings (listing excess capacities)
  - Regional Major Employers
  - Target Industries
  - Contact Us
- Utilize regional population and workforce numbers on all marketing / promotional / collateral materials.

### **DEVELOP NON-TRADITIONAL TARGETS FOR COMMUNICATION**

One East Kentucky's non-traditional sectors (groups or organizations that can generate or influence projects for the region) listed below should receive the same communication as all other primary sectors. This important target group can influence and generate projects and should not be overlooked in the marketing plan:

- Local Utilities (water, sewer, electric, natural gas and fiber)
- All Railroads
- Community and Technical Colleges, vocational schools and higher education facilities
- EKCEP
- SKED
- MAECD
- Area Development Districts
- Site Selection Consultants
- Community Stakeholders and Leadership
- Kentucky Cabinet for Economic Development
- Legislative Delegation
- Local Government Officials (City and County)
- Southeast Kentucky Chamber Board
- Local Chambers of Commerce
- Local Tourism Offices
- Real Estate Companies



## **SECTION 5: REGION RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

### **INTERNAL AND EXTERNAL COMMUNICATION**

- Meet with each town, county, Kentucky Cabinet for Economic Development, railroad providers, and electric utility providers to explain One East Kentucky's new program of work and key economic development selling points.
- Develop, maintain and update a database of entire internal / local and external audience (leadership, all government-related officials (to include school system), general public, universities and colleges, local and state media, etc.) and include them in the communication plan. Include all non-traditional targets, as identified above, in the local audience database.
- Develop a customized One East Kentucky email blast template for all communications and schedule monthly blasts to the database.
- Create a systemized economic development public relation strategy / internal communication schedule to create local buy-in and awareness. This schedule must include minimum monthly communication to your internal audience.
- Consistently communicate and promote: industry recruitment; existing industry initiatives and successes; entrepreneurial and small business developments; incentives; available product; etc.
- Develop and maintain a regional, state and national media contact list and publicize regional successes to those entities.
- Continual database management. Staff will update database as new contacts are added and deleted from the program.



## **SECTION 6: LOCAL RECOMMENDATIONS TO BRIDGE THE IDENTIFIED GAPS**

### **LOCAL ECONOMIC DEVELOPMENT ORGANIZATIONS**

Communities must focus on product development and local incentives. The number one responsibility for local communities is leading product development efforts and becoming the expert on all buildings and sites within your respective community. The importance of communities formalizing a local incentive package for expanding and newly locating companies cannot be overstated. A formalized (in writing and approved by the local government) incentive package sends a pro-business message to prospective companies and lets prospects know that your community is comfortable with the incentive process. Examples of local incentives may include reduced water and sewer rates, impact fee waivers, property tax abatements, discounted building permit fees, land grants, occupational tax abatements, temporary office or training space, reduced home mortgage rates, expedited construction permits, etc. The second priority is communicating product and local incentive information to the region. The local economic development organization will be the point person in working with the region on economic development initiatives. InSite recommends the local entities assume the roles and responsibilities for the following program of work elements:

- Develop local incentive packages
- Compile all necessary product information to assist in regional marketing efforts
- Project research support for RFIs and prospect visits
- Provide project support for prospect visits
- Create a mechanism to procure funds to develop, maintain and sustain industrial parks
- Develop fully infrastructured industrial parks – local counties must be in support of and proactive in developing viable, marketable industrial parks
- Construct speculative buildings with guidance and counsel from the One East Kentucky
- Inventory all local office and retail space. Be able to utilize LOIS to track properties
- Provide internal contacts (leadership, political, industry, stakeholders, and local officials) to the region for internal and external communication plan
- Identify potential location for Kentucky Teleworks Hub
- Identify additional location for a County Business Center
- Support regional airport initiative
- Tourism
- Main Street
- Retail
- Downtown



## **SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY**

This section, Section 7, details first, the baselines of a legitimate, functional economic development entity. Then it dives into an inventory of each county for what exists, specifically, program- and product-specific and a gap analysis, all of which were utilized to determine the local recommendations detailed on Section 6.

As stated previously in the document, the following are the critical elements that must exist to legitimize having tax-based funds dedicated to an economic development department:

- Defined program of work for economic development
- Full staff at a minimum of two individuals to accommodate a professional, responsive, functioning economic development focused entity. This staff does not share responsibilities with any other county department and has only an economic development focus
- Ability to work projects from finish to end (RFI to site visit)
- All individuals proficient in Word, Excel and PowerPoint
- Up-to-date technology to support the efforts of a functioning, professional organization such as smartphones, laptops, and the latest versions of Microsoft Office
- Business retention and expansion program
- Small business and entrepreneurial program
- Product databases, development and management
- Marketing materials for the community and industrial park to include a fully assembled and producible prospect package
- Proactive recruitment plan
- Internal or external communication plans
- Formalized future product development plan to include enhancing the existing and developing new
- Stand-alone economic development website / presence for economic development
- Ability to track business successes and losses
- Formalized incentive package



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

The following is an inventory of each county for what exists, specifically, program- and product-specific and a gap analysis, all of which were utilized to determine the local recommendations detailed on Section 6.

### LETCHER COUNTY

Letcher County is home to one of the few industrial parks in the region, the Gateway Regional Business Park, making it an attractive location for business and industry. The population for the area as of 2010 was 24,519, and the county seat is Whitesburg, population of 1,600. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### ASSETS (other than those mentioned for the entire region which applies to each county)

- There is a sincere desire to support the regional effort
- Commitment to a speculative building
- Potential for a county-owned rail site on 40 acres
- Types of existing industries
- Kentucky River Area Development District
- Access to life support services (retail, restaurants, grocery, etc.)
- Strong and revitalized school system
- Recreation center
- Golf course
- Trail system
- Downtown Whitesburg
- The Cut Through is a tremendous, yet unknown asset.

#### LIABILITIES

- There is no county-wide economic development program of work (as described above)
- Having only one person to accommodate economic development but is not solely dedicated to economic development
- The county only being in a position to react
- Lack of available, affordable housing



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### JOHNSON COUNTY

Johnson County is home to the Paintsville Chamber of Commerce who oversees the economic development efforts county-wide. Excess water capacity of 3 MGD and excess sewer capacity of 400,000 GPD are tremendous selling points for the Johnson County / Paintsville area. Coupled with a unique available building opportunity (former MidWay College facility) and the recently formed Paintsville / Johnson County Industrial Authority, the community is poised to successfully leverage a regional proactive approach to economic development. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### **ASSETS** (other than those mentioned for the entire region which applies to each county)

- The chamber economic development program of work includes:
  - Downtown Paintsville has an economic development plan
  - Business retention and expansion
- Big Sandy Area Development District.
- Support for tourism
- Paintsville controls all utilities
- There is a sincere desire to support the regional effort
- Downtown
- Strong and revitalized school system is an asset; Two quality school districts.
- Access to life support services (retail, restaurants, grocery, etc.).
- Available, affordable housing
- Golf course
- Lakes
- Shopping hub

#### **LIABILITIES**

- There is no county-wide economic development program of work (as described above)
- Having only one person part-time to accommodate economic development but is not solely dedicated to economic development
- Lack of competitive, marketable industrial parks
- Lack of competitive, marketable existing buildings
- Lack of accessible information on available product
- No large private sector employers
- Limited manufacturing operations in the area
- The county only being in a position to react



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### FLOYD COUNTY

Floyd County, Kentucky is considered to be the home of the "Star City" where five major highways converge. It is home to the city of Prestonsburg, an area hosting economic development assets for the region. The locational attributes make Floyd County attractive for industrial development. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### **ASSETS** (other than those mentioned for the entire region which applies to each county)

- City-owned infrastructure
- Big Sandy Area Development District
- Planetarium
- Home of natural outdoor assets (trails, parks, lake)
- The town of Prestonsburg has an economic development plan
- There is a sincere desire to support the regional effort
- Vibrant downtown
- Strong and revitalized school system
- Hospital / access to medical care
- Access to life support services (retail, restaurants, grocery, etc.)
- Golf course
- Lake
- Access to local cultural events
- Available space for business in the town of Prestonsburg

#### **LIABILITIES**

- There is no county-wide economic development program of work (as described above) to include zero staff
- Lack of competitive, marketable industrial parks
- Lack of competitive, marketable existing buildings
- Minimal municipal sewer capacity
- The county only being in a position to react
- Absentee landowners in downtown
- Cost to develop property is high
- Intense presence of billboards is a negative



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### LAWRENCE COUNTY

Lawrence County, Kentucky has many business climate assets (such as excess water and sewer capacity) to leverage in the promotion of the region. Its location and accessibility make it a viable location for manufacturing expansions. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### **ASSETS** (other than those mentioned for the entire region which applies to each county)

- Excess water capacity of 1.6 MGD
- Excess sewer capacity of 700,000 gpd
- Quality transportation access: Highway 23 and proximity to I-64
- Proximity to commercial airport (Huntington, WVA)
- Attitude of staff toward regional economic development
- Nearby Riverport
- Access to life support services (retail, restaurants, grocery, etc.)
- Golf course
- Yatesville Lake and marina
- Downtown
- Potential rail site availability

#### **LIABILITIES**

- There is no county-wide economic development program of work nor any full-time professionals dedicated to the program
- Lack of a manufacturing presence in the county
- Lack of competitive, marketable industrial parks
- Lack of broadband capacity
- Low education attainment



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### MAGOFFIN COUNTY

Magoffin County is home to the well-known and successful company called Joy Mining. The presence of Joy Mining sends the message to other manufacturing / industrial prospects that they, too, can thrive in this area. As of 2010, the population was 13,333 and the county seat is Salyersville. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### **ASSETS** (other than those mentioned for the entire region which applies to each county)

- Presence of Joy Mining and Mineral Labs (100 employees).
- Rails to trails project
- Access to fiber
- County owned industrial site
- Civil War Project
- Big Sandy Area Development District

#### **LIABILITIES**

- There is no county-wide economic development program of work nor any full-time professionals dedicated to the program
- Lack of access to medical care facility / hospital
- Lack of infrastructure with excess capacity
- Lack of leadership on infrastructure planning



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### KNOTT COUNTY

Knott County, Kentucky has many business climate assets to leverage in the promotion of the region. The community has displayed the willingness to work regionally as evidenced by Knott County's participation in the Coalfields Regional Industrial Park and possesses the region's largest available industrial building (311,000 SF Woodmark Building). Knott County is also the home of Alice Lloyd College, with a 1,000 student enrollment offering a pre-med program and unique work study requirement for all students. Based on desktop research and visits to the county, the following information is an inventory of the county's assets and liabilities:

#### ASSETS (other than those mentioned for the entire region which applies to each county)

- Alice Lloyd College is a strength – leverage their work study and internship programs and provide an incentive
- Kentucky River Area Development District
- Knott County Appalachian Artisan Center for tourism
- Hindman Settlement School
- Limited economic development website / presence on the knottcountyadventure.com website

#### LIABILITIES

- There is no county-wide economic development program of work nor any full-time professionals dedicated to the program
- Limited excess water and sewer capacities
- Historical political climate and lack of political leadership
- Lack of a manufacturing presence in the county
- Lack of life support services (lodging, restaurants, downtown, etc.)



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### MARTIN COUNTY

The Martin County / Inez area possesses one of the two regional industrial parks (Honey Branch Regional Industrial Park) in the eight county study region. The city and county have a successful history of working together on various projects. The community has redeveloped several properties within the county including the 35,000 SF Martin County Business Center located in downtown Inez. Based on desktop research and visit to the county, the following information is an inventory of the county's assets and liabilities:

#### **ASSETS** (other than those mentioned for the entire region which applies to each county)

- Big Sandy Area Development District
- Economic Development participants such as Jim Booth
- Attitude of staff toward regional economic development
- Access to trails and outdoor recreation

#### **LIABILITIES**

- There is no county-wide economic development program of work (as described above)
- Having only one person to accommodate economic development but is not solely dedicated to economic development
- Limited manufacturing presence in the community
- Culturally and economically isolated
- Low workforce participation
- Low self-esteem; feeling of lack of hope



## SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY

### PIKEVILLE / PIKE COUNTY

Serving as the region's business and retail hub, Pikeville / Pike County is home to UPIKE, Pikeville Medical Center and the third largest banking hub in Kentucky. A real opportunity exists for the city and county to work closer together and become a dynamic economic development leader for the southeast Kentucky region. Several ongoing product development initiatives within the community have the potential to transform the local economy. Based on desktop research and visit to the county, the following information is an inventory of the county's assets and liabilities:

#### ASSETS (other than those mentioned for the entire region which applies to each county)

- Presence of Kellogg
- Presence of University of Pikeville, Medical School
- City of Pikeville's presence and proactive approach to economic development
- City of Pikeville's willingness to be creative to create jobs and investment (i.e. Texas Roadhouse)
- City of Pikeville's commitment to comprehensive planning
- Big Sandy Area Development District
- Excess water and sewer capacity
- Natural gas availability
- Potential rail access
- Excellent schools – 4<sup>th</sup> highest test scores in Kentucky
- Fourth largest Banking community in Kentucky
- Access to life support services (retail; restaurants, grocery, etc.)
- Presence of EQT
- Access to local cultural events
- Presence of two high quality hotels downtown

#### LIABILITIES

- There is no county-wide economic development program of work (as described above)
- Having only one person to accommodate economic development but is not solely dedicated to economic development
- There is no county-wide economic development website presence with key information.
- UPIKE graduates leave region because limited job opportunities.
- Two hours to the nearest airport
- Lack of middle class housing
- Lack of public transportation
- Lack of funding for infrastructure development
- Pikeville and Pike County do not work together
- Without Pikeville's efforts, Pike County has nothing to offer new and expanding companies



## **SECTION 7: COUNTY AND EXISTING INDUSTRY INVENTORY**

### **EXISTING INDUSTRY**

Local industry has to work harder in the region to be successful due to the lack of a support system / program. The following is information as perceived by existing industry in the region:

- There is a lack of understanding about economic development in the general public.
- Need to leverage the existing companies in the region by utilizing them in the economic development process.
- Potential for multi-county incentive packages.
- Local regulations for construction are inhibitive.
- State regulations for construction are inhibitive.
- Need to lobby the state for more business-friendly regulations.
- People want to work – strong work ethic.
- The region seems to be in a reactionary mode for projects versus proactive.
- Needs to be a strong marketing effort on behalf of the region.
- Must to be a strong BRE effort on behalf of the region.
- Utilities are a strength - natural gas is an asset.
- Existing industries' needs have to be heard so they will expand in the area.
- Need assistance with rail companies for rail in and rail out.
- Transportation costs are a weakness.
- Negative perception of eastern Kentucky is a problem.
- Regional parks are weak – counties will not work together.
- Kentucky's largest domiciled bank holding company – HQ.
- Local protectionism is a weakness.
- Challenge to recruit skilled labor – electrical, mechanical.
- Turnover and absentee low.
- Lack of regional air service – weakness.
- Horrible local political systems – major weakness.
- Lack of vision for economic development.
- There is no understanding of the training program, its financial and education capabilities.
- There needs to be an education process for existing companies, through a strong BRE program, on the state and local incentives available to them.
- Local technical college needs to work closer with industry to offer quality, impactful training programs.
- There is no entity assisting with recruiting parts supplies or supply chain.
- Finding skilled labor is an issue.
- Lack of cell service in some areas is an issue.
- Great extended family and church network.





**SECTION 8: SOUTHEAST KENTUCKY CHAMBER REGION / KENTUCKY POWER PROJECT**  
**SNAPSHOT OF BENCHMARK AND ECONOMIC CONDITIONS**

	Pike County - No MSA		Huntington-Ashland		Johnson City, TN MSA		Florence SC, MSA		Charleston WV, MSA		Clarksville TN-KY, MSA		KY		US	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>SCHOOL ENROLLMENT</b>																
Population 3 years and over enrolled in school	13,966	13.966	68,526	68.526	47,642	47.642	51,774	51.774	64,664	64.664	74,245	74.245	1,088,379	1,088,379	80,939,002	80,939,002
Nursery school, preschool	705	5.0%	3,541	5.2%	2,173	4.6%	2,460	4.8%	3,723	5.8%	4,165	5.6%	63,967	5.9%	4,924,145	6.1%
Kindergarten	604	5.8%	3,694	5.4%	1,903	4.0%	4,139	8.0%	3,871	6.0%	4,088	5.5%	57,625	5.3%	4,113,849	5.1%
Elementary school (grades 1-8)	6,655	47.7%	27,728	40.5%	18,359	38.5%	22,220	42.9%	29,229	45.2%	31,247	42.1%	454,451	41.8%	32,578,808	40.3%
High school (grades 9-12)	3,119	22.3%	14,507	21.2%	9,573	20.1%	12,255	23.7%	14,757	22.8%	14,741	19.9%	232,765	21.4%	17,532,181	21.7%
College or graduate school	2,692	19.3%	19,056	27.8%	15,634	32.8%	10,700	20.7%	13,084	20.2%	20,004	26.9%	279,571	25.7%	21,790,019	26.9%
<b>EDUCATIONAL ATTAINMENT</b>																
Population 25 years and over	45,366	45.366	198,426	198.426	135,509	135.509	135,787	135.787	215,484	215.484	161,837	161.837	2,881,383	2,881,383	199,726,659	199,726,659
Less than 9th grade	6,087	13.4%	11,408	5.7%	10,310	7.6%	9,833	6.9%	12,720	5.9%	7,391	4.6%	227,766	7.9%	12,435,227	6.2%
9th to 12th grade, no diploma	7,457	16.4%	22,160	11.7%	15,175	11.2%	17,020	12.5%	21,501	10.0%	12,742	7.9%	300,804	10.4%	17,463,256	8.7%
High school graduate (includes equivalency)	16,364	36.1%	75,481	38.0%	45,294	33.4%	47,749	35.2%	63,464	29.7%	54,906	33.9%	987,495	34.3%	57,903,353	29.0%
Some college, no degree	8,192	18.1%	40,619	20.5%	26,633	19.7%	25,622	18.9%	39,614	18.4%	42,241	26.2%	577,977	20.1%	41,175,904	20.6%
Associate's degree	1,973	4.3%	14,413	7.3%	7,623	5.6%	10,411	7.7%	12,776	5.9%	13,167	8.1%	192,610	6.7%	15,021,920	7.5%
Bachelor's degree	2,419	5.3%	20,146	10.2%	19,274	14.2%	16,814	12.4%	27,253	12.6%	20,819	12.9%	353,907	12.3%	35,148,428	17.6%
Graduate or professional degree	2,874	6.3%	14,199	7.2%	11,200	8.3%	8,838	6.5%	18,156	8.4%	10,571	6.5%	240,824	8.4%	20,578,571	10.3%
Percent high school graduate or higher		70.1%		83.1%		81.2%		80.6%		84.1%		87.8%		81.7%		85.0%
Percent bachelor's degree or higher		11.7%		17.3%		22.5%		18.9%		21.1%		19.4%		20.6%		27.9%
<b>EMPLOYMENT STATUS</b>																
Population 16 years and over	52,106	52.106	232,787	232.787	160,188	160.188	155,853	155.853	246,472	246.472	202,157	202.157	3,412,180	3,412,180	238,793,644	238,793,644
In labor force	23,131	44.4%	123,989	53.3%	93,384	58.3%	95,787	61.5%	142,882	58.0%	131,875	65.2%	2,065,869	60.5%	155,163,977	65.0%
Civilian labor force	23,131	44.4%	123,847	53.2%	93,205	58.2%	95,603	61.3%	142,632	57.9%	133,940	66.4%	2,048,159	60.0%	154,037,474	64.5%
Employed	20,927	40.2%	114,034	49.0%	86,436	54.0%	86,728	55.7%	131,780	53.5%	101,868	50.4%	1,865,652	54.7%	141,833,331	59.4%
Unemployed	2,204	4.2%	9,813	4.2%	6,769	4.2%	8,875	5.7%	10,852	4.4%	12,072	6.0%	182,507	5.3%	12,204,143	5.1%
Armed Forces	0	0.0%	142	0.1%	179	0.1%	184	0.1%	250	0.1%	17,935	8.9%	17,710	0.5%	1,126,503	0.5%
Not in labor force	28,975	55.6%	108,798	46.7%	66,804	41.7%	60,066	38.5%	103,590	42.0%	70,282	34.8%	1,346,311	39.5%	83,560,667	35.0%
Percent Unemployed		9.5%		7.9%		6.1%		9.3%		7.6%		10.5%		8.9%		7.8%
<b>OCCUPATION</b>																
Civilian employed population 16 years and over	20,927	20.927	114,034	114.034	86,436	86.436	86,728	86.728	131,780	131.780	101,868	101.868	1,865,652	1,865,652	141,833,331	141,833,331
Management, professional, and related occupations	5,588	26.7%	36,172	31.7%	28,065	32.5%	26,396	30.4%	46,396	35.2%	30,192	29.6%	594,360	31.9%	50,034,578	35.3%
Service occupations	3,665	17.5%	20,853	18.3%	15,327	17.7%	15,348	17.7%	24,004	18.2%	17,995	17.7%	307,996	16.5%	24,281,015	17.1%
Sales and office occupations	5,127	24.5%	30,682	26.9%	22,500	26.0%	21,290	24.5%	34,019	25.8%	25,599	25.1%	460,735	24.7%	36,002,118	25.4%
Natural resources, construction and maintenance occupations	3,797	18.1%	10,762	9.4%	7,997	9.3%	454	0.5%	13,945	10.6%	10,672	10.5%	193,589	10.4%	13,940,273	9.8%
Production, transportation, and material moving occupations	2,750	13.1%	15,565	13.6%	12,547	14.5%	15,118	17.4%	13,416	10.2%	17,410	17.1%	308,572	16.5%	17,577,347	12.4%



**SECTION 8: SOUTHEAST KENTUCKY CHAMBER REGION / KENTUCKY POWER PROJECT**  
**SNAPSHOT OF BENCHMARK AND ECONOMIC CONDITIONS**

INDUSTRY	Pike County - No MSA		Huntington-Ashland		Johnson City, TN MSA		Florence SC, MSA		Charleston WV, MSA		Clarksville TN-KY, MSA		KY		US	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Civilian employed population 16 years and over	20,927	20.927	114,034	114.034	86,436	86.436	86,728	86.728	131,780	131.780	101,868	101.868	1,865,652	1,865.652	141,833,331	141.833,331
Agriculture, forestry, fishing and hunting, and mining	3,226	15.4%	1,526	1.3%	551	0.6%	1,391	1.6%	6,300	4.8%	1,803	1.8%	54,969	2.9%	2,634,188	1.9%
Construction	1,172	5.6%	7,232	6.3%	6,227	7.2%	4,852	5.6%	7,602	5.8%	6,855	6.7%	120,766	6.5%	10,115,885	7.1%
Manufacturing	864	4.1%	10,942	9.6%	12,475	14.4%	14,629	16.8%	7,791	5.9%	14,252	14.0%	259,242	13.9%	15,581,149	11.0%
Wholesale trade	251	1.2%	2,938	2.6%	2,170	2.5%	2,419	2.8%	4,046	3.1%	1,780	1.7%	51,594	2.8%	4,344,743	3.1%
Retail trade	2,677	12.5%	16,069	14.1%	10,831	12.5%	10,618	12.2%	15,146	11.5%	13,817	13.6%	219,571	11.8%	16,293,522	11.5%
Transportation and warehousing, and utilities	1,225	5.9%	6,658	5.8%	3,686	4.3%	4,221	4.9%	6,627	5.0%	4,978	4.9%	114,045	6.1%	7,183,907	5.1%
Information	229	1.1%	2,514	2.2%	1,769	2.0%	1,428	1.6%	3,094	2.3%	1,620	1.6%	34,033	1.8%	3,368,676	2.4%
Finance and insurance, and real estate and rental and leasing	764	3.7%	4,529	4.0%	4,629	5.4%	4,970	5.7%	8,108	6.2%	4,713	4.6%	103,383	5.5%	9,931	7.0%
Professional, scientific, and management, and administrative and waste management services	1,433	6.8%	8,019	7.0%	6,265	7.2%	6,718	7.7%	11,693	8.9%	8,014	7.9%	143,716	7.7%	14,772,322	10.4%
Educational services, and health care and social assistance	5,876	28.1%	33,157	29.1%	22,605	26.2%	21,139	24.4%	33,629	25.5%	22,615	22.2%	441,531	23.7%	31,277,542	22.1%
Arts, entertainment, and recreation, and accommodation and food services	1,203	5.7%	10,444	9.2%	7,745	9.0%	6,105	7.0%	11,735	8.9%	9,091	8.9%	151,582	8.2%	12,566,228	8.9%
Other services, except public administration	897	4.3%	5,618	4.9%	4,249	4.9%	4,930	5.7%	5,730	4.3%	4,077	4.0%	87,230	4.7%	6,899,223	4.9%
Public administration	1,110	5.3%	4,388	3.8%	3,234	3.7%	3,308	3.8%	10,729	7.8%	8,253	8.1%	82,990	4.4%	6,864,046	4.8%
<b>CLASS OF WORKER</b>																
Civilian employed population 16 years and over	20,927	20.927	114,034	114.034	86,436	86.436	86,728	86.728	131,780	131.780	101,868	101.868	1,865,652	1,865.652	141,833,331	141.833,331
Private wage and salary workers	16,175	77.3%	90,541	79.4%	66,011	76.4%	69,140	79.7%	100,602	76.0%	72,653	71.3%	1,464,340	78.5%	111,303,933	78.5%
Government workers	3,835	18.3%	18,592	16.3%	13,557	15.7%	12,592	14.5%	24,875	18.9%	21,929	21.5%	287,677	15.4%	21,024,265	14.8%
Self-employed in own not incorporated business workers	917	4.4%	4,825	4.2%	6,759	7.8%	4,907	5.7%	6,105	4.6%	7,017	6.9%	110,240	5.9%	9,250,789	6.5%
Unpaid family workers	0	0.0%	76	0.1%	109	0.1%	89	0.1%	198	0.2%	269	0.3%	3,395	0.2%	254,344	0.2%
<b>WAGE RATES</b>																
Average manufacturing wage rate	\$15.35		\$17.93		\$19.50		\$17.08		\$17.93		\$16.27		\$15.94		\$22.90	
<b>SEX AND AGE</b>																
Total population	65,055	65.055	287,337	287.337	195,735	195.735	205,563	205.563	304,124	304.124	269,001	269.001	4,369,356	4,369.356	303,965,272	303.965,272
Under 5 years	3,903	6.0%	16,704	5.8%	10,533	5.4%	13,773	6.7%	17,639	5.8%	23,258	8.6%	279,639	6.4%	20,131,420	6.6%
5 to 9 years	3,838	5.9%	17,099	6.0%	10,440	5.3%	13,567	6.6%	20,376	6.7%	20,367	7.6%	288,377	6.6%	20,116,654	6.6%
10 to 14 years	4,164	6.4%	17,048	5.9%	12,211	6.2%	14,389	7.0%	17,943	5.9%	19,321	7.2%	284,008	6.5%	20,643,730	6.8%
15 to 19 years	4,164	6.4%	19,321	6.7%	12,701	6.5%	14,389	7.0%	17,943	5.9%	18,921	7.0%	297,117	6.8%	22,132,691	7.3%
20 to 24 years	3,643	5.6%	18,739	6.5%	14,341	7.3%	13,773	6.7%	16,119	5.3%	25,297	9.4%	297,117	6.8%	21,214,118	7.0%
25 to 34 years	8,131	12.5%	35,437	12.3%	23,898	12.2%	24,873	12.1%	36,799	12.1%	43,073	16.0%	563,647	12.9%	40,191,013	13.2%
35 to 44 years	8,913	13.7%	37,494	13.0%	26,728	13.7%	26,517	12.9%	39,232	12.9%	35,481	13.2%	568,016	13.0%	42,206,141	13.9%
45 to 54 years	10,018	15.4%	41,370	14.4%	28,792	14.7%	29,190	14.2%	46,531	15.3%	32,875	12.2%	637,926	14.6%	44,302,697	14.6%
55 to 59 years	4,749	7.3%	19,617	6.8%	13,552	6.9%	14,595	7.1%	24,938	8.2%	13,619	5.1%	288,377	6.6%	18,817,728	6.2%
60 to 64 years	4,359	6.7%	18,198	6.3%	11,801	6.0%	12,745	6.2%	19,768	6.5%	11,114	4.1%	266,531	6.1%	15,459,667	5.1%
65 to 74 years	5,269	8.1%	25,171	8.8%	17,127	8.8%	16,445	8.0%	26,459	8.7%	14,829	5.5%	336,440	7.7%	20,493,467	6.7%
75 to 84 years	2,732	4.2%	15,886	5.5%	10,135	5.2%	8,223	4.0%	15,814	5.2%	7,845	2.9%	183,513	4.2%	13,079,803	4.3%
85 years and over	1,105	1.7%	5,253	1.8%	3,476	1.8%	3,083	1.5%	6,082	2.0%	3,001	1.1%	74,279	1.7%	5,176,143	1.7%
Median age (years)	40.4		40		40		38		42		31		30		37.0	
18 years and over	50,613	77.8%	225,399	78.4%	155,628	79.5%	155,406	75.6%	238,737	78.5%	194,930	72.5%	3,342,557	76.5%	229,932,155	75.6%
62 years and over	11,775	18.1%	56,202	19.6%	37,236	19.0%	35,357	17.2%	59,304	19.5%	32,383	12.0%	755,899	17.3%	47,432,207	15.6%
65 years and over	9,043	13.9%	46,310	16.1%	30,738	15.7%	27,957	13.6%	48,660	16.0%	25,675	9.5%	594,232	13.6%	38,749,413	12.7%



**SECTION 9: SOUTHEAST KENTUCKY CHAMBER REGION / KENTUCKY POWER PROJECT IMPLEMENTATION SCHEDULE**

√	Priority	Action Item	Months	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14
<b>Organizational Strategies and Recommendations</b>																
	2	Establish Structure	6													
	2	Budget and Fund Raising	6													
	4	Hire Personnel	10													
	1	Process	1													
	3	Updated Regional Brand	8													
	3	Professional Development (on-going, but initial development)	8													
<b>Program of Work Strategies and Recommendations</b>																
	2	Business Retention and Expansion Program	6													
		Product and Infrastructure	24													
	1	Marion's Branch	12													
	2	Scott Fork Site	18													
	3	Holland Site	24													
	4	Gateway Regional Business Park	18													
	5	Honey Branch Regional Business Park	18													
	6	Coalfields Regional Industrial Park	24													
	7	Stone Crest Site	24													
	8	East Park Regional Business Park	6													
	2	Entrepreneurial and Small Business Program	4													
		Marketing and Communications	9													
	4	Website Development	7													
	1	Sales Message Development	4													
	2	Sales Materials Development	6													
	3	Develop Non-Traditional Targets for Communication	3													
	5	Internal and External Communication Development and Implementation	9													

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

InSite was contracted by Kentucky Power Company to inventory and prioritize sites and buildings throughout the Southeastern Kentucky Region. The majority of projects, whether lead by the company, a site selection team, or real estate entity, begin with an available site / building search and an RFI (request for information). The quickest way to get on the radar screen for a project is to have viable, available product in your community. If a community does not have a place for industry to locate, a site or building that is viable by industry standards, unfortunately your economic development program is not merely losing; it is not even in the game.

### IMMEDIATE PRIORITY – VIABLE NOW

#### PRIORITY 1: EASTPARK (ASHLAND / BOYD) INDUSTRIAL PARK

This industrial park is competitive in a global / national search and should be a marketing priority for southeast Kentucky. Our recommendations with regard to making this site more marketable:

- Change the name of the park. Create a global, recognizable identity.
- Conduct a wetlands delineation on the park
- Develop new signage at the existing entrance. The park needs to look like a destination.

Items to highlight in the marketing process:

- Existence of an available 110,000 sf speculative building
- Acreage
- Ability to be subdivided
- Available water, sewer, electric, natural gas and fiber
- Excess water and sewer capacity
- Flat terrain
- Surrounding uses
- Completion of Phase 1, geotechnical, archeological and endangered species studies

#### PRIORITY 1: EASTPARK (ASHLAND / BOYD) SPECULATIVE BUILDING

This speculative building is competitive in a global / national search and should be a marketing priority for southeast Kentucky. Our recommendations with regard to making this facility more marketable:

- Pour 6 inch reinforced floor
- Pave parking area (minimal, but enough to make a more impactful first impression)
- Reduce the sales price
- Develop and advertise an aggressive incentive package for the building
- Change the name of the building. Create a global, recognizable identity.

Items to highlight in the marketing process:

- Size of facility
- Expansion capability
- Available water, sewer, electric, natural gas and fiber
- Excess water and sewer capacity
- Clear height
- Presence in an existing industrial park

- Surrounding uses
- Column spacing
- 10 percent office space
- Completion of Phase 1, geotechnical, archeological and endangered species studies

**Path Forward:**

- This is a viable, marketable park and building that could compete on a national level for global projects if the above items are completed
- Invest time, develop resources for funding, and allocate such funding for the above recommendations
- Input site and building information into LOIS
- Present both products to targeted audiences who generate projects (state, region, electric utility, consultants, etc.)

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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### SHORT-TERM: CURRENTLY NOT VIABLE

The following sites / parks are not currently competitive in a global / national search and should be prioritized based upon money and time to improve their competitiveness.

### PRIORITY 2: COALFIELDS INDUSTRIAL PARK (PERRY) - (fatal flaws - natural gas, incentives, maintenance, marketing materials)

The following must be executed to make Coalfields Industrial Park marketable:

- Conduct a Phase 1 and all site due diligence ( geotechnical, wetlands delineation, archeological and endangered species)
- Extend natural gas to the site
  - Cost
  - Schedule
  - Feasibility
- Verify excess water and sewer capacities
- Formalize an aggressive incentive package for the park
- Change the name of the park. Create a global, recognizable identity.
- Develop new marketing materials and website
- Cut the grass
- Identify and hold accountable a responsible champion for the park

### PRIORITY 2: AMERICAN WOODMARK BUILDING (PERRY) - (fatal flaws - sales price, natural gas)

The following must be executed to make the American Woodmark building marketable:

- Reduce purchase and lease cost
- Extend natural gas to the building
  - Cost
  - Schedule
  - Feasibility
- Verify excess water and sewer capacities
- Verify column spacing
- Change the name of the building. Create a global, recognizable identity.

## Path Forward:

- This can be a viable, marketable park and building that could compete on a national level for global projects if the above items are completed
- Invest time, develop resources for funding, and allocate such funding for the above recommendations
- Redirect funding from the AD (Area Development District) to the regional economic development team, One East Kentucky, for management of the park
- Input site and building information into LOIS
- Feature both on the regional website
- Present both products to targeted audiences who generate projects (state, region, electric utility, consultants, etc.)

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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### SHORT-TERM: CURRENTLY NOT VIABLE

The following sites / parks are not currently competitive in a global / national search and should be prioritized based upon money and time to improve their competitiveness.

### PRIORITY 3: MARIONS BRANCH (PIKE) - (fatal flaws - road / entrance, zoning, site due diligence, excess sewer capacity, fiber)

The following must be executed to make Marions Branch marketable:

- Conduct a Phase 1 / site due diligence ( geotechnical, wetlands delineation, archeological and endangered species)
- Increase excess sewer capacity from 20,000 gpd to a minimum of 500,000 gpd
  - Cost
  - Schedule
  - Feasibility
- Extend fiber to the park
  - Cost
  - Schedule
  - Feasibility
- Construct new entrance road
  - Cost
  - Schedule
  - Feasibility
- Eliminate residential from the master plan
- Zone industrial with protective covenants
- Grade a building pad that meets load bearing requirements
- Change the name of the park. Create a global, recognizable identity.
- Develop aggressive incentive package including cost offsets for site work required

### Path Forward:

- This can be a viable, marketable park that could compete on a national level for global projects if the above items are completed
- Invest time, develop resources for funding, and allocate such funding for the above recommendations
- Input site information into LOIS
- Feature on the regional website
- Present both products to targeted audiences who generate projects (state, region, electric utility, consultants, etc.)

## **PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY**

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### **SHORT-TERM: CURRENTLY NOT VIABLE**

#### **PRIORITY 4: DEVELOP AN INDUSTRIAL PARK**

The following must be executed to develop an additional industrial park without fatal flaws:

- Find at least 300 acres in a county with good access, in an industrial setting with access to water, sewer, electric, natural gas and fiber, along with having at least 500,000 gpd excess water and sewer capacity.

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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## NOT A PRIORITY FOR REGIONAL INVESTMENT IN MONEY AND RESOURCES

### HOLLAND SITE (JOHNSON) - (fatal flaws - availability, price, excess sewer capacity, site due diligence)

The following must be executed to make the Holland Site marketable:

- Determine owners willingness to market, which means must have a price to be available
- Determine industrial price per acre and develop a marketing agreement with the landowner
- Conduct a Phase 1 and due diligence (geotechnical, wetlands delineation, archeological and endangered species studies)
- Increase excess sewer capacity from 100,000 gpd to 500,000 gpd
  - Cost
  - Schedule
  - Feasibility
- Incorporate into an industrial park; develop a master plan showing developable acreage
- Change the name of the park. Create a global, recognizable identity.

### Path Forward:

- This currently is not a viable, marketable park that could compete on a national level for global projects based upon the noted fatal flaws in red
- Based upon the extent of the recommendations above, this would not be a priority for the region to develop / promote as an industrial park - do not invest time, nor develop resources for funding for the above recommendations
- This park can compete for local / regional projects looking for a place to expand or have a specific need for local resources
- Input site information into LOIS
- Realize this is a long-term project

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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## NOT A PRIORITY FOR REGIONAL INVESTMENT IN MONEY AND RESOURCES

### CHESTNUT MOUNTAIN (KNOTT) - (fatal flaws - zoning, availability, asking price per acre, excess sewer capacity, current recreation use)

The following must be executed to make Chestnut Mountain marketable:

- Determine leaderships' willingness to change the use of the park from recreation to industrial
- Conduct a Phase 1
- Zone industrial
- Determine industrial cost per acre – existing price is not marketable
- Increase the line size of natural gas to accommodate future industrial use
- Incorporate into an industrial park
- Consider redeveloping the 68,000 SF Sportsplex as an available industrial building and relocate the existing use
- Change the name of the park. Create a global, recognizable identity.
- Develop a marketing agreement with the landowner

### Path Forward:

- This currently is not a viable, marketable park that could compete on a national level for global projects based upon the noted fatal flaws in red
- Based upon the extent of the recommendations above, this would not be a priority for the region to develop / promote as an industrial park - do not invest time, nor develop resources for funding for the above recommendations
- Input site information into LOIS

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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## NOT A PRIORITY FOR REGIONAL INVESTMENT IN MONEY AND RESOURCES

### GATEWAY (LETCHER) - (fatal flaws - dialysis center at entrance, excess sewer capacity, maintenance)

The following must be executed to make the Gateway Business Park marketable:

- Increase excess sewer capacity from 0 gpd to 500,000 gpd
  - Cost
  - Schedule
  - feasibility
- Relocate dialysis center to another location outside of the park
  - Cost
  - Schedule
  - feasibility
- Or divert the entrance
  - Cost
  - Schedule
  - feasibility
- Change the name of the park. Create a global, recognizable identity
- Develop new marketing materials and website
- Cut the grass on shoulder of road

### Path Forward:

- This currently is not a viable, marketable park that could compete on a national level for global projects based upon the noted fatal flaws in red
- Based upon the extent of the recommendations above, this would not be a priority for the region to develop / promote as an industrial park - do not invest time, nor develop resources for funding for the above recommendations
- This park can compete for local / regional projects looking for a place to expand or have a specific need for local resources
- Input site information into LOIS

## PRIORITIZING OF SITES FOR SOUTHEAST KENTUCKY

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## NOT A PRIORITY FOR REGIONAL INVESTMENT IN MONEY AND RESOURCES

### HONEY BRANCH (MARTIN) - (fatal flaws - endangered species, excess water capacity, surrounding use of a prison, mineral rights)

The following must be executed to make Honey Branch marketable:

- Engage the EPA with regard to steps to mitigate the endangered species designation
- Conduct a Phase 1 and additional due diligence (wetlands delineation)
- Control mineral rights
- Increase excess water capacity from 78,000 gpd to 250,000 gpd
  - Cost
  - Schedule
  - Feasibility
- Change the name of the park. Create a global, recognizable identity
- Develop new marketing materials and website
- Develop an aggressive incentive package for the park

### Path Forward:

- This currently is not a viable, marketable park that could compete on a national level for global projects based upon the noted fatal flaws in red
- Based upon the extent of the recommendations above, this would not be a priority for the region to develop as an industrial park - do not invest time, nor develop resources for funding for the above recommendations
- This park can compete for local / regional projects looking for a place to expand or have a specific need for local resources
- Input site information into LOIS

PROPERTIES FOR SITE EVALUATIONS

KPC / AEP	Original Status	REVISED STATUS	Sent RFI	Sent Reminder	Received Correspondence	InSite RFI Complete	InSite RFI Partial	No Response	Access to Adequate Data	Zoned Industrial	Surrounding Uses	Building Size 20,000+ sf and ability to expand	Site Size 20+ acres	Floodplain	Number of Owners	Willingness to Sell	Cost	Willingness to Lease	Cost
	<b>Boyd County</b>																		
EastPark		1	yes	yes	yes	yes	-	-	yes	yes	Industrial		175	no	1	yes	\$75,000 ac	-	-
EastPark Ashland Building		1	yes	yes	yes	yes	-	-	yes	yes	Industrial	110,000	53	no	1	yes	\$2,250,000	yes	\$2.00/sf
<b>Greenup County</b>																			
Wurtland Riverport		see data	yes	yes	yes	no	yes	-	no	yes	no answer		135	no	1	yes	\$25,000 ac	-	-
<b>Lawrence County</b>																			
Browns Food		no response	yes	yes	no	no	no	none	no	-	-								
<b>Floyd County</b>																			
Stanley Allen (local marketability)		size	no	no	-	-	-	-	-	-	-		8						
Stone Crest		no response	yes	yes	no	no	no	none	no	-	-		20						
Wallen Farm (local marketability)		size	no	no	-	-	-	-	-	-	-		5						
Thunder Ridge		no response	yes	yes	no	no	no	none	no	-	-		100						
<b>Johnson County</b>																			
Celerity (local marketability)		location	no	no	-	-	-	-	-	-	-	42,405							
Palmsville Wal-Mart (local marketability)		ceiling heights	no	no	-	-	-	-	-	-	-	40,317							
Ward Building (local marketability)		size	no	no	-	-	-	-	-	-	-								
Holland Site		yes	yes	yes	no	yes	-	-	yes	yes	com/ind		653	no	3	yes	no answer	-	-
Midway Building (Building Availability on Hold)		bid, on hold	yes	yes	yes	no	-	none	-	-	-								
<b>Knott County</b>																			
Chestnut Mountain Sportsplex		not available	yes	yes	yes	yes	-	-	yes	no	other	66,000		no	1	no			
Chestnut Mountain			yes	yes	yes	yes	-	-	yes	no	other		200	no	2	yes	no answer	-	-
<b>Letcher County</b>																			
Food World (local marketability)		size	no	no	-	-	-	-	-	-	-	19,500							
Gateway			yes	yes	yes	no	yes	-	yes	yes	residential		260	no	1	yes	\$10,000 ac	-	-
Rail Site Old Tipple		size	yes	yes	yes	no	yes	-	yes	yes	com/ind		22	yes	1	yes	no answer	-	-
RC Property		size	no	no	-	-	-	-	-	-	-	15,000							
<b>Maggoffin County</b>																			
Don Bailey Building		no response	yes	yes	no	no	no	none	no	-	-	21,600							
Industrial Site Old Toll Booth		no response	yes	yes	no	no	no	none	no	-	-		60						
<b>Martin County</b>																			
Honey Branch (local marketability)		see data	yes	yes	yes	yes	-	-	yes	no	ind/ret		180	no	1	yes	\$20,000 ac	-	-
Martin Co Business Center (local marketability)		size	yes	yes	yes	yes	-	-	yes	other	com/ret	32000 / 7500 available	3	yes	1	no		yes	10.50/sf
MidCon Building / Honey Branch (local marketability)		size/price	yes	yes	yes	yes	-	-	yes	no	industrial	14,000	20	no	1	yes	4,000,000	yes	12.86/sf
<b>Perry County</b>																			
American Woodmark			yes	yes	yes	yes	-	-	yes	yes	industrial	311,000	32	no	1	yes	3,700,000	yes	10,000/sf
Coalfields Industrial Park			yes	yes	yes	yes	-	-	yes	yes	industrial		338	no	1	yes	\$10,000	-	-
<b>Pike County</b>																			
ACS		no response	yes	yes	no	no	no	no	no	-	-	42,946							
Hobbs Warehouse (local marketability)		ceiling heights	no	no	-	-	-	-	-	-	-	50,000							
Marions Branch (Pikeville)			yes	yes	yes	yes	-	-	yes	no	res/com/ind		170	no	1	yes	\$10,000 ac	-	-
Scott Fork		no response	yes	yes	no	no	no	no	no	-	-								
John Moore Branch		no response	yes	yes	no	no	no	no	no	-	-								
Step Constr. Sockleys Creek (local marketability)		size	no	no	-	-	-	-	-	-	-	9,657							

**PROPERTIES FOR SITE EVALUATIONS**

KPC / AEP	Original Status	REVISED STATUS	Industrial Park Setting	One mile+ Residential	One mile+ Schools	One mile+ Public Parks	Electric to the Site	Water to the Site	Excess Water Capacity	Sewer to the Site	Excess Sewer Capacity	Natural Gas to the Site	Fiber to the Site	Clean Phase 1	Geotechnical Study	Wetlands Delineation	Clear for Wetlands	Archeological Study	Endangered-Species Study	
<b>Boyd County</b>																				
EastPark		1	yes	yes	yes	yes	yes	yes	1.3 mgd	yes	1.1 mgd	yes	yes	yes	yes	no	yes	yes	yes	yes
EastPark Ashland Building		1	yes	yes	yes	yes	yes	yes	1.3 mgd	yes	1.1 mgd	yes	yes	yes	yes	no	yes	yes	yes	yes
<b>Greenup County</b>																				
Wurtland Riverport		see data	no	no	no	no	yes	yes	no answer	yes	no answer	yes	yes	yes	no answer	yes	yes	no	yes	yes
<b>Lawrence County</b>																				
Browns Food		no response																		
<b>Floyd County</b>																				
Stanley Allen (local marketability)		size																		
Stone Crest		no response																		
Wallen Farm (local marketability)		size																		
Thunder Ridge		no response																		
<b>Johnson County</b>																				
Celerity (local marketability)		location																		
Paintsville Wal-Mart (local marketability)		ceiling heights																		
Ward Building (local marketability)		size																		
Holland Site			no	yes	yes	yes	yes	yes	3 mgd	yes	100,000 gpd	yes	yes	no	no answer	na	no	unknown	no	no
Midway Building (Building Availability on Hold)		blog, on hold																		
<b>Knott County</b>																				
Chestnut Mountain Sportsplex		not available	no	yes	yes	yes	yes	yes	250,000 gpd	yes	180,000 gpd	yes	yes	yes	no answer	yes	yes	no answer	yes	yes
Chestnut Mountain			no	yes	yes	yes	yes	yes	250,000 gpd	yes	180,000 gpd	yes	yes	yes	no answer	yes	yes	no answer	yes	yes
<b>Letcher County</b>																				
Food World (local marketability)		size																		
Gateway			yes	yes	yes	yes	yes	yes	497,594 gpd	yes	0 gpd	yes	yes	yes	yes	no	yes	yes	yes	no
Rail Site Old Tipple		see data	no	yes	yes	yes	yes	yes	100,000 gpd	no	no answer	no	yes	no	no answer	no	no	no	no	no
RC Property		size																		
<b>Magoffin County</b>																				
Don Bailey Building		no response																		
Industrial Site Old Toll Booth		no response																		
<b>Martin County</b>																				
Honey Branch (local marketability)		see data	yes	yes	yes	yes	yes	yes	78,000 gpd	yes	474,000 gpd	yes	yes	yes	no	yes	no	no answer	yes	yes/Indiana Bot
Martin Co Business Center (local marketability)		size	no	no	yes	yes	yes	yes	1 mgd	yes	110,000 gpd	yes	yes	no	unknown	yes	na	unknown	no	no
MidCon Building / Honey Branch (local marketability)		size/price	yes	yes	yes	yes	yes	yes	1 mgd	yes	600,000 gpd	yes	yes	no	unknown	yes	na	no answer	yes	yes/Indiana Bot
<b>Perry County</b>																				
American Woodmark			yes	yes	yes	yes	yes	yes	544,000 gpd	yes	1.8 mgd	no	yes	yes	no	no	unknown	no	no	no
Coalfields Industrial Park			yes	yes	yes	yes	yes	yes	1.4 mgd	yes	1.7 mgd	no	yes	yes	unknown	no	no	no	no	no
<b>Pike County</b>																				
ACS		no response																		
Hobbs Warehouse (local marketability)		ceiling heights																		
Marions Branch (Pikeville)			yes	yes	yes	yes	yes	yes	1 mgd	yes	20,000 gpd	yes	no	no	no answer	yes	no	no	no	no
Scott Fork		no response																		
John Moore Branch		no response																		
Stepp Constr. Sookeys Creek (local marketability)		size																		

**PROPERTIES FOR SITE EVALUATIONS**

**KPC / AEP**

REVISED STATUS	Sept	Sept	Revised	InSite	InSite	No	Access to	Zoned	Surrounding	Building Size	Site Size		Number of	Willingness		Willingness		Industrial Park	On-site	
	17	Reminder	Complete	Complete	Partial	Response	Adequate Data	Industrial	Uses	20,000+ sf and ability to expand	20+ acres	Floodplain	Owners	to Sell	Cost	to lease	Cost	Salvage	Residential	
Boyd County																				
EastPark	yes	yes	yes	yes			yes	yes	Industrial	-	53	no	1	yes	\$25,000 ac	-	-	yes	yes	
EastPark Ashland Building	yes	yes	yes	yes			yes	yes	Industrial	110,000	53	no	1	yes	\$2,250,000	yes	\$2.00 sf	yes	yes	
Johnson County																				
Holland Site	yes	yes	yes	no	yes		yes	yes	com/ind	-	653	no	1	yes	no answer	-	-	no	yes	
Knott County																				
Chestnut Mountain	yes	yes	yes	yes			yes	no	other	-	200	no	2	yes	no answer	-	-	no	yes	
Letcher County																				
Gateway	yes	yes	yes	no	yes		yes	yes	residential	-	260	no	1	yes	\$10,000 ac	-	-	yes	yes	
Perry County																				
American Woodmark	yes	yes	yes	yes			yes	yes	Industrial	311,000	32	no	1	yes	3,700,000	yes	10,000 sf	yes	yes	
Coalfields Industrial Park	yes	yes	yes	yes			yes	yes	Industrial	-	38	no	1	yes	\$10,000	-	-	yes	yes	
Pike County																				
Mansons Branch (Pikeville)	yes	yes	yes	yes			yes	no	res/com/ind	-	170	no	1	yes	\$10,000 ac	-	-	yes	yes	
Martin County																				
Hanna Branch (local market hill)	yes	yes	yes	yes			yes	no	ind/res	-	180	no	1	yes	\$20,000 ac	-	-	yes	yes	

**PROPERTIES FOR SITE EVALUATIONS**

KPC / AEP

STATUS	One mile+	One mile+	Electric	Water	Excess	Sewer	Excess	Natural Gas	Fiber	Clean	Geotechnical	Wetlands	Clear for	Archeological	Endangered	
	to Site	to Site	to Site	to Site	Water Capacity	to Site	to Site	to Site	to Site							
Boyd County																
EastPark Ashland Building	yes	yes	yes	yes	1.3 mgd	yes	1.1 mgd	yes	yes	yes	yes	no	yes	yes	yes	yes
Holland Site	yes	yes	yes	yes	1.3 mgd	yes	1.1 mgd	yes	yes	yes	yes	no	yes	yes	yes	yes
Knott County																
Chestnut Mountain	yes	yes	yes	yes	3 mgd	yes	100,000 gpd	yes	yes	no	no answer	no	no	unknown	no	yes
Letour County																
Chestnut Mountain	yes	yes	yes	yes	250,000 gpd	yes	180,000 gpd	yes	yes	yes	no answer	yes	yes	no answer	yes	yes
Letour County																
Letour County	yes	yes	yes	yes	497,594 gpd	yes	0 gpd	yes	yes	yes	yes	no	yes	yes	yes	no
Perry County																
American Woodmark	yes	yes	yes	yes	544,000 gpd	yes	1.8 mgd	no	yes	yes	yes	no	no	unknown	no	no
Coalfields Industrial Park	yes	yes	yes	yes	1.4 mgd	yes	2.7 mgd	no	yes	yes	unknown	no	no	no	no	no
Pike County																
Marions Branch (Pikeville)	yes	yes	yes	yes	1 mgd	yes	20,000 gpd	yes	no	no	no answer	yes	no	no	no	no
Martin County																
Honey Branch (local marketability)	yes	yes	yes	yes	36,000 gpd	yes	474,000 gpd	yes	yes	yes	no	yes	no	no answer	yes	yes/Indiana

**PROPERTIES FOR SITE EVALUATIONS**

KPC / AEP	Status and Priority	Marketing Status	Submittal	Sent Reminder	Received Correspondence	InSite RFI Complete	InSite RFI Partial	No Response	Access to Adequate Data	Zoned Industrial	Surrounding Uses	Building Size 20,000+ sf and ability to expand	Site Size 20+ acres	Floodplain	Number of Owners	Willingness to Sell	Acquire Cost	Willingness to Lease	Cost
<b>Boyd County</b>																			
EastPark	1	Viable Now	yes	yes	yes	yes	-	-	yes	yes	Industrial	-	495	no	1	yes	\$25,000 ac	-	-
EastPark Ashland Building	1	Viable Now	yes	yes	yes	yes	-	-	yes	yes	Industrial	110,000	53	no	1	yes	\$2,250,000	yes	\$2.00/sf
<b>Perry County</b>																			
American Woodmark	2	Short-Term, Currently Not Viable	yes	yes	yes	yes	-	-	yes	yes	Industrial	311,000	32	no	1	yes	3,700,000	yes	10,000/sf
Coalfields Industrial Park	2	Short-Term, Currently Not Viable	yes	yes	yes	yes	-	-	yes	yes	Industrial	-	338	no	1	yes	\$10,000	-	-
<b>Wayne County</b>																			
Marions Branch (Pikeville)	3	Short-Term, Currently Not Viable	yes	yes	yes	yes	-	-	yes	no	residential	-	170	no	1	yes	\$10,000 ac	-	-
<b>Johnson County</b>																			
Holland Site		Not viable in a competitive, national client search	yes	yes	yes	no	yes	-	yes	yes	com/ind	-	653	no	1	yes	no lease	-	-
<b>Litcher County</b>																			
Gateway (local marketability)		Not viable in a competitive, national client search	yes	yes	yes	no	yes	-	yes	yes	residential	-	260	no	1	yes	\$10,000 ac	-	-
<b>Martin County</b>																			
Honey Branch (local marketability)		Not viable in a competitive, national client search	yes	yes	yes	yes	-	-	yes	no	residential	-	180	no	1	yes	\$20,000 ac	-	-
<b>Knots County</b>																			
Chestnut Mountain (not available)		Not viable in a competitive, national client search	yes	yes	yes	yes	-	-	yes	no	other	-	200	no	2	yes	no lease	-	-

**PROPERTIES FOR SITE EVALUATIONS**

KPC / AEP	Status and Priority	Marketing Status	Industrial Park Setting	One mile+ Residential	One mile+ Schools	One mile+ Public Parks	Electric to the Site	Water to the Site	Excess Water Capacity	Sewer to the Site	Excess Sewer Capacity	Natural Gas to the Site	Fiber to the Site	Phase 1	Clean Phase 1	Geotechnical Study	Wetlands Delineation	Clear for Wetlands	Archeological Study	Endangered Species Study
Way County																				
EastPark	1	Viable Now	yes	yes	yes	yes	yes	yes	1.3 mgd		1.3 mgd	yes	yes	yes	yes	yes	no	yes	yes	yes
EastPark Ashland Building	1		yes	yes	yes	yes	yes	yes	1.3 mgd	yes	1.3 mgd	yes	yes	yes	yes	yes	no	yes	yes	yes
Perry County																				
American Woodmark	2	Short-Term, Currently Not Viable	yes	yes	yes	yes	yes	yes	544,000 gpd	yes	1.8 mgd	no	yes	yes	yes	no	no	unknown	no	no
Coalfields Industrial Park			yes	yes	yes	yes	yes	yes	1.4 mgd	yes	1.7 mgd	no	yes	yes	unknown	no	no	no	no	no
Pike County																				
Marions Branch (Pikeville)	3	Short-Term, Currently Not Viable	yes	yes	yes	yes	yes	yes	1 mgd	yes	no	yes	yes	no	no	yes	no	no	no	no
Johnson County																				
Holland Site	-	Not viable in a competitive, national client search	no	yes	yes	yes	yes	yes	3 mgd	yes	100,000 gpd	yes	yes	no	no	no	no	unknown	no	no
etcher County																				
Gateway (local marketability)	-	Not viable in a competitive, national client search	yes	yes	yes	yes	yes	yes	497,594 gpd	yes	0 gpd	yes	yes	yes	yes	yes	no	yes	yes	no
Martin County																				
Honey Branch (local marketability)	-	Not viable in a competitive, national client search	yes	yes	yes	yes	yes	yes	76,000 gpd	yes	474,000 gpd	yes	yes	yes	no	yes	no	no	yes	no
Knott County																				
Chestnut Mountain (not available)	-	Not viable in a competitive, national client search	no	yes	yes	yes	yes	yes	250,000 gpd	yes	180,000 gpd	yes	yes	yes	no	yes	yes	no	yes	yes

## **K-PEGG PROGRAM**

### **GRANT RECIPIENT SUMMARIES**

- Recipient: One East Kentucky

Date of Grant: February 23, 2016

Amount: \$10,000

Counties Served: Floyd, Johnson, Knott, Lawrence, Letcher, Magoffin, Martin, Perry, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to One East Kentucky to support the organization's budget requirements for the 2015-2016 budget year. One East Kentucky used these funds to help cover costs incurred to meet with potential new employers, necessary travel, attend economic development conferences, and market the region. One East Kentucky is one of Kentucky Power's key regional economic development partners.

- Recipient: One East Kentucky

Date of Grant: February 23, 2016

Amount: \$50,000

Counties Served: Floyd, Johnson, Knott, Lawrence, Letcher, Magoffin, Martin, Perry, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to One East Kentucky to support the organization's budget requirements for the 2016-2017 budget year. As with the grant issued for the 2015-2016 budget year, One East Kentucky used or will use these funds to help cover costs incurred to meet with potential new employers, necessary travel, attend economic development conferences, and market the region. One East Kentucky is one of Kentucky Power's key regional economic development partners.

- Recipient: Perry County Economic Development Board

Date of Grant: February 17, 2016

Amount: \$25,000

Counties Served: Perry

Project Description: Kentucky Power issued a K-PEGG grant to the Perry County Economic Development Board to support the development of a Perry County economic development organization. The funds were used to create a strategic plan and provide

budgeting support for the organization whose mission is to attract, develop, and expand a diversified business base in the counties.

- Recipient: City of Hazard

Date of Grant: February 28, 2016

Amount: \$56,000

Counties Served: Perry, Harlan, Leslie, Letcher, and Breathitt

Project Description: Kentucky Power issued a K-PEGG grant to the City of Hazard to fund improvements to the sanitary sewer system that serves the Coalfields Regional Industrial Park. The industrial park is a partnership among Perry, Knott, Leslie, Harlan, and Breathitt Counties. The funds were used to replace impellers in lift station pumps that increased the capacity of the sanitary sewer system. Replacing the impellers and increasing the capacity of the sanitary sewer system addressed specifically one of the infrastructure gaps identified in the InSite gap analysis report. Increasing the sewer capacity to 260,000 gallons per day at the Coalfields Industrial Park makes that site more attractive to businesses looking to relocate to the area.

- Recipient: Shaping Our Appalachian Region, Inc. (“SOAR”)

Date of Grant: February 28, 2016

Amount: \$25,000

Counties Served: Entire Kentucky Power service territory

Project Description: Kentucky Power issued a K-PEGG grant to SOAR to help SOAR fulfill its mission of expanding job creation, enhancing regional opportunity, innovation, and identity, improving the quality of life, and supporting all those working to achieve these goals in Appalachian Kentucky. The funds provided by Kentucky Power allowed SOAR to cover a portion of its operational expenses, support regional projects, and develop and on-line community. SOAR is one of Kentucky Power’s key regional economic development partners.

- Recipient: City of Pikeville

Date of Grant: April 29, 2016

Amount: \$75,000

Counties Served: Pike

Project Description: Kentucky Power issued a K-PEGG grant to the City of Pikeville to provide the City with the funding necessary to hire engineers to design the “last mile” portion of the broadband infrastructure provided through the KentuckyWired project.

The KentuckyWired project only provides the broadband infrastructure backbone or the “middle mile.” The City’s project provided the engineering design necessary to extend broadband service from backbone to individual customers. The access to high-quality broadband service is intended to assist the City of Pikeville to attract new businesses to the area.

- Recipient: One East Kentucky

Date of Grant: June 27, 2016

Amount: \$37,500

Counties Served: Floyd, Johnson, Knott, Lawrence, Letcher, Magoffin, Martin, Perry, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to One East Kentucky to complete an Aerospace Assessment and Marketing Plan for the region. One East Kentucky used the funds to hire an outside consultant to perform the assessment and planning. As a result of the assessment and marketing plan, communities served by One East Kentucky received the AEROREady designation. This designation helps One East Kentucky give assurances to private aerospace and aviation companies that an independent firm has verified that the workforce and assets of the region can support their facilities.

- Recipient: Big Sandy Regional Industrial Development Authority

Date of Grant: June 27, 2016

Amount: \$100,000

Counties Served: Martin and Magoffin

Project Description: Kentucky Power issued a K-PEGG grant to the Big Sandy Regional Industrial Development Authority (“BSRIDA”) to provide the final funding necessary for BSRIDA to purchase Logan Corporation’s facility in Martin County. Logan Corporation sought to sell the property so that it would be able to purchase a larger facility in Magoffin County to expand its business. The facility in Martin County was insufficiently sized to support Logan’s operations as it transitioned from manufacturing mining equipment to dump truck beds. BSRIDA’s purchase of Logan’s facility in Martin County made the move to Magoffin County practical. As a result, none of the 35 jobs at Logan’s facility will be lost from the region and Logan will eventually create 80 new jobs at its Magoffin County facility. In addition, the BSRIDA now owns an industrial facility it can market to potential new businesses.

- Recipient: Big Sandy Community and Technical College

Date of Grant: July 20, 2016

Amount: \$75,000

Counties Served: Floyd, Johnson, Magoffin, Martin, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to Big Sandy Community and Technical College (“BSCTC”) to purchase equipment for the college’s new Advanced Technology Center at its Pikeville campus. This equipment helps students in BSCTC’s Fiber Optics Technician training program develop the skills necessary to serve as certified technicians for the new broadband infrastructure to be installed in the region through the KentuckyWired and other related projects.

- Recipient: Ashland Alliance

Date of Grant: July 20, 2016

Amount: \$84,000

Counties Served: Boyd and Greenup

Project Description: Kentucky Power issued a K-PEGG grant to Ashland Alliance for two projects: (1) to obtain an “AEROREady certification” for Greenup and Boyd Counties and (2) to hire an outside consultant to assist with the region’s marketing and branding efforts. As a result of the funds provided through the K-PEGG grant, Ashland Alliance obtained the AEROREady certification. This designation helps Ashland Alliance give assurances to private aerospace and aviation companies that an independent firm has verified that the workforce and assets of the region can support their facilities. Additionally, Ashland Alliance obtained a marketing and branding plan that will assist Ashland Alliance in marketing the region to interested companies.

- Recipient: Floyd County Fiscal Court

Date of Grant: August 15, 2016

Amount: \$100,000

Counties Served: Floyd

Project Description: Kentucky Power issued a K-PEGG grant to the Floyd County Fiscal Court to allow it to provide bridge funding for the RCC Big Shoal, LLC gas-to-liquids project. The bridge funding provided by this grant allowed RCC Big Shoal to complete pre-construction project development activities including site evaluation and engineering. RCC Big Shoal’s facility will be located on a reclaimed coal mine and will provide the equivalent of 500-600 jobs during construction. Once complete, the project is anticipated to result in 50 to 75 full-time jobs.

- Recipient: Ashland Alliance

Date of Grant: August 15, 2016

Amount: \$15,000

Counties Served: Boyd/Greenup

Project Description: Kentucky Power issued a K-PEGG grant to Ashland Alliance to offset a portion of the cost of upgrading an existing natural gas line at the Wurtland Riverport Industrial Park. The natural gas line upgrade was necessary to attract Steel Ventures, a West Virginia based company, to construct a steel galvanizing and distribution facility at the industrial park. Steel Ventures began construction on the new facility and anticipates it becoming operational in the summer of 2017. Steel Venture's new facility will eventually employ 65 personnel.

- Recipient: One East Kentucky

Date of Grant: April 5, 2017

Amount: \$50,000

Counties Served: Floyd, Johnson, Knott, Lawrence, Letcher, Magoffin, Martin, Perry, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to One East Kentucky to support the organization's budget requirements for the 2017-2018 budget year. As with the grants issued in previous years, One East Kentucky used or will use these funds to help cover costs incurred to meet with potential new employers, necessary travel, attend economic development conferences, and market the region. One East Kentucky is one of Kentucky Power's key regional economic development partners.

- Recipient: Shaping Our Appalachian Region, Inc. ("SOAR")

Date of Grant: April 5, 2017

Amount: \$25,000

Counties Served: Entire Kentucky Power service territory

Project Description: Kentucky Power issued a K-PEGG grant to SOAR to help SOAR fulfill its mission of expanding job creation, enhancing regional opportunity, innovation, and identity, improving the quality of life, and supporting all those working to achieve these goals in Appalachian Kentucky. Like the grant issued in 2016, the funds provided by Kentucky Power will allow SOAR to cover a portion of its operational expenses, support regional projects, and develop and on-line community. SOAR is one of Kentucky Power's key regional economic development partners.

- Recipient: Hazard-Perry County Economic Development Alliance

Date of Grant: April 5, 2017

Amount: \$25,000

Counties Served: Perry

Project Description: Kentucky Power issued a K-PEGG grant to the Hazard-Perry County Economic Development Alliance to provide budgetary support for the organization whose mission is to attract, develop, and expand a diversified business base in the counties. The Alliance's primary focus is marketing the Coal Fields Regional Industrial Park as an economic development site.

- Recipient: Southeast Kentucky Economic Development Corporation

Date of Grant: April 5, 2017

Amount: \$60,000

Counties Served: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Johnson, Knott, Lawrence, Leslie, Letcher, Magoffin, Martin, Morgan, Owsley, Perry, and Pike

Project Description: Kentucky Power issued a K-PEGG grant to the Southeast Kentucky Economic Development Corporation to provide funds necessary to assist four companies in the Company's service territory obtain quality control certifications necessary to compete for subcontracting work to major military and government contractors.

- Recipient: Pike County Fiscal Court

Date of Grant: April 5, 2017

Amount: \$18,700

Counties Served: Pike

Project Description: Kentucky Power issued a K-PEGG grant to the Pike County Fiscal Court to provide funds necessary to market the activities at the Pike County Teleworks Hub including job training and placement services.

## KEAP PROGRAM

### GRANT RECIPIENT SUMMARIES

- Recipient: Gateway Area Development District, Big Sandy Gateway Area Development District, and FIVCO Area Development District

Grant Year: 2014

Amount: \$8,000

Counties Served: Boyd, Carter, Elliott, Lawrence, Johnson, Martin, and Morgan

Project Description: Kentucky Power issued a KEAP grant to the Big Sandy, FIVCO, and Gateway Area Development Districts to support economic development training for members of each organization. With the funding provided in the grant, one member of staff from each organization was able to attend the annual University of Oklahoma Economic Development Institute (EDI) training session. The Oklahoma EDI is a premier economic development training course that allowed the staff members from each organization to develop the economic development skills necessary to make their communities competitive. This was the first of three years of training necessary for obtaining the Oklahoma EDI certification.

- Recipient: City of Paintsville

Grant Year: 2014

Amount: \$100,000

Counties Served: Johnson

Project Description: Kentucky Power issued a KEAP grant to the City of Paintsville to support its work to upgrade the then-vacant Teays Branch site. Specifically, the funding provided by the Company allowed the City to improve the parking at the facility to make it more attractive to new businesses. The work on the parking facilities is now complete, and the site is now the home of the Eastern Kentucky Advanced Manufacturing Institute.

- Recipient: Southeast Kentucky Chamber of Commerce – Louisa Chapter

Grant Year: 2014

Amount: \$92,000

Counties Served: Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Louisa Chapter of the Southeast Kentucky Chamber of Commerce to provide a portion of the start-up funding

for Quality Metal Roofing, a sheet metal and roofing manufacturing facility, to locate in Louisa. Quality Metal Roofing's facility has been constructed, and the Company currently employs eleven individuals full-time.

- Recipient: Northeast Kentucky Regional Industrial Park Authority

Grant Year: 2015

Amount: \$100,000

Counties Served: Boyd, Lawrence, Carter, Greenup, and Elliott

Project Description: Kentucky Power issued a KEAP grant to the Northeast Kentucky Regional Industrial Park Authority for site development work at the Authority's East Park Industrial Park in Boyd County. Specifically, the funding was used for soil compaction on a 150,000 building pad within the park. Soil compaction is necessary because the entire industrial park is built on a reclaimed surface mine. The soil compaction work on this project is complete.

- Recipient: Southeast Kentucky Chamber of Commerce – Louisa Chapter

Grant Year: 2015

Amount: \$90,300

Counties Served: Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Louisa Chapter of the Southeast Kentucky Chamber of Commerce to provide funding to update an industrial facility in Louisa and make it marketable as "site ready" for new businesses. The renovation work was completed in 2016.

- Recipient: Gateway Area Development District, Big Sandy Gateway Area Development District, and FIVCO Area Development District

Grant Year: 2015

Amount: \$9,700

Counties Served: Boyd, Carter, Elliott, Lawrence, Johnson, Martin, and Morgan

Project Description: Kentucky Power issued a KEAP grant to the Big Sandy, FIVCO, and Gateway Area Development Districts to support continued economic development training for members of each organization. With the funding provided in the grant, one member of staff from each organization was able to attend the annual University of Oklahoma Economic Development Institute (EDI) training session. This was the second of three years of training necessary for obtaining the Oklahoma EDI certification.

- Recipient: Ashland Alliance and Northeast Kentucky Regional Industrial Park Authority

Grant Year: 2016

Amount: \$45,000

Counties Served: Boyd, Lawrence, Carter, Greenup, and Elliott

Project Description: Kentucky Power issued a KEAP grant to Ashland Alliance and the Northeast Kentucky Regional Industrial Park Authority to fund improvements to the EastPark Industrial Park. These improvements were necessary to make the park more attractive to potential new businesses. This project included work to update signage at the site and to improve the spec building at the park. This project was completed in early 2017.

- Recipient: Gateway Area Development District, Big Sandy Gateway Area Development District, and FIVCO Area Development District

Grant Year: 2016

Amount: \$10,400

Counties Served: Boyd, Carter, Elliott, Lawrence, Johnson, Martin, and Morgan

Project Description: Kentucky Power issued a KEAP grant to the Big Sandy, FIVCO, and Gateway Area Development Districts to support economic development training for members of each organization. With the funding provided in the grant, one member of staff from each organization was able to attend the annual University of Oklahoma Economic Development Institute (EDI) training session. This was the final of three years of training with the Oklahoma EDI. All three participants received their certification from the EDI and are assisting their communities with economic development efforts.

- Recipient: City of Olive Hill

Grant Year: 2016

Amount: \$25,000

Counties Served: Carter

Project Description: Kentucky Power issued a KEAP grant to the City of Olive Hill to fund preliminary engineering services to support a capital project to upgrade the city's wastewater treatment facility. Preliminary engineering services funded by this grant included surveying, measurements of existing treatment capacities, and preliminary layout and design for system upgrades. The City is upgrading its wastewater treatment facility by 25% to allow for additional residential and industrial use. This expansion will make the City more attractive to new business and industry.

- Recipient: FIVCO Area Development District

Grant Year: 2016

Amount: \$4,000

Counties Served: Boyd, Lawrence, Carter, Greenup, and Elliott

Project Description: Kentucky Power issued a KEAP grant to the FIVCO Area Development District to support marketing efforts for the EastPark Industrial Park. These marketing funds were used to install signs identifying available space in the park as well as to participate in marketing efforts with commercial realtors to increase their awareness and understanding of the available parcels within the park.

- Recipient: Southeast Kentucky Chamber of Commerce – Louisa Chapter

Grant Year: 2016

Amount: \$92,750

Counties Served: Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Louisa Chapter of the Southeast Kentucky Chamber of Commerce to allow it to provide funding for the expansion of Quality Metal Roofing, a business created with the support of a KEAP grant in 2014. The business has thrived and the funding provided through this second KEAP grant allowed Quality Metal Roofing to add a new product line and create up to seven new jobs in Louisa.

- Recipient: Eastern Kentucky Advanced Manufacturing Institute (eKAMI)

Grant Year: 2017

Amount: \$50,000

Counties Served: Johnson

Project Description: Kentucky Power issued a KEAP grant to eKAMI to support the repurposing of its facility in Paintsville into an education center. The eKAMI education center will focus on re-training out-of-work coal miners in skills necessary for advanced manufacturing.

- Recipient: Ashland Alliance

Grant Year: 2017

Amount: \$17,500

Counties Served: Boyd, Carter, Elliott, Greenup, and Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Ashland Alliance to support the EastPark industrial park. Specifically, this grant would be used to obtain a build ready certification from the state and to fund recruitment and marketing efforts for the site.

- Recipient: One East Kentucky

Grant Year: 2017

Amount: \$88,200

Counties Served: Martin

Project Description: Kentucky Power issued a KEAP grant to One East Kentucky to provide funding to Thoroughbred Aviation Maintenance to support the development of a helicopter painting facility at the Big Sandy Regional Airport in Martin County. Once constructed, the Thoroughbred facility will be the only helicopter paint facility within 400 miles.

- Recipient: Ashland Community and Technical College

Grant Year: 2017

Amount: \$25,000

Counties Served: Boyd, Carter, Elliott, Greenup, and Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Ashland Community and Technical College to purchase equipment for its new fiber optics training program. The goal of the training program is to develop a workforce capable of supporting installation and maintenance requirements associated with the planned increased investment in fiber optics infrastructure in the region.

- Recipient: Paintsville-Johnson County Chamber of Commerce

Grant Year: 2017

Amount: \$20,000

Counties Served: Johnson

Project Description: Kentucky Power issued a KEAP grant to the Paintsville-Johnson County Chamber of Commerce to support American Metal Works in obtaining ISO 9001 and AS 9100 certifications. These quality assurance certifications will allow American Metal Works to compete more effectively for military and aerospace industry contracts.

- Recipient: Gateway Area Development District, Big Sandy Gateway Area Development District, and FIVCO Area Development District

Grant Year: 2017

Amount: \$3,300

Counties Served: Boyd, Carter, Elliott, Lawrence, Johnson, Martin, and Morgan

Project Description: Kentucky Power issued a KEAP grant to the Big Sandy, FIVCO, and Gateway Area Development Districts to support economic development certification testing for members of each organization. This funding will allow representatives from each organization to sit for the Certified Economic Developer examination.

- Recipient: Lawrence County Fiscal Court

Grant Year: 2017

Amount: \$18,000

Counties Served: Lawrence

Project Description: Kentucky Power issued a KEAP grant to the Lawrence County Fiscal Court to purchase equipment for a new Teleworks hub in the county. The Teleworks hub will include both work spaces for those engaged in the Teleworks program and training facilities for new employees.

**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) An Order	)	
Approving Its 2017 Environmental Compliance	)	
Plan; (3) An Order Approving Its Tariffs And	)	Case No. 2017-00179
Riders; (4) An Order Approving Accounting	)	
Practices To Establish Regulatory Assets And	)	
Liabilities; And (5) An Order Granting All Other	)	
Required Approvals And Relief	)	

**DIRECT TESTIMONY OF**  
**ADRIEN M. MCKENZIE, CFA**  
**ON BEHALF OF KENTUCKY POWER COMPANY**



**DIRECT TESTIMONY OF  
ADRIEN M. MCKENZIE, CFA**

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<b><u>Exhibit No.</u></b>	<b><u>Description</u></b>
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AMM-2	Summary of Results
AMM-3	Regulatory Mechanisms – Utility Group
AMM-4	Capital Structure
AMM-5	DCF Model –Utility Group
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AMM-9	Risk Premium Method
AMM-10	Expected Earnings Approach
AMM-11	DCF Model – Non-Utility Group

## I. INTRODUCTION

1 **Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

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

4 **Q2. IN WHAT CAPACITY ARE YOU EMPLOYED?**

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

7 **Q3. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
8 **PROFESSIONAL EXPERIENCE.**

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

11 **Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A4. The purpose of my testimony is to present to the Kentucky Public Service  
13 Commission (“Commission”) my independent assessment of the fair and reasonable  
14 rate of return on equity (“ROE”) that Kentucky Power Company (“Kentucky  
15 Power” or “the Company”) should be authorized to earn on its investment in  
16 providing electric utility service, including a reasonable return on environmental  
17 compliance-related capital expenditures. In addition, I also examined the  
18 reasonableness of Kentucky Power’s capital structure, considering both the specific  
19 risks faced by the Company, as well as other industry guidelines.

1 **Q5. PLEASE SUMMARIZE THE INFORMATION AND MATERIALS YOU**  
2 **RELIED ON TO SUPPORT THE OPINIONS AND CONCLUSIONS**  
3 **CONTAINED IN YOUR TESTIMONY.**

4 A5. To prepare my testimony, I referenced information from a variety of sources that  
5 would normally be relied upon by a person in my capacity. I am familiar with the  
6 organization, finances, and operations of Kentucky Power from my participation in  
7 prior proceedings before the Commission. In connection with this filing, I  
8 considered and relied upon corporate disclosures, publicly available financial  
9 reports and filings, and other published information relating to Kentucky Power and  
10 its parent company, American Electric Power Company, Inc. (“AEP”). I also  
11 reviewed information relating generally to capital market conditions and specifically  
12 to investor perceptions, requirements, and expectations for utilities. These sources,  
13 coupled with my experience in the fields of finance and utility regulation, have  
14 given me a working knowledge of the issues relevant to investors’ required return  
15 for Kentucky Power, and they form the basis of my analyses and conclusions.

16 **Q6. HOW IS YOUR TESTIMONY ORGANIZED?**

17 A6. After first summarizing my conclusions and recommendations, I briefly review  
18 Kentucky Power’s operations and finances. I then examine current conditions in the  
19 capital markets and their implications in evaluating a fair and reasonable ROE for  
20 Kentucky Power. With this as a background, I conduct well-accepted quantitative  
21 analyses to estimate the current cost of equity for a reference group of comparable-  
22 risk utilities. These included the discounted cash flow (“DCF”) model, the Capital  
23 Asset Pricing Model (“CAPM”), the empirical form of CAPM (“ECAPM”), an  
24 equity risk premium approach based on allowed ROEs, and reference to expected  
25 earned rates of return for utilities, which are all methods that are commonly relied

1 on in regulatory proceedings. In addition, I discuss the proper use of data from  
2 Regulatory Research Associates (“RRA”) in reviewing recommendations  
3 concerning the required ROE, and explain why the development and consideration  
4 of substantial record evidence is necessary to meet the regulatory principles set forth  
5 by the U.S. Supreme Court in the *Bluefield*<sup>1</sup> and *Hope*<sup>2</sup> cases.

6 Based on the cost of equity estimates indicated by my analyses, I evaluate a  
7 fair and reasonable ROE for Kentucky Power, taking into account the specific risks  
8 for its jurisdictional utility operations in Kentucky and the Company’s requirements  
9 for financial strength, as well as flotation costs, which are properly considered in  
10 setting a fair and reasonable ROE. Further, I corroborate my utility quantitative  
11 analyses by applying the DCF model to a group of low risk non-utility firms.

## II. RETURN ON EQUITY FOR KENTUCKY POWER

### 12 Q7. WHAT IS THE PURPOSE OF THIS SECTION?

13 A7. This section presents my conclusions that 10.31% is a fair and reasonable ROE  
14 applicable to Kentucky Power’s electric utility operations. This section also  
15 discusses the relationship between ROE and preservation of a utility’s financial  
16 integrity and the ability to attract capital.

#### A. Importance of Financial Strength

### 17 Q8. WHAT IS THE ROLE OF THE ROE IN SETTING A UTILITY'S RATES?

18 A8. The ROE is the cost of attracting and retaining common equity investment in the  
19 utility’s physical plant and assets. This investment is necessary to finance the asset

---

<sup>1</sup> *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

<sup>2</sup> *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1 base needed to provide utility service. Investors commit capital only if they expect  
2 to earn a return on their investment commensurate with returns available from  
3 alternative investments with comparable risks. Moreover, a fair and reasonable  
4 ROE is integral in meeting sound regulatory economics and the standards set forth  
5 by the U.S. Supreme Court in the *Bluefield* and *Hope* cases. A utility's allowed  
6 ROE should be sufficient to: 1) fairly compensate the utility's investors, 2) enable  
7 the utility to offer a return adequate to attract new capital on reasonable terms, and  
8 3) maintain the utility's financial integrity. These standards should allow the utility  
9 to fulfill its obligation to provide reliable service while meeting the needs of  
10 customers through necessary system replacement and expansion, but the Supreme  
11 Court's requirements can only be met if the utility has a reasonable opportunity to  
12 actually earn its allowed ROE.

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

1 **Q9. WHAT PART DOES REGULATION PLAY IN ENSURING THAT**  
2 **KENTUCKY POWER HAS ACCESS TO CAPITAL UNDER REASONABLE**  
3 **TERMS AND ON A SUSTAINABLE BASIS?**

4 A9. Regulatory signals are a major driver of investors' risk assessment for utilities.  
5 Investors recognize that constructive regulation is a key ingredient in supporting  
6 utility credit ratings and financial integrity, particularly during times of adverse  
7 conditions. Security analysts study commission orders and regulatory policy  
8 statements to advise investors about where to put their money. As Moody's  
9 Investors Service ("Moody's") noted, "the regulatory environment is the most  
10 important driver of our outlook because it sets the pace for cost recovery."<sup>3</sup>  
11 Similarly, S&P Global Ratings ("S&P") observed that, "Regulatory advantage is the  
12 most heavily weighted factor when S&P Global Ratings analyzes a regulated  
13 utility's business risk profile."<sup>4</sup> In a recent report on Kentucky Power, Moody's  
14 concluded, "Regulatory support with sufficient cost recovery is a key rating driver."<sup>5</sup>  
15 Furthermore, the ROE set by the Commission impacts investor confidence in not  
16 only the jurisdictional utility, but also in the ultimate parent company that is the  
17 entity that actually issues common stock.

18 **Q10. DO CUSTOMERS BENEFIT BY ENHANCING THE UTILITY'S**  
19 **FINANCIAL FLEXIBILITY?**

20 A10. Yes. Providing an ROE that is sufficient to maintain Kentucky Power's ability to  
21 attract capital under reasonable terms, even in times of financial and market stress,

---

<sup>3</sup> Moody's Investors Service, "Regulation Will Keep Cash Flow Stable As Major Tax Break Ends," *Industry Outlook* (Feb. 19, 2014).

<sup>4</sup> S&P Global Ratings, "Assessing U.S. Investors-Owned Utility Regulatory Environments," *RatingsExpress* (Aug. 10, 2016).

<sup>5</sup> Moody's Investors Service, "Kentucky Power Company," *Credit Opinion* (Feb. 4, 2016).

1 is not only consistent with the economic requirements embodied in the U.S.  
2 Supreme Court's *Hope* and *Bluefield* decisions, it is also in customers' best interests.  
3 Customers enjoy the benefits that come from ensuring that the utility has the  
4 financial wherewithal to take whatever actions are required to ensure safe and  
5 reliable service.

### B. Recommended ROE

6 **Q11. WHAT IS YOUR RECOMMENDATION AS TO A FAIR AND REASONABLE**  
7 **ROE FOR KENTUCKY POWER?**

8 A11. I recommend an ROE of 10.31% for Kentucky Power's electric utility operations.  
9 The bases for my conclusion are summarized below:

- 10 • In order to reflect the risks and prospects associated with Kentucky Power's  
11 jurisdictional utility operations, my analyses focused on a proxy group of  
12 eighteen other electric utilities ("Utility Group").
- 13 • Because investors' required return on equity is unobservable and no single  
14 method should be viewed in isolation, I applied the DCF, CAPM, ECAPM,  
15 and risk premium methods to estimate a fair and reasonable ROE for  
16 Kentucky Power, as well as referencing the expected earnings approach.
- 17 • As summarized on Exhibit AMM-2, considering the results of these  
18 analyses, and giving less weight to extremes at the high and low ends of the  
19 range, I concluded that the cost of equity for the proxy group of utilities is in  
20 the 9.6% to 10.8% range.
- 21 • Adding a flotation cost adjustment of 11 basis points to this bare bones cost  
22 of equity range resulted in an ROE range for the proxy group of 9.71% to  
23 10.91%;
- 24 • An ROE of 10.31% is equal to the midpoint of the proxy group range.
- 25 • Considering capital market expectations and the economic requirements  
26 necessary to maintain financial integrity and support additional capital  
27 investment even under adverse circumstances, an ROE of 10.31% at the  
28 midpoint of the proxy group range represents a fair and reasonable ROE for  
29 Kentucky Power.

1 **Q12. WHAT ELSE SHOULD BE CONSIDERED IN WEIGHING YOUR**  
2 **QUANTITATIVE RESULTS?**

3 A12. Current capital market conditions continue to reflect the impact of unprecedented  
4 policy measures taken in response to dislocations in the economy and financial  
5 markets stemming from the Great Recession, and are not representative of what is  
6 likely to prevail over the near-term future. As a result, the DCF results for utilities  
7 may be affected by potentially unrepresentative financial inputs. In this light, it is  
8 important to consider alternatives to the DCF model. As shown in Exhibit AMM-2,  
9 alternative risk premium models (*i.e.*, the CAPM, ECAPM and utility risk premium  
10 approaches) produce ROE estimates that generally exceed the DCF results. My  
11 expected earnings approach corroborated these outcomes.

12 **Q13. HAVE SUCH ALTERNATIVE ROE METHODS BEEN ACCEPTED BY**  
13 **OTHER REGULATORS?**

14 A13. Yes. In its recent Opinion 551, issued September 28, 2016, FERC reiterated its  
15 support for several of the very same methodologies relied on in my testimony. For  
16 example, FERC determined:

17 For the reasons discussed below, we conclude that the record in this  
18 proceeding demonstrates the presence of unusual capital market  
19 conditions, such that we have less confidence that the central  
20 tendency of the DCF zone of reasonableness (the midpoint in this  
21 case) accurately reflects the equity returns necessary to meet *Hope*  
22 and *Bluefield*.<sup>6</sup>

23 Rather, that finding supports a consideration of other cost of equity  
24 estimation methodologies in determining whether mechanically  
25 setting the ROE at the central tendency satisfies the capital attraction  
26 standards of *Hope* and *Bluefield*.<sup>7</sup>

---

<sup>6</sup> Opinion No. 551, 156 FERC ¶ 61,234 at P 119 (2016).

<sup>7</sup> *Id.* at P 120.

1           We therefore find it necessary and reasonable to consider additional  
2           record evidence, including evidence of alternative methodologies and  
3           state-commission approved ROEs, to gain insight into the potential  
4           impacts of these unusual capital market conditions on the  
5           appropriateness of using the resulting midpoint.<sup>8</sup>

6           The “alternative methodologies” referred to above include the CAPM, utility risk  
7           premium, and expected earnings approaches summarized on Exhibit AMM-2. After  
8           considering the results of these methods, FERC established an ROE for electric  
9           transmission services at the middle of the upper half of the DCF range, or 10.32%.<sup>9</sup>

10   **Q14. WHAT DID THE DCF RESULTS FOR YOUR SELECT GROUP OF NON-**  
11   **UTILITY FIRMS INDICATE WITH RESPECT TO YOUR EVALUATION?**

12   A14. Average DCF estimates for a low-risk group of firms in the competitive sector of the  
13   economy ranged from 10.4% to 10.8%, and averaged 10.6% before consideration of  
14   flotation costs. While I did not base my recommendation directly on these results,  
15   they confirm that a 10.31% ROE falls in a reasonable range to maintain Kentucky  
16   Power’s financial integrity, provide a return commensurate with investments of  
17   comparable risk, and support the Company’s ability to attract capital.

**C. Other Factors**

18   **Q15. ARE THERE REGULATORY MECHANISMS THAT AFFECT KENTUCKY**  
19   **POWER’S RATES FOR UTILITY SERVICE?**

20   A15. Yes. In addition to a fuel adjustment clause, Kentucky Revised Statute 278.183  
21   provides, in part, that “... a utility shall be entitled to the current recovery of its  
22   costs of complying with the Federal Clean Air Act as amended and those federal,  
23   state, or local environmental requirements which apply to coal combustion wastes

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<sup>8</sup> *Id.* at P 122.

<sup>9</sup> *Id.* at P 9.

1 and by-products from facilities utilized for production of energy from coal ...”  
2 Consistent with this statutory provision, the Commission has approved an  
3 environmental surcharge for the Company that allows for recovery of related costs.  
4 In addition, Kentucky Power operates under a Demand Side Management (“DSM”)  
5 rate mechanism that provides for recovery of the full costs associated with DSM  
6 programs – including any new revenues lost due to reduced sales – as well as a rider  
7 to address the decommissioning costs associated with Big Sandy Unit 2 and the Big  
8 Sandy Unit 1 coal related assets.

9 **Q16. DOES THE FACT THAT KENTUCKY POWER OPERATES UNDER**  
10 **CERTAIN REGULATORY MECHANISMS WARRANT ANY ADJUSTMENT**  
11 **IN YOUR EVALUATION OF A FAIR AND REASONABLE ROE?**

12 A16. No. Investors recognize that Kentucky Power is exposed to significant risks  
13 associated with the ability to recover rising costs and investment on a timely basis,  
14 and concerns over these risks have become increasingly pronounced in the industry.  
15 The Commission’s rate adjustment mechanisms are a tool to address these risks, but  
16 they do not eliminate them. In addition, investors also recognize that the periodic  
17 reviews accompanying trackers expose the Company to an increased risk of  
18 retroactive disallowances. While the regulatory mechanisms approved for Kentucky  
19 Power partially attenuate exposure to attrition in an era of rising costs and  
20 investment, this leveling of the playing field only serves to address factors that  
21 could otherwise impair the Company’s opportunity to earn its authorized return.

22 **Q17. DO THESE MECHANISMS SET KENTUCKY POWER APART FROM**  
23 **OTHER FIRMS OPERATING IN THE UTILITY INDUSTRY?**

24 A17. No. Adjustment mechanisms and cost trackers have been increasingly prevalent in  
25 the utility industry in recent years. In response to the increasing risk sensitivity of

1 investors to uncertainty over fluctuations in costs and the importance of advancing  
2 other public interest goals such as reliability, energy conservation, and safety,  
3 utilities and their regulators have sought to mitigate some of the cost recovery  
4 uncertainty and align the interest of utilities and their customers through a variety of  
5 regulatory mechanisms. Based largely on the expanded use of ratemaking  
6 mechanisms to address operational risks and investment recovery, Moody's  
7 upgraded most regulated utilities in January 2014.<sup>10</sup> This is consistent with the view  
8 that investors perceive the impact of regulatory mechanisms to be an industry-wide  
9 factor. Just as a rising tide lifts all boats, ratemaking mechanisms have had an  
10 across-the-board impact on risk perceptions for virtually all utilities.

11 **Q18. HAVE YOU SUMMARIZED THE VARIOUS REGULATORY**  
12 **MECHANISMS AVAILABLE TO THE FIRMS IN YOUR UTILITY GROUP?**

13 A18. Yes. Reflective of industry trends, the companies in the Utility Group operate under  
14 a variety of regulatory adjustment mechanisms. As summarized on Exhibit  
15 AMM-3, these mechanisms are ubiquitous and wide ranging. For example, the vast  
16 majority of the proxy utilities benefit from mechanisms that allow for recovery of  
17 new infrastructure investment outside a formal rate proceeding. Many of these  
18 utilities operate under revenue decoupling and other mechanisms that insulate the  
19 utility from volatility related to fluctuations in sales volumes, as well as the ability  
20 to implement periodic rate adjustments to reflect changes in a diverse range of  
21 operating and capital costs, including expenditures related to environmental  
22 mandates, conservation programs, transmission costs, and storm recovery efforts.

---

<sup>10</sup> Moody's Investors Service, "US utility sector upgrades driven by stable and transparent regulatory frameworks," *Sector Comment* (Feb. 2, 2014).

1 **Q19. WHAT IS YOUR CONCLUSION REGARDING THE IMPACT OF**  
2 **REGULATORY MECHANISMS IN EVALUATING A FAIR AND**  
3 **REASONABLE ROE FOR KENTUCKY POWER?**

4 A19. Investors recognize that the use of adjustment mechanisms is widely prevalent in the  
5 utility industry, and the relative impact is already considered in the data for my  
6 proxy group. As a result, any mitigation in risks associated with Kentucky Power's  
7 ability to attenuate regulatory lag through adjustment mechanisms is already  
8 reflected in the quantitative results presented in my testimony, and no adjustment to  
9 the ROE is justified or warranted.

10 **Q20. DOES THE CAPITAL STRUCTURE HAVE IMPLICATIONS FOR THE**  
11 **RATES PAID BY CUSTOMERS?**

12 A20. Yes. Because the cost of equity exceeds the cost of debt, the relative proportion of  
13 debt and equity in a utility's capital structure will impact the overall weighted  
14 average cost of capital, which is used to calculate the return component of a utility's  
15 revenue requirements.

16 **Q21. WHAT IS YOUR CONCLUSION AS TO THE REASONABLENESS OF THE**  
17 **COMPANY'S CAPITAL STRUCTURE?**

18 A21. Based on my evaluation, I conclude that the Company's proposed common equity  
19 ratio of 41.68% represents a reasonable basis from which to calculate Kentucky  
20 Power's overall rate of return. This conclusion was based on the following findings:

- 21 • Kentucky Power's common equity ratio is well within the range of  
22 capitalizations maintained by the firms in the proxy group of utilities and by  
23 other electric utility operating companies based on data at year-end 2016 and  
24 near-term expectations.
- 25 • While the Company's proposed equity ratio is within the range of  
26 comparable company capitalizations, it is below the average equity ratios  
27 maintained by these companies.

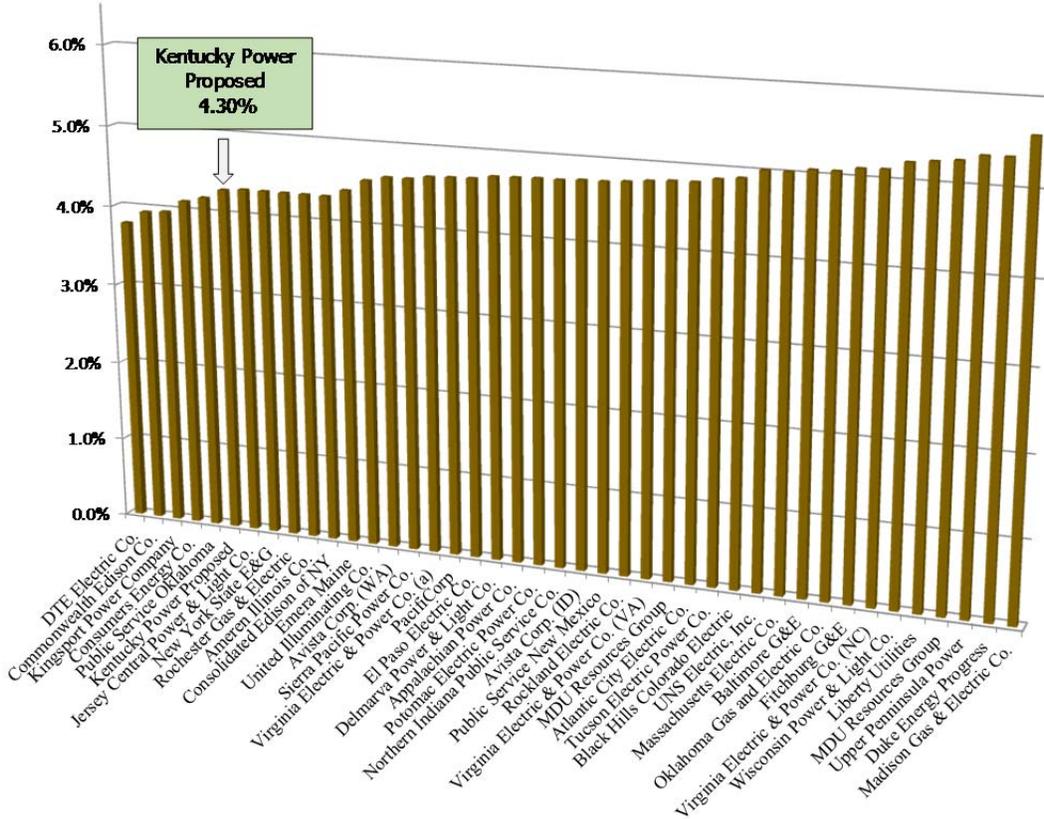
- 1           • Kentucky Power’s requested capitalization is consistent with the Company’s  
2           need to maintain its credit standing and financial flexibility as it seeks to  
3           raise additional capital to fund significant system investments and meet the  
4           requirements of its of customers.

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

8   **Q22. HOW DOES KENTUCKY POWER’S REQUESTED 4.30% WEIGHTED**  
9   **COST OF EQUITY COMPARE WITH THOSE RECENTLY APPROVED**  
10 **FOR ELECTRIC UTILITIES IN OTHER JURISDICTIONS?**

11 A22. The bar chart below shows the weighted costs of equity approved by state regulators  
12 for investor-owned electric utilities across the country during 2016 and for the first  
13 quarter of 2017. These observations represent all decisions reported by RRA that  
14 specify an ROE and an equity ratio for electric utilities during this period:

**FIGURE 2**  
**WEIGHTED COST OF EQUITY – ELECTRIC UTILITY**



Source: Regulatory Research Associates, "Major Rate Case Decisions," *Regulatory Focus* (Jan. 18 & Apr. 20, 2017).  
 Authorized Return on Equity \* Common Equity / Total Capital. Excludes decisions where a data element was not disclosed or where capital structure contained cost-free items or tax credit balances.  
 (a) Condenses multiple decisions and removes limited-issue adders.

1 As shown above, when the Company’s capital structure is considered along with my  
 2 recommended ROE of 10.31%, the resulting weighted cost of equity of 4.30% for  
 3 Kentucky Power falls at the lower end of the distribution of these weighted costs of  
 4 equity allowed by state regulators for other electric utilities.<sup>11</sup>

<sup>11</sup> 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

1 **Q23. WHAT IS THE PURPOSE OF THIS SECTION?**

2 A23. As a predicate to subsequent quantitative analyses, this section briefly reviews the  
3 operations and finances of Kentucky Power. In addition, it examines conditions in  
4 the capital markets and the general economy. An understanding of the fundamental  
5 factors driving the risks and prospects of electric utilities is essential in developing  
6 an informed opinion of investors' expectations and requirements that are the basis of  
7 a fair rate of return.

#### A. Kentucky Power Company

8 **Q24. BRIEFLY DESCRIBE KENTUCKY POWER.**

9 A24. Headquartered in Ashland, Kentucky, Kentucky Power is a wholly-owned  
10 subsidiary of AEP principally engaged in the generation, transmission, and  
11 distribution of electric power. The Company provides electric service to  
12 approximately 168,000 retail customers in eastern Kentucky. In addition to  
13 providing retail electric utility service, the Company also sells electric power at  
14 wholesale to municipalities. At December 31, 2016, Kentucky Power's total assets  
15 amounted to \$2.46 billion, with annual revenues amounting to approximately \$655  
16 million.

17 Kentucky Power has approximately 1,450 megawatts (MW) of generating  
18 capacity. Over the past few years, in an effort to address both environmental and  
19 reliability issues, Kentucky Power has significantly transformed the makeup of its  
20 generation resources. In 2013, it acquired, based on the Commission's  
21 determination that the acquisition was the least cost alternative, a 50% interest (780  
22 MW) in the cleaner-burning coal-fired Mitchell plant. In May 2015, it closed 800

1 MW of coal capacity at Big Sandy Unit 2 and, in 2016, completed the conversion of  
2 Big Sandy Unit 1 to a 285 MW natural gas fired facility. The Company also  
3 purchases a share of the Rockport plant (393 MW) under a long-term unit power  
4 agreement, and operates under a Power Coordination Agreement with its affiliates,  
5 Indiana Michigan Power Company, Appalachian Power Company, and Wheeling  
6 Power Company.

7 The Company's transmission and distribution facilities consist of over  
8 11,000 miles of transmission and distribution lines. It is a member of the PJM  
9 Interconnection, LLC ("PJM"), a FERC-approved regional transmission  
10 organization, and provides transmission service pursuant to the PJM Open Access  
11 Transmission Tariff. The Company's retail utility operations are subject to the  
12 jurisdiction of the Commission, with wholesale transmission operations being  
13 regulated by FERC.

14 **Q25. PLEASE DESCRIBE THE AEP SYSTEM.**

15 A25. AEP delivers electricity to more than 5 million customers across 11 states, including  
16 Ohio, Indiana, West Virginia, Virginia, Kentucky, Michigan, Tennessee, Oklahoma,  
17 Texas, Louisiana, and Arkansas. AEP is one of the largest electric utilities in the  
18 U.S., with its combined utility system including approximately 26,000 MW of  
19 generating capacity and more than 40,000 miles of transmission lines. During 2016,  
20 AEP's revenues totaled approximately \$16.4 billion, with total assets at December  
21 31, 2016 of \$63.5 billion.

22 **Q26. WHERE DOES KENTUCKY POWER OBTAIN THE CAPITAL USED TO**  
23 **FINANCE ITS INVESTMENT IN ELECTRIC UTILITY PLANT?**

24 A26. As a wholly-owned subsidiary of AEP, the Company obtains common equity capital  
25 solely from its parent, whose common stock is publicly traded on the New York

1 Stock Exchange. In addition to capital supplied by AEP, Kentucky Power also  
2 issues debt securities directly under its own name.

3 **Q27. DOES KENTUCKY POWER ANTICIPATE THE NEED FOR ADDITIONAL**  
4 **CAPITAL GOING FORWARD?**

5 A27. Yes. Kentucky Power will require capital investment to provide for necessary  
6 maintenance and replacements of its utility infrastructure, as well as to fund  
7 investment in new facilities. The Company anticipates that capital expenditures will  
8 total \$363.4 million from 2017-2019, which represents approximately 30.6% of  
9 adjusted rate base. Moody's noted the challenges associated with the Company's  
10 "[l]arge capital expenditure program," and "[h]igh coal concentration."<sup>12</sup> Support  
11 for Kentucky Power's financial integrity and flexibility will be instrumental in  
12 attracting the capital necessary to fund its share of these projects in an effective  
13 manner.

14 **Q28. WHAT CREDIT RATINGS ARE ASSIGNED TO KENTUCKY POWER?**

15 A28. Currently, Kentucky Power is assigned a corporate credit rating of A- by S&P, while  
16 Moody's has assigned the Company an issuer rating of Baa2. Fitch Ratings Ltd.  
17 assigns Kentucky Power an issuer default rating of BBB-.

**B. Outlook for Capital Costs**

18 **Q29. PLEASE SUMMARIZE CURRENT CAPITAL MARKET CONDITIONS?**

19 A29. Current capital market conditions continue to be affected by the Federal Reserve's  
20 unprecedented monetary policy actions, which were designed to push interest rates  
21 to historically and artificially low levels in an effort to support economic growth and

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<sup>12</sup> Moody's Investors Service, "Credit Opinion: Kentucky Power Company.," *Global Credit Research* (Dec. 11, 2015).

1           bolster employment. Since the Great Recession, investors have also had to contend  
2           with a heightened level of economic uncertainty. The ongoing potential for renewed  
3           turmoil in the capital markets has been seen repeatedly and investors have reacted to  
4           such periods of “risk off” behavior by seeking a safe haven in U.S. government  
5           bonds. As a result of this “flight to safety,” Treasury bond yields have been pushed  
6           significantly lower in the face of political, economic, and capital market risks. In  
7           the aftermath of the Brexit vote, for example, AP News reported that, “Fear and  
8           uncertainty about the global economy are leading investors to embrace the relative  
9           safety of U.S. Government debt and slashing yields to record lows.”<sup>13</sup>

10   **Q30. HAS THERE BEEN A FUNDAMENTAL SHIFT IN FEDERAL RESERVE**  
11   **MONETARY POLICIES?**

12   A30. No. The Federal Reserve continues to exert considerable influence over capital  
13   market conditions through its massive holdings of Treasuries and mortgage-backed  
14   securities. Prior to the initiation of the stimulus program in 2009, the Federal  
15   Reserve’s holdings of U.S. Treasury bonds and notes amounted to approximately  
16   \$400-\$500 billion. With the implementation of its asset purchase program, balances  
17   of Treasury securities and mortgage backed instruments climbed steadily, and their  
18   effect on capital market conditions became more pronounced. Table 1 below charts  
19   the course of the Federal Reserve’s asset purchase program:

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<sup>13</sup> Josh Boak, “Record-low U.S. Treasury yield points to rising economic fears,” AP News (Jul. 6, 2016).

1 **TABLE 1**  
 2 **FEDERAL RESERVE BALANCES OF**  
 3 **TREASURY BONDS AND MORTGAGE-BACKED SECURITIES**  
 4 **(BILLION \$)**

2008	\$ 458
2009	\$ 1,668
2010	\$ 1,993
2011	\$ 2,501
2012	\$ 2,598
2013	\$ 3,702
2014	\$ 4,211
2015	\$ 4,215
2016	\$ 4,217

Source: Factors Affecting Reserve Balances, H.4.1  
<http://www.federalreserve.gov/releases/h41/>

5 Far from representing a return to normal, the Federal Reserve's holdings of  
 6 Treasury bonds and mortgage-backed securities continue to exceed \$4.2 trillion.

7 Of course, the corollary to these observations is that changes to this policy of  
 8 reinvestment would further reduce stimulus measures and could place significant  
 9 upward pressure on bond yields, especially considering the unprecedented  
 10 magnitude of the Federal Reserve's holdings of Treasury bonds and mortgage-  
 11 backed securities. As a *Financial Analysts Journal* article noted:

12 Because no precedent exists for the massive monetary easing that has  
 13 been practiced over the past five years in the United States and  
 14 Europe, the uncertainty surrounding the outcome of central bank  
 15 policy is so vast. . . . Total assets on the balance sheets of most  
 16 developed nations' central banks have grown massively since 2008,  
 17 and the timing of when the banks will unwind those positions is  
 18 uncertain.<sup>14</sup>

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<sup>14</sup> William Poole, "Prospects for and Ramifications of the Great Central Banking Unwind," *Financial Analysts Journal* (November/December 2013).

1 Similarly, a report from the global investment management firm BlackRock cited  
2 the potential for yield spikes and the exposure of the utilities sector to rising yields,  
3 concluding that, “We are in uncharted territory,” when it comes to the implications  
4 of unwinding the Federal Reserve’s balance sheet holdings.<sup>15</sup> More recently, the  
5 Wall Street Journal echoed these concerns:

6 A great deal is at stake with the bond decision. Shrinking the  
7 portfolio could jolt financial markets, pushing up interest costs on  
8 government debt and mortgage bonds and reverberating through the  
9 broader economy.

10 Officials don’t know how markets will react when they shrink the  
11 holdings because they have never done it before. But they know  
12 plenty about the skittishness of investors. When they signaled they  
13 would end bond purchases in 2013, they sparked a market “taper  
14 tantrum” that sent interest rates higher and hurt emerging markets.<sup>16</sup>

15 More recently, the Wall Street Journal observed the potential for “considerable  
16 upward pressure on long-term interest rates” if the need to finance higher deficits  
17 associated with stimulative fiscal policies coincides with a higher supply of  
18 Treasury securities as the Federal Reserve unwinds its balance sheet holdings.<sup>17</sup>

19 **Q31. DO THE FEDERAL RESERVE’S RECENT MONETARY POLICY**  
20 **ACTIONS MARK A RETURN TO “NORMAL” IN THE CAPITAL**  
21 **MARKETS?**

22 A31. No. The Federal Reserve’s long-anticipated moves to increase the federal funds rate  
23 represent a modest step towards implementing the process of monetary policy

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<sup>15</sup> BlackRock, “When the Fed Yields,” *BlackRock Investment Institute* (May 2015).

<sup>16</sup> Michael S. Derby, “Fed Grapples With Massive Portfolio,” *The Outlook*, The Wall Street Journal, <http://www.wsj.com/articles/fed-grapples-with-massive-portfolio-1485717712> (last visited Jan. 30, 2017).

<sup>17</sup> Josh Zumbrun, “Trump’s Fiscal Plans, Fed’s Asset Unwinding Could Fuel Rate Rise,” *The Outlook*, The Wall Street Journal (May 7, 2017).

1 normalization outlined in its September 17, 2014 press release.<sup>18</sup> While the Federal  
2 Reserve's actions mark a continuation of the normalization process that began with  
3 its initial 25 basis point rate rise in the federal funds rate in December 2015, these  
4 modest and gradual moves do not result in a fundamental alteration of its  
5 accommodative monetary policy.

6 Nor have they removed uncertainty over the trajectory of further interest rate  
7 increases or the overhanging implications of the Federal Reserve's enormous  
8 holdings of long-term securities. While affirming its existing policy of reinvesting  
9 principal payments from its securities holdings, the Federal Reserve recently  
10 announced that it expects to begin implementing a gradual balance sheet  
11 normalization program later in 2017, subject to caps and an economic outlook in  
12 line with current expectations.<sup>19</sup> Uncertainties over just how the process of  
13 normalizing the Federal Reserve's unprecedented monetary policies will affect  
14 capital markets further support the consideration of alternative DCF analyses and  
15 ROE benchmarks when evaluating a just and reasonable ROE for the Company.

16 **Q32. IS THERE EVIDENCE THAT INVESTORS ANTICIPATE SIGNIFICANTLY**  
17 **HIGHER INTEREST RATES IN THE FORESEEABLE FUTURE?**

18 A32. Yes. Investors continue to anticipate that interest rates will increase significantly  
19 from present levels. With apprehension surrounding future Federal Reserve actions,  
20 uncertainties regarding future fiscal policies, world-wide geopolitical exposures, and  
21 the overhanging risk of a global economic slowdown, the potential for significant  
22 volatility and higher capital costs is clearly evident to investors.

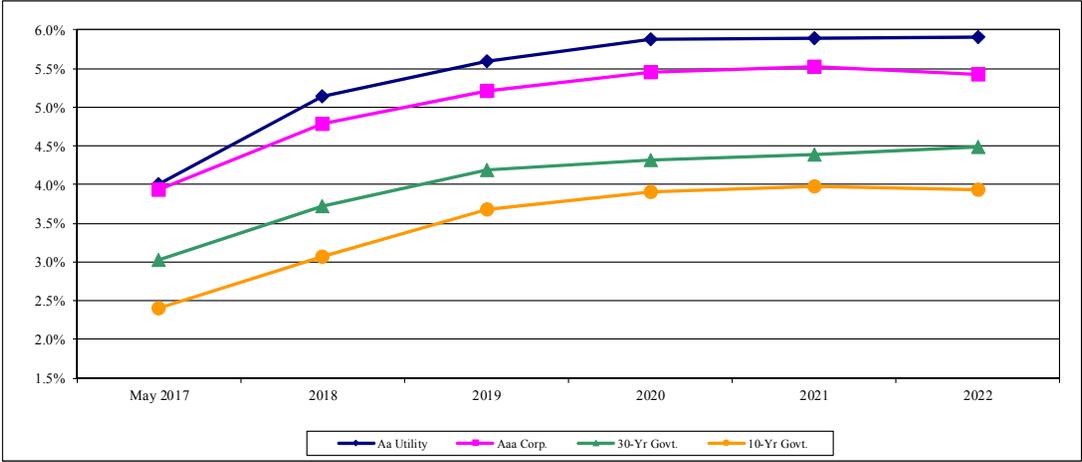
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<sup>18</sup> *Press Release*, Federal Reserve, Policy Normalization Principles and Plans (Sep. 17, 2014), <http://www.federalreserve.gov/newsevents/press/monetary/20140917c.htm>.

<sup>19</sup> *Addendum to the Policy Normalization Principles and Plans*, Federal Reserve (Jun. 13, 2017), [https://www.federalreserve.gov/monetarypolicy/files/FOMC\\_PolicyNormalization.20170613.pdf](https://www.federalreserve.gov/monetarypolicy/files/FOMC_PolicyNormalization.20170613.pdf).

1 For example, the June 1, 2017 long-term consensus forecast of economists  
 2 published in the Blue Chip Financial Forecast (“Blue Chip”) anticipates that  
 3 corporate bond yields will increase approximately 150 basis points between 2017  
 4 and 2022.<sup>20</sup> Figure 1 below compares six-month average interest rates on 10-year  
 5 and 30-year Treasury bonds, triple-A rated corporate bonds, and double-A rated  
 6 utility bonds as of May 2017 with the respective near-term projections from The  
 7 Value Line Investment Survey (“Value Line”), IHS Global Insight, Blue Chip, and  
 8 the Energy Information Administration (“EIA”), which are sources that are highly  
 9 regarded and widely referenced:

10 **FIGURE 1**  
 11 **INTEREST RATE TRENDS**



Source:  
 Value Line Investment Survey, Forecast for the U.S. Economy (Jun. 2, 2017)  
 IHS Global Insight (Apr. 2017)  
 Energy Information Administration, Annual Energy Outlook 2017 (Jan. 5, 2017)  
 Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 36, No. 6 (Jun. 1, 2017)

<sup>20</sup> Wolters Kluwer, *Blue Chip Financial Forecast*, Vol. 36, No. 6 (Jun. 1, 2017).

1 As evidenced above, projections by investment advisors, forecasting services, and  
2 government agencies support the general consensus in the investment community  
3 that the present artificial low level of long-term interest rates will not be sustained.

4 **Q33. WHAT DO THESE EVENTS IMPLY WITH RESPECT TO THE ROE FOR**  
5 **KENTUCKY POWER MORE GENERALLY?**

6 A33. Current capital market conditions continue to reflect the impact of unprecedented  
7 policy measures taken in response to recent dislocations in the economy and  
8 financial markets. As a result, current capital costs are not representative of what is  
9 likely to prevail over the near-term future. As FERC concluded:

10 [W]e also understand that any DCF analysis may be affected by  
11 potentially unrepresentative financial inputs to the DCF formula,  
12 including those produced by historically anomalous capital market  
13 conditions. Therefore, while the DCF model remains the  
14 Commission's preferred approach to determining allowed rate of  
15 return, the Commission may consider the extent to which economic  
16 anomalies may have affected the reliability of DCF analyses ...<sup>21</sup>

17 This conclusion continues to be supported by comparisons of current conditions to  
18 the historical record and independent forecasts. As demonstrated above, recognized  
19 economic forecasting services project that long-term capital costs will increase from  
20 present levels.

21 Thus, while the DCF model is a recognized approach to estimating the ROE,  
22 it is not without shortcomings and does not otherwise eliminate the need to ensure  
23 that the "end result" is fair. The Indiana Utility Regulatory Commission has also  
24 recognized this principle:

25 There are three principal reasons for our unwillingness to place a  
26 great deal of weight on the results of any DCF analysis. One is . . .

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<sup>21</sup> Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

1 the failure of the DCF model to conform to reality. The second is the  
2 undeniable fact that rarely if ever do two expert witnesses agree on  
3 the terms of a DCF equation for the same utility – for example, as we  
4 shall see in more detail below, projections of future dividend cash  
5 flow and anticipated price appreciation of the stock can vary widely.  
6 And, the third reason is that the unadjusted DCF result is almost  
7 always well below what any informed financial analysis would  
8 regard as defensible, and therefore require an upward adjustment  
9 based largely on the expert witness's judgment. In these  
10 circumstances, we find it difficult to regard the results of a DCF  
11 computation as any more than suggestive.<sup>22</sup>

12 Given investors' expectations for rising interest rates and capital costs, the  
13 Commission should consider near-term forecasts for higher public utility bond  
14 yields in assessing the reasonableness of individual cost of equity estimates and in  
15 evaluating the ROE for Kentucky Power. The use of these near-term forecasts for  
16 public utility bond yields is supported below by economic studies that show that  
17 equity risk premiums are higher when interest rates are at very low levels.

#### IV. COMPARABLE RISK UTILITY PROXY GROUP

18 **Q34. HOW DID YOU IMPLEMENT QUANTITATIVE METHODS TO**  
19 **ESTIMATE THE COST OF COMMON EQUITY FOR KENTUCKY**  
20 **POWER?**

21 A34. Application of quantitative methods to estimate the cost of common equity requires  
22 observable capital market data, such as stock prices. Moreover, even for a firm with  
23 publicly traded stock, the cost of common equity can only be estimated. As a result,  
24 applying quantitative models using observable market data only produces an  
25 estimate that inherently includes some degree of observation error. Thus, the  
26 accepted approach to increase confidence in the results is to apply quantitative

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<sup>22</sup> *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).

1 methods to a proxy group of publicly traded companies that investors regard as risk-  
2 comparable.

3 **Q35. WHAT SPECIFIC PROXY GROUP OF UTILITIES DID YOU RELY ON**  
4 **FOR YOUR ANALYSIS?**

5 A35. In order to reflect the risks and prospects associated with Kentucky Power's  
6 jurisdictional utility operations, my analyses focused on a reference group of other  
7 utilities composed of those companies in Value Line's electric utility industry groups  
8 with:

- 9 1. Corporate credit ratings from S&P and Moody's corresponding to one  
10 notch above and below the Company's current ratings. For S&P, this  
11 resulted in a ratings range of BBB+, A-, and A; for Moody's the range  
12 was Baa3, Baa2, and Baa1.
- 13 2. A Value Line Safety Rank of 1 or 1, consistent with AEP's rank of 1.
- 14 3. No ongoing involvement in a major merger or acquisition.<sup>23</sup>
- 15 4. No cuts in dividend payments during the past six months and no  
16 announcement of a dividend cut since that time.

17 **Q36. HOW DID YOU EVALUATE THE RISKS OF THE UTILITY GROUP**  
18 **RELATIVE TO KENTUCKY POWER?**

19 A36. My evaluation of relative risk considered four objective, published benchmarks that  
20 are widely relied on in the investment community. Credit ratings are assigned by  
21 independent rating agencies for the purpose of providing investors with a broad  
22 assessment of the creditworthiness of a firm. Ratings generally extend from triple-A  
23 (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show  
24 relative standing within a category. Because the rating agencies' evaluation includes  
25 all of the factors normally considered important in assessing a firm's relative credit

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<sup>23</sup> Westar Energy was eliminated due to ongoing involvement in a major merger or acquisition.

1 standing, corporate credit ratings provide a broad, objective measure of overall  
2 investment risk that is readily available to investors. Widely cited in the investment  
3 community and referenced by investors, credit ratings are also frequently used as a  
4 primary risk indicator in establishing proxy groups to estimate the cost of common  
5 equity.

6 While credit ratings provide the most widely referenced benchmark for  
7 investment risks, other quality rankings published by investment advisory services  
8 also provide relative assessments of risks that are considered by investors in forming  
9 their expectations for common stocks. Value Line's primary risk indicator is its  
10 Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk  
11 measure is intended to capture the total risk of a stock, and incorporates elements of  
12 stock price stability and financial strength. Given that Value Line is perhaps the  
13 most widely available source of investment advisory information, its Safety Rank  
14 provides useful guidance regarding the risk perceptions of investors.

15 The Financial Strength Rating is designed as a guide to overall financial  
16 strength and creditworthiness, with the key inputs including financial leverage,  
17 business volatility measures, and company size. Value Line's Financial Strength  
18 Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. These  
19 objective, published indicators incorporate consideration of a broad spectrum of  
20 risks, including financial and business position, relative size, and exposure to firm-  
21 specific factors.

22 Finally, beta measures a utility's stock price volatility relative to the market  
23 as a whole, and reflects the tendency of a stock's price to follow changes in the  
24 market. A stock that tends to respond less to market movements has a beta less than  
25 1.00, while stocks that tend to move more than the market have betas greater than

1 1.00. Beta is the only relevant measure of investment risk under modern capital  
 2 market theory, and is widely cited in academics and in the investment industry as a  
 3 guide to investors' risk perceptions. Moreover, in my experience Value Line is the  
 4 most widely referenced source for beta in regulatory proceedings. As noted in *New*  
 5 *Regulatory Finance*:

6 Value Line is the largest and most widely circulated independent  
 7 investment advisory service, and influences the expectations of a  
 8 large number of institutional and individual investors. ... Value Line  
 9 betas are computed on a theoretically sound basis using a broadly  
 10 based market index, and they are adjusted for the regression tendency  
 11 of betas to converge to 1.00.<sup>24</sup>

12 **Q37. HOW DO THE OVERALL RISKS OF YOUR PROXY GROUP COMPARE**  
 13 **TO KENTUCKY POWER?**

14 A37. Table 2 compares the Utility Group with Kentucky Power across the four key  
 15 indicators of investment risk discussed above. Because the Company has no  
 16 publicly traded common stock, the Value Line risk measures shown reflect those  
 17 published for its parent, AEP:

18 **TABLE 2**  
 19 **COMPARISON OF RISK INDICATORS**

	<u>Credit Rating</u>		<u>Value Line</u>		
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Safety</u>	<u>Financial</u>	
			<u>Rank</u>	<u>Strength</u>	<u>Beta</u>
Utility Group	A-	Baa2	2	A	0.66
Kentucky Power	A-	Baa2	1	A+	0.65

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<sup>24</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports* at 71 (2006).

1 **Q38. WHAT DOES THIS COMPARISON INDICATE REGARDING INVESTORS'**  
2 **ASSESSMENT OF THE RELATIVE RISKS ASSOCIATED WITH YOUR**  
3 **UTILITY GROUP?**

4 A38. As shown above, Kentucky Power's credit ratings are identical to the average for  
5 the Utility Group. Meanwhile, the Safety Rank and Financial Strength rating  
6 corresponding to the Company are one notch higher than the group average. Both  
7 of these measures indicate slightly lower risk for AEP and its related operating  
8 companies. On the other hand, the beta value corresponding to the Company is  
9 essentially equal to that of the Utility Group. Considered together, these  
10 comparisons of objective measures, which incorporate a broad spectrum of risks,  
11 including financial and business position, relative size, and exposure to company  
12 specific factors, indicates that investors would likely conclude that the overall  
13 investment risks for Kentucky Power are comparable to those of the firms in the  
14 Utility Group.

15 **Q39. IS AN EVALUATION OF THE CAPITAL STRUCTURE MAINTAINED BY A**  
16 **UTILITY RELEVANT IN ASSESSING ITS RETURN ON EQUITY?**

17 A39. Yes. Other things equal, a higher debt ratio, or lower common equity ratio,  
18 translates into increased financial risk for all investors. A greater amount of debt  
19 means more investors have a senior claim on available cash flow, thereby reducing  
20 the certainty that each will receive his contractual payments. This increases the  
21 risks to which lenders are exposed, and they require correspondingly higher rates of  
22 interest. From common shareholders' standpoint, a higher debt ratio means that  
23 there are proportionately more investors ahead of them, thereby increasing the  
24 uncertainty as to the amount of any remaining cash flow.

1 **Q40. WHAT IS KENTUCKY POWER'S COMMON EQUITY RATIO?**

2 A40. The Company's capital structure is presented in Section V, Workpaper S-2, page 1,  
3 of the rate filing package. As summarized there, common equity as a percent of the  
4 capital sources used to compute the overall rate of return for Kentucky Power was  
5 41.68%.

6 **Q41. HOW DOES THIS COMPARE TO THE AVERAGE CAPITALIZATION**  
7 **MAINTAINED BY THE UTILITY GROUP?**

8 A41. As shown on page 1 of Exhibit AMM-4, common equity ratios for the individual  
9 firms in the Utility Group ranged from a low of 28.3% to a high of 75.7% at year-  
10 end 2016, and averaged 44.5%. Excluding the highest and lowest results would  
11 result in an adjusted equity ratio of 43.6%. Meanwhile, Value Line's three-to-five  
12 year forecast indicates an average common equity ratio of 45.6% for the Utility  
13 Group, with the individual equity ratios ranging from 29.5% to 76.0%.<sup>25</sup>

14 **Q42. WHAT CAPITALIZATION RATIOS ARE MAINTAINED BY OTHER**  
15 **UTILITY OPERATING COMPANIES?**

16 A42. Pages 2 and 3 of Exhibit AMM-4 displays capital structure data at year-end 2016 for  
17 the group of electric utility operating companies owned by the firms in the Utility  
18 Group used to estimate the cost of equity.<sup>26</sup> As shown there, the simple average  
19 common equity ratio for these utilities is 53.5% and the weighted average is 51.7%.  
20 Of the 50 operating companies, 49 have equity ratios equal to or greater than the  
21 41.68% common equity requested by Kentucky Power.

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<sup>25</sup> Removing the highest and lowest values from Value Line's projections would produce an adjusted equity ratio of 44.7%.

<sup>26</sup> I excluded Kentucky Power from this analysis.

1 **Q43. WHAT DID YOU CONCLUDE REGARDING THE REASONABLENESS OF**  
2 **KENTUCKY POWER'S REQUESTED CAPITAL STRUCTURE?**

3 A43. Based on my evaluation, I conclude that the 41.68% common equity ratio requested  
4 by Kentucky Power represents a reasonable mix of capital sources from which to  
5 calculate the Company's overall rate of return. Nonetheless, this common equity  
6 ratio falls somewhat below the historical (44.5%) and projected (45.6%) averages  
7 maintained by the Utility Group, and well below the historical average maintained  
8 by other utility operating companies (53.5%).

## V. CAPITAL MARKET ESTIMATES

9 **Q44. WHAT IS THE PURPOSE OF THIS SECTION?**

10 A44. This section presents capital market estimates of the cost of equity. First, I address  
11 the concept of the cost of common equity, along with the risk-return tradeoff  
12 principle fundamental to capital markets. Next, I describe various quantitative  
13 analyses conducted to estimate the cost of common equity for the proxy group of  
14 comparable risk utilities. Finally, I examine flotation costs, which are properly  
15 considered in evaluating a fair and reasonable rate of return on equity.

### A. Economic Standards

16 **Q45. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE**  
17 **COST OF EQUITY CONCEPT?**

18 A45. The fundamental economic principle underlying the cost of equity concept is the  
19 notion that investors are risk averse. In capital markets where relatively risk-free  
20 assets are available (*e.g.*, U.S. Treasury securities), investors can be induced to hold  
21 riskier assets only if they are offered a premium, or additional return, above the rate  
22 of return on a risk-free asset. Because all assets compete with each other for

1 investor funds, riskier assets must yield a higher expected rate of return than safer  
 2 assets to induce investors to invest and hold them.

3 Given this risk-return tradeoff, the required rate of return ( $k$ ) from an asset  
 4 (i) can generally be expressed as:

$$5 \quad k_i = R_f + RP_i$$

6 where:  $R_f$  = Risk-free rate of return, and  
 7  $RP_i$  = Risk premium required to hold riskier asset i.

8 Thus, the required rate of return for a particular asset at any time is a function of:  
 9 (1) the yield on risk-free assets, and (2) the asset's relative risk, with investors  
 10 demanding correspondingly larger risk premiums for bearing greater risk.

11 **Q46. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF**  
 12 **PRINCIPLE ACTUALLY OPERATES IN THE CAPITAL MARKETS?**

13 A46. Yes. The risk-return tradeoff can be readily documented in segments of the capital  
 14 markets where required rates of return can be directly inferred from market data and  
 15 where generally accepted measures of risk exist. Bond yields, for example, reflect  
 16 investors' expected rates of return, and bond ratings measure the risk of individual  
 17 bond issues. Comparing the observed yields on government securities, which are  
 18 considered free of default risk, to the yields on bonds of various rating categories  
 19 demonstrates that the risk-return tradeoff does, in fact, exist.

20 **Q47. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED**  
 21 **INCOME SECURITIES EXTEND TO COMMON STOCKS AND OTHER**  
 22 **ASSETS?**

23 A47. It is widely accepted that the risk-return tradeoff evidenced with long-term debt  
 24 extends to all assets. Documenting the risk-return tradeoff for assets other than  
 25 fixed income securities, however, is complicated by two factors. First, there is no

1 standard measure of risk applicable to all assets. Second, for most assets –  
2 including common stock – required rates of return cannot be directly observed. Yet  
3 there is every reason to believe that investors exhibit risk aversion in deciding  
4 whether or not to hold common stocks and other assets, just as when choosing  
5 among fixed-income securities.

6 **Q48. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES**  
7 **BETWEEN FIRMS?**

8 A48. No. The risk-return tradeoff principle applies not only to investments in different  
9 firms, but also to different securities issued by the same firm. The securities issued  
10 by a utility vary considerably in risk because they have different characteristics and  
11 priorities. As noted earlier, common shareholders are the last in line and they  
12 receive only the net revenues, if any, remaining after all other claimants have been  
13 paid. As a result, the rate of return that investors require from a utility's common  
14 stock, the most junior and riskiest of its securities, must be considerably higher than  
15 the yield offered by the utility's senior, long-term debt.

16 **Q49. DOES THE FACT THAT KENTUCKY POWER IS ULTIMATELY A**  
17 **SUBSIDIARY OF AEP IN ANY WAY ALTER THESE FUNDAMENTAL**  
18 **STANDARDS UNDERLYING A FAIR AND REASONABLE ROE?**

19 A49. No. While Kentucky Power has no publicly traded common stock and AEP is  
20 ultimately its only shareholder, this does not change the standards governing the  
21 determination of a fair and reasonable ROE for the Company. The common equity  
22 that is required to support the utility operations of Kentucky Power must be raised  
23 by AEP in the capital markets, where investors consider the Company's ability to  
24 offer a rate of return that is competitive with other risk-comparable alternatives.  
25 Unless there is a reasonable expectation that the Company can earn a return that is

1 commensurate with the underlying risks, capital will be allocated elsewhere,  
2 Kentucky Power's financial integrity will be weakened, and investors will demand  
3 an even higher rate of return. Kentucky Power's ability to offer a reasonable return  
4 on investment is a necessary ingredient in ensuring that customers continue to enjoy  
5 economical rates and reliable service.

6 **Q50. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO**  
7 **ESTIMATING THE COST OF COMMON EQUITY FOR A UTILITY?**

8 A50. Although the cost of common equity cannot be observed directly, it is a function of  
9 the returns available from other investment alternatives and the risks to which the  
10 equity capital is exposed. Because it is not readily observable, the cost of common  
11 equity for a particular utility must be estimated by analyzing information about  
12 capital market conditions generally, assessing the relative risks of the company  
13 specifically, and employing various quantitative methods that focus on investors'  
14 required rates of return. These various quantitative methods typically attempt to  
15 infer investors' required rates of return from stock prices, interest rates, or other  
16 capital market data.

### **B. Discounted Cash Flow Analyses**

17 **Q51. HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF**  
18 **COMMON EQUITY?**

19 A51. DCF models are based on the assumption that the price of a share of common stock  
20 is equal to the present value of the expected cash flows (i.e., future dividends and  
21 stock price) that will be received while holding the stock, discounted at investors'

1 required rate of return. Rather than developing annual estimates of cash flows into  
 2 perpetuity, the DCF model can be simplified to a “constant growth” form:<sup>27</sup>

$$3 \quad P_0 = \frac{D_1}{k_e - g}$$

4 where:  $P_0$  = Current price per share;

5  $D_1$  = Expected dividend per share in the coming year;

6  $k_e$  = Cost of equity; and,

7  $g$  = Investors’ long-term growth expectations.

8 The cost of common equity ( $k_e$ ) can be isolated by rearranging terms within the  
 9 equation:

$$10 \quad k_e = \frac{D_1}{P_0} + g$$

11 This constant growth form of the DCF model recognizes that the rate of return to  
 12 stockholders consists of two parts: 1) dividend yield ( $D_1/P_0$ ); and, 2) growth ( $g$ ). In  
 13 other words, investors expect to receive a portion of their total return in the form of  
 14 current dividends and the remainder through price appreciation.

---

<sup>27</sup> The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (*i.e.*, no changes in risk or interest rate levels and a flat yield curve); and all of the above extend to infinity. Nevertheless, the DCF method provides a workable and practical approach to estimate investors’ required return that is widely referenced in utility ratemaking.

1 **Q52. WHAT STEPS ARE REQUIRED TO APPLY THE CONSTANT GROWTH**  
2 **DCF MODEL?**

3 A52. The first step in implementing the constant growth DCF model is to determine the  
4 expected dividend yield ( $D_1/P_0$ ) for the firm in question. This is usually calculated  
5 based on an estimate of dividends to be paid in the coming year divided by the  
6 current price of the stock. The second, and more controversial, step is to estimate  
7 investors' long-term growth expectations ( $g$ ) for the firm. The final step is to sum  
8 the firm's dividend yield and estimated growth rate to arrive at an estimate of its  
9 cost of common equity.

10 **Q53. HOW DID YOU DETERMINE THE DIVIDEND YIELD FOR THE UTILITY**  
11 **GROUP?**

12 A53. Estimates of dividends to be paid by each of these utilities over the next twelve  
13 months, obtained from Value Line, served as  $D_1$ . This annual dividend was then  
14 divided by a 30-day average stock price as of May 19, 2017 for each utility to arrive  
15 at the expected dividend yield. The expected dividends, stock prices, and resulting  
16 dividend yields for the firms in the Utility Group are presented on page 1 of Exhibit  
17 AMM-5. As shown there, dividend yields for the firms in the Utility Group ranged  
18 from 2.9% to 5.2%.

19 **Q54. WHAT IS THE NEXT STEP IN APPLYING THE CONSTANT GROWTH**  
20 **DCF MODEL?**

21 A54. The next step is to evaluate growth expectations, or " $g$ ", for the firm in question. In  
22 constant growth DCF theory, earnings, dividends, book value, and market price are  
23 all assumed to grow in lockstep, and the growth horizon of the DCF model is  
24 infinite. But implementation of the DCF model is more than just a theoretical  
25 exercise; it is an attempt to replicate the mechanism investors used to arrive at

1 observable stock prices. A wide variety of techniques can be used to derive growth  
2 rates, but the only “g” that matters in applying the DCF model is the value that  
3 investors expect.

4 **Q55. WHAT ARE INVESTORS MOST LIKELY TO CONSIDER IN**  
5 **DEVELOPING THEIR LONG-TERM GROWTH EXPECTATIONS?**

6 A55. Implementation of the DCF model is solely concerned with replicating the forward-  
7 looking evaluation of real-world investors. In the case of utilities, dividend growth  
8 rates are not likely to provide a meaningful guide to investors’ current growth  
9 expectations. This is because utilities have significantly altered their dividend  
10 policies in response to more accentuated business risks and capital requirements in  
11 the industry, with the payout ratios falling significantly from historical levels. As a  
12 result, dividend growth in the utility industry has lagged growth in earnings as  
13 utilities conserve financial resources.

14 A measure that plays a pivotal role in determining investors’ long-term  
15 growth expectations are future trends in earnings per share (“EPS”), which provide  
16 the source for future dividends and ultimately support share prices. The importance  
17 of earnings in evaluating investors’ expectations and requirements is well accepted  
18 in the investment community, and surveys of analytical techniques relied on by  
19 professional analysts indicate that growth in earnings is far more influential than  
20 trends in dividends per share (“DPS”).

21 The availability of projected EPS growth rates also is key to investors  
22 relying on this measure as compared to future trends in DPS. Apart from Value  
23 Line, investment advisory services do not generally publish comprehensive DPS  
24 growth projections, and this scarcity of dividend growth rates relative to the  
25 abundance of earnings forecasts attests to their relative influence. The fact that

1 securities analysts focus on EPS growth, and that DPS growth rates are not routinely  
2 published, indicates that projected EPS growth rates are likely to provide a superior  
3 indicator of investors' future expectations.

4 **Q56. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS**  
5 **CONSIDER HISTORICAL TRENDS?**

6 A56. Yes. Professional security analysts study historical trends extensively in developing  
7 their projections of future earnings. Hence, to the extent there is any useful  
8 information in historical patterns, that information is incorporated into analysts'  
9 growth forecasts.

10 **Q57. DID PROFESSOR MYRON J. GORDON, WHO ORIGINATED THE DCF**  
11 **APPROACH, RECOGNIZE THE PIVOTAL ROLE THAT EARNINGS PLAY**  
12 **IN FORMING INVESTORS' EXPECTATIONS?**

13 A57. Yes. Dr. Gordon specifically recognized that "it is the growth that investors expect  
14 that should be used" in applying the DCF model and he concluded:

15 A number of considerations suggest that investors may, in fact, use  
16 earnings growth as a measure of expected future growth."<sup>28</sup>

17 **Q58. ARE ANALYSTS' ASSESSMENTS OF GROWTH RATES APPROPRIATE**  
18 **FOR ESTIMATING INVESTORS' REQUIRED RETURN USING THE DCF**  
19 **MODEL?**

20 A58. Yes. In applying the DCF model to estimate the cost of common equity, the only  
21 relevant growth rate is the forward-looking expectations of investors that are  
22 captured in current stock prices. Investors, just like securities analysts and others in  
23 the investment community, do not know how the future will actually turn out. They

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<sup>28</sup> Myron J. Gordon, "The Cost of Capital to a Public Utility," *MSU Public Utilities Studies* at 89 (1974).

1 can only make investment decisions based on their best estimate of what the future  
2 holds in the way of long-term growth for a particular stock, and securities prices are  
3 constantly adjusting to reflect their assessment of available information.

4 Any claims that analysts' estimates are not relied upon by investors are  
5 illogical given the reality of a competitive market for investment advice. If financial  
6 analysts' forecasts do not add value to investors' decision making, then it is  
7 irrational for investors to pay for these estimates. Similarly, those financial analysts  
8 who fail to provide reliable forecasts will lose out in competitive markets relative to  
9 those analysts whose forecasts investors find more credible. The reality that analyst  
10 estimates are routinely referenced in the financial media and in investment advisory  
11 publications, as well as the continued success of services such as Thomson Reuters  
12 and Value Line, implies that investors use them as a basis for their expectations.

13 While the projections of securities analysts may be proven optimistic or  
14 pessimistic in hindsight, this is irrelevant in assessing the expected growth that  
15 investors have incorporated into current stock prices, and any bias in analysts'  
16 forecasts – whether pessimistic or optimistic – is irrelevant if investors share  
17 analysts' views. Earnings growth projections of security analysts provide the most  
18 frequently referenced guide to investors' views and are widely accepted in applying  
19 the DCF model. As explained in *New Regulatory Finance*:

20 Because of the dominance of institutional investors and their  
21 influence on individual investors, analysts' forecasts of long-run  
22 growth rates provide a sound basis for estimating required returns.  
23 Financial analysts exert a strong influence on the expectations of  
24 many investors who do not possess the resources to make their own  
25 forecasts, that is, they are a cause of  $g$  [growth]. The accuracy of

1                    these forecasts in the sense of whether they turn out to be correct is  
 2                    not an issue here, as long as they reflect widely held expectations.<sup>29</sup>

3    **Q59. HAVE REGULATORS ALSO RECOGNIZED THAT ANALYSTS' GROWTH**  
 4                    **RATE ESTIMATES ARE AN IMPORTANT AND MEANINGFUL GUIDE TO**  
 5                    **INVESTORS' EXPECTATIONS?**

6    A59. Yes. The Commission has indicated its preference for relying on analysts'  
 7                    projections in establishing investors' expectations:

8                    KU's argument concerning the appropriateness of using investors'  
 9                    expectations in performing a DCF analysis is more persuasive than  
 10                    the AG's argument that analysts' projections should be rejected in  
 11                    favor of historical results. The Commission agrees that analysts'  
 12                    projections of growth will be relatively more compelling in forming  
 13                    investors' forward-looking expectations than relying on historical  
 14                    performance, especially given the current state of the economy.<sup>30</sup>

15                    Similarly, FERC has expressed a clear preference for projected EPS growth rates in  
 16                    applying the DCF model to estimate the cost of equity for both electric and natural  
 17                    gas pipeline utilities:

18                    Opinion No. 414-A held that the IBES five-year growth forecasts for  
 19                    each company in the proxy group are the best available evidence of  
 20                    the short-term growth rates expected by the investment community.  
 21                    It cited evidence that (1) those forecasts are provided to IBES by  
 22                    professional security analysts, (2) IBES reports the forecast for each  
 23                    firm as a service to investors, and (3) the IBES reports are well  
 24                    known in the investment community and used by investors. The  
 25                    Commission has also rejected the suggestion that the IBES analysts  
 26                    are biased and stated that "in fact the analysts have a significant  
 27                    incentive to make their analyses as accurate as possible to meet the  
 28                    needs of their clients since those investors will not utilize brokerage  
 29                    firms whose analysts repeatedly overstate the growth potential of  
 30                    companies."<sup>31</sup>

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<sup>29</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* at 298 (2006) (emphasis added).

<sup>30</sup> *Kentucky Utilities Co.*, Case No. 2009-00548 (Ky PSC Jul. 30, 2010) at 30-31.

<sup>31</sup> *Kern River Gas Transmission Co.*, 126 FERC ¶ 61,034 at P 121 (2009) (footnote omitted).

1 The Public Utility Regulatory Authority of Connecticut has also noted that “there is  
2 not growth in DPS without growth in EPS,” and concluded that securities analysts’  
3 growth projections have a greater influence over investors’ expectations and stock  
4 prices.<sup>32</sup>

5 **Q60. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE**  
6 **WAY OF GROWTH FOR THE FIRMS IN THE UTILITY GROUP?**

7 A60. The earnings growth projections for each of the firms in the Utility Group reported  
8 by Value Line, IBES,<sup>33</sup> Zacks Investment Research (“Zacks”), Bloomberg, and S&P  
9 Capital IQ are displayed on page 2 of Exhibit AMM-5.

10 **Q61. HOW ELSE ARE INVESTORS’ EXPECTATIONS OF FUTURE LONG-**  
11 **TERM GROWTH PROSPECTS OFTEN ESTIMATED WHEN APPLYING**  
12 **THE CONSTANT GROWTH DCF MODEL?**

13 A61. In constant growth theory, growth in book equity will be equal to the product of the  
14 earnings retention ratio (one minus the dividend payout ratio) and the earned rate of  
15 return on book equity. Furthermore, if the earned rate of return and the payout ratio  
16 are constant over time, growth in earnings and dividends will be equal to growth in  
17 book value. Despite the fact that these conditions are never met in practice, this  
18 “sustainable growth” approach may provide a rough guide for evaluating a firm’s  
19 growth prospects and is frequently proposed in regulatory proceedings.

20 The sustainable growth rate is calculated by the formula,  $g = br + sv$ , where  
21 “b” is the expected retention ratio, “r” is the expected earned return on equity, “s” is  
22 the percent of common equity expected to be issued annually as new common stock,

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<sup>32</sup> *Decision*, Docket No. 13-02-20 (Sept. 24, 2013).

<sup>33</sup> Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters.

1 and “v” is the equity accretion rate. Under DCF theory, the “sv” factor is a  
2 component of the growth rate designed to capture the impact of issuing new  
3 common stock at a price above, or below, book value. The sustainable, “br+sv”  
4 growth rates for each firm in the Utility Group are summarized on page 2 of Exhibit  
5 AMM-5, with the underlying details being presented on Exhibit AMM-6.<sup>34</sup>

6 **Q62. ARE THERE SIGNIFICANT SHORTCOMINGS ASSOCIATED WITH THE**  
7 **“BR+SV” GROWTH RATE?**

8 A62. Yes. First, in order to calculate the sustainable growth rate, it is necessary to  
9 develop estimates of investors’ expectations for four separate variables; namely, “b”,  
10 “r”, “s”, and “v.” Given the inherent difficulty in forecasting each parameter and the  
11 difficulty of estimating the expectations of investors, the potential for measurement  
12 error is significantly increased when using four variables, as opposed to referencing  
13 a direct projection for EPS growth. Second, empirical research in the finance  
14 literature indicates that sustainable growth rates are not as significantly correlated to  
15 measures of value, such as share prices, as are analysts’ EPS growth forecasts.<sup>35</sup>  
16 The “sustainable growth” approach was included for completeness, but evidence  
17 indicates that analysts’ forecasts provide a superior and more direct guide to  
18 investors’ growth expectations. Accordingly, I give less weight to cost of equity  
19 estimates based on br+sv growth rates in evaluating the results of the DCF model.

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<sup>34</sup> Because Value Line reports end-of-year book values, an adjustment factor was incorporated to compute an average rate of return over the year, which is consistent with the theory underlying this approach.

<sup>35</sup> Roger A. Morin, “New Regulatory Finance,” *Public Utilities Reports, Inc.*, at 307 (2006).

1 **Q63. WHAT COST OF COMMON EQUITY ESTIMATES WERE IMPLIED FOR**  
2 **THE UTILITY GROUP USING THE DCF MODEL?**

3 A63. After combining the dividend yields and respective growth projections for each  
4 utility, the resulting cost of common equity estimates are shown on page 3 of  
5 Exhibit AMM-5.

6 **Q64. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF**  
7 **MODEL, IS IT APPROPRIATE TO ELIMINATE ILLOGICAL LOW OR**  
8 **HIGH-END VALUES?**

9 A64. Yes. In applying quantitative methods to estimate the cost of equity, it is essential  
10 that the resulting values pass fundamental tests of reasonableness and economic  
11 logic. Accordingly, DCF estimates that are implausibly low or high should be  
12 eliminated when evaluating the results of this method.

13 **Q65. HOW DID YOU EVALUATE DCF ESTIMATES AT THE LOW END OF THE**  
14 **RANGE?**

15 A65. I based my evaluation of DCF estimates at the low end of the range on the  
16 fundamental risk-return tradeoff, which holds that investors will only take on more  
17 risk if they expect to earn a higher rate of return to compensate them for the greater  
18 uncertainty. Because common stocks lack the protections associated with an  
19 investment in long-term bonds, a utility's common stock imposes far greater risks  
20 on investors. As a result, the rate of return that investors require from a utility's  
21 common stock is considerably higher than the yield offered by senior, long-term  
22 debt. Consistent with this principle, DCF results that are not sufficiently higher than  
23 the yield available on less risky utility bonds must be eliminated.

1 **Q66. HAVE SIMILAR TESTS BEEN APPLIED BY REGULATORS?**

2 A66. Yes. FERC has noted that adjustments are justified where applications of the DCF  
3 approach produce illogical results. FERC evaluates DCF results against observable  
4 yields on long-term public utility debt and has recognized that it is appropriate to  
5 eliminate estimates that do not sufficiently exceed this threshold.<sup>36</sup> FERC affirmed  
6 that:

7           The purpose of the low-end outlier test is to exclude from the proxy  
8 group those companies whose ROE estimates are below the average  
9 bond yield or are above the average bond yield but are sufficiently  
10 low that an investor would consider the stock to yield essentially the  
11 same return as debt. In public utility ROE cases, the Commission  
12 has used 100 basis points above the cost of debt as an approximation  
13 of this threshold, but has also considered the distribution of proxy  
14 group companies to inform its decision on which companies are  
15 outliers. As the Presiding Judge explained, this is a flexible test.<sup>37</sup>

16 **Q67. WHAT INTEREST RATE BENCHMARK DID YOU CONSIDER IN**  
17 **EVALUATING THE DCF RESULTS FOR THE UTILITY GROUP?**

18 A67. Baa utility bonds represent the lowest ratings grade for which Moody's publishes an  
19 index of average yields, and the closest available approximation for the risks of  
20 common stock, which are significantly greater than those of long-term debt.  
21 Monthly yields for Baa utility bonds reported by Moody's averaged 4.60% during  
22 the six-months ending May 2017.<sup>38</sup>

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<sup>36</sup> See, e.g., *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010).

<sup>37</sup> Opinion No. 531, 147 FERC ¶ 61,234 at P 122 (2014).

<sup>38</sup> Moody's Investors Service, *CreditTrends*.

1 **Q68. WHAT ELSE SHOULD BE CONSIDERED IN EVALUATING DCF**  
 2 **ESTIMATES AT THE LOW END OF THE RANGE?**

3 A68. As indicated earlier, it is generally expected that long-term interest rates will rise as  
 4 the Federal Reserve normalizes monetary policies. As shown in Table 3 below,  
 5 forecasts of IHS Global Insight and the EIA imply an average triple-B bond yield of  
 6 6.28% over the period 2018-2022:

7 **TABLE 3**  
 8 **IMPLIED BBB BOND YIELD**

	<b><u>Baa Yield</u></b> <b><u>2018-22</u></b>
Projected Aa Utility Yield	
IHS Global Insight (a)	5.81%
EIA (b)	<u>5.56%</u>
Average	5.68%
Current Baa - Aa Yield Spread (c)	<u>0.60%</u>
<b>Implied Baa Utility Yield</b>	<b>6.28%</b>

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(a) IHS Global Insight (Apr. 2017).

(b) Energy Information Administration, Annual Energy Outlook 2017  
(Jan. 5, 2017).

(c) Based on monthly average bond yields from Moody's Investors  
Service for the six-month period Dec. 2016 - May 2017.

9 The increase in debt yields anticipated by IHS Global Insight and EIA is also  
 10 supported by the widely-referenced Blue Chip, which as noted earlier, projects that  
 11 yields on corporate bonds will climb on the order of 150 basis points through 2022.

12 **Q69. WHAT DOES THIS TEST OF LOGIC IMPLY WITH RESPECT TO THE**  
 13 **DCF RESULTS FOR THE UTILITY GROUP?**

14 A69. Adding a 100 basis-point premium to the historical and projected average utility  
 15 bond yields implies a threshold to evaluate the reasonableness of low-end values on

1 the order of 5.6% to 7.3%. As highlighted on page 3 of Exhibit AMM-5, after  
2 considering this test and the distribution of individual estimates, I eliminated low-  
3 end DCF estimates ranging from 4.2% to 6.9%. Based on my professional  
4 experience and the risk-return tradeoff principle that is fundamental to finance, it is  
5 inconceivable that investors are not requiring a substantially higher rate of return for  
6 holding common stock. As a result, consistent with the threshold established by  
7 historical and projected utility bond yields, the values below the threshold provide  
8 little guidance as to the returns investors require from utility common stocks and  
9 should be excluded.

10 **Q70. WHAT ELSE SHOULD BE CONSIDERED IN EVALUATING DCF**  
11 **ESTIMATES AT THE LOW END OF THE RANGE?**

12 A70. While FERC has historically relied on a 100 basis point spread over public utility  
13 bond yields as a starting place in evaluating low-end values, reference to a static test  
14 ignores the implications of current low bond yields. Specifically, the premium that  
15 investors demand to bear the higher risks of common stock is not constant. As I  
16 demonstrate later in my testimony, equity risk premiums expand when interest rates  
17 fall, and vice versa. Given that bond yields have remained uncharacteristically low,  
18 this inverse relationship implies a significant increase in the equity risk premium  
19 that investors require to accept the higher uncertainties associated with an  
20 investment in utility common stocks versus bonds. As a result, using a fixed  
21 premium of 100 basis points over public utility bond yields will vastly understate  
22 the threshold for investors' minimum required return on utility stocks.

1 **Q71. DO YOU ALSO RECOMMEND EXCLUDING ESTIMATES AT THE HIGH**  
2 **END OF THE RANGE OF DCF RESULTS?**

3 A71. While it is just as important to evaluate DCF estimates at the upper end of the range,  
4 there is no objective benchmark analogous to the bond yield averages used to  
5 eliminate illogical low-end values. In response, FERC has consistently applied a  
6 two-pronged test for high-end values based on the magnitude of the cost of equity  
7 estimate and its underlying growth rate. As FERC observed:

8           The Presiding Judge found that the [utilities'] criteria for screening  
9 high-end outliers substantially complies with Commission precedent.  
10 . . . The Presiding Judge further stated that the Commission's high-end  
11 outlier test since 2004 has been to exclude from the proxy group any  
12 company whose cost of equity estimate is at or above 17.7 percent  
13 and whose growth rate is at or above 13.3 percent.<sup>39</sup>

14           The upper end of the DCF results for the Utility Group is set by a cost of  
15 equity estimate of 15.2%. This cost of equity estimate, and the underlying growth  
16 rate, falls well below the threshold tests employed by FERC. Moreover, while a  
17 15.2% cost of equity estimate may exceed the majority of the remaining values,  
18 remaining low-end estimates in the 7.0% range are assuredly far below investors'  
19 required rate of return. Nevertheless, considering the dispersion of the DCF results  
20 in this case, I elected to exclude the 15.2% DCF estimate from my analysis. Taken  
21 together and considered along with the balance of the results, the remaining values  
22 provide a reasonable basis on which to frame the range of plausible DCF estimates  
23 and evaluate investors' required rate of return.

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<sup>39</sup> Opinion No. 531, 147 FERC ¶ 61,234 at P 115 (2014)(footnotes omitted).

1 **Q72. WHAT COST OF COMMON EQUITY ESTIMATES ARE IMPLIED BY**  
 2 **YOUR DCF RESULTS FOR THE UTILITY GROUP?**

3 A72. As shown on page 3 of Exhibit AMM-5 and summarized in Table 4, below, after  
 4 eliminating illogical values, application of the constant growth DCF model resulted  
 5 in the following average cost of common equity estimates:

6 **TABLE 4**  
 7 **DCF RESULTS – UTILITY GROUP**

<u>Growth Rate</u>	<u>Cost of Equity</u>	
	<u>Average</u>	<u>Midpoint</u>
Value Line	9.8%	10.8%
IBES	9.6%	10.4%
Zacks	9.8%	10.5%
Bloomberg	9.6%	10.0%
S&P Capital/IQ	9.7%	10.1%
br + sv	8.7%	9.8%

### **C. Capital Asset Pricing Model**

8 **Q73. PLEASE DESCRIBE THE CAPM.**

9 A73. The CAPM is a theory of market equilibrium that measures risk using the beta  
 10 coefficient. Assuming investors are fully diversified, the relevant risk of an  
 11 individual asset (*e.g.*, common stock) is its volatility relative to the market as a  
 12 whole, with beta reflecting the tendency of a stock's price to follow changes in the  
 13 market. A stock that tends to respond less to market movements has a beta less than  
 14 1.00, while stocks that tend to move more than the market have betas greater than  
 15 1.00. The CAPM is mathematically expressed as:

1 
$$R_j = R_f + \beta_j(R_m - R_f)$$

2 where:  $R_j$  = required rate of return for stock j;  
3  $R_f$  = risk-free rate;  
4  $R_m$  = expected return on the market portfolio; and,  
5  $\beta_j$  = beta, or systematic risk, for stock j.

6 Under the CAPM formula above, a stock's required return is a function of  
7 the risk-free rate ( $R_f$ ), plus a risk premium that is scaled to reflect the relative  
8 volatility of a firm's stock price, as measured by beta ( $\beta$ ). Like the DCF model, the  
9 CAPM is an *ex-ante*, or forward-looking model based on expectations of the future.  
10 As a result, in order to produce a meaningful estimate of investors' required rate of  
11 return, the CAPM must be applied using estimates that reflect the expectations of  
12 actual investors in the market, not with backward-looking, historical data.

13 **Q74. WHY IS THE CAPM APPROACH A RELEVANT COMPONENT WHEN**  
14 **EVALUATING THE COST OF EQUITY FOR KENTUCKY POWER?**

15 A74. The CAPM approach (which also forms the foundation of the ECAPM) generally is  
16 considered to be the most widely referenced method for estimating the cost of  
17 equity among academicians and professional practitioners, with the pioneering  
18 researchers of this method receiving the Nobel Prize in 1990. Because this is the  
19 dominant model for estimating the cost of equity outside the regulatory sphere, the  
20 CAPM (and ECAPM) provides important insight into investors' required rate of  
21 return for utility stocks, including Kentucky Power.

22 **Q75. HOW DID YOU APPLY THE CAPM TO ESTIMATE THE COST OF**  
23 **COMMON EQUITY?**

24 A75. Application of the CAPM to the Utility Group based on a forward-looking estimate  
25 for investors' required rate of return from common stocks is presented on Exhibit  
26 AMM-7. In order to capture the expectations of today's investors in current capital

1 markets, the expected market rate of return was estimated by conducting a DCF  
2 analysis on the dividend paying firms in the S&P 500.

3 The dividend yield for each firm was obtained from Value Line, and the  
4 growth rate was equal to the average of the earnings growth projections for each  
5 firm published by Value Line, IBES and Zacks, with each firm's dividend yield and  
6 growth rate being weighted by its proportionate share of total market value. Based  
7 on the weighted average of the projections for the individual firms, current estimates  
8 imply an average growth rate over the next five years of 9.6%. Combining this  
9 average growth rate with a year-ahead dividend yield of 2.4% results in a current  
10 cost of common equity estimate for the market as a whole ( $R_m$ ) of approximately  
11 12.0%. Subtracting a 3.0% risk-free rate based on the average yield on 30-year  
12 Treasury bonds for the six-months ending May 2017 produced a market equity risk  
13 premium of 9.0%.

14 **Q76. WHAT WAS THE SOURCE OF THE BETA VALUES YOU USED TO APPLY**  
15 **THE CAPM?**

16 A76. As indicated earlier in my discussion of risk measure for the Utility Group, I relied  
17 on the beta values reported by Value Line, which in my experience is the most  
18 widely referenced source for beta in regulatory proceedings.

19 **Q77. WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE CAPM?**

20 A77. Financial research indicates that the CAPM does not fully account for observed  
21 differences in rates of return attributable to firm size. Accordingly, a modification is  
22 required to account for this size effect. As explained by *Morningstar*:

23 One of the most remarkable discoveries of modern finance is that of  
24 a relationship between company size and return. ... The relationship  
25 between company size and return cuts across the entire size  
26 spectrum; it is not restricted to the smallest stocks. ... This size-rated

1           phenomenon has prompted a revision to the CAPM, which includes a  
2           size premium.<sup>40</sup>

3           According to the CAPM, the expected return on a security should consist of  
4           the riskless rate, plus a premium to compensate for the systematic risk of the  
5           particular security. The degree of systematic risk is represented by the beta  
6           coefficient. The need for the size adjustment arises because differences in  
7           investors' required rates of return that are related to firm size are not fully captured  
8           by beta. To account for this, researchers have developed size premiums that need to  
9           be added to account for the level of a firm's market capitalization in determining the  
10          CAPM cost of equity.<sup>41</sup> Accordingly, my CAPM analyses also incorporated an  
11          adjustment to recognize the impact of size distinctions, as measured by the market  
12          capitalization for the firms in the Utility Group.

13   **Q78. ARE YOU RECOMMENDING THAT THE COMMISSION AWARD**  
14   **KENTUCKY POWER A PREMIUM TO THE ROE BECAUSE OF ITS SIZE?**

15   A78. Absolutely not. I am not proposing to apply a general size risk premium in  
16   evaluating a fair and reasonable ROE for Kentucky Power and my recommendation  
17   does not include any adjustment related to the Company's size. Rather, the size  
18   adjustment is specific to the CAPM and merely corrects for an observed inability of  
19   the beta measure to fully reflect the risks perceived by investors for the firms in the  
20   Utility Group. As FERC has recognized, "This type of size adjustment is a  
21   generally accepted approach to CAPM analyses."<sup>42</sup>

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<sup>40</sup> *Morningstar*, "Ibbotson SBBI 2015 Classic Yearbook," at pp. 99, 108.

<sup>41</sup> 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."

<sup>42</sup> Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117 (2015).

1 **Q79. WHAT IS THE IMPLIED ROE FOR THE UTILITY GROUP USING THE**  
2 **CAPM APPROACH?**

3 A79. As shown on page 1 of Exhibit AMM-7, after adjusting for the impact of firm size  
4 the CAPM approach implied an average and midpoint cost of equity estimates of  
5 9.3% and 9.2%, respectively, for the Utility Group.

6 **Q80. DID YOU ALSO APPLY THE CAPM USING FORECASTED BOND**  
7 **YIELDS?**

8 A80. Yes. As discussed earlier, there is general consensus that interest rates will increase  
9 materially as the Federal Reserve normalizes its monetary policies going forward.  
10 Accordingly, in addition to the use of current bond yields, I applied the CAPM  
11 based on the forecasted long-term Treasury bond yields developed based on  
12 projections published by Value Line, IHS Global Insight, and Blue Chip. As shown  
13 on page 2 of Exhibit AMM-7, incorporating a forecasted Treasury bond yield for  
14 2018-2022 implied an average cost of equity estimate of 9.7% for the Utility Group  
15 after adjusting for the impact of relative size, with a midpoint of 9.6%.

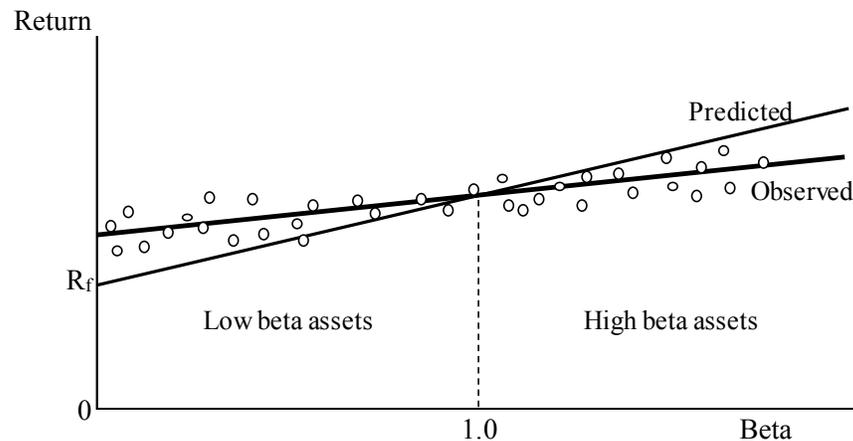
#### **D. Empirical Capital Asset Pricing Model**

16 **Q81. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL**  
17 **APPLICATIONS OF THE CAPM?**

18 A81. Empirical tests of the CAPM have shown that low-beta securities earn returns  
19 somewhat higher than the CAPM would predict, and high-beta securities earn less  
20 than predicted. In other words, the CAPM tends to overstate the actual sensitivity  
21 of the cost of capital to beta, with low-beta stocks tending to have higher returns

1 and high-beta stocks tending to have lower returns than predicted by the  
 2 CAPM.<sup>43</sup> This is illustrated graphically in the figure below:

3 **FIGURE 2**  
 4 **CAPM – PREDICTED VS. OBSERVED RETURNS**



5 Because the betas of utility stocks, including those in the Utility Group, are  
 6 generally less than 1.0, this implies that cost of equity estimates based on the  
 7 traditional CAPM would understate the cost of equity. This empirical finding is  
 8 widely reported in the finance literature, as summarized in *New Regulatory Finance*:

9 As discussed in the previous section, several finance scholars have  
 10 developed refined and expanded versions of the standard CAPM by  
 11 relaxing the constraints imposed on the CAPM, such as dividend  
 12 yield, size, and skewness effects. These enhanced CAPMs typically  
 13 produce a risk-return relationship that is flatter than the CAPM  
 14 prediction in keeping with the actual observed risk-return  
 15 relationship. The ECAPM makes use of these empirical  
 16 relationships.<sup>44</sup>

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<sup>43</sup> Because the betas of utility stocks, including those in the Utility 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.

<sup>44</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports* at 189 (2006).

1 As discussed in *New Regulatory Finance*, based on a review of the empirical  
2 evidence, the expected return on a security is related to its risk by the ECAPM,  
3 which is represented by the following formula:

$$4 \quad R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

5 Like the CAPM formula presented earlier, the ECAPM represents a stock's required  
6 return as a function of the risk-free rate ( $R_f$ ), plus a risk premium. In the formula  
7 above, this risk premium is composed of two parts: (1) the market risk premium  
8 ( $R_m - R_f$ ) weighted by a factor of 25%, and (2) a company-specific risk premium  
9 based on the stocks relative volatility  $[(\beta)(R_m - R_f)]$  weighted by 75%. This  
10 ECAPM equation, and its associated weighting factors, recognizes the observed  
11 relationship between standard CAPM estimates and the cost of capital documented  
12 in the financial research, and corrects for the understated returns that would  
13 otherwise be produced for low beta stocks.

14 **Q82. IS THE USE OF THE ECAPM CONSISTENT WITH THE USE OF VALUE**  
15 **LINE BETAS?**

16 A82. Yes. Value Line beta values are adjusted for the observed tendency of beta to  
17 converge toward the mean value of 1.00 over time.<sup>45</sup> The purpose of this adjustment  
18 is to refine beta values determined using historical data to better match forward-  
19 looking estimates of beta, which are the relevant parameter in applying the CAPM  
20 or ECAPM models. Meanwhile, the ECAPM does not involve any adjustment to  
21 beta whatsoever. Rather, it represents a formal recognition of findings in the  
22 financial literature that the observed risk-return tradeoff illustrated in Figure 2 is

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<sup>45</sup> See, e.g., Marshall E. Blume, "Betas and Their Regression Tendencies," *Journal of Finance*, Vo. 30, No. 3 (Jun. 1975), pp. 785-795.

1 flatter than predicted by the CAPM. In other words, even if a firm's beta value were  
2 estimated with perfect precision, the CAPM would still understate the return for  
3 low-beta stocks and overstate the return for high-beta stocks. The ECAPM and the  
4 use of adjusted betas represent two separate and distinct issues in estimating returns.

5 **Q83. HAVE OTHER REGULATORS RELIED ON THE ECAPM?**

6 A83. Yes. The ECAPM approach has been relied on by the Staff of the Maryland Public  
7 Service Commission. For example, Staff witness Julie McKenna noted that "the  
8 ECAPM model adjusts for the tendency of the CAPM model to underestimate  
9 returns for low Beta stocks," and concluded that, "I believe under current economic  
10 conditions that the ECAPM gives a more realistic measure of the ROE than the  
11 CAPM model does."<sup>46</sup> The Regulatory Commission of Alaska has also relied on the  
12 ECAPM approach, noting that:

13 Tesoro averaged the results it obtained from CAPM and ECAPM  
14 while at the same time providing empirical testimony that the  
15 ECAPM results are more accurate than [sic] traditional CAPM  
16 results. The reasonable investor would be aware of these empirical  
17 results. Therefore, we adjust Tesoro's recommendation to reflect  
18 only the ECAPM result.<sup>47</sup>

19 **Q84. WHAT COST OF EQUITY ESTIMATES WERE INDICATED BY THE**  
20 **ECAPM?**

21 A84. My applications of the ECAPM were based on the same forward-looking market  
22 rate of return, risk-free rates, and beta values discussed earlier in connections with  
23 the CAPM. As shown on page 1 of Exhibit AMM-8, applying the forward-looking  
24 ECAPM approach to the firms in the Utility Group results in an average cost of

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<sup>46</sup> *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at page 9.

<sup>47</sup> Regulatory Commission of Alaska, Order No. P-97-004(151) at 145 (Nov. 27, 2002).

1 equity estimate of 10.0% after incorporating the size adjustment corresponding to  
2 the market capitalization of the individual utilities.<sup>48</sup>

3 As shown on page 2 of Exhibit AMM-8, incorporating a forecasted Treasury  
4 bond yield for 2018-2022 implied an average and midpoint cost of equity for the  
5 Utility Group of approximately 10.3% after adjusting for the impact of relative size.

### E. Utility Risk Premium

6 **Q85. BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.**

7 A85. The risk premium method extends the risk-return tradeoff observed with bonds to  
8 estimate investors' required rate of return on common stocks. The cost of equity is  
9 estimated by first determining the additional return investors require to forgo the  
10 relative safety of bonds and to bear the greater risks associated with common stock,  
11 and by then adding this equity risk premium to the current yield on bonds. Like the  
12 DCF model, the risk premium method is capital market oriented. However, unlike  
13 DCF models, which indirectly impute the cost of equity, risk premium methods  
14 directly estimate investors' required rate of return by adding an equity risk premium  
15 to observable bond yields.

16 **Q86. IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED METHOD**  
17 **FOR ESTIMATING THE COST OF EQUITY?**

18 A86. Yes. The risk premium approach is based on the fundamental risk-return principle  
19 that is central to finance, which holds that investors will require a premium in the  
20 form of a higher return in order to assume additional risk. This method is routinely  
21 referenced by the investment community and in academia and regulatory

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<sup>48</sup> The midpoint of the size adjusted ECAPM range was also 10.0%.

1 proceedings, and provides an important tool in estimating a fair and reasonable ROE  
2 for Kentucky Power.

3 **Q87. HOW DID YOU IMPLEMENT THE RISK PREMIUM METHOD?**

4 A87. Estimates of equity risk premiums for utilities were based on surveys of previously  
5 authorized ROEs. Authorized ROEs presumably reflect regulatory commissions'  
6 best estimates of the cost of equity, however determined, at the time they issued  
7 their final order. Such ROEs should represent a balanced and impartial outcome  
8 that considers the need to maintain a utility's financial integrity and ability to attract  
9 capital. Moreover, allowed returns are an important consideration for investors and  
10 have the potential to influence other observable investment parameters, including  
11 credit ratings and borrowing costs. Thus, when considered in the context of a  
12 complete and rigorous analysis, this data provides a logical and frequently  
13 referenced basis for estimating equity risk premiums for regulated utilities.<sup>49</sup>

14 **Q88. IS IT CIRCULAR TO CONSIDER RISK PREMIUMS BASED ON**  
15 **AUTHORIZED RETURNS IN ASSESSING A FAIR AND REASONABLE**  
16 **ROE FOR KENTUCKY POWER?**

17 A88. No. In establishing authorized ROEs, regulators typically consider the results of  
18 alternative market-based approaches, including the DCF model. Because allowed  
19 risk premiums consider objective market data (*e.g.*, stock prices dividends, beta, and  
20 interest rates), and are not based strictly on past actions of other regulators, this  
21 mitigates concerns over any potential for circularity.

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<sup>49</sup> Later in this testimony, I further discuss the proper role of statistics concerning recently-allowed ROEs in setting a utility's ROE.

1 **Q89. HOW DID YOU CALCULATE THE EQUITY RISK PREMIUMS BASED ON**  
2 **ALLOWED ROES?**

3 A89. The ROEs authorized for electric utilities by regulatory commissions across the U.S.  
4 are compiled by RRA and published in its *Regulatory Focus* report. In Exhibit  
5 AMM-9, the average yield on public utility bonds is subtracted from the average  
6 allowed ROE for electric utilities to calculate equity risk premiums for each year  
7 between 1974 and 2016.<sup>50</sup> As shown on page 3 of Exhibit AMM-9, over this period,  
8 these equity risk premiums for electric utilities averaged 3.67%, and the yield on  
9 public utility bonds averaged 8.38%.

10 **Q90. IS THERE ANY CAPITAL MARKET RELATIONSHIP THAT MUST BE**  
11 **CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM**  
12 **METHOD?**

13 A90. Yes. The magnitude of equity risk premiums is not constant and equity risk  
14 premiums tend to move inversely with interest rates. In other words, when interest  
15 rate levels are relatively high, equity risk premiums narrow, and when interest rates  
16 are relatively low, equity risk premiums widen. The implication of this inverse  
17 relationship is that the cost of equity does not move as much as, or in lockstep with,  
18 interest rates. Accordingly, for a 1% increase or decrease in interest rates, the cost  
19 of equity may only rise or fall some fraction of 1%. Therefore, when implementing  
20 the risk premium method, adjustments may be required to incorporate this inverse  
21 relationship if current interest rate levels have diverged from the average interest  
22 rate level represented in the data set.

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<sup>50</sup> My analysis encompasses the entire period for which published data is available.

1 **Q91. HAS THIS INVERSE RELATIONSHIP BEEN DOCUMENTED IN THE**  
 2 **FINANCIAL RESEARCH?**

3 A91. Yes. There is considerable empirical evidence that when interest rates are relatively  
 4 high, equity risk premiums narrow, and when interest rates are relatively low, equity  
 5 risk premiums are greater. This inverse relationship between equity risk premiums  
 6 and interest rates has been widely reported in the financial literature.<sup>51</sup> As  
 7 summarized by *New Regulatory Finance*:

8 Published studies by Brigham, Shome, and Vinson (1985), Harris  
 9 (1986), Harris and Marston (1992, 1993), Carelton, Chambers, and  
 10 Lakonishok (1983), Morin (2005), and McShane (2005), and others  
 11 demonstrate that, beginning in 1980, risk premiums varied inversely  
 12 with the level of interest rates – rising when rates fell and declining  
 13 when rates rose.<sup>52</sup>

14 Other regulators have also recognized that the cost of equity does not move in  
 15 tandem with interest rates.<sup>53</sup> This relationship is illustrated in the figure on page 4  
 16 of Exhibit AMM-9.

17 **Q92. WHAT COST OF EQUITY IS IMPLIED BY THE RISK PREMIUM**  
 18 **METHOD USING SURVEYS OF ALLOWED ROES?**

19 A92. Based on the regression output between the interest rates and equity risk premiums  
 20 displayed on page 4 of Exhibit AMM-9, the equity risk premium for electric utilities  
 21 increased (decreased) approximately 43 basis points for each percentage point  
 22 decrease (increase) in the yield on average public utility bonds. As illustrated on

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<sup>51</sup> See, e.g., E. F. Brigham, D. K. Shome, and S. R. Vinson, “The Risk Premium Approach to Measuring a Utility’s Cost of Equity,” *Financial Management* (Spring 1985); R. S. Harris and F. C. Marston, “Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts,” *Financial Management* (Summer 1992).

<sup>52</sup> Roger A. Morin, “New Regulatory Finance,” *Public Utilities Reports*, at 128 (2006).

<sup>53</sup> See, e.g., California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-5, [http://www.entergy-mississippi.com/content/price/tariffs/emi\\_frp.pdf](http://www.entergy-mississippi.com/content/price/tariffs/emi_frp.pdf); *Martha Coakley et al.*, 147 FERC ¶ 61,234 at P 147 (2014).

1 page 1 of Exhibit AMM-9, with an average yield on public utility bonds for the six-  
2 months ending May 2017 of 4.26%, this implied a current equity risk premium of  
3 5.44% for electric utilities. Adding this equity risk premium to the average yield on  
4 triple-B utility bonds of 4.60% implies a current cost of equity of 10.04%.

5 **Q93. WHAT RISK PREMIUM COST OF EQUITY ESTIMATE WAS PRODUCED**  
6 **AFTER INCORPORATING FORECASTED BOND YIELDS?**

7 A93. As shown on page 2 of Exhibit AMM-9, incorporating a forecasted yield for 2018-  
8 2022 and adjusting for changes in interest rates since the study period implied an  
9 equity risk premium of 4.72% for electric utilities, which is less than the current  
10 equity risk premium. This lower equity risk premium is consistent with the inverse  
11 relationship I described above. Adding this equity risk premium to the implied  
12 average yield on triple-B public utility bonds for 2018-2022 of 6.28% resulted in an  
13 implied cost of equity of 11.00%.

14 **Q94. THE EQUITY RISK PREMIUMS CALCULATED IN YOUR STUDY WERE**  
15 **BASED ON AUTHORIZED ROES PUBLISHED BY RRA. WOULD IT NOT**  
16 **BE EQUALLY APPROPRIATE TO USE RECENT VALUES COMPLIED BY**  
17 **RRA TO ESTABLISH KENTUCKY POWER'S ROE DIRECTLY?**

18 A94. No, it would not. While data on allowed returns published by RRA can have a role  
19 in evaluating a fair and reasonable ROE, there is no basis to place undue weight on  
20 a single, summary statistic in lieu of comprehensive analyses and a case-specific  
21 evidentiary record. Most importantly, such an approach fails to satisfy the standards  
22 mandated by the U.S. Supreme Court in its *Bluefield* and *Hope* decisions, which  
23 dictate that the ROE reflect contemporaneous returns to investments of comparable  
24 risk.

1           These bedrock opinions require regulators to consider the individual and  
2 specific risks and financial circumstances facing the utility, as well as the capital  
3 market conditions and investor expectations concurrent with their deliberations.  
4 Meeting these standards necessitates detailed analyses and the application of  
5 financial models and approaches with inputs that are specific to the utility in  
6 question. In context of a rate case, alternative analyses and expert opinions are  
7 subject to thorough discovery and cross examination from all stakeholders, with the  
8 results being carefully weighed by regulators to arrive at their best estimate of the  
9 cost of equity. Developing the evidentiary record necessary to satisfy the *Hope* and  
10 *Bluefield* tests is a rigorous process that cannot be reduced to an isolated summary  
11 statistic from an industry publication such as RRA.

12 **Q95. PLEASE ELABORATE ON WHY A RECENT AVERAGE ROE REPORTED**  
13 **BY RRA FALLS SHORT OF ACCEPTED REGULATORY STANDARDS.**

14 A95. Setting a utility's ROE is a very company-specific process, and is a function of  
15 investors' perceptions of the risks and prospects for the subject company at a given  
16 point in time. Meanwhile, quarterly allowed ROEs reported by RRA are not  
17 necessarily representative or directly comparable to the utility at hand. That is, there  
18 may be an "apples and oranges" issue when the RRA data is applied in the current  
19 rate setting environment.

20           For instance, there may a limited number of proceedings reported in any  
21 given quarter, which undermines the ability to make broader inferences as to the  
22 ROE for a specific utility. There can also be significant differences in investment  
23 risks (*e.g.*, credit ratings) between the utilities that are the subject of a specific  
24 quarterly average ROE reported by RRA and the subject company in a rate  
25 proceeding. There may be distinctions in capital structure that give rise to financial

1 risk differences, functional differences (integrated utilities versus “wires only”  
2 distribution services), differentiation based on approved rate mechanisms (e.g.,  
3 decoupling and recovery riders and trackers) and regulatory conventions (e.g.,  
4 formula rate plans, forward test years), as well as other utility-specific  
5 characteristics (e.g. size differences, capital requirements, and economic conditions  
6 in the service territory). In some instances, ROEs reported by RRA may include  
7 disallowances or incentive adders based on management, customer service, safety,  
8 or reliability measures. Average authorized ROEs reported by RRA also include the  
9 results of settled cases, which may reflect a trade-off between other elements in a  
10 proceeding. On balance and over long periods, such as the forty-plus years covered  
11 by my risk premium study, there is no basis to suggest that ROEs resulting from  
12 settlements are biased one way or the other, but focusing on a narrow pool of recent  
13 cases may undermine this assurance. Finally, capital market conditions during the  
14 evidentiary record that underlies the decisions reported by RRA are not likely to be  
15 identical to those prevailing during a subsequent rate proceeding. The very nature  
16 of RRA’s quarterly publication schedule ensures that there will always be a lag  
17 between the results it reports and the ongoing case under study. Capital markets are  
18 constantly in flux and the distinctions between the historical time periods underlying  
19 the past findings of other regulatory agencies undermine the use of recent RRA data  
20 as a primary means to establish a fair and reasonable ROE in this case. All of these  
21 differences can lead to a potential disconnect between the broad summary statistics  
22 reported by RRA and the comprehensive and detailed analyses required to meet the  
23 *Hope* and *Bluefield* standards.

1 **Q96. DON'T THESE SAME CONCERNS EQUALLY AFFECT YOUR USE OF**  
2 **THE RRA-REPORTED AUTHORIZED ROES TO CALCULATE YOUR**  
3 **RISK PREMIUM COST OF EQUITY ESTIMATE?**

4 A96. No. My risk premium study considers all reported data concerning allowed ROEs  
5 over a forty-two year horizon. As a result, it incorporates findings that reflect  
6 regulators' broad assessment of the required rate of return for the electric utility  
7 industry in general, and is not unduly influenced by the specific risks or  
8 circumstances of a small subset of the industry that make up an isolated statistic  
9 based on decision in a particular calendar quarter. In addition, my application of the  
10 risk premium approach based on allowed ROEs from RRA specifically accounts for  
11 the impact of changes in capital market conditions by adjusting for the observed  
12 inverse relationship between equity risk premiums and interest rates, and by  
13 incorporating current bond yields when calculating the implied cost of equity.

14 **Q97. COULD USE OF THE RECENT AVERAGE ROE FROM RRA AS THE**  
15 **AUTHORIZED ROE ALSO TIE THE HANDS OF THE COMMISSION?**

16 A97. Yes. Placing undue weight on RRA data means, in effect, that the methods and  
17 deliberations used by other state regulators to determine the ROE would dictate the  
18 actions of the Commission. If a recent average ROE statistic from RRA is given  
19 substantial weight in establishing the authorized ROE, all of the methodologies,  
20 approaches, and assessments that are weighed and embedded in those results are  
21 also implicitly approved. In contrast to careful deliberation of a detailed and  
22 comprehensive evidentiary record on a case-by-case basis, the Commission would  
23 in large part relinquish control over the regulatory process and outcome in such a  
24 scenario.

1 **Q98. CAN THE PROCESS BECOME CIRCULAR IF STATE REGULATORS**  
 2 **WERE TO ROUTINELY ACCEPT ROE RESULTS FROM OTHER STATES**  
 3 **AS THE BASIS TO SET A UTILITY'S RETURN?**

4 A98. Yes. As noted above, the standard practice in regulatory proceedings is to consider  
 5 the results of numerous approaches that are grounded in current capital market  
 6 evidence when establishing a utility's ROE. If, instead, regulators were to simply  
 7 rely on the most recent determinations of other state agencies, the connection  
 8 between regulatory findings and investors in the capital markets would soon be  
 9 broken.<sup>54</sup> The cost of equity is determined by investors, not by regulators, and such  
 10 a circular outcome would undermine the standards governing the evaluation of a fair  
 11 and reasonable ROE. The New Hampshire Public Utilities Commission cited the  
 12 pitfalls of such a process:

13 The Company urged the PUC to consider, in making its  
 14 determination of the Company's allowed ROE, numerous ROEs set  
 15 by other regulatory agencies in other jurisdictions. Such a "bald  
 16 comparison" between the Company and these other companies is  
 17 flawed. The ROEs set in other jurisdictions may combine with and  
 18 reflect business, regulatory or financial risk differences of those other  
 19 jurisdictions that do not apply to New Hampshire, or to utilities  
 20 operating within New Hampshire. . . . There is also no evidence in  
 21 the record as to whether ROE was litigated or the result of a  
 22 settlement in the other jurisdictions. Presuming that it could consider  
 23 an ROE from another jurisdiction without a circular effect, which is  
 24 questionable, the PUC would need additional information.  
 25 Therefore, without a complete picture of the companies cited by the  
 26 Company and the cases in which the ROEs were decided, the rate of  
 27 profit allowed these other utilities by regulatory agencies in other  
 28 jurisdictions is simply not useful to PUC's determination of the  
 29 Company's current cost of common equity.<sup>55</sup>

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<sup>54</sup> While RRA data may be one factor considered by investors in developing their expectations, the required return is a function of the underlying risks associated with the utility at issue and the other investment opportunities available in the capital markets, including non-utility firms.

<sup>55</sup> *EnergyNorth Natural Gas, Inc.*, Case No. DG 08-009 (N.H. PUC Feb. 20, 2009) (footnotes omitted).

1 For these reasons, state regulatory agencies are charged with the responsibility of  
2 independently evaluating detailed evidence to establish an ROE corresponding to  
3 the specific risks, capital market conditions, and investor expectations facing the  
4 utility under its jurisdiction. This is precisely the standard dictated by the *Hope* and  
5 *Bluefield* decisions.

6 **Q99. ARE YOU SAYING THERE IS NO PLACE FOR RRA DATA IN THIS**  
7 **PROCESS?**

8 A99. No. As discussed earlier, I use such data in my risk premium approach as an input  
9 to calculate annual average historical risk premiums, which are then adjusted to  
10 account for changes in interest rates and specific risk differences. The resulting cost  
11 of equity estimate is extremely useful because, at its core, it is based on current and  
12 expected capital market conditions and on the fundamental financial principle that,  
13 due to differences in risk, the cost of equity must exceed the cost of debt. Using this  
14 method, allowed ROE data from RRA is one of a number of inputs in a  
15 comprehensive, multi-year study that ultimately leads to a cost of equity estimate  
16 specific to the utility at hand and steeped in both investor expectations and financial  
17 theory.

18 It is also common to reference allowed ROEs reported by RRA as a  
19 benchmark or guidepost when assessing the reasonableness of cost of equity  
20 estimates derived from primary methodologies, such as the DCF and CAPM. In  
21 other words, RRA data is valuable as a “secondary” approach, useful in judging  
22 whether an ROE estimate based on the application of accepted financial models  
23 makes sense “on its face.” In the right context, allowed ROE data from RRA can  
24 contribute in a valuable supporting role as part of the ROE estimation process.

## F. Expected Earnings Approach

1 **Q100. WHAT OTHER ANALYSES DID YOU CONDUCT TO ESTIMATE THE**  
2 **COST OF COMMON EQUITY?**

3 A100. As I noted earlier, I also evaluated the cost of common equity using the expected  
4 earnings method. Reference to rates of return available from alternative investments  
5 of comparable risk can provide an important benchmark in assessing the return  
6 necessary to assure confidence in the financial integrity of a firm and its ability to  
7 attract capital. This expected earnings approach is consistent with the economic  
8 underpinnings for a fair and reasonable rate of return established by the U.S.  
9 Supreme Court in *Bluefield* and *Hope*. Moreover, it avoids the complexities and  
10 limitations of capital market methods, such as the DCF and CAPM methodologies,  
11 and instead focuses on the returns earned on book equity, which are readily  
12 available to investors.

13 **Q101. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS**  
14 **APPROACH?**

15 A101. The simple, but powerful concept underlying the expected earnings approach is that  
16 investors compare each investment alternative with the next best opportunity. If the  
17 utility is unable to offer a return similar to that available from other opportunities of  
18 comparable risk, investors will become unwilling to supply the capital on reasonable  
19 terms. For existing investors, denying the utility an opportunity to earn what is  
20 available from other similar risk alternatives prevents them from earning their  
21 opportunity cost of capital. Such an outcome would violate the *Hope* and *Bluefield*  
22 standards and undermine the utility's access to capital on reasonable terms.

1 **Q102. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY**  
2 **IMPLEMENTED?**

3 A102. The traditional comparable earnings test identifies a group of companies that are  
4 believed to be comparable in risk to the utility. The actual earnings of those  
5 companies on the book value of their investment are then compared to the allowed  
6 return of the utility. While the traditional comparable earnings test is implemented  
7 using historical data taken from the accounting records, it is also common to use  
8 projections of returns on book investment, such as those published by recognized  
9 investment advisory publications (*e.g.*, Value Line). Because these returns on book  
10 value equity are analogous to the allowed return on a utility's rate base, this measure  
11 of opportunity costs results in a direct, "apples to apples" comparison.

12 Moreover, regulators do not set the returns that investors earn in the capital  
13 markets, which are a function of dividend payments and fluctuations in common  
14 stock prices- both of which are outside their control. Regulators can only establish  
15 the allowed ROE, which is applied to the book value of a utility's investment in rate  
16 base, as determined from its accounting records. This is directly analogous to the  
17 expected earnings approach, which measures the return that investors expect the  
18 utility to earn on book value. As a result, the expected earnings approach provides a  
19 meaningful guide to ensure that the allowed ROE is similar to what other utilities of  
20 comparable risk will earn on invested capital. This expected earnings test does not  
21 require theoretical models to indirectly infer investors' perceptions from stock  
22 prices or other market data. As long as the proxy companies are similar in risk, their  
23 expected earned returns on invested capital provide a direct benchmark for  
24 investors' opportunity costs that is independent of fluctuating stock prices, market-

1 to-book ratios, debates over DCF growth rates, or the limitations inherent in any  
2 theoretical model of investor behavior.

3 **Q103. WHAT RATES OF RETURN ON EQUITY ARE INDICATED FOR**  
4 **KENTUCKY POWER BASED ON THE EXPECTED EARNINGS**  
5 **APPROACH?**

6 A103. Value Line's projections imply an average rate of return on common equity for the  
7 electric utility industry of 10.8% over its 2020-2022 forecast horizon.<sup>56</sup> Meanwhile,  
8 for the firms in the Utility Group specifically, the year-end returns on common  
9 equity projected by Value Line over its forecast horizon are shown on Exhibit  
10 AMM-10. As I explained earlier in my discussion of the br+sv growth rates used in  
11 applying the DCF model, Value Line's returns on common equity are calculated  
12 using year-end equity balances, which understates the average return earned over  
13 the year.<sup>57</sup> Accordingly, these year-end values were converted to average returns  
14 using the same adjustment factor discussed earlier and developed on Exhibit AMM-  
15 6. As shown on Exhibit AMM-10, after excluding values at the bottom and top of  
16 the range, Value Line's projections for the Utility Group suggest an average ROE of  
17 approximately 11.8%, with a midpoint value of 11.5%.

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<sup>56</sup> The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017). Recall that Value Line reports return on year-end equity so the equivalent return on average equity would be higher.

<sup>57</sup> 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.

### **G. Flotation Costs**

1 **Q104. WHAT OTHER CONSIDERATIONS ARE RELEVANT IN SETTING THE**  
2 **RETURN ON EQUITY FOR A UTILITY?**

3 A104. The common equity used to finance the investment in utility assets is provided from  
4 either the sale of stock in the capital markets or from retained earnings not paid out  
5 as dividends. When equity is raised through the sale of common stock, there are  
6 costs associated with “floating” the new equity securities. These flotation costs  
7 include services such as legal, accounting, and printing, as well as the fees and  
8 discounts paid to compensate brokers for selling the stock to the public. Also, some  
9 argue that the “market pressure” from the additional supply of common stock and  
10 other market factors may further reduce the amount of funds a utility nets when it  
11 issues common equity. While Kentucky Power has no publicly traded stock and  
12 does not incur flotation costs directly, equity capital is provided by investors  
13 through AEP’s sale of common shares. Thus, these expenses are also relevant when  
14 evaluating the fair and reasonable ROE for a wholly-owned subsidiary, such as the  
15 Company.

16 **Q105. IS THERE AN ESTABLISHED MECHANISM FOR A UTILITY TO**  
17 **RECOGNIZE EQUITY ISSUANCE COSTS?**

18 A105. No. While debt flotation costs are recorded on the books of the utility, amortized  
19 over the life of the issue, and thus increase the effective cost of debt capital, there is  
20 no similar accounting treatment to ensure that equity flotation costs are recorded and  
21 ultimately recognized. No rate of return is authorized on flotation costs necessarily  
22 incurred to obtain a portion of the equity capital used to finance plant. In other words,  
23 equity flotation costs are not included in a utility’s rate base because neither that  
24 portion of the gross proceeds from the sale of common stock used to pay flotation

1 costs is available to invest in plant and equipment, nor are flotation costs capitalized  
2 as an intangible asset. Unless some provision is made to recognize these issuance  
3 costs, a utility's revenue requirements will not fully reflect all of the costs incurred for  
4 the use of investors' funds. Because there is no accounting convention to accumulate  
5 the flotation costs associated with equity issues, they must be accounted for  
6 indirectly, with an upward adjustment to the cost of equity being the most  
7 appropriate mechanism.

8 **Q106. THE COMMISSION HAS NOT ROUTINELY APPROVED A FLOTATION**  
9 **COST ADJUSTMENT FOR KENTUCKY POWER. WHY DO YOU**  
10 **CONTINUE TO RECOMMEND AN ADJUSTMENT IN THIS CASE?**

11 A106. I am aware that the Commission has not routinely approved a flotation cost  
12 adjustment for Kentucky Power in past proceedings. Nevertheless, the financial  
13 literature and evidence in this case provides a sound theoretical and practical basis  
14 to include consideration of flotation costs for Kentucky Power. An adjustment for  
15 flotation costs associated with past equity issues is appropriate, even when the  
16 utility is not contemplating any new sales of common stock. The need for a  
17 flotation cost adjustment to compensate for past equity issues has been recognized  
18 in the financial literature. In a *Public Utilities Fortnightly* article, for example,  
19 Brigham, Aberwald, and Gapenski demonstrated that even if no further stock issues  
20 are contemplated, a flotation cost adjustment in all future years is required to keep  
21 shareholders whole, and that the flotation cost adjustment must consider total equity,  
22 including retained earnings.<sup>58</sup> Similarly, *New Regulatory Finance* contains the  
23 following discussion:

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<sup>58</sup> E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, "Common Equity Flotation Costs and Rate Making," *Public Utilities Fortnightly*, May, 2, 1985.

1 Another controversy is whether the flotation cost allowance should  
2 still be applied when the utility is not contemplating an imminent  
3 common stock issue. Some argue that flotation costs are real and  
4 should be recognized in calculating the fair rate of return on equity,  
5 but only at the time when the expenses are incurred. In other words,  
6 the flotation cost allowance should not continue indefinitely, but  
7 should be made in the year in which the sale of securities occurs,  
8 with no need for continuing compensation in future years. This  
9 argument implies that the company has already been compensated  
10 for these costs and/or the initial contributed capital was obtained  
11 freely, devoid of any flotation costs, which is an unlikely assumption,  
12 and certainly not applicable to most utilities. ... The flotation cost  
13 adjustment cannot be strictly forward-looking unless all past flotation  
14 costs associated with past issues have been recovered.<sup>59</sup>

15 **Q107. CAN YOU ILLUSTRATE WHY INVESTORS WILL NOT HAVE THE**  
16 **OPPORTUNITY TO EARN THEIR REQUIRED ROE UNLESS A**  
17 **FLOTATION COST ADJUSTMENT IS INCLUDED?**

18 A107. Yes. Assume a utility sells \$10 worth of common stock at the beginning of year 1.  
19 If the utility incurs flotation costs of \$0.48 (5% of the net proceeds), then only \$9.52  
20 is available to invest in rate base. Assume that common shareholders' required rate  
21 of return is 11.5%, the expected dividend in year 1 is \$0.50 (*i.e.*, a dividend yield of  
22 5 percent), and that growth is expected to be 6.5% annually. As developed in Table  
23 5 below, if the allowed rate of return on common equity is only equal to the utility's  
24 11.5% "bare bones" cost of equity, common stockholders will not earn their required  
25 rate of return on their \$10 investment, since growth will really only be 6.25%,  
26 instead of 6.5%:

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<sup>59</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 335.

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2

**TABLE 5**  
**NO FLOTATION COST ADJUSTMENT**

	Common	Retained	Total	Market	M/B	Allowed	Earnings	Dividends	Payout
Year	Stock	Earnings	Equity	Price	Ratio	ROE	Per Share	Per Share	Ratio
1	\$ 9.52	\$ -	\$ 9.52	\$ 10.00	1.050	11.50%	\$ 1.09	\$ 0.50	45.7%
2	\$ 9.52	\$ 0.59	\$ 10.11	\$ 10.62	1.050	11.50%	\$ 1.16	\$ 0.53	45.7%
3	\$ 9.52	\$ 0.63	<u>\$ 10.75</u>	<u>\$ 11.29</u>	1.050	11.50%	<u>\$ 1.24</u>	<u>\$ 0.56</u>	45.7%
<b>Growth</b>			<b>6.25%</b>	<b>6.25%</b>			<b>6.25%</b>	<b>6.25%</b>	

3 The reason that investors never really earn 11.5% on their investment in the above  
4 example is that the \$0.48 in flotation costs initially incurred to raise the common  
5 stock is not treated like debt issuance costs (*i.e.*, amortized into interest expense and  
6 therefore increasing the embedded cost of debt), nor is it included as an asset in rate  
7 base.

8 Including a flotation cost adjustment allows investors to be fully  
9 compensated for the impact of these costs. One commonly referenced method for  
10 calculating the flotation cost adjustment is to multiply the dividend yield by a  
11 flotation cost percentage. Thus, with a 5% dividend yield and a 5% flotation cost  
12 percentage, the flotation cost adjustment in the above example would be  
13 approximately 25 basis points. As shown in Table 6 below, by allowing a rate of  
14 return on common equity of 11.75% (an 11.5% cost of equity plus a 25 basis point  
15 flotation cost adjustment), investors earn their 11.5% required rate of return, since  
16 actual growth is now equal to 6.5%:

17  
18

**TABLE 6**  
**INCLUDING FLOTATION COST ADJUSTMENT**

	Common	Retained	Total	Market	M/B	Allowed	Earnings	Dividends	Payout
Year	Stock	Earnings	Equity	Price	Ratio	ROE	Per Share	Per Share	Ratio
1	\$ 9.52	\$ -	\$ 9.52	\$ 10.00	1.050	11.75%	\$ 1.12	\$ 0.50	44.7%
2	\$ 9.52	\$ 0.62	\$ 10.14	\$ 10.65	1.050	11.75%	\$ 1.19	\$ 0.53	44.7%
3	\$ 9.52	\$ 0.66	<u>\$ 10.80</u>	<u>\$ 11.34</u>	1.050	11.75%	<u>\$ 1.27</u>	<u>\$ 0.57</u>	44.7%
<b>Growth</b>			<b>6.50%</b>	<b>6.50%</b>			<b>6.50%</b>	<b>6.50%</b>	

1 The only way for investors to be fully compensated for issuance costs is to include  
2 an ongoing adjustment to account for past flotation costs when setting the return on  
3 common equity. This is the case regardless of whether or not the utility is expected  
4 to issue additional shares of common stock in the future.

5 **Q108. WHAT IS THE MAGNITUDE OF THE ADJUSTMENT TO THE “BARE**  
6 **BONES” COST OF EQUITY TO ACCOUNT FOR ISSUANCE COSTS?**

7 A108. The most common method used to account for flotation costs in regulatory  
8 proceedings is to apply an average flotation-cost percentage to a utility’s dividend  
9 yield. Based on a review of the finance literature, *Regulatory Finance: Utilities’*  
10 *Cost of Capital* concluded:

11 The flotation cost allowance requires an estimated adjustment to the  
12 return on equity of approximately 5% to 10%, depending on the size  
13 and risk of the issue.<sup>60</sup>

14 Alternatively, a study of data from Morgan Stanley regarding issuance costs  
15 associated with utility common stock issuances suggests an average flotation cost  
16 percentage of 3.6%,<sup>61</sup> with AEP incurring issuance costs equal to approximately  
17 3.02% of the gross proceeds from its 2009 public offering of common stock.<sup>62</sup>  
18 Applying a 3.0% expense percentage to a representative dividend yield of 3.8%  
19 implies a minimum flotation cost adjustment on the order of 11 basis points. I thus

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<sup>60</sup> *Id.* at 323.

<sup>61</sup> *Application of Yankee Gas Services Company for a Rate Increase*, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth (Jul. 2, 2004) at Exhibit GJE-11.1. Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6%. Meanwhile, AEP incurred underwriting discounts equal to approximately 3.0% of the gross proceeds from its 2011 public offering of common stock. AEP Corporation, *Form 10-K Report*) at 296 (2011).

<sup>62</sup> American Electric Power Company, Inc., *Prospectus Supplement (To Prospectus dated December 22, 2008)* (Apr. 1, 2009). Net proceeds from AEP’s sale of 69 million shares of common stock raised approximately \$1.64 billion of additional equity capital.

1 recommend the Commission increase the cost of equity by 11 basis points in  
2 arriving at a fair and reasonable ROE for Kentucky Power.

3 **Q109. HAVE OTHER REGULATORS RECOGNIZED FLOTATION COSTS IN**  
4 **EVALUATING A FAIR AND REASONABLE ROE?**

5 A109. Yes. For example, in Docket No. UE-991606 the Washington Utilities and  
6 Transportation Commission concluded that a flotation cost adjustment of 25 basis  
7 points should be included in the allowed return on equity:

8 The Commission also agrees with both Dr. Avera and Dr. Lurito that  
9 a 25 basis point markup for flotation costs should be made. This  
10 amount compensates the Company for costs incurred from past  
11 issues of common stock. Flotation costs incurred in connection with  
12 a sale of common stock are not included in a utility's rate base  
13 because the portion of gross proceeds that is used to pay these costs  
14 is not available to invest in plant and equipment.<sup>63</sup>

15 More recently, in Case No. INT-G-16-02 the staff of the Idaho Public Utilities  
16 Commission supported the use of the same flotation cost methodology that I  
17 recommend above, concluding:

18 [I]s the standard equation for flotation cost adjustments and is  
19 referred to as the “conventional” approach. Its use in regulatory  
20 proceedings is widespread, and the formula is outlined in several  
21 corporate finance textbooks.<sup>64</sup>

22 Similarly, the South Dakota Public Utilities Commission has recognized the impact  
23 of issuance costs, concluding that, “recovery of reasonable flotation costs is  
24 appropriate.”<sup>65</sup> Another example of a regulator that approves common stock  
25 issuance costs is the Mississippi Public Service Commission, which routinely

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<sup>63</sup> *Third Supplemental Order*, WUTC Docket No. UE-991606, *et al.*, p. 95 (September 2000).

<sup>64</sup> Case No. INT-G-16-02, *Direct Testimony of Mark Rogers* at 18 (Dec. 16, 2016).

<sup>65</sup> *Northern States Power Co.*, EL11-019, Final Decision and Order at P 22 (2012).

1 includes a flotation cost adjustment in its Rate Stabilization Adjustment Rider  
2 formula.<sup>66</sup> The Public Utilities Regulatory Authority of Connecticut<sup>67</sup> and the  
3 Minnesota Public Utilities Commission<sup>68</sup> have also recognized that flotation costs  
4 are a legitimate expense worthy of consideration in setting a fair and reasonable  
5 ROE.

## VI. NON-UTILITY BENCHMARK

### 6 **Q110. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

7 A110. This section presents the results of my DCF analysis applied to a group of low-risk  
8 firms in the competitive sector, which I refer to as the “Non-Utility Group.” This  
9 analysis was not directly considered in arriving at my recommended ROE range of  
10 reasonableness; however, it is my opinion that this is a relevant consideration in  
11 evaluating a fair and reasonable ROE for the Company.

### 12 **Q111. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS** 13 **FOR CAPITAL?**

14 A111. Yes. The cost of capital is an opportunity cost based on the returns that investors  
15 could realize by putting their money in other alternatives. Clearly, the total capital  
16 invested in utility stocks is only the tip of the iceberg of total common stock  
17 investment, and there are a plethora of other enterprises available to investors  
18 beyond those in the utility industry. Utilities must compete for capital, not just  
19 against firms in their own industry, but with other investment opportunities of  
20 comparable risk. Indeed, modern portfolio theory is built on the assumption that

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<sup>66</sup> See, e.g., Entergy Mississippi, Inc., Formula Rate Plan Rider (Apr. 15, 2015), [http://www.energy-mississippi.com/content/price/tariffs/emi\\_frp.pdf](http://www.energy-mississippi.com/content/price/tariffs/emi_frp.pdf) (last visited Mar. 16, 2017).

<sup>67</sup> See, e.g., Docket No. 14-05-06, Decision (Dec. 17, 2014) at 133-134.

<sup>68</sup> See, e.g., Docket No. E001/GR-10-276, Findings of Fact, Conclusions, and Order at 9.

1 rational investors will hold a diverse portfolio of stocks, not just companies in a  
2 single industry.

3 **Q112. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO**  
4 **CONSIDER INVESTORS' REQUIRED ROE FOR NON-UTILITY**  
5 **COMPANIES?**

6 A112. Yes. The cost of equity capital in the competitive sector of the economy form the  
7 very underpinning for utility ROEs because regulation purports to serve as a  
8 substitute for the actions of competitive markets. The Supreme Court has  
9 recognized that it is the degree of risk, not the nature of the business, which is  
10 relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to  
11 “business undertakings attended with comparable risks and uncertainties.” It does  
12 not restrict consideration to other utilities. Similarly, the *Hope* case states:

13 By that standard the return to the equity owner should be  
14 commensurate with returns on investments in other enterprises  
15 having corresponding risks.<sup>69</sup>

16 As in the *Bluefield* decision, there is nothing to restrict “other enterprises” solely to  
17 the utility industry.

18 **Q113. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY**  
19 **GROUP HELP TO IMPROVE THE RELIABILITY OF DCF RESULTS?**

20 A113. Yes. The estimates of growth from the DCF model depend on analysts' forecasts. It  
21 is possible for utility growth rates to be distorted by short-term trends in the  
22 industry, or by the industry falling into favor or disfavor by analysts. The result of  
23 such distortions would be to bias the DCF estimates for utilities. Because the Non-  
24 Utility Group includes low-risk companies from more than one industry, it helps to

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<sup>69</sup> *Federal Power Comm'n v. Hope Natural Gas Co.* 320 U.S. 391, (1944).

1 insulate against any possible distortion that may be present in results for a particular  
2 sector.

3 **Q114. WHAT CRITERIA DID YOU APPLY TO DEVELOP THE NON-UTILITY**  
4 **GROUP?**

5 A114. My low-risk group of competitive firms was composed of those United States  
6 companies followed by Value Line that:

- 7 (1) pay common dividends;  
8 (2) have a Safety Rank of “1”;  
9 (3) have a Financial Strength Rating of “A” or greater;  
10 (4) have a beta of 0.75 or less; and  
11 (5) have investment grade credit ratings from S&P and Moody’s.<sup>70</sup>

12 **Q115. HOW DO THE OVERALL RISKS OF THIS NON-UTILITY GROUP**  
13 **COMPARE WITH THE UTILITY GROUP?**

14 A115. Table 7 compares the Non-Utility Group with the Utility Group and Kentucky  
15 Power across the four key risk measures discussed earlier:

16 **TABLE 7**  
17 **COMPARISON OF RISK INDICATORS**

	<u>Credit Rating</u>		<u>Value Line</u>		
			<u>Safety</u>	<u>Financial</u>	
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Rank</u>	<u>Strength</u>	<u>Beta</u>
Non-Utility Group	A-	A3	1	A+	0.73
Utility Group	A-	Baa2	2	A	0.66
Kentucky Power	A-	Baa2	1	A+	0.65

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<sup>70</sup> 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.

1           When considered together, a comparison of these objective measures, which  
2           consider a broad spectrum of risks, including financial and business position,  
3           relative size, and exposure to company-specific factors, indicates that investors  
4           would likely conclude that the overall investment risks for the Utility Group and  
5           Kentucky Power are greater than those of the firms in the Non-Utility Group.

6           The companies that make up the Non-Utility Group are representative of the  
7           pinnacle of corporate America. These firms, which include household names such  
8           as Coca-Cola, Procter & Gamble, and Wal-Mart, have long corporate histories,  
9           well-established track records, and exceedingly conservative risk profiles. Many of  
10          these companies pay dividends on a par with utilities, with the average dividend  
11          yield for the group approaching 3%. Moreover, because of their significance and  
12          name recognition, these companies receive intense scrutiny by the investment  
13          community, which increases confidence that published growth estimates are  
14          representative of the consensus expectations reflected in common stock prices.

15   **Q116. DO THE BETA VALUES FOR THE NON-UTILITY GROUP ADDRESS THE**  
16   **CONCERNS EXPRESSED BY THE KPSC IN A PRIOR RATE**  
17   **PROCEEDING FOR KENTUCKY POWER?**

18   A116. Yes. The Commission concluded in Case No. 2009-00548 that utilities must  
19   compete with non-regulated firms for capital and recognized that investors consider  
20   the opportunity costs associated with investment alternatives outside the utility  
21   industry.<sup>71</sup> However, the Commission found that lower beta values for utility  
22   common stocks supported a finding that the non-utility companies were “riskier

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<sup>71</sup> *Kentucky Utilities Co.*, Case No. 2009-00548 (Ky PSC Jul. 30, 2010) at 31.

1 alternatives.”<sup>72</sup> My proxy group criteria restricted the Non-Utility Group to include  
 2 only firms with beta values of 0.75 or less, while beta values for the firms in the  
 3 Utility Group range as high as 0.80.

4 **Q117. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-**  
 5 **UTILITY GROUP?**

6 A117. I applied the DCF model to the Non-Utility Group using analysts EPS growth  
 7 projections, as described earlier for the Utility Group, with the results being  
 8 presented in Exhibit AMM-11. As summarized in Table 8, below, application of the  
 9 constant growth DCF model resulted in the following cost of equity estimates:

10 **TABLE 8**  
 11 **DCF RESULTS – NON-UTILITY GROUP**

<u>Growth Rate</u>	<u>Cost of Equity</u>	
	<u>Average</u>	<u>Midpoint</u>
Value Line	10.4%	11.5%
IBES	10.5%	11.1%
Zacks	10.8%	11.5%

12 As discussed earlier, reference to the Non-Utility Group is consistent with  
 13 established regulatory principles. Required returns for utilities should be in line  
 14 with those of non-utility firms of comparable risk operating under the constraints of  
 15 free competition. Because the actual cost of equity is unobservable, and DCF  
 16 results inherently incorporate a degree of error, cost of equity estimates for the Non-  
 17 Utility Group provide an important benchmark in evaluating a fair and reasonable  
 18 ROE for Kentucky Power.

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<sup>72</sup> *Id.*

1 **Q118. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

2 A118. Yes.

## QUALIFICATIONS OF ADRIEN M. MCKENZIE

**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<sup>®</sup>) 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 approximately seventy-five proceedings filed with the Federal Energy Regulatory Commission (“FERC”), the Regulatory Commission of Alaska, the Colorado Public Utilities Commission, the Hawaii Public Utilities Commission, the Idaho Public Utilities Commission, the Indiana Utility Regulatory Commission, the Iowa Utilities Board, the Kansas State Corporation Commission, the Kentucky Public Service Commission, the Maryland Public Service Commission, the Montana Public Service Commission, the Nebraska Public Service Commission, the Ohio Public Utilities Commission, the Oregon Public Utilities Commission, the South Dakota Public Utilities Commission, the Virginia State Corporation Commission, the Washington Utilities and Transportation Commission, the West Virginia Public Service Commission, and the Wyoming Public Service Commission. 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.

In addition, over the course of my career I worked with Dr. William Avera to prepare prefiled direct and rebuttal testimony in over 250 regulatory proceedings before FERC, the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies in over 30 states.<sup>1</sup> Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. A resume containing the details of my qualifications and experience is attached below.

---

<sup>1</sup> This testimony was sponsored by Dr. William Avera, who was formerly President of FINCAP, Inc.

**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<sup>®</sup>) designation. He has over 25 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<sup>®</sup>) 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 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.

SUMMARY OF RESULTS

<u>DCF</u>	<u>Average</u>	<u>Midpoint</u>
Value Line	9.8%	10.8%
IBES	9.6%	10.4%
Zacks	9.8%	10.5%
Bloomberg	9.6%	10.0%
S&P Capital/IQ	9.7%	10.1%
Internal br + sv	8.7%	9.8%
<u>CAPM</u>		
Current Bond Yield	9.3%	9.2%
Projected Bond Yield	9.7%	9.6%
<u>Empirical CAPM</u>		
Current Bond Yield	10.0%	10.0%
Projected Bond Yield	10.3%	10.3%
<u>Utility Risk Premium</u>		
Current Bond Yield		10.0%
Projected Bond Yields		11.0%
<u>Expected Earnings</u>		
Industry		10.8%
Proxy Group	11.8%	11.5%
<u>Recommended Cost of Equity Range</u>		
Cost of Equity Range	9.6%	-- 10.8%
<u>Flotation Cost Adjustment</u>		
Dividend Yield		
Flotation Cost Percentage		3.8%
Adjustment		3.00%
		0.11%
<u>ROE Recommendation</u>	<b>9.71%</b>	<b>-- 10.91%</b>

UTILITY GROUP

	<u>Company</u>	<u>AMS</u>	<u>BDR</u>	<u>DSM</u>	<u>ECA</u>	<u>ESM</u>	<u>FCA</u>	<u>FRP</u>	<u>FTY</u>	<u>ICR</u>	<u>NDT</u>	<u>PCR</u>	<u>PGA</u>	<u>RDM</u>	<u>SCR</u>	<u>TAX</u>	<u>TCR</u>	<u>WNA</u>	<u>Other</u>
1	Alliant Energy			√			√		√	√			√				√		
2	Ameren Corp.		√	√	√		√	√	√	√		√	√	√			√		
3	American Elec Pwr	√			√		√		√	√							√		Vegetation mgmt. tracker
4	Avangrid, Inc.			√		√			√	√			√	√			√		
5	CMS Energy Corp.			√			√		√	√			√				√		
6	Dominion Energy		√	√	√		√	√		√			√				√	√	Nuclear decommissioning tracker
7	DTE Energy Co.			√			√		√		√		√				√		
8	Duke Energy Corp.			√	√		√			√					√		√		
9	Emera Inc.			√	√		√		√	√									Franchise fee tracker
10	Eversource Energy		√	√	√		√	√	√	√		√	√	√			√		
11	Fortis Inc.			√			√		√					√			√		Franchise fee tracker
12	NextEra Energy, Inc.			√	√	√	√			√									Nuclear cost recovery tracker
13	PPL Corp.	√		√	√		√	√	√	√			√		√		√		
14	Pub Sv Enterprise Group		√	√	√		√	√		√		√	√		√			√	
15	SCANA Corp.		√	√			√					√	√	√				√	
16	Sempra Energy			√	√		√	√	√	√	√	√	√	√		√	√		
17	Southern Company			√	√		√	√	√	√			√		√	√			
18	Vectren Corp.		√	√			√			√			√	√			√	√	

GLOSSARY OF TERMS

AMS--Advanced Metering System Recovery Rider

BDR -- Bad Debt Cost Recovery Rider

DSM -- Demand Side Management / Conservation / Energy Efficiency Adj Clause

ECA -- Environmental and/or Emissions Cost Adjustment Clause

ESM -- Earnings Sharing Mechanism

FCA -- Fuel and/or Power Cost Adjustment Clause

FRP--Formula Rate Plan

FTY - Jurisdiction allows for future test year

ICR -- Infrastructure Investment / Renewables Cost Recovery Mechanism

NDT -- Nuclear Decommissioning Tracker

PCR -- Pension Cost Recovery Mechanism

PGA -- Gas Cost Adjustment Clause

RDM -- Revenue Decoupling Mechanism

SCR - Storm Cost Recovery Tracker

TAX--Property / Franchise Tax Recovery Mechanism

TCR -- Transmission Cost Recovery Tracker

WNA -- Weather Normalization Adjustment or other mitigants

Sources:

Company 10-K reports;

Regulatory Research Associates, Regulatory Focus, "Adjustment Clauses-A State-by-State Overview," Aug. 22, 2016;

Edison Electric Institute, "Alternative Regulation for Emerging Utility Challenges: 2015 Update," Nov. 11, 2015.

UTILITY GROUP

Holding Company/ Elec. Operating Company	Type of Svc	State	Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Type of Adjustment Clause (a)								Future Test Year (b)		
					Decoupling				Renew- ables Expense	Environ- mental Compliance	New Capital			Trans- mission Expense	Other
					Full	Partial	Gener- ation Capacity	Generic Infra- structure							
<b>ALLIANT ENERGY</b>															
Interstate P&L	Elec.	IA	√	√	--	--	√	√	--	--	√	√	--		
Wisconsin P&L	Elec.	WI	√	--	--	--	--	--	LIR	LIR	--	√	C		
<b>AMEREN</b>															
Ameren Illinois	Elec.	IL	D	√	--	--	√	√	D	--	√	√	O		
Union Electric	Elec.	MO	√	√	--	√	--	√	--	√	√	√	P		
<b>AMERICAN ELEC PWR</b>															
AEP Texas Central	Elec.	TX	D	√	--	--	--	--	D	√	√	--	--		
AEP Texas North	Elec.	TX	D	√	--	--	--	--	D	√	√	--	--		
Appalachian Pwr	Elec.	VA	√	√	--	--	√	√	√	--	√	√	--		
Indiana Michigan Pwr	Elec.	IN	√	√	--	√	√	√	--	√	√	√	C		
Kentucky Pwr	Elec.	KY	√	√	--	√*	√	√	√	--	--	√	O		
Ohio Pwr	Elec.	OH	D	√	--	√	√	--	D	√	√	√	P		
Public Svc Co. of OK	Elec.	OK	√	√	--	√	--	--	--	√	√	√	--		
Southwestern Elec Pwr	Elec.	AR	√	√	--	√	--	√	√	√	--	√	O/P		
Wheeling Pwr	Elec.	WV	√	--	--	--	--	--	--	--	√	√	--		
<b>AVANGRID</b>															
Central Maine Pwr	Elec.	ME	D	--	√	--	--	--	D	--	--	√	C		
NY State E&G	Elec.	NY	D	--	√	--	√	--	D	--	--	--	C		
Rochester G&E	Elec.	NY	D	--	√	--	√	--	D	--	--	--	C		
United Illuminating	Elec.	CT	D	√	√	--	--	--	D	--	√	--	C		
<b>CMS ENERGY</b>															
Consumers Energy	Elec.	MI	√	√	--	--	√	--	--	--	√	--	C		
<b>DOMINION RESOURCES</b>															
Virginia Electric & Pwr	Elec	VA	√	√	--	--	--	√	√	--	√	√	--		

UTILITY GROUP

Holding Company/ Elec. Operating Company	Type of Svc	State	Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Type of Adjustment Clause (a)								Future Test Year (b)	
					Decoupling				Renew- ables Expense	Environ- mental Compliance	New Capital			
					Full	Partial	Other	Gener- ation Capacity			Generic Infra- structure	Trans- mission Expense		
<b>DTE ENERGY</b>														
DTE Electric	Elec.	MI	√	√	--	--	√	--	--	--	√	--	C	
<b>DUKE ENERGY CORP.</b>														
Duke Energy Florida	Elec.	FL	√	√	--	--	--	√	√	--	--	√	C	
Duke Energy Indiana	Elec.	IN	√	√	--	√	√	√	√	√	√	√	--	
Duke Energy Kentucky	Elec.	KY	√	√	--	√	√	--	--	--	--	√	O	
Duke Energy Carolinas	Elec.	NC,SC	√	√	--	--	√	√	--	--	--	--	--	
Duke Energy Progress	Elec.	NC,SC	√	√	--	--	√	√	--	--	--	--	--	
Duke Energy Ohio	Elec.	OH	D	√	--	√	√	--	D	√	√	√	P	
<b>EMERA INC.</b>														
Emera Maine	Elec.	ME	D	--	--	--	--	--	D	--	--	--	C	
Tampa Electric Co.	Elec.	FL	√	√	--	--	--	√	√	--	--	√	C	
<b>EVERSOURCE ENERGY</b>														
Connecticut L&P	Elec.	CT	D	√	√	--	--	--	D	--	√	--	C	
NSTAR Electric Co.	Elec.	MA	D	√	--	--	--	--	D	--	√	√	--	
PS Co. of New Hampshire	Elec.	NH	√	--	--	√	--	--	--	√	√	--	--	
Western Mass. Electric Co	Elec.	MA	D	√	√	--	√	--	D	--	√	√	--	
<b>FORTIS INC.</b>														
Central Hudson	Elec.	NY	D	--	√	--	√	--	D	--	--	--	C	
UNS Electric	Elec.	AZ	√	√	--	√	√	--	--	--	√	√	--	
<b>NEXTERA ENERGY, INC.</b>														
Florida Power & Light	Elec.	FL	√	√	--	--	--	√	√	--	--	√	C	
<b>PPL CORP.</b>														
Kentucky Utilities	Elec.	KY	√	√	--	√*	√	√	--	--	--	√	O	
Louisville G&E	Elec.	KY	√	√	--	√*	√	√	--	--	--	√	O	
PPL Electric Utilities	Elec.	PA	D	√	--	--	--	--	D	√	√	√	O	

UTILITY GROUP

Holding Company/ Elec. Operating Company	Type of Svc	State	Elec. Fuel/ Gas/ Purch. Pwr	Conserv. Program Expense	Type of Adjustment Clause (a)								Future Test Year (b)		
					Decoupling				Renew- ables Expense	Environ- mental Compliance	New Capital			Trans- mission Expense	Other
					Full	Partial	Gener- ation Capacity	Generic Infra- structure							
<b>PUB SV ENTERPRISE GRP</b>															
Public Service E&G	Elec.	NJ	D	√	--	--	√	√	D	√	--	√	P		
<b>SCANA CORP.</b>															
SC Elec. & Gas	Elec.	SC	√	--	--	--	--	√	√	--	--	--	--		
<b>SEMPRA ENERGY</b>															
San Diego G&E	Elec.	CA	√	--	√	--	--	--	--	--	--	--	C		
<b>SOUTHERN CO.</b>															
Alabama Power	Elec.	AL	√	--	--	--	--	√	√	--	--	√	C		
Georgia Power	Elec.	GA	√	--	--	--	--	--	√	--	--	--	C		
Gulf Power	Elec.	FL	√	√	--	--	--	√	√	--	--	√	C		
Mississippi Power	Elec.	MS	√	√	--	√	--	√	--	--	--	√	O		
<b>VECTREN CORP.</b>															
Southern Indiana G&E	Elec.	IN	√	√	--	√	--	--	--	--	--	√	√	--	

**Sources:**

- (a) Regulatory Research Associates, Regulatory Focus, "Adjustment Clauses-A State-by-State Overview," Aug. 22, 2016.  
(b) Edison Electric Institute, "Alternative Regulation for Emerging Utility Challenges: 2015 Update," Nov. 11, 2015.

**Notes:**

\* Partial decoupling provision relates to the lost revenue provision of KRS 278.285(2).

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.

LIR - Limited issue reopeners.

UTILITY GROUP

Company	At Fiscal Year-End 2016 (a)			Value Line Projected (b)		
	Debt	Preferred	Common Equity	Debt	Other	Common Equity
1 Alliant Energy	64.2%	1.8%	34.1%	50.0%	2.0%	48.0%
2 Ameren Corp.	50.1%	0.0%	49.9%	48.5%	1.0%	50.5%
3 American Elec Pwr	53.8%	0.0%	46.2%	52.5%	0.0%	47.5%
4 Avangrid, Inc.	24.3%	0.0%	75.7%	24.0%	0.0%	76.0%
5 CMS Energy Corp.	68.9%	0.0%	31.1%	64.5%	0.0%	35.5%
6 Dominion Energy	65.5%	0.0%	34.5%	70.5%	0.0%	29.5%
7 DTE Energy Co.	54.3%	0.0%	45.7%	56.5%	0.0%	43.5%
8 Duke Energy Corp.	53.9%	0.0%	46.1%	55.0%	0.0%	45.0%
9 Emera Inc.	68.4%	3.3%	28.3%	64.3%	3.4%	32.3%
10 Eversource Energy	46.9%	0.8%	52.3%	47.5%	0.5%	52.0%
11 Fortis Inc.	56.2%	4.3%	39.5%	55.5%	4.0%	40.5%
12 NextEra Energy, Inc.	54.6%	0.0%	45.4%	47.0%	0.0%	53.0%
13 PPL Corp.	64.9%	0.0%	35.1%	58.5%	0.0%	41.5%
14 Pub Sv Enterprise Grp.	46.5%	0.0%	53.5%	49.0%	0.0%	51.0%
15 SCANA Corp.	53.1%	0.0%	46.9%	53.0%	0.0%	47.0%
16 Sempra Energy	50.2%	0.1%	49.8%	60.0%	0.0%	40.0%
17 Southern Company	62.7%	0.4%	36.9%	61.5%	2.5%	36.0%
18 Vectren Corp.	49.2%	0.0%	50.8%	48.0%	0.0%	52.0%
<b>Average</b>	<b>54.9%</b>	<b>0.6%</b>	<b>44.5%</b>	<b>53.7%</b>	<b>0.7%</b>	<b>45.6%</b>

(a) Company Form 10-K and Annual Reports.

(b) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017; Emera, Mar. 24, 2017).

ELECTRIC GROUP OPERATING SUBSIDIARIES

<u>Operating Company</u>	At Year-End 2016 (a)		
	Debt	Preferred	Common Equity
<b>ALLIANT ENERGY CORP.</b>			
Interstate Power & Light	46.8%	4.3%	48.9%
Wisconsin Power & Light	47.0%	0.0%	53.0%
<b>AMEREN CORP.</b>			
Ameren Illinois Co.	45.5%	1.1%	53.4%
Union Electric Co.	48.9%	1.0%	50.1%
<b>AMERICAN ELEC PWR</b>			
AEP Texas Inc.	54.3%	0.0%	45.7%
Appalachian Power Co.	53.0%	0.0%	47.0%
Indiana Michigan Power Co.	53.5%	0.0%	46.5%
Kingsport Power Co.	34.8%	0.0%	65.2%
Ohio Power Co.	45.4%	0.0%	54.6%
Public Service Co. of Oklahoma	51.4%	0.0%	48.6%
Southwestern Electric Pwr Co.	54.7%	0.0%	45.3%
Wheeling Power Co.	45.8%	0.0%	54.2%
<b>AVANGRID</b>			
Central Maine Pwr	37.6%	0.0%	62.4%
NY State E&G	51.2%	0.0%	48.8%
Rochester G&E	45.7%	0.0%	54.3%
United Illuminating	45.8%	0.0%	54.2%
<b>CMS ENERGY</b>			
Consumers Energy Co.	48.8%	0.3%	50.9%
<b>DOMINION RESOURCES</b>			
Virginia Electric Power	47.0%	0.0%	53.0%
<b>DTE ENERGY CO.</b>			
DTE Electric Co.	49.6%	0.0%	50.4%
<b>DUKE ENERGY</b>			
Duke Energy Carolinas	47.1%	0.0%	52.9%
Duke Energy Florida	55.6%	0.0%	44.4%
Duke Energy Indiana	48.2%	0.0%	51.8%
Duke Energy Ohio	38.6%	0.0%	61.4%
Duke Energy Progress	48.8%	0.0%	51.2%
Progress Energy Inc.	59.8%	0.0%	40.2%
<b>EMERA INC.</b>			
Emera Maine	35.1%	0.0%	64.8%
Tampa Electric Co.	43.9%	0.0%	56.1%

ELECTRIC GROUP OPERATING SUBSIDIARIES

	At Year-End 2016-Continued (a)		
	Debt	Preferred	Common Equity
<b>EVERSOURCE ENERGY</b>			
Connecticut Light & Power	43.5%	1.8%	54.6%
NSTAR Electric Co.	43.4%	0.9%	55.7%
Public Service Co. of New Hampshire	43.6%	0.0%	56.4%
Western Massachussetts Electric Co.	45.8%	0.0%	54.2%
<b>FORTIS INC.</b>			
UNS Electric	46.4%	0.0%	53.6%
Central Hudson	49.4%	0.0%	50.6%
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.	40.1%	0.0%	59.9%
<b>NEXTERA ENERGY, INC.</b>			
Florida Power & Light	37.8%	0.0%	62.2%
<b>PPL CORP.</b>			
Kentucky Utilities Co.	41.2%	0.0%	58.8%
Louisville Gas & Electric Co.	39.5%	0.0%	60.5%
PPL Electric Utilities Corp.	45.5%	0.0%	54.5%
<b>PUB SV ENTERPRISE GRP.</b>			
Pub Service Electric & Gas Co.	47.3%	0.0%	52.7%
<b>SCANA CORP</b>			
South Carolina Electric & Gas	48.6%	0.0%	51.4%
<b>SEMPRA ENERGY</b>			
San Diego Gas & Electric	46.1%	0.0%	53.9%
Southern California Gas Co.	45.9%	0.3%	53.7%
<b>SOUTHERN CO.</b>			
Alabama Power Co.	51.8%	2.1%	46.2%
Georgia Power Co.	47.9%	1.2%	50.9%
Gulf Power Co.	41.1%	5.6%	53.2%
Mississippi Power Co.	52.6%	0.5%	46.9%
<b>VECTREN CORP.</b>			
Southern Indiana Gas & Electric Co.	43.3%	0.0%	56.7%
<b>Minimum</b>	<b>34.8%</b>	<b>0.0%</b>	<b>40.2%</b>
<b>Maximum</b>	<b>59.8%</b>	<b>5.6%</b>	<b>65.2%</b>
<b>Simple Average</b>	<b>46.1%</b>	<b>0.4%</b>	<b>53.5%</b>
<b>Weighted Average</b>	<b>48.0%</b>	<b>0.4%</b>	<b>51.7%</b>

Sources:

Company 10-K and FERC Form 1 reports.

DIVIDEND YIELD

		(a)	(b)	
	<u>Company</u>	<u>Price</u>	<u>Dividends</u>	<u>Yield</u>
1	Alliant Energy	\$ 39.69	\$ 1.26	3.2%
2	Ameren Corp.	\$ 54.84	\$ 1.79	3.3%
3	American Elec Pwr	\$ 67.84	\$ 2.42	3.6%
4	Avangrid, Inc.	\$ 43.72	\$ 1.73	4.0%
5	CMS Energy Corp.	\$ 45.35	\$ 1.35	3.0%
6	Dominion Energy	\$ 77.67	\$ 3.14	4.0%
7	DTE Energy Co.	\$ 104.37	\$ 3.42	3.3%
8	Duke Energy Corp.	\$ 67.84	\$ 3.54	5.2%
9	Emera Inc.	\$ 47.26	\$ 2.09	4.4%
10	Eversource Energy	\$ 59.67	\$ 1.90	3.2%
11	Fortis Inc.	\$ 32.70	\$ 1.65	5.0%
12	NextEra Energy, Inc.	\$ 133.26	\$ 4.06	3.0%
13	PPL Corp.	\$ 38.15	\$ 1.61	4.2%
14	Pub Sv Enterprise Grp.	\$ 44.13	\$ 1.74	3.9%
15	SCANA Corp.	\$ 65.83	\$ 2.49	3.8%
16	Sempra Energy	\$ 111.78	\$ 3.36	3.0%
17	Southern Company	\$ 49.79	\$ 2.34	4.7%
18	Vectren Corp.	\$ 59.30	\$ 1.72	2.9%
	<b>Average</b>			<b>3.8%</b>

(a) Average of closing prices for 30 trading days ended May 19, 2017.

(b) The Value Line Investment Survey, Summary & Index (May 19, 2017).

GROWTH RATES

	(a)	(b)	(c)		(d)	(e)
	<b>Earnings Growth</b>				<b>S&amp;P</b>	<b>br+sv</b>
<u>Company</u>	<u>V Line</u>	<u>IBES</u>	<u>Zacks</u>	<u>Bloomberg</u>	<u>Capital IQ</u>	<u>Growth</u>
1 Alliant Energy	6.0%	6.5%	5.5%	6.4%	5.9%	5.6%
2 Ameren Corp.	6.0%	6.1%	6.5%	5.8%	6.1%	3.9%
3 American Elec Pwr	4.0%	2.4%	5.6%	4.0%	4.1%	4.4%
4 Avangrid, Inc.	n/a	9.0%	8.5%	9.0%	7.8%	1.7%
5 CMS Energy Corp.	6.5%	7.5%	6.0%	6.8%	7.4%	5.8%
6 Dominion Energy	5.5%	4.0%	6.0%	5.0%	5.6%	0.1%
7 DTE Energy Co.	5.0%	4.6%	5.9%	6.0%	5.7%	4.2%
8 Duke Energy Corp.	4.5%	2.6%	5.0%	5.5%	3.6%	2.3%
9 Emera Inc.	9.0%	n/a	n/a	7.0%	8.2%	8.1%
10 Eversource Energy	6.5%	6.0%	6.3%	6.1%	5.8%	4.2%
11 Fortis Inc.	9.0%	n/a	5.5%	5.0%	6.2%	3.0%
12 NextEra Energy, Inc.	6.5%	6.7%	7.0%	7.0%	6.9%	6.2%
13 PPL Corp.	n/a	2.4%	5.0%	1.2%	5.2%	6.7%
14 Pub Sv Enterprise Grp.	2.5%	0.7%	3.0%	3.2%	5.1%	4.6%
15 SCANA Corp.	4.0%	5.8%	5.3%	6.0%	5.4%	4.7%
16 Sempra Energy	8.0%	9.9%	8.7%	12.2%	8.0%	3.7%
17 Southern Company	3.5%	3.8%	5.0%	4.7%	4.4%	3.5%
18 Vectren Corp.	7.0%	5.5%	5.7%	5.5%	5.7%	6.3%

(a) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(b) www.finance.yahoo.com (May 25, 2017).

(c) www.zacks.com (May 25, 2017).

(d) SNL, S&P Global, Inc. (May 25, 2017).

(e) See Exhibit AMM-6.

DCF COST OF EQUITY ESTIMATES

	(a)	(a)	(a)	(a)	(a)	(a)
	<u>Earnings Growth</u>					
<u>Company</u>	<u>V Line</u>	<u>IBES</u>	<u>Zacks</u>	<u>Bloomberg</u>	<u>S&amp;P Capital/IO</u>	<u>br+sv Growth</u>
1 Alliant Energy	9.2%	9.6%	8.7%	9.6%	9.1%	8.8%
2 Ameren Corp.	9.3%	9.3%	9.8%	9.1%	9.4%	7.1%
3 American Elec Pwr	7.6%	6.0%	9.2%	7.6%	7.7%	7.9%
4 Avangrid, Inc.	n/a	13.0%	12.5%	13.0%	11.8%	5.7%
5 CMS Energy Corp.	9.5%	10.5%	9.0%	9.8%	10.4%	8.8%
6 Dominion Energy	9.5%	8.0%	10.0%	9.0%	9.6%	4.2%
7 DTE Energy Co.	8.3%	7.9%	9.2%	9.3%	9.0%	7.5%
8 Duke Energy Corp.	9.7%	7.8%	10.2%	10.7%	8.8%	7.6%
9 Emera Inc.	13.4%	n/a	n/a	11.4%	12.6%	12.5%
10 Eversource Energy	9.7%	9.2%	9.5%	9.3%	9.0%	7.4%
11 Fortis Inc.	14.0%	n/a	10.5%	10.0%	11.2%	8.1%
12 NextEra Energy, Inc.	9.5%	9.7%	10.1%	10.0%	9.9%	9.3%
13 PPL Corp.	n/a	6.7%	9.2%	5.4%	9.4%	11.0%
14 Pub Sv Enterprise Grp.	6.4%	4.6%	6.9%	7.1%	9.0%	8.5%
15 SCANA Corp.	7.8%	9.6%	9.1%	9.8%	9.2%	8.5%
16 Sempra Energy	11.0%	12.9%	11.7%	15.2%	11.0%	6.7%
17 Southern Company	8.2%	8.5%	9.7%	9.3%	9.1%	8.2%
18 Vectren Corp.	9.9%	8.4%	8.6%	8.4%	8.6%	9.2%
<b>Average (b)</b>	<b>9.8%</b>	<b>9.6%</b>	<b>9.8%</b>	<b>9.6%</b>	<b>9.7%</b>	<b>8.7%</b>
<b>Midpoint (b,c)</b>	<b>10.8%</b>	<b>10.4%</b>	<b>10.5%</b>	<b>10.0%</b>	<b>10.1%</b>	<b>9.8%</b>

(a) Sum of dividend yield (Exhibit AMM-5, p. 1) and respective growth rate (Exhibit AMM-5, p. 2).

(b) Excludes highlighted figures.

(c) Average of low and high values.

**BR+SV GROWTH RATE**

	<u>Company</u>	(a)	(a)	(a)	<u>b</u>	<u>r</u>	(b)	(c)	<u>br</u>	(d)	(e)	<u>br + sv</u>	
		<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>			<u>Adjustment Factor</u>	<u>Adjusted r</u>		<u>"sv" Factor</u>			
		2021								<u>s</u>	<u>v</u>	<u>sv</u>	
1	Alliant Energy	\$2.50	\$1.58	\$19.05	36.8%	13.1%	1.0100	13.3%	4.9%	0.0142	0.4920	0.70%	5.6%
2	Ameren Corp.	\$3.50	\$2.15	\$35.50	38.6%	9.9%	1.0190	10.0%	3.9%	-	0.3238	0.00%	3.9%
3	American Elec Pwr	\$4.75	\$2.90	\$43.25	38.9%	11.0%	1.0202	11.2%	4.4%	0.0002	0.3593	0.01%	4.4%
4	Avangrid, Inc.	\$2.75	\$1.85	\$52.00	32.7%	5.3%	1.0060	5.3%	1.7%	0.0000	(0.3000)	0.00%	1.7%
5	CMS Energy Corp.	\$2.75	\$1.70	\$21.00	38.2%	13.1%	1.0356	13.6%	5.2%	0.0132	0.4750	0.63%	5.8%
6	Dominion Energy	\$4.50	\$4.20	\$24.25	6.7%	18.6%	1.0025	18.6%	1.2%	(0.0153)	0.7306	-1.11%	0.1%
7	DTE Energy Co.	\$6.50	\$4.30	\$62.00	33.8%	10.5%	1.0254	10.8%	3.6%	0.0137	0.3951	0.54%	4.2%
8	Duke Energy Corp.	\$5.50	\$3.96	\$65.00	28.0%	8.5%	1.0107	8.6%	2.4%	(0.0023)	0.2571	-0.06%	2.3%
9	Emera Inc.	\$4.50	\$2.80	\$32.55	37.8%	13.8%	1.0147	14.0%	5.3%	0.0506	0.5510	2.79%	8.1%
10	Eversource Energy	\$4.00	\$2.30	\$41.00	42.5%	9.8%	1.0193	9.9%	4.2%	-	0.3440	0.00%	4.2%
11	Fortis Inc.	\$3.00	\$2.05	\$37.25	31.7%	8.1%	1.0243	8.2%	2.6%	0.0246	0.1722	0.42%	3.0%
12	NextEra Energy, Inc.	\$8.50	\$5.50	\$68.00	35.3%	12.5%	1.0339	12.9%	4.6%	0.0306	0.5390	1.65%	6.2%
13	PPL Corp.	\$2.75	\$1.82	\$19.25	33.8%	14.3%	1.0355	14.8%	5.0%	0.0317	0.5471	1.74%	6.7%
14	Pub Sv Enterprise Grp.	\$3.50	\$2.10	\$31.25	40.0%	11.2%	1.0194	11.4%	4.6%	0.0008	0.4048	0.03%	4.6%
15	SCANA Corp.	\$5.00	\$2.90	\$50.00	42.0%	10.0%	1.0267	10.3%	4.3%	0.0122	0.3103	0.38%	4.7%
16	Sempra Energy	\$7.50	\$4.55	\$57.75	39.3%	13.0%	1.0078	13.1%	5.1%	(0.0261)	0.5558	-1.45%	3.7%
17	Southern Company	\$3.50	\$2.62	\$29.50	25.1%	11.9%	1.0191	12.1%	3.0%	0.0105	0.4381	0.46%	3.5%
18	Vectren Corp.	\$3.45	\$2.00	\$27.05	42.0%	12.8%	1.0274	13.1%	5.5%	0.0150	0.5082	0.76%	6.3%

BR+SV GROWTH RATE

	<u>Company</u>	(a)	(a)	(f)	(a)	(a)	(f)	(g)	(a)	(a)	(h)	(a)	(a)	(g)	
		<u>Eq Ratio</u>	<u>Tot Cap</u>	<u>Com Eq</u>	<u>Eq Ratio</u>	<u>Tot Cap</u>	<u>Com Eq</u>	<u>Chg</u>	<u>High</u>	<u>Low</u>		<u>Avg.</u>	<u>Common Shares</u>		
			2016			2021						2016	2021	Growth	
1	Alliant Energy	48.0%	\$7,600	\$3,648	48.0%	\$8,400	\$4,032	2.0%	\$45.00	\$30.00	\$37.50	1.969	227.67	236.00	0.72%
2	Ameren Corp.	51.3%	\$13,840	\$7,100	50.5%	\$17,000	\$8,585	3.9%	\$60.00	\$45.00	\$52.50	1.479	242.63	242.63	0.00%
3	American Elec Pwr	50.0%	\$34,775	\$17,388	47.5%	\$44,800	\$21,280	4.1%	\$75.00	\$60.00	\$67.50	1.561	491.71	492.00	0.01%
4	Avangrid, Inc.	77.0%	\$19,619	\$15,107	76.0%	\$21,100	\$16,036	1.2%	\$45.00	\$35.00	\$40.00	0.769	308.99	309.00	0.00%
5	CMS Energy Corp.	32.6%	\$13,040	\$4,251	35.5%	\$17,100	\$6,071	7.4%	\$45.00	\$35.00	\$40.00	1.905	279.21	289.00	0.69%
6	Dominion Energy	32.6%	\$44,836	\$14,617	29.5%	\$50,800	\$14,986	0.5%	\$105.00	\$75.00	\$90.00	3.711	627.80	615.00	-0.41%
7	DTE Energy Co.	44.4%	\$20,280	\$9,004	43.5%	\$26,700	\$11,615	5.2%	\$120.00	\$85.00	\$102.50	1.653	179.43	187.00	0.83%
8	Duke Energy Corp.	47.4%	\$86,609	\$41,053	45.0%	\$101,500	\$45,675	2.2%	\$100.00	\$75.00	\$87.50	1.346	700.00	694.00	-0.17%
9	Emera Inc.	28.5%	\$20,974	\$5,979	32.3%	\$21,425	\$6,925	3.0%	\$85.00	\$60.00	\$72.50	2.227	210.02	235.00	2.27%
10	Eversource Energy	54.4%	\$19,697	\$10,715	52.0%	\$25,000	\$13,000	3.9%	\$70.00	\$55.00	\$62.50	1.524	316.89	316.89	0.00%
11	Fortis Inc.	36.2%	\$35,874	\$12,986	40.5%	\$40,900	\$16,565	5.0%	\$50.00	\$40.00	\$45.00	1.208	401.49	444.00	2.03%
12	NextEra Energy, Inc.	46.7%	\$52,159	\$24,358	53.0%	\$64,500	\$34,185	7.0%	\$170.00	\$125.00	\$147.50	2.169	468.00	502.00	1.41%
13	PPL Corp.	35.7%	\$27,707	\$9,891	41.5%	\$34,000	\$14,110	7.4%	\$50.00	\$35.00	\$42.50	2.208	679.73	730.00	1.44%
14	Pub Sv Enterprise Grp.	54.7%	\$24,025	\$13,142	51.0%	\$31,300	\$15,963	4.0%	\$60.00	\$45.00	\$52.50	1.680	504.87	506.00	0.04%
15	SCANA Corp.	46.9%	\$12,198	\$5,721	47.0%	\$15,900	\$7,473	5.5%	\$85.00	\$60.00	\$72.50	1.450	142.90	149.00	0.84%
16	Sempra Energy	47.3%	\$24,963	\$11,807	40.0%	\$31,900	\$12,760	1.6%	\$150.00	\$110.00	\$130.00	2.251	250.15	236.00	-1.16%
17	Southern Company	35.7%	\$69,359	\$24,761	36.0%	\$83,300	\$29,988	3.9%	\$60.00	\$45.00	\$52.50	1.780	990.39	1020.00	0.59%
18	Vectren Corp.	52.7%	\$3,358	\$1,770	52.0%	\$4,475	\$2,327	5.6%	\$65.00	\$45.00	\$55.00	2.033	82.90	86.00	0.74%

(a) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(b) Computed using the formula  $2*(1+5\text{-Yr. Change in Equity})/(2+5\text{ Yr. Change in Equity})$ .

(c) Product of average year-end "r" for 2021 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 2021 BVPS.

UTILITY GROUP

	Company	(a) (b) Market Return ( $R_m$ )			(c)	(d)	Beta	Unadjusted $K_e$	(e) Market Cap	(f)	Size Adjusted $K_e$
		Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium				Size Adjustment	
1	Alliant Energy	2.4%	9.6%	12.0%	3.0%	9.0%	0.70	9.3%	\$ 9,071.9	0.89%	10.2%
2	Ameren Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.70	9.3%	\$ 13,415.8	0.61%	9.9%
3	American Elec Pwr	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 33,588.9	-0.35%	8.5%
4	Avangrid, Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	n/a	n/a	\$ 13,599.0	0.61%	n/a
5	CMS Energy Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 12,810.0	0.61%	9.5%
6	Dominion Energy	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 49,263.3	-0.35%	8.5%
7	DTE Energy Co.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 18,896.6	0.61%	9.5%
8	Duke Energy Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.60	8.4%	\$ 57,359.3	-0.35%	8.1%
9	Emera Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	0.60	8.4%	\$ 6,874.7	0.89%	9.3%
10	Eversource Energy	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 19,089.2	0.61%	9.5%
11	Fortis Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 17,448.6	0.61%	9.5%
12	NextEra Energy, Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 64,087.9	-0.35%	8.5%
13	PPL Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.70	9.3%	\$ 26,478.2	-0.35%	9.0%
14	Pub Sv Enterprise Grp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 22,114.0	0.61%	9.5%
15	SCANA Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.65	8.9%	\$ 9,287.1	0.89%	9.7%
16	Sempra Energy	2.4%	9.6%	12.0%	3.0%	9.0%	0.80	10.2%	\$ 27,800.8	-0.35%	9.9%
17	Southern Company	2.4%	9.6%	12.0%	3.0%	9.0%	0.55	8.0%	\$ 49,476.4	-0.35%	7.6%
18	Vectren Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	0.75	9.8%	\$ 4,907.0	0.98%	10.7%
	<b>Average (g)</b>							<b>9.0%</b>			<b>9.3%</b>
	<b>Midpoint (h)</b>							<b>9.1%</b>			<b>9.2%</b>

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(b) Average of weighted average earnings growth rates from Value Line Investment Survey, IBES, and Zacks Investment Research for dividend-paying stocks in the S&P 500 based on data from www.zacks.com (retrieved Jun. 8, 2017).., <http://finance.yahoo.com> (retrieved Jun. 8, 2017).., and Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(c) Average yield on 30-year Treasury bonds for the six-months ending May 2017 based on data from the Federal Reserve at <http://www.fred.stlouisfed.org>.

(d) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(e) [www.valueline.com](http://www.valueline.com) (retrieved May 24, 2017).

(f) Duff & Phelps, 2017 Valuation Handbook-U.S. Guide to Cost of Capital (Preview Version), p. 19.

(g) Excludes highlighted figures.

(h) Average of low and high values.

UTILITY GROUP

	Company	(a) (b) (c) Market Return ( $R_m$ )			(d) Risk-Free Rate	(e) Risk Premium	(f) Beta	(g) Unadjusted $K_e$	(h) Market Cap	(i) Size Adjustment	(j) Size Adjusted $K_e$
		Div Yield	Proj. Growth	Cost of Equity							
1	Alliant Energy	2.4%	9.6%	12.0%	4.2%	7.8%	0.70	9.7%	\$ 9,071.9	0.89%	10.6%
2	Ameren Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.70	9.7%	\$ 13,415.8	0.61%	10.3%
3	American Elec Pwr	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 33,588.9	-0.35%	8.9%
4	Avangrid, Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	n/a	n/a	\$ 13,599.0	0.61%	n/a
5	CMS Energy Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 12,810.0	0.61%	9.9%
6	Dominion Energy	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 49,263.3	-0.35%	8.9%
7	DTE Energy Co.	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 18,896.6	0.61%	9.9%
8	Duke Energy Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.60	8.9%	\$ 57,359.3	-0.35%	8.5%
9	Emera Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	0.60	8.9%	\$ 6,874.7	0.89%	9.8%
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11	Fortis Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 17,448.6	0.61%	9.9%
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13	PPL Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.70	9.7%	\$ 26,478.2	-0.35%	9.3%
14	Pub Sv Enterprise Grp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 22,114.0	0.61%	9.9%
15	SCANA Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.65	9.3%	\$ 9,287.1	0.89%	10.2%
16	Sempra Energy	2.4%	9.6%	12.0%	4.2%	7.8%	0.80	10.4%	\$ 27,800.8	-0.35%	10.1%
17	Southern Company	2.4%	9.6%	12.0%	4.2%	7.8%	0.55	8.5%	\$ 49,476.4	-0.35%	8.1%
18	Vectren Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	0.75	10.1%	\$ 4,907.0	0.98%	11.0%
	<b>Average</b>							<b>9.4%</b>			<b>9.7%</b>
	<b>Midpoint (g)</b>							<b>9.5%</b>			<b>9.6%</b>

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(b) Average of weighted average earnings growth rates from Value Line Investment Survey, IBES, and Zacks Investment Research for dividend-paying stocks in the S&P 500 based on data from www.zacks.com (retrieved Jun. 8, 2017).., <http://finance.yahoo.com> (retrieved Jun. 8, 2017).., and Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(c) Average yield on 30-year Treasury bonds for 2018-22 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Jun. 2, 2017); IHS Global Insight (Apr. 2017); & Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 36, No. 6 (Jun. 1, 2017).

(d) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(e) [www.valueline.com](http://www.valueline.com) (retrieved May 24, 2017).

(f) Duff & Phelps, 2017 Valuation Handbook-U.S. Guide to Cost of Capital (Preview Version), p. 19.

(g) Average of low and high values.

UTILITY GROUP

	Company	(a) Market Return (R <sub>m</sub> )			(c) Risk-Free Rate	(d) Market Risk Premium	(d) Unadjusted RP		(e) Beta		(d) Adjusted RP		Total RP	Unadjusted K <sub>e</sub>	(f) Market Cap	(g) Size Adjustment	Size Adjusted K <sub>e</sub>
		Div Yield	(b) Proj. Growth	Cost of Equity			Weight	RP <sup>1</sup>	Beta	Weight	RP <sup>2</sup>						
1	Alliant Energy	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.70	75%	4.7%	7.0%	10.0%	\$ 9,071.9	0.89%	10.9%	
2	Ameren Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.70	75%	4.7%	7.0%	10.0%	\$ 13,415.8	0.61%	10.6%	
3	American Elec Pwr	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 33,588.9	-0.35%	9.3%	
4	Avangrid, Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	n/a	75%	n/a	n/a	n/a	\$ 13,599.0	0.61%	n/a	
5	CMS Energy Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 12,810.0	0.61%	10.2%	
6	Dominion Energy	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 49,263.3	-0.35%	9.3%	
7	DTE Energy Co.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 18,896.6	0.61%	10.2%	
8	Duke Energy Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.60	75%	4.1%	6.3%	9.3%	\$ 57,359.3	-0.35%	9.0%	
9	Emera Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.60	75%	4.1%	6.3%	9.3%	\$ 6,874.7	0.89%	10.2%	
10	Eversource Energy	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 19,089.2	0.61%	10.2%	
11	Fortis Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 17,448.6	0.61%	10.2%	
12	NextEra Energy, Inc.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 64,087.9	-0.35%	9.3%	
13	PPL Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.70	75%	4.7%	7.0%	10.0%	\$ 26,478.2	-0.35%	9.6%	
14	Pub Sv Enterprise Grp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 22,114.0	0.61%	10.2%	
15	SCANA Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.65	75%	4.4%	6.6%	9.6%	\$ 9,287.1	0.89%	10.5%	
16	Sempra Energy	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.80	75%	5.4%	7.7%	10.7%	\$ 27,800.8	-0.35%	10.3%	
17	Southern Company	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.55	75%	3.7%	6.0%	9.0%	\$ 49,476.4	-0.35%	8.6%	
18	Vectren Corp.	2.4%	9.6%	12.0%	3.0%	9.0%	25%	2.3%	0.75	75%	5.1%	7.3%	10.3%	\$ 4,907.0	0.98%	11.3%	
<b>Average</b>													<b>9.7%</b>		<b>10.0%</b>		
<b>Midpoint (h)</b>													<b>9.8%</b>		<b>10.0%</b>		

- (a) Weighted average for dividend-paying stocks in the S&P 500 based on data from Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..
- (b) Average of weighted average earnings growth rates from Value Line Investment Survey, IBES, and Zacks Investment Research for dividend-paying stocks in the S&P 500 based on data from www.zacks.com (retrieved Jun. 8, 2017), http://finance.yahoo.com (retrieved Jun. 8, 2017), and Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..
- (c) Average yield on 30-year Treasury bonds for the six-months ending May 2017 based on data from the Federal Reserve at http://www.fred.stlouisfed.org.
- (d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).
- (e) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).
- (f) www.valueline.com (retrieved May 24, 2017).
- (g) Duff & Phelps, 2017 Valuation Handbook-U.S. Guide to Cost of Capital (Preview Version), p. 19.
- (h) Average of low and high values.

UTILITY GROUP

	(a)			(b)	(c)	(d)		(e)	(d)	(f)			(g)	Size Adjusted		
	Market Return ( $R_m$ )			Risk-Free Rate	Market Risk Premium	Unadjusted RP		Beta Adjusted RP			Total RP	Unadjusted $K_e$	Market Cap		Size Adjustment	
	Div Yield	Proj. Growth	Cost of Equity			Weight	$RP^1$	Beta	Weight	$RP^2$						RP
1	Alliant Energy	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.70	75%	4.1%	6.0%	10.2%	\$ 9,071.9	0.89%	11.1%
2	Ameren Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.70	75%	4.1%	6.0%	10.2%	\$ 13,415.8	0.61%	10.9%
3	American Elec Pwr	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 33,588.9	-0.35%	9.6%
4	Avangrid, Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	n/a	75%	n/a	n/a	n/a	\$ 13,599.0	0.61%	n/a
5	CMS Energy Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 12,810.0	0.61%	10.6%
6	Dominion Energy	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 49,263.3	-0.35%	9.6%
7	DTE Energy Co.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 18,896.6	0.61%	10.6%
8	Duke Energy Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.60	75%	3.5%	5.5%	9.7%	\$ 57,359.3	-0.35%	9.3%
9	Emera Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.60	75%	3.5%	5.5%	9.7%	\$ 6,874.7	0.89%	10.6%
10	Eversource Energy	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 19,089.2	0.61%	10.6%
11	Fortis Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 17,448.6	0.61%	10.6%
12	NextEra Energy, Inc.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 64,087.9	-0.35%	9.6%
13	PPL Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.70	75%	4.1%	6.0%	10.2%	\$ 26,478.2	-0.35%	9.9%
14	Pub Sv Enterprise Grp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 22,114.0	0.61%	10.6%
15	SCANA Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.0%	\$ 9,287.1	0.89%	10.8%
16	Sempra Energy	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.80	75%	4.7%	6.6%	10.8%	\$ 27,800.8	-0.35%	10.5%
17	Southern Company	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.55	75%	3.2%	5.2%	9.4%	\$ 49,476.4	-0.35%	9.0%
18	Vectren Corp.	2.4%	9.6%	12.0%	4.2%	7.8%	25%	2.0%	0.75	75%	4.4%	6.3%	10.5%	\$ 4,907.0	0.98%	11.5%
	<b>Average</b>												<b>10.0%</b>			<b>10.3%</b>
	<b>Midpoint (h)</b>												<b>10.1%</b>			<b>10.3%</b>

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(b) Average of weighted average earnings growth rates from Value Line Investment Survey, IBES, and Zacks Investment Research for dividend-paying stocks in the S&P 500 based on data from www.zacks.com (retrieved Jun. 8, 2017), <http://finance.yahoo.com> (retrieved Jun. 8, 2017), and Dividend paying components of S&P 500 index from zacks.com (retrieved Jun. 8, 2017)..

(c) Average yield on 30-year Treasury bonds for 2018-22 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Jun. 2, 2017); IHS Global Insight (Apr. 2017); & Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 36, No. 6 (Jun. 1, 2017).

(d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).

(e) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(f) [www.valueline.com](http://www.valueline.com) (retrieved May 24, 2017).

(g) Duff & Phelps, 2017 Valuation Handbook-U.S. Guide to Cost of Capital (Preview Version), p. 19.

(h) Average of low and high values.

## ELECTRIC UTILITY RISK PREMIUM

Exhibit AMM-9

Page 1 of 4

### CURRENT BOND YIELD

#### Current Equity Risk Premium

(a) Avg. Yield over Study Period	8.38%
(b) Average Utility Bond Yield	<u>4.26%</u>
Change in Bond Yield	-4.12%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4301</u>
Adjustment to Average Risk Premium	1.77%
(a) Average Risk Premium over Study Period	<u>3.67%</u>
<b>Adjusted Risk Premium</b>	<b>5.44%</b>

#### Implied Cost of Equity

(b) Baa Utility Bond Yield	4.60%
Adjusted Equity Risk Premium	<u>5.44%</u>
<b>Risk Premium Cost of Equity</b>	<b>10.04%</b>

(a) Exhibit AMM-9, page 3.

(b) Average bond yield on all utility bonds and Baa subset for the six-months ending May 2017 based on data from Moody's Investors Service at [www.credittrends.com](http://www.credittrends.com).

(c) Exhibit AMM-9, page 4.

PROJECTED BOND YIELDCurrent Equity Risk Premium

(a) Avg. Yield over Study Period	8.38%
(b) Average Utility Bond Yield 2018-2022	<u>5.94%</u>
Change in Bond Yield	-2.44%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4301</u>
Adjustment to Average Risk Premium	1.05%
(a) Average Risk Premium over Study Period	<u>3.67%</u>
<b>Adjusted Risk Premium</b>	<b>4.72%</b>

Implied Cost of Equity

(b) Baa Utility Bond Yield 2018-2022	6.28%
Adjusted Equity Risk Premium	<u>4.72%</u>
<b>Risk Premium Cost of Equity</b>	<b>11.00%</b>

(a) Exhibit AMM-9, page 3.

(b) Yields on all utility bonds and Baa subset based on data from IHS Global Insight (Apr. 2017); Energy Information Administration, Annual Energy Outlook 2017 (Jan. 5, 2017); & Moody's Investors Service at [www.credittrends.com](http://www.credittrends.com).

(c) Exhibit AMM-9, page 4.

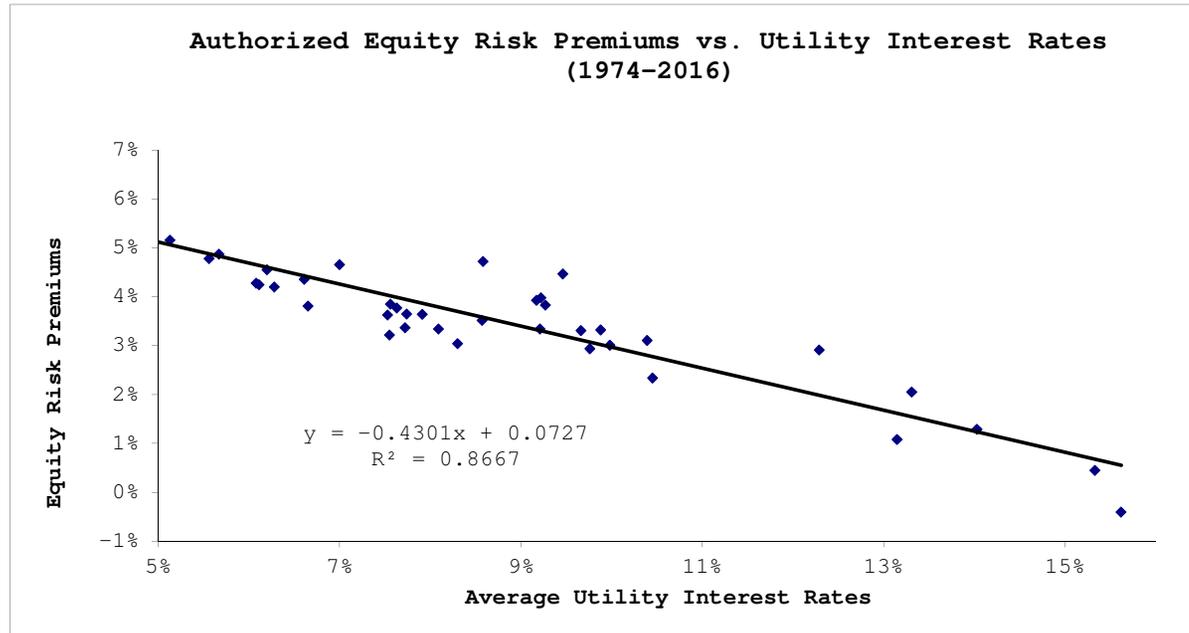
AUTHORIZED RETURNS

Year	(a)	(b)	Risk
	Allowed ROE	Average Utility Bond Yield	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	12.55%	9.21%	3.34%
1992	12.09%	8.57%	3.52%
1993	11.41%	7.56%	3.85%
1994	11.34%	8.30%	3.04%
1995	11.55%	7.91%	3.64%
1996	11.39%	7.74%	3.65%
1997	11.40%	7.63%	3.77%
1998	11.66%	7.00%	4.66%
1999	10.77%	7.55%	3.22%
2000	11.43%	8.09%	3.34%
2001	11.09%	7.72%	3.37%
2002	11.16%	7.53%	3.63%
2003	10.97%	6.61%	4.36%
2004	10.75%	6.20%	4.55%
2005	10.54%	5.67%	4.87%
2006	10.36%	6.08%	4.28%
2007	10.36%	6.11%	4.25%
2008	10.46%	6.65%	3.81%
2009	10.48%	6.28%	4.20%
2010	10.34%	5.56%	4.78%
2011	10.29%	5.13%	5.16%
2012	10.17%	4.26%	5.91%
2013	10.02%	4.55%	5.47%
2014	9.92%	4.41%	5.51%
2015	9.85%	4.37%	5.48%
2016	<u>9.77%</u>	<u>4.11%</u>	<u>5.66%</u>
<b>Average</b>	12.05%	8.38%	3.67%

(a) Major Rate Case Decisions, *Regulatory Focus*, Regulatory Research Associates; *UtilityScope Regulatory Service*, Argus.

(b) Moody's Investors Service.

REGRESSION RESULTS



SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9309653
R Square	0.8666965
Adjusted R Square	0.8634452
Standard Error	0.0049620
Observations	43

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.0065634	0.0065634	266.56874	0.00000
Residual	41	0.0010095	0.0000246		
Total	42	0.0075728			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.0727120	0.0023339	31.1548328	0.0000000	0.0679986	0.0774254	0.0679986	0.0774254
X Variable 1	-0.4301415	0.0263455	-16.3269329	0.0000000	-0.4833474	-0.3769357	-0.4833474	-0.3769357

UTILITY GROUP

	(a)	(b)	(c)
<u>Company</u>	<u>Expected Return on Common Equity</u>	<u>Adjustment Factor</u>	<u>Adjusted Return on Common Equity</u>
1 Alliant Energy	13.0%	1.0100	13.1%
2 Ameren Corp.	10.0%	1.0190	10.2%
3 American Elec Pwr	11.0%	1.0202	11.2%
4 Avangrid, Inc.	5.0%	1.0060	5.0%
5 CMS Energy Corp.	13.5%	1.0356	14.0%
6 Dominion Energy	19.0%	1.0025	19.0%
7 DTE Energy Co.	10.5%	1.0254	10.8%
8 Duke Energy Corp.	8.5%	1.0107	8.6%
9 Emera Inc.	14.5%	1.0147	14.7%
10 Eversource Energy	10.0%	1.0193	10.2%
11 Fortis Inc.	8.0%	1.0243	8.2%
12 NextEra Energy, Inc.	13.0%	1.0339	13.4%
13 PPL Corp.	13.5%	1.0355	14.0%
14 Pub Sv Enterprise Grp.	11.0%	1.0194	11.2%
15 SCANA Corp.	10.0%	1.0267	10.3%
16 Sempra Energy	13.5%	1.0078	13.6%
17 Southern Company	12.0%	1.0191	12.2%
18 Vectren Corp.	12.5%	1.0274	12.8%
<b>Average (d)</b>			<b>11.8%</b>
<b>Midpoint (d,e)</b>			<b>11.5%</b>

(a) The Value Line Investment Survey (Mar. 17, Apr. 28, & May 19, 2017).

(b) Adjustment to convert year-end return to an average rate of return from Exhibit AMM-6.

(c) (a) x (b).

(d) Excludes highlighted values.

(e) Average of low and high values.

DIVIDEND YIELD

			(a)	(b)	
	<u>Company</u>	<u>Industry Group</u>	<u>Price</u>	<u>Dividends</u>	<u>Yield</u>
1	AT&T Inc.	Telecommunications	\$ 39.09	\$ 1.97	5.0%
2	Church & Dwight	Household Products	\$ 50.04	\$ 0.76	1.5%
3	Coca-Cola	Beverage	\$ 43.34	\$ 1.50	3.5%
4	General Mills	Food Processing	\$ 57.06	\$ 1.94	3.4%
5	Hormel Foods	Food Processing	\$ 34.58	\$ 0.69	2.0%
6	Kellogg	Food Processing	\$ 71.38	\$ 2.10	2.9%
7	Kimberly-Clark	Household Products	\$ 129.84	\$ 3.88	3.0%
8	Lilly (Eli)	Drug Industry	\$ 81.76	\$ 2.08	2.5%
9	Procter & Gamble	Household Products	\$ 87.84	\$ 2.76	3.1%
10	Public Storage	REIT	\$ 217.15	\$ 1.39	0.6%
11	Smucker (J.M.)	Food Processing	\$ 126.45	\$ 3.00	2.4%
12	Sysco Corp.	Wholesale Food	\$ 53.34	\$ 1.36	2.5%
13	Verizon Communications	Telecommunications	\$ 46.91	\$ 2.31	4.9%
14	Wal-Mart Stores	Retail Store	\$ 46.91	\$ 2.04	4.3%
15	Waste Management	Environmental	\$ 72.59	\$ 1.70	2.3%
	<b>Average</b>				<b>2.9%</b>

(a) Average of closing prices for 30 trading days ended May 19, 2017.

(b) The Value Line Investment Survey, Summary & Index (May 19, 2017).

GROWTH RATES

	(a)	(b)	(c)
	<u>Earnings Growth</u>		
<u>Company</u>	<u>V Line</u>	<u>IBES</u>	<u>Zacks</u>
1 AT&T Inc.	5.50%	7.90%	4.40%
2 Church & Dwight	7.50%	8.24%	9.20%
3 Coca-Cola	4.50%	4.83%	6.20%
4 General Mills	5.00%	6.21%	7.40%
5 Hormel Foods	10.50%	9.88%	9.30%
6 Kellogg	6.50%	5.67%	6.00%
7 Kimberly-Clark	12.00%	6.07%	6.90%
8 Lilly (Eli)	11.00%	12.33%	11.90%
9 Procter & Gamble	7.50%	5.97%	7.90%
10 Public Storage	n/a	11.10%	5.00%
11 Smucker (J.M.)	7.00%	4.91%	6.20%
12 Sysco Corp.	11.50%	12.16%	8.20%
13 Verizon Communications	3.00%	2.46%	9.00%
14 Wal-Mart Stores	4.00%	5.50%	6.10%
15 Waste Management	7.00%	10.41%	9.50%

(a) The Value Line Investment Survey (Mar. 17, Mar. 24, Apr. 7, Apr. 21, Apr. 28, & May 26, 2017).

(b) [www.finance.yahoo.com](http://www.finance.yahoo.com) (retrieved May 25, 2017).

(c) [www.zacks.com](http://www.zacks.com) (retrieved May 25, 2017).

DCF COST OF EQUITY ESTIMATES

	(a)	(a)	(a)
	<u>Earnings Growth</u>		
<u>Company</u>	<u>V Line</u>	<u>IBES</u>	<u>Zacks</u>
1 AT&T Inc.	10.5%	12.9%	9.4%
2 Church & Dwight	9.0%	9.8%	10.7%
3 Coca-Cola	8.0%	8.3%	9.7%
4 General Mills	8.4%	9.6%	10.8%
5 Hormel Foods	12.5%	11.9%	11.3%
6 Kellogg	9.4%	8.6%	8.9%
7 Kimberly-Clark	15.0%	9.1%	9.9%
8 Lilly (Eli)	13.5%	14.9%	14.4%
9 Procter & Gamble	10.6%	9.1%	11.0%
10 Public Storage	n/a	11.7%	5.6%
11 Smucker (J.M.)	9.4%	7.3%	8.6%
12 Sysco Corp.	14.0%	14.7%	10.7%
13 Verizon Communications	7.9%	7.4%	13.9%
14 Wal-Mart Stores	8.3%	9.8%	10.4%
15 Waste Management	9.3%	12.8%	11.8%
<b>Average (b)</b>	<b>10.4%</b>	<b>10.5%</b>	<b>10.8%</b>
<b>Midpoint (c)</b>	<b>11.5%</b>	<b>11.1%</b>	<b>11.5%</b>

(a) Sum of dividend yield (Exhibit AMM-11, p. 1) and respective growth rate (Exhibit AMM-11, p. 2).

(b) Excludes highlighted figures.

(c) Average of low and high values.