COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY POWER COMPANY FOR (1) A GENERAL ADJUSTMENT OF ITS RATES FOR ELECTRIC SERVICE; (2) APPROVAL OF TARIFFS AND RIDERS; (3) APPROVAL OF ACCOUNTING PRACTICES TO ESTABLISH REGULATORY ASSETS AND LIABILITIES; (4) A SECURITIZATION FINANCING ORDER; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF	))))))))	**CASE NO. 2023-00159**

TESTIMONY OF TYLER COMINGS

ON BEHALF OF JOINT INTERVENORS MOUNTAIN ASSOCIATION, APPALACHIAN CITIZENS' LAW CENTER, KENTUCKIANS FOR THE COMMONWEALTH, AND KENTUCKY SOLAR ENERGY SOCIETY

October 2, 2023

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I. INTRODUCTIONS & QUALIFICATIONS

Q. Please state for the record your name and business address.

A. My name is Tyler Comings. My business address is 6 Liberty Square, PMB 98162, Boston, MA, 02109.

Q. By whom are you employed and in what position?

A. I have been a Senior Researcher for six years at Applied Economics Clinic, a 501(c)(3) non-profit consulting group. Founded in February 2017, the Clinic provides expert testimony, analysis, modeling, policy briefs, and reports for public interest groups on the topics of energy, environment, consumer protection, and equity, while providing on-the-job training to a new generation of technical experts.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Mountain Association, Appalachian Citizens' Law Center, Kentuckians for the Commonwealth, and Kentucky Solar Energy Society (collectively, "Joint Intervenors").

Q. Please describe your professional and educational background.

A. I have 17 years of experience in economic research and consulting. At Applied Economics Clinic, I focus on energy system planning, costs of regulatory compliance, wholesale electricity markets, utility finance, and economic impact analyses. I am also a Certified Rate of Return Analyst ("CRRA") and member of the Society of Utility and Regulatory Financial Analysts ("SURFA").

I have provided economic analysis for many public-interest clients including: American Association of Retired Persons ("AARP:), Appalachian Regional Commission, Citizens

Action Coalition of Indiana, City of Atlanta, Consumers Union, District of Columbia Office of the People's Counsel, District of Columbia Government, Earthjustice, Energy Future Coalition, Hawaii Division of Consumer Advocacy, Illinois Attorney General, Maryland Office of the People's Counsel, Massachusetts Energy Efficiency Advisory Council, Massachusetts Division of Insurance, Michigan Agency for Energy, Montana Consumer Counsel, Mountain Association for Community Economic Development, Nevada State Office of Energy, New Jersey Division of Rate Counsel, New York State Energy Research and Development, Nova Scotia Utility and Review Board Counsel, Rhode Island Office of Energy Resources, Sierra Club, Southern Environmental Law Center, U.S. Department of Justice, Vermont Department of Public Service, West Virginia Consumer Advocate Division, and Wisconsin Department of Administration.

I was previously employed at Synapse Energy Economics, where I provided expert testimony and reports on coal plant economics and utility system planning. Prior to that, I performed research on consumer finance and behavioral economics at Ideas42 and conducted economic impact and benefit-cost analysis of energy and transportation investments at EDR Group (now EBP).

I hold a B.A. in Mathematics and Economics from Boston University and an M.A. in Economics from Tufts University. My CV is attached as Exhibit TC-1.

Q. Have you previously filed expert witness testimony in other proceedings before this Commission or before other regulatory commissions?

A. Yes. I testified before this Commission on behalf of Sonia McElroy and Sierra Club in Case No. 2013-00259 on East Kentucky Power Cooperative's application for approval of environmental compliance investments at Cooper Station. I have also provided testimony before other public utility commissions in Arizona, Colorado, the District of Columbia, Hawaii, Indiana, Maryland, Michigan, Missouri, New Jersey, New Mexico, Ohio, Oklahoma, West Virginia, and Nova Scotia (Canada).

Q. What is the purpose of your testimony in this proceeding?

A. The primary purpose of my testimony is to address the financial state of Kentucky Power Company ("Kentucky Power" or the "Company") and the reasonableness of its requested allowable return on equity ("ROE") increase from 9.3% to 9.9%. I also discuss the Company's proposed securitization in this case.

II. SUMMARY OF FINDINGS AND RECOMMENDATION

Q. Please summarize the Company's requests in this proceeding.

A. The Company is requesting an annual revenue increase of approximately $94 million, in part driven by the requested increase in the allowable ROE to 9.9%. The Company's request equates to a total overall increase of 13.54%, representing an 18.3% increase on the average residential customer's bill.[1] The Company is also requesting securitization for several categories of costs, including those associated with Rockport and Big Sandy generating units.

Q. Please summarize your findings in this case.

A. My findings in the case include the following:

1. **The Company has exaggerated its level of financial distress.** In attempting to

[1] Direct Testimony of Cynthia G. Wiseman, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 18:3–7 (June 29, 2023) ("Wiseman Direct").

justify the rate increase, the Company paints a dire picture of its credit rating and finances. But Kentucky Power's viability is inextricably linked with its parent company, American Electric Power Company ("AEP"), which is financially stable. In addition to this linkage, there are shifts in both companies' finances happening in the near term that should also alleviate such concerns. First, the Company has exited the Rockport lease agreement, which ratings agencies had noted was a drag on its credit rating. The securitization of these and other costs will also provide an infusion of capital. Second, AEP—which is the sole shareholder in Kentucky Power as well as its only source of short-term loans—recently completed a sale of $1.2 billion in renewable assets, revenue which it claims will be used to invest in its regulated subsidiaries. AEP has a vested interest in supporting Kentucky Power as one of its regulatory arms. Third, by exiting from its contract at the Rockport plant and soon terminating its interest in the Mitchell plant, the Company is avoiding the expensive environmental compliance costs in coal generation that were also a previous concern of the ratings agencies.

2. **The Company's return on equity should, at most, remain the same.** The Company's requested 9.9% allowable ROE is too high for several reasons. First, the Company has little risk of failing to attract equity investments because AEP is the only equity investor in Kentucky Power. AEP itself raises equity, and those investors in AEP would look at the parent company as a whole and note its strong financial position. Second, the Company has overestimated the cost of equity by relying on measures like future earnings projections and allowable returns on equity decided on by regulatory commissions across the U.S.—both of which measures unfairly skew

the proposed ROE higher. I find that after incorporating more reasonable data metrics—including historical growth—the cost of equity for Kentucky Power is likely between 9.0 and 9.2%. Thus, the existing 9.3% currently allowed by this Commission is more than sufficient.

3. **The Company's proposed securitization will save ratepayers, potentially even more in the near term than what the Company estimates.** Witness Messner estimates that on a net present value ("NPV") basis, the securitization of costs associated with the Rockport and Big Sandy coal units, storm-related costs, and purchase power costs will save ratepayers $74 million compared to the conventional recovery method.[2] The Company's calculations, which assumed flat annual payments under either approach, projected an annual savings of $34.7 million over each of the next five years.[3] But this annual savings figure is likely understated because, absent securitization, these costs could be treated like other rate-based assets with higher rate recovery in the early years. In that event, the savings in the near term would be higher than the Company's estimate.

[2] Direct Testimony of Franz D. Messner, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 7:17–21 (June 29, 2023) ("Messner Direct").
[3] Response of Kentucky Power Company to Commission Staff's Supplemental Request for Information, Case No. 2023-00159, Question 1 (Aug. 28, 2023) ("KPCo Response to Staff Q2.1"), KPCO_R_KPSC_2_1_Attachment10_MessnerWP1, at "Results" tab; *see also* Response of Kentucky Power Company to the Joint Intervenors' Initial Request for Information, Case No. 2023-00159, Question 9 (Aug. 14, 2023) (citing KPCo Response to Staff Q2.1, Attach. 10).

Q. What do you recommend to the Commission?

A. I recommend that the Commission leave the allowable return on equity unchanged at 9.3 percent.

III. THE COMPANY'S ROE SHOULD NOT BE INCREASED.

Q. Please summarize the Company's rationale for increasing the allowable return on equity in this case.

A. The Company is proposing to increase the allowable ROE from 9.3 to 9.9% in this case, which contributes to the requested rate increase of $94 million annually.[4] As part of its rationale, the Company cites "poor financial performance," most notably the under-recovery of its allowable ROE in recent years.[5] The Company claims that it needs the higher allowable ROE to "attract low-cost capital to invest for customers' benefit."[6] Company Witness McKenzie conducts several models to estimate the cost of equity capital, ultimately concluding with an allowable ROE recommendation of 10.6 percent. This analysis informed the Company's ultimate recommendation of 9.9 percent which, while lower than Witness McKenzie's recommendation, is 60 basis points higher than the current allowable ROE of 9.3 percent.[7]

Q. Do you agree with the proposed increase of the allowable ROE?

A. No. As I describe further below, the Company's claims of financial distress are exaggerated and should not be used as a rationale to increase the allowable ROE. The

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[4] Response of Kentucky Power Company to Commission Staff's First Request for Information, Case No. 2023-00159, Question 16 (May 31, 2023) ("KPCo Response to Staff Q1.16"), KPCO_R_KPSC_1_16_Attachment_1, Workpaper S-2, p.1, & Schedule 2.
[5] Wiseman Direct at 15:2; *see id*. 12:9–14:2.
[6] *Id*. at 14:21–23.
[7] *Id.* at 21:1–4.

allowable ROE is a maximum or a ceiling of what the Company can earn. Currently, the Company's allowable ROE is 9.3% and the returns on equity have been under that threshold. Even if the Company had a higher allowable ROE in the past, it still could have under-earned. The Company's request in this case assumes that, even if it earned the maximum current ROE of 9.3%, then those earnings would be insufficient. But I find many flaws with the methodology used to develop the cost of equity estimate. Once these flaws are corrected, I find that the cost of equity is likely between 9.0 and 9.2%—thus the current 9.3% rate is more than sufficient for an equity return. Below, I address the Company's financial state and, following that, discuss the flaws in the Company's ROE analysis.

A. The Company's Claim of Financial Distress is Exaggerated.

Q. Are the circumstances that led to the recent under-recovery of earnings going to continue?

A. It is not likely. In fact, most of the issues that have led the Company to underearn are likely to be mitigated in the near term, without its requested allowable ROE increase. According to the Company, the lower earnings were driven by increased rate base since the Company's last base rate case, increased capital expenditures, purchased power costs that were not eligible for Tariff F.A.C recovery, mild winter temperatures (leading to lower energy revenue), and a credit rating downgrade.[8]

While I cannot predict the weather, other circumstances that previously led to lower earnings are going to improve coming out of this case or in the near term. First, the Company is including a rate base reduction in this current filing, in large part driven by

[8] Wiseman Direct at 13:8–14:15.

removal of Big Sandy unit 2 and Rockport costs from rate base if these costs are securitized.[9] Second, the Company is reducing the need for future capital, operating, and fuel costs by exiting the Rockport agreement which had previously obligated Kentucky Power to pay 30% of AEP Generating Company's costs of Rockport Units 1 and 2.[10] Third, purchased power costs related to December 2022 Winter Storm Elliott that were not recovered through Tariff F.A.C. are being requested in this case, and so may no longer have a negative impact on the Company's cash flow and earned ROE.[11]

Q. The Company also mentions its credit rating as contributing to underearning and warns of further downgrade. Do you agree?

A. No. I do not dispute that the credit rating was recently downgraded by one agency: Standard & Poor's ("S&P").[12] However, the two other agencies' credit ratings have been steady in recent years despite the simultaneous cash flow struggles of the Company. Moody's rating of Baa3 has been the same since 2019,[13] and Fitch's rating of BBB has

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[9] KPCo Response to Staff Q1.16, KPCO_R_KPSC_1_16_Attachment_1, Schedule 4, Rows 203–263; Direct Testimony of Heather M. Whitney, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 34–37 (June 29, 2023) ("Whitney Direct").

[10] Direct Testimony of Lerah M. Kahn, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 5:10–17 (June 29, 2023) ("Kahn Direct"). AEP Generating Company is an unregulated subsidiary of AEP, Kentucky Power's parent company.

[11] Direct Testimony of Brian K. West, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 6:15–8:5 (June 29, 2023) ("West Direct").

[12] Wiseman Direct at 14:11–13.

[13] *See* Moody's, *Kentucky Power Company*, https://www.moodys.com/credit-ratings/Kentucky-Power-Company-credit-rating-

been the same since 2017.[14] The Company warns that "a less than constructive decision by the Commission in this case could lead to further negative credit rating actions" and foretells of potential "junk bond status" if the Commission does not grant the Company its request.[15] It is important to note that regulatory commissions should not be beholden to ratings agencies which, of course, will always favor more allowed earnings than less. Putting that aside, I urge caution rather than panic. There are several reasons that the Company's credit ratings will improve in the near-term:

First, the exit from the Rockport agreement is credit-positive in terms of cash flow. Ratings agencies have noted that this agreement was expensive and a drag on its rating. Moody's stated that the expiration of the "high cost lease agreement" at Rockport was a positive and that a reduction in operating and capital costs could improve its position[16]; and Fitch said that the Company's cash flow would improve after the Rockport agreement ended.[17]

Second, the Company's exit from Rockport and upcoming termination of its interest in the Mitchell coal plant means less environmental cost risk. Ratings agencies stated the

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435750/reports?category=Ratings_and_Assessments_Reports_rc&type=Rating_Action_rc (last visited Sept. 27, 2023) (filtered by "Rating Action") (attached as Exhibit TC-2). The most recent rating action document titled "Moody's downgrades Kentucky Power to Baaa3, outlook stable" was published on April 12, 2019.

[14] *See* FitchRatings, *Kentucky Power Company*, https://www.fitchratings.com/entity/kentucky-power-company-80088982 (last visited Sept. 27, 2023) (attached as Exhibit TC-3) (under "Rating History" scroll to the right and can see that the rating was upgraded to BBB on July 13, 2017 and has not changed since).

[15] Direct Testimony of Steven M. Fetter, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 5:1–11 (June 29, 2023).

[16] Response of Kentucky Power Company to the Attorney General and Kentucky Industrial Utilities Customers, Inc.'s Initial Request for Information, Case No. 2023-00159, Question 61 (Aug. 28, 2023) ("KPCo Response to AG/KIUC Q1.61"), Attach. 2 at 2.

[17] KPCo Response to AG/KIUC Q1.61, Attach. 3 at 5.

Company's reliance on coal generation has been a drag on its credit rating, due to the environmental compliance risk of the Company's use of coal generation. S&P identified the Company's ties to "coal-fired generation" and the associated environmental compliance costs as a "key risk."[18] Moody also noted the "highly negative exposure to environmental risk" from coal generation.[19] Indeed, the most negative factor in Moody's Baa3 rating of the Company was its "generation and fuel diversity" factor.[20]

Finally, the Company's credit rating is closely tied to that of its parent company, AEP, which is the sole equity owner of Kentucky Power. AEP's credit rating is equal to or better than Kentucky Power's, for each of the three ratings agencies.[21] For Kentucky Power, Fitch stated that the rating agency:

> . . . expects AEP will adjust dividends from subsidiaries as needed and/or inject equity into subsidiaries to maintain regulatory capital structures and support credit metrics.[22]

The agency also applied a one notch uplift to Kentucky Power at the time "as a reflection of the implied support from the stronger parent company."[23] Most recently, Fitch affirmed both AEP and Kentucky Power's ratings of BBB, citing "AEP's low-risk profile as a regulated utility system, its transition of the regulated generation fleet away from coal generation, and ongoing efforts to improve

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[18] KPCo Response to Staff Q2.1, Attach. 53 at 338.
[19] KPCo Response to AG/KIUC Q1.61, Attach. 2 at 4.
[20] *Id*. at 6.
[21] *See* AEP, *Current Ratings for AEP, Inc. and Subsidiaries* (Nov. 1, 2022), https://www.aep.com/Assets/docs/investors/fixedincome/AEPandSubsidiaryCreditRatings_11-01-22.pdf.
[22] KPCo Response to AG/KIUC Q1.61, Attach. 3 at 4.
[23] *Id*.

regulated returns."[24] For all of these reasons, the Company's future credit ratings could improve as it is addressing some of the previously identified issues that were a drag on its credit rating for its long-term debt. Notably, none of the reasons listed above are contingent upon the Commission's decision in this case.

Q. Are there decisions that could be made in this case, apart from the ROE, that would lead to further capital being available for Kentucky Power?

A. Yes. If the requested securitization is approved in this case, the proceeds from that would provide a large upfront capital infusion.[25] This could be used to re-invest or pay off short- and long-term debts or some combination. The Company has listed these possibilities but not indicated specific plans for how it will use these funds.[26] I discuss the Company's securitization proposal further in Section IV below.

Q. What is the Company's source of short-term loans?

A. While there is some linkage between the long-term debt ratings of the Company and AEP, for short-term debt, the linkage is absolute. If the Company wants to borrow on this basis, its only current source is AEP's "Utility Money Pool," where all of AEP's regulated subsidiaries can access short-term funds.[27] The availability of this pool is seen as positive from ratings agencies because it can provide easy liquidity when needed.[28]

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[24] FitchRatings, *Fitch Affirms AEP and Subsidiaries; Outlook Stable* (Feb. 28, 2023), https://www.fitchratings.com/research/corporate-finance/fitch-affirms-aep-subsidiaries-outlook-stable-28-02-2023#:~:text=The%20Outlooks%20for%20all%20of,efforts%20to%20improve%20regulated%20returns.
[25] *See* Wiseman Direct at 18:18–20 ("[S]ecuritizing the assets will provide the Company with immediate one-time cash flow to address some of the financial pressures it is experiencing.").
[26] Response of Kentucky Power Company to Joint Intervenors' Initial Request for Information, Case No. 2023-00159, Question 8(c)–(d) (Aug. 28, 2023) ("KPCo Response to JI Q1.8(c)–(d)").
[27] Response of Kentucky Power Company to Commission Staff's Supplemental Request for Information, Case No. 2023-00159, Question 64(b) (Aug. 28, 2023) ("KPCo Response to Staff Q2.64(b)").
[28] KPCo Response to AG/KIUC Q1.61, Attach. 3 at 3.

Q. What is the Company's source of equity capital?

A. Apart from short- and long-term debt, the other source of capital is equity. AEP is the only equity shareholder in Kentucky Power, and therefore it is the Company's only source of equity investment.

Q. Has AEP recently indicated that it would increase investment in its regulated companies?

A. Yes. The parent company recently announced that it is pivoting away from unregulated operations towards its regulated subsidiaries, including Kentucky Power. AEP just received a large cash infusion after it sold a group of renewable assets for $1.5 billion—or a net gain of $1.2 billion in cash after taxes and fees.[29] AEP's CEO, Julie Sloat, stated that this move was part of the company's objective to "focus on our regulated operations."[30] Prior to the sale going through, in presenting to its investors, AEP listed only one use for the proceeds from the sale: that it would be "directed to support regulated businesses."[31] Thus, there are now substantially more funds available for AEP to further invest in its regulated operations, including Kentucky Power. Moreover, rating agencies typically view regulated operations as less risky ventures than unregulated operations because the latter's success depends more on the ups and downs of wholesale market prices. To wit: prior to AEP's recent sale of unregulated assets, Moody's stated that the transaction would be "credit positive" because of AEP's increased focus on

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[29] AEP Press Release, *AEP Completes Sale of Unregulated Renewables Assets* (Aug. 16, 2023), https://www.aep.com/news/releases/read/9070/AEP-Completes-Sale-of-Unregulated-Renewables-Assets (attached as Exhibit TC-4).
[30] *Id*.
[31] AEP, *Second Quarter 2023 Earnings Release Presentation*, at Slide 7 (July 27, 2023), https://www.aep.com/newsroom/resources/earnings/2023-07/2Q23EarningsReleasePresentation.pdf.

regulated operations.[32]

Q. Should the recent poor financial performance compel the Commission to increase the ROE?

A. No. The Company paints a dire but ultimately unconvincing picture of what would happen without an allowable ROE increase. Company witness Wiseman claims that:

> These are the investors that provide the capital to support Kentucky Power's operations and look to the Commission to provide the opportunity to earn, and the Company to achieve, a fair return.[33]

This makes it appear that Kentucky Power has to directly raise equity investment from the market, but that is not the case. The group of "investors" that Company witness Wiseman is describing is in reality just AEP, which is the sole owner and equity investor in Kentucky Power. While AEP must attract equity investors on the market, such investors would look at AEP as a whole when determining whether to invest. Indeed, Kentucky Power will need debt and equity funds available in order to operate in a safe, reliable manner: this I do not dispute. But as I have discussed above, I would not raise an alarm given the following:

1. Most of the circumstances that witness Wiseman cites as contributing to low earnings[34] have changed or are in flux—most notably the Company's recent exit from the costly Rockport agreement.
2. Despite the recent dip in earnings, most of the credit ratings for Kentucky Power have remained steady in recent years; and given the

[32] KPCo Response to KPSC Q2.1, Attach. 53 at 303.
[33] Wiseman Direct at 15:10–13.
[34] *Id*. at 13–14.

likely improvements in near-term cash flow, these ratings could improve.

3. The Company's long-term credit rating is tied to AEP which is seen as a strong company.
4. The Company will continue to have easy access to short-term credit through the AEP Utility Money Pool.
5. AEP, the sole investor in Kentucky Power, has recently acquired a substantial amount of cash that is earmarked for supporting its regulated subsidiaries, such as Kentucky Power.

Below, I discuss the Company's ROE analysis more directly, and discuss why it should not be increased at this time.

<u>B. The Company's ROE request is overstated.</u>

Q. What allowable return on equity is Kentucky Power requesting the Commission to authorize in this proceeding?

A. Kentucky Power is requesting the Commission to authorize an allowable ROE of 9.9%,[35] which would be an increase from the allowable ROE of 9.3% approved in the last rate case proceeding.[36]

Q. Please explain the importance of the allowable ROE.

A. The allowable ROE is an attempt to capture the cost of equity capital. The cost of equity is an estimate of the return that a firm needs to offer its shareholders to attract sufficient equity capital. The allowable ROE is set so that the Company does not over-earn, but

[35] *Id.* at 21:4.
[36] *Id.* at 12:7.

importantly, it is not necessarily equal to the cost of equity capital because the latter is unknown. The unknowability of the cost of equity necessitates using multiple models, substantial historical and projected data, and judgment in developing an estimate with which to set an allowable ROE. (Both measures are different than the actual ROE that a Company earns, which is reported to investors after-the-fact and easily measurable.)

Q. Is there cause for concern that the Company would not attract enough equity if the current allowable ROE remained in place?

A. No. The parent company, AEP—which also provides Kentucky Power's only source of short-term loans via the AEP Utility Money Pool[37]—is the only equity investor in the Company. Thus, the two companies are inextricably linked. Kentucky Power does not have to raise money on equity markets directly, but AEP does. Thus, the best representation of an equity investor in Kentucky Power would be an investor in AEP, who would review the parent company's operations in totality, not just those of Kentucky Power. As I described previously, Kentucky Power's long-term debt ratings are also tied to AEP's, and the parent company has also recently had a large cash infusion of $1.2 billion that it stated would be put towards its regulated operations. Moreover, the Company's requested ROE of 9.9% would be the highest ROE of any AEP regulated subsidiary.[38]

Q. What justification does the Company provide for its requested ROE of 9.9%?

A. Company Witness McKenzie estimated an allowable ROE of 10.6% after conducting

[37] Response of Kentucky Power Company to Commission Staff's Supplemental Request for Information, Case No. 2023-00159, Question 64(b) (Aug. 28, 2023).
[38] Response of Kentucky Power Company to Commission Staff's Supplemental Request for Information, Case No. 2023-00159, Question 50 (Aug. 28, 2023).

several model estimates.[39] He has employed the discounted cash flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the empirical CAPM ("ECAPM") model, a utility risk premium analysis, and an expected earnings assessment.[40] The 10.6% estimate, which is substantially higher than the approved ROEs for any of AEP's 11 other operating companies, is based on the midpoint of the range of model results (between 10.1 and 11.1%). But Company Witness Wiseman explained that the Company is electing to request a lower ROE of 9.9% "to reduce and offset the rate increase in this case."[41]

Q. Do you agree that 9.9% is a reasonable rate for the allowable ROE?

A. No. Even though the Company reduced the rate estimated by Witness McKenzie, I find that the requested level still overstates the cost of equity. I have identified several issues that have a material impact on the results of Witness McKenzie's calculations; and I conclude that the current allowable ROE of 9.3% is reasonable after making adjustments to his DCF, CAPM, and ECAPM models.

Q. Please describe the discounted cash flow (DCF) model.

A. The DCF model is a widely used methodology in estimating the cost of equity. The DCF relies on the concept that the price an investor is willing to pay for a share of equity *today* is equal to the *discounted future* dividends that the shareholder expects to receive over the long term. The discount rate at which those future earnings equal the initial stock price is

[39] Direct Testimony of Adrien M. McKenzie, *Electronic Application of Kentucky Power Company For (1) A General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3)Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief*, Case No. 2023-00159, at 8:23–24 (June 29, 2023) ("McKenzie Direct").
[40] *Id.* at 3:15–20.
[41] Wiseman Direct at 21:4.

the cost of equity capital**.** This concept is shown in the formula below:

$$\mathrm{P} = D_0 + \frac{D_0(1+g)}{(1+k)} + \frac{D_0(1+g)^2}{(1+k)^2} + \frac{D_0(1+g)^3}{(1+k)^3} + \cdots \frac{D_0(1+g)^n}{(1+k)^n}$$

Where $n = \infty$, P = stock price in year 0; D_0 = dividend paid in year 0; g = annual dividend growth rate; and k = discount rate or cost of equity

As the number of years of the equity investment approach infinity, this formula reduces down to the following:[42]

$$\mathrm{k} = \frac{D_1}{P} + g$$

Thus, per the DCF method, the cost of equity ("k") is equal to dividend yield (equal to the next year's dividend divided by the current stock price) plus a growth rate ("g"). This derivation requires the assumption that the dividend payout rate (equal to the percentage of earnings that are paid in dividends—as opposed to retained), growth rate ("g") and cost of capital ("k") are all constant. The estimate of the growth rate term ("g") is where DCF estimates often diverge because it its left to the analyst's judgment as to what data to employ and over what timeframe. The goal of the analysis is to mimic the use of data that a typical investor would evaluate. This requires many data metrics, the selection of a proxy group of similar companies, and in my opinion, the usage of both historical and projected information.

Q. Does Witness McKenzie's DCF model rely too heavily on projected earnings?

A. Yes. His DCF estimate consists of four model results, three of which are driven by earnings forecasts from Value Line, IBES, and Zacks, respectively. The fourth result is

[42] This is referred to as the "Gordon Growth Model." *See* M.J. Gordon, *Dividends, Earnings, and Stock Prices*, 41(2) Review of Econ. & Stat. 99, 99–105 (1959).

an "internal growth" estimate which assumes that expected growth will be the share of the ROE that is retained; this estimate uses the projected book value, dividends, and earnings—with which I do not take issue in this case. The results from the Company's DCF estimates are the following:

Table 1: Company's DCF results[43]

Value Line (projected earnings)	9.2%
IBES (projected earnings)	10.2%
Zacks (projected earnings)	9.5%
Internal growth	9.2%

The average of these four results is 9.5%, but I do not agree with weighing each of the three estimates that rely on projected earnings the same as the one internal growth estimate. If you simply took the average of the first three results as one "external growth" result it would be 9.6%. The average of this result with the internal growth result would yield 9.4%—only 0.1% above the current allowable ROE of Kentucky Power.

Q. Do you agree that only projected data be used in determining the DCF growth rate?

A. No. Forecasts are helpful information but are almost always wrong—and they are expected to be wrong. On the contrary, historical performance is known data and germane for evaluating future performance. This is why services that forecast earnings often provide historical earnings growth side-by-side—which is the case for all three earnings forecast sources used by Mr. McKenzie.[44] Importantly, the forecasts themselves are also limited to the near term, usually between three and five years into the future. But these short-term forecasts should not be confused with the long-term growth expectation,

[43] McKenzie Direct, Ex. AMM-2.
[44] *See* KPCo Response to Staff Q2.1, Attach. 52 at 117–152.

the latter being what the DCF's "g" term represents. For all these reasons, a prospective investor is likely to review both historical and projected data, and I recommend the use of both in estimating the cost of equity.

Q. Do you agree with the use of earnings forecasts?

A. Yes, but only as one metric among a suite of others—not as the primary driver of the DCF estimate. The projected earnings are one piece of the puzzle. The DCF formula is a discounted value of future dividend payments—which are a component of earnings—but there are also direct forecasts of dividends conducted by the same Value Line source used by Mr. McKenzie. The book value growth is another important measure because it represents the value of shareholder equity on the company's balance sheet. All three measures—earnings, dividends, and book value—should be used in determining a growth rate; and the analyst should view both historical and forecasts of these measures.

Q. Does the Value Line investor service used by Witness McKenzie provide historical and forecasted data for all three measures?

A. Yes. Value Line makes both backward- and forward-looking data on earnings, dividends, and book value readily available for each company that it covers. Each company-specific page includes a box that contains key measures including revenues, cash flow, earnings, dividends, and book value, and provides annual growth rates for these measures over the past 10 years, past 5 years, and a near-term forecast.[45]

Q. Please describe your discounted cash flow (DCF) methodology.

A. I kept some of Witness McKenzie's framework, including his proxy group of 18 utility

[45] *See id.* at 322–423.

holding companies. However, for estimating the external growth DCF growth rate I took the average of historical and projected growth rates for dividends, earnings, and book value for his proxy group—as opposed to just the projected earnings. I also weighed both the historical and projected rates equally, and the dividends, earnings, and book value metrics equally. I took historical and projected growth from the same Value Line data used by Witness McKenzie using the last five years of growth and five years of projection. In addition, I used all of the same sources for projected earnings as Witness McKenzie, but I took the average of three earnings growth sources. The resulting DCF using this method was 9.1%, after removing outlier values using the same method as Mr. McKenzie.

Q. Please describe the capital asset pricing model (CAPM) model.

A. Witness McKenzie also uses the CAPM and ECAPM models. These models address two important concepts: 1) that investments in equity are not "risk-free" investments, therefore equity investors expect a higher return; and 2) that equity investors expect varying return for equity investments of varying risk. The additional return for equity investments, compared to risk-free investments, is what defines the "market risk premium" (sometimes referred to as the "equity risk premium"). The future premium is unknown but needs to be estimated for this model. The relative risk of different types of equity investments is measured in a company's "beta," which is measured by the variance in that company's stock price relative to the equity market at-large (e.g., the S&P 500). A beta of less than one indicates that investment in that company is relatively less risky than the equity market at-large, and that investors in that company should expect a lower return commensurate with lower risk. Conversely, a beta greater than one indicates a riskier venture for which investors should expect a higher return commensurate with that higher risk.

The formula for the CAPM employs a risk-free rate (R_{rf}), market risk premium ($R_m - R_{rf}$) and beta (β) term:

$$k = R_{rf} + \beta * (R_m - R_{rf})$$

The ECAPM (empirical CAPM) formula is a variation of the CAPM that produces a higher value if the beta of the industry or company is less than one:

$$k = R_{rf} + .75 * \beta * \left(R_m - R_{rf}\right) + .25 * \left(R_m - R_{rf}\right)$$

The risk-free rate used in the CAPM and ECAPM is typically a current Treasury bond yield, as this is seen by investors as having little to no risk. The market risk premium can be estimated using historical returns on stocks compared to Treasury yields, using consistent Treasury maturities for both historical and current yields. For instance, if one uses a 20-year Treasury rate for the current risk-free rate (R_{rf}), then the market risk premium should be estimated as the difference between return on stocks and 20-year Treasuries.

Q. Does Witness McKenzie overestimate the equity risk premium and by extension the CAPM and ECAPM values?

A. Yes. Witness McKenzie CAPM value is 11.1% and his ECAPM is 11.4%. These high estimates are driven by his estimated equity risk premium of 7.8% which is substantially higher than the historical premium (which, as discussed below, typically ranges between 5 and 6%), and other forward-looking data. Mr. McKenzie again relies on projected earnings by calculating a DCF of a large group of companies using the same forecast sources—Value Line, IBES, and Zacks—to estimate the equity risk premium. I have already discussed why reliance on earnings projections alone is ill-advised. Once again, the historical data should be considered rather than ignored. A savvy investor is unlikely to rely on projected data alone.

There are publicly available measures that one can review to evaluate the equity risk premium—and currently the values of these measures are close to one another. First, the long-term historical returns of the equity market compared to that of 10-year Treasury bonds is 5.06% or 6.64% (depending on use of the geometric or arithmetic average, respectively).[46] Second, Kroll (formerly Duff and Phelps), an investor data and forecast service, periodically issues an equity risk premium recommendation to investors.[47] Its most recent equity risk premium recommendation was 5.5% on 20-year Treasury bonds. Going back to 2008, this recommendation has always been between 5 and 6% (inclusive).[48]

Regardless, when calculating the CAPM or ECAPM value the risk-free rate and the equity premium must be based on the same bond maturity. Witness McKenzie's estimate of 7.8 percent is based on the premium of equity over 30-year bonds. Although recently, 10-, 20-, and 30-year Treasury bond rates have been close to one another, in the long-run

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[46] Aswath Damodaran, *Damodaran Online*, Data Breakdown, https://pages.stern.nyu.edu/~adamodar/New_Home_Page/data.html (last visited Sept. 27, 2023). Supporting calculations based on Damodaran's data are included in my workpapers.
[47] *See* Carla Nunes et al., *Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital: January 2008 – Present*, Kroll, https://www.kroll.com/en/insights/publications/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates (last visited Sept. 27, 2023).
[48] Kroll, *Kroll Recommended U.S. Equity Risk Premium (ERP) and Corresponding Risk-free Rates (Rf); January 2008–Present*, https://www.kroll.com/-/media/cost-of-capital/kroll-us-erp-rf-table-2023.pdf (last visited Sept. 27, 2023) (attached as Exhibit TC-5).

run historical view, 30-year bonds typically have a higher rate than 10- or 20-year bonds. Thus, Witness McKenzie's premium is more overstated than a direct comparison to the other premiums—using shorter bond maturities—would indicate.[49]

Q. Did you calculate CAPM and ECAPM values?

A. Yes. I used two different methods: 1) the average historical premium on 10-year bonds, along with the current 10-year risk-free rate; and 2) the Kroll recommendation of the 5.5% risk premium on 20-year bonds, along with the current 20-year risk-free rate.[50] The Treasury bond rates were based on the six month average from March through August 2023: 3.76% for 10-year bonds and 4.06% for 20-year bonds.[51] I also used the same beta of 0.89 as Witness McKenzie based on his proxy group. Both methods produced the same result of 8.96%, which I will round up to the nearest tenth of a percent to 9.0%. The average ECAPM result was slightly higher at 9.1%.

Q. Do you agree that the utility risk premium method should be also used in addition to the DCF and CAPM?

A. No. Witness McKenzie also employs the risk premium model which takes the relationship between historical allowable ROEs and utility bond rates. I do not agree that this model is a reasonable estimate of the cost of equity. There are two key problems with

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[49] *See* U.S. Department of the Treasury, *Daily Treasury Par Yield Curve Rates*, https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value=2023 (last visited Sept. 27, 2023).

[50] *See* Carla Nunes et al., *Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital: January 2008 – Present*, Kroll, https://www.kroll.com/en/insights/publications/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates (last visited Sept. 27, 2023).

[51] U.S. Dept. of the Treasury, *Daily Treasury Par Yield Curve Rates*, https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value=2023 (last visited Sept. 27, 2023).

this model: 1) it relies solely on historical data; and 2) the historical data includes awarded ROEs from utility commissions which tend to overstate the cost of equity. First, in my opinion, both historical and projected data should be used—as I have explained above. The overreliance on historical data implicitly assumes that history will just keep repeating. Second, actual ROEs awarded have been fairly consistently decreasing since the 1980's, yet there is still an upward bias in these values. This is partly shown by looking at the market value of utility holding companies compared to their book value. In Witness McKenzie's DCF proxy group, the expected ratio of market to book value for the 18 companies is close to 2—meaning that the expected stock price is roughly double the expected equity value on the books for these utilities.[52] If investors are willing to pay much more on the market than the book value, that is an indicator that the ROE is higher than the cost of equity: It is the difference between what an investor is getting, and what they would have accepted as a return. Regardless, the use of previously allowed ROEs should not drive future ROE estimates because it introduces circular logic and perpetuates any bias in the allowable ROEs.

Q. Do you agree that the expected earnings test should be used?

A. No. This model is also problematic because it is reliant on one measure in one year. Witness McKenzie uses the Value Line projected rate of return for 2027 for his proxy group as the basis for this calculation. But this is a snapshot of one projection. It should not be used as the sole basis for a long-term growth expectation. As a result, the values are highly skewed with 7 of the 18 companies with an expected ROE of over 12%—two

[52] McKenzie Direct, Ex. AMM-6, page 2, column (j).

companies are also above 14%.[53] In recent years, FERC has rejected the use of the expected earnings test.[54] FERC stated that:

> Specifically, we will use the DCF model and CAPM in our ROE methodology, but not the Expected Earnings or Risk Premium models. As discussed further below, we find that expanding our methodology to use the CAPM model in addition to the DCF model will better reflect how investors make their investment decisions. This should result in our ROE analyses producing cost of equity estimates that more accurately reflect what ROE a utility must offer in order to attract capital. As discussed in sections VI and VIII below, we find that, on balance, the Expected Earnings and Risk Premium models would not improve our ROE determinations sufficiently to justify using those models, in light of their flaws and the potential inaccuracies and complexity that they could introduce into our ROE analyses.[55]

Q. Please summarize your DCF and CAPM estimates.

A. My DCF and CAPM results all are between 9.0 and 9.2%, shown below:

Table 2: Comings Cost of Equity Estimates

DCF internal growth	9.2%
DCF external growth	9.1%
CAPM	9.0%
ECAPM	9.1%

Q. What do you recommend for the allowable ROE?

A. Based on my modifications to the DCF and CAPM models put forth by the Company, I recommend that the allowable ROE remain unchanged at 9.3%.

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[53] McKenzie Direct, Ex. AMM-10.

[54] Richard Glick, *Commissioner Richard Glick Concurring in Part and Dissenting in Part Regarding Public Utility ROE Methodology (Opinion No. 569)* nn. 10 & 29, FERC (May 21, 2020), https://www.ferc.gov/news-events/news/commissioner-richard-glick-concurring-part-and-dissenting-part-regarding-public.

[55] Opinion No. 569, *Ass'n of Bus. Advocating Tariff Equity* v. *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,129, Docket No. EL14-12-003, P 31 (Nov. 21, 2019) https://www.ferc.gov/sites/default/files/2020-04/E-11_1.pdf.

IV. THE COMPANY'S PROPOSED SECURITIZATION WILL SAVE RATEPAYERS SUBSTANTIALLY IN THE NEAR TERM.

Q. Is the Company proposing securitization in this case?

A. Yes, the Company is proposing to securitize a number of costs, including those associated with the Rockport plant, decommissioning of the Big Sandy coal unit, storm-related costs, and purchased power costs. As the Company describes in detail, this involves issuing a securitization bond for $446.7 million that would be repaid in rates over a 20-year period but would avoid recovering these costs as typical rate-based assets.

Q. In general, is securitization a useful financing tool?

A. Yes. Securitization is a helpful means of lowering financing costs for ratepayers, particularly if the alternative is that the costs are financed in the conventional manner using the utility's weighted average cost of capital ("WACC'), which is certain to be a higher interest rate than a high-quality securitization bond rate.

Q. What are the Company's projected savings from pursuing securitization of these costs?

A. Witness Messner estimates that on a net present value ("NPV") basis, the securitization of these costs will save ratepayers a total of $74 million.[56] This is calculated assuming a flat payment (akin to a mortgage payment) of $37 million as an annual revenue requirement for the new securitized bond over a 20-year period at an interest rate of 5.166%.[57] In contrast, Witness Messner calculates that the costs of the "conventional" method of recovery, using the WACC, results in an annual payment of $71.8 million in

[56] Messner Direct at 7:19–21.
[57] *Id.*, Ex. FDM-1; *see also* Response of Kentucky Power Company to the Joint Intervenors' Initial Request for Information, Case No. 2023-00159, Question 9 (Aug. 14, 2023) (citing KPCo Response to Staff Q2.1, Attach. 10).

the near-term—or an annual savings of $34.7 million over each of the next five years.[58]

Q. Is it possible that these near-term savings are understated?

A. Yes. Witness Messner assumed a flat payment for the conventional recovery method as well, but the Company has stated that the rate recovery structure is currently unknown.[59] It is possible that, without the securitization, the conventional rate recovery would be higher in the early years because the rate of return is on the undepreciated plant balance for a typical rate-based asset. If that is the case, then the near-term savings would be higher than what the Company currently estimates.

Q. Have you evaluated the prudence of each component's inclusion in this proposal?

A. No. I do not take a position on the prudence of the cost components themselves. I would say, however, that if these cost components are found to be prudently incurred, then securitization is a favorable outcome for ratepayers.

Q. Are there any disadvantages to securitization?

A. The primary disadvantage is that it can prolong the recovery of costs, such that future ratepayers are paying for financing of capital investments that have long since retired—or other costs that were incurred in the past. This concern is sometimes referred to as "intergenerational equity." The savings, especially in the near-term, from securitization should trump that issue given concerns with the rate and bill impacts on customers.

Q. Has the Company indicated how it will use the proceeds?

A. Only in vague terms. In response to discovery asking about the use of the funds, the

[58] Messner Direct at Ex. FDM-1.
[59] Response of Kentucky Power Company to Joint Intervenors' First Supplemental Discovery Requests, Case No. 2023-00159, Question 18(b) (Sept 25, 2023).

Company stated that it would be used to pay outstanding loan, put towards capital spending, and repay other debt and equity to maintain its proposed capital structure.[60]

V. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.

[60] KPCo Response to JI Q1.8.

VERIFICATION

The undersigned, Tyler Comings, being first duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that the information contained therein is true and correct to the best of his information, knowledge, and belief, after reasonable inquiry.

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Subscribed and sworn to before me by Tyler Comings this 29th day of September 2023.

____
Notary Public

My commission expires: August 31, 2029

Madison M. Murphy
MY COMMISSION EXPIRES
August 31, 2029
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS

Exhibit TC-1

Tyler Comings, Senior Researcher

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PROFESSIONAL EXPERIENCE

Applied Economics Clinic, Arlington, MA. Senior Researcher, June 2017 – Present.

Provides technical expertise on electric utility regulation, energy markets, and energy policy. Clients are primarily public service organizations working on topics related to the environment, consumer rights, the energy sector, and community equity.

Synapse Energy Economics Inc., Cambridge, MA. Senior Associate, July 2014 – June 2017, Associate, July 2011 – July 2014.

Provided expert testimony and reports on energy system planning, coal plant economics and economic impacts. Performed benefit-cost analyses and research on energy and environmental issues.

Ideas42, Boston, MA. Senior Associate, 2010 – 2011.

Organized studies analyzing behavior of consumers regarding finances, working with top researchers in behavioral economics. Managed studies of mortgage default mitigation and case studies of financial innovations in developing countries.

Economic Development Research Group Inc., Boston, MA. Research Analyst, Economic Consultant, 2005 – 2010.

Performed economic impact modeling and benefit-cost analyses using IMPLAN and REMI for transportation and renewable energy projects, including support for Federal stimulus applications. Developed a unique web-tool for the National Academy of Sciences on linkages between economic development and transportation.

Harmon Law Offices, LLC., Newton, MA. Billing Coordinator, Accounting Liaison, 2002 – 2005.

Allocated IOLTA and Escrow funds, performed bank reconciliation and accounts receivable. Projected legal fees and costs.

Massachusetts Department of Public Health, Boston, MA. Data Analyst (contract), 2002.

Designed statistical programs using SAS based on data from health-related surveys. Extrapolated trends in health awareness and developed benchmarks for performance of clinics for a statewide assessment.

EDUCATION

Tufts University, Medford, MA

Master of Arts in Economics, 2007

Boston University, Boston, MA

Bachelor of Arts in Mathematics and Economics, Cum Laude, Dean's Scholar, 2002.

AFFILIATIONS

Society of Utility and Regulatory Financial Analysts (SURFA)

Member

Global Development and Environment Institute, Tufts University, Medford, MA.

Visiting Scholar, 2017 – 2020

CERTIFICATIONS

Certified Rate of Return Analyst (CRRA), professional designation by Society of Utility and Regulatory Financial Analysts (SURFA)

PAPERS AND REPORTS

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Resume dated September 2023

Exhibit TC-2

Kentucky Power Company

SUMMARY
REPORTS
RATINGS & ASSESSMENTS
FINANCIALS
MARKET SIGNALS
METHODOLOGIES & FRAMEWORKS
ESGVIEW NEW

TOOLS:
PEER COMPARISON
SCORECARD

REFERENCE:
SECTOR
RATINGS DEFINITIONS
TEAR SHEET

A Financial Data Package is not available for this issuer at this time.
Financial Data Package

Reports

FILTER BY
Rating Action Region Series Topics / Credit Foundations Date Range

SYNOPSIS

Date	Type	Title | 16 DOCUMENTS
12 Apr 2019	Rating Action	Moody's downgrades Kentucky Power to Baa3, outlook stableMoody's Investors Service
21 Mar 2018	Rating Action	Moody's affirms Kentucky Power at Baa2, outlook revised to negativeMoody's Investors Service
31 Jan 2014	Rating Action	Moody's upgrades American Electric Power and certain utility subsidiaries.Moody's Investors Service
08 Nov 2013	Rating Action	Moody's places ratings of most US regulated utilities on review for upgradeMoody's Investors Service
06 Feb 2013	Rating Action	Moody's Affirms Ratings of Three AEP Operating SubsidiariesMoody's Investors Service
30 Jan 2008	Rating Action	Moody's changes outlook on four American Electric Power Company subsidiaries to negativeMoody's Investors Service
02 Aug 2004	Rating Action	MOODY'S CHANGES AMERICAN ELECTRIC POWER COMPANY'S RATING OUTLOOK TO POSITIVE FROM STABLEMoody's Investors Service
10 Feb 2003	Rating Action	MOODY'S DOWNGRADES AMERICAN ELECTRIC POWER COMPANY (AEP: Sr. Uns. to Baa3 from Baa2) & SUBSIDIARIES. AEP'S COMMERCIAL PAPER DOWNGRADED TO PRIME-3 FROM PRIME-2. RATING REVIEW IS COMPLETED AND RATING OUTLOOK IS STABLE.Moody's Investors Service
11 Dec 2002	Rating Action	MOODY'S DOWNGRADES AMERICAN ELECTRIC POWER COMPANY (Sr.Uns. to Baa2 from Baa1) AND PLACES PRIME-2 COMMERCIAL PAPER RATING UNDER REVIEW FOR POSSIBLE DOWNGRADEMoody's Investors Service
19 Apr 2002	Rating Action	MOODY'S PLACES AEP AND SIX SUBSIDIARIES ON REVIEW FOR POSSIBLE DOWNGRADE AND CONFIRMS SIX SUBSIDIARIES IN ANTICIPATION OF THE COMPANY'S CORPORATE SEPARATIONMoody's Investors Service

Ticker
AEP

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Moody's Org Id
435750

Market Segment
Infrastructure & Project Finance

Industry
UTILITY: REG - ELECTR - INTEGRATED

Peer Group
Regulated Electric and Gas Utilities

Domicile
UNITED STATES

15 Jun 2000	Rating Action	MOODY'S CONFIRMS AMERICAN ELECTRIC POWER AND CENTRAL AND SOUTH WEST UTILITY RATINGS UPON MERGER CLOSINGMoody's Investors Service
23 Nov 1998	Rating Action	MOODY'S CONFIRMS AMERICAN ELECTRIC POWER AND AEP RESOURCES RATINGSMoody's Investors Service
04 Aug 1998	Rating Action	CREDIT QUALITY OF U.S. WHOLESALE BANKS MAY NOT FARE AS WELL AS RETAIL BANKS' IN AN ERA OF CONSOLIDATION, MOODY'S REPORTSMoody's Investors Service
22 Dec 1997	Rating Action	MOODY'S CONFIRMS AMERICAN ELECTRIC POWER AND CENTRAL AND SOUTH WEST RATINGS UPON MERGER ANNOUNCEMENTMoody's Investors Service
24 Feb 1997	Rating Action	MOODY'S AFFIRMS CREDIT RATINGS OF AEP (P-2) AND SUBSIDIARIES; AFFIRMS CREDIT RATINGS OF PUBLIC SERVICE COMPANY OF COLORADO BUT CHANGES OUTLOOK TO NEGATIVEMoody's Investors Service
15 Feb 1995	Rating Action	MOODY'S ASSIGNS COUNTERPARTY RATINGS TO 41 ELECTRIC UTILITIESMoody's Investors Service

Exhibit TC-3

FitchRatings

ENTITY

Kentucky Power Company

Corporate Finance / Utilities and Power/Global / North America/United States

EU Endorsed, UK Endorsed; Solicited by or on behalf of the issuer (sell side)

ESG RELEVANCE

1	2	3	4	5

01 Ratings

RATING	ACTION	DATE	TYPE
BBB	Affirmed	28-Feb-2023	Long Term Issuer Default Rating
WD	Withdrawn	22-Feb-2013	Short Term Issuer Default Rating

Ratings Key	Outlook	Watch
POSITIVE		
NEGATIVE		
EVOLVING		
STABLE		

* Ratings displayed in orange denotes EU or UK Unsolicited and Non-Participatory Ratings

Where there was a review with no rating action (Review – No Action), please refer to the "Latest Rating Action Commentary" for an explanation of key rating drivers

*Premium Content is displayed in Fitch Red

RATING HISTORY

LONG TERM ISSUER DEFAULT RATING

SHORT TERM ISSUER DEFAULT RATING

15-Oct-2020	01-Jul-2020	02-Jul-2019	17-Apr-2019	07-Sep-2018	18-Oct-2017	13-Jul-2017
BBB	BBB	BBB	BBB	BBB	BBB	BBB
Review - No Action	Affirmed	Affirmed	Review - No Action	Affirmed	Review - No Action	Upgrade

ENTITY

Kentucky Power Company

Corporate Finance / Utilities and Power/Global / North America/United States

EU Endorsed, UK Endorsed; Solicited by or on behalf of the issuer (sell side)

ESG RELEVANCE

1	2	3	4	5

01 Ratings

RATING	ACTION	DATE	TYPE
BBB	Affirmed	28-Feb-2023	Long Term Issuer Default Rating
WD	Withdrawn	22-Feb-2013	Short Term Issuer Default Rating

Ratings Key	Outlook	Watch
POSITIVE		
NEGATIVE		
EVOLVING		
STABLE		

* Ratings displayed in orange denotes EU or UK Unsolicited and Non-Participatory Ratings

Where there was a review with no rating action (Review – No Action), please refer to the "Latest Rating Action Commentary" for an explanation of key rating drivers

*Premium Content is displayed in Fitch Red

RATING HISTORY

LONG TERM ISSUER DEFAULT RATING

SHORT TERM ISSUER DEFAULT RATING

DATE :	28-Feb-2023	09-Mar-2022	23-Dec-2021	28-Oct-2021	08-Apr-2021	15-Oct-202(
RATING :	BBB	BBB	BBB	BBB	BBB	BBB
ACTION :	Affirmed	Review - No Action	Affirmed	Affirmed	Affirmed	Review - No /

02 Rating Actions

RATING ACTION COMMENTARY / TUE 28 FEB, 2023

Fitch Affirms AEP and Subsidiaries; Outlook Stable

RATING ACTION COMMENTARY / THU 23 DEC, 2021

Fitch Affirms AEP and Select Subsidiaries; Upgrades IMPCo

RATING ACTION COMMENTARY / THU 28 OCT, 2021

Fitch Downgrades AEP's L-T IDR to 'BBB' and S-T IDR to 'F3'; Affirms Kentucky Power

RATING /

Fitc Out

03 Insights

SPECIAL REPORT / WED 28 AUG, 2019

U.S. Integrated Electric Utilities Handbook (A Detailed Review of Integrated Electric Utilities

RATING REPORT / MON 29 JUL, 2019

Kentucky Power Co. (Subsidiary of American Electric Power Company, Inc.)

NAVIGATOR REPORT / MON 07 JAN, 2019

Kentucky Power Co. - Ratings Navigator

NAVIGATOR REPORT / MON 07 JAN, 2019

American Electric Power Company - Ratings Navigator

RATING REPORT / FRI 13 JUL, 2018

Kentucky Power Co. (Subsidiary of American Electric Power Company, Inc.)

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04 Sector Outlooks

OUTLOOK REPORT / TUE 27 JUN, 2023

Global Corporates Mid-Year Outlook 2023

OUTLOOK REPORT / WED 07 DEC, 2022

North American Utilities, Power & Gas Outlook 2023

OUTLOOK REPORT / TUE 06 DEC, 2022

U.S. Public Power and Electric Cooperatives Outlook 2023

OUTLOOK REPORT / FRI 17 DEC, 2021

Fitch Ratings 2022 Outlook: U.S. Public Finance

OUTLOOK REPORT / TUE 07 DEC, 2021

Fitch Ratings 2022 Outlook: U.S. Public Power and Electric Cooperatives

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05 Securities and Obligations

RATED ENTITY / DEBT	RATINGS	ENTITY DETAILS	DEBT TYPE & IDENTIFIERS	OTHER DETAILS
Issuer: Kentucky Power Company **Debt Level:** senior unsecured **Issue:** USD 75 mln 5.625% bond/note 01-Dec-2032	28-Feb-2023 BBB+ Affirmed Long Term Rating RATING HISTORY	**Country:** United States **Sectors:** Corporate Finance; Utilities and Power **Disclosures:** EU Endorsed, UK Endorsed; Solicited by or on behalf of the issuer (sell side)	senior unsecured; bond/note **ISIN:** US491386AL26 (Public) **CUSIP:** 491386AL2 (Public)	**Maturity Date:** 01-Dec-2032 **Currency:** USD **Amount:** 75,000,000 **Coupon Rate:** 5.625% **Placement:** Public
Issuer: Kentucky Power Company **Debt Level:** senior unsecured **Issue:** USD 65 mln W. Virginia St Econ Dev Auth Solid waste Disposal Facilities 2014A rev bonds 01-Apr-2036	12-Jun-2023 BBB+ New Rating Long Term Rating RATING HISTORY	**Country:** United States **Sectors:** Corporate Finance; Utilities and Power **Disclosures:** EU Endorsed, UK Endorsed; Solicited by or on behalf of the issuer (sell side)	senior unsecured; bond/note **CUSIP:** 95648VBP3 (Public) **ISIN:** US95648VBP31 (Public)	**Maturity Date:** 01-Apr-2036 **Currency:** USD **Amount:** 65,000,000 **Placement:** Public

PREVIOUS Page 1 of 1 10 rows NEXT

06 Fitch Adjusted Financials

	NOTES AND FORMULAS	REPORTED VALUES	SUM OF ADJUSTMENTS	CASH ADJUSTMENT	HYBRID ADJUSTMENT	CORP - LEASE TREATMENT	OTHER ADJUSTMENTS	ADJUSTED VALUES
Income Statement Summary								
Revenue	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EBITDAR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EBITDAR After Associates and Minorities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Leases Expense	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EBITDA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EBITDA After Associates and Minorities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EBIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

07 Disclosures

ORIGINAL RATING DATE

Long Term Issuer Default Rating	01-Jun-2000
Short Term Issuer Default Rating	01-May-1998

SOLICITATION STATUS

Long Term Issuer Default Rating	Solicited - Sell Side

ENDORSEMENT STATUS

EU Endorsed, UK Endorsed

COUNTRY OF ANALYST

UNITED STATES

COUNTRY OF FITCH OFFICE

UNITED STATES

08 Identifiers

TYPE:	CIK Code	CUSIP	CUSIP	LEI
IDENTIFIER:	0000055373	491386	95648V	JHOZYZ5WPEXWR477VH72

09 Criteria

28 OCT 2022 ACTIVE CRITERIA
Corporate Rating Criteria

28 OCT 2022 EXPIRED CRITERIA
Sector Navigators: Addendum to the Corporate Rating Criteria - Effective from 28 October 2022 to 12 May 2023

01 DEC 2021 EXPIRED CRITERIA
Parent and Subsidiary Linkage Rating Criteria - Effective from 1 December 2021 to 16 June 2023

15 OCT 2021 EXPIRED CRITERIA
Sector Navigators - Addendum to the Corporate Rating Criteria - Effective from 15 October 2021 to 15 July 2022

15 OCT 2021 EXPIRED CRITERIA
Corporate Rating Criteria - Effective from 15 October 2021 to 28 October 2022

10 Analysts

Barbara Chapman, CFA
Primary Rating Analyst

Ivana Ergovic
Secondary Rating Analyst

CREDIT-RELEVANT ESG SCALE

How relevant are E, S and G issues to the overall credit rating?

5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector

* ESG Relevance is applicable for international scale ratings only

Ratings Key	**Outlook**	**Watch**
POSITIVE		
NEGATIVE		
EVOLVING		
STABLE		

* Ratings displayed in orange denotes EU or UK Unsolicited and Non-Participatory Ratings

Where there was a review with no rating action (Review – No Action), please refer to the "Latest Rating Action Commentary" for an explanation of key rating drivers

*Premium Content is displayed in Fitch Red

Exhibit TC-4

NEWS RELEASE

News Releases | Featured Stories | Community Involvement | News Alerts | Bill Support | Regional News | Media Contacts

News News Releases News Release

August 16, 2023

AEP COMPLETES SALE OF UNREGULATED RENEWABLES ASSETS

SHARE:

COLUMBUS, Ohio, Aug. 16, 2023 – American Electric Power (Nasdaq: AEP) has completed the sale of its 1,365-megawatt (MW) unregulated, contracted renewables portfolio to IRG Acquisition Holdings, a partnership owned by Invenergy, CDPQ and funds managed by Blackstone Infrastructure, at an enterprise value of $1.5 billion including project debt. AEP nets approximately $1.2 billion in cash after taxes, transaction fees and other customary adjustments.

"This sale is part of our strategy to streamline and de-risk the business and focus on our regulated operations," said Julie Sloat, AEP president and chief executive officer. "Over the next five years, we plan to invest nearly $40 billion primarily in our regulated wires and generation businesses. The proceeds from this sale will be used to continue to modernize the energy grid, shift to a more balanced generation portfolio and enhance service for our customers while strengthening our balance sheet."

AEP signed an agreement to sell the assets in February 2023 and obtained approval from the Federal Energy Regulatory Commission, clearance from the Committee on Foreign Investment in the United States and approvals under applicable competition laws.

The sale portfolio includes 14 projects, representing 1,200 MW of wind and 165 MW of solar in 11 states. The renewable power from the projects is contracted under long-term agreements with other utilities, corporations and municipalities.

J.P. Morgan served as lead financial advisor and Citigroup Global Markets served as financial advisor to AEP for this transaction. Hunton Andrews Kurth LLP served as legal counsel to AEP.

American Electric Power, based in Columbus, Ohio, is powering a cleaner, brighter energy future for its customers and communities. AEP's approximately 17,000 employees operate and maintain the nation's largest electricity transmission system and more than 225,000 miles of distribution lines to safely deliver reliable and affordable power to 5.6 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with nearly 29,000 megawatts of diverse generating capacity, including approximately 5,800 megawatts of renewable energy. The company's plans include growing its regulated renewable generation portfolio to approximately 50% of total capacity by 2032. AEP is on track to reach an 80% reduction in carbon dioxide emissions from 2005 levels by 2030 and has committed to achieving net zero by 2045. AEP is recognized consistently for its focus on sustainability, community engagement, and diversity, equity and inclusion. AEP's family of companies includes utilities AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana, east Texas and the Texas Panhandle). AEP also owns AEP Energy, which provides innovative competitive energy solutions nationwide. For more information, visit aep.com.

OTHER NEWS RELEASES

September 22, 2023

KENTUCKY POWER ISSUES REQUEST FOR PROPOSALS FOR GENERATION RESOURCES

Read more

August 21, 2023

AEP Board Elects Sloat Chair, Names Stoddard Board Member

The Board of Directors of American Electric Power has elected Julie Sloat chair of the Board, effective Oct. 2. Sloat is AEP's president and chief

Read more

August 01, 2023

AEP RECOGNIZED AS ONE OF THE BEST COMPANIES TO WORK FOR

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PRIVACY POLICY | COOKIE SETTINGS | YOUR PRIVACY CHOICES

Exhibit TC-5

Kroll Recommended U.S. Equity Risk Premium (ERP) and Corresponding Risk-free Rates (R_f); January 2008–Present

For additional information, please visit
kroll.com/cost-of-capital-resource-center

Date	Risk-free Rate (R_f)	R_f (%)	Kroll Recommended U.S. ERP (%)	What Changed
Current Guidance:				
June 8, 2023 – UNTIL FURTHER NOTICE*	Normalized 20-year U.S. Treasury yield*	3.50*	5.50	*ERP*
October 18, 2022 – June 7, 2023	Normalized 20-year U.S. Treasury yield	3.50	6.00	*ERP*
June 16, 2022 – October 17, 2022	Normalized 20-year U.S. Treasury yield	3.50	5.50	*Rf*
April 7, 2022 – June 15, 2022	Normalized 20-year U.S. Treasury yield	3.00	5.50	*Rf*
December 7, 2020 – April 6, 2022	Normalized 20-year U.S. Treasury yield	2.50	5.50	*ERP*
June 30, 2020 – December 6, 2020	Normalized 20-year U.S. Treasury yield	2.50	6.00	*Rf*
March 25, 2020 – June 29, 2020	Normalized 20-year U.S. Treasury yield	3.00	6.00	*ERP*
December 19, 2019 – March 24, 2020	Normalized 20-year U.S. Treasury yield	3.00	5.00	*ERP*
September 30, 2019 – December 18, 2019	Normalized 20-year U.S. Treasury yield	3.00	5.50	R_f
December 31, 2018 – September 29, 2019	Normalized 20-year U.S. Treasury yield	3.50	5.50	*ERP*
September 5, 2017 – December 30, 2018	Normalized 20-year U.S. Treasury yield	3.50	5.00	*ERP*
November 15, 2016 – September 4, 2017	Normalized 20-year U.S. Treasury yield	3.50	5.50	R_f
January 31, 2016 – November 14, 2016	Normalized 20-year U.S. Treasury yield	4.00	5.50	*ERP*
December 31, 2015	Normalized 20-year U.S. Treasury yield	4.00	5.00	
December 31, 2014	Normalized 20-year U.S. Treasury yield	4.00	5.00	
December 31, 2013	Normalized 20-year U.S. Treasury yield	4.00	5.00	
February 28, 2013 – January 30, 2016	Normalized 20-year U.S. Treasury yield	4.00	5.00	*ERP*
December 31, 2012	Normalized 20-year U.S. Treasury yield	4.00	5.50	
January 15, 2012 – February 27, 2013	Normalized 20-year U.S. Treasury yield	4.00	5.50	*ERP*
December 31, 2011	Normalized 20-year U.S. Treasury yield	4.00	6.00	
September 30, 2011 – January 14, 2012	Normalized 20-year U.S. Treasury yield	4.00	6.00	*ERP*
July 1 2011 – September 29, 2011	Normalized 20-year U.S. Treasury yield	4.00	5.50	R_f
June 1, 2011 – June 30, 2011	Spot 20-year U.S. Treasury yield	Spot	5.50	R_f
May 1, 2011 – May 31, 2011	Normalized 20-year U.S. Treasury yield	4.00	5.50	R_f
December 31, 2010	Spot 20-year U.S. Treasury yield	Spot	5.50	
December 1, 2010 – April 30, 2011	Spot 20-year U.S. Treasury yield	Spot	5.50	R_f
June 1, 2010 – November 30, 2010	Normalized 20-year U.S. Treasury yield	4.00	5.50	R_f
December 31, 2009	Spot 20-year U.S. Treasury yield	Spot	5.50	
December 1, 2009 – May 31, 2010	Spot 20-year U.S. Treasury yield	Spot	5.50	*ERP*
June 1, 2009 – November 30, 2009	Spot 20-year U.S. Treasury yield	Spot	6.00	R_f
December 31, 2008	Normalized 20-year U.S. Treasury yield	4.50	6.00	
November 1, 2008 – May 31, 2009	Normalized 20-year U.S. Treasury yield	4.50	6.00	R_f
October 27, 2008 – October 31, 2008	Spot 20-year U.S. Treasury yield	Spot	6.00	*ERP*
January 1, 2008 – October 26, 2008	Spot 20-year U.S. Treasury yield	Spot	5.00	*Initialized*

*** We recommend using the spot 20-year U.S. Treasury yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than our recommended U.S. normalized risk-free rate of 3.5%. This guidance is effective when developing USD-denominated discount rates as of June 16, 2022 and thereafter.**

"Normalized" in this context means that in months where the risk-free rate is deemed to be abnormally low, a proxy for a longer-term sustainable risk-free rate is used.

To learn more about cost of capital issues, and to ensure that you are using the most recent Kroll's Global Cost of Capital Inputs, visit kroll.com/cost-of-capital-resource-center.

This and other related resources can also be found in the online Cost of Capital Navigator platform. To learn more about the Cost of Capital Navigator and other Kroll valuation and industry data products, visit kroll.com/costofcapitalnavigator.