

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

In the Matter of the 2020 Wolf Creek)	Docket No.
Triennial Decommissioning Financing)	21-WCNE-103-GIE
Plan.)	

DIRECT TESTIMONY

PREPARED BY

Adam H. Gatewood

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

December 18, 2020

1 **Q. Would you please state your name and business address?**

2 A. My name is Adam H. Gatewood. My business address is 1500 Southwest
3 Arrowhead Road, Topeka, Kansas, 66604.

4 **Q. Who is your employer and what is your title?**

5 A. I am employed in the Utilities Division of the Kansas Corporation Commission as
6 Senior Managing Financial Analyst.

7 **Q. What is your educational and professional background?**

8 A. I graduated from Washburn University with a B.A. in Economics and a Masters of
9 Business Administration. I have filed testimony on cost of capital and related
10 financial issues before the Commission in more than 120 proceedings. I have also
11 filed testimony on cost of capital issues before the Federal Energy Regulatory
12 Commission in natural gas pipeline and electric transmission dockets.

13 **Q. What issues are you testifying to in this Docket?**

14 A. My testimony addresses two issues. First, I am testifying to the escalation rates that
15 Wolf Creek Nuclear Operating Corporation¹ (WCNOC) is proposing in connection
16 with the Decommissioning Cost Study (Cost Study).² The escalation rates are
17 discussed in Attachment 3 of the Joint Pleading Regarding Decommissioning
18 Financing Plan (Joint Pleading). The escalation rate is necessary to inflate the
19 decommissioning cost estimate from the 2020-dollar amount to the appropriate year
20 when those costs are scheduled to be incurred.

¹ Wolf Creek Nuclear Operating Corporation is owned by Evergy Metro (f/k/a, Kansas City Power & Light Company) 47%, Evergy Kansas South (f/k/a, Kansas Gas & Electric Company) 47%, and Kansas Electric Power Cooperative, Incorporated, 6%.

² Decommissioning Cost Analysis for the Wolf Creek Generation Station prepared for the Wolf Creek Nuclear Operating Corporation, prepared by TLG Services, Inc. of Bridgewater Connecticut; August 2020. Attachment 3 of Application in 21-WCNE-103-GIE.

1 Second, I review the annual accrual amounts for Evergy Kansas Metro (EKM),
2 Evergy Kansas South (EKS), and Kansas Electric Power Cooperative (KEPCo)
3 (collectively referred to as WCNOOC Owners) that appear in Attachment 4 of the
4 Joint Pleading. The annual accrual is the amount each WCNOOC Owner must set
5 aside in a trust to fund its share of the decommissioning costs.

6 **Q. Please summarize your findings and recommendations.**

7 A. First, with respect to the escalation rate, I agree with the escalation rates proposed
8 in Jason O. Humphry's testimony and his methodology of applying the escalation
9 rates to the decommissioning cost components. It is my recommendation that these
10 escalation rates and his methodology should be applied to the decommissioning
11 plan selected by the Commission.

12 Second, regarding the annual accruals for EKM and EKS. I found that the annual
13 accruals for both are sufficient to fund their share of the decommissioning costs
14 under the WCNOOC Owners' proposed decommissioning methodology.

15 Third, regarding the annual accrual for KEPCo. I found that KEPCo needs a small
16 increase to its annual accrual to meet its obligations under the WCNOOC Owners'
17 proposed decommissioning methodology.

18 **Q. Are your recommendations dependent on the decommissioning method**
19 **selected by the Commission?**

20 A. Mr. Humphry's escalation rates and methodology are appropriate for either of the
21 decommissioning alternatives presented in the Cost Study. My recommendations
22 for the WCNOOC Owners' annual accruals is based on the DECON methodology and
23 the specific cash flows detailed in Table 3.1 of the Cost Study; the methodology

1 proposed by the WNOG Owners and supported by Staff witness Leo Haynos. My
2 recommendation on the annual accruals for EKM, EKS, KEPCo are specific to the
3 DECON methodology. If the Commission adopts a different decommissioning
4 methodology, all the parties in this docket will need to review the annual accrual
5 calculations utilizing the cash flow schedule associated with the methodology the
6 Commission selects.

7 In past triennial reviews, the decommissioning methodology has been reviewed and
8 selected by the Commission in one docket. Then, in separate dockets, each
9 WCNOG Owner files a funding plan, sometimes as part of a rate case filing. In this
10 instance, there is sufficient information in the Application to review the funding
11 plans for each WCNOG Owner, possibly completing this triennial review without
12 additional dockets.

13 **Q. Are you sponsoring any attachments to your testimony?**

14 A. Yes, I have attached the following data request responses to my testimony; DR-16
15 (EKS and EKM update to Schedule B), and DR-17 (KEPCo update to Schedule B).
16 These data requests asked each of the WCNOG Owners to update the market values
17 of their nuclear decommissioning trusts to September 30, 2020.

18 **Q. What documents did you review in preparing your testimony?**

19 A. I reviewed the Joint Pleading including the Cost Study, the Direct Testimony of
20 Jason O. Humphrey, data request responses in this Docket, and various documents
21 from the previous decommissioning dockets.

22 **Escalation Rates Applied to Decommissioning Costs**

23 **Q. What is the purpose of the escalation rates in this Docket?**

1 A. The Cost Study presents the estimated cost of decommissioning in 2020-dollars.
2 The decommissioning process begins in the year 2045 and continues over several
3 decades. The escalation rates are necessary to inflate the 2020-dollar costs to the
4 years in the future when they occur. Those inflated-costs are inputs to calculate the
5 annual accrual for each owner.

6 **Q. Please discuss the escalation rates proposed by the WCNOG Owners.**

7 A. The Direct Testimony of Jason O. Humphrey (Attachment 3 of the Joint Pleading)
8 presents long-run inflation forecasts for the decommissioning cost-categories of
9 labor, equipment & materials, energy, burial costs, and a broad category to capture
10 other costs. He obtained the inflation forecasts for four of these five cost categories
11 from Moody's Analytics. As there is no commercially available inflation forecast
12 for the burial costs, which is the disposal-cost of low-level radioactive waste, Mr.
13 Humphrey relied on historic data on burial costs to form an inflation forecast for
14 this cost category.³

15 **Q. Do you agree with the forecasts?**

16 A. Yes, the forecasts are acceptable to Staff; they are from reputable sources and
17 specific to the cost-categories associated with the decommissioning process. These
18 are the same sources that we have relied on in past decommissioning cost studies.
19 I recommend that the Commission adopt the inflation forecasts in Mr. Humphrey's
20 testimony.

21 **Q. How did he apply the escalation rates to the 2020-dollar cost estimates?**

22 A. Mr. Humphrey applied the escalation rate of each cost-category, specifically to the

³ NUREG-1307 (Revisions 11 and 16); "Report on Waste Burial Charges," Nuclear Regulatory Commission.

1 costs in that category. In triennial decommissioning cost estimate dockets prior to
2 2017, the escalation rates were not applied to their unique category costs, instead
3 the *average* of those five escalation rates was applied to each of the cost categories.
4 That approach was sufficient when the entire decommissioning process would be
5 completed in eight years, as was expected in decommissioning triennial reviews
6 prior to 2017. Under the Cost Study, decommissioning will take more than 30 years
7 to complete. This longer horizon and timing of resources demands a more granular
8 application of the escalation rates such as that Mr. Humphry has advocated for in
9 his testimony.

10 **Q. Does Staff agree with this approach?**

11 A. Yes, Staff agrees with Mr. Humphrey's methodology. It is the same methodology
12 that Staff applied in the 18-WCNE-107-GIE, 18-WSEE-328-RTS, 18-KCPE-480-
13 RTS, and 19-KEPE-460-MIS dockets. Each of these dockets was directly related
14 to the previous triennial decommissioning cost study. In those dockets, the
15 Commission adopted funding levels that relied on Staff's approach to applying the
16 escalation rates.

17 **Q. Did you review Mr. Humphrey's workpapers where he applies the escalation**
18 **rates to the DECON Alternative decommissioning cost estimate?**

19 A. Yes, I traced the calculations through his work papers and I reached the same results
20 as Mr. Humphrey.

21 **Setting the Annual Accrual to Fund the Nuclear Decommissioning Trusts**

22 **Q. What is the annual accrual?**

23 A. The annual accrual is the amount that each owner needs to deposit in their

1 respective nuclear decommissioning trust (NDT) each year to fund their respective
2 share of decommissioning WCNO. The calculation takes in to account the timing
3 of the cash inflows, cash outflows, and returns earned on the balance.

4 **Q. What information is necessary to determine each owners' annual accrual?**

5 A. The calculation requires a handful of inputs: 1) a decommissioning cost estimate
6 with a schedule of annual cash flows; and 2) an escalation rate to inflate the
7 decommissioning cost estimate from 2020-dollars to the year the cost will be
8 incurred. Then, several inputs specific to each of the WCNO Owners: 1) its
9 ownership interest in Wolf Creek; 2) the Kansas jurisdictional allocation for EKM;
10 3) the current balance of their respective NDTs; and 3) an estimate of the returns
11 earned by their NDTs. The Joint Pleading contains all of these inputs.

12 **Q. Are these inputs difficult to determine?**

13 A. For the most part, no. The decommissioning methodology and escalation rates are
14 set by the Commission in this docket. The split of Wolf Creek ownership has been
15 and will continue to be static over the operating life of the plant with EKS owning
16 47%, EKM 47%, and KEPCo 6%. For EKM, the portion allocated to Kansas is the
17 product of its system average peak demand experienced in its Kansas jurisdiction
18 using the 12-CP approach. The portfolio market value balances for each owner at
19 September 30, 2020, are in their respective calculations in Attachments AHG-1 and
20 AHG-2. Last of all, the expected return on each owner's respective NDT. This
21 input is certainly the most subjective of the inputs because returns on financial
22 assets such as stocks and bonds vary widely over time and expectations for the
23 future can vary widely across sophisticated, competent forecasters.

Q. How does Staff's analysis address the subjectivity associated with the expected returns?

A. It has been Staff's position that an appropriate expected return should fall within the range of returns achieved over time and those forecasted to be likely in the future by sophisticated, experienced asset managers.

Q. How did you establish a range for the expected returns?

A. I reviewed historic return data and forecasted market returns published by money management firms. As has been the case for the past two decades, the historic returns are significantly higher than the returns forecasted by money management firms. The wide difference between forecasted and historic returns on common equity are obvious in the following table.

Survey of Forecasted and Historic Returns on Financial Assets			
	Equities	U.S. 10-Year Treas. Bond	Corporate Bonds
Survey of Forecasted Returns			
J.P. Morgan Long-Term Market Assumptions 2021	5.13%	1.54%	2.60%
BlackRock Capital Market Assumptions	6.80%	1.00%	2.50%
Survey of Professional Forecasters Published by the Philadelphia Federal Reserve Bank, Average Annual Return on the S&P 500 Index for Next Ten Years; Average of 19 Forecasts for equities and 24 forecasts for U.S. 10-Year Treasury bond yield	6.17%	2.81%	n/a
Historic Returns			
1928-2019	11.57%	5.15%	7.22%
1970-2019	11.89%	7.39%	9.46%
2010-2019	14.02%	4.35%	7.23%
Sources: https://am.jpmorgan.com/us/en/asset-management/institutional/insights/portfolio-insights/lcma/ https://www.blackrock.com/institutions/en-us/insights/charts/capital-market-assumptions https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/spf-q1-2020 http://pages.stern.nyu.edu/~adamodar/			

As a means to evaluate the reasonableness of the WCNOO Owners' expected return, I rely on the historic measures of returns and the forecasted expected returns

1 of money management firms as endpoints for a range of returns anticipated by
2 investors. This is a reasonable means of setting the endpoints as it captures long
3 run historic and forecasted economic growth.

4 I would be hesitant to rely on returns at the upper-end of that range, relying solely
5 on historic returns, given the near universal acceptance that U.S. and global
6 economic growth going forward will not match the levels experienced over the past
7 90 years. That being said, there are market participants that lean heavily on historic
8 data to form opinions about the future. The lower levels of economic growth
9 translate directly to lower returns on equity and fixed income investments. The
10 expected returns forecasted by money management firms encompass their views
11 for future economic growth. It is important to remind the Commission and
12 participants that we have the opportunity to review the annual accrual and inputs
13 every three years; we are not setting an expected return once and for all for 50 years.
14 As expectations change over time, we can factor those changes into the triennial
15 reviews.

16 **Q. Do the forecasted returns for EKS' and EKM's NDTs fall within this range?**

17 A. Yes, EKS and EKM incorporate an 8.59% return on common stocks, within the
18 range of historic and forecasted returns. Their expected return on fixed income,
19 through a blend of corporate and government bonds, of 2.43% is also within that
20 range. EKS and EKM relied on returns forecasted by Willis-Towers-Watson, an
21 international company that provides risk management, insurance brokerage, and
22 advisory services. That forecast explicitly takes into account their long-run

1 economic forecasts.⁴ This firm also provides Evergy pension and post-retirement
2 benefits advice and valuation which demands a similar type of long-run forecasts
3 of returns.

4 EKS and EKM continue to maintain separate trusts. Both trusts are governed by
5 documented investment guidelines that explain the trusts' objectives, investment
6 policies, and applicable regulations. The investment guidelines for EKS and EKM
7 are contained in Attachment 4 of the Joint Pleading.

8 **Q. With respect to EKS's annual accrual, what has it requested?**

9 A. Attachment 4 Schedule B of the Application for EKS indicates that it wants to
10 maintain the current annual accrual of \$5,772,700 for 2021, 2022, and 2023 then
11 increase its annual accrual to \$6,244,898 in 2024 and beyond. Thus, it appears that
12 an increase is necessary, but it wants to delay the increase until the next rate case;
13 after the rate moratorium expires.

14 **Q. Does Staff agree with EKS's position?**

15 A. No. If an increase to the annual accrual is necessary, Staff does not support delaying
16 it. To confirm the need for a change, I requested each of the WCNOE Owners
17 update the inputs to their respective funding calculations to reflect their NDT's
18 market value at September 30, 2020. With that update, EKS's current annual
19 accrual of \$5,772,700 is sufficient to meet its obligation. The current contribution
20 results in an overage of \$2.4 million in year 2079. To achieve a zero balance in
21 that final year, the annual accrual would only decline by 0.30%. Given the long
22 time horizon and the number of variables in the calculation, I view the current

⁴ Willis Towers Watson Expected Return Estimator, U.S. Capital Market Assumptions; DR-18

1 annual accrual of \$5,772,700 an accurate estimate of the amount necessary to meet
2 EKS's obligation.

3 **Q. With respect to Evergy Metro's annual accrual, what is it requesting in the**
4 **Joint Application?**

5 A. Evergy Kansas Metro demonstrates (Attachment 4 Schedule B of the Application)
6 that it does not require a change in its annual accrual from the current amount of
7 \$2,036,799.

8 **Q. Does Staff agree with EKM's position?**

9 A. Yes, Staff confirmed that EKM's current annual accrual of \$2,036,766 is sufficient
10 to meet its share of the decommissioning cost. With the update to its portfolio
11 balance (Attachment AHG-1) the current annual accrual results in a \$600 thousand
12 over collection at the end decommissioning in 2079; a relatively small amount in
13 that a reduction in the annual accrual of 0.25% would zero out that overage. Given
14 the lengthy time horizon in the calculation and the number of variables involved, I
15 view the current annual accrual of \$2,036,766 an accurate estimate of the amount
16 necessary to meet EKM's obligation.

17 **KEPCO**

18 **Q. Is the expected return in KEPCo's analysis within that range?**

19 A. Yes, the expected return on both equities and fixed income investments to fall
20 within the ranges discussed earlier. KEPCo based its forecasted returns on the
21 recent historic returns realized by investments held in its NDT.

Long-Run Returns Incorporated in Annual Accrual Calculations		
	Equities	Fixed Income
Evergy (EKS, EKM)	8.49%	2.43%
KEPCo	6.22%	3.96%
Sources: Joint Pleading; Attachment 4, Schedule B, KEPCo response to KCC DR-17		

1

2 **Q. Does KEPCo have an investment policy governing its NDT?**

3 A. Yes, it is in Attachment 4 of the Joint Pleading; KEPCo's policy statement sets out
 4 objectives, investment guidelines, responsibilities, and restrictions on
 5 disbursements. The policy statement sets out goals, with limitations, that are
 6 consistent with a conservative-growth strategy; managing investments for growth
 7 over a long time horizon while conserving principal using a diversified portfolio of
 8 equity and fixed income investments.

9 **Q. With respect to KEPCo, what is your recommendation?**

10 A. KEPCo provided an update to its annual accrual calculation based on the September
 11 30, 2020, market value of its trust (Attachment AHG-2). That update, indicates a
 12 need for a small increase to its annual accrual to \$550,196 from its current level of
 13 \$543,994. I recommend that the Commission instruct KEPCo to increase its annual
 14 accrual to \$550,196.

15 **Q. Does this conclude your testimony?**

16 A. Yes, it does.

Evergy Kansas Metro
Case Name: 2020 Wolf Creek Decommissioning Financing Plan
Case Number: 21-WCNE-103-GIE

Response to Gatewood Adam Interrogatories - KCC_20201029
Date of Response: 11/9/2020

Question:16

For Evergy Kansas South and Evergy Kansas Metro provide updated versions of their Schedule B of Attachment 4 to the

Application that incorporate NDT balance as of 9/30/2020. Include any other updates to inputs that Evergy believes should be made with an update to the NDT balances. Include in the response an Excel spreadsheet with formulas.

Response:

As requested, asset values have been updated to 09/30/2020 and the attached files represent updated assumptions.

Response Provided by Cole Bakalar, Corporate Treasury

Attachments:

Q16_DECON - Evergy NDT Cost Modeling_KCC Copy_9.30.20.xlsx

Q16_Kansas Attachments 4_9.30.20.pdf

Schedule B

Evergy Kansas South 2020 Funding Analysis

DECOMMISSIONING TRUST FUND CASH FLOWS

NET AFTER-TAX MARKET VALUE	
September 30, 2020 Market Value	279,109,403
2020 Remaining Deposits	1,443,175
Market Value Incl Remaining Deposit	280,552,578
Unrealized Net Gain	33,399,987
Effective Tax Rate	20.00%
Tax on Unrealized Net Gain	6,679,997
Net After-Tax Market Value	273,872,581

Annual Accrual Escalation	0.00%
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Contribution \$ 5,772,700.00

Year	Trust Fund Contribution	Trust Fund Expenditure	Earnings After Fees & Taxes	Trust Fund Balance
2020		\$ -		\$ 273,872,581
2021	\$ 5,772,700	\$ -	\$ 13,028,852	\$ 292,674,133
2022	\$ 5,772,700	\$ -	\$ 13,916,278	\$ 312,363,111
2023	\$ 5,772,700	\$ -	\$ 14,845,590	\$ 332,981,401
2024	\$ 5,772,700	\$ -	\$ 15,818,765	\$ 354,572,865
2025	\$ 5,772,700	\$ -	\$ 16,837,873	\$ 377,183,439
2026	\$ 5,772,700	\$ -	\$ 17,905,083	\$ 400,861,222
2027	\$ 5,772,700	\$ -	\$ 19,022,665	\$ 425,656,587
2028	\$ 5,772,700	\$ -	\$ 20,192,997	\$ 451,622,284
2029	\$ 5,772,700	\$ -	\$ 21,418,567	\$ 478,813,551
2030	\$ 5,772,700	\$ -	\$ 22,701,984	\$ 507,288,235
2031	\$ 5,772,700	\$ -	\$ 24,045,978	\$ 537,106,913
2032	\$ 5,772,700	\$ -	\$ 25,453,407	\$ 568,333,020
2033	\$ 5,772,700	\$ -	\$ 26,927,267	\$ 601,032,987
2034	\$ 5,772,700	\$ -	\$ 28,470,693	\$ 635,276,380
2035	\$ 5,772,700	\$ -	\$ 30,086,967	\$ 671,136,047
2036	\$ 5,772,700	\$ -	\$ 31,779,529	\$ 708,688,276
2037	\$ 5,772,700	\$ -	\$ 33,551,979	\$ 748,012,955
2038	\$ 5,772,700	\$ -	\$ 35,408,088	\$ 789,193,743
2039	\$ 5,772,700	\$ -	\$ 37,351,805	\$ 832,318,248
2040	\$ 5,772,700	\$ -	\$ 39,387,264	\$ 877,478,212
2041	\$ 5,772,700	\$ -	\$ 41,518,797	\$ 924,769,709
2042	\$ 5,772,700	\$ -	\$ 43,750,936	\$ 974,293,345
2043	\$ 5,772,700	\$ -	\$ 46,088,432	\$ 1,026,154,477
2044	\$ 5,772,700	\$ -	\$ 48,536,257	\$ 1,080,463,434
2045	\$ 1,443,175	\$ (79,415,919)	\$ 49,617,336	\$ 1,052,108,026
2046	\$ -	\$ (173,794,459)	\$ 46,582,942	\$ 924,896,509
2047	\$ -	\$ (230,772,225)	\$ 39,570,111	\$ 733,694,395
2048	\$ -	\$ (238,078,089)	\$ 30,416,136	\$ 526,032,441
2049	\$ -	\$ (120,222,668)	\$ 22,700,598	\$ 428,510,371
2050	\$ -	\$ (52,309,973)	\$ 19,299,639	\$ 395,500,037
2051	\$ -	\$ (49,686,576)	\$ 17,787,999	\$ 363,601,460
2052	\$ -	\$ (17,608,633)	\$ 16,850,173	\$ 362,843,000
2053	\$ -	\$ (12,755,316)	\$ 16,900,277	\$ 366,987,962
2054	\$ -	\$ (13,151,253)	\$ 17,088,910	\$ 370,925,619
2055	\$ -	\$ (13,832,424)	\$ 17,262,709	\$ 374,355,904
2056	\$ -	\$ (14,018,014)	\$ 16,683,813	\$ 377,021,703
2057	\$ -	\$ (14,416,112)	\$ 16,055,015	\$ 378,660,607
2058	\$ -	\$ (15,157,500)	\$ 15,368,543	\$ 378,871,649
2059	\$ -	\$ (15,327,787)	\$ 14,629,047	\$ 378,172,910
2060	\$ -	\$ (15,847,117)	\$ 13,850,241	\$ 376,176,033
2061	\$ -	\$ (16,612,760)	\$ 13,026,044	\$ 372,589,317
2062	\$ -	\$ (16,807,045)	\$ 12,165,289	\$ 367,947,561
2063	\$ -	\$ (17,331,885)	\$ 11,282,357	\$ 361,898,032
2064	\$ -	\$ (18,258,355)	\$ 10,373,231	\$ 354,012,909
2065	\$ -	\$ (18,432,324)	\$ 9,447,389	\$ 345,027,974
2066	\$ -	\$ (19,009,025)	\$ 8,521,774	\$ 334,540,722
2067	\$ -	\$ (19,967,289)	\$ 7,594,720	\$ 322,168,153
2068	\$ -	\$ (20,271,641)	\$ 6,676,204	\$ 308,572,716
2069	\$ -	\$ (21,233,278)	\$ 5,779,340	\$ 293,118,778
2070	\$ -	\$ (20,724,867)	\$ 4,915,729	\$ 277,309,640
2071	\$ -	\$ (21,380,522)	\$ 4,503,088	\$ 260,432,206
2072	\$ -	\$ (22,117,694)	\$ 4,088,850	\$ 242,403,363
2073	\$ -	\$ (22,755,776)	\$ 3,674,440	\$ 223,322,027
2074	\$ -	\$ (23,476,770)	\$ 3,262,012	\$ 203,107,269
2075	\$ -	\$ (24,220,979)	\$ 2,852,348	\$ 181,738,638
2076	\$ -	\$ (25,057,624)	\$ 2,446,521	\$ 159,127,535
2077	\$ -	\$ (25,782,096)	\$ 2,046,170	\$ 135,391,609
2078	\$ -	\$ (61,201,430)	\$ 1,482,563	\$ 75,672,742
2079	\$ -	\$ (73,844,495)	\$ 608,400	\$ 2,436,647

Schedule B

2020 Evergy Kansas Metro Funding Analysis

DECOMMISSIONING TRUST FUND EARNINGS ASSUMPTIONS

TRUST FUND MANAGEMENT FEE	
Kansas Avg Fund Balance	\$ 213,344,388
Kansas Annual Fixed Trustee Fee	51,326
Fixed Trustee Fee %	0.0241%
FI Fee and Fixed Trustee Fee%	0.2351%
Equity Fee and Fixed Trustee Fee	0.1047%

	US T-Bills	Fixed Income	Inter- national	Small Stocks	Lrg Corp Stocks	Weighted After-Tax Earnings
Pre-tax Returns	2.04%	2.43%	8.91%	8.75%	8.49%	
Effective Tax Rate	20.0%	20.0%	20.0%	20.0%	20.0%	
Earnings After Fees & Taxes	1.44%	1.76%	7.04%	6.92%	6.71%	
Year	Investment Mix					
2020	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2021	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2022	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2023	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2024	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2025	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2026	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2027	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2028	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2029	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2030	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2031	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2032	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2033	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2034	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2035	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2036	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2037	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2038	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2039	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2040	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2041	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2042	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2043	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2044	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2045	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2046	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2047	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2048	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2049	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2050	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2051	0.0%	30.0%	16.0%	20.0%	34.0%	5.32%
2052	3.3%	34.4%	14.2%	17.8%	30.2%	4.91%
2053	6.7%	38.9%	12.4%	15.6%	26.4%	4.51%
2054	10.0%	43.3%	10.7%	13.3%	22.7%	4.10%
2055	13.3%	47.8%	8.9%	11.1%	18.9%	3.69%
2056	16.7%	52.2%	7.1%	8.9%	15.1%	3.29%
2057	20.0%	56.7%	5.3%	6.7%	11.3%	2.88%
2058	23.3%	61.1%	3.6%	4.4%	7.6%	2.47%
2059	26.7%	65.6%	1.8%	2.2%	3.8%	2.07%
2060	30.0%	70.0%	0.0%	0.0%	0.0%	1.66%
2061	33.7%	66.3%	0.0%	0.0%	0.0%	1.65%
2062	37.4%	62.6%	0.0%	0.0%	0.0%	1.64%
2063	41.1%	58.9%	0.0%	0.0%	0.0%	1.63%
2064	44.7%	55.3%	0.0%	0.0%	0.0%	1.62%
2065	48.4%	51.6%	0.0%	0.0%	0.0%	1.60%
2066	52.1%	47.9%	0.0%	0.0%	0.0%	1.59%
2067	55.8%	44.2%	0.0%	0.0%	0.0%	1.58%
2068	59.5%	40.5%	0.0%	0.0%	0.0%	1.57%
2069	63.2%	36.8%	0.0%	0.0%	0.0%	1.56%
2070	66.8%	33.2%	0.0%	0.0%	0.0%	1.55%
2071	70.5%	29.5%	0.0%	0.0%	0.0%	1.54%
2072	74.2%	25.8%	0.0%	0.0%	0.0%	1.52%
2073	77.9%	22.1%	0.0%	0.0%	0.0%	1.51%
2074	81.6%	18.4%	0.0%	0.0%	0.0%	1.50%
2075	85.3%	14.7%	0.0%	0.0%	0.0%	1.49%
2076	88.9%	11.1%	0.0%	0.0%	0.0%	1.48%
2077	92.6%	7.4%	0.0%	0.0%	0.0%	1.47%
2078	96.3%	3.7%	0.0%	0.0%	0.0%	1.46%
2079	100.0%	0.0%	0.0%	0.0%	0.0%	1.44%

Schedule B

2020 Everygy Kansas Metro Funding Analysis

DECOMMISSIONING TRUST FUND CASH FLOWS

NET AFTER-TAX MARKET VALUE	
September 30, 2020 Market Value	123,025,769
2020 Remaining Deposits	509,058
Market Value Incl Remaining Deposit	123,534,826
Unrealized Net Gain	41,456,737
Effective Tax Rate	20.00%
Tax on Unrealized Net Gain	8,291,347
Net After-Tax Market Value	115,243,479

Annual Accrual Escalation	0.00%
---------------------------	-------

Contribution \$ 2,036,766.00

Year	Trust Fund Contribution	Trust Fund Expenditure	Earnings After Fees & Taxes	Trust Fund Balance
2020		\$ -		\$ 115,243,479
2021	\$ 2,036,766	\$ -	\$ 6,169,155	\$ 123,449,400
2022	\$ 2,036,766	\$ -	\$ 6,605,538	\$ 132,091,704
2023	\$ 2,036,766	\$ -	\$ 7,065,127	\$ 141,193,597
2024	\$ 2,036,766	\$ -	\$ 7,549,157	\$ 150,779,521
2025	\$ 2,036,766	\$ -	\$ 8,058,928	\$ 160,875,214
2026	\$ 2,036,766	\$ -	\$ 8,595,807	\$ 171,507,787
2027	\$ 2,036,766	\$ -	\$ 9,161,237	\$ 182,705,790
2028	\$ 2,036,766	\$ -	\$ 9,756,736	\$ 194,499,292
2029	\$ 2,036,766	\$ -	\$ 10,383,903	\$ 206,919,961
2030	\$ 2,036,766	\$ -	\$ 11,044,422	\$ 220,001,150
2031	\$ 2,036,766	\$ -	\$ 11,740,067	\$ 233,777,983
2032	\$ 2,036,766	\$ -	\$ 12,472,706	\$ 248,287,455
2033	\$ 2,036,766	\$ -	\$ 13,244,306	\$ 263,568,527
2034	\$ 2,036,766	\$ -	\$ 14,056,939	\$ 279,662,232
2035	\$ 2,036,766	\$ -	\$ 14,912,786	\$ 296,611,784
2036	\$ 2,036,766	\$ -	\$ 15,814,147	\$ 314,462,698
2037	\$ 2,036,766	\$ -	\$ 16,763,442	\$ 333,262,906
2038	\$ 2,036,766	\$ -	\$ 17,763,219	\$ 353,062,891
2039	\$ 2,036,766	\$ -	\$ 18,816,163	\$ 373,915,820
2040	\$ 2,036,766	\$ -	\$ 19,925,102	\$ 395,877,687
2041	\$ 2,036,766	\$ -	\$ 21,093,013	\$ 419,007,466
2042	\$ 2,036,766	\$ -	\$ 22,323,032	\$ 443,367,265
2043	\$ 2,036,766	\$ -	\$ 23,618,463	\$ 469,022,494
2044	\$ 2,036,766	\$ -	\$ 24,982,783	\$ 496,042,043
2045	\$ 509,192	\$ (36,014,359)	\$ 25,670,991	\$ 486,207,866
2046	\$ -	\$ (78,814,124)	\$ 24,284,345	\$ 431,678,087
2047	\$ -	\$ (104,652,996)	\$ 20,869,222	\$ 347,894,313
2048	\$ -	\$ (107,966,135)	\$ 16,347,610	\$ 256,275,787
2049	\$ -	\$ (54,519,830)	\$ 12,541,258	\$ 214,297,216
2050	\$ -	\$ (23,722,072)	\$ 10,923,051	\$ 201,498,195
2051	\$ -	\$ (22,532,387)	\$ 10,266,137	\$ 189,231,945
2052	\$ -	\$ (7,985,347)	\$ 9,147,476	\$ 190,394,074
2053	\$ -	\$ (5,784,414)	\$ 8,480,572	\$ 193,090,232
2054	\$ -	\$ (5,963,967)	\$ 7,823,813	\$ 194,950,078
2055	\$ -	\$ (6,272,872)	\$ 7,113,020	\$ 195,790,226
2056	\$ -	\$ (6,357,035)	\$ 6,357,313	\$ 195,790,504
2057	\$ -	\$ (6,537,569)	\$ 5,569,800	\$ 194,822,735
2058	\$ -	\$ (6,873,781)	\$ 4,757,435	\$ 192,706,389
2059	\$ -	\$ (6,951,005)	\$ 3,932,206	\$ 189,687,590
2060	\$ -	\$ (7,186,516)	\$ 3,108,416	\$ 185,609,490
2061	\$ -	\$ (7,533,728)	\$ 3,017,450	\$ 181,093,212
2062	\$ -	\$ (7,621,834)	\$ 2,921,861	\$ 176,393,239
2063	\$ -	\$ (7,859,844)	\$ 2,823,413	\$ 171,356,808
2064	\$ -	\$ (8,279,989)	\$ 2,719,523	\$ 165,796,342
2065	\$ -	\$ (8,358,883)	\$ 2,610,471	\$ 160,047,931
2066	\$ -	\$ (8,620,411)	\$ 2,498,619	\$ 153,926,138
2067	\$ -	\$ (9,054,974)	\$ 2,381,177	\$ 147,252,341
2068	\$ -	\$ (9,192,995)	\$ 2,258,259	\$ 140,317,605
2069	\$ -	\$ (9,629,089)	\$ 2,131,076	\$ 132,819,592
2070	\$ -	\$ (9,398,529)	\$ 2,000,678	\$ 125,421,741
2071	\$ -	\$ (9,695,862)	\$ 1,870,481	\$ 117,596,360
2072	\$ -	\$ (10,030,162)	\$ 1,735,282	\$ 109,301,480
2073	\$ -	\$ (10,319,526)	\$ 1,595,063	\$ 100,577,017
2074	\$ -	\$ (10,646,491)	\$ 1,450,115	\$ 91,380,641
2075	\$ -	\$ (10,983,982)	\$ 1,300,110	\$ 81,696,769
2076	\$ -	\$ (11,363,393)	\$ 1,144,810	\$ 71,478,186
2077	\$ -	\$ (11,691,934)	\$ 984,204	\$ 60,770,456
2078	\$ -	\$ (27,754,263)	\$ 732,985	\$ 33,749,178
2079	\$ -	\$ (33,487,772)	\$ 305,985	\$ 567,391

Kansas Corporation Commission
Information Request

Request No: 17

Company Name WOLF CREEK NUCLEAR OPERATING CORPORATION WCNE
Docket Number 21-WCNE-103-GIE
Request Date October 29, 2020
Date Information Needed November 9, 2020

RE: Estimate of KEPCo's Annual Accrual

Please Provide the Following:

Provide an estimate of KEPCo's annual accrual incorporating the 9/30/20 balance of its nuclear decommissioning trust and the schedule of cash flows shown in Exhibit B of KEPCo's September 2, 2020 Late Filed Exhibit in this docket. Include in the response an Excel spreadsheet with formulas.

Submitted By Gatewood

Submitted To KEPCo

Please see attached file Docket 21-WCNE-103-GIE_Staff DR 17_2020 KCC Schedule.xlsx for KEPCo's response. Also attached is the same file in pdf format.

If for some reason, the above information cannot be provided by the date requested, please provide a written explanation of those reasons.

Verification of Response

I have read the foregoing Information Request and answer(s) thereto and find answer(s) to be true, accurate, full and complete and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request.

Signed: Rebecca A. Fowler

Date: 11/24/2020

Kansas Electric Power Cooperative Inc.
Estimate for Decommissioning Fund Contributions
DECON ALT

KCC Stipulated and Fixed Amounts	
Total Cost DECON ALT Method in 2020 \$s	\$1,073,642,247
Estimated KEPCo Cost in 2020 \$s	\$64,418,535
Forecasted Rate of Inflation	3.25%
Remaining Years in Service	24
Total KEPCo Cost of Decommissioning	\$199,771,905
Market Value of Portfolio @ 09/30/2020	\$32,163,880
Remaining \$s To Be Collected	\$167,608,025
KEPCo Variables	
Forecasted Return on Portfolio	Table Below
Annual Payment	\$550,196
Amount of Excess/Shortfall	0

Time	Year	Annual Inflow	Annual Outflow	Annual Earnings	Balance	Annual Return
1	2020	\$ -	\$ -	\$ -	\$ 32,299,885	0.00%
2	2021	\$ 550,196	\$ -	\$ 1,679,594	\$ 34,497,375	5.20%
3	2022	\$ 550,196	\$ -	\$ 1,793,864	\$ 36,806,938	5.20%
4	2023	\$ 550,196	\$ -	\$ 1,913,961	\$ 39,234,288	5.20%
5	2024	\$ 550,196	\$ -	\$ 1,911,614	\$ 41,656,864	5.20%
6	2025	\$ 550,196	\$ -	\$ 2,166,157	\$ 44,331,560	5.20%
7	2026	\$ 550,196	\$ -	\$ 2,305,241	\$ 47,142,666	5.20%
8	2027	\$ 550,196	\$ -	\$ 2,451,419	\$ 50,097,138	5.20%
9	2028	\$ 550,196	\$ -	\$ 2,605,051	\$ 53,202,288	5.20%
10	2029	\$ 550,196	\$ -	\$ 2,766,519	\$ 56,465,801	5.20%
11	2030	\$ 550,196	\$ -	\$ 2,936,222	\$ 59,895,753	5.20%
12	2031	\$ 550,196	\$ -	\$ 3,114,579	\$ 63,500,633	5.20%
13	2032	\$ 550,196	\$ -	\$ 3,302,033	\$ 67,289,361	5.20%
14	2033	\$ 550,196	\$ -	\$ 3,499,047	\$ 71,271,315	5.20%
15	2034	\$ 550,196	\$ -	\$ 3,706,108	\$ 75,456,348	5.20%
16	2035	\$ 550,196	\$ -	\$ 3,923,730	\$ 79,854,818	5.20%
17	2036	\$ 550,196	\$ -	\$ 4,152,451	\$ 84,477,610	5.20%
18	2037	\$ 550,196	\$ -	\$ 4,392,836	\$ 89,336,165	5.20%
19	2038	\$ 550,196	\$ -	\$ 4,645,481	\$ 94,442,505	5.20%
20	2039	\$ 550,196	\$ -	\$ 4,911,010	\$ 99,809,269	5.20%
21	2040	\$ 550,196	\$ -	\$ 5,190,082	\$ 105,449,738	5.20%

22	2041	\$	550,196	\$	-	\$	5,483,386	\$	111,377,871	5.20%
23	2042	\$	550,196	\$	-	\$	5,791,649	\$	117,608,339	5.20%
24	2043	\$	550,196	\$	-	\$	6,115,634	\$	124,156,560	5.20%
25	2044	\$	550,196	\$	-	\$	6,456,141	\$	131,038,741	5.20%
26	2045	\$	-	\$	(10,138,202)	\$	6,814,015	\$	127,583,514	5.20%
27	2046	\$	-	\$	(22,186,527)	\$	6,634,343	\$	111,903,747	5.20%
28	2047	\$	-	\$	(29,460,284)	\$	5,818,995	\$	88,150,554	5.20%
29	2048	\$	-	\$	(30,392,948)	\$	4,583,829	\$	62,253,284	5.20%
30	2049	\$	-	\$	(15,347,575)	\$	3,237,171	\$	50,080,627	5.20%
31	2050	\$	-	\$	(6,677,869)	\$	2,604,193	\$	45,956,870	5.20%
32	2051	\$	-	\$	(6,342,967)	\$	2,389,757	\$	41,957,704	5.20%
33	2052	\$	-	\$	(2,247,911)	\$	2,181,801	\$	41,849,636	5.20%
34	2053	\$	-	\$	(1,628,338)	\$	2,176,181	\$	42,355,629	5.20%
35	2054	\$	-	\$	(1,678,883)	\$	2,202,493	\$	42,836,883	5.20%
36	2055	\$	-	\$	(1,765,841)	\$	2,227,518	\$	43,255,723	5.20%
37	2056	\$	-	\$	(1,789,534)	\$	2,249,298	\$	43,672,231	5.20%
38	2057	\$	-	\$	(1,840,355)	\$	2,270,956	\$	44,059,160	5.20%
39	2058	\$	-	\$	(1,935,000)	\$	2,291,076	\$	44,371,177	5.20%
40	2059	\$	-	\$	(1,956,739)	\$	1,974,517	\$	44,344,584	4.45%
41	2060	\$	-	\$	(2,023,036)	\$	1,973,334	\$	44,250,538	4.45%
42	2061	\$	-	\$	(2,120,778)	\$	1,969,149	\$	44,054,658	4.45%
43	2062	\$	-	\$	(2,145,580)	\$	1,960,432	\$	43,825,455	4.45%
44	2063	\$	-	\$	(2,212,581)	\$	1,950,233	\$	43,519,282	4.45%
45	2064	\$	-	\$	(2,330,854)	\$	1,610,213	\$	42,755,122	3.70%
46	2065	\$	-	\$	(2,353,063)	\$	1,581,940	\$	41,941,244	3.70%
47	2066	\$	-	\$	(2,426,684)	\$	1,551,826	\$	41,024,445	3.70%
48	2067	\$	-	\$	(2,549,016)	\$	1,517,904	\$	39,952,309	3.70%
49	2068	\$	-	\$	(2,587,869)	\$	1,478,235	\$	38,802,723	3.70%
50	2069	\$	-	\$	(2,710,631)	\$	675,167	\$	36,728,456	1.74%
51	2070	\$	-	\$	(2,645,728)	\$	639,075	\$	34,685,075	1.74%
52	2071	\$	-	\$	(2,729,428)	\$	603,520	\$	32,524,482	1.74%
53	2072	\$	-	\$	(2,823,535)	\$	565,926	\$	30,234,348	1.74%
54	2073	\$	-	\$	(2,904,993)	\$	526,078	\$	27,825,199	1.74%
55	2074	\$	-	\$	(2,997,034)	\$	484,158	\$	25,284,498	1.74%
56	2075	\$	-	\$	(3,092,040)	\$	439,950	\$	22,607,124	1.74%
57	2076	\$	-	\$	(3,198,846)	\$	393,364	\$	19,779,035	1.74%
58	2077	\$	-	\$	(3,291,331)	\$	344,155	\$	16,812,080	1.74%
59	2078	\$	-	\$	(7,812,949)	\$	292,530	\$	9,274,849	1.74%
60	2079	\$	-	\$	(9,426,957)	\$	161,382	\$	0	1.74%

CERTIFICATE OF SERVICE

21-WCNE-103-GIE

I, the undersigned, certify that a true and correct copy of the above and foregoing Testimony was served electronically this 18th day of December, 2020, to the following:

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CERTIFICATE OF SERVICE

21-WCNE-103-GIE

/s/ Vicki Jacobsen

Vicki Jacobsen