

**KENTUCKY POWER COMPANY**

**BIG SANDY UNIT 1**

**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**

**DEPRECIATION STUDY WORKPAPERS**

**KENTUCKY POWER COMPANY**  
**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**  
**BIG SANDY PLANT**  
**AVERAGE AGE OF SURVIVING PLANT**

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE AGE OF SURVIVING PLANT  
 BIG SANDY GENERATING PLANT - Account 311**

VINTAGE YEAR	SURVIVING BALANCE	AGE (YEARS)	DOLLAR YEARS	AVERAGE AGE (YEARS)
1963	2,997,080	53.5	160,343,801	
1964	9,315	52.5	489,035	
1965	12,957	51.5	667,260	
1966	2,567	50.5	129,635	
1967	153	49.5	7,583	
1968	10,969	48.5	531,987	
1970	131,388	46.5	6,109,549	
1971	30,036	45.5	1,366,657	
1972	10,482	44.5	466,450	
1973	481	43.5	20,920	
1974	924	42.5	39,268	
1975	5,241	41.5	217,494	
1976	12,122	40.5	490,930	
1977	14,170	39.5	559,727	
1978	52,188	38.5	2,009,246	
1979	30,094	37.5	1,128,515	
1980	191	36.5	6,981	
1981	39,423	35.5	1,399,529	
1982	118,151	34.5	4,076,207	
1983	61,497	33.5	2,060,157	
1984	484	32.5	15,743	
1987	6,453	29.5	190,363	
1988	31,694	28.5	903,285	
1989	2,881	27.5	79,217	
1990	32,209	26.5	853,546	
1991	2,077	25.5	52,959	
1992	3,824	24.5	93,696	
1993	29,153	23.5	685,102	
1994	218,837	22.5	4,923,838	
1995	2,227	21.5	47,873	
1996	85,931	20.5	1,761,584	
1997	132,755	19.5	2,588,725	
1998	247,224	18.5	4,573,646	
1999	10,408	17.5	182,138	
2000	31,263	16.5	515,841	
2002	1,146,198	14.5	16,619,878	
2003	57,124	13.5	771,171	
2004	102,623	12.5	1,282,790	
2005	339,407	11.5	3,903,186	
2006	152,839	10.5	1,604,811	
2007	173,086	9.5	1,644,319	
2008	340,431	8.5	2,893,667	
2009	198,620	7.5	1,489,651	
2010	56,861	6.5	369,594	
2011	58,886	5.5	323,875	
2012	137,255	4.5	617,648	
2013	92,417	3.5	323,460	
2014	30,529	2.5	76,322	
2015	2,170,114	1.5	3,255,170	
2016	<u>2,322,885</u>	0.5	<u>1,161,442</u>	
	11,756,127		235,925,471	<b>20.07</b>

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE AGE OF SURVIVING PLANT  
 BIG SANDY GENERATING PLANT - Account 312**

VINTAGE YEAR	SURVIVING BALANCE	AGE (YEARS)	DOLLAR YEARS	AVERAGE AGE (YEARS)
1963	2,069,258	53.5	110,705,285	
1964	74,130	52.5	3,891,843	
1965	22,980	51.5	1,183,487	
1966	25,740	50.5	1,299,893	
1967	972	49.5	48,115	
1968	27,946	48.5	1,355,391	
1970	207,880	46.5	9,666,436	
1971	147,608	45.5	6,716,145	
1972	61,783	44.5	2,749,329	
1973	5,202	43.5	226,307	
1974	52,885	42.5	2,247,633	
1975	88,189	41.5	3,659,863	
1976	36,118	40.5	1,462,764	
1977	54,154	39.5	2,139,092	
1978	298,041	38.5	11,474,586	
1979	269,393	37.5	10,102,226	
1980	142,610	36.5	5,205,262	
1981	194,102	35.5	6,890,610	
1982	350,178	34.5	12,081,140	
1983	159,815	33.5	5,353,786	
1984	120,855	32.5	3,927,776	
1985	146,983	31.5	4,629,976	
1986	121,432	30.5	3,703,677	
1987	266,497	29.5	7,861,659	
1988	191,531	28.5	5,458,637	
1989	122,520	27.5	3,369,296	
1990	149,970	26.5	3,974,206	
1991	107,650	25.5	2,745,076	
1992	238,992	24.5	5,855,294	
1993	223,800	23.5	5,259,292	
1994	412,803	22.5	9,288,068	
1995	873,616	21.5	18,782,751	
1996	707,086	20.5	14,495,268	
1997	462,748	19.5	9,023,581	
1998	572,147	18.5	10,584,727	
1999	13,922	17.5	243,634	
2000	51,192	16.5	844,660	
2001	28,569	15.5	442,827	
2002	246,824	14.5	3,578,949	
2004	518,323	12.5	6,479,031	
2005	407,908	11.5	4,690,938	
2006	551,060	10.5	5,786,129	
2007	313,893	9.5	2,981,986	
2008	901,763	8.5	7,664,983	
2009	85,385	7.5	640,390	
2010	645,211	6.5	4,193,872	
2011	432,314	5.5	2,377,729	
2012	806,944	4.5	3,631,247	
2013	264,339	3.5	925,187	
2014	74,054	2.5	185,134	
2015	160,820	1.5	241,230	
2016	<u>60,878,587</u>	0.5	<u>30,439,294</u>	
	75,388,722		382,765,697	5.08

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE AGE OF SURVIVING PLANT  
 BIG SANDY GENERATING PLANT - Account 314**

VINTAGE YEAR	SURVIVING BALANCE	AGE (YEARS)	DOLLAR YEARS	AVERAGE AGE (YEARS)
1963	5,378,356	53.5	287,742,054	
1965	6	51.5	320	
1966	59,188	50.5	2,988,985	
1970	308,935	46.5	14,365,457	
1971	300,482	45.5	13,671,930	
1972	112,909	44.5	5,024,437	
1973	25,293	43.5	1,100,243	
1974	6,216	42.5	264,186	
1975	240,134	41.5	9,965,561	
1976	3,981	40.5	161,250	
1977	8,170	39.5	322,730	
1978	4,807	38.5	185,066	
1979	222,434	37.5	8,341,274	
1981	809,683	35.5	28,743,737	
1982	176,640	34.5	6,094,078	
1983	433,828	33.5	14,533,250	
1984	25,266	32.5	821,143	
1985	485	31.5	15,283	
1986	30,319	30.5	924,738	
1987	96,782	29.5	2,855,054	
1988	1,389,327	28.5	39,595,812	
1989	834,871	27.5	22,958,961	
1990	406,098	26.5	10,761,599	
1991	690,000	25.5	17,595,001	
1993	1,125,177	23.5	26,441,667	
1994	926,658	22.5	20,849,796	
1995	486,981	21.5	10,470,092	
1996	598,555	20.5	12,270,372	
1998	4,716,303	18.5	87,251,612	
1999	3,095	17.5	54,156	
2000	21,296	16.5	351,391	
2001	4,860	15.5	75,323	
2002	2,881,542	14.5	41,782,361	
2003	365,845	13.5	4,938,906	
2004	646,104	12.5	8,076,301	
2005	254,962	11.5	2,932,069	
2006	530,585	10.5	5,571,143	
2007	368,312	9.5	3,498,962	
2008	33,867,615	8.5	287,874,729	
2009	25,383	7.5	190,375	
2010	17,442	6.5	113,375	
2011	154,351	5.5	848,929	
2012	88,771	4.5	399,468	
2013	1,992,030	3.5	6,972,106	
2014	286,136	2.5	715,339	
2015	109,146	1.5	163,719	
2016	<u>356,987</u>	0.5	<u>178,493</u>	
	61,392,346		1,011,052,833	<b>16.47</b>

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE AGE OF SURVIVING PLANT  
 BIG SANDY GENERATING PLANT - Account 315**

VINTAGE YEAR	SURVIVING BALANCE	AGE (YEARS)	DOLLAR YEARS	AVERAGE AGE (YEARS)
1963	1,454,149	53.5	77,796,995	
1965	1,390	51.5	71,587	
1970	134,343	46.5	6,246,930	
1971	86,297	45.5	3,926,496	
1972	3,234	44.5	143,912	
1973	27,714	43.5	1,205,563	
1974	362	42.5	15,367	
1976	70,412	40.5	2,851,669	
1977	27,666	39.5	1,092,817	
1978	52,679	38.5	2,028,157	
1979	9,494	37.5	356,016	
1980	15,962	36.5	582,628	
1981	104,237	35.5	3,700,415	
1982	85,906	34.5	2,963,745	
1983	21,612	33.5	724,005	
1984	21,442	32.5	696,877	
1985	21,176	31.5	667,056	
1987	29,089	29.5	858,118	
1988	45,500	28.5	1,296,749	
1989	24,337	27.5	669,270	
1990	51,643	26.5	1,368,546	
1991	25,782	25.5	657,433	
1992	9,432	24.5	231,081	
1993	28,079	23.5	659,847	
1994	7,093	22.5	159,588	
1995	2,769	21.5	59,526	
1996	79,164	20.5	1,622,861	
1997	226,625	19.5	4,419,179	
1998	97,967	18.5	1,812,385	
1999	695	17.5	12,158	
2000	25,029	16.5	412,972	
2001	18,401	15.5	285,220	
2002	135,353	14.5	1,962,618	
2003	216,931	13.5	2,928,569	
2004	4,789	12.5	59,863	
2005	1,658	11.5	19,070	
2006	44,224	10.5	464,350	
2007	42,151	9.5	400,430	
2008	58,687	8.5	498,838	
2009	86,988	7.5	652,408	
2010	59,216	6.5	384,905	
2011	6,264	5.5	34,453	
2012	115,473	4.5	519,627	
2013	24,183	3.5	84,641	
2015	105,842	1.5	158,763	
2016	<u>165,700</u>	0.5	<u>82,850</u>	
	3,877,136		127,846,553	<b>32.97</b>

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE AGE OF SURVIVING PLANT  
 BIG SANDY GENERATING PLANT - Account 316**

VINTAGE YEAR	SURVIVING BALANCE	AGE (YEARS)	DOLLAR YEARS	AVERAGE AGE (YEARS)
1963	660,603	53.5	35,342,269	
1964	4,003	52.5	210,164	
1965	4,603	51.5	237,059	
1966	7,226	50.5	364,921	
1967	2,021	49.5	100,016	
1968	3,237	48.5	156,985	
1970	55,921	46.5	2,600,327	
1971	24,019	45.5	1,092,880	
1972	13,632	44.5	606,644	
1973	6,538	43.5	284,386	
1975	35,357	41.5	1,467,302	
1976	5,270	40.5	213,431	
1977	2,543	39.5	100,439	
1978	9,748	38.5	375,279	
1979	6,756	37.5	253,359	
1980	3,169	36.5	115,680	
1981	26,500	35.5	940,761	
1982	20,493	34.5	707,005	
1984	18,468	32.5	600,210	
1985	24,183	31.5	761,779	
1986	27,265	30.5	831,571	
1987	9,065	29.5	267,403	
1988	8,303	28.5	236,646	
1989	23,371	27.5	642,715	
1990	4,824	26.5	127,824	
1991	8,298	25.5	211,606	
1992	22,470	24.5	550,508	
1993	3,212	23.5	75,489	
1994	351,391	22.5	7,906,290	
1995	28,546	21.5	613,728	
1996	48,396	20.5	992,112	
1997	61,547	19.5	1,200,173	
1998	13,263	18.5	245,371	
1999	9,459	17.5	165,541	
2000	2,121	16.5	34,997	
2001	14,344	15.5	222,331	
2002	20,755	14.5	300,945	
2003	40,698	13.5	549,419	
2004	49,807	12.5	622,589	
2005	55,798	11.5	641,673	
2006	60,654	10.5	636,864	
2007	74,928	9.5	711,814	
2008	62,539	8.5	531,582	
2009	14,930	7.5	111,974	
2010	204,813	6.5	1,331,283	
2011	6,583	5.5	36,206	
2012	17,026	4.5	76,617	
2013	187,593	3.5	656,574	
2014	42,202	2.5	105,505	
2015	769,747	1.5	1,154,620	
2016	<u>143,108</u>	0.5	<u>71,554</u>	
	3,321,344		68,394,420	<b>20.59</b>

**KENTUCKY POWER COMPANY**  
**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**  
**BIG SANDY PLANT**  
**AVERAGE REMAINING LIFE**



**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE REMAINING LIFE  
 BIG SANDY GENERATING PLANT - Account 311  
 RETIREMENT YEAR 2031  
 ANNUAL INTERIM RETIREMENT RATE = 0.00379**

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM LIFE</u>
2017	44,556	0.5	22,278	
2018	44,556	1.5	66,834	
2019	44,556	2.5	111,390	
2020	44,556	3.5	155,946	
2021	44,556	4.5	200,502	
2022	44,556	5.5	245,058	
2023	44,556	6.5	289,614	
2024	44,556	7.5	334,170	
2025	44,556	8.5	378,726	
2026	44,556	9.5	423,282	
2027	44,556	10.5	467,838	
2028	44,556	11.5	512,394	
2029	44,556	12.5	556,950	
2030	44,556	13.5	601,506	
2031	<u>11,132,343</u>	14.5	<u>161,418,974</u>	
TOTALS	11,756,127		165,785,462	<b>14.10</b>

Interim Retirement Amount                      623,784

**KENTUCKY POWER COMPANY**  
**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**  
**CALCULATION OF AVERAGE REMAINING LIFE**  
**BIG SANDY GENERATING PLANT - Account 312**  
**RETIREMENT YEAR 2031**  
**ANNUAL INTERIM RETIREMENT RATE = 0.01021**

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM LIFE</u>
2017	769,719	0.5	384,860	
2018	769,719	1.5	1,154,579	
2019	769,719	2.5	1,924,298	
2020	769,719	3.5	2,694,017	
2021	769,719	4.5	3,463,736	
2022	769,719	5.5	4,233,455	
2023	769,719	6.5	5,003,174	
2024	769,719	7.5	5,772,893	
2025	769,719	8.5	6,542,612	
2026	769,719	9.5	7,312,331	
2027	769,719	10.5	8,082,050	
2028	769,719	11.5	8,851,769	
2029	769,719	12.5	9,621,488	
2030	769,719	13.5	10,391,207	
2031	<u>64,612,656</u>	14.5	<u>936,883,512</u>	
<b>TOTALS</b>	<b>75,388,722</b>		<b>1,012,315,974</b>	<b>13.43</b>

Interim Retirement Amount                      10,776,066

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE REMAINING LIFE  
 BIG SANDY GENERATING PLANT - Account 314  
 RETIREMENT YEAR 2031  
 ANNUAL INTERIM RETIREMENT RATE = 0.00609**

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM LIFE</u>
2017	373,879	0.5	186,940	
2018	373,879	1.5	560,819	
2019	373,879	2.5	934,698	
2020	373,879	3.5	1,308,577	
2021	373,879	4.5	1,682,456	
2022	373,879	5.5	2,056,335	
2023	373,879	6.5	2,430,214	
2024	373,879	7.5	2,804,093	
2025	373,879	8.5	3,177,972	
2026	373,879	9.5	3,551,851	
2027	373,879	10.5	3,925,730	
2028	373,879	11.5	4,299,609	
2029	373,879	12.5	4,673,488	
2030	373,879	13.5	5,047,367	
2031	<u>56,158,040</u>	14.5	<u>814,291,580</u>	
<b>TOTALS</b>	<b>61,392,346</b>		<b>850,931,722</b>	<b>13.86</b>

Interim Retirement Amount                      5,234,306

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE REMAINING LIFE  
 BIG SANDY GENERATING PLANT - Account 315  
 RETIREMENT YEAR 2031  
 ANNUAL INTERIM RETIREMENT RATE = 0.00447**

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM LIFE</u>
2017	17,331	0.5	8,666	
2018	17,331	1.5	25,997	
2019	17,331	2.5	43,328	
2020	17,331	3.5	60,659	
2021	17,331	4.5	77,990	
2022	17,331	5.5	95,321	
2023	17,331	6.5	112,652	
2024	17,331	7.5	129,983	
2025	17,331	8.5	147,314	
2026	17,331	9.5	164,645	
2027	17,331	10.5	181,976	
2028	17,331	11.5	199,307	
2029	17,331	12.5	216,638	
2030	17,331	13.5	233,969	
2031	<u>3,634,502</u>	14.5	<u>52,700,279</u>	
<b>TOTALS</b>	<b>3,877,136</b>		<b>54,398,717</b>	<b>14.03</b>

Interim Retirement Amount                      242,634

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATION OF AVERAGE REMAINING LIFE  
 BIG SANDY GENERATING PLANT - Account 316  
 RETIREMENT YEAR 2031  
 ANNUAL INTERIM RETIREMENT RATE = 0.00448**

<u>YEAR</u>	<u>AMOUNT RETIRED</u>	<u>REM LIFE (YEARS)</u>	<u>DOLLAR YEARS</u>	<u>AVERAGE REM LIFE</u>
2017	14,880	0.5	7,440	
2018	14,880	1.5	22,320	
2019	14,880	2.5	37,200	
2020	14,880	3.5	52,080	
2021	14,880	4.5	66,960	
2022	14,880	5.5	81,840	
2023	14,880	6.5	96,720	
2024	14,880	7.5	111,600	
2025	14,880	8.5	126,480	
2026	14,880	9.5	141,360	
2027	14,880	10.5	156,240	
2028	14,880	11.5	171,120	
2029	14,880	12.5	186,000	
2030	14,880	13.5	200,880	
2031	<u>3,113,024</u>	14.5	<u>45,138,848</u>	
<b>TOTALS</b>	<b>3,321,344</b>		<b>46,597,088</b>	<b>14.03</b>

Interim Retirement Amount                      208,320

**KENTUCKY POWER COMPANY**  
**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**  
**BIG SANDY PLANT**  
**INTERIM RETIREMENT RATIOS**

**KENTUCKY POWER COMPANY**  
**Interim Activity Analysis @ December 31, 2016**  
**Plant - Big Sandy, Account 311**

<b>Year</b>	<b>Additions</b>	<b>Retmts</b>	<b>Transfers &amp; Adj.</b>	<b>Beginning Balance</b>	<b>Interim Retmts</b>
1998	0.00	0.00	0.00	29,075,673.00	0.00
1999	220,172.83	(4,000.00)	0.00	29,075,673.00	(4,000.00)
2000	46,629.46	(17,281.51)	0.00	29,291,845.83	(17,281.51)
2001	20,442.87	(8,355.00)	0.00	29,321,193.78	(8,355.00)
2002	430.50	(1,167.67)	0.00	29,333,281.65	(1,167.67)
2003	6,265,695.81	(5,061.35)	0.00	29,332,544.48	(5,061.35)
2004	630,676.06	(74,097.10)	0.00	35,593,178.94	(74,097.10)
2005	1,829,331.53	(60,909.77)	233,726.90	36,149,757.90	(60,909.77)
2006	484,133.73	(118,897.31)	0.00	38,151,906.56	(118,897.31)
2007	1,141,079.95	(258,942.19)	0.00	38,517,142.98	(258,942.19)
2008	1,533,583.83	(348,944.30)	0.00	39,399,280.74	(348,944.30)
2009	1,340,748.74	(197,472.62)	0.00	40,583,920.27	(197,472.62)
2010	702,311.24	(106,480.77)	0.00	41,727,196.39	(106,480.77)
2011	251,155.97	(36,646.45)	0.00	42,323,026.86	(36,646.45)
2012	810,181.76	(188,375.54)	0.00	42,537,536.38	(188,375.54)
2013	126,865.38	5,456.68	0.00	43,159,342.60	5,456.68
2014	411,416.87	(660,873.50)	0.00	43,291,664.66	(660,873.50)
2015	1,858,397.78	(35,668,288.91)	0.00	43,042,208.03	(150,655.71)
2016	2,829,718.53	(305,908.66)	0.00	9,232,316.90	(305,908.66)
<b>Total</b>	<b>20,502,972.84</b>	<b>(38,056,245.97)</b>	<b>233,726.90</b>	<b>669,138,690.95</b>	<b>(2,538,612.77)</b>

**Interim Retirement Factor**

**0.00379**

2016 Balance

11,756,126.77

**Note:** 2015 Interim Retirements were adjusted to exclude the retirement of the coal assets at Big Sandy

**KENTUCKY POWER COMPANY**  
**Interim Activity Analysis @ December 31, 2016**  
**Plant - Big Sandy, Account 312**

<b>Year</b>	<b>Additions</b>	<b>Retmnts</b>	<b>Transfers &amp; Adj.</b>	<b>Beginning Balance</b>	<b>Interim Retmnts</b>
1998	0.00	0.00	0.00	144,032,619.00	0.00
1999	1,881,074.16	(193,709.96)	(28,163.00)	144,032,619.00	(193,709.96)
2000	2,908,027.83	(641,670.90)	1,444,194.00	145,691,820.20	(641,670.90)
2001	922,803.23	(356,729.14)	0.00	149,402,371.13	(356,729.14)
2002	3,332,714.97	(560,581.31)	0.00	149,968,445.22	(560,581.31)
2003	183,221,112.15	(15,170,924.46)	0.00	152,740,578.88	(15,170,924.46)
2004	6,041,203.52	(2,293,275.88)	0.00	320,790,766.57	(2,293,275.88)
2005	6,490,044.37	(946,347.93)	0.00	324,538,694.21	(946,347.93)
2006	7,880,638.04	(2,730,270.60)	0.00	330,082,390.65	(2,730,270.60)
2007	4,975,557.73	(2,668,837.61)	0.00	335,232,758.09	(2,668,837.61)
2008	23,004,351.30	(5,305,939.29)	0.00	337,539,478.21	(5,305,939.29)
2009	9,001,917.33	(3,204,442.57)	0.00	355,237,890.22	(3,204,442.57)
2010	5,147,976.15	(1,513,600.98)	0.00	361,035,364.98	(1,513,600.98)
2011	5,381,925.69	(4,675,112.13)	(7,066.55)	364,669,740.15	(4,675,112.13)
2012	9,019,955.46	(5,487,448.86)	0.00	365,369,487.16	(5,487,448.86)
2013	3,471,240.60	(1,769,542.79)	0.00	368,901,993.76	(1,769,542.79)
2014	1,360,350.66	(2,732,045.31)	0.00	370,603,691.57	(2,732,045.31)
2015	1,546,646.44	(355,639,838.04)	0.00	369,231,996.92	(1,115,516.79)
2016	61,010,790.54	(760,873.54)	0.00	15,138,805.32	(760,873.54)
<b>Total</b>	<b>336,598,330.17</b>	<b>(406,651,191.30)</b>	<b>1,408,964.45</b>	<b>5,104,241,511.24</b>	<b>(52,126,870.05)</b>

**Interim Retirement Factor**

**0.01021**

2016 Balance

75,388,722.32

**Note:** 2015 Interim Retirments were adjusted to exclude the retirement of the coal assets at Big Sandy



**KENTUCKY POWER COMPANY**  
**Interim Activity Analysis @ December 31, 2016**  
**Plant - Big Sandy, Account 314**

<b>Year</b>	<b>Additions</b>	<b>Retmnts</b>	<b>Transfers &amp; Adj.</b>	<b>Beginning Balance</b>	<b>Interim Retmnts</b>
1998	0.00	0.00	0.00	61,821,772.00	0.00
1999	(310,405.75)	(1,230.73)	0.00	61,821,772.00	(1,230.73)
2000	252,534.83	(52,538.10)	1,252,093.00	61,510,135.52	(52,538.10)
2001	47,682.05	(141,367.40)	0.00	62,962,225.25	(141,367.40)
2002	1,505,312.16	(257,582.00)	0.00	62,868,539.90	(257,582.00)
2003	9,648,825.11	(1,427,668.37)	0.00	64,116,270.06	(1,427,668.37)
2004	1,394,539.41	(692,982.65)	0.00	72,337,426.80	(692,982.65)
2005	1,257,589.30	(333,750.30)	0.00	73,038,983.56	(333,750.30)
2006	1,053,123.95	(493,137.52)	0.00	73,962,822.56	(493,137.52)
2007	1,393,818.18	(884,733.21)	0.00	74,522,808.99	(884,733.21)
2008	29,686,505.57	(211,542.62)	0.00	75,031,893.96	(211,542.62)
2009	5,760,688.76	(402,510.80)	0.00	104,506,856.91	(402,510.80)
2010	37,996.60	(29,831.79)	0.00	109,865,034.87	(29,831.79)
2011	403,700.82	(242,624.32)	7,066.55	109,873,199.68	(242,624.32)
2012	773,195.43	(513,876.51)	0.00	110,041,342.73	(513,876.51)
2013	820,955.70	(1,598,668.15)	0.00	110,300,661.65	(1,598,668.15)
2014	4,030,791.50	(1,647,228.44)	0.00	109,522,949.20	(1,647,228.44)
2015	364,939.99	(51,006,739.77)	0.00	111,906,512.26	(300,271.16)
2016	472,119.39	(344,485.87)	0.00	61,264,712.48	(344,485.87)
<b>Total</b>	<b>58,593,913.00</b>	<b>(60,282,498.55)</b>	<b>1,259,159.55</b>	<b>1,571,275,920.38</b>	<b>(9,576,029.94)</b>

**Interim Retirement Factor**

**0.00609**

2016 Balance

61,392,346.00

**Note:** 2015 Interim Retirments were adjusted to exclude the retirement of the coal assets at Big Sandy

**KENTUCKY POWER COMPANY**  
**Interim Activity Analysis @ December 31, 2016**  
**Plant - Big Sandy, Account 315**

<b>Year</b>	<b>Additions</b>	<b>Retmts</b>	<b>Transfers &amp; Adj.</b>	<b>Beginning Balance</b>	<b>Interim Retmts</b>
1998	0.00	0.00	0.00	13,209,602.00	0.00
1999	8,929.26	(1,371.60)	0.00	13,209,602.00	(1,371.60)
2000	368,049.34	(80,920.42)	561,587.00	13,217,159.66	(80,920.42)
2001	46,398.03	(32,875.77)	0.00	14,065,875.58	(32,875.77)
2002	7,425.54	(2,009.14)	0.00	14,079,397.84	(2,009.14)
2003	244,780.63	(587,860.01)	0.00	14,084,814.24	(587,860.01)
2004	4,906.88	(4,041.26)	0.00	13,741,734.86	(4,041.26)
2005	16,173.58	(12,797.85)	1,194,584.65	13,742,600.48	(12,797.85)
2006	206,091.47	(57,499.32)	0.00	14,940,560.86	(57,499.32)
2007	173,582.38	(46,468.47)	0.00	15,089,153.01	(46,468.47)
2008	103,306.34	(16,287.27)	0.00	15,216,266.92	(16,287.27)
2009	511,250.46	(92,613.38)	0.00	15,303,285.99	(92,613.38)
2010	340,629.43	(8,325.98)	0.00	15,721,923.07	(8,325.98)
2011	111,783.77	(70,609.68)	0.00	16,054,226.52	(70,609.68)
2012	428,637.17	(133,162.13)	0.00	16,095,400.61	(133,162.13)
2013	131,333.15	(9,006.53)	0.00	16,390,875.65	(9,006.53)
2014	23,983.38	(3,501.87)	0.00	16,513,202.27	(3,501.87)
2015	124,427.75	(12,899,439.02)	0.00	16,533,683.78	(4,929.57)
2016	165,699.51	(47,236.40)	0.00	3,758,672.51	(47,236.40)
<b>Total</b>	<b>3,017,388.07</b>	<b>(14,106,026.10)</b>	<b>1,756,171.65</b>	<b>270,968,037.85</b>	<b>(1,211,516.65)</b>

**Interim Retirement Factor**

**0.00447**

2016 Balance

3,877,135.62

**Note:** 2015 Interim Retirements were adjusted to exclude the retirement of the coal assets at Big Sandy

**KENTUCKY POWER COMPANY**  
**Interim Activity Analysis @ December 31, 2016**  
**Plant - Big Sandy, Account 316**

<b>Year</b>	<b>Additions</b>	<b>Retmts</b>	<b>Transfers &amp; Adj.</b>	<b>Beginning Balance</b>	<b>Interim Retmts</b>
1998	0.00	0.00	0.00	5,674,563.00	0.00
1999	31,382.47	(804.75)	0.00	5,674,563.00	(804.75)
2000	64,253.00	0.00	1,033.00	5,705,140.72	0.00
2001	59,062.43	(4,331.55)	0.00	5,770,426.72	(4,331.55)
2002	67,283.09	(38,540.37)	0.00	5,825,157.60	(38,540.37)
2003	442,131.97	(62,104.97)	(348,660.09)	5,853,900.32	(62,104.97)
2004	698,136.36	(64,449.54)	0.00	5,885,267.23	(64,449.54)
2005	191,000.29	(31,592.80)	0.00	6,518,954.05	(31,592.80)
2006	176,384.27	(20,680.94)	0.00	6,678,361.54	(20,680.94)
2007	302,266.04	(15,563.03)	0.00	6,834,064.87	(15,563.03)
2008	78,252.38	(25,876.78)	0.00	7,120,767.88	(25,876.78)
2009	229,245.43	(69,958.40)	0.00	7,173,143.48	(69,958.40)
2010	703,077.44	(9,950.95)	0.00	7,332,430.51	(9,950.95)
2011	46,309.46	(50,251.23)	0.00	8,025,557.00	(50,251.23)
2012	27,170.21	(19,532.77)	0.00	8,021,615.23	(19,532.77)
2013	693,915.82	(13,990.12)	0.00	8,029,252.67	(13,990.12)
2014	59,468.04	(2,516.36)	0.00	8,709,178.37	(2,516.36)
2015	461,435.61	(6,373,867.22)	0.00	8,766,130.05	(129,023.77)
2016	475,510.64	(7,865.26)	0.00	2,853,698.44	(7,865.26)
<b>Total</b>	<b>4,806,284.95</b>	<b>(6,811,877.04)</b>	<b>(347,627.09)</b>	<b>126,452,172.68</b>	<b>(567,033.59)</b>

**Interim Retirement Factor**

**0.00448**

2016 Balance

3,321,343.82

**Note:** 2015 Interim Retirements were adjusted to exclude the retirement of the coal assets at Big Sandy

**KENTUCKY POWER COMPANY**

**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**

**BIG SANDY UNIT 1 NET SALVAGE RATIO CALCULATION**

KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AT DECEMBER 31, 2016  
 CALCULATION OF NET SALVAGE RATIO - BIG SANDY UNIT 1

Plant/Units	Terminal Salvage	Interim Salvage Amount	Total Salvage Amount	Terminal Removal	Interim Removal Amount	Total Removal Amount	Original Cost at Dec. 2016	Salvage as a % of Original Cost	Removal as a % of Original Cost	Net Salvage Percent	Net Salvage Ratio
Big Sandy Unit 1	<u>\$8,261,424</u>	<u>\$1,045,110</u>	<u>\$9,306,534</u>	<u>\$19,665,185</u>	<u>\$4,099,354</u>	<u>\$23,764,539</u>	<u>\$155,735,675</u>	5.98%	15.26%	-9.28%	<b>1.09</b>
<b>Total Big Sandy Unit 1</b>	<u><b>\$8,261,424</b></u>	<u><b>\$1,045,110</b></u>	<u><b>\$9,306,534</b></u>	<u><b>\$19,665,185</b></u>	<u><b>\$4,099,354</b></u>	<u><b>\$23,764,539</b></u>	<u><b>\$155,735,675</b></u>				

**KENTUCKY POWER COMPANY  
 CALCULATION OF TERMINAL SALVAGE AND REMOVAL AT RETIREMENT - BIG SANDY UNIT 1  
 USING SARGENT & LUNDY STUDY DATA AND LIVINGSTON SURVEY ESCALATION INDEX**

<b>Plant/Units</b>	<b>Terminal Salvage</b>	<b>Terminal Removal</b>	<b>Terminal Net Salvage</b>	<b>Average Inflation Rate (1)</b>	<b>Plant Retirement Year</b>	<b>Escalation Period</b>	<b>Terminal Salvage</b>	<b>Terminal Removal</b>	<b>Terminal Net Salvage</b>
<b><u>Big Sandy Plant</u></b>									
S&L Estimate (2) (3)	\$5,486,476	\$13,059,803	\$7,573,327	2.30%	2031	18	\$8,261,424	\$19,665,185	(\$11,403,761)
Total Big Sandy Plant	\$5,486,476	\$13,059,803	\$7,573,327				\$8,261,424	\$19,665,185	(\$11,403,761)

**Notes:**

- (1) Source Livingston Survey dated December 9, 2016 (survey performed by Federal Reserve Bank of Philadelphia)
- (2) The last Sargent & Lundy estimate was based on December 2012 indexed prices.

**KENTUCKY POWER COMPANY  
 CALCULATION OF TERMINAL SALVAGE AND REMOVAL - BIG SANDY UNIT 1**

Plant/Units	Terminal Salvage	Terminal Removal	Net Salvage	KPCo Share of Plant/Unit	Terminal Salvage - Price Level 2013	Terminal Removal - Price Level 2013	Terminal Net Salvage - Price Level 2013
<b><i>Big Sandy Plant</i></b>							
S&L Estimate	\$20,887,112	\$49,718,898	-\$28,831,786	100.00%	\$20,887,112	\$49,718,898	-\$28,831,786
Total Big Sandy Plant	\$20,887,112	\$49,718,898	-\$28,831,786		\$20,887,112	\$49,718,898	-\$28,831,786
			<b>Allocation % to Big Sandy Unit 1</b>		<b>26.27%</b>	<b>26.27%</b>	<b>26.27%</b>
			<b>Terminal Net Salvage - Big Sandy Unit 1</b>		<b>\$5,486,476</b>	<b>\$13,059,803</b>	<b>-\$7,573,326</b>

**Notes:**

- 1) Asbestos costs are included in cost of service separately through the accounting for asset retirement obligations.

**KENTUCKY POWER COMPANY**  
**DEPRECIATION STUDY AT DECEMBER 31, 2016**  
***PERCENTAGE ALLOCATION FOR TERMINAL NET SALVAGE CALCULATION OF BIG SANDY UNIT 1***

Big Sandy Unit 1 Generating Capacity (MW)	285	26.27%
Big Sandy Unit 2 Generating Capacity (MW)	800	73.73%
<b>Total Generating Capacity of Big Sandy</b>	<b>1,085</b>	<b>100.00%</b>



**KENTUCKY POWER COMPANY  
 BIG SANDY UNIT 1  
 CALCULATION OF INTERIM RETIREMENT REMOVAL AND SALVAGE AMOUNTS  
 DEPRECIATION STUDY AT DECEMBER 2016**

<b>Account</b>	<b>Interim Retirement Amount</b>	<b>Interim Removal %</b>	<b>Interim Salvage %</b>	<b>Interim Removal Amount</b>	<b>Interim Salvage Amount</b>
Big Sandy					
311	\$623,784	23.99%	6.12%	\$149,669	\$38,157
312	\$10,776,066	23.99%	6.12%	\$2,585,579	\$659,181
314	\$5,234,306	23.99%	6.12%	\$1,255,905	\$320,187
315	\$242,634	23.99%	6.12%	\$58,217	\$14,842
316	<u>\$208,320</u>	23.99%	6.12%	<u>\$49,984</u>	<u>\$12,743</u>
	\$17,085,110			\$4,099,354	\$1,045,110
			<b>Interim Net Salvage %</b>		
				<b>-17.88%</b>	

**Kentucky Power Company  
 Depreciation Study at December 31, 2016  
 Big Sandy and Mitchell Steam Plant Interim Retirements  
 Removal and Salvage as a % of Retirements**

<u>Year</u>	<u>Retire</u>	<u>Removal</u>	<u>Salvage</u>
2001	\$2,993,746.57	\$3,926,667.74	\$185,115.64
2002	\$1,002,884.46	\$2,853,090.90	\$70,132.51
2003	\$17,368,194.85	\$7,319,823.83	\$15,412.02
2004	\$6,706,362.64	\$4,688,532.40	\$501,015.89
2005	\$1,935,060.35	\$473,564.30	-\$6,024.07
2006	\$29,374,046.55	\$1,023,159.53	\$1,802.94
2007	\$17,187,291.21	\$1,816,077.14	\$466,314.61
2008	\$8,442,428.35	\$930,803.38	\$1,096,436.11
2009	\$7,099,590.81	\$4,892,799.31	\$695,150.68
2010	\$4,584,217.82	\$3,158,048.35	\$524,911.16
2011	\$9,597,929.56	\$681,035.63	\$144,621.61
2012	\$18,961,542.16	\$1,520,105.72	\$1,088,236.66
2013	\$18,287,379.31	\$1,958,542.39	\$4,545,851.16
2014	\$7,176,844.40	\$2,675,750.49	\$918,602.85
2015	\$22,621,513.09	\$6,070,827.45	\$1,005,485.69
2016	<u>\$15,615,230.05</u>	<u>\$1,348,321.03</u>	<u>\$305,427.76</u>
	<b>\$188,954,262.18</b>	<b>\$45,337,149.59</b>	<b>\$11,558,493.22</b>

**Removal and Salvage as a % of  
 Retirements**

**23.99%**

**6.12%**

**Notes:**

1) Mitchell Plant Retirements, Removal and Salvage are included at 100% prior to 2015 for the purposes of this calculation of the percentage of removal and salvage included when retiring steam plant production property.

2) 2015 Retirements were adjusted to exclude the retirement of the coal related assets at Big Sandy.

**KENTUCKY POWER COMPANY**

**DEPRECIATION STUDY AS OF DECEMBER 31, 2016**

**THEORETICAL RESERVE CALCULATION**

**BIG SANDY PLANT**

**KENTUCKY POWER COMPANY  
 DEPRECIATION STUDY AS OF DECEMBER 31, 2016  
 CALCULATED DEPRECIATION RESERVE  
 BIG SANDY GENERATING PLANT**

Plant/Account	Plant Balance	Avg. Age	Avg. Rem. Life	Avg. Life	Net Salvage Ratio	% Rem. Life to Avg. Life	Calculated Reserve %	Calculated Reserve w/o Net Salvage	Calculated Reserve with Net Salvage
<b><u>STEAM PRODUCTION PLANT</u></b>									
<b>BIG SANDY</b>									
311.0	11,756,127	20.07	14.10	34.17	1.09	41.26%	58.74%	6,905,047	7,526,502
312.0	75,388,722	5.08	13.43	18.51	1.09	72.56%	27.44%	20,690,152	22,552,265
314.0	61,392,346	16.47	13.86	30.33	1.09	45.70%	54.30%	33,337,683	36,338,075
315.0	3,877,136	32.97	14.03	47.00	1.09	29.85%	70.15%	2,719,770	2,964,549
316.0	<u>3,321,344</u>	20.59	14.03	34.62	1.09	40.53%	59.47%	1,975,346	2,153,127
Total	<u>155,735,675</u>							<u>65,627,998</u>	<u>71,534,518</u>