

THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

Before Commissioners: Dwight D. Keen, Chair
 Shari Feist Albrecht
 Susan K. Duffy


In the Matter of the Application of Kansas)
Electric Power Cooperative, Inc. for Approval)
of Changes in the Accrual and Funding of) Docket No. 19-KEPE-460-MIS
Wolf Creek Generating Station)
Decommissioning Costs.)

NOTICE OF FILING OF STAFF REPORT AND RECOMMENDATION

COMES NOW, the Staff of the State Corporation Commission of the State of Kansas
("Staff" and "Commission", respectively), and for its Notice of Filing of Staff Report and
Recommendation states as follows:

Staff hereby files the attached Report and Recommendation, and Attachments, dated July
9, 2019, regarding Kansas Electric Power Cooperative, Inc.'s ("KEPCo") Application containing
its proposed decommissioning fund plan to fund its 6% share of the decommissioning cost for
Wolf Creek Nuclear Generating Station.

WHEREFORE, Staff submits its Report and Recommendation for Commission review
and consideration and for such other relief as the Commission deems just and proper.



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REPORT AND RECOMMENDATION UTILITIES DIVISION

TO: Chair Dwight D. Keen
Commissioner Shari Feist Albrecht
Commissioner Susan K. Duffy

FROM: Adam Gatewood, Managing Financial Analyst
Justin Grady, Chief of Auditing & Financial Analysis
Jeff McClanahan, Director of Utilities Division

DATE: July 9, 2019

SUBJECT: In the Matter of the Application of Kansas Electric Power Cooperative, Inc. (KEPCo) for Approval of Changes in the Accrual and Funding of Wolf Creek Generating Station Decommissioning Costs
Docket No. 19-KEPE-460-MIS

EXECUTIVE SUMMARY:

The purpose of this Docket is to establish the annual contribution necessary for Kansas Electric Power Cooperative, Inc. ("KEPCo") to fund its 6% share of the decommissioning cost for Wolf Creek Nuclear Generating Station ("Wolf Creek").¹ Attachment A to KEPCo's Application (attached) contains its proposed decommissioning funding plan ("Funding Plan"). Staff determined that the Funding Plan accurately incorporates the Commission's decisions from Docket 18-WCNE-107-GIE and incorporates reasonable assumptions for investment returns. KEPCo's Funding Plan proposes an annual accrual of \$543,994, an increase of \$28,784 over the amount set in the previous review in Docket No. 15-KEPE-560-MIS. Staff recommends that the Commission adopt KEPCo's proposed Funding Plan.

BACKGROUND:

The Commission conducts the triennial reviews of the decommissioning costs for Wolf Creek in two phases. In phase one, the Commission selects the decommissioning methodology and adopts the corresponding decommissioning cost estimate and the forecasted inflation rates that apply to the decommissioning cost estimate. Phase two of the triennial review is specific to each of the three owners; relying on each owner's ownership interest in Wolf Creek, their respective balance

¹Although KEPCo is a deregulated entity, the Commission retains jurisdiction over KEPCo's funding of its nuclear decommissioning trust pursuant to K.S.A. 66-128 *et seq.* See Order Lifting Stay and Resolving Docket, May 16, 2011. <http://estar.kcc.ks.gov/estar/ViewFile.aspx/10-KEPE-262-MIS%20Ord%20Lift%20Stay1.pdf?Id=ffdce3fe-aca6-4708-813e-0f29cf8018b2>

of their respective nuclear decommissioning trust funds (NDT), and the projected returns on the NDT going forward to determine the annual accrual or contribution that is necessary for each owner to fully fund its NDT. Each owner has the responsibility to accumulate sufficient funds over Wolf Creek's operational life to pay for their respective share of the total decommissioning costs.

In phase one (18-107 Docket) of the triennial review, the Commission adopted the SAFESTOR decommissioning methodology. The SAFESTOR method of decommissioning is a 60 year process, ending in the year 2106. The previously adopted methodology that was in place since 1985 assumed that decommissioning process would take just six years, ending in 2050. This longer time horizon means the current-dollar cost estimate for the decommissioning activities are inflated out further in time. As an offset to the effects of inflation over the additional 56 years, the funds in the NDT portfolios will have longer time horizon to grow via compounding.

Cost estimates, inflation rate estimates and asset return estimates change over time. None of the inputs in either phase one or phase two are forever fixed for the life of the NDTs. These triennial reviews provide opportunities for the Commission to make adjustments to the inputs as new information is available and to adjust the annual accrual.

ANALYSIS:

Staff's analysis of KEPCo's Funding Plan examines whether it incorporates: 1) the Commission's decisions from the 18-107 Docket, and 2) reasonable forecasts for returns on NDT portfolio. We found that KEPCo's Funding Plan does incorporate the Commission's decisions in the 18-107 Docket in terms of both the amounts and timing of decommissioning expenditures. KEPCo's proposed inputs to its NDT portfolio are reasonable in that it has accounted for the market-value of its portfolio and incorporated realistic expectations for investment returns over the remaining 87 year life of the NDT.

The forecasted returns on KEPCo's NDT over the remaining 87 years is an important element of the analysis because small changes to the future returns have a significant effect on the estimated annual accrual. The annual return on the NDT is a function of the mix of assets (equities and fixed-income) and the return on each class of assets.

Staff found that KEPCo's forecasted mix of equities and fixed-income securities is reasonable throughout the time span of the calculation. Likewise, KEPCo's expected returns on the equities and fixed-income assets are reasonable and conservative. KEPCo's expected returns are consistent with forecasts published by investment management firms. For example, one of the largest global investment management firm's long-term forecasted return² for a portfolio of 60% equities and 40% fixed-income is about 6.00% annually, as compared to the return that KEPCo assumes going forward of 5.15% on a comparable mix of equity and fixed-income investments. The forecasted returns published by this investment firm are consistent with those published by other firms in the capital management industry.

² J.P. Morgan Asset Management Long-Term Capital Market Assumption, 2019; <https://am.jpmorgan.com/blob-gim/1383582205822/83456/JPM51230%20LTCMA%202019%20-%20EMEA.PDF>

RECOMMENDATION: Staff recommends the Commission adopt KEPCo's Funding Plan as shown in "Attachment A" of its Application.

ATTACHMENT A

Kansas Electric Power Cooperative Inc.
Estimate for Decommissioning Fund Contributions
SAFSTOR
Attachment A

KCC Stipulated and Fixed Amounts	
Total Cost DECON w LT Spent Fuel Method in 2017 \$s	\$1,093,117,000
Estimated KEPCo Cost in 2017 \$s	\$65,587,020
Forecasted Rate of Inflation	2.91%
Remaining Years in Service	28
Total KEPCo Cost of Decommissioning	\$830,592,205
Market Value of Portfolio @ 09/30/2018	\$27,026,427
Remaining \$s To Be Collected	\$803,565,778
KEPCo Variables	
Forecasted Return on Portfolio	Table Below
Annual Payment	\$543,994
Amount of Excess/Shortfall	0

Time	Year	Annual Inflow	Annual Outflow	Annual Earnings	Balance	Annual Return
1	2018	\$ -	\$ -	\$ -	\$ 27,026,427	5.15%
2	2019	\$ 543,994	\$ -	\$ 1,391,861	\$ 28,860,190	5.15%
3	2020	\$ 543,994	\$ -	\$ 1,486,300	\$ 30,781,973	5.15%
4	2021	\$ 543,994	\$ -	\$ 1,585,272	\$ 32,796,002	5.15%
5	2022	\$ 543,994	\$ -	\$ 1,688,994	\$ 34,906,705	5.15%
6	2023	\$ 543,994	\$ -	\$ 1,797,695	\$ 37,118,721	5.15%
7	2024	\$ 543,994	\$ -	\$ 1,911,614	\$ 39,436,914	5.15%
8	2025	\$ 543,994	\$ -	\$ 2,031,001	\$ 41,866,380	5.15%
9	2026	\$ 543,994	\$ -	\$ 2,156,119	\$ 44,412,460	5.15%
10	2027	\$ 543,994	\$ -	\$ 2,287,242	\$ 47,080,753	5.15%

11	2028	\$	543,994	\$	-	\$	2,424,659	\$	49,877,123	5.15%
12	2029	\$	543,994	\$	-	\$	2,568,672	\$	52,807,720	5.15%
13	2030	\$	543,994	\$	-	\$	2,719,598	\$	55,878,984	5.15%
14	2031	\$	543,994	\$	-	\$	2,877,768	\$	59,097,670	5.15%
15	2032	\$	543,994	\$	-	\$	3,043,530	\$	62,470,852	5.15%
16	2033	\$	543,994	\$	-	\$	3,217,249	\$	66,005,948	5.15%
17	2034	\$	543,994	\$	-	\$	3,399,306	\$	69,710,727	5.15%
18	2035	\$	543,994	\$	-	\$	3,590,102	\$	73,593,337	5.15%
19	2036	\$	543,994	\$	-	\$	3,790,057	\$	77,662,311	5.15%
20	2037	\$	543,994	\$	-	\$	3,999,609	\$	81,926,596	5.15%
21	2038	\$	543,994	\$	-	\$	4,219,220	\$	86,395,567	5.15%
22	2039	\$	543,994	\$	-	\$	4,449,372	\$	91,079,049	5.15%
23	2040	\$	543,994	\$	-	\$	4,690,571	\$	95,987,338	5.15%
24	2041	\$	543,994	\$	-	\$	4,943,348	\$	101,131,224	5.15%
25	2042	\$	543,994	\$	-	\$	5,208,258	\$	106,522,017	5.15%
26	2043	\$	543,994	\$	-	\$	5,485,884	\$	112,171,568	5.15%
27	2044	\$	543,994	\$	-	\$	5,776,836	\$	118,092,298	5.15%
28	2045	\$	-	\$	(8,053,839)	\$	6,081,753	\$	115,699,389	5.15%
29	2046	\$	-	\$	(11,548,678)	\$	5,958,519	\$	109,696,782	5.15%
30	2047	\$	-	\$	(5,284,264)	\$	5,649,384	\$	109,670,463	5.15%
31	2048	\$	-	\$	(5,437,435)	\$	5,648,029	\$	109,489,711	5.15%
32	2049	\$	-	\$	(5,563,915)	\$	5,638,720	\$	109,173,802	5.15%
33	2050	\$	-	\$	(4,190,053)	\$	5,622,451	\$	110,216,591	5.15%
34	2051	\$	-	\$	(778,535)	\$	5,676,154	\$	114,720,953	5.15%
35	2052	\$	-	\$	(801,163)	\$	5,908,129	\$	119,418,896	5.15%
36	2053	\$	-	\$	(820,216)	\$	6,150,073	\$	124,323,287	5.15%
37	2054	\$	-	\$	(841,899)	\$	6,402,649	\$	129,441,406	5.15%
38	2055	\$	-	\$	(864,164)	\$	6,666,232	\$	134,782,929	5.15%
39	2056	\$	-	\$	(889,316)	\$	6,941,321	\$	140,355,694	5.15%
40	2057	\$	-	\$	(910,506)	\$	7,228,318	\$	146,174,762	5.15%
41	2058	\$	-	\$	(934,615)	\$	7,528,000	\$	152,249,035	5.15%
42	2059	\$	-	\$	(959,374)	\$	7,840,825	\$	158,590,115	5.15%
43	2060	\$	-	\$	(987,336)	\$	8,167,391	\$	165,207,604	5.15%
44	2061	\$	-	\$	(1,010,908)	\$	8,508,192	\$	172,119,161	5.15%

45	2062	\$	-	\$	(1,037,722)	\$	8,864,137	\$	179,335,658	5.15%
46	2063	\$	-	\$	(1,065,258)	\$	9,235,786	\$	186,871,012	5.15%
47	2064	\$	-	\$	(1,096,353)	\$	9,623,857	\$	194,736,967	5.15%
48	2065	\$	-	\$	(1,122,581)	\$	10,028,954	\$	202,954,261	5.15%
49	2066	\$	-	\$	(1,152,408)	\$	10,452,144	\$	211,536,157	5.15%
50	2067	\$	-	\$	(1,183,042)	\$	10,894,112	\$	220,499,351	5.15%
51	2068	\$	-	\$	(1,217,627)	\$	11,355,717	\$	229,858,193	5.15%
52	2069	\$	-	\$	(1,246,817)	\$	11,837,697	\$	239,637,069	5.15%
53	2070	\$	-	\$	(1,280,006)	\$	12,341,309	\$	249,852,143	5.15%
54	2071	\$	-	\$	(1,314,093)	\$	12,867,385	\$	260,523,453	5.15%
55	2072	\$	-	\$	(1,352,569)	\$	13,416,958	\$	271,668,510	5.15%
56	2073	\$	-	\$	(1,385,066)	\$	13,990,928	\$	283,316,033	5.15%
57	2074	\$	-	\$	(1,422,003)	\$	14,590,776	\$	295,485,699	5.15%
58	2075	\$	-	\$	(1,459,944)	\$	15,217,513	\$	308,201,568	5.15%
59	2076	\$	-	\$	(1,502,760)	\$	15,872,381	\$	321,484,983	5.15%
60	2077	\$	-	\$	(1,538,948)	\$	16,556,477	\$	335,369,814	5.15%
61	2078	\$	-	\$	(1,580,070)	\$	17,271,545	\$	349,879,996	5.15%
62	2079	\$	-	\$	(1,622,312)	\$	18,018,820	\$	365,044,424	5.15%
63	2080	\$	-	\$	(1,669,971)	\$	18,799,788	\$	380,889,086	5.15%
64	2081	\$	-	\$	(1,710,281)	\$	19,615,788	\$	397,453,980	5.15%
65	2082	\$	-	\$	(1,756,075)	\$	20,468,880	\$	414,768,197	5.15%
66	2083	\$	-	\$	(1,803,120)	\$	21,360,562	\$	432,866,450	5.15%
67	2084	\$	-	\$	(1,856,185)	\$	22,292,622	\$	451,780,355	5.15%
68	2085	\$	-	\$	(1,901,104)	\$	19,516,911	\$	467,807,432	4.32%
69	2086	\$	-	\$	(1,952,116)	\$	20,209,281	\$	484,419,770	4.32%
70	2087	\$	-	\$	(2,004,527)	\$	20,926,934	\$	501,639,208	4.32%
71	2088	\$	-	\$	(2,063,631)	\$	21,670,814	\$	519,483,153	4.32%
72	2089	\$	-	\$	(2,113,703)	\$	22,441,672	\$	537,985,432	4.32%
73	2090	\$	-	\$	(2,170,549)	\$	23,240,971	\$	557,165,404	4.32%
74	2091	\$	-	\$	(2,228,960)	\$	24,069,545	\$	577,048,411	4.32%
75	2092	\$	-	\$	(2,294,811)	\$	20,138,990	\$	592,865,420	3.49%
76	2093	\$	-	\$	(2,350,649)	\$	20,691,003	\$	609,123,245	3.49%
77	2094	\$	-	\$	(2,414,021)	\$	21,258,401	\$	625,828,193	3.49%
78	2095	\$	-	\$	(2,479,143)	\$	21,841,404	\$	642,992,556	3.49%

79	2096	\$	-	\$	(2,552,541)	\$	22,440,440	\$	660,622,482	3.49%
80	2097	\$	-	\$	(2,614,835)	\$	23,055,725	\$	678,743,692	3.49%
81	2098	\$	-	\$	(5,489,018)	\$	11,131,397	\$	682,002,968	1.64%
82	2099	\$	-	\$	(25,850,380)	\$	11,184,849	\$	664,942,926	1.64%
83	2100	\$	-	\$	(159,736,477)	\$	10,905,064	\$	513,776,713	1.64%
84	2101	\$	-	\$	(235,334,655)	\$	8,425,938	\$	285,062,278	1.64%
85	2102	\$	-	\$	(99,764,354)	\$	4,675,021	\$	188,967,727	1.64%
86	2103	\$	-	\$	(104,470,268)	\$	3,099,071	\$	86,927,642	1.64%
87	2104	\$	-	\$	(58,714,416)	\$	1,425,613	\$	29,327,093	1.64%
88	2105	\$	-	\$	(18,053,822)	\$	480,964	\$	11,644,091	1.64%
89	2106	\$	-	\$	(11,786,800)	\$	190,963	\$	0	1.64%

CERTIFICATE OF SERVICE

19-KEPE-460-MIS

I, the undersigned, certify that a true and correct copy of the above and foregoing Notice of Filing of Staff Report and Recommendation was served electronically this 22nd day of July, 2019, to the following:

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