

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-101

REQUEST:

Refer to the Application generally. Provide a schedule of the amortization expense and remaining balance associated with each regulatory asset and regulatory liability for each month for the years 2018 through 2022, and for each month projected for 2023 and continuing through the end of the test year. In addition, provide the amortization period and the corresponding case number in which the Commission approved the recovery and the amortization period, if any. This request is applicable to all regulatory assets and liabilities except for the regulatory asset balances related to the Planned Outage O&M and the Forced Outage Purchased Power.

RESPONSE:

Please see AG-DR-01-101 Attachment.

PERSON RESPONSIBLE: Danielle L. Weatherston

DEK Regulatory Assets being amortized

<u>Account #</u>	<u>Account Description</u>	<u>Case No.</u>	<u>Amortization Period</u>	<u>Monthly Amortization Expense</u>	
0182366	Carbon Management Regulatory Asset	KPSC Case No. 2008-308; 2017-00321	05/18 - 04/28	\$	16,666.34
0182525	Non-AMI Meter NBV 182.3	KPSC 2017-321	07/19 - 08/31	\$	30,715.67
0182714	Opt-Out IT Modifications	KPSC 2017-321 KPSC 2008-476;	05/18 - 04/23	\$	2,620.00
0182700	Hurricane Ike Regulatory Asset	KPSC 2017-321 KPSC 2014-201;	05/18 - 04/23	\$	81,878.00
0182050	East Bend Plant O&M expense	KPSC 2017-321	05/18 - 10/28	\$	374,189.09
0182493	East Bend Plant Deferred Depreciation	KPSC 2017-321 KPSC 2015-120;	05/18 - 10/41	\$	22,320.00
0186108	DEK 2017 ELEC Rate Case Exp	KPSC 2017-321	05/18 - 04/28	\$	10,957.00
0186113	DEK 2019 Elec Rate Case Exp	KPSC 2019-271	05/20/-04/25	\$	6,552.80

Carbon Management Reg Asset Amortization
Per DEK Case No. 2017-00321 (4/13/18)

Authorized Amount to Recover:		<u>2,000,000.00</u>	(Acct 0182366) beginning May 31, 2018
GL Balance	4/30/2018	<u>1,850,000.00</u>	
			KPSC 2008-476; KPSC
2nd Qtr Payment	Ant. June 2018	2017-321	50,000.00
3rd Qtr Payment	Ant. Sept 2018		50,000.00
4th Qtr Payment	Ant. Dec 2018		50,000.00

To be amortized for 120 months: **16,666.34** (May 2018 to April 2028)

Accounting used in May 2018 to true up balance and normal amortization

400RA700 - Monthly entry:					
BU	Resp Center	Account	Debit	Credit	
75080	9928	0407305	16,666.34		Normal May amc
75080	9928	0182366		16,666.34	
75080	9928	0407305	39.60		Up front penny ai
75080	9928	0182366		39.60	

Accounting used from June 2018 to April 2028:

400RA702 - Monthly entry:					
BU	Resp Center	Account	Debit	Credit	
75080	9928	0407305	16,666.34		
75080	9928	0182366		16,666.34	

Amortization Schedule			<u>Amortization in</u> <u>Acct 0182366</u>	<u>Net</u> <u>Balance</u>
	Beg Bal	Monthly Amount		1,850,000.00
1	May-18	16,705.94	(16,705.94)	1,833,294.06
2	Jun-18	16,666.34	(33,372.27)	1,866,627.73
3	Jul-18	16,666.34	(50,038.61)	1,849,961.39
4	Aug-18	16,666.34	(66,704.95)	1,833,295.05
5	Sep-18	16,666.34	(83,371.28)	1,866,628.72

6	Oct-18	16,666.34	(100,037.62)	1,849,962.38
7	Nov-18	16,666.34	(116,703.96)	1,833,296.04
8	Dec-18	16,666.34	(133,370.29)	1,866,629.71
9	Jan-19	16,666.34	(150,036.63)	1,849,963.37
10	Feb-19	16,666.34	(166,702.97)	1,833,297.03
11	Mar-19	16,666.34	(183,369.30)	1,816,630.70
12	Apr-19	16,666.34	(200,035.64)	1,799,964.36
13	May-19	16,666.34	(216,701.98)	1,783,298.02
14	Jun-19	16,666.34	(233,368.31)	1,766,631.69
15	Jul-19	16,666.34	(250,034.65)	1,749,965.35
16	Aug-19	16,666.34	(266,700.99)	1,733,299.01
17	Sep-19	16,666.34	(283,367.32)	1,716,632.68
18	Oct-19	16,666.34	(300,033.66)	1,699,966.34
19	Nov-19	16,666.34	(316,700.00)	1,683,300.00
20	Dec-19	16,666.34	(333,366.33)	1,666,633.67
21	Jan-20	16,666.34	(350,032.67)	1,649,967.33
22	Feb-20	16,666.34	(366,699.01)	1,633,300.99
23	Mar-20	16,666.34	(383,365.34)	1,616,634.66
24	Apr-20	16,666.34	(400,031.68)	1,599,968.32
25	May-20	16,666.34	(416,698.02)	1,583,301.98
26	Jun-20	16,666.34	(433,364.35)	1,566,635.65
27	Jul-20	16,666.34	(450,030.69)	1,549,969.31
28	Aug-20	16,666.34	(466,697.03)	1,533,302.97
29	Sep-20	16,666.34	(483,363.36)	1,516,636.64
30	Oct-20	16,666.34	(500,029.70)	1,499,970.30
31	Nov-20	16,666.34	(516,696.04)	1,483,303.96
32	Dec-20	16,666.34	(533,362.37)	1,466,637.63
33	Jan-21	16,666.34	(550,028.71)	1,449,971.29
34	Feb-21	16,666.34	(566,695.05)	1,433,304.95
35	Mar-21	16,666.34	(583,361.38)	1,416,638.62
36	Apr-21	16,666.34	(600,027.72)	1,399,972.28
37	May-21	16,666.34	(616,694.06)	1,383,305.94
38	Jun-21	16,666.34	(633,360.39)	1,366,639.61
39	Jul-21	16,666.34	(650,026.73)	1,349,973.27
40	Aug-21	16,666.34	(666,693.07)	1,333,306.93
41	Sep-21	16,666.34	(683,359.40)	1,316,640.60
42	Oct-21	16,666.34	(700,025.74)	1,299,974.26
43	Nov-21	16,666.34	(716,692.08)	1,283,307.92
44	Dec-21	16,666.34	(733,358.41)	1,266,641.59
45	Jan-22	16,666.34	(750,024.75)	1,249,975.25

46	Feb-22	16,666.34	(766,691.09)	1,233,308.91
47	Mar-22	16,666.34	(783,357.42)	1,216,642.58
48	Apr-22	16,666.34	(800,023.76)	1,199,976.24
49	May-22	16,666.34	(816,690.10)	1,183,309.90
50	Jun-22	16,666.34	(833,356.43)	1,166,643.57
51	Jul-22	16,666.34	(850,022.77)	1,149,977.23
52	Aug-22	16,666.34	(866,689.11)	1,133,310.89
53	Sep-22	16,666.34	(883,355.44)	1,116,644.56
54	Oct-22	16,666.34	(900,021.78)	1,099,978.22
55	Nov-22	16,666.34	(916,688.12)	1,083,311.88
56	Dec-22	16,666.34	(933,354.45)	1,066,645.55
57	Jan-23	16,666.34	(950,020.79)	1,049,979.21
58	Feb-23	16,666.34	(966,687.13)	1,033,312.87
59	Mar-23	16,666.34	(983,353.46)	1,016,646.54
60	Apr-23	16,666.34	(1,000,019.80)	999,980.20
61	May-23	16,666.34	(1,016,686.14)	983,313.86
62	Jun-23	16,666.34	(1,033,352.47)	966,647.53
63	Jul-23	16,666.34	(1,050,018.81)	949,981.19
64	Aug-23	16,666.34	(1,066,685.15)	933,314.85
65	Sep-23	16,666.34	(1,083,351.48)	916,648.52
66	Oct-23	16,666.34	(1,100,017.82)	899,982.18
67	Nov-23	16,666.34	(1,116,684.16)	883,315.84
68	Dec-23	16,666.34	(1,133,350.49)	866,649.51
69	Jan-24	16,666.34	(1,150,016.83)	849,983.17
70	Feb-24	16,666.34	(1,166,683.17)	833,316.83
71	Mar-24	16,666.34	(1,183,349.50)	816,650.50
72	Apr-24	16,666.34	(1,200,015.84)	799,984.16
73	May-24	16,666.34	(1,216,682.18)	783,317.82
74	Jun-24	16,666.34	(1,233,348.51)	766,651.49
75	Jul-24	16,666.34	(1,250,014.85)	749,985.15
76	Aug-24	16,666.34	(1,266,681.19)	733,318.81
77	Sep-24	16,666.34	(1,283,347.52)	716,652.48
78	Oct-24	16,666.34	(1,300,013.86)	699,986.14
79	Nov-24	16,666.34	(1,316,680.20)	683,319.80
80	Dec-24	16,666.34	(1,333,346.53)	666,653.47
81	Jan-25	16,666.34	(1,350,012.87)	649,987.13
82	Feb-25	16,666.34	(1,366,679.21)	633,320.79
83	Mar-25	16,666.34	(1,383,345.54)	616,654.46
84	Apr-25	16,666.34	(1,400,011.88)	599,988.12
85	May-25	16,666.34	(1,416,678.22)	583,321.78

86	Jun-25	16,666.34	(1,433,344.55)	566,655.45
87	Jul-25	16,666.34	(1,450,010.89)	549,989.11
88	Aug-25	16,666.34	(1,466,677.23)	533,322.77
89	Sep-25	16,666.34	(1,483,343.56)	516,656.44
90	Oct-25	16,666.34	(1,500,009.90)	499,990.10
91	Nov-25	16,666.34	(1,516,676.24)	483,323.76
92	Dec-25	16,666.34	(1,533,342.57)	466,657.43
93	Jan-26	16,666.34	(1,550,008.91)	449,991.09
94	Feb-26	16,666.34	(1,566,675.25)	433,324.75
95	Mar-26	16,666.34	(1,583,341.58)	416,658.42
96	Apr-26	16,666.34	(1,600,007.92)	399,992.08
97	May-26	16,666.34	(1,616,674.26)	383,325.74
98	Jun-26	16,666.34	(1,633,340.59)	366,659.41
99	Jul-26	16,666.34	(1,650,006.93)	349,993.07
100	Aug-26	16,666.34	(1,666,673.27)	333,326.73
101	Sep-26	16,666.34	(1,683,339.60)	316,660.40
102	Oct-26	16,666.34	(1,700,005.94)	299,994.06
103	Nov-26	16,666.34	(1,716,672.28)	283,327.72
104	Dec-26	16,666.34	(1,733,338.61)	266,661.39
105	Jan-27	16,666.34	(1,750,004.95)	249,995.05
106	Feb-27	16,666.34	(1,766,671.29)	233,328.71
107	Mar-27	16,666.34	(1,783,337.62)	216,662.38
108	Apr-27	16,666.34	(1,800,003.96)	199,996.04
109	May-27	16,666.34	(1,816,670.30)	183,329.70
110	Jun-27	16,666.34	(1,833,336.63)	166,663.37
111	Jul-27	16,666.34	(1,850,002.97)	149,997.03
112	Aug-27	16,666.34	(1,866,669.31)	133,330.69
113	Sep-27	16,666.34	(1,883,335.64)	116,664.36
114	Oct-27	16,666.34	(1,900,001.98)	99,998.02
115	Nov-27	16,666.34	(1,916,668.32)	83,331.68
116	Dec-27	16,666.34	(1,933,334.65)	66,665.35
117	Jan-28	16,666.34	(1,950,000.99)	49,999.01
118	Feb-28	16,666.34	(1,966,667.33)	33,332.67
119	Mar-28	16,666.34	(1,983,333.66)	16,666.34
120	Apr-28	16,666.34	(2,000,000.00)	(0.00)

ortization

mortization

includes 2nd qtr pmt of \$50,000

includes 3rd qtr pmt of \$50,000

Amort 0182366

includes 4th qtr pmt of \$50,000

GL Balance 06/30	
\$ 1,533,318.20	233,313.49 Correction 06/19

Duke Energy Kentucky

DEK Kentucky Retail Non-AMI Meter Reg Asset

The purpose of this schedule is to show the amortization of the DEK Non-AMI regulatory Asset. The DEK AMI rollout was completed as was done before (through June 2019). Tab B represents the last tracking file that was used for DEK Non-AMI Meter account consists of the NBV of the Non-AMI Meters as well as the impairment that was recognized given that DEK is not allowed in 2018. Amortization of \$38K a month was approved in the rate case. As such, this amortization table continues the amortization of the impairment recorded. Technically this should have begun in May 2018 when amortization of the reg asset began. However, of the regulatory asset. The difference between what should have been recorded from May 2018 - August 2019 is approximately \$1,160,000. A period adjustment is needed.

KPSC 2008-476;
 KPSC 2017-321

Kentucky DEK Balance - Impairment booked 5/20 (1,160,000) **See Tab C**

Amortization Life (mon)	146
Monthly Amort.	7,945.21
July-Aug. 2019 Entry	15,890.41

Kentucky DEK Balance - Per KY Rate Case Filing (KY 2017-00321) - Amortization began in May 2018

Monthly Amort.	38,660.88	See Tab F
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Month	Beginning Balance Meter NBV	Monthly Amortization to 407 (Expense approved in Rate Case)	Ending Balance Meter NBV	Beginning Balance NBV Impairment	Monthly Entry to 421 (Implied Return)	Total Monthly Reduction to 182
Jun-19		-				-
Jul-19	5,609,829	(38,661)	5,571,168	(1,160,000)	7,945	(30,716)
Aug-19	5,571,168	(38,661)	5,532,507	(1,152,055)	7,945	(30,716)
Sep-19	5,532,507	(38,661)	5,493,846	(1,144,110)	7,945	(30,716)
Oct-19	5,493,846	(38,661)	5,455,185	(1,136,164)	7,945	(30,716)
Nov-19	5,455,185	(38,661)	5,416,525	(1,128,219)	7,945	(30,716)
Dec-19	5,416,525	(38,661)	5,377,864	(1,120,274)	7,945	(30,716)
Jan-20	5,377,864	(38,661)	5,339,203	(1,112,329)	7,945	(30,716)
Feb-20	5,339,203	(38,661)	5,300,542	(1,104,384)	7,945	(30,716)
Mar-20	5,300,542	(38,661)	5,261,881	(1,096,438)	7,945	(30,716)
Apr-20	5,261,881	(38,661)	5,223,220	(1,088,493)	7,945	(30,716)
May-20	5,223,220	(38,661)	5,184,559	(1,080,548)	7,945	(30,716)
Jun-20	5,184,559	(38,661)	5,145,898	(1,072,603)	7,945	(30,716)
Jul-20	5,145,898	(38,661)	5,107,237	(1,064,658)	7,945	(30,716)
Aug-20	5,107,237	(38,661)	5,068,577	(1,056,712)	7,945	(30,716)
Sep-20	5,068,577	(38,661)	5,029,916	(1,048,767)	7,945	(30,716)
Oct-20	5,029,916	(38,661)	4,991,255	(1,040,822)	7,945	(30,716)
Nov-20	4,991,255	(38,661)	4,952,594	(1,032,877)	7,945	(30,716)
Dec-20	4,952,594	(38,661)	4,913,933	(1,024,932)	7,945	(30,716)
Jan-21	4,913,933	(38,661)	4,875,272	(1,016,986)	7,945	(30,716)
Feb-21	4,875,272	(38,661)	4,836,611	(1,009,041)	7,945	(30,716)
Mar-21	4,836,611	(38,661)	4,797,950	(1,001,096)	7,945	(30,716)
Apr-21	4,797,950	(38,661)	4,759,290	(993,151)	7,945	(30,716)
May-21	4,759,290	(38,661)	4,720,629	(985,205)	7,945	(30,716)
Jun-21	4,720,629	(38,661)	4,681,968	(977,260)	7,945	(30,716)
Jul-21	4,681,968	(38,661)	4,643,307	(969,315)	7,945	(30,716)
Aug-21	4,643,307	(38,661)	4,604,646	(961,370)	7,945	(30,716)
Sep-21	4,604,646	(38,661)	4,565,985	(953,425)	7,945	(30,716)
Oct-21	4,565,985	(38,661)	4,527,324	(945,479)	7,945	(30,716)
Nov-21	4,527,324	(38,661)	4,488,663	(937,534)	7,945	(30,716)

Month	Beginning Balance Meter NBV	Monthly Amortization to 407 (Expense approved in Rate Case)	Ending Balance Meter NBV	Beginning Balance NBV Impairment	Monthly Entry to 421 (Implied Return)	Total Monthly Reduction to 182
Dec-21	4,488,663	(38,661)	4,450,003	(929,589)	7,945	(30,716)
Jan-22	4,450,003	(38,661)	4,411,342	(921,644)	7,945	(30,716)
Feb-22	4,411,342	(38,661)	4,372,681	(913,699)	7,945	(30,716)
Mar-22	4,372,681	(38,661)	4,334,020	(905,753)	7,945	(30,716)
Apr-22	4,334,020	(38,661)	4,295,359	(897,808)	7,945	(30,716)
May-22	4,295,359	(38,661)	4,256,698	(889,863)	7,945	(30,716)
Jun-22	4,256,698	(38,661)	4,218,037	(881,918)	7,945	(30,716)
Jul-22	4,218,037	(38,661)	4,179,376	(873,973)	7,945	(30,716)
Aug-22	4,179,376	(38,661)	4,140,716	(866,027)	7,945	(30,716)
Sep-22	4,140,716	(38,661)	4,102,055	(858,082)	7,945	(30,716)
Oct-22	4,102,055	(38,661)	4,063,394	(850,137)	7,945	(30,716)
Nov-22	4,063,394	(38,661)	4,024,733	(842,192)	7,945	(30,716)
Dec-22	4,024,733	(38,661)	3,986,072	(834,247)	7,945	(30,716)
Jan-23	3,986,072	(38,661)	3,947,411	(826,301)	7,945	(30,716)
Feb-23	3,947,411	(38,661)	3,908,750	(818,356)	7,945	(30,716)
Mar-23	3,908,750	(38,661)	3,870,089	(810,411)	7,945	(30,716)
Apr-23	3,870,089	(38,661)	3,831,429	(802,466)	7,945	(30,716)
May-23	3,831,429	(38,661)	3,792,768	(794,521)	7,945	(30,716)
Jun-23	3,792,768	(38,661)	3,754,107	(786,575)	7,945	(30,716)
Jul-23	3,754,107	(38,661)	3,715,446	(778,630)	7,945	(30,716)
Aug-23	3,715,446	(38,661)	3,676,785	(770,685)	7,945	(30,716)
Sep-23	3,676,785	(38,661)	3,638,124	(762,740)	7,945	(30,716)
Oct-23	3,638,124	(38,661)	3,599,463	(754,795)	7,945	(30,716)
Nov-23	3,599,463	(38,661)	3,560,802	(746,849)	7,945	(30,716)
Dec-23	3,560,802	(38,661)	3,522,141	(738,904)	7,945	(30,716)
Jan-24	3,522,141	(38,661)	3,483,481	(730,959)	7,945	(30,716)
Feb-24	3,483,481	(38,661)	3,444,820	(723,014)	7,945	(30,716)
Mar-24	3,444,820	(38,661)	3,406,159	(715,068)	7,945	(30,716)
Apr-24	3,406,159	(38,661)	3,367,498	(707,123)	7,945	(30,716)
May-24	3,367,498	(38,661)	3,328,837	(699,178)	7,945	(30,716)

Month	Beginning Balance Meter NBV	Monthly Amortization to 407 (Expense approved in Rate Case)	Ending Balance Meter NBV	Beginning Balance NBV Impairment	Monthly Entry to 421 (Implied Return)	Total Monthly Reduction to 182
Jun-24	3,328,837	(38,661)	3,290,176	(691,233)	7,945	(30,716)
Jul-24	3,290,176	(38,661)	3,251,515	(683,288)	7,945	(30,716)
Aug-24	3,251,515	(38,661)	3,212,854	(675,342)	7,945	(30,716)
Sep-24	3,212,854	(38,661)	3,174,194	(667,397)	7,945	(30,716)
Oct-24	3,174,194	(38,661)	3,135,533	(659,452)	7,945	(30,716)
Nov-24	3,135,533	(38,661)	3,096,872	(651,507)	7,945	(30,716)
Dec-24	3,096,872	(38,661)	3,058,211	(643,562)	7,945	(30,716)
Jan-25	3,058,211	(38,661)	3,019,550	(635,616)	7,945	(30,716)
Feb-25	3,019,550	(38,661)	2,980,889	(627,671)	7,945	(30,716)
Mar-25	2,980,889	(38,661)	2,942,228	(619,726)	7,945	(30,716)
Apr-25	2,942,228	(38,661)	2,903,567	(611,781)	7,945	(30,716)
May-25	2,903,567	(38,661)	2,864,907	(603,836)	7,945	(30,716)
Jun-25	2,864,907	(38,661)	2,826,246	(595,890)	7,945	(30,716)
Jul-25	2,826,246	(38,661)	2,787,585	(587,945)	7,945	(30,716)
Aug-25	2,787,585	(38,661)	2,748,924	(580,000)	7,945	(30,716)
Sep-25	2,748,924	(38,661)	2,710,263	(572,055)	7,945	(30,716)
Oct-25	2,710,263	(38,661)	2,671,602	(564,110)	7,945	(30,716)
Nov-25	2,671,602	(38,661)	2,632,941	(556,164)	7,945	(30,716)
Dec-25	2,632,941	(38,661)	2,594,280	(548,219)	7,945	(30,716)
Jan-26	2,594,280	(38,661)	2,555,620	(540,274)	7,945	(30,716)
Feb-26	2,555,620	(38,661)	2,516,959	(532,329)	7,945	(30,716)
Mar-26	2,516,959	(38,661)	2,478,298	(524,384)	7,945	(30,716)
Apr-26	2,478,298	(38,661)	2,439,637	(516,438)	7,945	(30,716)
May-26	2,439,637	(38,661)	2,400,976	(508,493)	7,945	(30,716)
Jun-26	2,400,976	(38,661)	2,362,315	(500,548)	7,945	(30,716)
Jul-26	2,362,315	(38,661)	2,323,654	(492,603)	7,945	(30,716)
Aug-26	2,323,654	(38,661)	2,284,993	(484,658)	7,945	(30,716)
Sep-26	2,284,993	(38,661)	2,246,333	(476,712)	7,945	(30,716)
Oct-26	2,246,333	(38,661)	2,207,672	(468,767)	7,945	(30,716)

Month	Beginning Balance Meter NBV	Monthly Amortization to 407 (Expense approved in Rate Case)	Ending Balance Meter NBV	Beginning Balance NBV Impairment	Monthly Entry to 421 (Implied Return)	Total Monthly Reduction to 182
Nov-26	2,207,672	(38,661)	2,169,011	(460,822)	7,945	(30,716)
Dec-26	2,169,011	(38,661)	2,130,350	(452,877)	7,945	(30,716)
Jan-27	2,130,350	(38,661)	2,091,689	(444,932)	7,945	(30,716)
Feb-27	2,091,689	(38,661)	2,053,028	(436,986)	7,945	(30,716)
Mar-27	2,053,028	(38,661)	2,014,367	(429,041)	7,945	(30,716)
Apr-27	2,014,367	(38,661)	1,975,706	(421,096)	7,945	(30,716)
May-27	1,975,706	(38,661)	1,937,046	(413,151)	7,945	(30,716)
Jun-27	1,937,046	(38,661)	1,898,385	(405,205)	7,945	(30,716)
Jul-27	1,898,385	(38,661)	1,859,724	(397,260)	7,945	(30,716)
Aug-27	1,859,724	(38,661)	1,821,063	(389,315)	7,945	(30,716)
Sep-27	1,821,063	(38,661)	1,782,402	(381,370)	7,945	(30,716)
Oct-27	1,782,402	(38,661)	1,743,741	(373,425)	7,945	(30,716)
Nov-27	1,743,741	(38,661)	1,705,080	(365,479)	7,945	(30,716)
Dec-27	1,705,080	(38,661)	1,666,419	(357,534)	7,945	(30,716)
Jan-28	1,666,419	(38,661)	1,627,758	(349,589)	7,945	(30,716)
Feb-28	1,627,758	(38,661)	1,589,098	(341,644)	7,945	(30,716)
Mar-28	1,589,098	(38,661)	1,550,437	(333,699)	7,945	(30,716)
Apr-28	1,550,437	(38,661)	1,511,776	(325,753)	7,945	(30,716)
May-28	1,511,776	(38,661)	1,473,115	(317,808)	7,945	(30,716)
Jun-28	1,473,115	(38,661)	1,434,454	(309,863)	7,945	(30,716)
Jul-28	1,434,454	(38,661)	1,395,793	(301,918)	7,945	(30,716)
Aug-28	1,395,793	(38,661)	1,357,132	(293,973)	7,945	(30,716)
Sep-28	1,357,132	(38,661)	1,318,471	(286,027)	7,945	(30,716)
Oct-28	1,318,471	(38,661)	1,279,811	(278,082)	7,945	(30,716)
Nov-28	1,279,811	(38,661)	1,241,150	(270,137)	7,945	(30,716)
Dec-28	1,241,150	(38,661)	1,202,489	(262,192)	7,945	(30,716)
Jan-29	1,202,489	(38,661)	1,163,828	(254,247)	7,945	(30,716)
Feb-29	1,163,828	(38,661)	1,125,167	(246,301)	7,945	(30,716)
Mar-29	1,125,167	(38,661)	1,086,506	(238,356)	7,945	(30,716)
Apr-29	1,086,506	(38,661)	1,047,845	(230,411)	7,945	(30,716)

Month	Beginning Balance Meter NBV	Monthly Amortization to 407 (Expense approved in Rate Case)	Ending Balance Meter NBV	Beginning Balance NBV Impairment	Monthly Entry to 421 (Implied Return)	Total Monthly Reduction to 182
May-29	1,047,845	(38,661)	1,009,184	(222,466)	7,945	(30,716)
Jun-29	1,009,184	(38,661)	970,524	(214,521)	7,945	(30,716)
Jul-29	970,524	(38,661)	931,863	(206,575)	7,945	(30,716)
Aug-29	931,863	(38,661)	893,202	(198,630)	7,945	(30,716)
Sep-29	893,202	(38,661)	854,541	(190,685)	7,945	(30,716)
Oct-29	854,541	(38,661)	815,880	(182,740)	7,945	(30,716)
Nov-29	815,880	(38,661)	777,219	(174,795)	7,945	(30,716)
Dec-29	777,219	(38,661)	738,558	(166,849)	7,945	(30,716)
Jan-30	738,558	(38,661)	699,897	(158,904)	7,945	(30,716)
Feb-30	699,897	(38,661)	661,237	(150,959)	7,945	(30,716)
Mar-30	661,237	(38,661)	622,576	(143,014)	7,945	(30,716)
Apr-30	622,576	(38,661)	583,915	(135,068)	7,945	(30,716)
May-30	583,915	(38,661)	545,254	(127,123)	7,945	(30,716)
Jun-30	545,254	(38,661)	506,593	(119,178)	7,945	(30,716)
Jul-30	506,593	(38,661)	467,932	(111,233)	7,945	(30,716)
Aug-30	467,932	(38,661)	429,271	(103,288)	7,945	(30,716)
Sep-30	429,271	(38,661)	390,610	(95,342)	7,945	(30,716)
Oct-30	390,610	(38,661)	351,950	(87,397)	7,945	(30,716)
Nov-30	351,950	(38,661)	313,289	(79,452)	7,945	(30,716)
Dec-30	313,289	(38,661)	274,628	(71,507)	7,945	(30,716)
Jan-31	274,628	(38,661)	235,967	(63,562)	7,945	(30,716)
Feb-31	235,967	(38,661)	197,306	(55,616)	7,945	(30,716)
Mar-31	197,306	(38,661)	158,645	(47,671)	7,945	(30,716)
Apr-31	158,645	(38,661)	119,984	(39,726)	7,945	(30,716)
May-31	119,984	(38,661)	81,323	(31,781)	7,945	(30,716)
Jun-31	81,323	(38,661)	42,662	(23,836)	7,945	(30,716)
Jul-31	42,662	(38,661)	4,002	(15,890)	7,945	(30,716)
Aug-31	4,002	(4,002)	-	(7,945)	7,945	3,944

complete as of Q1 2019. As such, Asset Accounting will no longer track meter retirement expenses through June 2019. This agrees to the G/L as of June 2019. The balance in this account was a return on these assets. DEK began recovery of this reg asset starting in May 2019 at the approved amount until the amount is zero. DEK also needs to accrete the impairment given materiality, DEK will accrete this impairment over the remaining recovery period at a rate of approximately \$80K (roughly \$1,160,000/15 years) which is considered immaterial so no prior

Monthly Amortization Accounting Entries

	<u>Debit</u>	<u>Credit</u>
0407115 - Meter Amortization	38,660.88	
0182525 - Non-AMI Meter NBV 182.3		(38,660.88)
0182525 - Non-AMI Meter NBV 182.3	7,945.21	
0421940 Misc Income		(7,945.21)

Net G/L Balance

4,449,829

4,419,113

4,388,398

4,357,682

4,326,966

4,296,251

4,265,535

4,234,819

4,204,104

4,173,388

4,142,672

4,111,957

4,081,241

4,050,525

4,019,809

3,989,094

3,958,378

3,927,662

3,896,947

3,866,231

3,835,515

3,804,800

3,774,084

3,743,368

3,712,653

3,681,937

3,651,221

3,620,506

3,589,790

3,559,074

July-Aug 2019 only (Record in Sept)

0407115 - Meter Amortization

0182525 - Non-AMI Meter NBV 182.3

0182525 - Non-AMI Meter NBV 182.3

0421940 Misc Income

Sept 2019 only (To Be Setup as Recurring)

0407115 - Meter Amortization

0182525 - Non-AMI Meter NBV 182.3

0182525 - Non-AMI Meter NBV 182.3

0421940 Misc Income

Debit

77,321.76

15,890.41

Debit

38,660.88

7,945.21

Credit

(77,321.76)

(15,890.41)

Credit

(38,660.88)

(7,945.21)

Net G/L Balance

3,528,359
3,497,643
3,466,927
3,436,212
3,405,496
3,374,780
3,344,065
3,313,349
3,282,633
3,251,918
3,221,202
3,190,486
3,159,771
3,129,055
3,098,339
3,067,624
3,036,908
3,006,192
2,975,477
2,944,761
2,914,045
2,883,330
2,852,614
2,821,898
2,791,183
2,760,467
2,729,751
2,699,036
2,668,320
2,637,604

Net G/L Balance

2,606,889
2,576,173
2,545,457
2,514,742
2,484,026
2,453,310
2,422,595
2,391,879
2,361,163
2,330,448
2,299,732
2,269,016
2,238,300
2,207,585
2,176,869
2,146,153
2,115,438
2,084,722
2,054,006
2,023,291
1,992,575
1,961,859
1,931,144
1,900,428
1,869,712
1,838,997
1,808,281
1,777,565
1,746,850

Net G/L Balance

1,716,134
1,685,418
1,654,703
1,623,987
1,593,271
1,562,556
1,531,840
1,501,124
1,470,409
1,439,693
1,408,977
1,378,262
1,347,546
1,316,830
1,286,115
1,255,399
1,224,683
1,193,968
1,163,252
1,132,536
1,101,821
1,071,105
1,040,389
1,009,674
978,958
948,242
917,527
886,811
856,095
825,380

Net G/L Balance

794,664
763,948
733,233
702,517
671,801
641,086
610,370
579,654
548,939
518,223
487,507
456,792
426,076
395,360
364,644
333,929
303,213
272,497
241,782
211,066
180,350
149,635
118,919
88,203
57,488
26,772
(3,944)
0

400AM701
AMI Opt-Out Deferred Expenses Amortization
Per DEK Case No. 2017-00321 (4/13/18)

Authorized Amount to Recover: \$ 263,029.00
GL Balance 157,210.51 (Acct 0182714) beginning May 31, 2018

KPSC 2008-476;
KPSC 2017-321

To be amortized for 60 months: **2,620.00** (May 2018 to April 2023)

Accounting used in May 2018 to true up balance and normal amortization

400RA702 - Monthly entry:					
BU	OU	Resp Center	Account	Debit	Credit
75085	CSKE	9928	0407305	2,620.00	
75085	CSKE	9928	0182714		2,620.00
75085	CSKE	9928	0407305	10.80	
75085	CSKE	9928	0182714		10.80

Normal May amortization

Up front penny amortization

from June 2018 to April 2023:

702 - Monthly entry:					
BU	OU	Resp Center	Account	Debit	Credit
75085	CSKE	9928	0407305	2,620.00	
75085	CSKE	9928	0182714		2,620.00

Amortization Schedule		Monthly Amount	Amortization in Acct 0182714	Net Balance
	Beg Bal			157,210.51
1	May-18	2,630.80	(2,630.80)	154,579.71
2	Jun-18	2,620.00	(5,250.79)	151,959.72
3	Jul-18	2,620.00	(7,870.79)	149,339.72
4	Aug-18	2,620.00	(10,490.78)	146,719.73
5	Sep-18	2,620.00	(13,110.78)	144,099.73
6	Oct-18	2,620.00	(15,730.77)	141,479.74
7	Nov-18	2,620.00	(18,350.77)	138,859.74
8	Dec-18	2,620.00	(20,970.76)	136,239.75

9	Jan-19	2,620.00	(23,590.76)	133,619.75
10	Feb-19	2,620.00	(26,210.75)	130,999.76
11	Mar-19	2,620.00	(28,830.75)	128,379.76
12	Apr-19	2,620.00	(31,450.74)	125,759.77
13	May-19	2,620.00	(34,070.74)	123,139.77
14	Jun-19	2,620.00	(36,690.73)	120,519.78
15	Jul-19	2,620.00	(39,310.73)	117,899.78
16	Aug-19	2,620.00	(41,930.72)	115,279.79
17	Sep-19	2,620.00	(44,550.72)	112,659.79
18	Oct-19	2,620.00	(47,170.71)	110,039.80
19	Nov-19	2,620.00	(49,790.71)	107,419.80
20	Dec-19	2,620.00	(52,410.70)	104,799.81
21	Jan-20	2,620.00	(55,030.70)	102,179.81
22	Feb-20	2,620.00	(57,650.69)	99,559.82
23	Mar-20	2,620.00	(60,270.69)	96,939.82
24	Apr-20	2,620.00	(62,890.68)	94,319.83
25	May-20	2,620.00	(65,510.68)	91,699.83
26	Jun-20	2,620.00	(68,130.67)	89,079.84
27	Jul-20	2,620.00	(70,750.67)	86,459.84
28	Aug-20	2,620.00	(73,370.66)	83,839.85
29	Sep-20	2,620.00	(75,990.66)	81,219.85
30	Oct-20	2,620.00	(78,610.66)	78,599.86
31	Nov-20	2,620.00	(81,230.65)	75,979.86
32	Dec-20	2,620.00	(83,850.65)	73,359.86
33	Jan-21	2,620.00	(86,470.64)	70,739.87
34	Feb-21	2,620.00	(89,090.64)	68,119.87
35	Mar-21	2,620.00	(91,710.63)	65,499.88
36	Apr-21	2,620.00	(94,330.63)	62,879.88
37	May-21	2,620.00	(96,950.62)	60,259.89
38	Jun-21	2,620.00	(99,570.62)	57,639.89
39	Jul-21	2,620.00	(102,190.61)	55,019.90
40	Aug-21	2,620.00	(104,810.61)	52,399.90
41	Sep-21	2,620.00	(107,430.60)	49,779.91
42	Oct-21	2,620.00	(110,050.60)	47,159.91
43	Nov-21	2,620.00	(112,670.59)	44,539.92
44	Dec-21	2,620.00	(115,290.59)	41,919.92
45	Jan-22	2,620.00	(117,910.58)	39,299.93
46	Feb-22	2,620.00	(120,530.58)	36,679.93
47	Mar-22	2,620.00	(123,150.57)	34,059.94
48	Apr-22	2,620.00	(125,770.57)	31,439.94

DUKE ENERGY KENTUCKY, INC.
Regulatory Asset Amortizations

49	May-22	2,620.00	(128,390.56)	28,819.95
50	Jun-22	2,620.00	(131,010.56)	26,199.95
51	Jul-22	2,620.00	(133,630.55)	23,579.96
52	Aug-22	2,620.00	(136,250.55)	20,959.96
53	Sep-22	2,620.00	(138,870.54)	18,339.97
54	Oct-22	2,620.00	(141,490.54)	15,719.97
55	Nov-22	2,620.00	(144,110.53)	13,099.98
56	Dec-22	2,620.00	(146,730.53)	10,479.98
57	Jan-23	2,620.00	(149,350.52)	7,859.99
58	Feb-23	2,620.00	(151,970.52)	5,239.99
59	Mar-23	2,620.00	(154,590.51)	2,620.00
60	Apr-23	2,620.00	(157,210.51)	0.00

400AM702
Hurricane IKE Deferred Expenses Amortization
Per DEK Case No. 2017-00321 (4/13/18)

Authorized Amount to Recover: 4,912,684.00 (Acct 0182700) beginning May 31, 2018

KPSC
2008-476;
KPSC
2017-321

To be amortized for 60 months: **81,878.00** (May 2018 to April 2023)

Accounting used in May 2018 to true up balance and normal amortization

400RA702 - Monthly entry:					
BU	Resp Center	Account	Debit	Credit	
75084	9928	0407305	81,878.00		Normal May amorization
75084	9928	0182700		81,878.00	
75084	9928	0407305	4.20		Up front penny amortization
75084	9928	0182700		4.20	

Accounting used from June 2018 to April 2023:

400RA702 - Monthly entry:					
BU	Resp Center	Account	Debit	Credit	
75084	9928	0407305	81,878.00		
75084	9928	0182700		81,878.00	

Amortization Schedule			Amortization in Acct 0182700	Net Balance
		Monthly Amount		
	Beg Bal			4,912,684.00
1	May-18	81,882.20	(81,882.20)	4,830,801.80
2	Jun-18	81,878.00	(163,760.19)	4,748,923.81
3	Jul-18	81,878.00	(245,638.19)	4,667,045.81
4	Aug-18	81,878.00	(327,516.19)	4,585,167.81
5	Sep-18	81,878.00	(409,394.18)	4,503,289.82
6	Oct-18	81,878.00	(491,272.18)	4,421,411.82
7	Nov-18	81,878.00	(573,150.18)	4,339,533.82
8	Dec-18	81,878.00	(655,028.17)	4,257,655.83
9	Jan-19	81,878.00	(736,906.17)	4,175,777.83

10	Feb-19	81,878.00	(818,784.17)	4,093,899.83
11	Mar-19	81,878.00	(900,662.16)	4,012,021.84
12	Apr-19	81,878.00	(982,540.16)	3,930,143.84
13	May-19	81,878.00	(1,064,418.16)	3,848,265.84
14	Jun-19	81,878.00	(1,146,296.15)	3,766,387.85
15	Jul-19	81,878.00	(1,228,174.15)	3,684,509.85
16	Aug-19	81,878.00	(1,310,052.15)	3,602,631.85
17	Sep-19	81,878.00	(1,391,930.14)	3,520,753.86
18	Oct-19	81,878.00	(1,473,808.14)	3,438,875.86
19	Nov-19	81,878.00	(1,555,686.14)	3,356,997.86
20	Dec-19	81,878.00	(1,637,564.13)	3,275,119.87
21	Jan-20	81,878.00	(1,719,442.13)	3,193,241.87
22	Feb-20	81,878.00	(1,801,320.13)	3,111,363.87
23	Mar-20	81,878.00	(1,883,198.12)	3,029,485.88
24	Apr-20	81,878.00	(1,965,076.12)	2,947,607.88
25	May-20	81,878.00	(2,046,954.12)	2,865,729.88
26	Jun-20	81,878.00	(2,128,832.11)	2,783,851.89
27	Jul-20	81,878.00	(2,210,710.11)	2,701,973.89
28	Aug-20	81,878.00	(2,292,588.11)	2,620,095.89
29	Sep-20	81,878.00	(2,374,466.10)	2,538,217.90
30	Oct-20	81,878.00	(2,456,344.10)	2,456,339.90
31	Nov-20	81,878.00	(2,538,222.10)	2,374,461.90
32	Dec-20	81,878.00	(2,620,100.09)	2,292,583.91
33	Jan-21	81,878.00	(2,701,978.09)	2,210,705.91
34	Feb-21	81,878.00	(2,783,856.09)	2,128,827.91
35	Mar-21	81,878.00	(2,865,734.08)	2,046,949.92
36	Apr-21	81,878.00	(2,947,612.08)	1,965,071.92
37	May-21	81,878.00	(3,029,490.08)	1,883,193.92
38	Jun-21	81,878.00	(3,111,368.07)	1,801,315.93
39	Jul-21	81,878.00	(3,193,246.07)	1,719,437.93
40	Aug-21	81,878.00	(3,275,124.07)	1,637,559.93
41	Sep-21	81,878.00	(3,357,002.06)	1,555,681.94
42	Oct-21	81,878.00	(3,438,880.06)	1,473,803.94
43	Nov-21	81,878.00	(3,520,758.06)	1,391,925.94
44	Dec-21	81,878.00	(3,602,636.05)	1,310,047.95
45	Jan-22	81,878.00	(3,684,514.05)	1,228,169.95
46	Feb-22	81,878.00	(3,766,392.05)	1,146,291.95
47	Mar-22	81,878.00	(3,848,270.04)	1,064,413.96
48	Apr-22	81,878.00	(3,930,148.04)	982,535.96
49	May-22	81,878.00	(4,012,026.04)	900,657.96

50	Jun-22	81,878.00	(4,093,904.03)	818,779.97
51	Jul-22	81,878.00	(4,175,782.03)	736,901.97
52	Aug-22	81,878.00	(4,257,660.03)	655,023.97
53	Sep-22	81,878.00	(4,339,538.02)	573,145.98
54	Oct-22	81,878.00	(4,421,416.02)	491,267.98
55	Nov-22	81,878.00	(4,503,294.02)	409,389.98
56	Dec-22	81,878.00	(4,585,172.01)	327,511.99
57	Jan-23	81,878.00	(4,667,050.01)	245,633.99
58	Feb-23	81,878.00	(4,748,928.01)	163,755.99
59	Mar-23	81,878.00	(4,830,806.00)	81,878.00
60	Apr-23	81,878.00	(4,912,684.00)	0.00

DEK Electric EB O&M Reg Asset

		Beg Balance (a)	Rev Req/12 (b) pmt(int,months,am ount)	Interest (c)=0.4243/12*(a)	Principal (d) = (b)-(c)	Ending Bal (e)=(a)-(d)
1	Apr-18	38,098,774		134,711		38,098,774
2	May-18	38,098,774	374,189	134,711	239,478	37,859,295
3	Jun-18	37,859,295	374,189	133,864	240,325	37,618,971
4	Jul-18	37,618,971	374,189	133,014	241,175	37,377,796
5	Aug-18	37,377,796	374,189	132,162	242,027	37,135,768
6	Sep-18	37,135,768	374,189	131,306	242,883	36,892,885
7	Oct-18	36,892,885	374,189	130,447	243,742	36,649,143
8	Nov-18	36,649,143	374,189	129,585	244,604	36,404,539
9	Dec-18	36,404,539	374,189	128,720	245,469	36,159,071
10	Jan-19	36,159,071	374,189	127,852	246,337	35,912,734
11	Feb-19	35,912,734	374,189	126,981	247,208	35,665,526
12	Mar-19	35,665,526	374,189	126,107	248,082	35,417,445
13	Apr-19	35,417,445	374,189	125,230	248,959	35,168,486
14	May-19	35,168,486	374,189	124,350	249,839	34,918,647
15	Jun-19	34,918,647	374,189	123,467	250,723	34,667,924
16	Jul-19	34,667,924	374,189	122,580	251,609	34,416,315
17	Aug-19	34,416,315	374,189	121,690	252,499	34,163,816
18	Sep-19	34,163,816	374,189	120,798	253,392	33,910,425
19	Oct-19	33,910,425	374,189	119,902	254,287	33,656,137
20	Nov-19	33,656,137	374,189	119,002	255,187	33,400,951
21	Dec-19	33,400,951	374,189	118,100	256,089	33,144,862
22	Jan-20	33,144,862	374,189	117,195	256,994	32,887,867
23	Feb-20	32,887,867	374,189	116,286	257,903	32,629,964
24	Mar-20	32,629,964	374,189	115,374	258,815	32,371,149
25	Apr-20	32,371,149	374,189	114,459	259,730	32,111,419
26	May-20	32,111,419	374,189	113,541	260,648	31,850,771
27	Jun-20	31,850,771	374,189	112,619	261,570	31,589,201
28	Jul-20	31,589,201	374,189	111,694	262,495	31,326,706
29	Aug-20	31,326,706	374,189	110,766	263,423	31,063,283
30	Sep-20	31,063,283	374,189	109,835	264,355	30,798,928
31	Oct-20	30,798,928	374,189	108,900	265,289	30,533,639
32	Nov-20	30,533,639	374,189	107,962	266,227	30,267,412
33	Dec-20	30,267,412	374,189	107,021	267,169	30,000,243
34	Jan-21	30,000,243	374,189	106,076	268,113	29,732,130
35	Feb-21	29,732,130	374,189	105,128	269,061	29,463,069
36	Mar-21	29,463,069	374,189	104,177	270,013	29,193,056
37	Apr-21	29,193,056	374,189	103,222	270,967	28,922,089
38	May-21	28,922,089	374,189	102,264	271,925	28,650,163
39	Jun-21	28,650,163	374,189	101,302	272,887	28,377,276
40	Jul-21	28,377,276	374,189	100,337	273,852	28,103,425
41	Aug-21	28,103,425	374,189	99,369	274,820	27,828,605
42	Sep-21	27,828,605	374,189	98,397	275,792	27,552,813
43	Oct-21	27,552,813	374,189	97,422	276,767	27,276,046
44	Nov-21	27,276,046	374,189	96,444	277,746	26,998,300
45	Dec-21	26,998,300	374,189	95,461	278,728	26,719,573
46	Jan-22	26,719,573	374,189	94,476	279,713	26,439,860
47	Feb-22	26,439,860	374,189	93,487	280,702	26,159,157
48	Mar-22	26,159,157	374,189	92,494	281,695	25,877,463
49	Apr-22	25,877,463	374,189	91,498	282,691	25,594,772
50	May-22	25,594,772	374,189	90,499	283,690	25,311,082
51	Jun-22	25,311,082	374,189	89,496	284,693	25,026,388
52	Jul-22	25,026,388	374,189	88,489	285,700	24,740,689
53	Aug-22	24,740,689	374,189	87,479	286,710	24,453,978
54	Sep-22	24,453,978	374,189	86,465	287,724	24,166,254
55	Oct-22	24,166,254	374,189	85,448	288,741	23,877,513

JE for July 2019:		
Dr. Amortization Expense 407305	374,189.09	
Cr. Carrying Costs 407407		122,580.00
Cr. Reg Asset 0182050		251,609.09

		Beg Balance (a)	Rev Req/12 (b) pmt(int,months,amount)	Interest (c)=0.4243/12*(a)	Principal (d) = (b)-(c)	Ending Bal (e)=(a)-(d)
56	Nov-22	23,877,513	374,189	84,427	289,762	23,587,751
57	Dec-22	23,587,751	374,189	83,402	290,787	23,296,964
58	Jan-23	23,296,964	374,189	82,374	291,815	23,005,149
59	Feb-23	23,005,149	374,189	81,342	292,847	22,712,303
60	Mar-23	22,712,303	374,189	80,307	293,882	22,418,421
61	Apr-23	22,418,421	374,189	79,268	294,921	22,123,499
62	May-23	22,123,499	374,189	78,225	295,964	21,827,535
63	Jun-23	21,827,535	374,189	77,179	297,011	21,530,525
64	Jul-23	21,530,525	374,189	76,128	298,061	21,232,464
65	Aug-23	21,232,464	374,189	75,074	299,115	20,933,349
66	Sep-23	20,933,349	374,189	74,017	300,172	20,633,177
67	Oct-23	20,633,177	374,189	72,955	301,234	20,331,943
68	Nov-23	20,331,943	374,189	71,890	302,299	20,029,645
69	Dec-23	20,029,645	374,189	70,821	303,368	19,726,277
70	Jan-24	19,726,277	374,189	69,749	304,440	19,421,837
71	Feb-24	19,421,837	374,189	68,672	305,517	19,116,320
72	Mar-24	19,116,320	374,189	67,592	306,597	18,809,723
73	Apr-24	18,809,723	374,189	66,508	307,681	18,502,042
74	May-24	18,502,042	374,189	65,420	308,769	18,193,273
75	Jun-24	18,193,273	374,189	64,328	309,861	17,883,412
76	Jul-24	17,883,412	374,189	63,233	310,956	17,572,456
77	Aug-24	17,572,456	374,189	62,133	312,056	17,260,400
78	Sep-24	17,260,400	374,189	61,030	313,159	16,947,241
79	Oct-24	16,947,241	374,189	59,923	314,266	16,632,975
80	Nov-24	16,632,975	374,189	58,811	315,378	16,317,597
81	Dec-24	16,317,597	374,189	57,696	316,493	16,001,104
82	Jan-25	16,001,104	374,189	56,577	317,612	15,683,492
83	Feb-25	15,683,492	374,189	55,454	318,735	15,364,757
84	Mar-25	15,364,757	374,189	54,327	319,862	15,044,896
85	Apr-25	15,044,896	374,189	53,196	320,993	14,723,903
86	May-25	14,723,903	374,189	52,061	322,128	14,401,775
87	Jun-25	14,401,775	374,189	50,922	323,267	14,078,508
88	Jul-25	14,078,508	374,189	49,779	324,410	13,754,098
89	Aug-25	13,754,098	374,189	48,632	325,557	13,428,541
90	Sep-25	13,428,541	374,189	47,481	326,708	13,101,833
91	Oct-25	13,101,833	374,189	46,326	327,863	12,773,970
92	Nov-25	12,773,970	374,189	45,167	329,022	12,444,948
93	Dec-25	12,444,948	374,189	44,003	330,186	12,114,762
94	Jan-26	12,114,762	374,189	42,836	331,353	11,783,408
95	Feb-26	11,783,408	374,189	41,664	332,525	11,450,884
96	Mar-26	11,450,884	374,189	40,488	333,701	11,117,183

		Beg Balance (a)	Rev Req/12 (b) pmt(int,months,amount)	Interest (c)=0.4243/12*(a)	Principal (d) = (b)-(c)	Ending Bal (e)=(a)-(d)
97	Apr-26	11,117,183	374,189	39,309	334,881	10,782,302
98	May-26	10,782,302	374,189	38,124	336,065	10,446,238
99	Jun-26	10,446,238	374,189	36,936	337,253	10,108,985
100	Jul-26	10,108,985	374,189	35,744	338,445	9,770,539
101	Aug-26	9,770,539	374,189	34,547	339,642	9,430,897
102	Sep-26	9,430,897	374,189	33,346	340,843	9,090,054
103	Oct-26	9,090,054	374,189	32,141	342,048	8,748,006
104	Nov-26	8,748,006	374,189	30,931	343,258	8,404,748
105	Dec-26	8,404,748	374,189	29,718	344,471	8,060,277
106	Jan-27	8,060,277	374,189	28,500	345,689	7,714,588
107	Feb-27	7,714,588	374,189	27,277	346,912	7,367,676
108	Mar-27	7,367,676	374,189	26,051	348,138	7,019,538
109	Apr-27	7,019,538	374,189	24,820	349,369	6,670,169
110	May-27	6,670,169	374,189	23,585	350,604	6,319,564
111	Jun-27	6,319,564	374,189	22,345	351,844	5,967,720
112	Jul-27	5,967,720	374,189	21,101	353,088	5,614,632
113	Aug-27	5,614,632	374,189	19,852	354,337	5,260,295
114	Sep-27	5,260,295	374,189	18,600	355,590	4,904,706
115	Oct-27	4,904,706	374,189	17,342	356,847	4,547,859
116	Nov-27	4,547,859	374,189	16,080	358,109	4,189,750
117	Dec-27	4,189,750	374,189	14,814	359,375	3,830,375
118	Jan-28	3,830,375	374,189	13,544	360,646	3,469,730
119	Feb-28	3,469,730	374,189	12,268	361,921	3,107,809
120	Mar-28	3,107,809	374,189	10,989	363,200	2,744,609
121	Apr-28	2,744,609	374,189	9,704	364,485	2,380,124
122	May-28	2,380,124	374,189	8,416	365,773	2,014,351
123	Jun-28	2,014,351	374,189	7,122	367,067	1,647,284
124	Jul-28	1,647,284	374,189	5,825	368,365	1,278,920
125	Aug-28	1,278,920	374,189	4,522	369,667	909,253
126	Sep-28	909,253	374,189	3,215	370,974	538,278
127	Oct-28	538,278	374,189	1,903	372,286	165,993
		44,528,502			<u><u>37,932,781</u></u>	sum of column equals total
		44,902,690				

DEK Deferred Rate Case Expense Amortization
Per DEK Case No. 2017-00321 (4/13/18)

Authorized Amount to Recover:	\$	657,434.00	
GL Balance		<u>683,224.94</u>	(Acct 0186108) beginning May 31, 2018
			KPSC 2008-476;
			KPSC 2017-
Amount to write off ii321	\$	25,790.94	

To be amortized for 60 months: **10,957.00** (May 2018 to April 2023)

Accounting used in May 2018 to true up balance and normal amortization

400RA702 - Monthly entry:						
BU	OU	Resp Center	Account	Debit	Credit	
75080	EL02	9928	0928006	10,957.00		Normal May amortization
75080	EL02	9928	0186108		10,957.00	
75080	EL02	9928	0928006	13.80		Up front penny amortization
75080	EL02	9928	0186108		13.80	
75080	EL02	9928	0928006	25,790.94		Write off
75080	EL02	9928	0186108		25,790.94	

Accounting used from June 2018 to April 2023:

400RA702 - Monthly entry:					
BU	OU	Resp Center	Account	Debit	Credit
75080	EL02	9928	0928006	10,957.00	
75080	EL02	9928	0186108		10,957.00

Amortization Schedule			<u>Amortization in</u>	<u>Net</u>
			<u>Acct 0186108</u>	<u>Balance</u>
	Beg Bal	Monthly Amount		657,434.00
1	May-18	10,970.80	(10,970.80)	646,463.20
2	Jun-18	10,957.00	(21,927.81)	635,506.19
3	Jul-18	10,957.00	(32,884.81)	624,549.19
4	Aug-18	10,957.00	(43,841.81)	613,592.19

5	Sep-18	10,957.00	(54,798.82)	602,635.18
6	Oct-18	10,957.00	(65,755.82)	591,678.18
7	Nov-18	10,957.00	(76,712.82)	580,721.18
8	Dec-18	10,957.00	(87,669.83)	569,764.17
9	Jan-19	10,957.00	(98,626.83)	558,807.17
10	Feb-19	10,957.00	(109,583.83)	547,850.17
11	Mar-19	10,957.00	(120,540.84)	536,893.16
12	Apr-19	10,957.00	(131,497.84)	525,936.16
13	May-19	10,957.00	(142,454.84)	514,979.16
14	Jun-19	10,957.00	(153,411.85)	504,022.15
15	Jul-19	10,957.00	(164,368.85)	493,065.15
16	Aug-19	10,957.00	(175,325.85)	482,108.15
17	Sep-19	10,957.00	(186,282.86)	471,151.14
18	Oct-19	10,957.00	(197,239.86)	460,194.14
19	Nov-19	10,957.00	(208,196.86)	449,237.14
20	Dec-19	10,957.00	(219,153.87)	438,280.13
21	Jan-20	10,957.00	(230,110.87)	427,323.13
22	Feb-20	10,957.00	(241,067.87)	416,366.13
23	Mar-20	10,957.00	(252,024.88)	405,409.12
24	Apr-20	10,957.00	(262,981.88)	394,452.12
25	May-20	10,957.00	(273,938.88)	383,495.12
26	Jun-20	10,957.00	(284,895.89)	372,538.11
27	Jul-20	10,957.00	(295,852.89)	361,581.11
28	Aug-20	10,957.00	(306,809.89)	350,624.11
29	Sep-20	10,957.00	(317,766.90)	339,667.10
30	Oct-20	10,957.00	(328,723.90)	328,710.10
31	Nov-20	10,957.00	(339,680.90)	317,753.10
32	Dec-20	10,957.00	(350,637.91)	306,796.09
33	Jan-21	10,957.00	(361,594.91)	295,839.09
34	Feb-21	10,957.00	(372,551.91)	284,882.09
35	Mar-21	10,957.00	(383,508.92)	273,925.08
36	Apr-21	10,957.00	(394,465.92)	262,968.08
37	May-21	10,957.00	(405,422.92)	252,011.08
38	Jun-21	10,957.00	(416,379.93)	241,054.07
39	Jul-21	10,957.00	(427,336.93)	230,097.07
40	Aug-21	10,957.00	(438,293.93)	219,140.07
41	Sep-21	10,957.00	(449,250.94)	208,183.06
42	Oct-21	10,957.00	(460,207.94)	197,226.06
43	Nov-21	10,957.00	(471,164.94)	186,269.06
44	Dec-21	10,957.00	(482,121.95)	175,312.05

45	Jan-22	10,957.00	(493,078.95)	164,355.05
46	Feb-22	10,957.00	(504,035.95)	153,398.05
47	Mar-22	10,957.00	(514,992.96)	142,441.04
48	Apr-22	10,957.00	(525,949.96)	131,484.04
49	May-22	10,957.00	(536,906.96)	120,527.04
50	Jun-22	10,957.00	(547,863.97)	109,570.03
51	Jul-22	10,957.00	(558,820.97)	98,613.03
52	Aug-22	10,957.00	(569,777.97)	87,656.03
53	Sep-22	10,957.00	(580,734.98)	76,699.02
54	Oct-22	10,957.00	(591,691.98)	65,742.02
55	Nov-22	10,957.00	(602,648.98)	54,785.02
56	Dec-22	10,957.00	(613,605.99)	43,828.01
57	Jan-23	10,957.00	(624,562.99)	32,871.01
58	Feb-23	10,957.00	(635,519.99)	21,914.01
59	Mar-23	10,957.00	(646,477.00)	10,957.00
60	Apr-23	10,957.00	(657,434.00)	(0.00)

DE Kentucky

East Bend Depreciation Deferral - Account 0182493

Below is a summary of the East Bend Deferred Depreciation Proforma included in the 2017 DEK Electric Rate Case. The annual amortization of \$490,618 was approved as part of the rate case. The original amortization table included with the rate case assumed rates would go into effect 4/1/2018; however, rates did not go into effect until 5/1/2018. As such, Asset Accounting adjusted the amortization table to record only \$22,320 for the month of April 2018 and to start the approved monthly Amortization in May 2018. The Amortization table below shows the amortization through the remaining period of recovery for this regulatory asset.

This regulatory asset is related to the purchase of DP&L's share of East Bend in 2015. Case 2015-120 gave DEK Authority to establish the regulatory asset. Amortization of the regulatory asset was approved as part of the 2017 Rate Case (8 Cited below)

KPSC 2008-476;
KPSC 2017-321

Line No.	Description	Amount	Monthly Depr		Depr of		Monthly Debit To Reg Asset	Balance of Reg Asset
			Per Books	Net Plant Per Books	Purchase Price Per Books	To Reg Asset		
			Month	214.4 mm * 2.16	\$12.4 mm * 2.16%		(d)/(a)(c)	(e)
1	Annual Depreciation Expense Determined Under FERC Regulations							
2	Original cost	\$ 214,359,000						
3	Depreciation rate	\$ 2,16%						
4	Annual Depreciation Expense	\$ 4,630,154						
5	Monthly Depreciation Expense	\$ 385,846						
6	Months until purchase price fully depreciated	32.14						
7	Depreciation Expense on Net Plant Purchase Price							
8	Net Purchase Price	\$ 12,400,000						
9	Depreciation rate	\$ 2,16%						
11	Depreciation Expense	\$ 267,840						
12	Monthly Depreciation Expense	\$ 22,320						
13	Depreciation expense booked for first 32.14 months	\$ 717,365						
14	Deferred Depreciation Balance	\$ 11,682,635						
16	Amortization after first 32.14 months through March 31, 2018	153,115						
19	Regulatory Asset Balance at March 31, 2018	11,529,520						
20	Remaining Life of East Bend Station	23.5						
22	Annual Amortization	\$ 490,618						
	Monthly Amortization	40,885						
	To record amortization of East Bend deferred depreciation in account 182493							
	Per order in Case 2015-120							
			1/31/2015	\$ 385,846	12,014,154	\$ 22,320	\$ 363,526	363,526
			2/28/2015	\$ 385,846	11,628,308	\$ 22,320	363,526	727,052
			3/31/2015	\$ 385,846	11,242,462	\$ 22,320	363,526	1,090,578
			4/30/2015	\$ 385,846	10,856,616	\$ 22,320	363,526	1,454,104
			5/31/2015	\$ 385,846	10,470,770	\$ 22,320	363,526	1,817,630
			6/30/2015	\$ 385,846	10,084,924	\$ 22,320	363,526	2,181,156
			7/31/2015	\$ 385,846	9,699,078	\$ 22,320	363,526	2,544,682
			8/31/2015	\$ 385,846	9,313,232	\$ 22,320	363,526	2,908,208
			9/30/2015	\$ 385,846	8,927,386	\$ 22,320	363,526	3,271,734
			10/31/2015	\$ 385,846	8,541,540	\$ 22,320	363,526	3,635,260
			11/30/2015	\$ 385,846	8,155,694	\$ 22,320	363,526	3,998,786
			12/31/2015	\$ 385,846	7,769,848	\$ 22,320	363,526	4,362,312
			1/31/2016	\$ 385,846	7,384,002	\$ 22,320	363,526	4,725,838
			2/29/2016	\$ 385,846	6,998,156	\$ 22,320	363,526	5,089,364
			3/31/2016	\$ 385,846	6,612,310	\$ 22,320	363,526	5,452,890
			4/30/2016	\$ 385,846	6,226,464	\$ 22,320	363,526	5,816,416
			5/31/2016	\$ 385,846	5,840,618	\$ 22,320	363,526	6,179,942
			6/30/2016	\$ 385,846	5,454,772	\$ 22,320	363,526	6,543,468
			7/31/2016	\$ 385,846	5,068,926	\$ 22,320	363,526	6,906,994
			8/31/2016	\$ 385,846	4,683,080	\$ 22,320	363,526	7,270,520
			9/30/2016	\$ 385,846	4,297,234	\$ 22,320	363,526	7,634,046
			10/31/2016	\$ 385,846	3,911,388	\$ 22,320	363,526	7,997,572
			11/30/2016	\$ 385,846	3,525,542	\$ 22,320	363,526	8,361,098
			12/31/2016	\$ 385,846	3,139,696	\$ 22,320	363,526	8,724,624
			1/31/2017	\$ 385,846	2,753,850	\$ 22,320	363,526	9,088,150
			2/28/2017	\$ 385,846	2,368,004	\$ 22,320	363,526	9,451,676
			3/31/2017	\$ 385,846	1,982,158	\$ 22,320	363,526	9,815,202
			4/30/2017	\$ 385,846	1,596,312	\$ 22,320	363,526	10,178,728
			5/31/2017	\$ 385,846	1,210,466	\$ 22,320	363,526	10,542,254
			6/30/2017	\$ 385,846	824,620	\$ 22,320	363,526	10,905,780
			7/31/2017	\$ 385,846	438,774	\$ 22,320	363,526	11,269,306
			8/31/2017	\$ 385,846	52,928	\$ 22,320	363,526	11,632,832
			9/30/2017	\$ 52,928	-	\$ 3,125	49,803	11,682,635
			9/30/2017	-	-	\$ 19,195	(19,195)	11,663,440
			10/31/2017	-	-	\$ 22,320	(22,320)	11,641,120
			11/30/2017	-	-	\$ 22,320	(22,320)	11,618,800
			12/31/2017	-	-	\$ 22,320	(22,320)	11,596,480
			1/31/2018	-	-	\$ 22,320	(22,320)	11,574,160
			2/28/2018	-	-	\$ 22,320	(22,320)	11,551,840
			3/31/2018	-	-	\$ 22,320	(22,320)	11,529,520
			4/30/2018	-	-	\$ 22,320	(22,320)	11,507,200
			5/31/2018	-	-	\$ 22,320	(40,885)	11,466,315
			6/30/2018	-	-	\$ 22,320	(40,885)	11,425,430
			7/31/2018	-	-	\$ 22,320	(40,885)	11,384,545
			8/31/2018	-	-	\$ 22,320	(40,885)	11,343,661
			9/30/2018	-	-	\$ 22,320	(40,885)	11,302,776
			10/31/2018	-	-	\$ 22,320	(40,885)	11,261,891
			11/30/2018	-	-	\$ 22,320	(40,885)	11,221,006
			12/31/2018	-	-	\$ 22,320	(40,885)	11,180,121
			1/31/2019	-	-	\$ 22,320	(40,885)	11,139,237
			2/28/2019	-	-	\$ 22,320	(40,885)	11,098,352
			3/31/2019	-	-	\$ 22,320	(40,885)	11,057,467
			4/30/2019	-	-	\$ 22,320	(40,885)	11,016,582
			5/31/2019	-	-	\$ 22,320	(40,885)	10,975,697
			6/30/2019	-	-	\$ 22,320	(40,885)	10,934,812
			7/31/2019	-	-	\$ 22,320	(40,885)	10,893,928
			8/31/2019	-	-	\$ 22,320	(40,885)	10,853,043
			9/30/2019	-	-	\$ 22,320	(40,885)	10,812,158
			10/31/2019	-	-	\$ 22,320	(40,885)	10,771,273
			11/30/2019	-	-	\$ 22,320	(40,885)	10,730,388
			12/31/2019	-	-	\$ 22,320	(40,885)	10,689,503
			1/31/2020	-	-	\$ 22,320	(40,885)	10,648,619
			2/29/2020	-	-	\$ 22,320	(40,885)	10,607,734
			3/31/2020	-	-	\$ 22,320	(40,885)	10,566,849
			4/30/2020	-	-	\$ 22,320	(40,885)	10,525,964
			5/31/2020	-	-	\$ 22,320	(40,885)	10,485,079
			6/30/2020	-	-	\$ 22,320	(40,885)	10,444,194
			7/31/2020	-	-	\$ 22,320	(40,885)	10,403,310
			8/31/2020	-	-	\$ 22,320	(40,885)	10,362,425
			9/30/2020	-	-	\$ 22,320	(40,885)	10,321,540
			10/31/2020	-	-	\$ 22,320	(40,885)	10,280,655
			11/30/2020	-	-	\$ 22,320	(40,885)	10,239,770
			12/31/2020	-	-	\$ 22,320	(40,885)	10,198,885
			1/31/2021	-	-	\$ 22,320	(40,885)	10,158,001
			2/28/2021	-	-	\$ 22,320	(40,885)	10,117,116
			3/31/2021	-	-	\$ 22,320	(40,885)	10,076,231
			4/30/2021	-	-	\$ 22,320	(40,885)	10,035,346
			5/31/2021	-	-	\$ 22,320	(40,885)	9,994,461
			6/30/2021	-	-	\$ 22,320	(40,885)	9,953,576
			7/31/2021	-	-	\$ 22,320	(40,885)	9,912,691
			8/31/2021	-	-	\$ 22,320	(40,885)	9,871,807

This portion was included in the Rate Case to show how the regulatory asset accumulated.

NOTE: RATES WERE NOTE APPROVED AND IMPLEMENTED UNTIL MAY 1, 2018. FOR APRIL THE \$22k AMOUNT WAS RECORDED

9/30/2021	-	\$	22,320	(40,885)	9,830,922
10/31/2021	-	\$	22,320	(40,885)	9,790,037
11/30/2021	-	\$	22,320	(40,885)	9,749,152
12/31/2021	-	\$	22,320	(40,885)	9,708,267
1/31/2022	-	\$	22,320	(40,885)	9,667,382
2/28/2022	-	\$	22,320	(40,885)	9,626,498
3/31/2022	-	\$	22,320	(40,885)	9,585,613
4/30/2022	-	\$	22,320	(40,885)	9,544,728
5/31/2022	-	\$	22,320	(40,885)	9,503,843
6/30/2022	-	\$	22,320	(40,885)	9,462,958
7/31/2022	-	\$	22,320	(40,885)	9,422,073
8/31/2022	-	\$	22,320	(40,885)	9,381,189
9/30/2022	-	\$	22,320	(40,885)	9,340,304
10/31/2022	-	\$	22,320	(40,885)	9,299,419
11/30/2022	-	\$	22,320	(40,885)	9,258,534
12/31/2022	-	\$	22,320	(40,885)	9,217,649
1/31/2023	-	\$	22,320	(40,885)	9,176,764
2/28/2023	-	\$	22,320	(40,885)	9,135,880
3/31/2023	-	\$	22,320	(40,885)	9,094,995
4/30/2023	-	\$	22,320	(40,885)	9,054,110
5/31/2023	-	\$	22,320	(40,885)	9,013,225
6/30/2023	-	\$	22,320	(40,885)	8,972,340
7/31/2023	-	\$	22,320	(40,885)	8,931,455
8/31/2023	-	\$	22,320	(40,885)	8,890,571
9/30/2023	-	\$	22,320	(40,885)	8,849,686
10/31/2023	-	\$	22,320	(40,885)	8,808,801
11/30/2023	-	\$	22,320	(40,885)	8,767,916
12/31/2023	-	\$	22,320	(40,885)	8,727,031
1/31/2024	-	\$	22,320	(40,885)	8,686,146
2/29/2024	-	\$	22,320	(40,885)	8,645,262
3/31/2024	-	\$	22,320	(40,885)	8,604,377
4/30/2024	-	\$	22,320	(40,885)	8,563,492
5/31/2024	-	\$	22,320	(40,885)	8,522,607
6/30/2024	-	\$	22,320	(40,885)	8,481,722
7/31/2024	-	\$	22,320	(40,885)	8,440,837
8/31/2024	-	\$	22,320	(40,885)	8,399,953
9/30/2024	-	\$	22,320	(40,885)	8,359,068
10/31/2024	-	\$	22,320	(40,885)	8,318,183
11/30/2024	-	\$	22,320	(40,885)	8,277,298
12/31/2024	-	\$	22,320	(40,885)	8,236,413
1/31/2025	-	\$	22,320	(40,885)	8,195,528
2/28/2025	-	\$	22,320	(40,885)	8,154,644
3/31/2025	-	\$	22,320	(40,885)	8,113,759
4/30/2025	-	\$	22,320	(40,885)	8,072,874
5/31/2025	-	\$	22,320	(40,885)	8,031,989
6/30/2025	-	\$	22,320	(40,885)	7,991,104
7/31/2025	-	\$	22,320	(40,885)	7,950,219
8/31/2025	-	\$	22,320	(40,885)	7,909,335
9/30/2025	-	\$	22,320	(40,885)	7,868,450
10/31/2025	-	\$	22,320	(40,885)	7,827,565
11/30/2025	-	\$	22,320	(40,885)	7,786,680
12/31/2025	-	\$	22,320	(40,885)	7,745,795
1/31/2026	-	\$	22,320	(40,885)	7,704,910
2/28/2026	-	\$	22,320	(40,885)	7,664,026
3/31/2026	-	\$	22,320	(40,885)	7,623,141
4/30/2026	-	\$	22,320	(40,885)	7,582,256
5/31/2026	-	\$	22,320	(40,885)	7,541,371
6/30/2026	-	\$	22,320	(40,885)	7,500,486
7/31/2026	-	\$	22,320	(40,885)	7,459,601
8/31/2026	-	\$	22,320	(40,885)	7,418,717
9/30/2026	-	\$	22,320	(40,885)	7,377,832
10/31/2026	-	\$	22,320	(40,885)	7,336,947
11/30/2026	-	\$	22,320	(40,885)	7,296,062
12/31/2026	-	\$	22,320	(40,885)	7,255,177
1/31/2027	-	\$	22,320	(40,885)	7,214,292
2/28/2027	-	\$	22,320	(40,885)	7,173,408
3/31/2027	-	\$	22,320	(40,885)	7,132,523
4/30/2027	-	\$	22,320	(40,885)	7,091,638
5/31/2027	-	\$	22,320	(40,885)	7,050,753
6/30/2027	-	\$	22,320	(40,885)	7,009,868
7/31/2027	-	\$	22,320	(40,885)	6,968,983
8/31/2027	-	\$	22,320	(40,885)	6,928,099
9/30/2027	-	\$	22,320	(40,885)	6,887,214
10/31/2027	-	\$	22,320	(40,885)	6,846,329
11/30/2027	-	\$	22,320	(40,885)	6,805,444
12/31/2027	-	\$	22,320	(40,885)	6,764,559
1/31/2028	-	\$	22,320	(40,885)	6,723,674
2/28/2028	-	\$	22,320	(40,885)	6,682,790
3/31/2028	-	\$	22,320	(40,885)	6,641,905
4/30/2028	-	\$	22,320	(40,885)	6,601,020
5/31/2028	-	\$	22,320	(40,885)	6,560,135
6/30/2028	-	\$	22,320	(40,885)	6,519,250
7/31/2028	-	\$	22,320	(40,885)	6,478,365
8/31/2028	-	\$	22,320	(40,885)	6,437,481
9/30/2028	-	\$	22,320	(40,885)	6,396,596
10/31/2028	-	\$	22,320	(40,885)	6,355,711
11/30/2028	-	\$	22,320	(40,885)	6,314,826
12/31/2028	-	\$	22,320	(40,885)	6,273,941
1/31/2029	-	\$	22,320	(40,885)	6,233,056
2/28/2029	-	\$	22,320	(40,885)	6,192,172
3/31/2029	-	\$	22,320	(40,885)	6,151,287
4/30/2029	-	\$	22,320	(40,885)	6,110,402
5/31/2029	-	\$	22,320	(40,885)	6,069,517
6/30/2029	-	\$	22,320	(40,885)	6,028,632
7/31/2029	-	\$	22,320	(40,885)	5,987,747
8/31/2029	-	\$	22,320	(40,885)	5,946,863
9/30/2029	-	\$	22,320	(40,885)	5,905,978
10/31/2029	-	\$	22,320	(40,885)	5,865,093
11/30/2029	-	\$	22,320	(40,885)	5,824,208
12/31/2029	-	\$	22,320	(40,885)	5,783,323
1/31/2030	-	\$	22,320	(40,885)	5,742,438
2/28/2030	-	\$	22,320	(40,885)	5,701,554
3/31/2030	-	\$	22,320	(40,885)	5,660,669
4/30/2030	-	\$	22,320	(40,885)	5,619,784
5/31/2030	-	\$	22,320	(40,885)	5,578,899
6/30/2030	-	\$	22,320	(40,885)	5,538,014
7/31/2030	-	\$	22,320	(40,885)	5,497,129

8/31/2030	-	\$	22,320	(40,885)	5,456,245
9/30/2030	-	\$	22,320	(40,885)	5,415,360
10/31/2030	-	\$	22,320	(40,885)	5,374,475
11/30/2030	-	\$	22,320	(40,885)	5,333,590
12/31/2030	-	\$	22,320	(40,885)	5,292,705
1/31/2031	-	\$	22,320	(40,885)	5,251,820
2/28/2031	-	\$	22,320	(40,885)	5,210,936
3/31/2031	-	\$	22,320	(40,885)	5,170,051
4/30/2031	-	\$	22,320	(40,885)	5,129,166
5/31/2031	-	\$	22,320	(40,885)	5,088,281
6/30/2031	-	\$	22,320	(40,885)	5,047,396
7/31/2031	-	\$	22,320	(40,885)	5,006,511
8/31/2031	-	\$	22,320	(40,885)	4,965,627
9/30/2031	-	\$	22,320	(40,885)	4,924,742
10/31/2031	-	\$	22,320	(40,885)	4,883,857
11/30/2031	-	\$	22,320	(40,885)	4,842,972
12/31/2031	-	\$	22,320	(40,885)	4,802,087
1/31/2032	-	\$	22,320	(40,885)	4,761,202
2/29/2032	-	\$	22,320	(40,885)	4,720,318
3/31/2032	-	\$	22,320	(40,885)	4,679,433
4/30/2032	-	\$	22,320	(40,885)	4,638,548
5/31/2032	-	\$	22,320	(40,885)	4,597,663
6/30/2032	-	\$	22,320	(40,885)	4,556,778
7/31/2032	-	\$	22,320	(40,885)	4,515,893
8/31/2032	-	\$	22,320	(40,885)	4,475,009
9/30/2032	-	\$	22,320	(40,885)	4,434,124
10/31/2032	-	\$	22,320	(40,885)	4,393,239
11/30/2032	-	\$	22,320	(40,885)	4,352,354
12/31/2032	-	\$	22,320	(40,885)	4,311,469
1/31/2033	-	\$	22,320	(40,885)	4,270,584
2/28/2033	-	\$	22,320	(40,885)	4,229,700
3/31/2033	-	\$	22,320	(40,885)	4,188,815
4/30/2033	-	\$	22,320	(40,885)	4,147,930
5/31/2033	-	\$	22,320	(40,885)	4,107,045
6/30/2033	-	\$	22,320	(40,885)	4,066,160
7/31/2033	-	\$	22,320	(40,885)	4,025,275
8/31/2033	-	\$	22,320	(40,885)	3,984,391
9/30/2033	-	\$	22,320	(40,885)	3,943,506
10/31/2033	-	\$	22,320	(40,885)	3,902,621
11/30/2033	-	\$	22,320	(40,885)	3,861,736
12/31/2033	-	\$	22,320	(40,885)	3,820,851
1/31/2034	-	\$	22,320	(40,885)	3,779,966
2/28/2034	-	\$	22,320	(40,885)	3,739,082
3/31/2034	-	\$	22,320	(40,885)	3,698,197
4/30/2034	-	\$	22,320	(40,885)	3,657,312
5/31/2034	-	\$	22,320	(40,885)	3,616,427
6/30/2034	-	\$	22,320	(40,885)	3,575,542
7/31/2034	-	\$	22,320	(40,885)	3,534,657
8/31/2034	-	\$	22,320	(40,885)	3,493,772
9/30/2034	-	\$	22,320	(40,885)	3,452,888
10/31/2034	-	\$	22,320	(40,885)	3,412,003
11/30/2034	-	\$	22,320	(40,885)	3,371,118
12/31/2034	-	\$	22,320	(40,885)	3,330,233
1/31/2035	-	\$	22,320	(40,885)	3,289,348
2/28/2035	-	\$	22,320	(40,885)	3,248,464
3/31/2035	-	\$	22,320	(40,885)	3,207,579
4/30/2035	-	\$	22,320	(40,885)	3,166,694
5/31/2035	-	\$	22,320	(40,885)	3,125,809
6/30/2035	-	\$	22,320	(40,885)	3,084,924
7/31/2035	-	\$	22,320	(40,885)	3,044,039
8/31/2035	-	\$	22,320	(40,885)	3,003,155
9/30/2035	-	\$	22,320	(40,885)	2,962,270
10/31/2035	-	\$	22,320	(40,885)	2,921,385
11/30/2035	-	\$	22,320	(40,885)	2,880,500
12/31/2035	-	\$	22,320	(40,885)	2,839,615
1/31/2036	-	\$	22,320	(40,885)	2,798,730
2/29/2036	-	\$	22,320	(40,885)	2,757,845
3/31/2036	-	\$	22,320	(40,885)	2,716,961
4/30/2036	-	\$	22,320	(40,885)	2,676,076
5/31/2036	-	\$	22,320	(40,885)	2,635,191
6/30/2036	-	\$	22,320	(40,885)	2,594,306
7/31/2036	-	\$	22,320	(40,885)	2,553,421
8/31/2036	-	\$	22,320	(40,885)	2,512,537
9/30/2036	-	\$	22,320	(40,885)	2,471,652
10/31/2036	-	\$	22,320	(40,885)	2,430,767
11/30/2036	-	\$	22,320	(40,885)	2,389,882
12/31/2036	-	\$	22,320	(40,885)	2,348,997
1/31/2037	-	\$	22,320	(40,885)	2,308,112
2/28/2037	-	\$	22,320	(40,885)	2,267,228
3/31/2037	-	\$	22,320	(40,885)	2,226,343
4/30/2037	-	\$	22,320	(40,885)	2,185,458
5/31/2037	-	\$	22,320	(40,885)	2,144,573
6/30/2037	-	\$	22,320	(40,885)	2,103,688
7/31/2037	-	\$	22,320	(40,885)	2,062,803
8/31/2037	-	\$	22,320	(40,885)	2,021,919
9/30/2037	-	\$	22,320	(40,885)	1,981,034
10/31/2037	-	\$	22,320	(40,885)	1,940,149
11/30/2037	-	\$	22,320	(40,885)	1,899,264
12/31/2037	-	\$	22,320	(40,885)	1,858,379
1/31/2038	-	\$	22,320	(40,885)	1,817,494
2/28/2038	-	\$	22,320	(40,885)	1,776,610
3/31/2038	-	\$	22,320	(40,885)	1,735,725
4/30/2038	-	\$	22,320	(40,885)	1,694,840
5/31/2038	-	\$	22,320	(40,885)	1,653,955
6/30/2038	-	\$	22,320	(40,885)	1,613,070
7/31/2038	-	\$	22,320	(40,885)	1,572,185
8/31/2038	-	\$	22,320	(40,885)	1,531,301
9/30/2038	-	\$	22,320	(40,885)	1,490,416
10/31/2038	-	\$	22,320	(40,885)	1,449,531
11/30/2038	-	\$	22,320	(40,885)	1,408,646
12/31/2038	-	\$	22,320	(40,885)	1,367,761
1/31/2039	-	\$	22,320	(40,885)	1,326,876
2/28/2039	-	\$	22,320	(40,885)	1,285,992
3/31/2039	-	\$	22,320	(40,885)	1,245,107
4/30/2039	-	\$	22,320	(40,885)	1,204,222
5/31/2039	-	\$	22,320	(40,885)	1,163,337
6/30/2039	-	\$	22,320	(40,885)	1,122,452

7/31/2039	-	\$	22,320	(40,885)	1,081,567
8/31/2039	-	\$	22,320	(40,885)	1,040,683
9/30/2039	-	\$	22,320	(40,885)	999,798
10/31/2039	-	\$	22,320	(40,885)	958,913
11/30/2039	-	\$	22,320	(40,885)	918,028
12/31/2039	-	\$	22,320	(40,885)	877,143
1/31/2040	-	\$	22,320	(40,885)	836,258
2/29/2040	-	\$	22,320	(40,885)	795,374
3/31/2040	-	\$	22,320	(40,885)	754,489
4/30/2040	-	\$	22,320	(40,885)	713,604
5/31/2040	-	\$	22,320	(40,885)	672,719
6/30/2040	-	\$	22,320	(40,885)	631,834
7/31/2040	-	\$	22,320	(40,885)	590,949
8/31/2040	-	\$	22,320	(40,885)	550,065
9/30/2040	-	\$	22,320	(40,885)	509,180
10/31/2040	-	\$	22,320	(40,885)	468,295
11/30/2040	-	\$	22,320	(40,885)	427,410
12/31/2040	-	\$	22,320	(40,885)	386,525
1/31/2041	-	\$	22,320	(40,885)	345,640
2/28/2041	-	\$	22,320	(40,885)	304,756
3/31/2041	-	\$	22,320	(40,885)	263,871
4/30/2041	-	\$	22,320	(40,885)	222,986
5/31/2041	-	\$	22,320	(40,885)	182,101
6/30/2041	-	\$	22,320	(40,885)	141,216
7/31/2041	-	\$	22,320	(40,885)	100,331
8/31/2041	-	\$	22,320	(40,885)	59,447
9/30/2041	-	\$	22,320	(40,885)	18,562
10/31/2041	-	\$	22,320	(18,562)	-

**DEK 2019 Deferred Rate Case Expense Amortization
Per DEK Case No. 2019-00271 (4/27/20)**

Authorized Amount to Recover as of 04/20 order: \$ 339,168.00

KPSC 2008-
476;
KPSC 2017-
321

To be amortized for 60 months: \$ **5,652.80** (May 2020 to April 2025)

Accounting used from May 2020 to April 2025:

400AM0005 - Monthly entry:					
BU	OU	Resp Center	Account	Debit	Credit
75080	EL02	9928	0928006	5,652.80	
75080	EL02	9928	0186113		5,652.80

Amortization Schedule		Monthly Amount	Amortization in Acct 0186113	Net Balance
	Beg Bal			339,168.00
1	May-20	5,652.80	(5,652.80)	333,515.20
2	Jun-20	5,652.80	(11,305.60)	327,862.40
3	Jul-20	5,652.80	(16,958.40)	322,209.60
4	Aug-20	5,652.80	(22,611.20)	316,556.80
5	Sep-20	5,652.80	(28,264.00)	310,904.00
6	Oct-20	5,652.80	(33,916.80)	305,251.20
7	Nov-20	5,652.80	(39,569.60)	299,598.40
8	Dec-20	5,652.80	(45,222.40)	293,945.60
9	Jan-21	5,652.80	(50,875.20)	288,292.80
10	Feb-21	5,652.80	(56,528.00)	282,640.00
11	Mar-21	5,652.80	(62,180.80)	276,987.20
12	Apr-21	5,652.80	(67,833.60)	271,334.40
13	May-21	5,652.80	(73,486.40)	265,681.60
14	Jun-21	5,652.80	(79,139.20)	260,028.80
15	Jul-21	5,652.80	(84,792.00)	254,376.00
16	Aug-21	5,652.80	(90,444.80)	248,723.20
17	Sep-21	5,652.80	(96,097.60)	243,070.40
18	Oct-21	5,652.80	(101,750.40)	237,417.60

19	Nov-21	5,652.80	(107,403.20)	231,764.80
20	Dec-21	5,652.80	(113,056.00)	226,112.00
21	Jan-22	5,652.80	(118,708.80)	220,459.20
22	Feb-22	5,652.80	(124,361.60)	214,806.40
23	Mar-22	5,652.80	(130,014.40)	209,153.60
24	Apr-22	5,652.80	(135,667.20)	203,500.80
25	May-22	5,652.80	(141,320.00)	197,848.00
26	Jun-22	5,652.80	(146,972.80)	192,195.20
27	Jul-22	5,652.80	(152,625.60)	186,542.40
28	Aug-22	5,652.80	(158,278.40)	180,889.60
29	Sep-22	5,652.80	(163,931.20)	175,236.80
30	Oct-22	5,652.80	(169,584.00)	169,584.00
31	Nov-22	5,652.80	(175,236.80)	163,931.20
32	Dec-22	5,652.80	(180,889.60)	158,278.40
33	Jan-23	5,652.80	(186,542.40)	152,625.60
34	Feb-23	5,652.80	(192,195.20)	146,972.80
35	Mar-23	5,652.80	(197,848.00)	141,320.00
36	Apr-23	5,652.80	(203,500.80)	135,667.20
37	May-23	5,652.80	(209,153.60)	130,014.40
38	Jun-23	5,652.80	(214,806.40)	124,361.60
39	Jul-23	5,652.80	(220,459.20)	118,708.80
40	Aug-23	5,652.80	(226,112.00)	113,056.00
41	Sep-23	5,652.80	(231,764.80)	107,403.20
42	Oct-23	5,652.80	(237,417.60)	101,750.40
43	Nov-23	5,652.80	(243,070.40)	96,097.60
44	Dec-23	5,652.80	(248,723.20)	90,444.80
45	Jan-24	5,652.80	(254,376.00)	84,792.00
46	Feb-24	5,652.80	(260,028.80)	79,139.20
47	Mar-24	5,652.80	(265,681.60)	73,486.40
48	Apr-24	5,652.80	(271,334.40)	67,833.60
49	May-24	5,652.80	(276,987.20)	62,180.80
50	Jun-24	5,652.80	(282,640.00)	56,528.00
51	Jul-24	5,652.80	(288,292.80)	50,875.20
52	Aug-24	5,652.80	(293,945.60)	45,222.40
53	Sep-24	5,652.80	(299,598.40)	39,569.60
54	Oct-24	5,652.80	(305,251.20)	33,916.80
55	Nov-24	5,652.80	(310,904.00)	28,264.00
56	Dec-24	5,652.80	(316,556.80)	22,611.20
57	Jan-25	5,652.80	(322,209.60)	16,958.40
58	Feb-25	5,652.80	(327,862.40)	11,305.60

DUKE ENERGY KENTUCKY, INC.
Regulatory Asset Amortizations

59	Mar-25	5,652.80	(333,515.20)	5,652.80
60	Apr-25	5,652.80	(339,168.00)	0.00

DEK Deferred Storm Costs Amortization
Per DEK Case No. 2019-00271 (4/27/20)

Authorized Amount to Recover as of 04/20 order: \$ 1,051,054.25

KPSC 2008-
476;
KPSC 2017-
321

To be amortized for 60 months: \$ **17,517.57** (May 2020 to April 2025)

Accounting used from May 2020 to April 2025:

400AM2001 - Monthly entry:					
BU	OU	Resp Center	Account	Debit	Credit
75084	V932	S471	0593000	17,517.57	
75084	V932	S471	0182330		17,517.57

Amortization Schedule		Monthly Amount	Amortization in Acct 0186108	Net Balance
	Beg Bal			1,051,054.25
1	May-20	17,517.57	(17,517.57)	1,033,536.68
2	Jun-20	17,517.57	(35,035.14)	1,016,019.11
3	Jul-20	17,517.57	(52,552.71)	998,501.54
4	Aug-20	17,517.57	(70,070.28)	980,983.97
5	Sep-20	17,517.57	(87,587.85)	963,466.40
6	Oct-20	17,517.57	(105,105.43)	945,948.83
7	Nov-20	17,517.57	(122,623.00)	928,431.25
8	Dec-20	17,517.57	(140,140.57)	910,913.68
9	Jan-21	17,517.57	(157,658.14)	893,396.11
10	Feb-21	17,517.57	(175,175.71)	875,878.54
11	Mar-21	17,517.57	(192,693.28)	858,360.97
12	Apr-21	17,517.57	(210,210.85)	840,843.40
13	May-21	17,517.57	(227,728.42)	823,325.83
14	Jun-21	17,517.57	(245,245.99)	805,808.26
15	Jul-21	17,517.57	(262,763.56)	788,290.69
16	Aug-21	17,517.57	(280,281.13)	770,773.12
17	Sep-21	17,517.57	(297,798.70)	753,255.55
18	Oct-21	17,517.57	(315,316.28)	735,737.98

19	Nov-21	17,517.57	(332,833.85)	718,220.40
20	Dec-21	17,517.57	(350,351.42)	700,702.83
21	Jan-22	17,517.57	(367,868.99)	683,185.26
22	Feb-22	17,517.57	(385,386.56)	665,667.69
23	Mar-22	17,517.57	(402,904.13)	648,150.12
24	Apr-22	17,517.57	(420,421.70)	630,632.55
25	May-22	17,517.57	(437,939.27)	613,114.98
26	Jun-22	17,517.57	(455,456.84)	595,597.41
27	Jul-22	17,517.57	(472,974.41)	578,079.84
28	Aug-22	17,517.57	(490,491.98)	560,562.27
29	Sep-22	17,517.57	(508,009.55)	543,044.70
30	Oct-22	17,517.57	(525,527.13)	525,527.13
31	Nov-22	17,517.57	(543,044.70)	508,009.55
32	Dec-22	17,517.57	(560,562.27)	490,491.98
33	Jan-23	17,517.57	(578,079.84)	472,974.41
34	Feb-23	17,517.57	(595,597.41)	455,456.84
35	Mar-23	17,517.57	(613,114.98)	437,939.27
36	Apr-23	17,517.57	(630,632.55)	420,421.70
37	May-23	17,517.57	(648,150.12)	402,904.13
38	Jun-23	17,517.57	(665,667.69)	385,386.56
39	Jul-23	17,517.57	(683,185.26)	367,868.99
40	Aug-23	17,517.57	(700,702.83)	350,351.42
41	Sep-23	17,517.57	(718,220.40)	332,833.85
42	Oct-23	17,517.57	(735,737.98)	315,316.28
43	Nov-23	17,517.57	(753,255.55)	297,798.70
44	Dec-23	17,517.57	(770,773.12)	280,281.13
45	Jan-24	17,517.57	(788,290.69)	262,763.56
46	Feb-24	17,517.57	(805,808.26)	245,245.99
47	Mar-24	17,517.57	(823,325.83)	227,728.42
48	Apr-24	17,517.57	(840,843.40)	210,210.85
49	May-24	17,517.57	(858,360.97)	192,693.28
50	Jun-24	17,517.57	(875,878.54)	175,175.71
51	Jul-24	17,517.57	(893,396.11)	157,658.14
52	Aug-24	17,517.57	(910,913.68)	140,140.57
53	Sep-24	17,517.57	(928,431.25)	122,623.00
54	Oct-24	17,517.57	(945,948.83)	105,105.43
55	Nov-24	17,517.57	(963,466.40)	87,587.85
56	Dec-24	17,517.57	(980,983.97)	70,070.28
57	Jan-25	17,517.57	(998,501.54)	52,552.71
58	Feb-25	17,517.57	(1,016,019.11)	35,035.14

DUKE ENERGY KENTUCKY, INC.
Regulatory Asset Amortizations

59	Mar-25	17,517.57	(1,033,536.68)	17,517.57
60	Apr-25	17,517.57	(1,051,054.25)	0.00

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-102

REQUEST:

Refer to the Application generally. Provide the Asset Retirement Obligations and the accumulated amortization recorded for East Bend by FERC account/subaccount (assets and liabilities) and by generating unit, if available, as of December 31, 2021 and September 30, 2022, for each specific legal obligation.

RESPONSE:

Please see AG-DR-01-102 Attachment.

PERSON RESPONSIBLE: Huyen C. Dang

Duke Energy Kentucky
East Bend Asset Retirement Obligation

Refer to the Application generally. Provide the Asset Retirement Obligations and the accumulated amortization recorded for East Bend by FERC account/subaccount (assets and liabilities) and by generating unit, if available, as of December 31, 2021 and September 30, 2022, for each specific legal obligation.

Response:

East Bend - Unit 2	31-Dec-21	30-Sep-22
0101315 - ARO Asset - Coal Ash	100,701,443	163,355,248
0108315 - ARO Accum Depr - Coal Ash	37,342,316	39,779,205
0230315 - ARO Liability - Coal Ash & 0230105 current	(82,043,727)	(99,351,718)

**Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023**

AG-DR-01-103

REQUEST:

Refer to the Application generally. Provide the Asset Retirement Obligations recorded for the Woodsdale CTs by FERC account/subaccount (assets and liabilities) as of December 31, 2021, and September 30, 2022 for each specific legal obligation.

RESPONSE:

Duke Energy Kentucky does not have an ARO recorded for Woodsdale CT.

PERSON RESPONSIBLE: Huyen C. Dang

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-104

REQUEST:

Refer to the Kopp Testimony, and specifically the 1898 & Company's ("1898 & Co") decommissioning study. In regard to any asbestos abatement and other remediation costs for the East Bend Station and the Woodsdale CTs, indicate which, if any, of the costs for each unit relates to the Asset Retirement Obligations recorded by the Company.

RESPONSE:

In regard to asbestos abatement for the East Bend Station and the Woodsdale CTs, none of the costs relate to the Asset Retirement Obligations recorded by the Company. In regard to other remediation costs for the East Bend Station, specifically closure of the coal ash basin and East and West landfills, the Company has recorded an Asset Retirement Obligation of \$99,351,718 as of September 30, 2022.

PERSON RESPONSIBLE: Huyen C. Dang

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-105

REQUEST:

Refer to the Kopp Testimony, and specifically the 1898 & Co's decommissioning study, Attachment JTK-1. Refer further to the column labeled "Inventory Cost" on Table 1-1 on page 6 of 30, which shows costs of \$9.084 million and \$5.967 million added to the level of decommissioning costs for East Bend and Woodsdale, respectively. Explain in detail what these costs include, how they were calculated, and why they should be considered part of the decommissioning costs for these two generating stations. In addition, explain their relationship, if any, to the level of salvage value estimated.

RESPONSE:

The inventory costs are included for the inventory which Duke Energy Kentucky maintains on site to ensure the reliability of the facility and enable the site to continue operating. Generation facilities keep an appropriate level of inventory while a plant operates, and at the time the plant retires it will have limited salvage value. The value of the inventory included in the study was provided by Duke Energy Kentucky. As part of the study, 1898 & Co. estimated the remaining salvage value of the inventory at the time Duke Energy Kentucky determines the plants should be retired. For Woodsdale, a salvage value of 25 percent was assumed. For East Bend, 10 percent of the inventory was assumed to be salvageable. Woodsdale was assumed to have a higher inventory salvage value because

spare parts for combustion turbines are more marketable and can be more easily resold to other owners/operators at a higher premium than just the scrap price of the material.

PERSON RESPONSIBLE: Jeffrey T. Kopp

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-106

REQUEST:

Refer to the Kopp Testimony at 6 – 7, wherein he addresses 1898 & Co's development of the "direct" costs of decommissioning the Company's generating units as follows:

1898 & Co estimated quantities based on a visual inspection of the facilities, review of engineering drawings, 1898 & Co's in-house database of plant quantities, and 1898 & Co's professional judgment. This resulted in an estimate of quantities for the tasks required to be performed for each decommissioning effort. Current market pricing for labor rates, equipment, and unit pricing were then developed for each task. These rates were applied to the quantities for the Plants to determine the total cost of decommissioning for each site.

Refer also to Mr. Kopp's Attachment JTK-1 at page 7 of 30, wherein the decommissioning study states, "The site decommissioning costs were developed using information provided by DEK and in-house data 1898 & Co has collected from previous project experience."

a. Indicate whether 1898 & Co relied on actual costs incurred to decommission other generating units and restore sites in the development of its estimates for the Duke Kentucky generating units. If so, provide a detailed description of this aspect of 1898 & Co's scope of work in the development of its estimates and the specific information "collected from previous experience" and used for this purpose. If not, then explain why not and explain why such actual costs would not assist in the development of experience-based estimates.

b. Provide a copy of all actual costs and analyses incurred to decommission other generating units and restore sites used in the development of 1898 & Co's estimate

for the Duke Kentucky generating units. Provide this information in Excel live format and with all formulas intact.

RESPONSE:

a. 1898 & Co. and BMcD's experience preparing cost estimates for other clients as well as experience reviewing demolition bids for contractors and overseeing that work forms the basis of our professional judgement in preparing these estimates and verifying their accuracy. Specific, actual decommissioning costs are not utilized directly in any of the cost estimates; however, some unit pricing may be based on our experience reviewing costs from demolition contractors and other estimates that were received or prepared under confidentiality agreements, the details of which cannot be disclosed.

b. There were no costs and analyses incurred to decommission other generating units and restore sites used in the development of 1898 & Co's estimate for the Duke Energy Kentucky generating units.

PERSON RESPONSIBLE: Jeffrey T. Kopp

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-107

REQUEST:

Refer to the Kopp Testimony at 8, wherein he addresses the addition of “indirect” Company costs to the direct costs of decommissioning the Company’s generating units and states, “[i]ndirect costs were determined as a percentage of the direct costs, as is a typical approach when preparing these types of cost estimates. The percentage of direct costs that was applied to determine the indirect costs was developed by 1898 & Co based on experience with recent decommissioning estimates.”

a. Provide a copy of all source data and information relied on to determine the “indirect costs” described in the above referenced testimony.

b. Provide all of 1898 & Co’s analyses that demonstrate such costs are incremental to the costs incurred by Duke Kentucky rather than a non-incremental temporary reallocation of costs. If no such analyses were performed, then so state. If such analyses were performed, then provide all supporting assumptions, data, and calculations in live Excel format with all formulas intact, and dated notes, memoranda, and all other documentation contemporaneously developed along with the estimates of the indirect costs.

RESPONSE:

a. There is no source data available. Indirect costs were determined as a percentage of the direct costs, as is a typical approach when preparing these types of cost estimates. 1898 & Co. developed the percentage of direct costs that was applied to

determine the indirect costs based on our experience and Duke Energy Kentucky's approach to managing the execution of dismantling projects. 1898 & Co. and Duke Energy Kentucky mutually agreed on the percentage applied in the study.

b. A specific analysis was not performed regarding whether the indirect costs were incremental to the costs incurred by Duke Energy Kentucky or a non-incremental temporary reallocation of costs. In our experience, indirect costs include those costs expected to be incurred by Duke Energy Kentucky during the dismantling process that are in addition to the direct costs paid to demolition contractors. This typically includes items such as permitting, fees, costs associated with third-party project managers or engineers providing oversight during demolition activities, inspections, and testing to confirm that remediation has been completed. These types of typical costs are incremental costs directly related to this study.

PERSON RESPONSIBLE: Jeffrey T. Kopp

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-108

REQUEST:

Refer to the Kopp Testimony, Attachment JTK-1 at page 9 of 30, wherein he provides a brief description of the East Bend generating units and site.

a. Provide a more detailed description of the operating and retirement history of Unit 1, including, but not limited to, the retirement date.

b. Provide the gross plant, accumulated depreciation, and net book value of East Bend 1 at the date of retirement and at December 31 in each subsequent year. In addition, provide the accumulated terminal net salvage included in the accumulated depreciation at the date of retirement and at December 31 in each subsequent year. Further, provide the actual terminal net salvage costs incurred since the date of retirement and provide the accounting journal entries used to record these costs.

c. Describe Duke Kentucky's accounting practices for retired generating units, e.g., credit plant in service and debit accumulated depreciation equally for the gross plant in service at the date of retirement.

d. Describe the manner in which the net book value debit balance included in accumulated depreciation post-retirement has been included in subsequent depreciation studies, e.g., "rolled in" to the accumulated depreciation for East Bend 2.

RESPONSE:

a. Please see Attachment JTK-1 at page 9, while East Bend was designed for multiple units, only Unit 2 was fully constructed and placed into service. A steam Turbine and concrete for a control center was poured for Unit 1.

b. N/A.

c. Duke Energy Kentucky's retirement accounting entry for Regulated Utilities Plant is: Debit Accumulated Depreciation-FERC Account 108 and Credit Plant in Service-Classified-FERC Accounts 101 for the Gross Plant amount as of the retirement date.

d. Duke Energy Kentucky's current depreciation study, for Steam Production function, total Accumulated Depreciation balance as of December 2021 included any remaining net book value for retired plants as of the time of the Study.

PERSON RESPONSIBLE:

William C. Luke – a., b.
Huyen C. Dang – c., d.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-109

REQUEST:

Refer to the Kopp Testimony, Attachment JTK-1 at 15 of 30, wherein he describes the demolition and site restoration of Miami Fort.

a. Confirm that Dynegy will direct the demolition and site restoration for all facilities and the entire site, and not Duke Kentucky.

b. Provide the estimated date that Dynegy will retire the last operating unit at the site and a copy of the source information relied on for the estimated date.

c. Provide the estimated dates that Dynegy will commence and complete the demolition and site restoration for all facilities and the entire site.

d. Provide a copy of the maintenance agreement with Dynegy. In addition, indicate whether the expense of this Maintenance Agreement is included in present base rates and included in the proposed base revenues in this proceeding.

e. Provide a copy of all correspondence, notes, and all other documentation regarding Duke Kentucky's instructions to include the \$200,000 per year Maintenance Agreement fee in the decommissioning cost estimate.

f. Provide a description of all decommissioning and site restoration activities to date since the Miami Fort 6 generating unit was retired on June 1, 2015.

g. Confirm that the Company's base rates will be reset on or about July 1, 2023, after an Order is issued by the Commission in this proceeding.

h. Provide the gross plant, accumulated depreciation, and net book value of Miami Fort 6 at the date of retirement and at December 31 in each subsequent year. In addition, provide the accumulated terminal net salvage included in the accumulated depreciation at the date of retirement and at December 31 in each subsequent year. Further, provide the actual terminal net salvage costs incurred since the date of retirement and provide the accounting journal entries used to record these costs.

i. Provide the asset Accumulated Deferred Income Taxes (“ADIT”) for the decommissioning regulatory liability that is included in accumulated depreciation for each of the 13 months in the test year.

j. Confirm that asset ADIT arises for the decommissioning expense revenue recoveries temporary difference in the absence of a decommission expense tax deduction.

k. Confirm that decommissioning revenues received prior to when decommissioning costs actually are incurred results in a temporary difference and an asset ADIT.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRETE (As to Attachment only)

a. The existing Operations and Services Agreement is in effect through December 2024. Extension, termination or amendment of this agreement for the Retirement Period services is under review by Duke Energy. Duke Energy as the asset owner, has approval authority for a site retirement plan involving Miami Fort Unit 6. Duke Energy envisions Unit 6 would be demolished in parallel with Dynegy (Vistra) Units 7 & 8 following their respective retirement dates. At this time, Dynegy (Vistra) oversight of the demolition activities is expected, but not a contractual or agreement requirement between the parties.

- b. According to the news article found at <https://www.wcpo.com/news/local-news/clermont-county/moscow/zimmer-miami-fort-power-plants-to-close-by-2027>

Dynegy plans to close the Miami Fort plant by the end of 2027.

c. Duke Energy Kentucky does not have the estimated dates that Dynegy will commence and complete the demolition and site restoration for all facilities and the entire site.

d. See Application, Volume 16, appendix f. The costs are included in the Depreciation Study and therefore are included in Depreciation Expense in base rates.

e. Please see AG-DR-01-109(e) Confidential Attachment. The confidential attachment to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

f. Since the Unit No. 6 generating unit retirement in 2015, Dynegy (Vistra) maintains care and custody of the unit and common systems related to the Miami Fort Generating Station in North Bend, Ohio. This care and custody is performed by Dynegy (Vistra) on behalf of Duke Energy per the facility Operations and Services Agreement. In addition to the agreement services, Duke Energy has undertaken specific decommissioning scopes of work to:

- Abate all insulation containing asbestos containing materials. Generating unit ACM removal was completed in 2020.
- Draining of all lubricating oils, removal of chemicals and cleaning of CCR from the generating unit.
- Electrical disconnect (air – gapping) of all systems serving Unit 6 only. Several common electrical services to the station Units 7 & 8 were left intact to continue service for Dynegy / Vistra.

- A coal conveyor serving Unit 5 & 6 was demolished due to structural deterioration.
- Chimney serving generating units 5 & 6, but owned by DEK, requires monthly and programmatic inspections. Inspection and maintenance repairs completed to internal platforms, rain hood, aviation lighting and access elevators have been completed.
- Repairs to underground piping system – high pressure and low-pressure service water systems to maintain fire protection for the facility.
- Duke Energy considers the Unit No. 6 generating unit to be decommissioned with demolition of above grade structures, closure of intake/discharge tunnels and final site restoration required to complete the retirement.

g. The Company can confirm that base rates will be reset when the Commission issues an order in this proceeding ordering the Company to do so. The Company does not confirm that will be on July 1, 2023.

h. Please see AG-DR-01-109(h) Attachment.

i. Duke Energy does not calculate ADIT at the Plant level.

j. Cost of removal and retirement is a component of book depreciation and is collected from customers over the life of the asset. The tax deduction for the cost of removal and retirement is not recognized until work is conducted to retire the plant and this therefore creates a temporary book-tax difference resulting in ADIT.

k. Cost of removal and retirement is a component of book depreciation and is collected from customers over the life of the asset. The tax deduction for the cost of

removal and retirement is not recognized until work is conducted to retire the plant and this therefore creates a temporary book-tax difference resulting in ADIT.

PERSON RESPONSIBLE:

William C. Luke – a., b., c., f.
William C. Luke and Sarah E. Lawler – d.
Jeffrey T. Kopp – e.
Sarah E. Lawler – g.
Huyen C. Dang – h.
John R. Panizza – i., j., k.

CONFIDENTIAL PROPRIETARY TRADE SECRET

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: [EXTERNAL] DEK Follow Up Questions
Date: Wednesday, May 25, 2022 2:22:21 PM

Hello [REDACTED] – Please see comments for Miami Fort in red text... [REDACTED]

From: [REDACTED]
Sent: Tuesday, May 24, 2022 8:56 AM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
[REDACTED]
Subject: [EXTERNAL] DEK Follow Up Questions

***** CAUTION! EXTERNAL SENDER *** STOP. ASSESS. VERIFY!!** Were you expecting this email? Are grammar and spelling correct? Does the content make sense? Can you verify the sender? If suspicious report it, then do not click links, open attachments or enter your ID or password.

Hi [REDACTED],

Thank you again for accompanying [REDACTED] and [REDACTED] on the DEK site visits last week. I complied some questions from the 1898 & Co. team regarding the study.

- Will inventory estimates be included and provided for this study? **No inventory for Miami Fort station. For all the other sites – YES – Solar, Woodsdale, East Bend.**
- Are substations included for solar facilities? **Yes**
- For Miami Fort Unit 6 we'd like to confirm the assumed methods of demolition. In the prior study we assumed two options (1) full demo of unit 6 to be done at the same time as the other units on site, (2) retire in place for unit 6 (RIP assumptions below). What scenarios should be included for this study? **Assume full demo with the non-Duke owned units / assets at the site. Duke Energy currently maintains an O&M agreement with Vistra for the Unit 6 retired assets. This Agreement requires a budget of 200k per year paid by Duke to support common site system operations and repair (elevator, firewater, service water, electrical facilities, circulating water) due to the interconnectivity of key infrastructure. Please include this 200k / year Maintenance Agreement fee until full site retirement. Current retirement date for U7 & 8 is 2025 per Vistra news releases.**
 - **Some significant changes since the last Demolition estimate that would have been provided for Miami Fort 6**
 - **Duke Energy completed Unit 6 asbestos (ACM) removal from the unit – all work completed in 2019 – early 2020.**
 - **Duke Energy completed removal of the #11 Unit 6 coal conveyor (incline conveyor from the coal yard to the Unit 6 bunker level) due to deteriorating structural condition.**
 - **Duke Energy completed removal of all oils / fluids from Unit 6. The TR sets on**

CONFIDENTIAL PROPRIETARY TRADE SECRET

the precips were drained and scrapped. All lubricating oils drained and disposed.

- The unit is demolition ready in a decommissioned state at present. Demolition would proceed on Unit 6 after a contractor was selected for overall site demolition after U7 & 8 are retired. The estimate should be based on the yellow highlighted notes in 4.2.3 below – with the exception of the #11 conveyor (removed already)
- For all common facilities at the site, include a 13% cost allocation to DEK, with the exception of barge and mooring facilities noted in 4.2.3 below.

Miami Fort – Retirement in Place

5. Due to continued operation of Unit 7, and Unit 8 owned by Dynegy, and for purposes of maintaining structural integrity of plant facilities, assets owned by DEK will not be removed from the plant under the retirement in place scenario unless they pose a safety risk.
6. Both precipitators, old and new, and induced draft fans associated with Unit 6 will be removed. The old precipitator is currently seen as a safety hazard if it were to be retired in place, due to its vintage, and the new precipitator would require routine maintenance if retired in place and, therefore, it is assumed that they both will be removed.
7. Asbestos abatement of all DEK owned assets will precede any other work. **ACM bulk removal completed in November 2019, with final basement piping removal in fall of 2020.**
8. Materials from the demolition of Unit 6 precipitators will be scrapped and moved off-site. **TR sets were drained of oil and removed from site. Precip was coated externally with a new roof enclosure constructed to prevent storm water ingress.**
9. Oil-filled transformers will be drained and the oil disposed of properly. **complete**
10. The chimney will be capped. Decommissioning Cost Estimate Study Decommissioning Costs – **chimney inspected, and maintenance repairs completed in fall 2020. The chimney is not capped with no plan to install at this time.**

4.2.3 Miami Fort – Full Demolition

1. A full demo of the Miami Fort power plant is assumed to take place after the retirement of all of the currently operating units owned by Dynegy. The full demolition costs are in addition to the Retire in Place costs that will be incurred.
2. The full demolition costs include only the assets owned by DEK. These assets include Unit 6 boiler and steam turbine, three conveyors (#11, #12, and conveyer G), Unit 5 coal crusher, Unit 5 vacuum pump, and the exhaust stack. The building housing the four steam turbines is assumed to be 25 percent owned by DEK and, therefore, 25 percent of the demolition costs will be paid for by DEK.
3. The chimney is assumed to be imploded upon the retirement of all of the currently operating units owned by Dynegy due to the cost to remove the stacks mechanically with adjacent units in operation being approximately ten times that of implosion.
4. It is assumed that no material was removed from the site during construction; therefore, borrow material is available on-site to be used to backfill the basement.
5. Due to the vintage of the plant, lead based paint is assumed to be present.
6. Mooring cells and barge unloading facilities are not included in the scope of this Study.
7. Scrap values, net of transportation costs, used in the Study are as follows: **(values need updated for 2022)**
 - a. Steel \$180.68/ton
 - b. Copper \$1.74/lb
 - c. Aluminum \$0.42/lb
 - d. Brass \$1.34/lb
 - e. Stainless steel \$0.66/lb

CONFIDENTIAL PROPRIETARY TRADE SECRET

Thanks,

[REDACTED]

Analyst | Generation Consulting & Independent Engineering
1898 & Co. | Part of Burns & McDonnell

[REDACTED] [REDACTED]

[REDACTED]

9450 Ward Parkway, Kansas City, MO 64114

Miami Fort 6 (Production Assets, excluding ARO)

As of:	Retirement Date: May'15 (before retirement entry)	December 2015	December 2016	December 2017	December 2018	December 2019	December 2020	December 2021	December 2022	
1	Gross Plant	78,750,250	33,998	11,276	11,276	11,276	12,460	10,958	10,958	10,958
	Accumulated Depreciation (Life+COR-not including nonunitized RWIP)	76,374,765	(2,375,216)	(3,923,754)	(3,957,079)	(3,957,079)	(3,916,454)	(3,916,454)	(3,916,454)	(3,916,454)
	Net Book Value	2,375,484	2,409,214	3,935,030	3,968,354	3,968,354	3,928,914	3,927,412	3,927,412	3,927,412
	Cost of Removal (COR) Reserve, not including nonunitized RWIP	4,133,828	4,133,828	2,613,116	2,613,116	2,613,116	2,613,116	2,613,116	2,613,116	2,613,116
	Actual Cost of Removal, net of salvage, incurred since the date of retirement									
3	(Jun'15-Dec'15, annual cost for 2016-2022)		-	370,926	252,854	3,612,907	4,457,845	381,106	157,094	136,594

Accounting Entries:

Cost of Removal: Debit Accumulated Depreciation-FERC Account 108 and Credit Cash-FERC Account 131

Cash Salvage: Debit Cash-FERC Account 131 and Credit Accumulated Depreciation-FERC Account 108

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-110

REQUEST:

Refer to the Kopp Testimony, Attachment JTK-1, Appendix A, at pages 19 – 23.

- a. Confirm that all of these estimates are in 2022 dollars.
- b. Confirm that none of these estimates rely on a specific retirement date or year. If this is not correct, then provide a corrected statement and describe how the specific retirement date or year impacted the cost estimate.

RESPONSE:

- a. This is correct. All of the estimates provided as Attachment JTK-1 to the Kopp Testimony at Appendix A at pages 19-23 are in 2022 dollars.
- b. This is correct. None of these estimates provided as Attachment JTK-1 to the Kopp Testimony at Appendix A at pages 19-23, rely on a specific retirement year.

PERSON RESPONSIBLE: Jeffrey T. Kopp

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-111

REQUEST:

Refer to the Kopp Testimony, Appendix A. Confirm that there are no future retirement dates cited in the entire 1898 & Co study, and explain why that is the case.

RESPONSE:

This is correct. There are no future retirement dates cited in the 1898 & Co. study. 1898 & Co.'s scope of work for this study did not include determining retirement dates. Our scope was to review the facilities and to make a recommendation to Duke Energy Kentucky regarding the total cost in 2022 dollars to decommission the facilities at the end of their useful lives, when Duke Energy Kentucky determines the Plants should be retired.

PERSON RESPONSIBLE: Jeffrey T. Kopp

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-112

REQUEST:

Refer to the Application generally. Provide a monthly schedule for January 2018 through June 2024 by FERC electric plant account (and by generating unit and/or power plant for the production plant accounts) showing actual plant in service, actual retirements, actual depreciation expense (excluding net salvage), actual net cost of removal expense included in depreciation expense accrual, actual salvage income included in depreciation expense accrual, actual accumulated depreciation (only for depreciation and excluding accumulated net salvage), actual regulatory liability (only for accumulated net salvage separated into accumulated cost of removal and accumulated salvage income if available), actual cost of removal charged against the regulatory liability, and actual salvage income added to the regulatory liability. For those accounts that are both electric and gas, provide an allocation to electric for purposes of this response. Provide this information in electronic spreadsheet format. Identify all costs separately that are recovered through the Company's Rider ESM instead of base rates.

RESPONSE:

For actual monthly data by FERC electric plant account for January 2018 through August 2022, see AG-DR-01-112 Attachment 1.

For projected monthly data by FERC electric plant account for September 2022 through June 2024, see AG-DR-01-112 Attachment 2. The ESM costs are being proposed to be rolled into base rates. Please note that in the process of responding to this request the

Company discovered an error in the calculation of the forecasted 13-month average plant reserve balances. The forecasted 13-month average plant reserve balance in the filed schedule B-3 was understated by approximately \$100,000 and this correction has been reflected in AG-DR-01-112 Attachment 2.

PERSON RESPONSIBLE: Huyen C. Dang – actual data
Grady “Tripp” S. Carpenter – forecasted data

Duke Energy Kentucky
Summary of Assets recovered through ESM Rider
January 2018-August 2022

Note: The below balances are all included within the East Bend Account FERC Accountn 311 Activity shown on the "Monthly Activity Tab"

Month	Plant in Service	Depreciation Expense		Accumulated Depreciation	
		Life	COR	Life	COR
201801	-	-	-	-	-
201802	-	-	-	-	-
201803	-	-	-	-	-
201804	-	-	-	-	-
201805	-	-	-	-	-
201806	-	-	-	-	-
201807	-	-	-	-	-
201808	-	-	-	-	-
201809	-	-	-	-	-
201810	-	-	-	-	-
201811	9,535,804	-	-	-	-
201812	10,190,910	16,121	2,931	16,121	2,931
201901	10,247,008	17,262	3,139	33,383	6,070
201902	10,409,502	17,360	3,156	50,743	9,226
201903	40,414,561	17,643	3,208	68,386	12,434
201904	40,592,842	67,266	12,230	135,652	24,664
201905	41,089,898	67,576	12,287	203,228	36,951
201906	41,154,832	68,442	12,444	271,670	49,395
201907	41,357,125	68,555	12,465	340,225	61,859
201908	41,613,953	68,907	12,529	409,133	74,388
201909	41,240,678	69,355	12,610	478,487	86,998
201910	41,121,404	68,705	12,492	547,192	99,489
201911	41,587,732	68,497	12,454	615,689	111,943
201912	51,431,091	69,309	12,602	684,998	124,545
202001	51,826,557	86,304	15,692	771,302	140,237
202002	68,838,860	86,993	15,817	858,295	156,054
202003	68,880,120	116,246	21,136	974,541	177,189
202004	69,194,311	116,318	21,149	1,090,859	198,338
202005	69,407,870	116,865	21,248	1,207,724	219,586
202006	69,481,974	117,237	21,316	1,324,961	240,902
202007	69,519,617	117,366	21,339	1,442,327	262,241
202008	69,523,318	117,432	21,351	1,559,759	283,593
202009	67,432,273	117,438	21,352	1,677,197	304,945
202010	67,432,273	117,445	21,354	1,794,642	326,298
202011	67,432,274	117,445	21,354	1,912,086	347,652
202012	67,432,275	117,445	21,354	2,029,531	369,006
202101	67,432,275	117,445	21,354	2,146,975	390,359
202102	67,432,275	117,445	21,354	2,264,420	411,713
202103	67,432,275	117,445	21,354	2,381,864	433,066
202104	67,432,275	117,445	21,354	2,499,309	454,420
202105	67,432,275	117,445	21,354	2,616,754	475,773
202106	67,432,275	117,445	21,354	2,734,198	497,127
202107	67,432,275	117,445	21,354	2,851,643	518,480
202108	67,432,275	117,445	21,354	2,969,087	539,834
202109	67,432,275	117,445	21,354	3,086,532	561,188
202110	67,432,275	117,445	21,354	3,203,976	582,541
202111	67,432,275	117,445	21,354	3,321,421	603,895
202112	67,432,275	117,445	21,354	3,438,865	625,248
202201	67,432,275	117,445	21,354	3,556,310	646,602
202202	67,432,275	117,445	21,354	3,673,754	667,955
202203	67,432,275	117,445	21,354	3,791,199	689,309
202204	67,432,275	117,445	21,354	3,908,644	710,662
202205	67,432,275	117,445	21,354	4,026,088	732,016
202206	67,432,275	117,445	21,354	4,143,533	753,370
202207	67,432,275	117,445	21,354	4,260,977	774,723
202208	67,432,275	117,445	21,354	4,378,422	796,077

DUKE ENERGY KENTUCKY, INC.
LAMB 951 2022 2023
PLANT ACCOUNT ROLL-FORWARD
SEPTEMBER 2022 THROUGH JUNE 2024

STEAM PRODUCTION PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Land and Land Rights, Structures & Improvements, and various equipment.

OTHER PRODUCTION PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Land and Land Rights, Structures & Improvements, and various equipment.

TRANSMISSION PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Land, Structures & Improvements, and various equipment.

DISTRIBUTION PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Land and Land Rights, Structures & Improvements, and various equipment.

GENERAL PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Maintenance Intangible Plant, Structures & Improvements, and various equipment.

COMMON PLANT

Table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Maintenance Intangible Plant, Structures & Improvements, and various equipment.

Summary table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Total Steam Production Plant, Total Other Production Plant, Total Transmission Plant, Total Distribution Plant, Total General Plant, and Total Common Plant.

Summary table with columns: FERC Co. No., Account Title, and monthly depreciation from Sep-22 to Jun-24. Includes rows for Total Electric Plant, Total Electric Plant Including Allocated Common, and Common Plant Allocated to Electric.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-113
(As to Attachment 2 only)

REQUEST:

Refer to the Application generally. Provide Duke Energy Kentucky's capital expenditures by year from 2020 through 2027. Provide actual expenditures for years 2020 through 2022 and projected for years 2023 through 2027. Provide capital expenditures separated between steam and other production, distribution, transmission, and general plant.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment 2 only)

Please see AG-DR-01-113 Attachment 1 for actual capital expenditures for 2020, 2021, and 2022. Please note that numbers represented actual capital expenditures booked to Construction Work in Progress (Account 107), not plant in service additions. Please see AG-01-113 Confidential Attachment 2 for projected capital expenditures for years 2023 to 2026. The Company's capital expenditure forecast does not go beyond 2026. Please note that the amounts provided are projected capital expenditures rather than projected additions to plant in-service.

The confidential attachment to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Huyen C. Dang – actual data
 Grady "Tripp" S. Carpenter – forecasted data

Duke Energy Kentucky
Capital Expenditures (including AFUDC) by Function

	<u>2020</u>	<u>2021</u>	<u>2022</u>
Elec - Distribution Plant	\$ 48,696,485	\$ 38,929,462	\$ 38,752,891
Elec - General Plant	\$ 7,480,567	\$ 6,444,432	\$ 6,055,322
Elec - Intangible Plant	\$ 5,627,733	\$ 1,171,909	\$ 2,239,800
Elec - Other Production Plant	\$ 1,169,227	\$ 3,577,436	\$ 2,691,947
Elec - Steam Production Plant	\$ 28,073,925	\$ 28,743,977	\$ 18,628,080
Elec - Transmission Plant	\$ 32,577,963	\$ 16,547,482	\$ 14,662,317
	<u>\$ 123,625,901</u>	<u>\$ 95,414,699</u>	<u>\$ 83,030,356</u>

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-113
CONFIDENTIAL ATTACHMENT 2**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-114

REQUEST:

Refer to the Direct Testimony of Mr. Spanos (“Spanos Testimony”) at 12, wherein he states, “[b]ased on studies for other utilities and the Decommissioning Cost Study conducted by 1898 & Co. for Duke Energy Kentucky, it was determined that the dismantlement or decommissioning costs for steam and other production facilities is best calculated by dividing the dismantlement cost by the surviving plant at final retirement.”

a. Identify specifically how “it was determined” that the dismantlement or decommissioning costs for steam and other production facilities is “best calculated” in the manner described and what factors were considered in this determination.

b. Identify specifically who “determined” that the dismantlement or decommissioning costs for steam and other production facilities is “best calculated” in the manner described.

RESPONSE:

a. The decommissioning costs for steam and other production facilities were established through an extensive study of removal costs specific to each facility conducted by 1898 & Co. in 2022. The amounts determined in the Decommissioning Study for each facility were then used in the Depreciation Study for the determination of the annual depreciation expense and rate. Table 3 on page VIII-4 of the Depreciation Study shows how the decommissioning costs are used in determining the terminal net salvage percent used in calculating depreciation for each facility. The decommissioning costs from the

Decommissioning Study are escalated to the date of expected retirement, and then, as described in Mr. Spanos' testimony, the terminal net salvage percent is calculated by dividing the escalated decommissioning cost by the estimated terminal retirements. The terminal net salvage percent calculated in this step is then weighted with the interim net salvage estimate to determine the overall net salvage percent used in the calculation of depreciation expense.

b. The methods used to determine the decommissioning costs, and the net salvage estimates based on them, have been established by experts in these respective fields. 1898 & Co. (for decommissioning studies) and Gannett Fleming Valuation and Rate Consultants (for depreciation studies) have been providing expert studies in their respective fields for many years and base their determinations of decommissioning and depreciation estimates on industry-accepted standards that have provided the basis for approved depreciation rates for utilities throughout the country.

PERSON RESPONSIBLE: John J. Spanos

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-115

REQUEST:

Refer to the Application generally. Provide a copy of the depreciation study in support of the presently approved depreciation rates consistent with the depreciation rates authorized in Case No. 2017-00321. In addition, provide the interim and terminal net salvage components of the depreciation rates and the underlying workpaper support, including any conceptual and/or other studies used to develop the interim net salvage percentages and the terminal net salvage estimates and/or percentages. Finally, provide the probable retirement date and service life used for each generating unit in the determination of present approved depreciation rates.

RESPONSE:

Objection. This request is overbroad, unduly burdensome, and harassing in nature as it seeks information that is publicly available and equally accessible to the Attorney General. The information filed in Case No 2017-321 is available in the Commission's docket. Please see AG-DR-01-115 Attachment which provides the rates approved in the order from that case which used the same service life and net salvage parameters proposed in the Depreciation Study.

PERSON RESPONSIBLE:

As to objection, Legal
As to response, John J. Spanos

DUKE ENERGY KENTUCKY
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2016

ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	COMPOSITE REMAINING LIFE		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
COMMON PLANT									
1900	STRUCTURES AND IMPROVEMENTS								
	ERLANGER OPERATIONS CENTER	90-R1 *	0	5,938,868.27	3,425,912	2,512,956	57,590	0.97	43.6
	KENTUCKY SERVICE BUILDING - 19TH AND AUGUSTINE	90-R1 *	0	1,798,785.05	1,618,907	179,879	7,430	0.41	24.2
	MINOR STRUCTURES	40-R1	(10)	3,671,283.62	1,141,603	2,896,809	78,568	2.14	36.9
	TOTAL STRUCTURES AND IMPROVEMENTS			11,408,936.94	6,186,422	5,589,644	143,588	1.26	38.9
1910	OFFICE FURNITURE AND EQUIPMENT	20-SQ	0	67,899.49	10,094	57,805	3,398	5.00	17.0
1911	ELECTRONIC DATA PROCESSING	5-SQ	0	807,216.83	545,610	261,607	161,473	20.00	1.6
1940	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	127,323.71	46,888	80,436	5,087	4.00	15.8
1970	COMMUNICATION EQUIPMENT	15-SQ	0	7,755,234.45	3,827,968	3,927,266	517,384	6.67	7.6
1980	MISCELLANEOUS EQUIPMENT	15-SQ	0	41,504.01	15,956	25,548	2,770	6.67	9.2
	TOTAL COMMON PLANT			20,208,115.43	10,632,939	9,942,306	833,700	4.13	11.9
STEAM PRODUCTION PLANT									
3110	STRUCTURES AND IMPROVEMENTS	100-S0.5 *	(17)	71,372,344.69	41,147,398	42,358,246	1,761,884	2.47	24.0
3120	BOILER PLANT EQUIPMENT	40-S0.5 *	(17)	453,023,974.40	305,620,093	224,417,957	10,156,202	2.24	22.1
3123	BOILER PLANT EQUIPMENT - SCR CATALYST	10-S2.5	0	5,420,680.46	3,370,330	2,050,350	247,333	4.56	8.3
3140	TURBOGENERATOR UNITS	40-S0.5 *	(17)	100,695,783.40	66,465,609	51,348,458	2,373,174	2.36	21.6
3150	ACCESSORY ELECTRIC EQUIPMENT	55-R2 *	(17)	44,736,780.67	29,260,579	23,081,454	1,003,384	2.24	23.0
3160	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0 *	(17)	19,377,682.01	9,282,060	13,389,828	613,593	3.17	21.8
	TOTAL STEAM PRODUCTION PLANT			694,627,245.63	455,146,070	356,646,293	16,155,570	2.33	22.1
OTHER PRODUCTION PLANT									
3401	RIGHTS OF WAY	40-SQ	0	651,684.00	271,137	380,547	24,551	3.77	15.5
3410	STRUCTURES AND IMPROVEMENTS	60-R4 *	(4)	36,133,374.66	23,762,723	13,815,986	909,196	2.52	15.2
3420	FUEL HOLDERS, PRODUCERS AND ACCESSORIES	55-S2.5 *	(4)	15,785,782.40	11,489,834	4,927,380	336,020	2.13	14.7
3440	GENERATORS	45-R2 *	(4)	210,038,948.92	117,476,601	100,963,906	7,065,233	3.36	14.3
3450	ACCESSORY ELECTRIC EQUIPMENT	40-R2 *	(4)	21,372,936.35	10,850,111	11,377,743	817,292	3.82	13.9
3460	MISCELLANEOUS POWER PLANT EQUIPMENT	35-S0 *	(4)	4,671,828.67	2,562,803	2,295,899	173,281	3.71	13.2
	TOTAL OTHER PRODUCTION PLANT			288,654,555.00	166,413,209	133,761,461	9,325,573	3.23	14.3
TRANSMISSION PLANT									
3501	RIGHTS OF WAY	65-R4	0	1,092,199.49	644,167	448,033	13,922	1.27	32.2
3520	STRUCTURES AND IMPROVEMENTS	65-R2.5	(10)	1,480,413.30	241,283	1,387,172	28,998	1.96	47.8
3530	STATION EQUIPMENT	50-R2	(15)	16,703,413.69	4,556,595	14,652,330	360,750	2.16	40.6
3531	STATION EQUIPMENT - STEP UP	50-R2.5	0	9,373,633.98	3,842,564	5,531,070	192,366	2.05	28.8
3532	STATION EQUIPMENT - MAJOR	60-R2.5	(10)	5,965,587.37	1,738,102	4,824,044	102,921	1.73	46.9
3534	STATION EQUIPMENT - STEP UP EQUIPMENT	30-R2.5	0	7,057,290.24	802,521	6,254,769	291,558	4.13	21.5
3550	POLES AND FIXTURES	55-R1.5	(30)	7,565,364.06	4,009,740	5,825,234	133,233	1.76	43.7
3560	OVERHEAD CONDUCTORS AND DEVICES	50-R1	(30)	5,791,808.11	3,489,281	4,040,069	110,687	1.91	36.5
3561	OVERHEAD CONDUCTORS AND DEVICES - CLEARING/ROW	60-R3	0	213,241.32	2,117	211,124	3,714	1.74	56.8
	TOTAL TRANSMISSION PLANT			55,242,951.56	19,326,370	43,173,845	1,238,149	2.24	34.9

DUKE ENERGY KENTUCKY
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2016

ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE	COMPOSITE REMAINING LIFE	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
DISTRIBUTION PLANT									
3601	RIGHTS OF WAY	70-R3	0	6,439,899.15	2,942,255	3,497,644	66,306	1.03	52.8
3610	STRUCTURES AND IMPROVEMENTS	65-R2.5	(10)	1,470,232.87	53,521	1,563,735	33,254	2.26	47.0
3620	STATION EQUIPMENT	48-R2.5	(15)	36,917,375.12	10,841,330	31,613,651	866,413	2.35	36.5
3622	STATION EQUIPMENT - MAJOR	60-R2.5	(10)	25,253,260.24	9,088,622	18,689,964	402,515	1.59	46.4
3640	POLES, TOWERS AND FIXTURES	52-R0.5	(40)	56,105,078.83	28,098,369	50,448,742	1,170,250	2.09	43.1
3650	OVERHEAD CONDUCTORS AND DEVICES	50-O1	(25)	116,901,323.62	36,628,887	109,497,767	2,496,981	2.14	43.9
3651	OVERHEAD CONDUCTORS AND DEVICES - CLEARING/ROW	60-R2.5	0	1,827,217.70	103,637	1,723,581	30,137	1.65	57.2
3660	UNDERGROUND CONDUIT	65-S2.5	(20)	18,863,541.33	6,147,852	16,488,398	340,210	1.80	48.5
3670	UNDERGROUND CONDUCTORS AND DEVICES	58-R2	(20)	58,304,068.59	15,449,020	54,515,862	1,209,793	2.07	45.1
3680	LINE TRANSFORMERS	45-R0.5	(10)	55,611,324.10	28,319,252	32,853,205	933,420	1.68	35.2
3682	LINE TRANSFORMERS - CUSTOMER	50-R1.5	(10)	273,660.52	279,531	21,495	857	0.31	25.1
3691	SERVICES - UNDERGROUND	60-R2	(25)	2,393,706.08	460,181	2,531,952	44,728	1.87	56.6
3692	SERVICES - OVERHEAD	53-R1	(20)	15,729,900.78	10,007,160	8,868,721	190,957	1.21	46.4
3700	METERS	24-L1	(1)	12,211,085.54	3,303,526	9,029,670	771,814	6.32	**
3701	INSTRUMENTATION TRANSFORMERS	24-L1	(1)	714,995.08	261,903	460,242	72,718	10.17	6.3
3702	UoF METERS	15-S2.5	0	395,724.90	9,493	386,232	27,091	6.85	14.3
3712	COMPANY-OWNED OUTDOOR LIGHTING	20-S0.5	0	409,941.97	15,094	394,848	21,547	5.26	18.3
3720	LEASED PROPERTY ON CUSTOMER PREMISES	25-L3	0	9,647.36	9,647	0	0	-	-
3731	STREET LIGHTING - OVERHEAD	32-L0.5	(10)	2,739,571.44	2,435,218	578,311	19,886	0.73	29.1
3732	STREET LIGHTING - BOULEVARD	45-R1.5	(10)	3,358,776.28	2,373,606	1,321,048	39,546	1.18	33.4
3733	STREET LIGHTING - CUSTOMER POLES	30-L0	(10)	3,874,765.33	1,484,538	2,777,704	103,399	2.67	26.9
TOTAL DISTRIBUTION PLANT				419,805,096.83	158,312,644	347,262,772	8,841,822	2.11	39.3
GENERAL PLANT									
3900	STRUCTURES AND IMPROVEMENTS	35-S1	(5)	144,983.75	43,841	108,392	4,923	3.40	22.0
3910	OFFICE FURNITURE AND EQUIPMENT	20-SQ	0	15,317.31	15,317	0	0	-	-
3911	ELECTRONIC DATA PROCESSING	5-SQ	0	2,369,951.38	1,163,228	1,206,723	474,050	20.00	2.5
3920	TRANSPORTATION EQUIPMENT	12-S3	0	218,719.32	3,363	215,356	18,727	8.56	11.5
3921	TRANSPORTATION EQUIPMENT - TRAILERS	18-R2.5	5	201,059.78	116,402	74,605	7,718	3.84	9.7
3940	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	2,027,306.34	458,617	1,568,690	81,146	4.00	19.3
3960	POWER OPERATED EQUIPMENT	15-L2	0	11,770.00	5,449	6,321	793	6.74	8.0
3970	COMMUNICATION EQUIPMENT	15-SQ	0	2,882,947.32	1,090,984	1,791,963	192,305	6.67	9.3
TOTAL GENERAL PLANT				7,872,055.20	2,897,202	4,972,050	779,662	9.90	6.4
UNRECOVERED RESERVE FOR AMORTIZATION									
COMMON PLANT									
1910	OFFICE FURNITURE AND EQUIPMENT				550		(110)		
1911	ELECTRONIC DATA PROCESSING				(57,600)		11,520		
1940	TOOLS, SHOP AND GARAGE EQUIPMENT						18,000		(3,600)
1970	COMMUNICATION EQUIPMENT				3,766,000		(753,200)		
1980	MISCELLANEOUS EQUIPMENT				(4,300)		860		
TOTAL COMMON PLANT					3,722,650		(744,530)		

DUKE ENERGY KENTUCKY
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2016

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)=(6)/(7)
ELECTRIC PLANT								
3910	OFFICE FURNITURE AND EQUIPMENT			1,254		(251)		
3911	ELECTRONIC DATA PROCESSING			242,000		(48,400)		
3940	TOOLS, SHOP AND GARAGE EQUIPMENT			(43,000)		8,600		
3970	COMMUNICATION EQUIPMENT			75,000		(15,000)		
TOTAL ELECTRIC PLANT				275,254		(55,051)		
TOTAL UNRECOVERED RESERVE FOR AMORTIZATION				3,997,904		(799,581)		
TOTAL DEPRECIABLE PLANT			1,486,410,019.65	816,726,338	895,758,727	36,374,895	2.45	
NONDEPRECIABLE PLANT								
1890	LAND		154,248.18					
3100	LAND		7,047,300.74	60,798				
3170	ARO		46,586,238.12	7,017,696				
3400	LAND		2,258,588.39					
3500	LAND		249,216.68					
3600	LAND		6,830,709.67					
TOTAL NONDEPRECIABLE PLANT			63,126,301.78	7,078,494				
ACCOUNTS NOT STUDIED								
1030	MISCELLANEOUS INTANGIBLE PLANT		22,332,072.52	22,232,108				
3030	MISCELLANEOUS INTANGIBLE PLANT		12,089,205.48	7,524,770				
3030	MISCELLANEOUS INTANGIBLE PLANT - MIAMI FORT UNIT 6		254,010.81	154,057				
TOTAL ACCOUNTS NOT STUDIED			34,675,288.81	29,910,935				
TOTAL COMMON AND ELECTRIC PLANT			1,584,211,610.24	853,715,767	895,758,727	36,374,895		

* CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.

** REMAINING RATE BASE AMORTIZED OVER 15 YEARS.

NOTE: ACCRUAL RATES AS OF DECEMBER 31, 2017 FOR NEW SOLAR FACILITY WILL BE AS FOLLOWS:

<u>ACCOUNT</u>	<u>RATE</u>
341	4.12
344	4.72
345	4.44

**Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023**

AG-DR-01-116

REQUEST:

Refer to the Spanos Testimony, Gannett Fleming Depreciation Study, Attachment JS-1, Table 1 at pages 52 – 54 of 382. Provide a schedule that shows current versus proposed depreciation rates, survivor curves, and net salvage percentages for all categories identified in the Gannett Fleming Depreciation Study Table 1.

RESPONSE:

Please see AG-DR-01-116 Attachment.

PERSON RESPONSIBLE: John J. Spanos

DUKE ENERGY KENTUCKY

COMPARISON OF EXISTING AND PROPOSED ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT
AND ANNUAL DEPRECIATION RATE RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2021

ACCOUNT (1)	EXISTING			PROPOSED					
	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ACCRUAL RATE (4)	SURVIVOR CURVE (5)	NET SALVAGE PERCENT (6)	ACCRUAL RATE (7)			
COMMON PLANT									
1900	STRUCTURES AND IMPROVEMENTS								
	ERLANGER OPERATIONS CENTER	90-R1	*	0	0.97	75-R0.5	*	(10)	2.83
	KENTUCKY SERVICE BUILDING - 19TH AND AUGUSTINE	90-R1	*	0	0.41	75-R0.5	*	(10)	5.39
	MINOR STRUCTURES	40-R1		(10)	2.14	45-R1.5		(10)	2.57
1910	OFFICE FURNITURE AND EQUIPMENT	20-SQ		0	5.00	20-SQ		0	5.00
1911	ELECTRONIC DATA PROCESSING	5-SQ		0	20.00	5-SQ		0	10.01
1940	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ		0	4.00	25-SQ		0	4.00
1970	COMMUNICATION EQUIPMENT	15-SQ		0	6.67	15-SQ		0	6.67
1980	MISCELLANEOUS EQUIPMENT	15-SQ		0	6.67	15-SQ		0	6.67
STEAM PRODUCTION PLANT									
3110	STRUCTURES AND IMPROVEMENTS	100-S0.5	*	(17)	2.47	85-S1	*	(10)	6.30
3120	BOILER PLANT EQUIPMENT	40-S0.5	*	(17)	2.24	45-S0.5	*	(10)	4.33
3123	BOILER PLANT EQUIPMENT - SCR CATALYST	10-S2.5	*	0	4.56	10-S2.5	*	0	5.91
3140	TURBOGENERATOR UNITS	40-S0.5	*	(17)	2.36	40-S0.5	*	(10)	4.53
3150	ACCESSORY ELECTRIC EQUIPMENT	55-R2	*	(17)	2.24	65-R2.5	*	(10)	2.99
3160	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(17)	3.17	55-S0	*	(10)	4.88
OTHER PRODUCTION PLANT									
3410	STRUCTURES AND IMPROVEMENTS	60-R4	*	(4)	2.52	60-R4	*	(8)	1.77
3420	FUEL HOLDERS, PRODUCERS AND ACCESSORIES	55-S2.5	*	(4)	2.13	45-S1.5	*	(8)	5.46
3430	PRIME MOVERS			NOT APPLICABLE		25-S0	*	(8)	6.14
3440	GENERATORS	45-R2	*	(4)	3.36	40-S0.5	*	(8)	2.83
3446	GENERATORS - SOLAR								
	CRITTENDEN	30-S1.5	*	(5)	4.72	25-S2.5	*	(20)	5.17
	WALTON	30-S1.5	*	(5)	4.72	25-S2.5	*	(20)	5.17
3450	ACCESSORY ELECTRIC EQUIPMENT	40-R2	*	(4)	3.82	35-S1	*	(8)	3.23
3456	ACCESSORY ELECTRIC EQUIPMENT - SOLAR								
	CRITTENDEN	45-R2.5	*	(5)	4.44	25-S2.5	*	(20)	5.46
	WALTON	45-R2.5	*	(5)	4.44	25-S2.5	*	(20)	5.46
3460	MISCELLANEOUS POWER PLANT EQUIPMENT	35-S0	*	(4)	3.71	45-R1.5	*	(8)	2.62
TRANSMISSION PLANT									
3501	RIGHTS OF WAY	65-R4		0	1.27	75-R4		0	0.93
3520	STRUCTURES AND IMPROVEMENTS	65-R2.5		(10)	1.96	70-R2.5		(15)	1.69
3530	STATION EQUIPMENT	50-R2		(15)	2.16	50-R1		(10)	2.31
3531	STATION EQUIPMENT - STEP UP	50-R2.5		0	2.05	50-R3		(10)	2.52
3532	STATION EQUIPMENT - MAJOR	60-R2.5		(10)	1.73	60-R2.5		(10)	1.78
3534	STATION EQUIPMENT - STEP UP EQUIPMENT	30-R2.5		0	4.13	40-R2.5		(10)	2.87
3550	POLES AND FIXTURES	55-R1.5		(30)	1.76	55-R1		(30)	2.57
3560	OVERHEAD CONDUCTORS AND DEVICES	50-R1		(30)	1.91	55-R1		(25)	2.09
3561	OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY	60-R3		0	1.74	65-R3		0	1.54

DUKE ENERGY KENTUCKY

COMPARISON OF EXISTING AND PROPOSED ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT
AND ANNUAL DEPRECIATION RATE RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2021

ACCOUNT (1)	EXISTING			PROPOSED			
	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ACCRUAL RATE (4)	SURVIVOR CURVE (5)	NET SALVAGE PERCENT (6)	ACCRUAL RATE (7)	
DISTRIBUTION PLANT							
3601	RIGHTS OF WAY	70-R3	0	1.03	75-R4	0	0.69
3610	STRUCTURES AND IMPROVEMENTS	65-R2.5	(10)	2.26	70-R2.5	(15)	1.88
3620	STATION EQUIPMENT	48-R2.5	(15)	2.35	32-R0.5	(10)	3.91
3622	STATION EQUIPMENT - MAJOR	60-R2.5	(10)	1.59	60-R2.5	(10)	1.73
3640	POLES, TOWERS AND FIXTURES	52-R0.5	(40)	2.09	55-R0.5	(50)	2.38
3650	OVERHEAD CONDUCTORS AND DEVICES	50-O1	(25)	2.14	53-O1	(40)	2.51
3651	OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY	60-R2.5	0	1.65	65-R3	0	1.50
3660	UNDERGROUND CONDUIT	65-S2.5	(20)	1.80	75-R3	(25)	1.60
3670	UNDERGROUND CONDUCTORS AND DEVICES	58-R2	(20)	2.07	56-R2	(35)	2.53
3680	LINE TRANSFORMERS	45-R0.5	(10)	1.68	48-R0.5	(15)	2.03
3682	LINE TRANSFORMERS - CUSTOMER	50-R1.5	(10)	0.31	55-R1.5	(15)	0.53
3691	SERVICES - UNDERGROUND	60-R2	(25)	1.87	65-R3	(40)	1.97
3692	SERVICES - OVERHEAD	53-R1	(20)	1.21	60-R1	(40)	1.70
3700	METERS AND METERING EQUIPMENT	24-L1	(1)	6.32	24-L1	(2)	4.60
3702	UoF METERS	15-S2.5	0	6.85	15-S2.5	0	6.12
3711	INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING		NOT APPLICABLE		20-S0.5	0	4.57
3712	COMPANY-OWNED OUTDOOR LIGHTING	20-S0.5	0	5.26	11-R2	(5)	10.78
3720	LEASED PROPERTY ON CUSTOMERS' PREMISES	25-L3	0	-	30-L3	0	-
3731	STREET LIGHTING - OVERHEAD	32-L0.5	(10)	0.73	34-L0.5	(15)	1.25
3732	STREET LIGHTING - BOULEVARD	45-R1.5	(10)	1.18	55-R1.5	(20)	1.12
3733	STREET LIGHTING - CUSTOMER POLES	30-L0	(10)	2.67	25-L0	(10)	4.21
GENERAL PLANT							
3900	STRUCTURES AND IMPROVEMENTS	35-S1	(5)	3.40	40-S1	(10)	3.33
3910	OFFICE FURNITURE AND EQUIPMENT	20-SQ	0	5.00	20-SQ	0	5.00
3911	ELECTRONIC DATA PROCESSING	5-SQ	0	20.00	5-SQ	0	20.00
3920	TRANSPORTATION EQUIPMENT	12-S3	0	8.56	12-S3	0	6.20
3921	TRANSPORTATION EQUIPMENT - TRAILERS	18-R2.5	5	3.84	20-R2.5	5	1.93
3940	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	4.00	25-SQ	0	4.00
3960	POWER OPERATED EQUIPMENT	15-L2	0	6.74	15-L2	0	4.18
3970	COMMUNICATION EQUIPMENT	15-SQ	0	6.67	15-SQ	0	6.67

* THESE RATES WERE FOOTNOTED IN THE FILING, SINCE THE ASSETS WERE NOT YET IN SERVICE AT THE TIME OF THE DEPRECIATION STUDY.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-117

REQUEST:

Refer to the Spanos Testimony generally. Provide an electronic copy, with all formulas intact, of all schedules and supporting workpapers used in the depreciation study presented by Mr. Spanos, including but not limited to Table 1 on pages 52 – 54 of 382, and pages 232 – 234 of 382.

RESPONSE:

Please see AG-DR-01-117 Attachments 1 through 11 which set forth the schedules and supporting workpapers in the depreciation study.

PERSON RESPONSIBLE: John J. Spanos

**AG-DR-01-117
ATTACHMENT 1**

**FILED ELECTRONICALLY IN
EXCEL FORMAT**

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
ERLANGER OPERATIONS CENTER						
INTERIM SURVIVOR CURVE.. IOWA 75-R0.5						
PROBABLE RETIREMENT YEAR.. 6-2065						
NET SALVAGE PERCENT.. -10						
2005	1,142,528.49	316,721	73,848	1,182,934	37.19	31,808
2009	5,185.77	1,167	272	5,432	37.49	145
2018	1,368,577.40	102,776	23,964	1,481,472	38.08	38,904
2019	1,657,802.89	90,869	21,187	1,802,396	38.14	47,257
2020	147,175.21	4,970	1,159	160,734	38.20	4,208
2021	207,298.87	2,360	550	227,478	38.26	5,946
	4,528,568.63	518,863	120,980	4,860,445		128,268

KENTUCKY SERVICE BUILDING - 19TH AND AUGUSTINE
INTERIM SURVIVOR CURVE.. IOWA 75-R0.5
PROBABLE RETIREMENT YEAR.. 6-2042
NET SALVAGE PERCENT.. -10

1947	215,206.60	176,326	41,113	195,615	17.08	11,453
1949	7,874.04	6,411	1,495	7,167	17.21	416
1950	2,833.13	2,299	536	2,580	17.27	149
1951	610.66	494	115	557	17.33	32
1953	4,989.45	4,009	935	4,554	17.44	261
1955	121.96	97	23	112	17.55	6
1956	313.02	249	58	286	17.61	16
1957	1,480.66	1,173	274	1,355	17.66	77
1958	91.02	72	17	83	17.71	5
1959	1,905.03	1,497	349	1,746	17.76	98
1961	3,761.02	2,931	683	3,454	17.86	193
1964	1,660.34	1,277	298	1,529	18.00	85
1965	2,410.30	1,845	430	2,221	18.05	123
1966	478.18	364	85	441	18.09	24
1967	8,188.75	6,208	1,447	7,560	18.13	417
1969	4,337.05	3,254	759	4,012	18.22	220
1970	1,925.44	1,437	335	1,783	18.26	98
1972	4,634.39	3,419	797	4,301	18.33	235
1973	8,585.30	6,296	1,468	7,976	18.37	434
1974	6,637.72	4,837	1,128	6,174	18.41	335
1975	6,319.85	4,576	1,067	5,885	18.44	319
1976	337.18	242	56	314	18.48	17
1977	975.57	697	163	911	18.51	49
1978	23,626.36	16,752	3,906	22,083	18.55	1,190
1979	39,938.23	28,107	6,554	37,379	18.58	2,012
1980	11,560.66	8,074	1,883	10,834	18.61	582

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
KENTUCKY SERVICE BUILDING - 19TH AND AUGUSTINE INTERIM SURVIVOR CURVE.. IOWA 75-R0.5 PROBABLE RETIREMENT YEAR.. 6-2042 NET SALVAGE PERCENT.. -10						
1981	33,194.05	22,996	5,362	31,152	18.64	1,671
1982	12,516.21	8,598	2,005	11,763	18.67	630
1983	14,035.96	9,557	2,228	13,211	18.70	706
1984	42,353.87	28,575	6,663	39,927	18.73	2,132
1985	24,798.14	16,574	3,864	23,414	18.75	1,249
1986	443.45	293	68	419	18.78	22
1987	12,451.85	8,152	1,901	11,796	18.81	627
1988	593.39	384	90	563	18.83	30
1989	35,301.47	22,593	5,268	33,564	18.86	1,780
1990	3,340.07	2,112	492	3,182	18.88	169
1991	38,025.34	23,746	5,537	36,291	18.90	1,920
1992	58,847.35	36,248	8,452	56,280	18.93	2,973
1993	59,866.03	36,359	8,478	57,375	18.95	3,028
1994	201,782.73	120,720	28,147	193,814	18.97	10,217
1995	12,489.98	7,355	1,715	12,024	18.99	633
1996	5,130.73	2,971	693	4,951	19.01	260
1998	26,943.53	15,034	3,505	26,133	19.05	1,372
1999	18,009.05	9,845	2,295	17,514	19.07	918
2000	208,595.64	111,579	26,016	203,439	19.09	10,657
2001	104,267.18	54,495	12,706	101,988	19.10	5,340
2002	11,191.29	5,702	1,329	10,981	19.12	574
2003	57,780.29	28,651	6,680	56,878	19.14	2,972
2004	11,087.97	5,341	1,245	10,951	19.15	572
2005	32,681.20	15,242	3,554	32,395	19.17	1,690
2006	10,536.72	4,746	1,107	10,484	19.18	547
2008	83,669.17	34,781	8,110	83,926	19.21	4,369
2009	208,294.55	82,549	19,247	209,877	19.23	10,914
2010	5,918.47	2,227	519	5,991	19.24	311
2011	327,253.40	116,025	27,053	332,926	19.26	17,286
2012	1,914,828.55	635,179	148,100	1,958,211	19.27	101,620
2014	479,129.50	134,454	31,350	495,693	19.30	25,684
2016	16,488.00	3,657	853	17,284	19.32	895
2017	25,126.74	4,737	1,104	26,535	19.34	1,372
2018	3,382,601.14	516,642	120,462	3,600,400	19.35	186,067
2019	1,153,356.68	131,563	30,676	1,238,017	19.36	63,947
2020	58,932.88	4,192	977	63,849	19.38	3,295
2021	99,319.68	2,478	578	108,674	19.39	5,605
	9,151,984.16	2,549,295	594,401	9,472,782		492,900

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
MINOR STRUCTURES						
SURVIVOR CURVE.. IOWA 45-R1.5						
NET SALVAGE PERCENT.. -10						
2018	123,818.00	8,657	2,018	134,182	42.14	3,184
	123,818.00	8,657	2,018	134,182		3,184
	13,804,370.79	3,076,815	717,399	14,467,409		624,352
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						23.2 4.52

DUKE ENERGY KENTUCKY

ACCOUNT 1910 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	3,006.42	1,729	1,729	1,277	8.50	150
2013	20,895.34	8,881	8,881	12,014	11.50	1,045
2014	43,997.73	16,499	16,499	27,499	12.50	2,200
2017	687,664.25	154,724	154,724	532,940	15.50	34,383
2018	2,517.92	441	441	2,077	16.50	126
2019	17,766.54	2,221	2,221	15,546	17.50	888
2020	13,020.59	977	977	12,044	18.50	651
	788,868.79	185,472	185,472	603,397		39,443
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.3 5.00

DUKE ENERGY KENTUCKY

ACCOUNT 1911 ELECTRONIC DATA PROCESSING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	5,177.15	4,659	4,659	518	0.50	518
	5,177.15	4,659	4,659	518		518
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						1.0 10.01

DUKE ENERGY KENTUCKY

ACCOUNT 1940 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1999	5,371.46	4,834	4,834	537	2.50	215
2004	37,038.55	25,927	25,927	11,112	7.50	1,482
2005	2,964.11	1,956	1,956	1,008	8.50	119
2006	2,287.17	1,418	1,418	869	9.50	91
2007	17,796.89	10,322	10,322	7,475	10.50	712
2010	1,150.51	529	529	622	13.50	46
2014	10,220.00	3,066	3,066	7,154	17.50	409
2015	37,021.21	9,626	9,626	27,395	18.50	1,481
	113,849.90	57,678	57,678	56,172		4,555
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.3 4.00

DUKE ENERGY KENTUCKY

ACCOUNT 1970 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	2,110,692.69	2,040,343	1,992,588	118,105	0.50	118,105
2008	1,077,675.41	969,908	947,207	130,468	1.50	86,979
2009	145,687.05	121,405	118,563	27,124	2.50	10,850
2010	203,089.96	155,703	152,059	51,031	3.50	14,580
2011	708,177.65	495,724	484,121	224,057	4.50	49,790
2012	525,145.64	332,590	324,806	200,340	5.50	36,425
2013	1,417.96	804	785	633	6.50	97
2014	141,883.83	70,942	69,282	72,602	7.50	9,680
2015	485,705.76	210,471	205,545	280,161	8.50	32,960
2016	603,244.17	221,192	216,014	387,230	9.50	40,761
2017	411,282.85	123,385	120,497	290,786	10.50	27,694
	6,414,002.97	4,742,467	4,631,467	1,782,536		427,921
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						4.2 6.67

DUKE ENERGY KENTUCKY

ACCOUNT 1980 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	24,647.40	18,896	18,896	5,751	3.50	1,643
2011	3,561.95	2,493	2,493	1,069	4.50	238
2012	13,294.66	8,420	8,420	4,875	5.50	886
2020	53,796.79	5,380	5,380	48,417	13.50	3,586
	95,300.80	35,189	35,189	60,112		6,353
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						9.5 6.67

DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 85-S1						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
1980	79,670.00	65,952	52,907	34,730	12.80	2,713
1981	21,732,263.31	17,888,000	14,349,964	9,555,526	12.82	745,361
1982	208,863.68	170,890	137,090	92,660	12.84	7,217
1983	72,230.43	58,728	47,112	32,341	12.86	2,515
1985	313,838.14	251,743	201,951	143,271	12.90	11,106
1986	56,946.12	45,334	36,367	26,273	12.93	2,032
1987	25,699.44	20,302	16,287	11,983	12.95	925
1988	7,679.70	6,018	4,828	3,620	12.97	279
1990	248,748.12	191,522	153,641	119,982	13.01	9,222
1991	7,244.23	5,525	4,432	3,536	13.03	271
1992	214,519.73	161,964	129,929	106,042	13.05	8,126
1993	106,959.72	79,892	64,090	53,565	13.07	4,098
1994	208,985.68	154,314	123,793	106,092	13.09	8,105
1999	70,010.31	48,225	38,687	38,325	13.18	2,908
2001	236,199.12	156,949	125,906	133,913	13.22	10,130
2002	231,816.95	150,987	121,124	133,875	13.24	10,111
2003	103,526.01	65,993	52,940	60,938	13.25	4,599
2004	228,372.86	142,162	114,044	137,166	13.27	10,337
2005	151,399.00	91,791	73,636	92,903	13.29	6,990
2006	3,098,291.42	1,826,548	1,465,278	1,942,842	13.30	146,078
2007	236,076.01	134,810	108,146	151,537	13.32	11,377
2008	168,425.07	92,912	74,535	110,732	13.33	8,307
2009	514,042.96	272,523	218,621	346,826	13.35	25,979
2010	450,707.51	228,698	183,464	312,314	13.36	23,377
2011	484,241.10	233,808	187,564	345,102	13.37	25,812
2012	637,062.52	290,118	232,736	468,033	13.39	34,954
2013	499,911.96	213,126	170,972	378,931	13.40	28,278
2014	545,564.35	215,065	172,528	427,593	13.41	31,886
2015	19,442,261.71	6,971,353	5,592,501	15,793,986	13.42	1,176,899
2016	11,449,783.49	3,659,282	2,935,519	9,659,243	13.43	719,229
2017	42,192,344.22	11,641,880	9,339,253	37,072,325	13.44	2,758,358
2018	13,530,388.88	3,073,279	2,465,421	12,418,007	13.45	923,272
2019	43,769,919.98	7,541,732	6,050,066	42,096,846	13.46	3,127,552
2020	20,787,949.84	2,291,248	1,838,066	21,028,679	13.47	1,561,149
2021	1,605,694.85	63,179	50,683	1,715,581	13.48	127,269
	183,717,638.42	58,505,852	46,934,083	155,155,319		11,576,821
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						13.4 6.30

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 45-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
1981	128,171,579.83	103,853,714	121,415,517	19,573,221	10.72	1,825,860
1982	87,297.08	70,324	82,216	13,811	10.80	1,279
1983	758,041.65	606,923	709,554	124,291	10.88	11,424
1984	1,069,838.90	851,114	995,039	181,784	10.96	16,586
1985	992,190.52	783,959	916,528	174,882	11.04	15,841
1986	508,078.99	398,587	465,989	92,898	11.12	8,354
1987	715,736.33	557,526	651,804	135,506	11.19	12,110
1988	146,366.40	113,101	132,227	28,777	11.27	2,553
1989	274,137.86	210,142	245,677	55,874	11.34	4,927
1990	12,821.13	9,745	11,393	2,710	11.41	238
1991	518,417.01	390,456	456,483	113,776	11.48	9,911
1992	1,887,920.78	1,408,198	1,646,326	430,387	11.55	37,263
1993	339,323.82	250,526	292,890	80,366	11.62	6,916
1994	4,592,825.99	3,353,539	3,920,627	1,131,482	11.69	96,791
1995	344,651.91	248,826	290,903	88,214	11.75	7,508
1996	113,773.05	81,124	94,842	30,308	11.82	2,564
1998	1,465,153.04	1,016,318	1,188,179	423,490	11.95	35,438
1999	4,677,932.46	3,196,216	3,736,700	1,409,025	12.01	117,321
2000	1,103,675.58	741,805	867,245	346,798	12.07	28,732
2001	178,769.21	118,053	138,016	58,630	12.13	4,833
2002	47,311,352.79	30,646,260	35,828,584	16,213,904	12.19	1,330,099
2003	638,881.69	405,294	473,830	228,940	12.25	18,689
2004	2,183,148.69	1,353,537	1,582,422	819,042	12.31	66,535
2005	740,682.81	447,730	523,442	291,309	12.37	23,550
2006	548,548.71	322,495	377,029	226,374	12.43	18,212
2007	2,986,021.64	1,701,862	1,989,649	1,294,975	12.49	103,681
2008	1,677,511.36	924,458	1,080,785	764,477	12.54	60,963
2009	2,146,386.41	1,138,297	1,330,785	1,030,240	12.60	81,765
2010	2,140,681.99	1,087,730	1,271,667	1,083,084	12.65	85,619
2011	441,816.54	213,640	249,767	236,231	12.71	18,586
2012	9,958,601.99	4,551,360	5,321,001	5,633,461	12.76	441,494
2013	1,265,275.73	540,924	632,395	759,408	12.82	59,236
2014	37,273,311.03	14,761,051	17,257,165	23,743,478	12.87	1,844,870
2015	135,390,775.72	48,816,227	57,071,117	91,858,737	12.92	7,109,809
2016	12,319,615.69	3,955,299	4,624,145	8,927,432	12.98	687,784
2017	2,692,510.63	747,667	874,098	2,087,663	13.03	160,220
2018	95,396,755.81	21,850,913	25,545,932	79,390,500	13.08	6,069,610

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 45-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
2019	2,462,549.86	428,885	501,410	2,207,395	13.13	168,118
2020	25,936,993.34	2,897,862	3,387,894	25,142,798	13.18	1,907,648
2021	13,898,202.27	556,790	650,944	14,637,079	13.23	1,106,355
	545,368,156.24	255,608,477	298,832,215	301,072,757		23,609,292
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.8 4.33

DUKE ENERGY KENTUCKY

ACCOUNT 3123 BOILER PLANT EQUIPMENT - SCR CATALYST

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 10-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. 0						
2002	2,230,486.31	2,210,412	2,230,486			
2013	536,263.68	380,211	445,673	90,591	2.91	31,131
2015	2,653,930.47	1,571,127	1,841,632	812,299	4.08	199,093
2019	2,563,477.12	638,947	748,956	1,814,521	7.50	241,936
	7,984,157.58	4,800,697	5,266,747	2,717,411		472,160
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.8 5.91

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 40-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
1981	17,084,725.27	13,893,999	14,857,458	3,935,740	9.88	398,354
1982	58,061.01	46,908	50,161	13,706	10.00	1,371
1983	15,183.01	12,187	13,032	3,669	10.11	363
1984	10,207.91	8,137	8,701	2,527	10.22	247
1985	20,496,632.97	16,222,511	17,347,437	5,198,859	10.33	503,278
1986	463,905.17	364,514	389,791	120,505	10.43	11,554
1987	636,364.46	496,273	530,686	169,315	10.53	16,079
1989	54,725.97	41,978	44,889	15,310	10.73	1,427
1990	158,093.76	120,235	128,573	45,331	10.82	4,190
1991	198,456.18	149,567	159,939	58,363	10.91	5,349
1992	640,896.37	478,164	511,322	193,664	11.01	17,590
1993	66,699.95	49,254	52,669	20,700	11.10	1,865
1994	88,755.33	64,852	69,349	28,282	11.18	2,530
1996	96,612.68	68,930	73,710	32,564	11.35	2,869
1997	96,476.91	67,910	72,619	33,505	11.44	2,929
1999	2,355.17	1,610	1,722	869	11.60	75
2000	341,306.00	229,557	245,475	129,961	11.68	11,127
2001	206,777.67	136,628	146,102	81,353	11.76	6,918
2002	27,909.66	18,092	19,347	11,354	11.84	959
2003	409,131.79	259,676	277,683	172,362	11.92	14,460
2004	89,271.54	55,400	59,242	38,957	11.99	3,249
2005	6,942,324.58	4,201,099	4,492,418	3,144,139	12.07	260,492
2006	77,714.53	45,754	48,927	36,559	12.14	3,011
2007	749,845.57	428,326	458,028	366,802	12.21	30,041
2008	12,485.43	6,889	7,367	6,367	12.29	518
2009	374,534.63	198,928	212,722	199,266	12.36	16,122
2010	549,806.26	279,774	299,175	305,612	12.43	24,587
2011	276,330.25	133,887	143,171	160,792	12.50	12,863
2012	943,595.69	431,955	461,908	576,047	12.57	45,827
2013	1,071,747.49	459,391	491,247	687,675	12.64	54,405
2014	2,360,288.53	936,388	1,001,320	1,594,997	12.71	125,492
2015	29,836,335.05	10,796,129	11,544,771	21,275,198	12.77	1,666,030
2016	724,353.79	233,419	249,605	547,184	12.84	42,616
2017	613,243.94	170,983	182,840	491,729	12.90	38,119
2018	13,674,081.60	3,145,928	3,364,078	11,677,412	12.97	900,340

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 40-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
2019	3,511,135.54	613,364	655,897	3,206,352	13.03	246,075
2020	4,951,409.59	552,879	591,218	4,855,333	13.10	370,636
2021	1,374,010.80	55,318	59,154	1,452,258	13.16	110,354
	109,285,792.05	55,476,793	59,323,750	60,890,621		4,954,311
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.3 4.53

DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
1980	510,760.54	422,720	511,511	50,326	12.44	4,045
1981	21,281,346.26	17,500,460	21,176,373	2,233,108	12.50	178,649
1982	258,626.65	211,313	255,699	28,791	12.55	2,294
1983	48,933.57	39,712	48,053	5,774	12.60	458
1984	276,234.86	222,640	269,405	34,454	12.64	2,726
1985	24,050.59	19,245	23,287	3,168	12.68	250
1986	25,758.88	20,449	24,744	3,591	12.73	282
1987	32,911.68	25,926	31,372	4,831	12.76	379
1989	61,628.68	47,708	57,729	10,063	12.84	784
1990	146,081.85	112,052	135,588	25,102	12.87	1,950
1992	284,827.83	214,116	259,090	54,220	12.93	4,193
1995	1,290.00	936	1,133	286	13.02	22
2001	112,022.85	74,003	89,547	33,678	13.15	2,561
2002	129,665.97	83,949	101,582	41,050	13.17	3,117
2004	87,558.37	54,143	65,516	30,799	13.21	2,331
2005	423,653.63	255,322	308,952	157,067	13.22	11,881
2006	50,031.42	29,296	35,450	19,585	13.24	1,479
2009	106,920.20	56,337	68,170	49,442	13.28	3,723
2010	308,549.41	155,597	188,280	151,125	13.29	11,371
2011	195,647.63	93,824	113,531	101,681	13.30	7,645
2012	4,489,838.35	2,031,831	2,458,610	2,480,212	13.32	186,202
2013	380,227.18	160,968	194,779	223,471	13.33	16,765
2014	133,522.10	52,223	63,192	83,682	13.34	6,273
2015	12,011,588.32	4,277,098	5,175,488	8,037,259	13.35	602,042
2016	1,399,850.72	443,827	537,051	1,002,784	13.36	75,059
2017	4,283,467.29	1,175,315	1,422,186	3,289,628	13.36	246,230
2018	957,559.98	216,046	261,426	791,890	13.37	59,229
2019	146,819.56	25,168	30,454	131,047	13.38	9,794
2021	3,975.53	157	190	4,183	13.39	312
	48,173,349.90	28,022,381	33,908,388	19,082,297		1,442,046

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.2 2.99

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 55-S0						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
1981	2,155,519.87	1,726,045	1,761,663	609,409	11.85	51,427
1982	235,379.13	187,391	191,258	67,659	11.89	5,690
1983	113,761.60	90,019	91,877	33,261	11.93	2,788
1984	157,554.25	123,922	126,479	46,830	11.96	3,916
1985	101,065.69	78,956	80,585	30,587	12.00	2,549
1986	113,063.57	87,736	89,546	34,823	12.03	2,895
1987	121,651.98	93,699	95,633	38,185	12.07	3,164
1988	81,696.88	62,449	63,738	26,129	12.10	2,159
1989	160,311.26	121,579	124,088	52,255	12.13	4,308
1990	108,479.70	81,549	83,232	36,096	12.17	2,966
1991	420,109.15	313,008	319,467	142,653	12.20	11,693
1992	141,502.92	104,425	106,580	49,073	12.23	4,013
1993	49,356.38	36,061	36,805	17,487	12.26	1,426
1994	217,002.50	156,782	160,017	78,685	12.30	6,397
1995	20,672.44	14,765	15,070	7,670	12.33	622
1996	6,611.10	4,665	4,761	2,511	12.36	203
1997	108,562.36	75,592	77,152	42,267	12.39	3,411
1999	643,219.54	434,989	443,965	263,576	12.45	21,171
2000	90,906.69	60,479	61,727	38,270	12.48	3,067
2001	250,932.55	164,023	167,408	108,618	12.51	8,682
2002	280,411.23	179,818	183,529	124,924	12.54	9,962
2003	41,468.35	26,046	26,583	19,032	12.57	1,514
2004	251,997.55	154,690	157,882	119,315	12.60	9,469
2005	546,553.86	327,064	333,813	267,396	12.64	21,155
2006	377,319.96	219,633	224,165	190,887	12.67	15,066
2007	84,074.08	47,481	48,461	44,021	12.70	3,466
2008	598,969.43	326,956	333,703	325,163	12.73	25,543
2009	808,886.13	425,232	434,007	455,768	12.76	35,718
2010	429,177.62	216,135	220,595	251,500	12.79	19,664
2011	1,604,054.06	768,951	784,819	979,641	12.83	76,355
2012	931,965.12	422,346	431,061	594,100	12.86	46,198
2013	185,105.83	78,635	80,258	123,359	12.89	9,570
2014	638,770.79	251,098	256,280	446,368	12.93	34,522
2015	5,516,288.45	1,976,321	2,017,104	4,050,814	12.96	312,563
2016	2,427,229.97	775,328	791,327	1,878,626	13.00	144,510
2017	1,873,812.52	518,267	528,962	1,532,232	13.04	117,502
2018	826,013.53	188,329	192,215	716,400	13.08	54,771

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST BEND						
INTERIM SURVIVOR CURVE.. IOWA 55-S0						
PROBABLE RETIREMENT YEAR.. 6-2035						
NET SALVAGE PERCENT.. -10						
2019	1,144,524.87	198,100	202,188	1,056,789	13.12	80,548
2020	53,633.44	5,964	6,087	52,910	13.16	4,021
2021	79,489.40	3,128	3,193	84,246	13.21	6,377
	23,997,105.75	11,127,656	11,357,282	15,039,534		1,171,041
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.8 4.88

DUKE ENERGY KENTUCKY

ACCOUNT 3410 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 60-R4						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1991	6,686.52	4,572	5,440	1,781	17.39	102
1992	33,179,302.65	22,368,079	26,616,472	9,217,175	17.50	526,696
1994	32,271.08	21,120	25,131	9,721	17.68	550
1995	28,624.96	18,427	21,927	8,988	17.77	506
2006	13,755.09	6,803	8,095	6,760	18.31	369
2007	77,734.54	37,025	44,057	39,896	18.34	2,175
2008	28,902.54	13,215	15,725	15,490	18.36	844
2011	1,013,820.32	397,436	472,921	622,005	18.41	33,786
2012	201,932.54	74,154	88,238	129,849	18.42	7,049
2013	216,117.23	73,584	87,560	145,847	18.44	7,909
2014	1,026,692.75	320,163	380,972	727,856	18.45	39,450
2015	78,301.70	22,031	26,215	58,350	18.45	3,163
2016	153,786.34	38,126	45,367	120,722	18.46	6,540
2017	357.46	76	90	296	18.47	16
2018	32,395.47	5,574	6,633	28,354	18.47	1,535
2019	219,192.43	28,208	33,566	203,162	18.48	10,994
2020	69,386.61	5,626	6,695	68,243	18.48	3,693
	36,379,260.23	23,434,219	27,885,105	11,404,496		645,377
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						17.7 1.77

DUKE ENERGY KENTUCKY

ACCOUNT 3420 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 45-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1992	6,519,957.67	4,514,481	2,554,262	4,487,293	14.33	313,140
1995	65,305.28	43,262	24,477	46,052	14.90	3,091
1996	83,697.19	54,549	30,863	59,530	15.08	3,948
1999	58,466.30	36,010	20,374	42,769	15.62	2,738
2001	55,587.31	32,752	18,531	41,503	15.96	2,600
2012	407,682.47	153,316	86,745	353,552	17.52	20,180
2014	144,852.48	46,198	26,139	130,302	17.73	7,349
2017	168,146.39	36,271	20,522	161,076	17.99	8,954
2018	25,088.88	4,386	2,482	24,614	18.07	1,362
2019	53,546,233.66	6,980,073	3,949,276	53,880,656	18.14	2,970,268
2020	235,872.28	19,396	10,974	243,768	18.20	13,394
	61,310,889.91	11,920,694	6,744,645	59,471,116		3,347,024
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						17.8 5.46

DUKE ENERGY KENTUCKY

ACCOUNT 3430 PRIME MOVERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 25-S0						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1992	22,344.55	16,436	12,557	11,576	7.97	1,452
2016	786,578.39	206,718	157,925	691,579	14.77	46,823
2017	6,599,425.54	1,487,840	1,136,658	5,990,721	15.01	399,115
2018	4,084.23	757	578	3,833	15.25	251
2019	1,722,272.93	241,249	184,306	1,675,749	15.50	108,113
2020	22,495.12	2,008	1,534	22,761	15.76	1,444
2021	1,183,508.94	37,886	28,944	1,249,246	16.04	77,883
	10,340,709.70	1,992,894	1,522,502	9,645,464		635,081
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.2 6.14

DUKE ENERGY KENTUCKY

ACCOUNT 3440 GENERATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 40-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1992	119,469,338.87	79,884,416	92,118,865	36,908,021	13.78	2,678,376
1995	44,071.41	28,265	32,594	15,003	14.24	1,054
1996	75,066.53	47,403	54,663	26,409	14.39	1,835
1999	289,576.93	173,463	200,029	112,714	14.83	7,600
2000	2,176,842.29	1,278,327	1,474,105	876,884	14.97	58,576
2001	12,551,711.26	7,214,422	8,319,324	5,236,524	15.11	346,560
2003	421,505.59	230,822	266,173	189,053	15.39	12,284
2004	13,649.50	7,277	8,391	6,350	15.52	409
2005	10,461,096.18	5,412,186	6,241,072	5,056,911	15.66	322,919
2006	10,833,651.11	5,427,087	6,258,256	5,442,088	15.79	344,654
2007	170,201.58	82,314	94,921	88,897	15.92	5,584
2008	301,113.37	139,866	161,287	163,916	16.06	10,206
2009	15,814,499.03	7,028,109	8,104,477	8,975,182	16.19	554,366
2010	7,960,271.15	3,367,739	3,883,515	4,713,578	16.32	288,822
2011	8,356,990.93	3,344,869	3,857,142	5,168,408	16.44	314,380
2012	8,423,077.89	3,162,455	3,646,791	5,450,133	16.57	328,916
2013	2,798,083.81	975,449	1,124,841	1,897,090	16.70	113,598
2014	175,950.78	56,292	64,913	125,114	16.82	7,438
2015	254,485.19	73,554	84,819	190,025	16.94	11,218
2016	112,718.61	28,718	33,116	88,620	17.07	5,192
2017	834.01	182	210	691	17.19	40
2018	1,518,631.87	269,259	310,497	1,329,626	17.31	76,813
2019	6,531,850.71	869,384	1,002,532	6,051,867	17.43	347,210
2021	2,493,206.44	72,648	83,774	2,608,889	17.67	147,645
	211,248,425.04	119,174,506	137,426,306	90,721,993		5,985,695
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.2 2.83

DUKE ENERGY KENTUCKY

ACCOUNT 3446 GENERATORS - SOLAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
CRITTENDEN						
INTERIM SURVIVOR CURVE.. IOWA 25-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2047						
NET SALVAGE PERCENT.. -20						
2017	4,143,038.53	929,350	787,881	4,183,765	19.53	214,222
	4,143,038.53	929,350	787,881	4,183,765		214,222
WALTON						
INTERIM SURVIVOR CURVE.. IOWA 25-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2047						
NET SALVAGE PERCENT.. -20						
2017	5,670,767.07	1,272,044	1,078,410	5,726,510	19.53	293,216
	5,670,767.07	1,272,044	1,078,410	5,726,510		293,216
	9,813,805.60	2,201,394	1,866,291	9,910,275		507,438
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					19.5	5.17

DUKE ENERGY KENTUCKY

ACCOUNT 3450 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 35-S1						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1992	12,128,216.59	8,534,573	9,446,878	3,651,596	11.77	310,246
1996	13,528.24	8,949	9,906	4,705	12.73	370
1999	2,218.96	1,389	1,537	859	13.42	64
2000	23,116.79	14,168	15,682	9,284	13.65	680
2001	6,287.18	3,769	4,172	2,618	13.87	189
2002	42,708.77	25,004	27,677	18,449	14.09	1,309
2006	8,616.82	4,484	4,963	4,343	14.96	290
2007	8,047.88	4,038	4,470	4,222	15.17	278
2008	5,782.47	2,786	3,084	3,161	15.38	206
2009	7,263.33	3,343	3,700	4,144	15.59	266
2011	3,017,940.84	1,247,428	1,380,772	1,878,604	16.00	117,413
2012	2,183,025.81	845,035	935,365	1,422,303	16.20	87,796
2013	28,395.09	10,201	11,291	19,375	16.39	1,182
2014	273,443.75	89,895	99,504	195,815	16.59	11,803
2015	374,312.15	110,855	122,705	281,552	16.78	16,779
2016	114,608.56	29,892	33,087	90,690	16.96	5,347
2017	261,347.40	58,074	64,282	217,973	17.14	12,717
2018	227,115.00	40,960	45,338	199,946	17.31	11,551
2019	528,311.90	71,179	78,788	491,789	17.47	28,150
2021	604,614.16	17,520	19,393	633,590	17.77	35,655
	19,858,901.69	11,123,542	12,312,595	9,135,019		642,291
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						14.2 3.23

DUKE ENERGY KENTUCKY

ACCOUNT 3456 ACCESSORY ELECTRIC EQUIPMENT - SOLAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
CRITTENDEN						
INTERIM SURVIVOR CURVE.. IOWA 25-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2047						
NET SALVAGE PERCENT.. -20						
2017	637,652.33	143,036	85,328	679,855	19.53	34,811
	637,652.33	143,036	85,328	679,855		34,811
WALTON						
INTERIM SURVIVOR CURVE.. IOWA 25-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2047						
NET SALVAGE PERCENT.. -20						
2017	979,306.42	219,674	131,046	1,044,122	19.53	53,462
	979,306.42	219,674	131,046	1,044,122		53,462
	1,616,958.75	362,710	216,374	1,723,977		88,273
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						19.5 5.46

DUKE ENERGY KENTUCKY

ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSDALE						
INTERIM SURVIVOR CURVE.. IOWA 45-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2040						
NET SALVAGE PERCENT.. -8						
1990	3,122.67	2,112	2,673	700	14.83	47
1991	7,518.94	5,016	6,348	1,773	15.00	118
1992	2,181,939.64	1,435,294	1,816,356	540,139	15.16	35,629
1993	34,393.68	22,287	28,204	8,941	15.32	584
1994	100,409.10	64,078	81,090	27,351	15.46	1,769
1995	4,756.58	2,987	3,780	1,357	15.60	87
1996	2,435.08	1,503	1,902	728	15.74	46
1997	2,276.78	1,380	1,746	713	15.87	45
1998	10,992.46	6,537	8,273	3,599	15.99	225
1999	442,879.67	258,024	326,528	151,782	16.11	9,422
2000	120,769.72	68,860	87,142	43,289	16.22	2,669
2001	339,993.67	189,369	239,645	127,548	16.33	7,811
2002	6,611.57	3,593	4,547	2,594	16.43	158
2003	8,649.09	4,578	5,793	3,548	16.52	215
2006	83,904.90	40,417	51,147	39,470	16.78	2,352
2007	86,247.12	40,019	50,644	42,503	16.86	2,521
2008	93,734.75	41,765	52,853	48,380	16.93	2,858
2009	44,263.05	18,842	23,844	23,960	17.00	1,409
2010	40,517.21	16,388	20,739	23,020	17.07	1,349
2011	305,238.51	116,643	147,611	182,047	17.13	10,627
2012	10,349.94	3,704	4,687	6,491	17.19	378
2013	106,572.43	35,362	44,750	70,348	17.25	4,078
2014	226,097.98	68,826	87,099	157,087	17.30	9,080
2015	110,886.68	30,428	38,506	81,251	17.35	4,683
2016	165,030.22	39,908	50,503	127,729	17.40	7,341
2017	453,044.95	93,459	118,272	371,017	17.45	21,262
2018	63,398.81	10,646	13,472	54,998	17.49	3,145
2019	50,902.30	6,401	8,100	46,874	17.53	2,674
2020	18,115.36	1,434	1,815	17,750	17.57	1,010
2021	27,056.92	760	962	28,260	17.61	1,605
	5,152,109.78	2,630,620	3,329,034	2,235,245		135,197

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.5 2.62

DUKE ENERGY KENTUCKY

ACCOUNT 3501 RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R4						
NET SALVAGE PERCENT.. 0						
1950	1,695.10	1,407	1,695			
1956	2,703.51	2,114	2,665	39	16.34	2
1957	363.17	281	354	9	17.00	1
1958	79,809.09	61,006	76,919	2,890	17.67	164
1959	1,962.52	1,482	1,869	94	18.35	5
1960	2,355.33	1,758	2,217	138	19.03	7
1961	50,047.85	36,882	46,502	3,546	19.73	180
1962	235.12	171	216	19	20.44	1
1963	22,089.15	15,860	19,997	2,092	21.15	99
1965	75,275.56	52,582	66,297	8,979	22.61	397
1966	3,845.27	2,648	3,339	506	23.36	22
1967	86,314.17	58,567	73,843	12,471	24.11	517
1968	4,755.68	3,178	4,007	749	24.88	30
1969	1,091.55	718	905	187	25.65	7
1970	46.30	30	38	8	26.44	
1971	8,895.38	5,666	7,144	1,751	27.23	64
1972	25,173.18	15,762	19,873	5,300	28.04	189
1973	34,776.92	21,399	26,981	7,796	28.85	270
1974	26,321.38	15,905	20,054	6,267	29.68	211
1975	1,578.60	936	1,180	399	30.51	13
1976	14,597.75	8,496	10,712	3,886	31.35	124
1977	275.20	157	198	77	32.21	2
1981	85,664.62	44,888	56,596	29,069	35.70	814
1983	346,750.92	173,421	218,656	128,095	37.49	3,417
1988	18,297.90	8,027	10,121	8,177	42.10	194
1989	7,057.21	3,007	3,791	3,266	43.04	76
1992	3,991.58	1,550	1,954	2,038	45.88	44
2006	124,268.34	25,583	32,257	92,011	59.56	1,545
2011	0.14					
2019	605.10	20	25	580	72.50	8
2020	302,688.73	6,054	7,633	295,056	73.50	4,014
	1,333,532.32	569,555	718,038	615,494		12,417

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.6 0.93

DUKE ENERGY KENTUCKY

ACCOUNT 3520 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 70-R2.5						
NET SALVAGE PERCENT.. -15						
1955	48,873.53	41,423	33,169	23,036	18.41	1,251
1958	49,503.38	40,688	32,580	24,349	19.97	1,219
1960	71,981.46	57,862	46,332	36,447	21.07	1,730
1965	1,230.56	930	745	670	24.02	28
1967	2,611.13	1,919	1,537	1,466	25.27	58
1968	1,911.98	1,385	1,109	1,090	25.91	42
1971	2,028.33	1,404	1,124	1,209	27.88	43
1976	146,306.73	92,899	74,388	93,865	31.35	2,994
1993	21,996.24	9,219	7,382	17,914	44.49	403
2006	124,869.08	29,336	23,490	120,109	55.70	2,156
2007	419,838.40	92,425	74,008	408,806	56.60	7,223
2012	351,875.96	51,217	41,011	363,646	61.14	5,948
2013	222,849.40	29,069	23,277	233,000	62.06	3,754
2016	14,537.12	1,232	987	15,731	64.84	243
2020	4,505,126.98	105,120	84,173	5,096,723	68.58	74,318
	5,985,540.28	556,128	445,312	6,438,059		101,410
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						63.5 1.69

DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R1						
NET SALVAGE PERCENT.. -10						
1943	3,307.21	3,132	2,361	1,277	6.95	184
1951	9,867.28	8,746	6,594	4,260	9.71	439
1955	2,021.43	1,725	1,301	923	11.21	82
1956	1,858.83	1,571	1,184	861	11.59	74
1958	265,351.59	219,557	165,529	126,358	12.39	10,198
1960	65,960.69	53,402	40,261	32,296	13.20	2,447
1961	2,479.97	1,985	1,497	1,231	13.62	90
1965	196,895.08	150,136	113,191	103,394	15.34	6,740
1966	1,394.05	1,049	791	742	15.79	47
1967	329.35	245	185	177	16.24	11
1968	3,984.66	2,919	2,201	2,182	16.70	131
1971	48,032.41	33,688	25,398	27,438	18.12	1,514
1973	36,610.30	24,888	18,764	21,507	19.10	1,126
1974	407.00	272	205	243	19.60	12
1975	2,654.12	1,745	1,316	1,604	20.11	80
1976	338,411.94	218,736	164,910	207,343	20.62	10,055
1978	1,810.00	1,128	850	1,141	21.67	53
1979	4,385.57	2,682	2,022	2,802	22.20	126
1982	42,063.83	24,199	18,244	28,026	23.85	1,175
1983	299,131.92	168,405	126,964	202,081	24.41	8,279
1985	68,625.24	36,914	27,830	47,658	25.55	1,865
1986	16,638.72	8,734	6,585	11,718	26.14	448
1991	144,506.44	66,285	49,974	108,983	29.15	3,739
1992	821,677.01	365,696	275,706	628,139	29.77	21,100
1995	509,123.85	205,309	154,787	405,249	31.67	12,796
1998	103,784.59	37,423	28,214	85,949	33.61	2,557
2000	718,534.36	238,223	179,602	610,786	34.93	17,486
2002	501,628.47	151,632	114,319	437,472	36.26	12,065
2003	1,043,452.03	299,805	226,030	921,767	36.94	24,953
2005	56,620.11	14,586	10,997	51,285	38.29	1,339
2006	385,318.09	93,417	70,429	353,421	38.98	9,067
2007	2,604,668.54	592,510	446,707	2,418,428	39.66	60,979
2009	11,727.24	2,312	1,743	11,157	41.04	272
2012	542,603.36	82,009	61,828	535,036	43.13	12,405
2013	174,696.16	23,675	17,849	174,317	43.84	3,976
2014	1,304,582.80	156,419	117,928	1,317,113	44.55	29,565
2015	1,884,870.30	196,554	148,187	1,925,170	45.26	42,536
2016	51,448.64	4,550	3,430	53,164	45.98	1,156
2017	1,003,219.98	72,834	54,911	1,048,631	46.70	22,455
2018	134,921.02	7,628	5,751	142,662	47.43	3,008

DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R1						
NET SALVAGE PERCENT.. -10						
2019	4,077,562.18	165,060	124,442	4,360,876	48.16	90,550
2020	10,328,744.54	252,228	190,161	11,171,458	48.89	228,502
2021	2,125,126.35	17,299	13,042	2,324,597	49.63	46,839
	29,941,037.25	4,011,312	3,024,220	29,910,921		692,521
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						43.2 2.31

DUKE ENERGY KENTUCKY

ACCOUNT 3531 STATION EQUIPMENT - STEP UP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. -10						
1992	8,405,252.90	4,944,642	4,295,881	4,949,897	23.26	212,807
1996	968,381.08	501,079	435,335	629,884	26.48	23,787
	9,373,633.98	5,445,721	4,731,216	5,579,781		236,594
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						23.6 2.52

DUKE ENERGY KENTUCKY

ACCOUNT 3532 STATION EQUIPMENT - MAJOR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -10						
1950	10,834.19	9,935	10,637	1,281	9.98	128
1954	222,862.54	198,980	213,045	32,104	11.30	2,841
1958	261,300.93	226,016	241,992	45,439	12.82	3,544
1965	65,041.15	52,431	56,137	15,408	16.03	961
1971	4,093.09	3,051	3,267	1,235	19.34	64
1973	11,683.92	8,453	9,050	3,802	20.54	185
1976	40,615.59	27,968	29,945	14,732	22.44	657
1978	26,247.29	17,439	18,672	10,200	23.76	429
1983	111,783.06	67,158	71,905	51,056	27.23	1,875
1985	122,679.77	70,443	75,422	59,526	28.68	2,076
1992	34,444.03	16,399	17,558	20,330	34.03	597
2000	264,762.57	94,216	100,876	190,363	40.59	4,690
2001	125,472.82	42,694	45,712	92,308	41.44	2,228
2002	780,656.67	253,323	271,229	587,493	42.30	13,889
2003	994,850.91	307,147	328,857	765,479	43.16	17,736
2005	130,205.14	36,046	38,594	104,632	44.90	2,330
2006	134,369.73	35,030	37,506	110,301	45.78	2,409
2007	1,788,006.76	436,966	467,852	1,498,955	46.67	32,118
2011	82,257.49	14,688	15,726	74,757	50.26	1,487
2014	61,020.46	7,831	8,385	58,738	53.00	1,108
2015	561,727.06	62,612	67,037	550,863	53.92	10,216
2019	1,036,803.25	44,855	48,025	1,092,459	57.64	18,953
2020	4,576,560.39	119,160	127,583	4,906,633	58.58	83,760
2021	511.68	4	4	559	59.53	9
	11,448,790.49	2,152,845	2,305,016	10,288,654		204,290

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 50.4 1.78

DUKE ENERGY KENTUCKY

ACCOUNT 3534 STATION EQUIPMENT - STEP UP EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2.5						
NET SALVAGE PERCENT.. -10						
1992	1,218,688.02	821,091	746,413	594,144	15.50	38,332
2012	5,838,602.22	1,403,308	1,275,678	5,146,784	31.26	164,644
2021	614,723.26	7,945	7,222	668,974	39.53	16,923
	7,672,013.50	2,232,344	2,029,313	6,409,902		219,899
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						29.1 2.87

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1						
NET SALVAGE PERCENT.. -30						
1946	12.22	13	9	7	11.44	1
1949	134.11	134	89	85	12.58	7
1961	35,492.48	31,359	20,753	25,387	17.62	1,441
1962	631.47	551	365	456	18.07	25
1963	8,837.48	7,618	5,042	6,447	18.53	348
1964	146,896.29	124,996	82,721	108,244	19.00	5,697
1965	37,031.40	31,090	20,575	27,566	19.48	1,415
1966	12,789.40	10,592	7,010	9,616	19.96	482
1967	6,512.34	5,320	3,521	4,945	20.44	242
1968	176.81	142	94	136	20.93	6
1969	20,833.58	16,531	10,940	16,144	21.43	753
1970	5,511.98	4,307	2,850	4,316	21.94	197
1971	108,384.56	83,387	55,185	85,715	22.45	3,818
1972	24,492.44	18,542	12,271	19,569	22.97	852
1973	142,786.57	106,345	70,378	115,245	23.49	4,906
1974	216,251.27	158,350	104,795	176,332	24.02	7,341
1975	33,014.91	23,754	15,720	27,199	24.56	1,107
1976	85,350.55	60,320	39,919	71,037	25.10	2,830
1977	9,560.14	6,632	4,389	8,039	25.65	313
1978	3,298.60	2,245	1,486	2,802	26.20	107
1979	24,488.04	16,340	10,814	21,020	26.77	785
1980	24,042.59	15,724	10,406	20,849	27.33	763
1981	195,827.99	125,392	82,983	171,593	27.91	6,148
1982	9,765.49	6,119	4,050	8,645	28.49	303
1983	448,030.90	274,591	181,722	400,718	29.07	13,785
1984	14,001.85	8,383	5,548	12,654	29.67	426
1985	58,706.85	34,316	22,710	53,609	30.27	1,771
1986	9,513.26	5,426	3,591	8,776	30.87	284
1987	36,501.96	20,293	13,430	34,023	31.48	1,081
1988	357,207.86	193,345	127,954	336,416	32.10	10,480
1989	30,535.45	16,080	10,642	29,054	32.72	888
1990	65,711.96	33,642	22,264	63,162	33.34	1,894
1991	80,641.24	40,084	26,527	78,307	33.97	2,305
1992	227,242.94	109,520	72,479	222,937	34.61	6,441
1993	105,858.64	49,417	32,704	104,912	35.25	2,976
1994	81,572.49	36,826	24,371	81,673	35.90	2,275
1995	256,713.69	111,949	74,087	259,641	36.55	7,104
1996	62,303.84	26,213	17,348	63,647	37.20	1,711
1997	165,115.13	66,893	44,269	170,381	37.86	4,500
1998	47,716.49	18,587	12,301	49,730	38.52	1,291
1999	95,041.86	35,516	23,504	100,050	39.19	2,553
2000	38,921.09	13,928	9,217	41,380	39.86	1,038
2001	12,367.27	4,230	2,799	13,278	40.53	328

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1						
NET SALVAGE PERCENT.. -30						
2002	51,605.02	16,821	11,132	55,955	41.21	1,358
2003	198,945.69	61,696	40,830	217,799	41.88	5,201
2004	643,444.27	189,044	125,108	711,370	42.57	16,711
2005	186,009.95	51,661	34,189	207,624	43.25	4,801
2006	64,751.67	16,927	11,202	72,975	43.94	1,661
2007	693,790.52	170,058	112,543	789,385	44.63	17,687
2008	160,930.49	36,821	24,368	184,842	45.32	4,079
2009	129,318.90	27,478	18,185	149,930	46.01	3,259
2010	395,932.55	77,583	51,344	463,368	46.71	9,920
2011	117,427.32	21,066	13,941	138,715	47.41	2,926
2012	299,332.26	48,677	32,214	356,918	48.12	7,417
2013	126,990.66	18,520	12,256	152,832	48.83	3,130
2014	263,307.26	33,980	22,488	319,811	49.54	6,456
2015	377,583.84	42,391	28,054	462,805	50.25	9,210
2016	41,841.83	3,985	2,637	51,757	50.97	1,015
2017	670,056.45	52,264	34,588	836,485	51.70	16,180
2018	299,995.77	18,295	12,107	377,888	52.42	7,209
2019	1,522,229.35	66,570	44,055	1,934,843	53.15	36,403
2020	2,112,136.23	55,410	36,670	2,709,107	53.89	50,271
2021	3,564,040.97	31,182	20,636	4,612,618	54.63	84,434
	15,265,498.48	2,995,471	1,982,379	17,862,769		392,346
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						45.5 2.57

DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1						
NET SALVAGE PERCENT.. -25						
1959	7,165.47	6,234	7,757	1,200	16.72	72
1960	16,450.18	14,143	17,597	2,966	17.17	173
1961	77,095.33	65,496	81,493	14,876	17.62	844
1962	817.90	686	854	168	18.07	9
1963	10,933.06	9,062	11,275	2,391	18.53	129
1964	85,862.23	70,251	87,409	19,919	19.00	1,048
1965	65,848.52	53,158	66,141	16,170	19.48	830
1966	19,341.46	15,403	19,165	5,012	19.96	251
1967	7,042.91	5,532	6,883	1,921	20.44	94
1968	88.90	69	86	25	20.93	1
1969	28,458.93	21,713	27,016	8,558	21.43	399
1970	1,062.53	798	993	335	21.94	15
1971	76,096.79	56,295	70,045	25,076	22.45	1,117
1972	9,179.14	6,682	8,314	3,160	22.97	138
1973	129,826.88	92,974	115,682	46,602	23.49	1,984
1974	163,961.68	115,443	143,639	61,313	24.02	2,553
1975	20,793.12	14,385	17,898	8,093	24.56	330
1976	100,008.44	67,961	84,560	40,451	25.10	1,612
1977	22,191.36	14,803	18,419	9,320	25.65	363
1979	6,562.75	4,211	5,239	2,964	26.77	111
1980	10,745.50	6,757	8,407	5,025	27.33	184
1981	226,839.31	139,662	173,773	109,776	27.91	3,933
1983	584,779.09	344,618	428,788	302,186	29.07	10,395
1985	36,252.24	20,376	25,353	19,962	30.27	659
1986	3,374.82	1,851	2,303	1,916	30.87	62
1987	589.83	315	392	345	31.48	11
1988	402,244.06	209,348	260,479	242,326	32.10	7,549
1990	65,181.33	32,087	39,924	41,553	33.34	1,246
1991	59,115.74	28,254	35,155	38,740	33.97	1,140
1992	325,214.39	150,708	187,517	219,001	34.61	6,328
1993	51,461.41	23,099	28,741	35,586	35.25	1,010
1994	6,433.51	2,793	3,475	4,567	35.90	127
1995	223,621.98	93,767	116,669	162,858	36.55	4,456
1996	70,288.86	28,435	35,380	52,481	37.20	1,411
1997	105,960.51	41,277	51,359	81,092	37.86	2,142
1998	2,335.76	875	1,089	1,831	38.52	48
1999	114,303.96	41,071	51,102	91,778	39.19	2,342
2000	71,328.85	24,543	30,537	58,624	39.86	1,471
2001	34,546.06	11,361	14,136	29,047	40.53	717
2002	38,971.82	12,214	15,197	33,518	41.21	813
2003	192,430.55	57,380	71,395	169,143	41.88	4,039
2004	299,768.03	84,684	105,367	269,343	42.57	6,327
2005	48,322.52	12,905	16,057	44,346	43.25	1,025

DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1						
NET SALVAGE PERCENT.. -25						
2006	67,584.33	16,988	21,137	63,343	43.94	1,442
2007	804,846.09	189,692	236,023	770,035	44.63	17,254
2008	29,497.89	6,490	8,075	28,797	45.32	635
2009	14,558.83	2,975	3,702	14,497	46.01	315
2010	224,131.54	42,229	52,543	227,621	46.71	4,873
2011	116,641.60	20,121	25,035	120,767	47.41	2,547
2012	156,105.21	24,409	30,371	164,761	48.12	3,424
2013	70,493.87	9,885	12,299	75,818	48.83	1,553
2014	35,934.50	4,459	5,548	39,370	49.54	795
2015	30,546.45	3,297	4,102	34,081	50.25	678
2016	54,475.49	4,989	6,208	61,886	50.97	1,214
2017	88,915.25	6,669	8,298	102,846	51.70	1,989
2018	31,503.52	1,847	2,298	37,081	52.42	707
2019	1,449,758.42	60,962	75,851	1,736,347	53.15	32,669
2020	2,435,942.92	61,447	76,455	2,968,474	53.89	55,084
2021	1,614,513.86	13,582	16,899	2,001,243	54.63	36,633
	11,048,347.48	2,473,720	3,077,904	10,732,530		231,320
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						46.4 2.09

DUKE ENERGY KENTUCKY

ACCOUNT 3561 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. 0						
2007	4,273.99	921	903	3,371	50.99	66
2008	678.77	136	133	546	51.93	11
2009	6,650.00	1,240	1,216	5,434	52.88	103
2010	8,002.00	1,375	1,349	6,653	53.83	124
2011	17,292.00	2,719	2,667	14,625	54.78	267
2012	44,728.00	6,372	6,249	38,479	55.74	690
2013	18,513.00	2,361	2,316	16,197	56.71	286
2014	35,273.00	3,978	3,901	31,372	57.67	544
2015	36,833.00	3,604	3,535	33,298	58.64	568
2016	40,997.56	3,400	3,335	37,663	59.61	632
2017	321,299.63	21,800	21,380	299,920	60.59	4,950
2018	313,956.90	16,615	16,295	297,662	61.56	4,835
2019	199,142.71	7,538	7,393	191,750	62.54	3,066
2020	623,062.09	14,187	13,914	609,148	63.52	9,590
2021	171,149.94	1,290	1,265	169,885	64.51	2,633
	1,841,852.59	87,536	85,851	1,756,002		28,365
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						61.9 1.54

DUKE ENERGY KENTUCKY

ACCOUNT 3601 RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R4						
NET SALVAGE PERCENT.. 0						
1937	21,090.83	19,021	21,091			
1938	4,555.53	4,089	4,556			
1939	566.88	506	567			
1940	3,030.65	2,693	3,031			
1941	1,573.96	1,391	1,574			
1942	5,164.10	4,539	5,164			
1943	4,897.52	4,279	4,898			
1944	462.34	401	462			
1945	330.67	285	331			
1946	781.58	670	782			
1947	1,799.58	1,531	1,800			
1948	3,349.38	2,827	3,349			
1949	8,676.40	7,264	8,676			
1950	1,737.77	1,443	1,738			
1951	8,346.55	6,868	8,347			
1952	12,726.87	10,375	12,727			
1953	2,603.56	2,102	2,604			
1954	9,502.50	7,593	9,502			
1955	4,760.79	3,764	4,761			
1956	14,044.62	10,985	14,045			
1957	13,905.05	10,753	13,905			
1958	14,105.17	10,782	14,105			
1959	11,597.81	8,760	11,598			
1960	17,228.28	12,857	17,228			
1961	35,962.20	26,502	35,962			
1962	30,065.96	21,872	30,066			
1963	23,589.95	16,938	23,590			
1964	21,297.85	15,085	21,298			
1965	47,056.95	32,871	47,057			
1966	28,568.21	19,670	28,568			
1967	37,661.09	25,554	37,500	161	24.11	7
1968	34,610.71	23,129	33,941	670	24.88	27
1969	31,018.91	20,410	29,951	1,068	25.65	42
1970	47,115.95	30,506	44,767	2,349	26.44	89
1971	45,736.43	29,131	42,749	2,987	27.23	110
1972	67,572.03	42,309	62,088	5,484	28.04	196
1973	78,177.44	48,105	70,593	7,584	28.85	263
1974	140,806.04	85,085	124,861	15,945	29.68	537
1975	61,888.66	36,712	53,874	8,015	30.51	263
1976	75,551.33	43,971	64,527	11,024	31.35	352
1977	52,602.82	30,011	44,041	8,562	32.21	266
1978	62,310.29	34,836	51,121	11,189	33.07	338
1979	71,128.25	38,941	57,145	13,983	33.94	412

DUKE ENERGY KENTUCKY

ACCOUNT 3601 RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R4						
NET SALVAGE PERCENT.. 0						
1980	120,456.92	64,549	94,725	25,732	34.81	739
1981	123,971.39	64,961	95,329	28,642	35.70	802
1982	114,830.29	58,808	86,300	28,530	36.59	780
1983	238,309.31	119,186	174,904	63,405	37.49	1,691
1984	140,617.91	68,622	100,702	39,916	38.40	1,039
1985	222,229.32	105,721	155,144	67,085	39.32	1,706
1986	226,881.50	105,153	154,311	72,570	40.24	1,803
1987	374,182.90	168,831	247,757	126,426	41.16	3,072
1988	162,262.39	71,180	104,456	57,806	42.10	1,373
1989	273,358.16	116,486	170,942	102,416	43.04	2,380
1990	238,355.78	98,584	144,671	93,685	43.98	2,130
1991	284,100.23	113,904	167,153	116,947	44.93	2,603
1992	206,935.37	80,347	117,908	89,027	45.88	1,940
1993	166,625.11	62,563	91,810	74,815	46.84	1,597
1994	142,883.92	51,820	76,045	66,839	47.80	1,398
1995	178,950.56	62,584	91,842	87,109	48.77	1,786
1996	66,778.64	22,500	33,018	33,761	49.73	679
2000	18,278.20	5,206	7,640	10,638	53.64	198
2017	19,994.03	1,197	1,757	18,237	70.51	259
2018	8,487.03	396	581	7,906	71.50	111
2019	9,522.89	317	465	9,058	72.50	125
	4,497,571.31	2,200,331	3,188,000	1,309,571		31,113

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 42.1 0.69

DUKE ENERGY KENTUCKY

ACCOUNT 3610 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 70-R2.5						
NET SALVAGE PERCENT.. -15						
1939	28,191.50	26,895	14,276	18,144	11.93	1,521
1942	1,443.55	1,354	719	941	12.92	73
1946	490.00	448	238	326	14.39	23
1953	87.10	75	40	60	17.43	3
1955	713.14	604	321	499	18.41	27
1964	2,439.86	1,867	991	1,815	23.41	78
1969	2,540.34	1,813	962	1,959	26.56	74
1974	90,080.14	59,285	31,469	72,123	29.94	2,409
1975	92.16	60	32	74	30.64	2
2007	9,905.05	2,181	1,158	10,233	56.60	181
2008	139,224.59	28,591	15,177	144,931	57.50	2,521
2010	17,292.34	3,037	1,612	18,274	59.31	308
2011	6,032.09	968	514	6,423	60.23	107
2013	50,345.99	6,567	3,486	54,412	62.06	877
2014	689,479.20	79,520	42,210	750,691	62.98	11,920
2015	374,914.98	37,510	19,911	411,241	63.91	6,435
2016	1,221.72	104	55	1,350	64.84	21
2018	5,712.25	309	164	6,405	66.71	96
	1,420,206.00	251,188	133,335	1,499,902		26,676

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 56.2 1.88

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 32-R0.5						
NET SALVAGE PERCENT.. -10						
1952	1,927.84	2,121	2,121			
1960	21,578.01	22,831	6,411	17,325	1.22	14,201
1964	87,818.90	87,364	24,531	72,070	3.06	23,552
1966	753.86	728	204	625	3.91	160
1967	3,036.07	2,888	811	2,529	4.33	584
1969	1,526.85	1,410	396	1,284	5.14	250
1970	2,855.57	2,597	729	2,412	5.54	435
1971	6,722.72	6,025	1,692	5,703	5.93	962
1972	1,708.03	1,507	423	1,456	6.33	230
1974	576.94	493	138	497	7.12	70
1975	28.00	24	7	24	7.52	3
1976	189,747.84	157,064	44,103	164,620	7.92	20,785
1977	6,281.84	5,111	1,435	5,475	8.33	657
1979	4,683.22	3,679	1,033	4,119	9.15	450
1980	6,940.27	5,354	1,503	6,131	9.56	641
1981	6,291.52	4,760	1,337	5,584	9.99	559
1982	428.59	318	89	382	10.41	37
1983	106,504.97	77,433	21,743	95,412	10.85	8,794
1984	168,487.64	120,005	33,697	151,639	11.28	13,443
1985	1,345.65	938	263	1,217	11.73	104
1986	242.34	165	46	221	12.18	18
1987	5,139.10	3,420	960	4,693	12.64	371
1988	320,498.50	208,222	58,468	294,080	13.10	22,449
1991	332,512.48	199,568	56,038	309,726	14.54	21,302
1992	750,980.41	437,822	122,938	703,140	15.04	46,751
1993	647,215.01	366,206	102,829	609,108	15.54	39,196
1994	2,033.12	1,115	313	1,923	16.05	120
1995	661,642.70	351,167	98,606	629,201	16.56	37,995
1996	43,170.48	22,126	6,213	41,275	17.09	2,415
1997	95,877.06	47,394	13,308	92,157	17.62	5,230
1998	434.11	207	58	420	18.15	23
1999	24,210.52	11,069	3,108	23,524	18.70	1,258
2000	7,399.32	3,243	911	7,228	19.25	375
2001	1,285,831.62	539,246	151,418	1,262,997	19.80	63,788
2002	889,686.92	355,986	99,959	878,697	20.36	43,158
2003	928,293.61	353,247	99,190	921,933	20.93	44,048
2004	1,120,686.05	404,491	113,579	1,119,176	21.50	52,055
2005	879,353.55	299,860	84,199	883,090	22.08	39,995
2006	1,438,284.65	461,787	129,668	1,452,445	22.66	64,097
2007	1,025,189.91	308,710	86,684	1,041,025	23.24	44,795
2008	805,420.64	226,195	63,515	822,448	23.83	34,513
2009	200,179.69	52,160	14,646	205,552	24.42	8,417
2010	78,764.92	18,926	5,314	81,327	25.01	3,252

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 32-R0.5						
NET SALVAGE PERCENT.. -10						
2011	219,506.28	48,217	13,539	227,918	25.61	8,900
2012	1,733,018.84	344,930	96,855	1,809,466	26.21	69,037
2013	2,924,703.78	521,793	146,517	3,070,657	26.81	114,534
2014	2,871,188.50	453,028	127,208	3,031,099	27.41	110,584
2015	2,033,436.92	278,904	78,315	2,158,466	28.01	77,061
2016	2,898,268.52	336,727	94,552	3,093,543	28.62	108,090
2017	3,372,653.40	321,131	90,172	3,619,747	29.23	123,837
2018	8,308,023.95	616,871	173,215	8,965,611	29.84	300,456
2019	19,341,462.42	1,030,590	289,386	20,986,223	30.45	689,203
2020	13,682,568.48	437,377	122,814	14,928,011	31.07	480,464
2021	4,762,569.20	50,764	14,254	5,224,572	31.69	164,865
	74,309,691.33	9,615,314	2,701,461	79,039,199		2,908,569
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						27.2 3.91

DUKE ENERGY KENTUCKY

ACCOUNT 3622 STATION EQUIPMENT - MAJOR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -10						
1955	6,151.27	5,451	6,330	436	11.66	37
1960	19,160.21	16,278	18,903	2,173	13.66	159
1962	4,096.00	3,412	3,962	544	14.57	37
1963	10,431.35	8,598	9,984	1,490	15.04	99
1964	120,966.56	98,622	114,523	18,540	15.53	1,194
1966	270,347.76	215,356	250,078	47,305	16.55	2,858
1967	15,812.04	12,442	14,448	2,945	17.08	172
1969	98,484.53	75,508	87,682	20,651	18.18	1,136
1970	9,366.59	7,083	8,225	2,078	18.75	111
1971	196,837.41	146,730	170,388	46,133	19.34	2,385
1972	25,581.14	18,792	21,822	6,317	19.93	317
1973	37,552.07	27,167	31,547	9,760	20.54	475
1974	136,571.00	97,247	112,926	37,302	21.16	1,763
1976	604,860.70	416,507	483,661	181,686	22.44	8,097
1977	396,237.94	268,129	311,360	124,502	23.09	5,392
1979	108,739.39	70,910	82,343	37,270	24.43	1,526
1980	111,717.19	71,460	82,982	39,907	25.11	1,589
1981	150,376.13	94,258	109,455	55,959	25.81	2,168
1982	353,461.57	217,021	252,012	136,796	26.51	5,160
1983	682,230.76	409,875	475,960	274,494	27.23	10,081
1984	401,128.70	235,698	273,700	167,542	27.95	5,994
1986	41,970.00	23,530	27,324	18,843	29.42	640
1987	35,726.65	19,538	22,688	16,611	30.17	551
1988	83,800.96	44,677	51,880	40,301	30.92	1,303
1989	101,133.92	52,490	60,953	50,294	31.69	1,587
1990	34,368.83	17,353	20,151	17,655	32.46	544
1991	1,100,145.56	539,731	626,753	583,407	33.24	17,551
1992	377,796.58	179,874	208,875	206,701	34.03	6,074
1993	939,635.95	433,771	503,709	529,891	34.82	15,218
1995	202,678.25	87,544	101,659	121,287	36.44	3,328
2000	1,228,111.88	437,024	507,486	843,437	40.59	20,779
2001	3,292,835.41	1,120,430	1,301,079	2,321,040	41.44	56,010
2002	509,919.85	165,469	192,148	368,764	42.30	8,718
2003	643,994.24	198,825	230,882	477,512	43.16	11,064
2004	948,700.00	277,767	322,552	721,018	44.03	16,376
2005	1,023,536.02	283,353	329,038	796,852	44.90	17,747
2006	1,457,748.51	380,035	441,309	1,162,214	45.78	25,387
2007	1,360,135.34	332,399	385,992	1,110,157	46.67	23,787
2008	1,930,162.77	440,199	511,173	1,612,006	47.56	33,894
2009	904,783.53	191,588	222,478	772,784	48.45	15,950
2010	2,036,293.53	397,586	461,689	1,778,234	49.35	36,033
2014	1,197,690.66	153,708	178,491	1,138,969	53.00	21,490
2015	896,309.89	99,905	116,013	869,928	53.92	16,134

DUKE ENERGY KENTUCKY

ACCOUNT 3622 STATION EQUIPMENT - MAJOR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -10						
2018	3,842,220.06	231,736	269,099	3,957,343	56.71	69,782
2019	6,655,109.02	287,920	334,341	6,986,279	57.64	121,205
2020	5,116,051.45	133,207	154,684	5,472,973	58.58	93,427
2021	2,964,591.29	25,534	29,651	3,231,399	59.53	54,282
	42,685,560.46	9,071,737	10,534,388	36,419,729		739,611
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						49.2 1.73

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R0.5						
NET SALVAGE PERCENT.. -50						
1915	22.22	32	33			
1917	21.06	30	32			
1918	18.91	27	28			
1919	20.33	28	30			
1921	35.85	49	54			
1922	39.78	54	60			
1923	36.37	49	55			
1924	77.90	104	117			
1925	664.20	883	996			
1926	334.01	440	501			
1927	341.57	446	512			
1928	550.44	713	826			
1929	819.48	1,052	1,229			
1930	1,053.50	1,341	1,580			
1931	3,906.73	4,930	5,860			
1932	2,273.65	2,844	3,410			
1933	5,069.59	6,288	7,604			
1934	5,967.92	7,337	8,952			
1935	5,573.33	6,791	8,360			
1936	1,715.49	2,072	2,573			
1937	6,497.15	7,777	9,746			
1938	7,384.10	8,758	11,076			
1939	5,920.98	6,960	8,881			
1940	10,313.32	12,010	15,470			
1941	8,458.16	9,758	12,687			
1942	13,029.64	14,889	19,544			
1943	2,781.72	3,148	4,173			
1944	4,969.90	5,571	7,455			
1945	9,788.61	10,863	14,683			
1946	7,583.03	8,332	11,375			
1947	18,018.35	19,597	27,028			
1948	16,921.77	18,216	25,383			
1949	27,955.15	29,772	41,933			
1950	39,084.58	41,177	58,375	252	16.37	15
1951	45,186.53	47,089	66,757	1,023	16.79	61
1952	63,279.10	65,218	92,458	2,461	17.21	143
1953	61,059.44	62,230	88,222	3,367	17.63	191
1954	64,565.33	65,047	92,215	4,633	18.06	257
1955	84,991.75	84,606	119,943	7,545	18.50	408
1956	72,085.99	70,913	100,531	7,598	18.93	401
1957	84,923.27	82,522	116,989	10,396	19.37	537
1958	89,376.54	85,753	121,569	12,496	19.82	630
1959	100,771.55	95,477	135,355	15,802	20.26	780

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R0.5						
NET SALVAGE PERCENT.. -50						
1960	85,109.24	79,569	112,802	14,862	20.72	717
1961	130,251.43	120,175	170,368	25,009	21.17	1,181
1962	94,372.85	85,888	121,761	19,798	21.63	915
1963	92,450.60	82,978	117,635	21,041	22.09	953
1964	160,542.50	142,037	201,361	39,453	22.56	1,749
1965	155,127.83	135,257	191,750	40,942	23.03	1,778
1966	139,683.09	119,963	170,068	39,457	23.51	1,678
1967	146,885.80	124,226	176,111	44,218	23.99	1,843
1968	187,637.69	156,234	221,488	59,969	24.47	2,451
1969	195,761.35	160,381	227,367	66,275	24.96	2,655
1970	234,635.30	189,094	268,073	83,880	25.45	3,296
1971	243,686.98	193,066	273,704	91,826	25.95	3,539
1972	318,253.14	247,803	351,303	126,077	26.45	4,767
1973	409,630.49	313,367	444,251	170,195	26.95	6,315
1974	281,642.82	211,541	299,895	122,569	27.46	4,464
1975	252,601.23	186,143	263,889	115,013	27.98	4,111
1976	268,336.52	194,007	275,038	127,467	28.49	4,474
1977	421,878.15	299,038	423,937	208,880	29.01	7,200
1978	437,382.01	303,703	430,550	225,523	29.54	7,634
1979	575,953.28	391,594	555,151	308,779	30.07	10,269
1980	861,348.87	573,193	812,598	479,425	30.60	15,667
1981	735,925.06	478,889	678,906	424,982	31.14	13,647
1982	655,420.80	416,848	590,952	392,179	31.68	12,379
1983	676,805.35	420,296	595,841	419,367	32.23	13,012
1984	611,118.78	370,338	525,017	391,661	32.78	11,948
1985	706,638.50	417,623	592,051	467,907	33.33	14,039
1986	768,342.17	442,565	627,411	525,102	33.88	15,499
1987	1,089,104.17	610,693	865,760	767,896	34.44	22,297
1988	739,318.55	403,058	571,403	537,575	35.01	15,355
1989	1,699,986.15	900,831	1,277,080	1,272,899	35.57	35,786
1990	997,969.18	513,320	727,718	769,236	36.14	21,285
1991	1,377,696.02	687,229	974,263	1,092,281	36.71	29,754
1992	1,661,321.36	802,418	1,137,563	1,354,419	37.29	36,321
1993	1,768,808.18	826,847	1,172,195	1,481,017	37.86	39,118
1994	1,841,605.56	831,734	1,179,123	1,583,285	38.44	41,188
1995	1,660,257.18	723,108	1,025,128	1,465,258	39.03	37,542
1996	1,402,226.98	588,557	834,379	1,268,961	39.61	32,036
1997	1,183,362.45	477,647	677,145	1,097,899	40.20	27,311
1998	1,476,009.28	572,433	811,520	1,402,494	40.78	34,392
1999	1,313,057.96	488,103	691,968	1,277,619	41.37	30,883
2000	1,015,801.93	361,255	512,140	1,011,563	41.96	24,108
2001	686,732.83	232,988	330,300	699,799	42.56	16,443
2002	111,864.58	36,152	51,252	116,545	43.15	2,701

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R0.5						
NET SALVAGE PERCENT.. -50						
2003	853,718.80	261,942	371,347	909,231	43.75	20,782
2004	751,789.30	218,568	309,857	817,827	44.34	18,444
2005	1,258,572.52	345,308	489,532	1,398,327	44.94	31,115
2006	1,628,927.62	420,263	595,794	1,847,597	45.54	40,571
2007	1,223,542.04	295,651	419,135	1,416,178	46.14	30,693
2009	1,679,143.05	350,328	496,649	2,022,066	47.35	42,705
2010	1,225,555.20	235,637	334,055	1,504,278	47.95	31,372
2011	729,974.69	128,209	181,758	913,204	48.56	18,806
2012	2,435,327.76	387,875	549,878	3,103,114	49.16	63,123
2013	2,436,688.35	347,557	492,721	3,162,312	49.77	63,539
2014	2,598,945.65	327,467	464,240	3,434,178	50.38	68,166
2015	3,995,574.05	436,976	619,487	5,373,874	50.99	105,391
2016	3,242,723.65	300,698	426,290	4,437,795	51.60	86,004
2017	2,706,104.13	205,190	290,892	3,768,264	52.22	72,161
2018	2,006,594.79	118,740	168,334	2,841,558	52.83	53,787
2019	3,442,077.68	145,497	206,267	4,956,850	53.45	92,738
2020	3,332,395.95	84,526	119,830	4,878,764	54.07	90,231
2021	8,188,348.82	69,273	98,206	12,184,317	54.69	222,789
	74,482,036.53	21,483,087	30,437,147	81,285,908		1,770,540

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 45.9 2.38

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 53-01						
NET SALVAGE PERCENT.. -40						
1901	90.21	126	126			
1925	102,230.71	130,296	143,123			
1926	2.26	3	3			
1927	20.01	25	28			
1932	140.81	166	197			
1938	16,230.02	17,899	22,074	648	11.25	58
1939	8,801.48	9,590	11,827	495	11.75	42
1940	455.46	490	604	34	12.25	3
1941	10,473.82	11,136	13,733	930	12.75	73
1942	9,065.99	9,519	11,739	953	13.25	72
1943	5,276.28	5,470	6,746	641	13.75	47
1944	724.82	742	915	100	14.25	7
1945	3,711.60	3,750	4,625	571	14.75	39
1946	8,599.52	8,575	10,575	1,464	15.25	96
1947	25,824.80	25,411	31,338	4,817	15.75	306
1948	15,260.93	14,815	18,271	3,094	16.25	190
1949	32,384.30	31,009	38,242	7,096	16.75	424
1950	76,036.58	71,805	88,553	17,898	17.25	1,038
1951	51,854.15	48,283	59,545	13,051	17.75	735
1952	101,356.40	93,037	114,737	27,162	18.25	1,488
1953	40,971.26	37,068	45,714	11,646	18.75	621
1954	96,157.02	85,725	105,720	28,900	19.25	1,501
1955	79,155.54	69,523	85,739	25,079	19.75	1,270
1956	82,879.01	71,698	88,421	27,610	20.25	1,363
1957	81,141.50	69,123	85,246	28,352	20.75	1,366
1958	92,883.64	77,900	96,070	33,967	21.25	1,598
1959	73,514.73	60,684	74,838	28,083	21.75	1,291
1960	93,418.84	75,881	93,580	37,206	22.25	1,672
1961	180,315.88	144,081	177,687	74,755	22.75	3,286
1962	176,294.75	138,541	170,855	75,958	23.25	3,267
1963	197,027.40	152,232	187,739	88,099	23.75	3,709
1964	273,059.89	207,370	255,738	126,546	24.25	5,218
1965	264,366.20	197,277	243,291	126,822	24.75	5,124
1966	293,950.84	215,469	265,726	145,805	25.25	5,774
1967	210,315.52	151,387	186,697	107,745	25.75	4,184
1968	240,677.85	170,065	209,732	127,217	26.25	4,846
1969	211,547.49	146,685	180,899	115,267	26.75	4,309
1970	420,253.33	285,852	352,526	235,829	27.25	8,654
1971	419,500.07	279,802	345,065	242,235	27.75	8,729
1972	365,814.70	239,159	294,942	217,199	28.25	7,688
1973	655,414.43	419,839	517,765	399,815	28.75	13,907
1974	555,072.48	348,227	429,449	347,652	29.25	11,886
1975	431,985.57	265,305	327,186	277,594	29.75	9,331

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 53-01						
NET SALVAGE PERCENT.. -40						
1976	354,912.05	213,284	263,032	233,845	30.25	7,730
1977	321,572.49	188,999	233,082	217,119	30.75	7,061
1978	301,073.76	172,977	213,323	208,180	31.25	6,662
1979	658,840.79	369,818	456,076	466,301	31.75	14,687
1980	831,609.34	455,817	562,134	602,119	32.25	18,670
1981	468,480.75	250,596	309,046	346,827	32.75	10,590
1982	603,298.12	314,738	388,149	456,468	33.25	13,728
1983	982,158.49	499,422	615,910	759,112	33.75	22,492
1984	607,194.13	300,730	370,874	479,198	34.25	13,991
1985	885,438.12	426,848	526,408	713,205	34.75	20,524
1986	925,915.97	434,138	535,399	760,883	35.25	21,585
1987	1,242,950.78	566,360	698,461	1,041,670	35.75	29,138
1988	765,260.18	338,594	417,570	653,794	36.25	18,036
1989	2,218,098.23	952,096	1,174,168	1,931,170	36.75	52,549
1990	1,317,061.06	547,947	675,753	1,168,132	37.25	31,359
1991	2,052,098.96	826,659	1,019,473	1,853,466	37.75	49,098
1992	2,062,292.81	803,511	990,926	1,896,284	38.25	49,576
1993	1,964,407.07	739,438	911,909	1,838,261	38.75	47,439
1994	3,323,408.77	1,207,069	1,488,612	3,164,160	39.25	80,616
1995	1,991,706.11	697,097	859,692	1,928,697	39.75	48,521
1996	1,337,570.17	450,491	555,566	1,317,032	40.25	32,721
1997	1,021,106.83	330,412	407,479	1,022,071	40.75	25,081
1998	1,999,307.72	620,545	765,284	2,033,747	41.25	49,303
1999	1,285,178.99	381,909	470,988	1,328,263	41.75	31,815
2000	4,613,576.23	1,310,080	1,615,650	4,843,357	42.25	114,636
2001	2,177,592.68	589,605	727,128	2,321,502	42.75	54,304
2002	426,808.28	109,922	135,561	461,971	43.25	10,681
2003	5,407,071.44	1,321,175	1,629,333	5,940,567	43.75	135,784
2004	5,029,219.08	1,162,383	1,433,504	5,607,403	44.25	126,721
2005	3,058,711.25	666,567	822,041	3,460,155	44.75	77,322
2006	6,217,420.30	1,272,843	1,569,728	7,134,660	45.25	157,672
2007	3,725,864.08	713,525	879,951	4,336,259	45.75	94,782
2008	1,810,346.54	322,792	398,082	2,136,403	46.25	46,192
2009	3,479,497.37	574,423	708,404	4,162,892	46.75	89,046
2010	5,950,463.32	903,792	1,114,597	7,216,052	47.25	152,721
2011	1,186,227.51	164,511	202,882	1,457,837	47.75	30,531
2012	10,142,229.95	1,272,525	1,569,336	12,629,786	48.25	261,757
2013	5,777,720.23	648,642	799,935	7,288,873	48.75	149,515
2014	3,210,416.96	317,992	392,162	4,102,422	49.25	83,298
2015	6,746,373.72	579,163	714,250	8,730,673	49.75	175,491
2016	4,178,512.85	303,552	374,354	5,475,564	50.25	108,966
2017	4,531,284.70	269,294	332,106	6,011,693	50.75	118,457
2018	3,755,836.60	173,625	214,122	5,044,049	51.25	98,420

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 53-01						
NET SALVAGE PERCENT.. -40						
2019	8,641,924.92	285,287	351,829	11,746,866	51.75	226,993
2020	8,807,512.80	174,477	215,173	12,115,345	52.25	231,873
2021	10,490,415.27	69,321	85,490	14,601,091	52.75	276,798
	144,890,225.86	29,686,031	36,592,558	166,253,758		3,640,144
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						45.7 2.51

DUKE ENERGY KENTUCKY

ACCOUNT 3651 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. 0						
2017	4,136,475.58	280,660	428,920	3,707,556	60.59	61,191
2018	319,584.85	16,912	25,846	293,739	61.56	4,772
2019	727,201.20	27,525	42,065	685,136	62.54	10,955
2020	284,408.99	6,476	9,897	274,512	63.52	4,322
2021	1,709,941.30	12,893	19,704	1,690,237	64.51	26,201
	7,177,611.92	344,466	526,432	6,651,180		107,441
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						61.9 1.50

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. -25						
1911	86.72	103	108			
1916	484.20	563	605			
1920	108.08	124	135			
1923	4,597.29	5,207	5,747			
1924	70.00	79	88			
1926	627.04	702	784			
1927	1,655.18	1,845	2,069			
1928	226.28	251	283			
1929	6,901.70	7,629	8,627			
1930	191.38	211	239			
1931	10,483.05	11,486	13,104			
1932	2,755.95	3,005	3,445			
1933	224.03	243	280			
1934	33.01	36	41			
1935	1,453.75	1,562	1,817			
1937	91.31	97	114			
1938	22,677.01	23,966	28,310	36	11.59	3
1939	0.78	1	1			
1940	45,158.13	47,160	55,707	741	12.34	60
1941	9,031.67	9,372	11,071	219	12.74	17
1942	2,013.83	2,076	2,452	65	13.14	5
1943	1,885.59	1,931	2,281	76	13.56	6
1944	264.60	269	318	13	14.00	1
1945	958.82	968	1,143	56	14.44	4
1946	0.54	1	1			
1947	2,244.22	2,230	2,634	171	15.37	11
1948	134.05	132	156	12	15.85	1
1949	12,503.39	12,222	14,437	1,192	16.35	73
1950	18,929.13	18,345	21,670	1,991	16.85	118
1951	5,103.76	4,902	5,790	590	17.37	34
1952	11,395.81	10,843	12,808	1,437	17.91	80
1953	3,209.28	3,025	3,573	439	18.45	24
1954	3,659.33	3,415	4,034	540	19.01	28
1955	23,323.04	21,543	25,447	3,707	19.58	189
1956	8,680.00	7,934	9,372	1,478	20.16	73
1957	6,187.35	5,594	6,608	1,126	20.75	54
1958	9,346.30	8,356	9,870	1,813	21.36	85
1959	3,630.60	3,208	3,789	749	21.98	34
1960	1,112.97	972	1,148	243	22.60	11
1961	18,720.57	16,150	19,077	4,324	23.24	186
1962	11,434.34	9,740	11,505	2,788	23.89	117
1963	79,439.22	66,795	78,901	20,398	24.55	831
1964	5,425.93	4,502	5,318	1,464	25.22	58

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. -25						
1965	13,790.95	11,288	13,334	3,905	25.89	151
1966	998.12	805	951	297	26.58	11
1967	8,392.22	6,675	7,885	2,605	27.28	95
1968	136.17	107	126	44	27.98	2
1969	22,661.30	17,487	20,656	7,671	28.70	267
1970	35,385.16	26,881	31,753	12,478	29.42	424
1971	84,792.81	63,383	74,870	31,121	30.15	1,032
1972	21,618.85	15,893	18,773	8,251	30.89	267
1973	119,674.87	86,485	102,159	47,435	31.64	1,499
1974	76,619.48	54,412	64,274	31,500	32.39	973
1975	206,167.56	143,802	169,864	87,845	33.15	2,650
1976	177,574.99	121,579	143,614	78,355	33.92	2,310
1977	33,297.47	22,365	26,418	15,204	34.70	438
1978	6,263.61	4,125	4,873	2,957	35.49	83
1979	3,638.48	2,348	2,774	1,774	36.28	49
1980	128,507.71	81,217	95,937	64,698	37.08	1,745
1982	39,502.24	23,899	28,230	21,148	38.70	546
1983	17,578.46	10,395	12,279	9,694	39.52	245
1984	100,279.68	57,928	68,427	56,923	40.34	1,411
1985	6,009.67	3,387	4,001	3,511	41.18	85
1986	52,949.29	29,104	34,379	31,808	42.02	757
1987	17,225.08	9,227	10,899	10,632	42.86	248
1988	129,456.88	67,491	79,723	82,098	43.72	1,878
1989	177,640.00	90,092	106,420	115,630	44.57	2,594
1990	166,959.13	82,255	97,163	111,536	45.44	2,455
1991	58,878.65	28,154	33,257	40,341	46.31	871
1992	622,072.87	288,432	340,707	436,884	47.18	9,260
1993	835,433.48	374,974	442,934	601,358	48.07	12,510
1994	1,061,991.05	461,077	544,642	782,847	48.95	15,993
1995	827,150.61	346,711	409,548	624,390	49.85	12,525
1996	779,257.86	315,083	372,188	601,884	50.74	11,862
1997	884,548.85	344,233	406,621	699,065	51.65	13,535
1998	835,632.68	312,527	369,169	675,372	52.56	12,850
1999	1,791,080.74	642,707	759,190	1,479,661	53.47	27,673
2000	402,246.69	138,172	163,214	339,594	54.39	6,244
2001	152,457.51	50,031	59,099	131,473	55.31	2,377
2002	79,431.14	24,835	29,336	69,953	56.24	1,244
2003	3,055,300.98	907,921	1,072,471	2,746,655	57.17	48,044
2004	233,796.54	65,814	77,742	214,504	58.11	3,691
2005	376,812.80	100,171	118,326	352,690	59.05	5,973
2006	508,068.25	127,100	150,135	484,950	59.99	8,084
2007	526,802.09	123,449	145,823	512,680	60.94	8,413
2008	202,563.97	44,260	52,282	200,923	61.89	3,246

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. -25						
2009	313,490.59	63,533	75,048	316,815	62.84	5,042
2010	309,477.95	57,768	68,238	318,609	63.80	4,994
2011	309,274.61	52,782	62,348	324,245	64.76	5,007
2012	437,739.76	67,631	79,888	467,287	65.73	7,109
2013	289,171.09	40,050	47,309	314,155	66.69	4,711
2014	748,320.06	91,548	108,140	827,260	67.66	12,227
2015	584,272.96	62,028	73,270	657,071	68.63	9,574
2016	241,976.47	21,739	25,679	276,792	69.61	3,976
2017	2,622,810.04	193,203	228,219	3,050,294	70.58	43,218
2018	2,871,845.32	164,664	194,507	3,395,300	71.56	47,447
2019	5,956,059.11	244,198	288,456	7,156,618	72.54	98,658
2020	12,188,465.29	300,598	355,078	14,880,504	73.52	202,401
2021	1,282,535.43	10,469	12,366	1,590,803	74.51	21,350
	43,372,544.85	7,417,287	8,759,919	45,455,762		694,427
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						65.5 1.60

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 56-R2						
NET SALVAGE PERCENT.. -35						
1901	24.39	33	33			
1922	0.16					
1923	16.90	22	19	4	1.42	3
1926	10.01	13	11	3	2.23	1
1927	5.82	8	8			
1929	126.10	161	138	32	3.06	10
1931	76.11	96	82	21	3.63	6
1932	20.80	26	22	6	3.92	2
1933	24.56	31	27	6	4.21	1
1935	18.23	23	20	5	4.78	1
1937	41.93	51	44	13	5.36	2
1938	2,587.00	3,139	2,685	807	5.66	143
1939	146.71	177	151	47	5.95	8
1940	14,574.52	17,483	14,953	4,723	6.24	757
1941	205.48	245	210	67	6.53	10
1942	85.47	101	86	29	6.83	4
1943	63.66	75	64	22	7.13	3
1945	171.86	200	171	61	7.73	8
1947	979.77	1,125	962	361	8.35	43
1949	4,061.90	4,603	3,937	1,547	8.99	172
1950	12,101.22	13,621	11,650	4,687	9.31	503
1951	2,368.58	2,647	2,264	934	9.65	97
1952	509.93	566	484	204	9.99	20
1953	1,033.86	1,138	973	423	10.34	41
1954	2,816.56	3,076	2,631	1,171	10.70	109
1955	26,810.78	29,046	24,843	11,352	11.06	1,026
1956	9,853.36	10,585	9,053	4,249	11.44	371
1957	4,813.84	5,127	4,385	2,114	11.82	179
1958	1,438.02	1,518	1,298	643	12.22	53
1959	9,726.41	10,172	8,700	4,431	12.62	351
1960	6,190.34	6,412	5,484	2,873	13.03	220
1961	9,441.90	9,683	8,282	4,465	13.46	332
1962	5,178.77	5,257	4,496	2,495	13.89	180
1963	35,189.77	35,341	30,227	17,279	14.34	1,205
1964	24,883.58	24,721	21,143	12,450	14.79	842
1965	19,378.77	19,037	16,282	9,879	15.25	648
1966	8,812.96	8,556	7,318	4,579	15.73	291
1967	12,211.94	11,711	10,016	6,470	16.22	399
1968	9,986.24	9,459	8,090	5,391	16.71	323
1969	15,920.94	14,884	12,730	8,763	17.22	509
1970	56,777.88	52,368	44,789	31,861	17.74	1,796
1971	73,576.96	66,923	57,238	42,091	18.27	2,304
1972	71,217.24	63,850	54,610	41,533	18.81	2,208

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 56-R2						
NET SALVAGE PERCENT.. -35						
1973	111,358.53	98,362	84,127	66,207	19.36	3,420
1974	175,445.40	152,601	130,517	106,334	19.92	5,338
1975	160,839.12	137,686	117,760	99,373	20.49	4,850
1976	283,855.53	239,024	204,433	178,772	21.07	8,485
1977	385,293.00	318,958	272,799	247,347	21.66	11,420
1978	200,834.67	163,354	139,714	131,413	22.26	5,904
1979	456,585.37	364,663	311,890	304,500	22.87	13,314
1980	410,059.90	321,376	274,867	278,714	23.49	11,865
1981	241,207.98	185,378	158,551	167,080	24.12	6,927
1982	241,710.14	182,035	155,691	170,618	24.76	6,891
1983	397,627.81	293,226	250,791	286,007	25.41	11,256
1984	528,393.79	381,376	326,184	387,148	26.06	14,856
1985	497,158.00	350,804	300,037	371,126	26.73	13,884
1986	583,088.29	401,881	343,722	443,447	27.41	16,178
1987	1,167,848.40	785,759	672,046	904,549	28.09	32,202
1988	923,231.03	605,819	518,147	728,215	28.78	25,303
1989	1,228,601.37	785,469	671,798	986,814	29.48	33,474
1990	1,167,084.80	726,162	621,074	954,490	30.19	31,616
1991	1,009,645.96	610,688	522,311	840,711	30.91	27,199
1992	1,003,750.51	589,696	504,357	850,706	31.63	26,896
1993	1,601,853.40	912,879	780,770	1,381,732	32.36	42,699
1994	1,055,846.25	582,886	498,532	926,860	33.10	28,002
1995	718,585.00	383,709	328,180	641,910	33.85	18,963
1996	663,083.41	341,916	292,435	602,728	34.61	17,415
1997	1,090,031.02	542,101	463,650	1,007,892	35.37	28,496
1998	729,320.98	349,173	298,642	685,941	36.14	18,980
1999	2,245,513.97	1,032,843	883,373	2,148,071	36.92	58,182
2000	2,611,725.54	1,152,206	985,462	2,540,367	37.70	67,384
2001	1,969,354.49	831,300	710,997	1,947,632	38.49	50,601
2002	575,828.21	231,959	198,391	578,977	39.29	14,736
2003	2,478,468.30	950,613	813,043	2,532,889	40.09	63,180
2004	1,732,401.89	630,619	539,357	1,799,386	40.90	43,995
2005	4,007,139.68	1,379,458	1,179,827	4,229,812	41.72	101,386
2006	2,815,043.04	913,442	781,251	3,019,057	42.54	70,970
2007	2,168,126.11	660,149	564,614	2,362,356	43.37	54,470
2008	1,823,918.29	518,829	443,745	2,018,545	44.20	45,668
2009	2,764,384.61	730,374	624,676	3,107,243	45.04	68,989
2010	1,888,906.10	460,381	393,756	2,156,267	45.89	46,988
2011	442,894.59	98,870	84,562	513,346	46.74	10,983
2012	3,032,195.87	614,020	525,161	3,568,303	47.60	74,964
2013	705,049.91	128,153	109,607	842,210	48.46	17,379
2014	1,241,026.69	199,555	170,676	1,504,710	49.33	30,503
2015	1,774,677.14	248,134	212,225	2,183,589	50.20	43,498

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 56-R2						
NET SALVAGE PERCENT.. -35						
2016	1,419,765.64	168,400	144,030	1,772,654	51.08	34,703
2017	3,815,277.03	370,639	317,001	4,833,623	51.97	93,008
2018	3,389,708.01	257,406	220,155	4,355,951	52.85	82,421
2019	3,687,788.04	200,037	171,088	4,807,426	53.75	89,440
2020	7,768,769.92	254,750	217,883	10,269,956	54.64	187,957
2021	10,036,797.41	108,939	93,173	13,456,504	55.55	242,241
	81,870,581.37	23,381,367	19,997,687	90,527,598		2,074,660
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						43.6 2.53

DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 48-R0.5						
NET SALVAGE PERCENT.. -15						
1901	31,582.54	36,320	36,320			
1910	932.69	1,073	1,073			
1916	93.05	107	107			
1917	39.05	45	45			
1920	740.05	851	851			
1921	117.96	136	136			
1922	605.03	696	696			
1923	162.79	187	187			
1925	659.74	759	759			
1926	248.00	284	285			
1927	291.97	331	336			
1928	180.65	202	208			
1929	179.48	199	206			
1930	124.12	136	143			
1932	374.42	403	431			
1933	182.90	195	210			
1935	66.95	70	77			
1936	1,464.13	1,512	1,684			
1937	2,257.56	2,307	2,596			
1938	113.55	115	131			
1939	122.80	123	141			
1940	2,320.41	2,302	2,668			
1941	1,192.53	1,171	1,371			
1942	165.20	161	190			
1945	484.42	457	557			
1946	250.89	234	289			
1947	2,257.08	2,087	2,596			
1948	1,863.69	1,706	2,143			
1949	3,376.19	3,058	3,883			
1950	5,269.63	4,723	6,060			
1951	15,277.18	13,550	17,569			
1952	10,017.37	8,789	11,520			
1953	5,159.44	4,477	5,933			
1954	13,634.36	11,698	15,680			
1955	36,066.47	30,598	41,476			
1956	45,862.04	38,457	52,606	135	13.00	10
1957	10,944.80	9,070	12,407	180	13.41	13
1958	31,088.24	25,458	34,825	926	13.82	67
1959	42,607.88	34,463	47,143	1,856	14.24	130
1960	38,507.13	30,758	42,075	2,208	14.66	151
1961	44,738.19	35,285	48,267	3,182	15.08	211
1962	43,195.54	33,624	45,995	3,680	15.51	237
1963	60,452.89	46,434	63,518	6,003	15.94	377

DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 48-R0.5						
NET SALVAGE PERCENT.. -15						
1964	144,131.92	109,189	149,363	16,389	16.38	1,001
1965	103,226.91	77,112	105,484	13,227	16.82	786
1966	175,327.32	129,126	176,635	24,991	17.26	1,448
1967	139,007.46	100,877	137,993	21,866	17.71	1,235
1968	206,662.00	147,747	202,108	35,553	18.16	1,958
1969	291,962.47	205,581	281,220	54,537	18.61	2,931
1970	395,146.20	273,882	374,651	79,767	19.07	4,183
1971	438,911.95	299,276	409,389	95,360	19.54	4,880
1972	486,115.52	325,983	445,922	113,111	20.01	5,653
1973	571,749.46	376,833	515,481	142,031	20.49	6,932
1974	654,633.82	424,091	580,127	172,702	20.96	8,240
1975	391,466.42	249,007	340,624	109,562	21.45	5,108
1976	311,722.74	194,627	266,236	92,245	21.94	4,204
1977	468,845.25	287,222	392,900	146,272	22.43	6,521
1978	621,284.08	373,164	510,462	204,015	22.93	8,897
1979	590,702.86	347,582	475,468	203,840	23.44	8,696
1980	641,491.50	369,780	505,833	231,882	23.94	9,686
1981	811,736.41	457,806	626,247	307,250	24.46	12,561
1982	569,243.91	313,948	429,459	225,171	24.98	9,014
1983	1,038,629.33	559,886	765,885	428,539	25.50	16,805
1984	936,556.67	492,972	674,351	402,689	26.03	15,470
1985	1,025,991.57	527,022	720,929	458,961	26.56	17,280
1986	1,036,637.77	519,317	710,389	481,744	27.09	17,783
1987	1,113,866.13	543,339	743,250	537,696	27.64	19,454
1988	1,938,993.86	920,747	1,259,518	970,325	28.18	34,433
1989	1,933,218.14	892,526	1,220,913	1,002,288	28.73	34,886
1990	1,885,191.47	845,508	1,156,596	1,011,374	29.28	34,541
1991	1,875,602.25	816,036	1,116,280	1,040,663	29.84	34,875
1992	1,404,651.97	592,300	810,225	805,125	30.40	26,484
1993	1,870,888.25	763,338	1,044,193	1,107,328	30.97	35,755
1994	2,382,573.34	939,587	1,285,289	1,454,670	31.54	46,121
1995	1,295,995.96	493,380	674,909	815,486	32.11	25,397
1996	1,162,211.93	426,585	583,539	753,005	32.68	23,042
1997	1,815,491.21	641,126	877,016	1,210,799	33.26	36,404
1998	1,512,006.91	512,948	701,677	1,037,131	33.84	30,648
1999	1,427,510.66	464,452	635,338	1,006,299	34.42	29,236
2000	1,248,012.97	388,398	531,301	903,914	35.01	25,819
2001	448,410.16	133,213	182,226	333,446	35.60	9,366
2002	568,816.30	160,944	220,160	433,979	36.19	11,992
2003	1,033,092.47	277,708	379,885	808,171	36.78	21,973
2004	1,375,038.72	350,193	479,040	1,102,255	37.37	29,496
2005	773,129.59	185,786	254,142	634,957	37.97	16,723
2006	909,888.85	205,570	281,205	765,167	38.57	19,838

DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 48-R0.5						
NET SALVAGE PERCENT.. -15						
2007	1,400,110.98	296,537	405,642	1,204,486	39.16	30,758
2008	780,875.43	154,161	210,882	687,125	39.76	17,282
2009	846,751.83	154,994	212,021	761,744	40.36	18,874
2010	1,204,702.26	203,198	277,961	1,107,447	40.96	27,037
2011	24,528.45	3,779	5,169	23,039	41.57	554
2012	722,279.43	100,887	138,006	692,615	42.17	16,424
2013	401,747.21	50,244	68,730	393,279	42.78	9,193
2014	2,398,769.06	264,934	362,412	2,396,172	43.39	55,224
2015	1,719,352.11	164,765	225,387	1,751,868	44.00	39,815
2016	1,986,965.73	161,367	220,739	2,064,272	44.61	46,274
2017	1,763,896.19	117,490	160,718	1,867,763	45.22	41,304
2018	992,651.43	51,609	70,598	1,070,951	45.83	23,368
2019	1,889,110.25	70,149	95,959	2,076,518	46.45	44,704
2020	3,399,543.44	75,766	103,643	3,805,832	47.07	80,855
2021	13,729,450.19	101,996	139,523	15,649,345	47.69	328,147
	73,741,779.67	20,072,201	27,436,641	57,366,406		1,498,764
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						38.3 2.03

DUKE ENERGY KENTUCKY

ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -15						
1937	1.04	1	1			
1938	2.53	3	3			
1940	0.01					
1941	0.95	1	1			
1942	10.94	11	13			
1943	2.50	2	3			
1945	1,765.26	1,677	2,030			
1946	3,329.42	3,142	3,829			
1947	2,300.29	2,156	2,645			
1948	401.17	373	461			
1949	3,857.31	3,563	4,436			
1950	416.26	382	479			
1951	5,955.07	5,418	6,848			
1952	49.28	44	57			
1953	1,452.54	1,301	1,670			
1954	1,558.30	1,384	1,792			
1955	581.76	512	669			
1956	26,953.32	23,523	30,996			
1957	2,433.12	2,104	2,798			
1958	213.84	183	246			
1959	2,698.35	2,290	3,103			
1961	5,229.50	4,348	6,014			
1962	3,983.11	3,276	4,581			
1963	14,251.40	11,592	16,308	81	16.10	5
1964	4,392.70	3,532	4,969	83	16.54	5
1965	5,116.30	4,066	5,720	164	16.99	10
1966	6,770.22	5,316	7,479	307	17.45	18
1967	2,140.86	1,660	2,335	127	17.92	7
1968	26,876.44	20,568	28,936	1,972	18.40	107
1969	25,290.78	19,101	26,873	2,211	18.88	117
1970	4,780.28	3,560	5,008	489	19.38	25
1971	21,630.59	15,879	22,340	2,535	19.89	127
1972	4,522.23	3,271	4,602	599	20.41	29
1973	6,132.94	4,369	6,147	906	20.93	43
1974	2,241.30	1,571	2,210	367	21.47	17
1975	5,212.61	3,595	5,058	937	22.02	43
1976	23,132.60	15,686	22,068	4,534	22.57	201
1977	7,355.35	4,901	6,895	1,564	23.13	68
1978	16,190.89	10,596	14,907	3,713	23.70	157
1984	5,955.63	3,447	4,849	2,000	27.32	73

DUKE ENERGY KENTUCKY

ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -15						
1986	6,576.87	3,632	5,110	2,453	28.59	86
1989	1,093.01	559	786	471	30.55	15
1990	20,801.65	10,347	14,557	9,365	31.21	300
	273,660.52	202,942	279,832	34,878		1,453
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						24.0 0.53

DUKE ENERGY KENTUCKY

ACCOUNT 3691 SERVICES - UNDERGROUND

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. -40						
1937	2,102.97	2,657	2,944			
1938	285.12	359	399			
1940	41.87	52	59			
1941	61.27	76	86			
1942	79.40	98	111			
1943	40.05	49	56			
1944	7.99	10	11			
1945	55.14	67	77			
1946	113.01	136	158			
1947	1.37	2	2			
1948	33.10	39	46			
1949	711.04	842	995			
1950	2,722.18	3,204	3,811			
1951	963.92	1,126	1,349			
1952	161.30	187	226			
1953	2,097.44	2,414	2,936			
1954	2.40	3	3			
1955	5,688.73	6,441	7,964			
1956	5,252.42	5,896	7,353			
1957	1,742.85	1,939	2,440			
1958	4,390.81	4,838	6,147			
1959	2,216.13	2,419	3,103			
1960	1,748.05	1,888	2,447			
1961	4,994.94	5,338	6,993			
1962	4,051.53	4,283	5,672			
1963	9,823.23	10,266	13,635	118	16.48	7
1964	7,489.85	7,735	10,274	212	17.05	12
1965	5,003.84	5,105	6,780	225	17.63	13
1966	10,814.74	10,894	14,469	672	18.23	37
1967	8,596.12	8,546	11,351	684	18.84	36
1968	6,368.32	6,246	8,296	620	19.46	32
1969	16,508.14	15,965	21,204	1,907	20.10	95
1970	11,077.59	10,558	14,023	1,486	20.75	72
1971	3,470.46	3,258	4,327	532	21.41	25
1972	627.60	580	770	109	22.08	5
1973	775.11	705	936	149	22.76	7
1975	482.08	424	563	112	24.16	5
1976	528.32	457	607	133	24.87	5
1977	870.14	739	982	236	25.59	9
1987	2,059.61	1,405	1,866	1,017	33.32	31
1999	1,265.67	583	774	998	43.62	23
2003	312,396.30	119,363	158,537	278,818	47.26	5,900
2004	269.07	97	129	248	48.18	5

DUKE ENERGY KENTUCKY

ACCOUNT 3691 SERVICES - UNDERGROUND

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. -40						
2005	115.00	39	52	109	49.11	2
2006	740.20	238	316	720	50.05	14
2007	309.48	93	124	309	50.99	6
2008	132.00	37	49	136	51.93	3
2009	1,078.83	282	375	1,135	52.88	21
2014	1,979,667.46	312,546	415,118	2,356,416	57.67	40,860
2015	19,759.66	2,707	3,596	24,068	58.64	410
2017	8,211.81	780	1,036	10,461	60.59	173
2018	10,029.29	743	987	13,054	61.56	212
2019	6,970.93	369	490	9,269	62.54	148
2020	113,601.35	3,621	4,809	154,233	63.52	2,428
2021	187,018.87	1,974	2,622	259,204	64.51	4,018
	2,765,626.10	570,718	754,485	3,117,392		54,614
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						57.1 1.97

DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. -40						
1925	13,266.86	16,218	18,574			
1938	513.57	575	719			
1939	1,164.03	1,292	1,630			
1940	1,218.56	1,342	1,706			
1941	1,418.89	1,550	1,986			
1942	726.10	787	1,017			
1943	1,003.82	1,079	1,405			
1944	969.78	1,033	1,358			
1945	1,051.02	1,110	1,471			
1946	2,258.45	2,363	3,162			
1947	3,292.57	3,415	4,610			
1948	4,679.48	4,808	6,551			
1949	5,650.86	5,751	7,911			
1950	6,791.79	6,845	9,509			
1951	6,216.97	6,204	8,704			
1952	9,190.19	9,079	12,866			
1953	8,696.62	8,502	12,175			
1954	9,867.65	9,546	13,815			
1955	515.77	494	722			
1956	18,913.37	17,895	26,479			
1957	27,733.34	25,949	38,827			
1958	34,671.35	32,061	48,540			
1959	40,773.76	37,257	57,083			
1960	48,228.86	43,539	67,520			
1961	51,108.76	45,567	71,552			
1962	48,679.92	42,845	68,152			
1963	48,309.64	41,967	67,633			
1964	49,675.91	42,574	69,546			
1965	56,384.25	47,665	78,938			
1966	62,254.69	51,887	87,157			
1967	75,184.84	61,769	105,259			
1968	64,765.17	52,408	90,646	25	25.32	1
1969	84,665.62	67,484	116,721	1,811	25.84	70
1970	85,017.34	66,713	115,388	3,636	26.37	138
1971	110,247.86	85,122	147,228	7,119	26.91	265
1972	114,036.26	86,583	149,755	9,896	27.46	360
1973	108,948.51	81,323	140,657	11,871	28.01	424
1974	156,127.63	114,535	198,101	20,478	28.56	717
1975	156,212.61	112,557	194,680	24,018	29.12	825
1976	150,943.31	106,753	184,642	26,679	29.69	899
1977	166,448.14	115,505	199,779	33,248	30.26	1,099
1978	198,792.31	135,258	233,944	44,365	30.84	1,439
1979	199,399.50	132,972	229,990	49,169	31.42	1,565

DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. -40						
1980	199,907.36	130,559	225,817	54,053	32.01	1,689
1981	242,882.52	155,226	268,481	71,555	32.61	2,194
1982	213,246.88	133,301	230,559	67,987	33.21	2,047
1983	214,750.83	131,234	226,984	73,667	33.81	2,179
1984	303,707.57	181,203	313,412	111,779	34.43	3,247
1985	248,813.79	144,909	250,637	97,702	35.04	2,788
1986	283,065.96	160,764	278,060	118,232	35.66	3,316
1987	292,909.02	162,048	280,281	129,792	36.29	3,577
1988	261,684.25	140,927	243,750	122,608	36.92	3,321
1989	245,296.64	128,496	222,249	121,166	37.55	3,227
1990	239,144.99	121,701	210,496	124,307	38.19	3,255
1991	227,049.89	112,103	193,895	123,975	38.84	3,192
1992	296,928.60	142,099	245,777	169,923	39.49	4,303
1993	300,052.21	139,044	240,493	179,580	40.14	4,474
1994	277,400.36	124,341	215,062	173,299	40.79	4,249
1995	298,990.12	129,414	223,836	194,750	41.45	4,698
1996	413,677.30	172,586	298,507	280,641	42.12	6,663
1997	285,074.97	114,543	198,115	200,990	42.78	4,698
1998	250,174.40	96,608	167,095	183,149	43.45	4,215
1999	206,056.65	76,352	132,060	156,419	44.12	3,545
2000	510,092.27	180,910	312,905	401,224	44.80	8,956
2001	3,268.64	1,107	1,915	2,661	45.48	59
2003	926,311.32	284,435	491,963	804,873	46.84	17,183
2004	186,060.37	54,181	93,712	166,773	47.52	3,510
2005	278,240.97	76,544	132,392	257,145	48.21	5,334
2006	549,948.73	142,437	246,361	523,567	48.90	10,707
2007	457,041.78	110,907	191,826	448,032	49.60	9,033
2008	515,458.48	116,783	201,990	519,652	50.29	10,333
2009	619,903.76	130,327	225,415	642,450	50.99	12,600
2010	303,563.94	58,861	101,807	323,183	51.69	6,252
2011	21,004.37	3,725	6,443	22,963	52.40	438
2012	644,834.08	103,818	179,565	723,203	53.10	13,620
2013	1,228,339.90	177,419	306,867	1,412,809	53.81	26,256
2014	110,390.00	14,090	24,370	130,176	54.53	2,387
2015	1,642,242.18	182,023	314,830	1,984,309	55.25	35,915
2016	474,010.91	44,575	77,097	586,518	55.97	10,479
2017	515,256.22	39,797	68,834	652,525	56.69	11,510
2018	375,400.55	22,599	39,087	486,474	57.42	8,472

DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. -40						
2019	515,599.66	22,254	38,491	683,349	58.15	11,751
2020	707,289.98	18,319	31,685	958,521	58.89	16,276
2021	1,343,532.17	11,605	20,072	1,860,873	59.63	31,207
	19,464,620.52	6,224,355	10,671,301	16,579,168		330,957
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						50.1 1.70

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 24-L1						
NET SALVAGE PERCENT.. -2						
1920	124.77	127	127			
1921	33.06	34	34			
1922	145.86	149	149			
1923	404.07	412	412			
1924	338.11	345	345			
1925	596.06	608	608			
1926	394.33	402	402			
1927	915.90	934	934			
1928	759.22	774	774			
1929	1,479.22	1,509	1,509			
1930	702.69	717	717			
1931	837.11	854	854			
1933	25.93	26	26			
1934	349.75	357	357			
1935	240.77	246	246			
1936	899.50	917	917			
1937	1,314.85	1,341	1,341			
1938	159.03	162	162			
1939	1,186.84	1,211	1,211			
1940	758.81	774	774			
1941	2,117.78	2,160	2,160			
1942	1,272.97	1,298	1,298			
1943	204.25	208	208			
1944	439.19	448	448			
1945	273.87	279	279			
1946	820.94	836	768	69	0.05	69
1947	4,290.12	4,287	3,939	437	0.49	437
1948	3,011.68	2,990	2,747	325	0.64	325
1949	2,046.72	2,017	1,853	235	0.81	235
1950	3,315.40	3,246	2,982	400	0.96	400
1951	2,016.80	1,961	1,802	255	1.12	228
1952	5,033.04	4,860	4,465	669	1.28	523
1953	6,460.57	6,194	5,690	900	1.44	625
1954	3,232.01	3,077	2,827	470	1.60	294
1955	3,970.37	3,753	3,448	602	1.76	342
1956	5,446.56	5,109	4,694	861	1.93	446
1957	9,946.36	9,258	8,505	1,640	2.10	781
1958	4,304.20	3,977	3,654	736	2.26	326
1959	5,274.94	4,833	4,440	940	2.44	385
1960	7,553.30	6,867	6,309	1,395	2.61	534
1961	7,945.98	7,166	6,583	1,522	2.78	547
1962	4,978.36	4,452	4,090	988	2.96	334
1963	4,792.59	4,249	3,904	984	3.14	313

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 24-L1						
NET SALVAGE PERCENT.. -2						
1964	6,368.92	5,598	5,143	1,353	3.32	408
1965	2,960.09	2,579	2,369	650	3.50	186
1966	10,849.70	9,365	8,604	2,463	3.69	667
1967	7,627.65	6,526	5,996	1,784	3.87	461
1968	13,207.19	11,192	10,282	3,189	4.06	785
1969	10,652.48	8,937	8,211	2,655	4.26	623
1970	8,107.25	6,736	6,188	2,081	4.45	468
1971	7,520.29	6,184	5,681	1,990	4.65	428
1972	13,447.79	10,945	10,055	3,662	4.85	755
1973	13,007.66	10,476	9,624	3,644	5.05	722
1974	20,241.88	16,122	14,811	5,836	5.26	1,110
1975	5,479.59	4,315	3,964	1,625	5.47	297
1976	3,516.48	2,738	2,515	1,072	5.68	189
1977	5,671.65	4,363	4,008	1,777	5.90	301
1978	6,284.81	4,776	4,388	2,023	6.12	331
1979	8,002.48	6,006	5,518	2,645	6.34	417
1980	6,914.48	5,125	4,708	2,345	6.56	357
1981	2,512.39	1,838	1,689	874	6.79	129
1983	1,357.69	966	887	498	7.26	69
1984	7,982.51	5,594	5,139	3,003	7.51	400
1985	11,959.11	8,259	7,588	4,610	7.75	595
1986	22,318.93	15,177	13,943	8,822	8.00	1,103
1987	16,886.92	11,304	10,385	6,840	8.25	829
1988	2,767.31	1,822	1,674	1,149	8.51	135
1989	8,988.57	5,814	5,341	3,827	8.78	436
1990	15,906.04	10,106	9,285	6,939	9.05	767
1991	17,381.47	10,844	9,963	7,766	9.32	833
1992	11,684.95	7,151	6,570	5,349	9.60	557
1993	9,550.43	5,731	5,265	4,476	9.88	453
1994	15,512.16	9,118	8,377	7,445	10.17	732
1995	12,347.01	7,100	6,523	6,071	10.47	580
1996	700.53	394	362	353	10.77	33
1998	36,146.70	19,357	17,784	19,086	11.40	1,674
2004	65,789.10	29,526	27,126	39,979	13.44	2,975
2005	127,116.21	55,050	50,575	79,084	13.81	5,727
2006	186,724.98	77,930	71,595	118,864	14.18	8,383
2007	268,031.07	107,421	98,689	174,703	14.57	11,991
2008	266,529.32	102,401	94,077	177,783	14.96	11,884
2011	118,612.40	38,866	35,707	85,278	16.29	5,235
2012	33,378.99	10,200	9,371	24,676	16.81	1,468
2013	17,558.20	4,955	4,552	13,357	17.36	769
2014	334,304.54	85,674	78,710	262,281	17.97	14,595
2017	8,100.06	1,349	1,239	7,023	20.08	350

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 24-L1						
NET SALVAGE PERCENT.. -2						
2018	2,290.41	303	278	2,058	20.89	99
2019	473,333.12	45,663	41,951	440,849	21.73	20,288
2020	109,087.00	6,445	5,921	105,348	22.61	4,659
2021	165,390.99	3,303	3,035	165,664	23.53	7,041
	2,620,523.38	907,068	834,658	1,838,276		120,438
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.3 4.60

DUKE ENERGY KENTUCKY

ACCOUNT 3702 UoF METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-S2.5						
NET SALVAGE PERCENT.. 0						
2015	195,374.34	82,188	114,968	80,406	8.69	9,253
2016	263,192.08	94,749	132,539	130,653	9.60	13,610
2018	864.13	200	280	584	11.52	51
2019	24,755,545.07	4,126,007	5,771,623	18,983,922	12.50	1,518,714
2020	375,175.73	37,518	52,481	322,695	13.50	23,903
2021	316,689.84	10,555	14,765	301,925	14.50	20,822
	25,906,841.19	4,351,217	6,086,656	19,820,185		1,586,353
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.5 6.12

DUKE ENERGY KENTUCKY

ACCOUNT 3711 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S0.5						
NET SALVAGE PERCENT.. 0						
2019	156.58	18	59	98	17.69	6
2021	894.66	22	72	823	19.51	42
	1,051.24	40	131	920		48

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.2 4.57

DUKE ENERGY KENTUCKY

ACCOUNT 3712 COMPANY-OWNED OUTDOOR LIGHTING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 11-R2						
NET SALVAGE PERCENT.. -5						
2008	542.25	465	290	279	2.02	138
2011	0.01					
2015	95,323.93	48,134	29,973	70,117	5.71	12,280
2016	135,879.91	59,274	36,911	105,763	6.43	16,448
2017	22,065.45	8,025	4,997	18,172	7.19	2,527
2018	43,931.60	12,664	7,886	38,242	7.98	4,792
2019	180,835.07	37,803	23,540	166,337	8.81	18,880
2020	195,342.45	24,800	15,443	189,667	9.67	19,614
2021	187,363.63	8,048	5,012	191,720	10.55	18,173
	861,284.30	199,213	124,052	780,297		92,852
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						8.4 10.78

DUKE ENERGY KENTUCKY

ACCOUNT 3720 LEASED PROPERTY ON CUSTOMERS' PREMISES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-L3						
NET SALVAGE PERCENT.. 0						
1969	9,647.36	8,409	9,647			
	9,647.36	8,409	9,647			
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 34-L0.5						
NET SALVAGE PERCENT.. -15						
1910	78.85	78	91			
1925	1,885.21	1,752	2,168			
1927	3.09	3	4			
1938	170.68	151	196			
1939	25.99	23	30			
1940	114.48	100	132			
1941	379.29	330	436			
1942	25.06	22	29			
1943	9.58	8	11			
1944	22.00	19	25			
1945	75.74	65	87			
1946	102.29	87	118			
1947	1,289.01	1,090	1,482			
1948	93.66	79	108			
1949	205.66	172	237			
1950	56.23	47	65			
1951	144.66	120	166			
1952	288.06	236	331			
1953	264.52	216	304			
1954	173.29	140	199			
1955	423.29	341	487			
1956	1,335.84	1,067	1,536			
1957	539.30	428	620			
1958	1,178.70	928	1,356			
1959	4,487.08	3,504	5,160			
1960	7,703.32	5,967	8,859			
1961	18,994.14	14,590	21,843			
1962	20,333.15	15,488	23,383			
1963	20,386.22	15,397	23,444			
1964	16,923.20	12,667	19,462			
1965	46,421.89	34,418	53,385			
1966	39,824.91	29,257	45,799			
1967	25,411.34	18,488	29,223			
1968	12,733.09	9,169	14,643			
1969	49,780.30	35,477	57,247			
1970	49,885.13	35,180	57,368			
1971	48,258.11	33,657	55,497			
1972	36,858.44	25,420	42,387			
1973	42,999.87	29,321	49,450			
1974	17,129.17	11,541	19,699			
1975	20,834.43	13,868	23,960			
1976	9,228.13	6,065	10,612			
1977	13,091.56	8,493	15,055			

DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 34-L0.5						
NET SALVAGE PERCENT.. -15						
1978	19,156.52	12,265	22,030			
1979	30,724.37	19,402	35,333			
1980	40,750.37	25,375	46,863			
1981	20,459.10	12,553	23,528			
1982	11,778.09	7,119	13,545			
1983	12,607.57	7,501	14,499			
1984	14,244.10	8,340	16,285	96	16.69	6
1985	45,296.09	26,091	50,948	1,143	16.97	67
1986	31,674.18	17,934	35,020	1,405	17.26	81
1987	15,970.30	8,880	17,340	1,026	17.56	58
1988	22,538.99	12,304	24,026	1,894	17.86	106
1989	63,258.56	33,892	66,181	6,566	18.16	362
1990	38,417.50	20,180	39,405	4,775	18.47	259
1991	13,589.62	6,991	13,651	1,977	18.79	105
1992	41,628.25	20,965	40,938	6,934	19.11	363
1993	82,530.99	40,672	79,420	15,491	19.43	797
1994	81,517.91	39,263	76,668	17,078	19.76	864
1995	75,857.11	35,664	69,641	17,595	20.10	875
1996	59,652.50	27,359	53,424	15,176	20.44	742
1997	91,922.73	41,103	80,261	25,450	20.78	1,225
1998	114,903.42	49,980	97,595	34,544	21.14	1,634
1999	145,014.37	61,360	119,817	46,950	21.49	2,185
2000	99,614.52	40,904	79,873	34,684	21.86	1,587
2001	28,286.70	11,261	21,989	10,541	22.23	474
2002	7,009.27	2,700	5,272	2,789	22.61	123
2004	157,564.41	56,545	110,415	70,784	23.39	3,026
2005	54,100.78	18,665	36,447	25,769	23.80	1,083
2006	28,667.94	9,473	18,498	14,470	24.23	597
2007	55,634.27	17,557	34,283	29,696	24.67	1,204
2008	18,290.88	5,481	10,703	10,332	25.14	411
2009	39,669.53	11,244	21,956	23,664	25.62	924
2010	11,636.29	3,097	6,048	7,334	26.13	281
2012	33,725.01	7,723	15,081	23,703	27.23	870
2014	5,366.40	1,011	1,974	4,197	28.43	148
2015	313,351.24	52,251	102,030	258,324	29.07	8,886
2016	32,025.22	4,625	9,031	27,798	29.73	935
2017	33,362.94	4,029	7,868	30,499	30.43	1,002
2018	1,852.41	179	349	1,781	31.15	57

DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 34-L0.5						
NET SALVAGE PERCENT.. -15						
2019	2,852.24	202	395	2,885	31.91	90
2020	785.48	34	66	837	32.71	26
2021	3.09			4	33.55	
	2,507,459.22	1,147,643	2,105,390	778,188		31,453
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						24.7 1.25

DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -20						
1922	269.37	302	323			
1923	3,481.73	3,886	4,178			
1927	1,995.79	2,187	2,395			
1928	1,451.94	1,584	1,742			
1929	3,724.55	4,044	4,469			
1930	53.15	57	64			
1931	1,776.61	1,911	2,132			
1932	602.71	645	723			
1933	354.16	377	425			
1936	53.64	56	64			
1937	147.76	154	177			
1938	290.84	301	349			
1939	63.35	65	76			
1941	1,449.08	1,474	1,739			
1942	26.87	27	32			
1943	283.50	285	340			
1950	171.43	164	206			
1951	1,257.21	1,193	1,509			
1952	114.34	108	137			
1953	0.10					
1954	171.18	159	205			
1955	361.21	332	433			
1956	565.62	515	679			
1958	509.17	455	611			
1959	293.96	260	353			
1960	21.46	19	26			
1961	28.82	25	35			
1962	273.08	234	328			
1963	253.93	216	305			
1965	4,917.77	4,078	5,901			
1970	400.52	311	481			
1972	1,582.16	1,194	1,899			
1973	13,625.05	10,128	16,350			
1974	18,600.26	13,607	22,320			
1975	4,518.21	3,251	5,422			
1976	7,327.42	5,185	8,793			
1977	7,718.76	5,367	9,263			
1978	14,756.10	10,077	17,707			
1979	13,221.08	8,859	15,865			
1980	16,725.73	10,992	20,071			
1981	12,793.42	8,243	15,352			
1982	10,784.55	6,805	12,941			
1983	2,407.97	1,487	2,890			

DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1.5						
NET SALVAGE PERCENT.. -20						
1984	12,877.16	7,777	15,205	248	27.32	9
1985	38,093.48	22,482	43,956	1,756	27.95	63
1986	21,062.90	12,137	23,730	1,545	28.59	54
1987	58,166.39	32,705	63,943	5,857	29.23	200
1988	71,225.22	39,021	76,292	9,178	29.89	307
1989	92,132.51	49,149	96,094	14,465	30.55	473
1990	131,972.23	68,502	133,932	24,435	31.21	783
1991	47,327.02	23,863	46,656	10,136	31.89	318
1992	128,990.98	63,126	123,421	31,368	32.57	963
1993	79,243.85	37,587	73,488	21,605	33.26	650
1994	88,032.37	40,431	79,049	26,590	33.95	783
1995	113,773.50	50,515	98,765	37,763	34.65	1,090
1996	99,521.16	42,646	83,379	36,046	35.36	1,019
1997	145,426.69	60,064	117,434	57,078	36.07	1,582
1998	145,025.04	57,620	112,656	61,374	36.79	1,668
1999	628,139.09	239,698	468,647	285,120	37.51	7,601
2000	135,300.71	49,476	96,733	65,628	38.24	1,716
2001	13,200.25	4,614	9,021	6,819	38.98	175
2002	32,074.31	10,700	20,920	17,569	39.71	442
2004	387,664.12	116,639	228,047	237,150	41.21	5,755
2005	364,108.47	103,592	202,539	234,391	41.96	5,586
2006	200,674.41	53,765	105,119	135,690	42.72	3,176
2007	42,779.63	10,752	21,022	30,314	43.48	697
2009	55,789.51	12,160	23,775	43,172	45.01	959
2010	33,453.09	6,722	13,142	27,002	45.79	590
2012	25,121.11	4,193	8,198	21,947	47.35	464
2017	23,600.45	1,890	3,695	24,626	51.33	480
2018	1,486.80	93	182	1,602	52.14	31
2019	2,144.04	96	188	2,385	52.95	45
2020	590.49	16	31	678	53.77	13
	3,368,422.54	1,332,650	2,568,569	1,473,538		37,692

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 39.1 1.12

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 25-L0						
NET SALVAGE PERCENT.. -10						
1962	755.64	609	695	136	6.69	20
1963	2,782.60	2,221	2,536	525	6.86	77
1964	3,748.22	2,964	3,385	738	7.03	105
1965	4,665.23	3,654	4,173	959	7.20	133
1966	5,777.78	4,479	5,115	1,241	7.38	168
1967	3,479.48	2,670	3,049	778	7.56	103
1968	6,702.27	5,090	5,813	1,559	7.74	201
1969	7,039.84	5,287	6,038	1,706	7.93	215
1970	5,509.18	4,094	4,675	1,385	8.11	171
1971	9,268.50	6,810	7,777	2,418	8.30	291
1972	7,421.14	5,388	6,153	2,010	8.50	236
1973	7,731.84	5,549	6,337	2,168	8.69	249
1974	8,908.55	6,315	7,212	2,587	8.89	291
1975	8,885.45	6,220	7,103	2,671	9.09	294
1976	9,620.18	6,646	7,590	2,992	9.30	322
1977	9,884.29	6,741	7,698	3,175	9.50	334
1978	17,299.53	11,631	13,282	5,747	9.72	591
1979	26,010.63	17,247	19,695	8,917	9.93	898
1980	22,740.61	14,859	16,968	8,047	10.15	793
1981	22,233.17	14,312	16,344	8,112	10.37	782
1982	16,008.79	10,143	11,583	6,027	10.60	569
1983	11,307.29	7,050	8,051	4,387	10.83	405
1984	9,332.94	5,724	6,537	3,729	11.06	337
1985	6,882.67	4,149	4,738	2,833	11.30	251
1986	6,740.07	3,992	4,559	2,855	11.54	247
1987	3,167.17	1,842	2,104	1,380	11.78	117
1988	12,023.15	6,856	7,829	5,396	12.04	448
1989	12,810.66	7,164	8,181	5,911	12.29	481
1990	23,089.62	12,648	14,444	10,955	12.55	873
1991	28,187.99	15,119	17,265	13,742	12.81	1,073
1992	27,730.95	14,544	16,609	13,895	13.08	1,062
1993	28,177.85	14,432	16,481	14,515	13.36	1,086
1994	27,014.71	13,503	15,420	14,296	13.64	1,048
1995	34,876.96	17,003	19,417	18,948	13.92	1,361
1996	34,167.86	16,222	18,525	19,060	14.21	1,341
1997	28,963.90	13,369	15,267	16,593	14.51	1,144
1998	31,524.66	14,134	16,141	18,536	14.81	1,252
1999	22,323.39	9,704	11,082	13,474	15.12	891
2000	5,610.07	2,362	2,697	3,474	15.43	225
2001	21,321.77	8,678	9,910	13,544	15.75	860
2002	74.99	29	33	49	16.08	3
2004	203,563.28	73,893	84,383	139,537	16.75	8,331
2005	20,608.87	7,164	8,181	14,489	17.10	847

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 25-L0						
NET SALVAGE PERCENT.. -10						
2006	37,051.67	12,309	14,056	26,701	17.45	1,530
2007	26,995.18	8,540	9,752	19,943	17.81	1,120
2008	34,780.87	10,437	11,919	26,340	18.18	1,449
2009	17,696.04	5,014	5,726	13,740	18.56	740
2010	3,892.91	1,038	1,185	3,097	18.94	164
2011	7,548.80	1,883	2,150	6,154	19.33	318
2012	38,503.81	8,911	10,176	32,178	19.74	1,630
2013	39,542.02	8,421	9,616	33,880	20.16	1,681
2015	88,475.64	15,299	17,471	79,852	21.07	3,790
2016	914,151.78	138,768	158,468	847,099	21.55	39,309
2017	190,026.68	24,582	28,072	180,957	22.06	8,203
2018	282,616.68	29,720	33,939	276,939	22.61	12,249
2019	446,773.93	35,384	40,408	451,043	23.20	19,442
2020	519,660.01	26,295	30,028	541,598	23.85	22,709
2021	404,832.33	7,481	8,543	436,773	24.58	17,769
	3,858,522.09	746,592	852,584	3,391,790		162,629
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						20.9 4.21

DUKE ENERGY KENTUCKY

ACCOUNT 3900 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-S1						
NET SALVAGE PERCENT.. -10						
1948	10,963.57	11,535	10,244	1,816	1.74	1,044
1951	328.00	338	300	61	2.57	24
1977	3,297.18	2,626	2,332	1,295	11.04	117
2007	40,659.35	14,480	12,860	31,865	27.05	1,178
2008	59,235.18	19,857	17,635	47,524	27.81	1,709
2010	28,802.78	8,404	7,464	24,219	29.39	824
2020	22,055.60	910	808	23,453	38.50	609
	165,341.66	58,150	51,643	130,233		5,505
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						23.7 3.33

DUKE ENERGY KENTUCKY

ACCOUNT 3910 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	3,084.80	2,082	2,082	1,003	6.50	154
2009	9,910.13	6,194	6,194	3,716	7.50	495
2013	1,587.47	675	675	912	11.50	79
2016	734.91	202	202	533	14.50	37
2017	9,344.29	2,102	2,102	7,242	15.50	467
2018	928.23	162	162	766	16.50	46
2019	3,749.32	469	469	3,280	17.50	187
2021	344,689.12	8,617	8,617	336,072	19.50	17,234
	374,028.27	20,503	20,503	353,525		18,699
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					18.9	5.00

DUKE ENERGY KENTUCKY

ACCOUNT 3911 ELECTRONIC DATA PROCESSING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	376,828.69	339,146	326,955	49,874	0.50	49,874
2018	1,167,902.00	817,531	788,145	379,757	1.50	253,171
2019	595,996.15	297,998	287,286	308,710	2.50	123,484
2020	467,784.33	140,335	135,291	332,493	3.50	94,998
2021	185,438.27	18,544	17,877	167,561	4.50	37,236
	2,793,949.44	1,613,554	1,555,554	1,238,395		558,763
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.2						20.00

DUKE ENERGY KENTUCKY

ACCOUNT 3920 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 12-S3						
NET SALVAGE PERCENT.. 0						
2020	971,612.98	121,452	352,132	619,481	10.50	58,998
2021	87,540.67	3,648	10,577	76,964	11.50	6,693
	1,059,153.65	125,100	362,709	696,445		65,691
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.6 6.20

DUKE ENERGY KENTUCKY

ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-R2.5						
NET SALVAGE PERCENT.. +5						
1999	15,736.15	12,131	14,949			
2000	5,838.07	4,398	5,546			
2001	21,763.00	15,971	20,675			
2003	14,278.00	9,820	13,564			
2005	26,234.28	16,648	23,661	1,262	6.64	190
2006	92,022.48	55,687	79,146	8,275	7.26	1,140
2016	96,194.41	22,983	32,665	58,720	14.97	3,923
	272,066.39	137,638	190,206	68,257		5,253
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					13.0	1.93

DUKE ENERGY KENTUCKY

ACCOUNT 3940 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1997	6,942.62	6,804	6,804	139	0.50	139
1998	16,223.30	15,250	15,250	973	1.50	649
2000	109,708.96	94,350	94,350	15,359	3.50	4,388
2001	51,974.41	42,619	42,619	9,355	4.50	2,079
2002	37,932.62	29,587	29,587	8,346	5.50	1,517
2003	4,809.80	3,559	3,559	1,251	6.50	192
2005	25,940.45	17,121	17,121	8,819	8.50	1,038
2008	380,978.53	205,728	205,728	175,251	11.50	15,239
2009	2,959.10	1,480	1,480	1,479	12.50	118
2010	2,978.89	1,370	1,370	1,609	13.50	119
2012	106,042.10	40,296	40,296	65,746	15.50	4,242
2020	2,127,101.95	127,626	127,626	1,999,476	23.50	85,084
2021	288,080.19	5,762	5,762	282,318	24.50	11,523
	3,161,672.92	591,552	591,552	2,570,121		126,327
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.3						4.00

DUKE ENERGY KENTUCKY

ACCOUNT 3960 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-L2						
NET SALVAGE PERCENT.. 0						
2008	11,770.00	6,905	8,718	3,052	6.20	492
	11,770.00	6,905	8,718	3,052		492
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						6.2 4.18

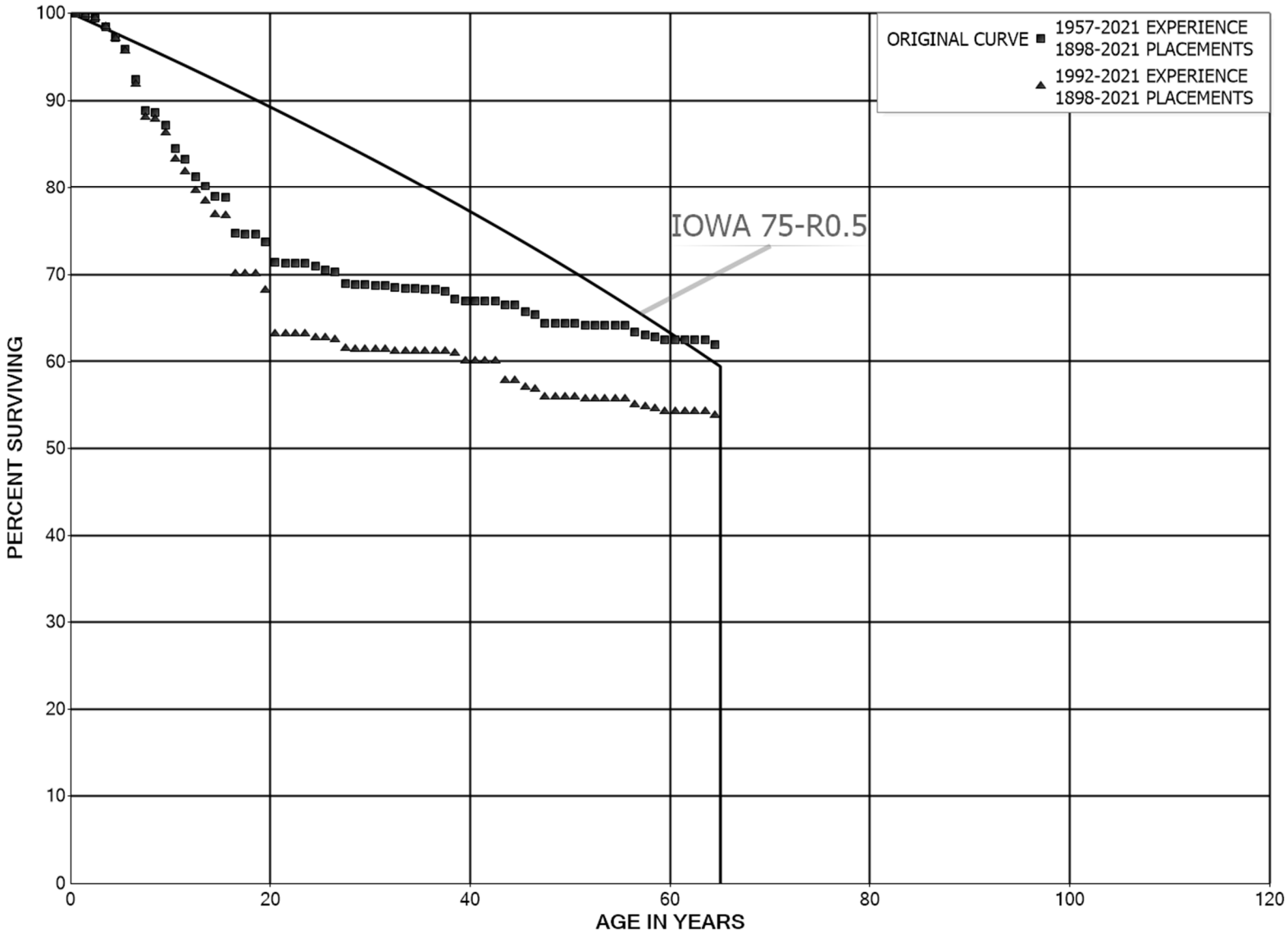
DUKE ENERGY KENTUCKY

ACCOUNT 3970 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	166,461.37	160,913	159,488	6,973	0.50	6,973
2008	598.13	538	533	65	1.50	43
2009	107,358.47	89,465	88,673	18,685	2.50	7,474
2010	1,387,831.33	1,064,009	1,054,588	333,243	3.50	95,212
2011	478,464.22	334,925	331,960	146,504	4.50	32,556
2012	8,837.90	5,597	5,547	3,291	5.50	598
2013	22,988.34	13,027	12,912	10,076	6.50	1,550
2014	330,246.90	165,123	163,661	166,586	7.50	22,211
2015	17,836.10	7,729	7,661	10,175	8.50	1,197
2016	248,081.51	90,964	90,159	157,923	9.50	16,623
2017	9,491.24	2,847	2,822	6,669	10.50	635
2018	102,404.90	23,894	23,682	78,723	11.50	6,845
2019	995,656.13	165,946	164,477	831,179	12.50	66,494
2020	4,188,026.54	418,803	415,094	3,772,933	13.50	279,477
2021	940,040.89	31,332	31,055	908,986	14.50	62,689
	9,004,323.97	2,575,112	2,552,312	6,452,012		600,577
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.7 6.67

DUKE ENERGY KENTUCKY
ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1957-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	48,165,007	21,512	0.0004	0.9996	100.00
0.5	47,841,075	128,378	0.0027	0.9973	99.96
1.5	47,185,587	116,688	0.0025	0.9975	99.69
2.5	44,251,353	448,310	0.0101	0.9899	99.44
3.5	19,058,246	242,265	0.0127	0.9873	98.43
4.5	18,759,678	256,134	0.0137	0.9863	97.18
5.5	18,298,572	666,073	0.0364	0.9636	95.86
6.5	17,546,697	667,753	0.0381	0.9619	92.37
7.5	16,278,590	49,853	0.0031	0.9969	88.85
8.5	16,132,094	249,625	0.0155	0.9845	88.58
9.5	14,556,334	446,286	0.0307	0.9693	87.21
10.5	13,745,055	202,591	0.0147	0.9853	84.53
11.5	13,201,702	318,454	0.0241	0.9759	83.29
12.5	10,566,668	141,837	0.0134	0.9866	81.28
13.5	8,114,325	122,118	0.0150	0.9850	80.19
14.5	7,808,793	10,540	0.0013	0.9987	78.98
15.5	4,279,277	223,258	0.0522	0.9478	78.87
16.5	3,007,253	4,204	0.0014	0.9986	74.76
17.5	2,985,624	1,806	0.0006	0.9994	74.66
18.5	2,926,037	34,678	0.0119	0.9881	74.61
19.5	2,880,168	91,397	0.0317	0.9683	73.73
20.5	2,675,541	3,253	0.0012	0.9988	71.39
21.5	2,456,223	1,237	0.0005	0.9995	71.30
22.5	2,436,977		0.0000	1.0000	71.26
23.5	2,378,116	10,857	0.0046	0.9954	71.26
24.5	2,367,259	14,079	0.0059	0.9941	70.94
25.5	2,331,946	6,810	0.0029	0.9971	70.52
26.5	2,311,268	46,009	0.0199	0.9801	70.31
27.5	2,063,477	3,518	0.0017	0.9983	68.91
28.5	2,000,092		0.0000	1.0000	68.79
29.5	1,941,245	2,254	0.0012	0.9988	68.79
30.5	1,900,965	607	0.0003	0.9997	68.71
31.5	1,897,018	6,025	0.0032	0.9968	68.69
32.5	1,855,692	2,552	0.0014	0.9986	68.47
33.5	840,872		0.0000	1.0000	68.38
34.5	828,420	1,358	0.0016	0.9984	68.38
35.5	826,618		0.0000	1.0000	68.27
36.5	801,820	2,604	0.0032	0.9968	68.27
37.5	756,863	9,526	0.0126	0.9874	68.05
38.5	733,301	2,609	0.0036	0.9964	67.19

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1957-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	718,175	154	0.0002	0.9998	66.95	
40.5	684,827		0.0000	1.0000	66.94	
41.5	673,267		0.0000	1.0000	66.94	
42.5	633,328	3,870	0.0061	0.9939	66.94	
43.5	605,832		0.0000	1.0000	66.53	
44.5	604,857	7,453	0.0123	0.9877	66.53	
45.5	597,067	2,847	0.0048	0.9952	65.71	
46.5	587,900	8,622	0.0147	0.9853	65.39	
47.5	572,640		0.0000	1.0000	64.43	
48.5	564,055		0.0000	1.0000	64.43	
49.5	559,421	596	0.0011	0.9989	64.43	
50.5	558,825	1,586	0.0028	0.9972	64.37	
51.5	555,313		0.0000	1.0000	64.18	
52.5	550,976		0.0000	1.0000	64.18	
53.5	550,976		0.0000	1.0000	64.18	
54.5	542,787		0.0000	1.0000	64.18	
55.5	542,309	6,779	0.0125	0.9875	64.18	
56.5	533,120	2,420	0.0045	0.9955	63.38	
57.5	529,040	2,327	0.0044	0.9956	63.09	
58.5	546,992	2,650	0.0048	0.9952	62.82	
59.5	544,342		0.0000	1.0000	62.51	
60.5	540,581		0.0000	1.0000	62.51	
61.5	540,581		0.0000	1.0000	62.51	
62.5	538,676		0.0000	1.0000	62.51	
63.5	538,585	4,629	0.0086	0.9914	62.51	
64.5	532,475		0.0000	1.0000	61.97	
65.5	532,162	108,533	0.2039	0.7961	61.97	
66.5	423,507		0.0000	1.0000	49.33	
67.5	423,507	7,703	0.0182	0.9818	49.33	
68.5	410,814		0.0000	1.0000	48.44	
69.5	410,814		0.0000	1.0000	48.44	
70.5	410,204	860	0.0021	0.9979	48.44	
71.5	406,511	155,638	0.3829	0.6171	48.34	
72.5	242,999		0.0000	1.0000	29.83	
73.5	242,999	7,328	0.0302	0.9698	29.83	
74.5	20,494		0.0000	1.0000	28.93	
75.5	20,494	185	0.0090	0.9910	28.93	
76.5	20,309		0.0000	1.0000	28.67	
77.5	20,309		0.0000	1.0000	28.67	
78.5	20,309		0.0000	1.0000	28.67	

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1957-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	20,309		0.0000	1.0000	28.67
80.5	20,309		0.0000	1.0000	28.67
81.5	20,309		0.0000	1.0000	28.67
82.5	20,280		0.0000	1.0000	28.67
83.5	20,280		0.0000	1.0000	28.67
84.5	20,280		0.0000	1.0000	28.67
85.5	20,280		0.0000	1.0000	28.67
86.5	20,280		0.0000	1.0000	28.67
87.5	20,280		0.0000	1.0000	28.67
88.5	20,280		0.0000	1.0000	28.67
89.5	20,280		0.0000	1.0000	28.67
90.5	20,280		0.0000	1.0000	28.67
91.5	20,280		0.0000	1.0000	28.67
92.5	20,280		0.0000	1.0000	28.67
93.5	20,280		0.0000	1.0000	28.67
94.5	20,280		0.0000	1.0000	28.67
95.5	20,280		0.0000	1.0000	28.67
96.5	20,280		0.0000	1.0000	28.67
97.5	20,280		0.0000	1.0000	28.67
98.5	20,280		0.0000	1.0000	28.67
99.5	20,280		0.0000	1.0000	28.67
100.5	20,280		0.0000	1.0000	28.67
101.5	20,280		0.0000	1.0000	28.67
102.5	20,280		0.0000	1.0000	28.67
103.5	20,280		0.0000	1.0000	28.67
104.5	20,280		0.0000	1.0000	28.67
105.5	20,280		0.0000	1.0000	28.67
106.5					28.67

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	42,221,568	21,512	0.0005	0.9995	100.00
0.5	46,098,546	128,378	0.0028	0.9972	99.95
1.5	45,629,690	116,688	0.0026	0.9974	99.67
2.5	42,737,560	447,798	0.0105	0.9895	99.42
3.5	17,545,000	238,115	0.0136	0.9864	98.37
4.5	17,270,610	253,599	0.0147	0.9853	97.04
5.5	16,812,341	656,130	0.0390	0.9610	95.61
6.5	16,103,330	665,865	0.0413	0.9587	91.88
7.5	14,906,024	49,853	0.0033	0.9967	88.08
8.5	14,780,873	249,465	0.0169	0.9831	87.79
9.5	12,629,096	445,641	0.0353	0.9647	86.31
10.5	11,889,083	202,154	0.0170	0.9830	83.26
11.5	11,357,726	316,118	0.0278	0.9722	81.85
12.5	8,824,118	131,434	0.0149	0.9851	79.57
13.5	6,407,183	122,118	0.0191	0.9809	78.38
14.5	6,102,627	9,127	0.0015	0.9985	76.89
15.5	2,574,860	223,258	0.0867	0.9133	76.77
16.5	1,311,044		0.0000	1.0000	70.12
17.5	1,300,738	1,376	0.0011	0.9989	70.12
18.5	1,250,167	34,215	0.0274	0.9726	70.04
19.5	1,215,637	87,826	0.0722	0.9278	68.13
20.5	2,033,351	1,500	0.0007	0.9993	63.20
21.5	1,817,711		0.0000	1.0000	63.16
22.5	1,805,299		0.0000	1.0000	63.16
23.5	1,746,438	10,857	0.0062	0.9938	63.16
24.5	1,747,152		0.0000	1.0000	62.76
25.5	1,726,397	5,766	0.0033	0.9967	62.76
26.5	1,709,173	29,128	0.0170	0.9830	62.56
27.5	1,479,923	1,888	0.0013	0.9987	61.49
28.5	1,418,169		0.0000	1.0000	61.41
29.5	1,359,322		0.0000	1.0000	61.41
30.5	1,325,057		0.0000	1.0000	61.41
31.5	1,321,717	5,595	0.0042	0.9958	61.41
32.5	1,282,726		0.0000	1.0000	61.15
33.5	270,548		0.0000	1.0000	61.15
34.5	259,577		0.0000	1.0000	61.15
35.5	259,447		0.0000	1.0000	61.15
36.5	234,771		0.0000	1.0000	61.15
37.5	192,417	773	0.0040	0.9960	61.15
38.5	187,063	2,609	0.0139	0.9861	60.90

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	171,937		0.0000	1.0000	60.06
40.5	139,354		0.0000	1.0000	60.06
41.5	130,905		0.0000	1.0000	60.06
42.5	98,841	3,870	0.0392	0.9608	60.06
43.5	71,345		0.0000	1.0000	57.70
44.5	603,618	7,453	0.0123	0.9877	57.70
45.5	595,828	2,847	0.0048	0.9952	56.99
46.5	586,661	8,622	0.0147	0.9853	56.72
47.5	571,401		0.0000	1.0000	55.89
48.5	562,816		0.0000	1.0000	55.89
49.5	558,182	596	0.0011	0.9989	55.89
50.5	557,586	1,586	0.0028	0.9972	55.83
51.5	554,074		0.0000	1.0000	55.67
52.5	550,976		0.0000	1.0000	55.67
53.5	550,976		0.0000	1.0000	55.67
54.5	542,787		0.0000	1.0000	55.67
55.5	542,309	6,779	0.0125	0.9875	55.67
56.5	533,120	2,420	0.0045	0.9955	54.97
57.5	529,040	2,327	0.0044	0.9956	54.72
58.5	526,712	2,650	0.0050	0.9950	54.48
59.5	524,062		0.0000	1.0000	54.21
60.5	520,301		0.0000	1.0000	54.21
61.5	520,301		0.0000	1.0000	54.21
62.5	518,396		0.0000	1.0000	54.21
63.5	518,305	4,629	0.0089	0.9911	54.21
64.5	512,195		0.0000	1.0000	53.72
65.5	511,882	108,533	0.2120	0.7880	53.72
66.5	403,227		0.0000	1.0000	42.33
67.5	403,227	7,703	0.0191	0.9809	42.33
68.5	390,535		0.0000	1.0000	41.52
69.5	390,535		0.0000	1.0000	41.52
70.5	389,924	860	0.0022	0.9978	41.52
71.5	386,231	155,638	0.4030	0.5970	41.43
72.5	222,719		0.0000	1.0000	24.74
73.5	222,719	7,328	0.0329	0.9671	24.74
74.5	214		0.0000	1.0000	23.92
75.5	214	185	0.8626	0.1374	23.92
76.5	29		0.0000	1.0000	3.29
77.5	29		0.0000	1.0000	3.29
78.5	29		0.0000	1.0000	3.29

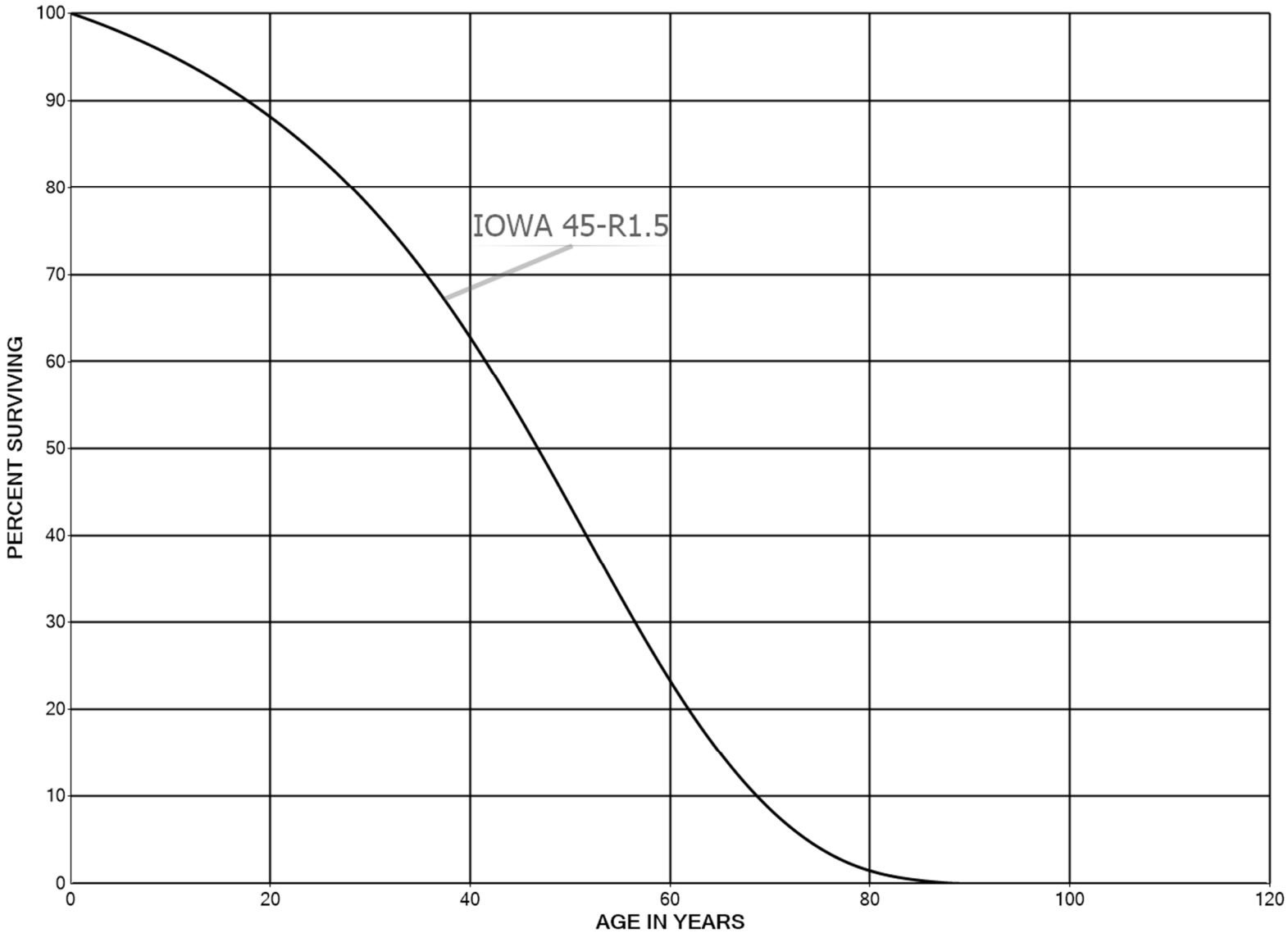
DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

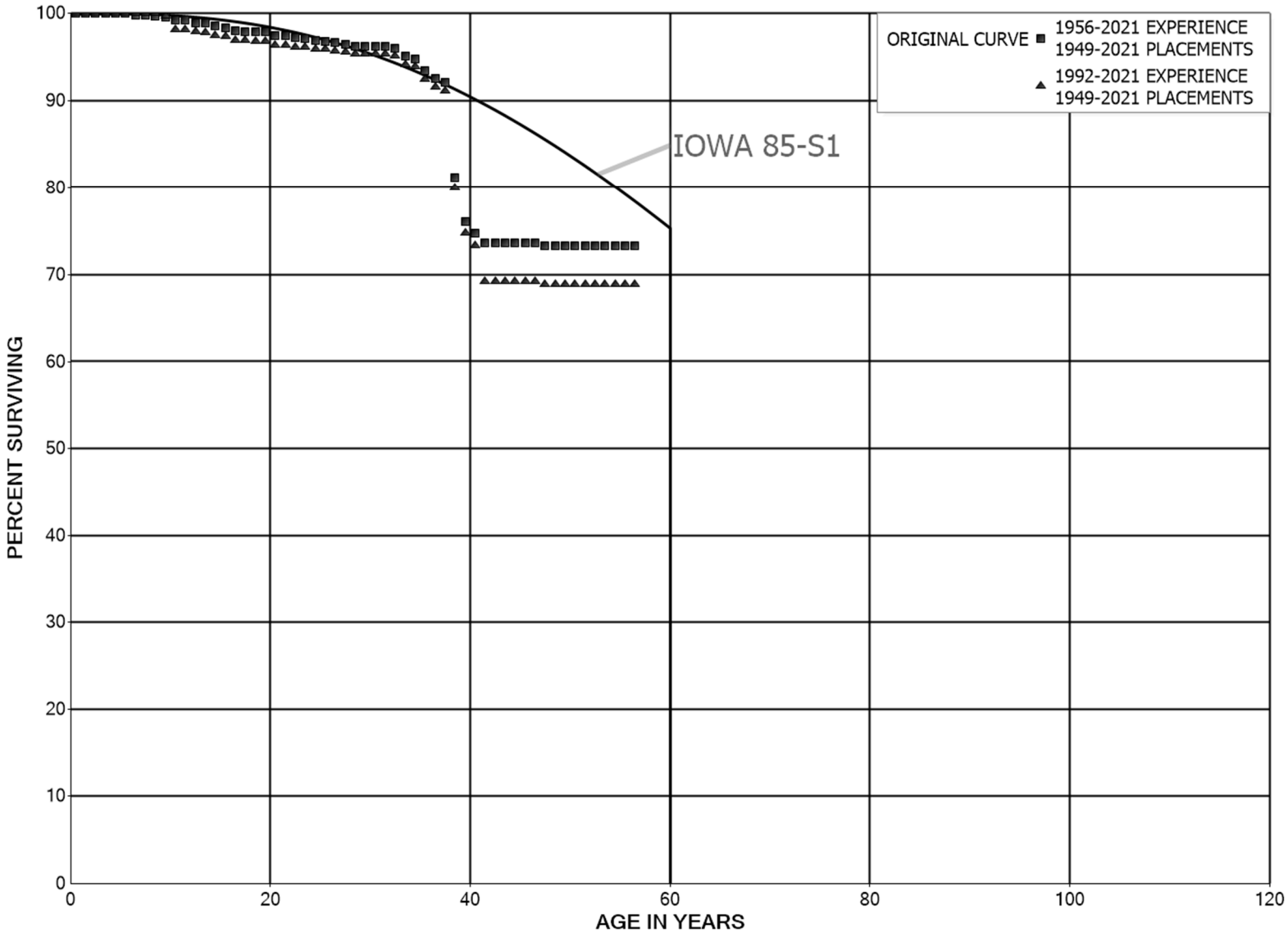
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5		29	0.0000	1.0000	3.29
80.5		29	0.0000	1.0000	3.29
81.5		29	0.0000	1.0000	3.29
82.5					3.29
83.5					
84.5					
85.5					
86.5					
87.5					
88.5					
89.5					
90.5					
91.5					
92.5					
93.5	20,280		0.0000		
94.5	20,280		0.0000		
95.5	20,280		0.0000		
96.5	20,280		0.0000		
97.5	20,280		0.0000		
98.5	20,280		0.0000		
99.5	20,280		0.0000		
100.5	20,280		0.0000		
101.5	20,280		0.0000		
102.5	20,280		0.0000		
103.5	20,280		0.0000		
104.5	20,280		0.0000		
105.5	20,280		0.0000		
106.5					

DUKE ENERGY KENTUCKY
ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS - MINOR STRUCTURES
SMOOTH SURVIVOR CURVE



DUKE ENERGY KENTUCKY
ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	198,327,640		0.0000	1.0000	100.00
0.5	196,691,889		0.0000	1.0000	100.00
1.5	175,965,370	40,813	0.0002	0.9998	100.00
2.5	132,489,986	1,953	0.0000	1.0000	99.98
3.5	119,292,684	84,580	0.0007	0.9993	99.98
4.5	76,969,822	6,359	0.0001	0.9999	99.90
5.5	65,784,994	117,932	0.0018	0.9982	99.90
6.5	46,173,091	15,572	0.0003	0.9997	99.72
7.5	45,714,339	9,553	0.0002	0.9998	99.68
8.5	44,881,833	50,979	0.0011	0.9989	99.66
9.5	44,021,326	176,574	0.0040	0.9960	99.55
10.5	42,614,324	3,914	0.0001	0.9999	99.15
11.5	41,926,300	113,550	0.0027	0.9973	99.14
12.5	41,535,326	33,929	0.0008	0.9992	98.87
13.5	41,439,932	119,400	0.0029	0.9971	98.79
14.5	41,160,358	79,505	0.0019	0.9981	98.51
15.5	37,989,805	146,301	0.0039	0.9961	98.32
16.5	37,272,130	19,855	0.0005	0.9995	97.94
17.5	37,023,902	31,027	0.0008	0.9992	97.89
18.5	36,837,637	5,711	0.0002	0.9998	97.80
19.5	36,602,470	152,527	0.0042	0.9958	97.79
20.5	36,237,876		0.0000	1.0000	97.38
21.5	36,608,310	88,923	0.0024	0.9976	97.38
22.5	36,449,376	41,973	0.0012	0.9988	97.14
23.5	36,168,536	76,666	0.0021	0.9979	97.03
24.5	36,300,733	32,589	0.0009	0.9991	96.83
25.5	36,048,941	65,393	0.0018	0.9982	96.74
26.5	35,917,933	56,871	0.0016	0.9984	96.56
27.5	34,604,055	75,856	0.0022	0.9978	96.41
28.5	34,421,240	10,641	0.0003	0.9997	96.20
29.5	34,169,358		0.0000	1.0000	96.17
30.5	34,162,114	2,324	0.0001	0.9999	96.17
31.5	33,911,042	65,052	0.0019	0.9981	96.16
32.5	33,824,599	340,121	0.0101	0.9899	95.98
33.5	33,476,797	90,264	0.0027	0.9973	95.01
34.5	33,518,779	484,199	0.0144	0.9856	94.76
35.5	32,977,396	316,147	0.0096	0.9904	93.39
36.5	32,343,221	150,676	0.0047	0.9953	92.49
37.5	32,189,652	3,812,318	0.1184	0.8816	92.06
38.5	25,114,699	1,575,591	0.0627	0.9373	81.16

DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	23,329,285	416,503	0.0179	0.9821	76.07
40.5	1,180,519	17,308	0.0147	0.9853	74.71
41.5	1,085,932		0.0000	1.0000	73.62
42.5	1,084,006		0.0000	1.0000	73.62
43.5	1,071,133		0.0000	1.0000	73.62
44.5	1,024,884		0.0000	1.0000	73.62
45.5	1,024,884		0.0000	1.0000	73.62
46.5	3,891,211	18,254	0.0047	0.9953	73.62
47.5	3,872,956		0.0000	1.0000	73.27
48.5	3,872,956		0.0000	1.0000	73.27
49.5	3,731,896		0.0000	1.0000	73.27
50.5	3,722,507		0.0000	1.0000	73.27
51.5	2,856,501		0.0000	1.0000	73.27
52.5	2,856,501		0.0000	1.0000	73.27
53.5	2,856,501		0.0000	1.0000	73.27
54.5	2,856,501		0.0000	1.0000	73.27
55.5	2,856,501		0.0000	1.0000	73.27
56.5					73.27

DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	161,443,508		0.0000	1.0000	100.00
0.5	159,980,222		0.0000	1.0000	100.00
1.5	140,129,205		0.0000	1.0000	100.00
2.5	96,773,212		0.0000	1.0000	100.00
3.5	83,577,863	40,325	0.0005	0.9995	100.00
4.5	41,173,023	1,411	0.0000	1.0000	99.95
5.5	30,125,373		0.0000	1.0000	99.95
6.5	9,767,787		0.0000	1.0000	99.95
7.5	10,068,983		0.0000	1.0000	99.95
8.5	9,246,031	33,928	0.0037	0.9963	99.95
9.5	8,461,966	128,174	0.0151	0.9849	99.58
10.5	39,291,582		0.0000	1.0000	98.07
11.5	38,866,778	92,657	0.0024	0.9976	98.07
12.5	38,504,627	33,929	0.0009	0.9991	97.84
13.5	38,409,233	119,400	0.0031	0.9969	97.75
14.5	38,511,587	73,121	0.0019	0.9981	97.45
15.5	35,347,419	140,579	0.0040	0.9960	97.26
16.5	34,854,669	19,855	0.0006	0.9994	96.88
17.5	34,631,558	31,027	0.0009	0.9991	96.82
18.5	35,505,478		0.0000	1.0000	96.74
19.5	35,276,021	150,527	0.0043	0.9957	96.74
20.5	34,940,148		0.0000	1.0000	96.32
21.5	35,310,582	76,044	0.0022	0.9978	96.32
22.5	35,164,528	29,768	0.0008	0.9992	96.12
23.5	34,917,283	76,666	0.0022	0.9978	96.03
24.5	35,049,481	4,329	0.0001	0.9999	95.82
25.5	34,825,948	57,318	0.0016	0.9984	95.81
26.5	34,703,253	56,871	0.0016	0.9984	95.65
27.5	33,393,565	71,056	0.0021	0.9979	95.50
28.5	33,218,442	10,641	0.0003	0.9997	95.29
29.5	33,041,520		0.0000	1.0000	95.26
30.5	33,037,558	2,324	0.0001	0.9999	95.26
31.5	32,827,501	65,052	0.0020	0.9980	95.26
32.5	32,741,058	340,121	0.0104	0.9896	95.07
33.5	32,395,182	90,264	0.0028	0.9972	94.08
34.5	32,450,037	484,199	0.0149	0.9851	93.82
35.5	31,954,903	316,147	0.0099	0.9901	92.42
36.5	31,320,728	150,676	0.0048	0.9952	91.50
37.5	31,175,588	3,812,318	0.1223	0.8777	91.06
38.5	24,100,635	1,575,591	0.0654	0.9346	79.93

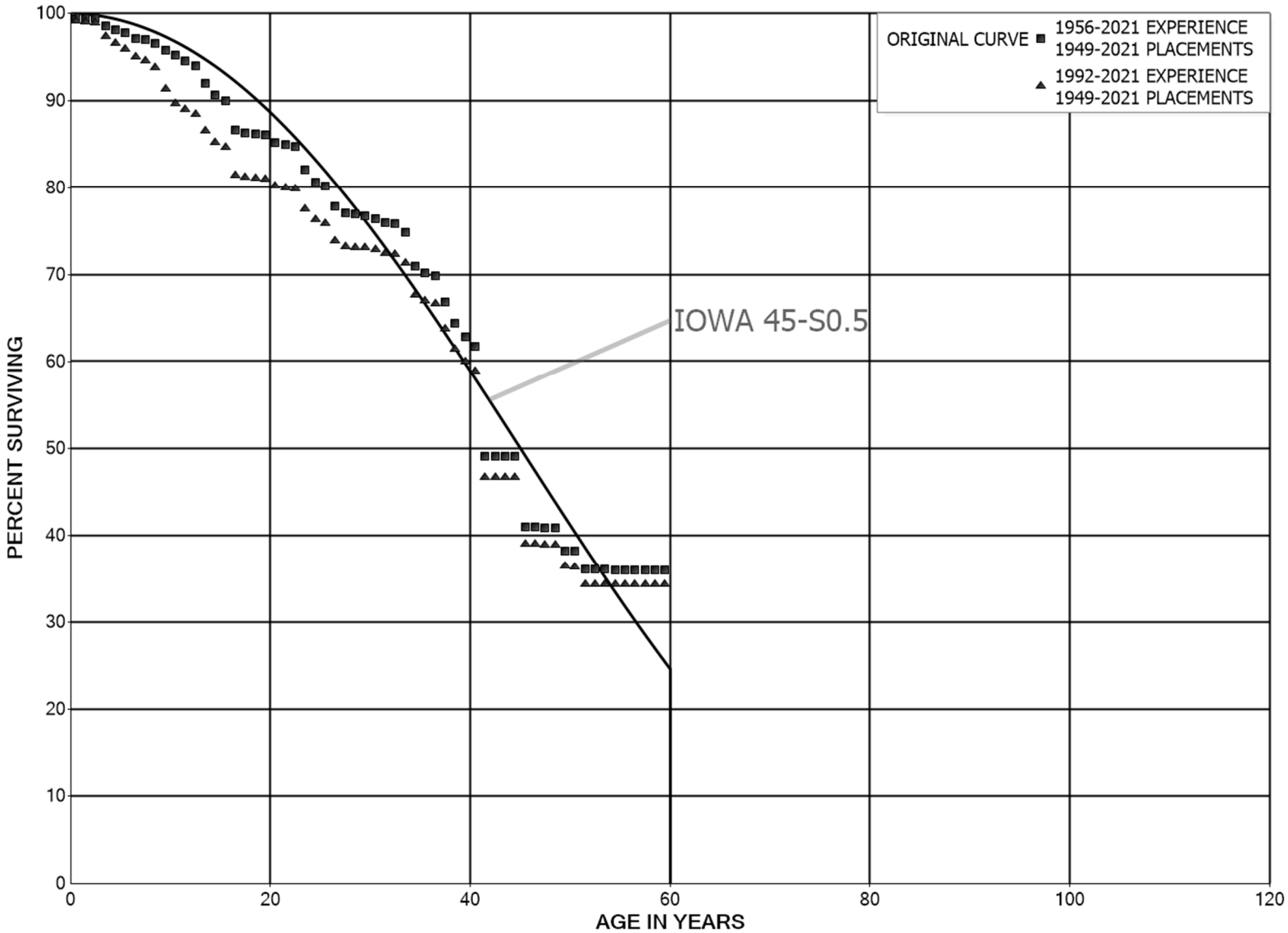
DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	22,315,221	416,503	0.0187	0.9813	74.70
40.5	307,515	17,308	0.0563	0.9437	73.31
41.5	222,317		0.0000	1.0000	69.18
42.5	1,084,006		0.0000	1.0000	69.18
43.5	1,071,133		0.0000	1.0000	69.18
44.5	1,024,884		0.0000	1.0000	69.18
45.5	1,024,884		0.0000	1.0000	69.18
46.5	3,891,211	18,254	0.0047	0.9953	69.18
47.5	3,872,956		0.0000	1.0000	68.86
48.5	3,872,956		0.0000	1.0000	68.86
49.5	3,731,896		0.0000	1.0000	68.86
50.5	3,722,507		0.0000	1.0000	68.86
51.5	2,856,501		0.0000	1.0000	68.86
52.5	2,856,501		0.0000	1.0000	68.86
53.5	2,856,501		0.0000	1.0000	68.86
54.5	2,856,501		0.0000	1.0000	68.86
55.5	2,856,501		0.0000	1.0000	68.86
56.5					68.86

DUKE ENERGY KENTUCKY
ACCOUNT 3120 BOILER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	785,755,512	3,962,738	0.0050	0.9950	100.00
0.5	767,875,693	415,046	0.0005	0.9995	99.50
1.5	740,626,253	665,726	0.0009	0.9991	99.44
2.5	740,704,830	6,341,383	0.0086	0.9914	99.35
3.5	641,039,060	2,804,616	0.0044	0.9956	98.50
4.5	692,559,390	2,523,355	0.0036	0.9964	98.07
5.5	680,242,722	4,147,903	0.0061	0.9939	97.71
6.5	541,194,281	1,018,406	0.0019	0.9981	97.12
7.5	492,426,610	2,002,368	0.0041	0.9959	96.94
8.5	487,036,652	3,890,065	0.0080	0.9920	96.54
9.5	472,711,400	2,827,584	0.0060	0.9940	95.77
10.5	464,896,364	3,397,357	0.0073	0.9927	95.20
11.5	460,286,903	2,603,759	0.0057	0.9943	94.50
12.5	459,327,604	9,801,081	0.0213	0.9787	93.97
13.5	463,204,001	6,944,885	0.0150	0.9850	91.96
14.5	455,920,635	3,112,957	0.0068	0.9932	90.58
15.5	451,572,461	16,979,222	0.0376	0.9624	89.96
16.5	436,304,244	1,481,392	0.0034	0.9966	86.58
17.5	430,834,797	481,058	0.0011	0.9989	86.29
18.5	429,085,100	639,397	0.0015	0.9985	86.19
19.5	381,438,521	3,712,509	0.0097	0.9903	86.06
20.5	375,347,577	1,096,712	0.0029	0.9971	85.23
21.5	236,562,494	843,373	0.0036	0.9964	84.98
22.5	231,497,594	7,032,740	0.0304	0.9696	84.67
23.5	208,409,447	3,637,189	0.0175	0.9825	82.10
24.5	204,208,450	1,376,257	0.0067	0.9933	80.67
25.5	196,316,556	5,657,069	0.0288	0.9712	80.12
26.5	191,834,936	1,920,224	0.0100	0.9900	77.82
27.5	184,572,781	300,962	0.0016	0.9984	77.04
28.5	183,846,452	481,406	0.0026	0.9974	76.91
29.5	181,302,052	757,358	0.0042	0.9958	76.71
30.5	179,422,852	1,003,588	0.0056	0.9944	76.39
31.5	178,247,208	336,048	0.0019	0.9981	75.96
32.5	177,726,467	2,411,706	0.0136	0.9864	75.82
33.5	174,305,273	9,033,838	0.0518	0.9482	74.79
34.5	164,566,428	1,671,821	0.0102	0.9898	70.91
35.5	162,226,303	750,166	0.0046	0.9954	70.19
36.5	160,471,608	6,898,540	0.0430	0.9570	69.87
37.5	141,157,138	5,150,040	0.0365	0.9635	66.87
38.5	135,137,365	3,398,921	0.0252	0.9748	64.43

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	131,653,853	2,271,146	0.0173	0.9827	62.81
40.5	940,643	193,474	0.2057	0.7943	61.72
41.5	781,694		0.0000	1.0000	49.03
42.5	718,842		0.0000	1.0000	49.03
43.5	717,326		0.0000	1.0000	49.03
44.5	736,028	121,386	0.1649	0.8351	49.03
45.5	622,964		0.0000	1.0000	40.94
46.5	7,768,311	28,271	0.0036	0.9964	40.94
47.5	7,740,040		0.0000	1.0000	40.79
48.5	7,740,040	489,192	0.0632	0.9368	40.79
49.5	7,243,949	9,310	0.0013	0.9987	38.21
50.5	7,163,659	403,713	0.0564	0.9436	38.16
51.5	6,718,498		0.0000	1.0000	36.01
52.5	6,690,518		0.0000	1.0000	36.01
53.5	6,665,564	6,702	0.0010	0.9990	36.01
54.5	6,630,890		0.0000	1.0000	35.98
55.5	6,622,569		0.0000	1.0000	35.98
56.5	6,734		0.0000	1.0000	35.98
57.5	192,340		0.0000	1.0000	35.98
58.5	192,340		0.0000	1.0000	35.98
59.5	192,340		0.0000	1.0000	35.98
60.5	192,340		0.0000	1.0000	35.98
61.5	192,340		0.0000	1.0000	35.98
62.5	185,606		0.0000	1.0000	35.98
63.5	185,606		0.0000	1.0000	35.98
64.5	185,606		0.0000	1.0000	35.98
65.5	185,606		0.0000	1.0000	35.98
66.5	185,606		0.0000	1.0000	35.98
67.5					35.98

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	426,896,818	3,962,738	0.0093	0.9907	100.00
0.5	410,397,439	409,982	0.0010	0.9990	99.07
1.5	384,150,141	594,293	0.0015	0.9985	98.97
2.5	385,900,465	5,980,086	0.0155	0.9845	98.82
3.5	286,932,095	2,247,391	0.0078	0.9922	97.29
4.5	340,300,069	2,335,118	0.0069	0.9931	96.53
5.5	328,422,169	3,231,396	0.0098	0.9902	95.86
6.5	190,771,596	917,021	0.0048	0.9952	94.92
7.5	143,152,496	1,158,627	0.0081	0.9919	94.46
8.5	138,699,512	3,559,225	0.0257	0.9743	93.70
9.5	125,970,688	2,342,044	0.0186	0.9814	91.30
10.5	434,729,953	3,262,157	0.0075	0.9925	89.60
11.5	445,164,677	2,475,491	0.0056	0.9944	88.93
12.5	444,454,138	9,657,654	0.0217	0.9783	88.43
13.5	449,440,465	6,793,795	0.0151	0.9849	86.51
14.5	442,308,190	2,945,014	0.0067	0.9933	85.20
15.5	439,058,127	16,732,668	0.0381	0.9619	84.63
16.5	429,867,447	1,443,562	0.0034	0.9966	81.41
17.5	424,701,215	159,257	0.0004	0.9996	81.14
18.5	423,288,336	582,526	0.0014	0.9986	81.11
19.5	375,757,794	3,648,326	0.0097	0.9903	80.99
20.5	369,742,913	1,046,455	0.0028	0.9972	80.21
21.5	231,017,649	541,411	0.0023	0.9977	79.98
22.5	226,254,711	6,531,864	0.0289	0.9711	79.79
23.5	203,669,119	3,211,280	0.0158	0.9842	77.49
24.5	199,900,247	1,121,657	0.0056	0.9944	76.27
25.5	192,278,534	5,065,185	0.0263	0.9737	75.84
26.5	188,388,798	1,815,544	0.0096	0.9904	73.84
27.5	181,235,415	162,836	0.0009	0.9991	73.13
28.5	180,647,606	101,377	0.0006	0.9994	73.06
29.5	179,251,871	486,596	0.0027	0.9973	73.02
30.5	177,644,655	940,544	0.0053	0.9947	72.83
31.5	178,239,973	336,048	0.0019	0.9981	72.44
32.5	177,719,232	2,411,706	0.0136	0.9864	72.30
33.5	174,298,038	9,033,838	0.0518	0.9482	71.32
34.5	164,559,193	1,671,821	0.0102	0.9898	67.63
35.5	162,219,068	750,166	0.0046	0.9954	66.94
36.5	160,464,373	6,898,540	0.0430	0.9570	66.63
37.5	141,149,903	5,150,040	0.0365	0.9635	63.76
38.5	135,130,130	3,398,921	0.0252	0.9748	61.44

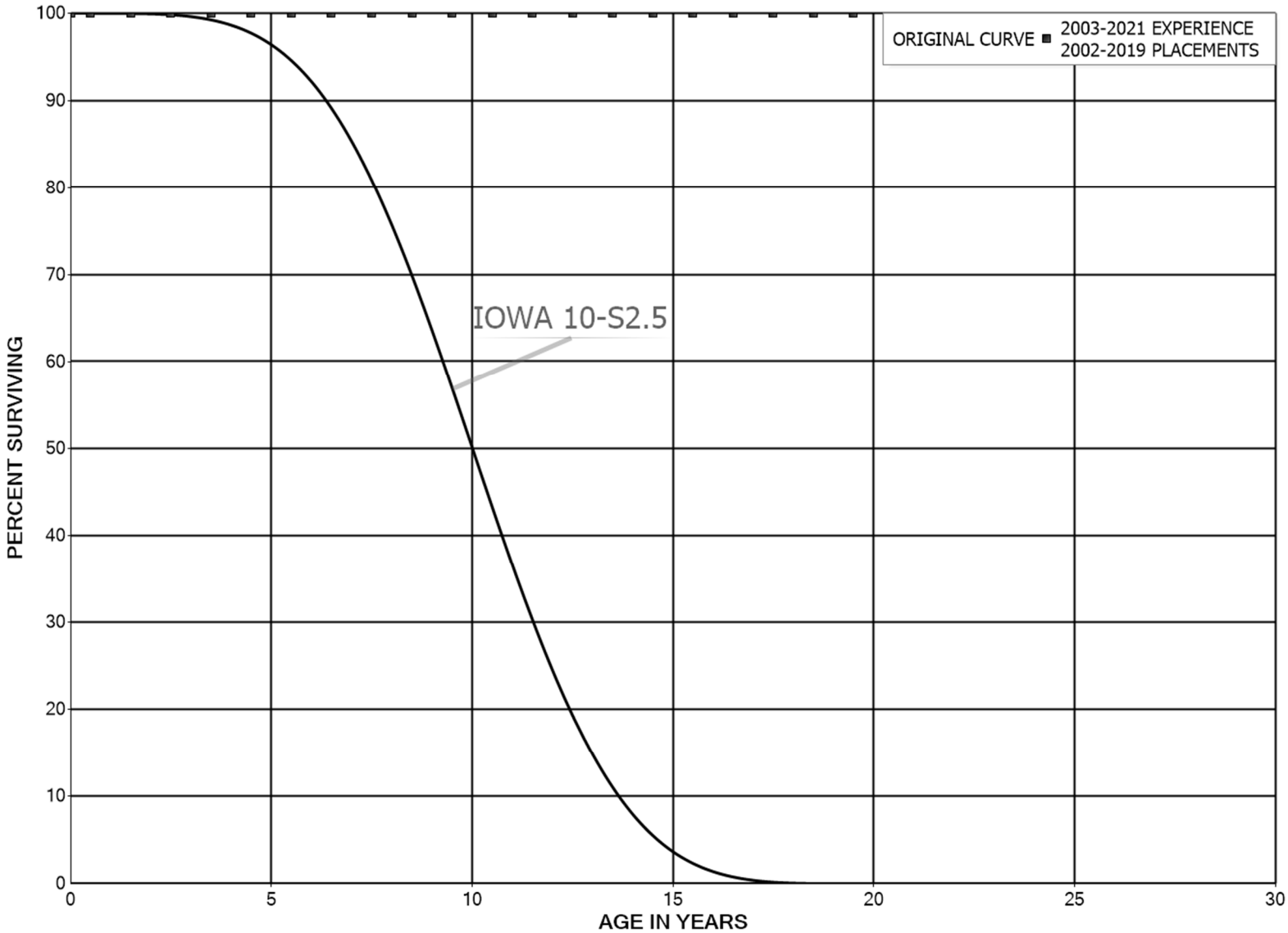
DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	131,646,618	2,271,146	0.0173	0.9827	59.89
40.5	933,408	193,474	0.2073	0.7927	58.86
41.5	774,771		0.0000	1.0000	46.66
42.5	718,842		0.0000	1.0000	46.66
43.5	717,326		0.0000	1.0000	46.66
44.5	736,028	121,386	0.1649	0.8351	46.66
45.5	622,964		0.0000	1.0000	38.96
46.5	7,768,311	28,271	0.0036	0.9964	38.96
47.5	7,740,040		0.0000	1.0000	38.82
48.5	7,740,040	489,192	0.0632	0.9368	38.82
49.5	7,243,949	9,310	0.0013	0.9987	36.37
50.5	7,163,659	403,713	0.0564	0.9436	36.32
51.5	6,718,498		0.0000	1.0000	34.27
52.5	6,690,518		0.0000	1.0000	34.27
53.5	6,665,564	6,702	0.0010	0.9990	34.27
54.5	6,630,890		0.0000	1.0000	34.24
55.5	6,622,569		0.0000	1.0000	34.24
56.5	6,734		0.0000	1.0000	34.24
57.5	192,340		0.0000	1.0000	34.24
58.5	192,340		0.0000	1.0000	34.24
59.5	192,340		0.0000	1.0000	34.24
60.5	192,340		0.0000	1.0000	34.24
61.5	192,340		0.0000	1.0000	34.24
62.5	185,606		0.0000	1.0000	34.24
63.5	185,606		0.0000	1.0000	34.24
64.5	185,606		0.0000	1.0000	34.24
65.5	185,606		0.0000	1.0000	34.24
66.5	185,606		0.0000	1.0000	34.24
67.5					34.24

DUKE ENERGY KENTUCKY
ACCOUNT 3123 BOILER PLANT EQUIPMENT - SCR CATALYST
ORIGINAL AND SMOOTH SURVIVOR CURVES



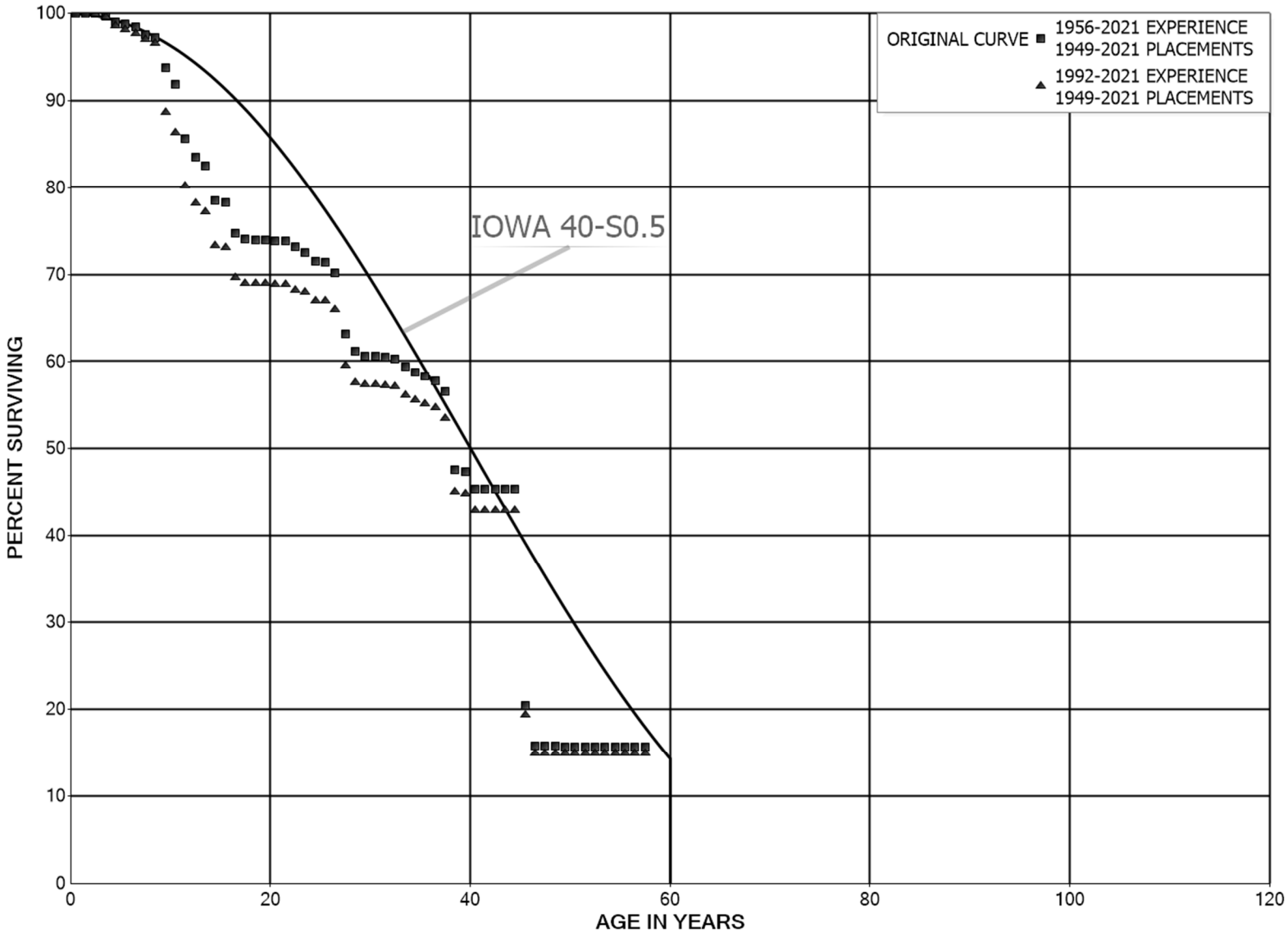
DUKE ENERGY KENTUCKY

ACCOUNT 3123 BOILER PLANT EQUIPMENT - SCR CATALYST

ORIGINAL LIFE TABLE

PLACEMENT BAND 2002-2019			EXPERIENCE BAND 2003-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	5,753,671		0.0000	1.0000	100.00
0.5	7,984,164		0.0000	1.0000	100.00
1.5	7,984,158		0.0000	1.0000	100.00
2.5	5,420,680		0.0000	1.0000	100.00
3.5	5,420,680		0.0000	1.0000	100.00
4.5	5,420,680		0.0000	1.0000	100.00
5.5	5,420,680		0.0000	1.0000	100.00
6.5	2,766,750		0.0000	1.0000	100.00
7.5	2,766,750		0.0000	1.0000	100.00
8.5	2,230,486		0.0000	1.0000	100.00
9.5	2,230,486		0.0000	1.0000	100.00
10.5	2,230,486		0.0000	1.0000	100.00
11.5	2,230,486		0.0000	1.0000	100.00
12.5	2,230,486		0.0000	1.0000	100.00
13.5	2,230,486		0.0000	1.0000	100.00
14.5	2,230,486		0.0000	1.0000	100.00
15.5	2,230,486		0.0000	1.0000	100.00
16.5	2,230,486		0.0000	1.0000	100.00
17.5	2,230,486		0.0000	1.0000	100.00
18.5	2,230,486		0.0000	1.0000	100.00
19.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3140 TURBOGENERATOR UNITS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	117,603,518		0.0000	1.0000	100.00
0.5	116,229,714		0.0000	1.0000	100.00
1.5	112,764,428	95,283	0.0008	0.9992	100.00
2.5	109,598,689	300,071	0.0027	0.9973	99.92
3.5	96,062,295	651,220	0.0068	0.9932	99.64
4.5	95,345,438	215,688	0.0023	0.9977	98.97
5.5	94,776,272	371,576	0.0039	0.9961	98.74
6.5	64,909,667	585,809	0.0090	0.9910	98.36
7.5	63,846,792	175,792	0.0028	0.9972	97.47
8.5	62,376,243	2,209,484	0.0354	0.9646	97.20
9.5	59,690,621	1,220,675	0.0205	0.9795	93.76
10.5	57,771,898	3,933,990	0.0681	0.9319	91.84
11.5	53,288,102	1,274,241	0.0239	0.9761	85.59
12.5	51,374,816	607,233	0.0118	0.9882	83.54
13.5	52,599,283	2,588,722	0.0492	0.9508	82.55
14.5	50,308,053	155,218	0.0031	0.9969	78.49
15.5	50,215,126	2,277,553	0.0454	0.9546	78.25
16.5	41,153,342	348,038	0.0085	0.9915	74.70
17.5	38,881,936	67,638	0.0017	0.9983	74.07
18.5	38,405,166	3,500	0.0001	0.9999	73.94
19.5	38,733,921	60,185	0.0016	0.9984	73.93
20.5	39,690,212	15,419	0.0004	0.9996	73.82
21.5	59,878,256	519,882	0.0087	0.9913	73.79
22.5	59,278,137	516,998	0.0087	0.9913	73.15
23.5	57,000,956	786,467	0.0138	0.9862	72.51
24.5	55,985,913	52,928	0.0009	0.9991	71.51
25.5	55,815,388	969,163	0.0174	0.9826	71.44
26.5	54,846,225	5,524,472	0.1007	0.8993	70.20
27.5	49,223,307	1,562,503	0.0317	0.9683	63.13
28.5	47,619,126	380,242	0.0080	0.9920	61.12
29.5	46,597,988		0.0000	1.0000	60.64
30.5	46,114,638	84,460	0.0018	0.9982	60.64
31.5	45,823,949	151,481	0.0033	0.9967	60.53
32.5	45,636,468	741,411	0.0162	0.9838	60.33
33.5	44,905,921	493,479	0.0110	0.9890	59.35
34.5	43,732,351	313,200	0.0072	0.9928	58.69
35.5	42,958,986	397,184	0.0092	0.9908	58.27
36.5	22,065,169	476,930	0.0216	0.9784	57.73
37.5	21,578,031	3,430,764	0.1590	0.8410	56.49
38.5	18,107,061	82,313	0.0045	0.9955	47.51

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	17,966,688	768,913	0.0428	0.9572	47.29
40.5	107,802		0.0000	1.0000	45.27
41.5	97,580		0.0000	1.0000	45.27
42.5	95,647		0.0000	1.0000	45.27
43.5	93,070		0.0000	1.0000	45.27
44.5	94,614	52,089	0.5505	0.4495	45.27
45.5	40,605	9,199	0.2265	0.7735	20.34
46.5	5,960,098		0.0000	1.0000	15.74
47.5	5,980,790		0.0000	1.0000	15.74
48.5	5,980,790	29,921	0.0050	0.9950	15.74
49.5	5,950,869		0.0000	1.0000	15.66
50.5	5,950,869		0.0000	1.0000	15.66
51.5	5,950,869		0.0000	1.0000	15.66
52.5	5,929,295		0.0000	1.0000	15.66
53.5	5,921,007		0.0000	1.0000	15.66
54.5	5,919,463		0.0000	1.0000	15.66
55.5	5,919,463		0.0000	1.0000	15.66
56.5	20,692		0.0000	1.0000	15.66
57.5					15.66

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021

EXPERIENCE BAND 1992-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	81,160,185		0.0000	1.0000	100.00
0.5	79,786,381		0.0000	1.0000	100.00
1.5	76,574,511	95,283	0.0012	0.9988	100.00
2.5	73,408,772	239,851	0.0033	0.9967	99.88
3.5	59,932,599	650,519	0.0109	0.9891	99.55
4.5	59,365,866	214,783	0.0036	0.9964	98.47
5.5	59,036,233	330,967	0.0056	0.9944	98.11
6.5	29,210,237	185,233	0.0063	0.9937	97.56
7.5	28,547,939	138,790	0.0049	0.9951	96.94
8.5	27,114,393	2,199,846	0.0811	0.9189	96.47
9.5	24,438,408	653,443	0.0267	0.9733	88.65
10.5	55,461,064	3,927,223	0.0708	0.9292	86.28
11.5	50,984,035	1,270,931	0.0249	0.9751	80.17
12.5	49,074,059	598,923	0.0122	0.9878	78.17
13.5	50,394,926	2,583,434	0.0513	0.9487	77.21
14.5	48,108,984	125,944	0.0026	0.9974	73.26
15.5	48,045,331	2,268,651	0.0472	0.9528	73.06
16.5	38,992,450	344,547	0.0088	0.9912	69.61
17.5	36,729,316	53,449	0.0015	0.9985	69.00
18.5	36,266,735		0.0000	1.0000	68.90
19.5	36,598,989	60,185	0.0016	0.9984	68.90
20.5	37,555,280	2,120	0.0001	0.9999	68.78
21.5	57,756,624	519,882	0.0090	0.9910	68.78
22.5	57,162,603	165,277	0.0029	0.9971	68.16
23.5	55,237,144	776,958	0.0141	0.9859	67.96
24.5	54,231,610	52,710	0.0010	0.9990	67.01
25.5	54,061,303	778,917	0.0144	0.9856	66.94
26.5	53,288,378	5,264,181	0.0988	0.9012	65.98
27.5	47,927,915	1,562,503	0.0326	0.9674	59.46
28.5	46,323,735	151,662	0.0033	0.9967	57.52
29.5	45,619,973		0.0000	1.0000	57.33
30.5	45,136,624	84,460	0.0019	0.9981	57.33
31.5	45,804,528	151,481	0.0033	0.9967	57.23
32.5	45,636,468	741,411	0.0162	0.9838	57.04
33.5	44,905,921	493,479	0.0110	0.9890	56.11
34.5	43,732,351	313,200	0.0072	0.9928	55.49
35.5	42,958,986	397,184	0.0092	0.9908	55.10
36.5	22,065,169	476,930	0.0216	0.9784	54.59
37.5	21,578,031	3,430,764	0.1590	0.8410	53.41
38.5	18,107,061	82,313	0.0045	0.9955	44.92

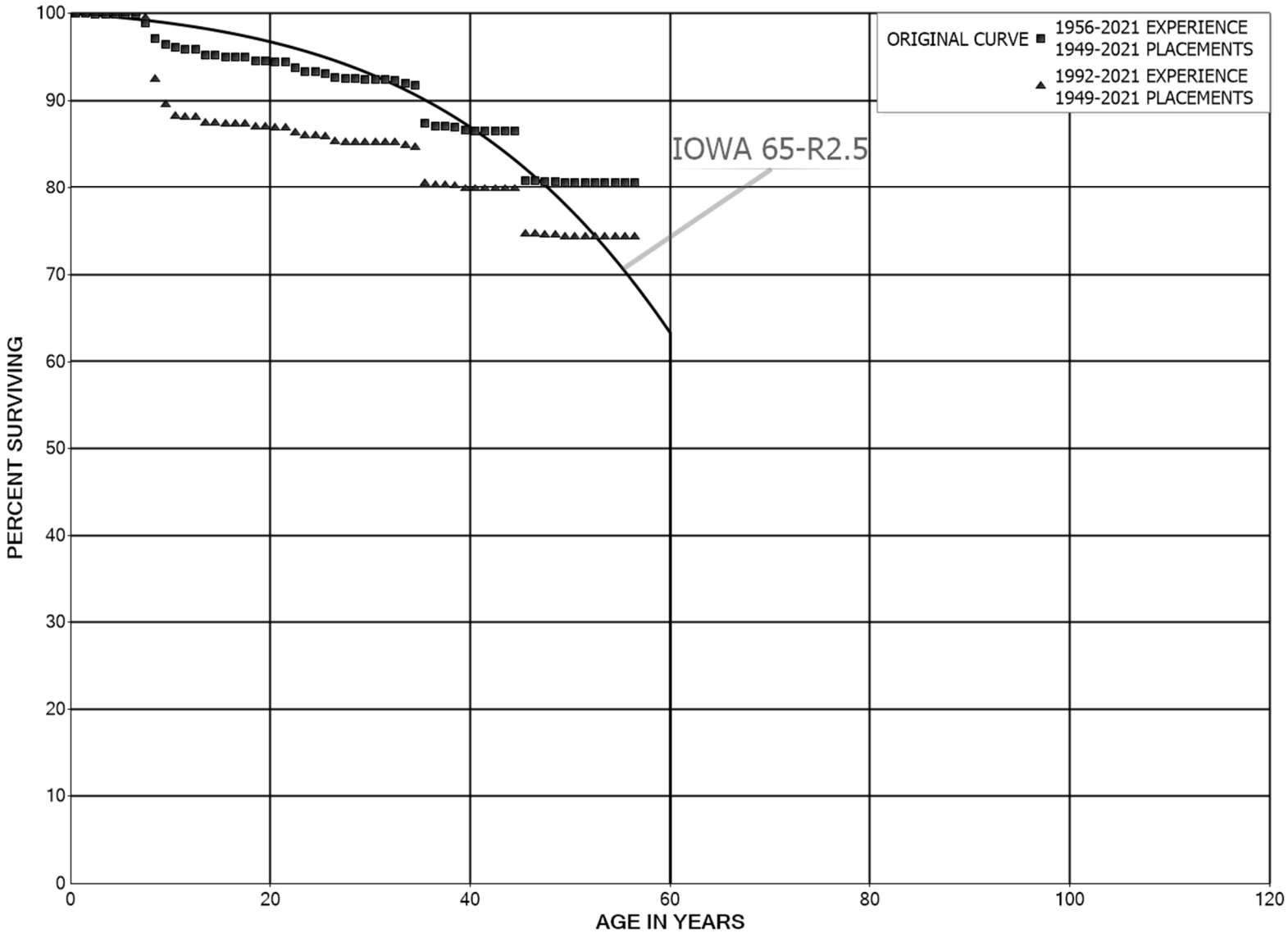
DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	17,966,688	768,913	0.0428	0.9572	44.71
40.5	107,802		0.0000	1.0000	42.80
41.5	97,580		0.0000	1.0000	42.80
42.5	95,647		0.0000	1.0000	42.80
43.5	93,070		0.0000	1.0000	42.80
44.5	94,614	52,089	0.5505	0.4495	42.80
45.5	40,605	9,199	0.2265	0.7735	19.24
46.5	5,960,098		0.0000	1.0000	14.88
47.5	5,980,790		0.0000	1.0000	14.88
48.5	5,980,790	29,921	0.0050	0.9950	14.88
49.5	5,950,869		0.0000	1.0000	14.80
50.5	5,950,869		0.0000	1.0000	14.80
51.5	5,950,869		0.0000	1.0000	14.80
52.5	5,929,295		0.0000	1.0000	14.80
53.5	5,921,007		0.0000	1.0000	14.80
54.5	5,919,463		0.0000	1.0000	14.80
55.5	5,919,463		0.0000	1.0000	14.80
56.5	20,692		0.0000	1.0000	14.80
57.5					14.80

DUKE ENERGY KENTUCKY
ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	51,439,851		0.0000	1.0000	100.00
0.5	51,433,139		0.0000	1.0000	100.00
1.5	51,497,245	72,673	0.0014	0.9986	100.00
2.5	51,737,136	873	0.0000	1.0000	99.86
3.5	50,778,703	11,039	0.0002	0.9998	99.86
4.5	46,613,862	2,705	0.0001	0.9999	99.84
5.5	45,456,135		0.0000	1.0000	99.83
6.5	33,554,544	324,685	0.0097	0.9903	99.83
7.5	33,096,337	584,342	0.0177	0.9823	98.86
8.5	32,074,095	245,238	0.0076	0.9924	97.12
9.5	27,312,569	85,953	0.0031	0.9969	96.38
10.5	26,925,714	59,048	0.0022	0.9978	96.07
11.5	26,559,407	5,988	0.0002	0.9998	95.86
12.5	26,074,674	195,206	0.0075	0.9925	95.84
13.5	25,879,467		0.0000	1.0000	95.12
14.5	26,687,899	38,447	0.0014	0.9986	95.12
15.5	26,599,420	13,543	0.0005	0.9995	94.99
16.5	26,198,309	8,637	0.0003	0.9997	94.94
17.5	26,216,383	115,349	0.0044	0.9956	94.91
18.5	26,056,437		0.0000	1.0000	94.49
19.5	25,959,682	25,718	0.0010	0.9990	94.49
20.5	25,836,633	665	0.0000	1.0000	94.39
21.5	25,930,503	183,946	0.0071	0.9929	94.39
22.5	25,639,704	126,423	0.0049	0.9951	93.72
23.5	25,617,926		0.0000	1.0000	93.26
24.5	25,374,948	40,813	0.0016	0.9984	93.26
25.5	24,621,853	141,443	0.0057	0.9943	93.11
26.5	25,159,806	20,346	0.0008	0.9992	92.58
27.5	25,101,349	4,796	0.0002	0.9998	92.50
28.5	25,087,600	22,125	0.0009	0.9991	92.48
29.5	24,783,060	11,117	0.0004	0.9996	92.40
30.5	24,771,943	139	0.0000	1.0000	92.36
31.5	24,633,113	7,102	0.0003	0.9997	92.36
32.5	24,753,053	98,570	0.0040	0.9960	92.33
33.5	24,627,700	51,968	0.0021	0.9979	91.97
34.5	24,583,531	1,186,967	0.0483	0.9517	91.77
35.5	23,461,435	65,456	0.0028	0.9972	87.34
36.5	23,387,271	4,304	0.0002	0.9998	87.10
37.5	23,186,807	36,827	0.0016	0.9984	87.08
38.5	23,115,200	90,128	0.0039	0.9961	86.94

DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	22,587,377	16,260	0.0007	0.9993	86.60
40.5	1,493,089		0.0000	1.0000	86.54
41.5	957,192		0.0000	1.0000	86.54
42.5	810,283		0.0000	1.0000	86.54
43.5	832,561		0.0000	1.0000	86.54
44.5	719,226	46,986	0.0653	0.9347	86.54
45.5	532,365		0.0000	1.0000	80.89
46.5	1,878,730	2,920	0.0016	0.9984	80.89
47.5	1,739,039		0.0000	1.0000	80.76
48.5	1,724,884	3,434	0.0020	0.9980	80.76
49.5	1,718,539		0.0000	1.0000	80.60
50.5	1,515,221		0.0000	1.0000	80.60
51.5	1,509,812		0.0000	1.0000	80.60
52.5	1,468,050		0.0000	1.0000	80.60
53.5	1,416,843		0.0000	1.0000	80.60
54.5	1,374,188		0.0000	1.0000	80.60
55.5	1,370,346		0.0000	1.0000	80.60
56.5					80.60

DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	25,869,866		0.0000	1.0000	100.00
0.5	25,863,154		0.0000	1.0000	100.00
1.5	25,926,168		0.0000	1.0000	100.00
2.5	26,238,732		0.0000	1.0000	100.00
3.5	25,281,172		0.0000	1.0000	100.00
4.5	21,127,371		0.0000	1.0000	100.00
5.5	19,972,349		0.0000	1.0000	100.00
6.5	8,070,757	47,373	0.0059	0.9941	100.00
7.5	7,889,862	558,146	0.0707	0.9293	99.41
8.5	6,935,983	214,172	0.0309	0.9691	92.38
9.5	2,519,251	37,573	0.0149	0.9851	89.53
10.5	24,936,646	23,327	0.0009	0.9991	88.19
11.5	24,829,808		0.0000	1.0000	88.11
12.5	24,361,395	195,206	0.0080	0.9920	88.11
13.5	24,549,277		0.0000	1.0000	87.40
14.5	25,559,551	38,447	0.0015	0.9985	87.40
15.5	25,471,072	10,333	0.0004	0.9996	87.27
16.5	25,858,266		0.0000	1.0000	87.24
17.5	25,932,814	94,865	0.0037	0.9963	87.24
18.5	25,794,541		0.0000	1.0000	86.92
19.5	25,709,611	14,595	0.0006	0.9994	86.92
20.5	25,597,685		0.0000	1.0000	86.87
21.5	25,707,971	158,023	0.0061	0.9939	86.87
22.5	25,443,229	126,423	0.0050	0.9950	86.33
23.5	25,421,451		0.0000	1.0000	85.91
24.5	25,183,269	32,185	0.0013	0.9987	85.91
25.5	24,438,801	141,443	0.0058	0.9942	85.80
26.5	24,980,348	20,346	0.0008	0.9992	85.30
27.5	24,928,076	4,796	0.0002	0.9998	85.23
28.5	24,914,831	8,393	0.0003	0.9997	85.21
29.5	24,630,907	333	0.0000	1.0000	85.18
30.5	24,637,316	139	0.0000	1.0000	85.18
31.5	24,632,021	7,102	0.0003	0.9997	85.18
32.5	24,751,961	98,570	0.0040	0.9960	85.16
33.5	24,626,608	51,968	0.0021	0.9979	84.82
34.5	24,582,439	1,186,967	0.0483	0.9517	84.64
35.5	23,460,343	65,456	0.0028	0.9972	80.55
36.5	23,386,179	4,304	0.0002	0.9998	80.33
37.5	23,186,807	36,827	0.0016	0.9984	80.31
38.5	23,115,200	90,128	0.0039	0.9961	80.19

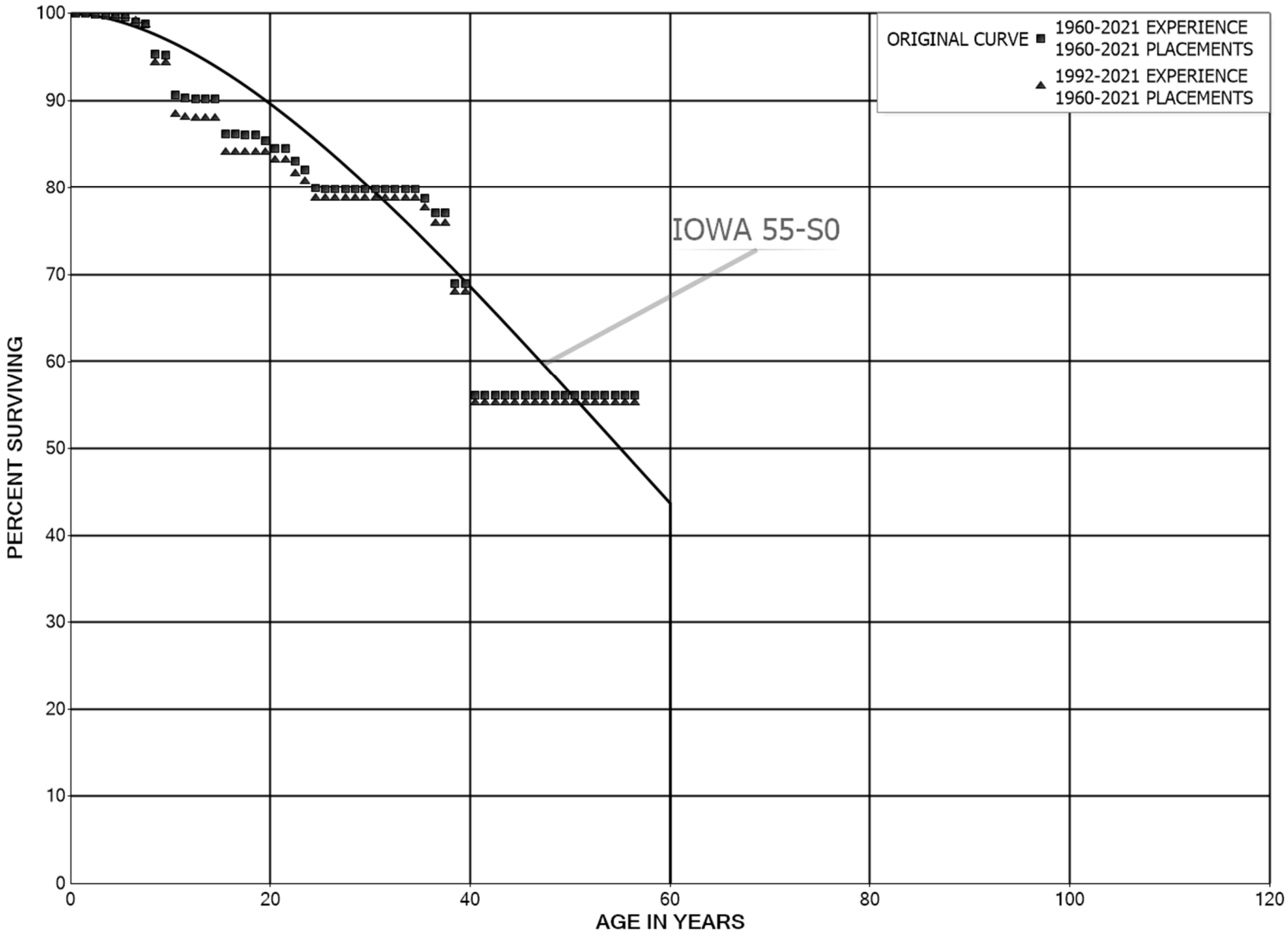
DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	22,587,377	16,260	0.0007	0.9993	79.87
40.5	1,493,089		0.0000	1.0000	79.82
41.5	957,192		0.0000	1.0000	79.82
42.5	810,283		0.0000	1.0000	79.82
43.5	832,561		0.0000	1.0000	79.82
44.5	719,226	46,986	0.0653	0.9347	79.82
45.5	532,365		0.0000	1.0000	74.60
46.5	1,878,730	2,920	0.0016	0.9984	74.60
47.5	1,739,039		0.0000	1.0000	74.49
48.5	1,724,884	3,434	0.0020	0.9980	74.49
49.5	1,718,539		0.0000	1.0000	74.34
50.5	1,515,221		0.0000	1.0000	74.34
51.5	1,509,812		0.0000	1.0000	74.34
52.5	1,468,050		0.0000	1.0000	74.34
53.5	1,416,843		0.0000	1.0000	74.34
54.5	1,374,188		0.0000	1.0000	74.34
55.5	1,370,346		0.0000	1.0000	74.34
56.5					74.34

DUKE ENERGY KENTUCKY
ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2021			EXPERIENCE BAND 1960-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	22,913,079		0.0000	1.0000	100.00
0.5	22,783,524	1,598	0.0001	0.9999	100.00
1.5	23,241,822	37,703	0.0016	0.9984	99.99
2.5	22,427,535	31,985	0.0014	0.9986	99.83
3.5	21,796,377	24,717	0.0011	0.9989	99.69
4.5	20,918,814	12,267	0.0006	0.9994	99.58
5.5	18,793,802	97,415	0.0052	0.9948	99.52
6.5	13,429,542	44,631	0.0033	0.9967	99.00
7.5	14,117,376	488,622	0.0346	0.9654	98.67
8.5	13,517,597	10,612	0.0008	0.9992	95.26
9.5	12,855,363	613,513	0.0477	0.9523	95.18
10.5	10,593,437	38,952	0.0037	0.9963	90.64
11.5	10,208,189	15,961	0.0016	0.9984	90.31
12.5	9,634,999	1,929	0.0002	0.9998	90.17
13.5	9,393,867	1,504	0.0002	0.9998	90.15
14.5	9,418,902	417,184	0.0443	0.9557	90.13
15.5	9,044,507	71	0.0000	1.0000	86.14
16.5	8,726,800	6,159	0.0007	0.9993	86.14
17.5	8,314,451		0.0000	1.0000	86.08
18.5	6,143,029	46,577	0.0076	0.9924	86.08
19.5	5,940,418	61,460	0.0103	0.9897	85.43
20.5	5,741,089		0.0000	1.0000	84.54
21.5	5,751,248	102,016	0.0177	0.9823	84.54
22.5	5,163,567	61,119	0.0118	0.9882	83.04
23.5	5,216,209	130,411	0.0250	0.9750	82.06
24.5	5,212,614	7,911	0.0015	0.9985	80.01
25.5	5,198,093		0.0000	1.0000	79.89
26.5	5,177,813		0.0000	1.0000	79.89
27.5	4,960,811		0.0000	1.0000	79.89
28.5	4,911,454		0.0000	1.0000	79.89
29.5	4,769,951		0.0000	1.0000	79.89
30.5	4,349,842		0.0000	1.0000	79.89
31.5	4,241,363		0.0000	1.0000	79.89
32.5	4,081,051		0.0000	1.0000	79.89
33.5	3,999,354		0.0000	1.0000	79.89
34.5	3,877,702	54,585	0.0141	0.9859	79.89
35.5	3,710,054	81,430	0.0219	0.9781	78.76
36.5	3,527,558		0.0000	1.0000	77.03
37.5	3,370,004	353,290	0.1048	0.8952	77.03
38.5	2,902,952		0.0000	1.0000	68.96

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2021			EXPERIENCE BAND 1960-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,667,573	499,348	0.1872	0.8128	68.96
40.5	12,705		0.0000	1.0000	56.05
41.5	12,705		0.0000	1.0000	56.05
42.5	12,705		0.0000	1.0000	56.05
43.5	12,705		0.0000	1.0000	56.05
44.5	12,705		0.0000	1.0000	56.05
45.5	12,705		0.0000	1.0000	56.05
46.5	27,336		0.0000	1.0000	56.05
47.5	27,336		0.0000	1.0000	56.05
48.5	27,336		0.0000	1.0000	56.05
49.5	27,336		0.0000	1.0000	56.05
50.5	27,336		0.0000	1.0000	56.05
51.5	27,336		0.0000	1.0000	56.05
52.5	27,336		0.0000	1.0000	56.05
53.5	27,336		0.0000	1.0000	56.05
54.5	27,336		0.0000	1.0000	56.05
55.5	27,336		0.0000	1.0000	56.05
56.5					56.05

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	19,320,282		0.0000	1.0000	100.00
0.5	19,190,728		0.0000	1.0000	100.00
1.5	19,663,065	33,325	0.0017	0.9983	100.00
2.5	18,853,156	29,490	0.0016	0.9984	99.83
3.5	18,224,493	12,440	0.0007	0.9993	99.67
4.5	17,359,206		0.0000	1.0000	99.61
5.5	15,246,462	90,281	0.0059	0.9941	99.61
6.5	9,891,112	44,153	0.0045	0.9955	99.02
7.5	10,585,726	459,192	0.0434	0.9566	98.57
8.5	10,027,411		0.0000	1.0000	94.30
9.5	9,434,183	595,460	0.0631	0.9369	94.30
10.5	10,016,314	38,069	0.0038	0.9962	88.35
11.5	10,123,174	10,556	0.0010	0.9990	88.01
12.5	9,555,389		0.0000	1.0000	87.92
13.5	9,316,185		0.0000	1.0000	87.92
14.5	9,342,724	414,430	0.0444	0.9556	87.92
15.5	8,971,083		0.0000	1.0000	84.02
16.5	8,653,447		0.0000	1.0000	84.02
17.5	8,247,258		0.0000	1.0000	84.02
18.5	6,075,836		0.0000	1.0000	84.02
19.5	5,919,802	61,460	0.0104	0.9896	84.02
20.5	5,720,473		0.0000	1.0000	83.15
21.5	5,730,632	102,016	0.0178	0.9822	83.15
22.5	5,142,951	61,119	0.0119	0.9881	81.67
23.5	5,195,593	130,411	0.0251	0.9749	80.70
24.5	5,191,998		0.0000	1.0000	78.67
25.5	5,185,387		0.0000	1.0000	78.67
26.5	5,165,108		0.0000	1.0000	78.67
27.5	4,948,105		0.0000	1.0000	78.67
28.5	4,898,749		0.0000	1.0000	78.67
29.5	4,757,246		0.0000	1.0000	78.67
30.5	4,337,137		0.0000	1.0000	78.67
31.5	4,241,363		0.0000	1.0000	78.67
32.5	4,081,051		0.0000	1.0000	78.67
33.5	3,999,354		0.0000	1.0000	78.67
34.5	3,877,702	54,585	0.0141	0.9859	78.67
35.5	3,710,054	81,430	0.0219	0.9781	77.56
36.5	3,527,558		0.0000	1.0000	75.86
37.5	3,370,004	353,290	0.1048	0.8952	75.86
38.5	2,902,952		0.0000	1.0000	67.91

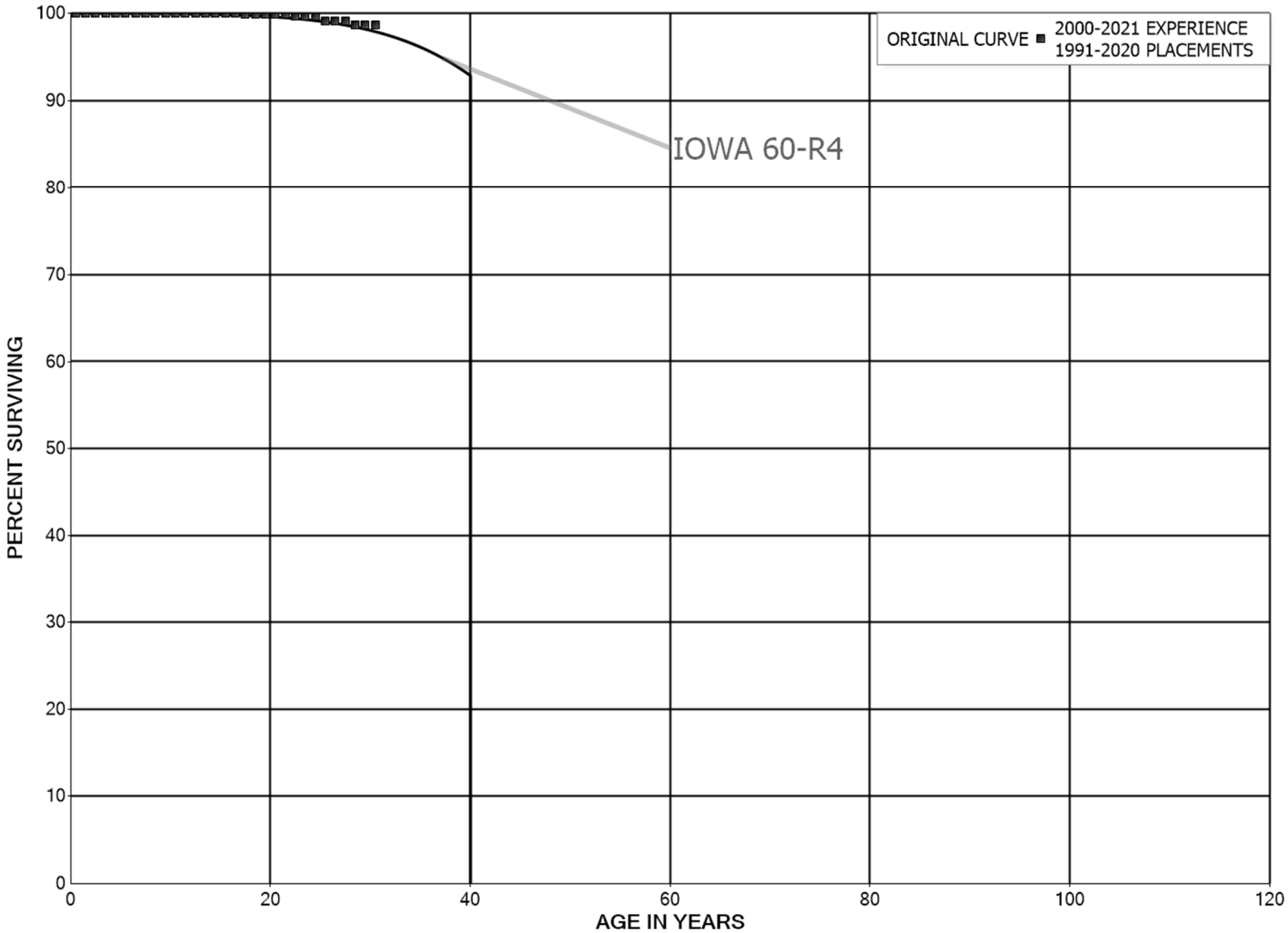
DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,667,573	499,348	0.1872	0.8128	67.91
40.5	12,705		0.0000	1.0000	55.20
41.5	12,705		0.0000	1.0000	55.20
42.5	12,705		0.0000	1.0000	55.20
43.5	12,705		0.0000	1.0000	55.20
44.5	12,705		0.0000	1.0000	55.20
45.5	12,705		0.0000	1.0000	55.20
46.5	27,336		0.0000	1.0000	55.20
47.5	27,336		0.0000	1.0000	55.20
48.5	27,336		0.0000	1.0000	55.20
49.5	27,336		0.0000	1.0000	55.20
50.5	27,336		0.0000	1.0000	55.20
51.5	27,336		0.0000	1.0000	55.20
52.5	27,336		0.0000	1.0000	55.20
53.5	27,336		0.0000	1.0000	55.20
54.5	27,336		0.0000	1.0000	55.20
55.5	27,336		0.0000	1.0000	55.20
56.5					55.20

DUKE ENERGY KENTUCKY
ACCOUNT 3410 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



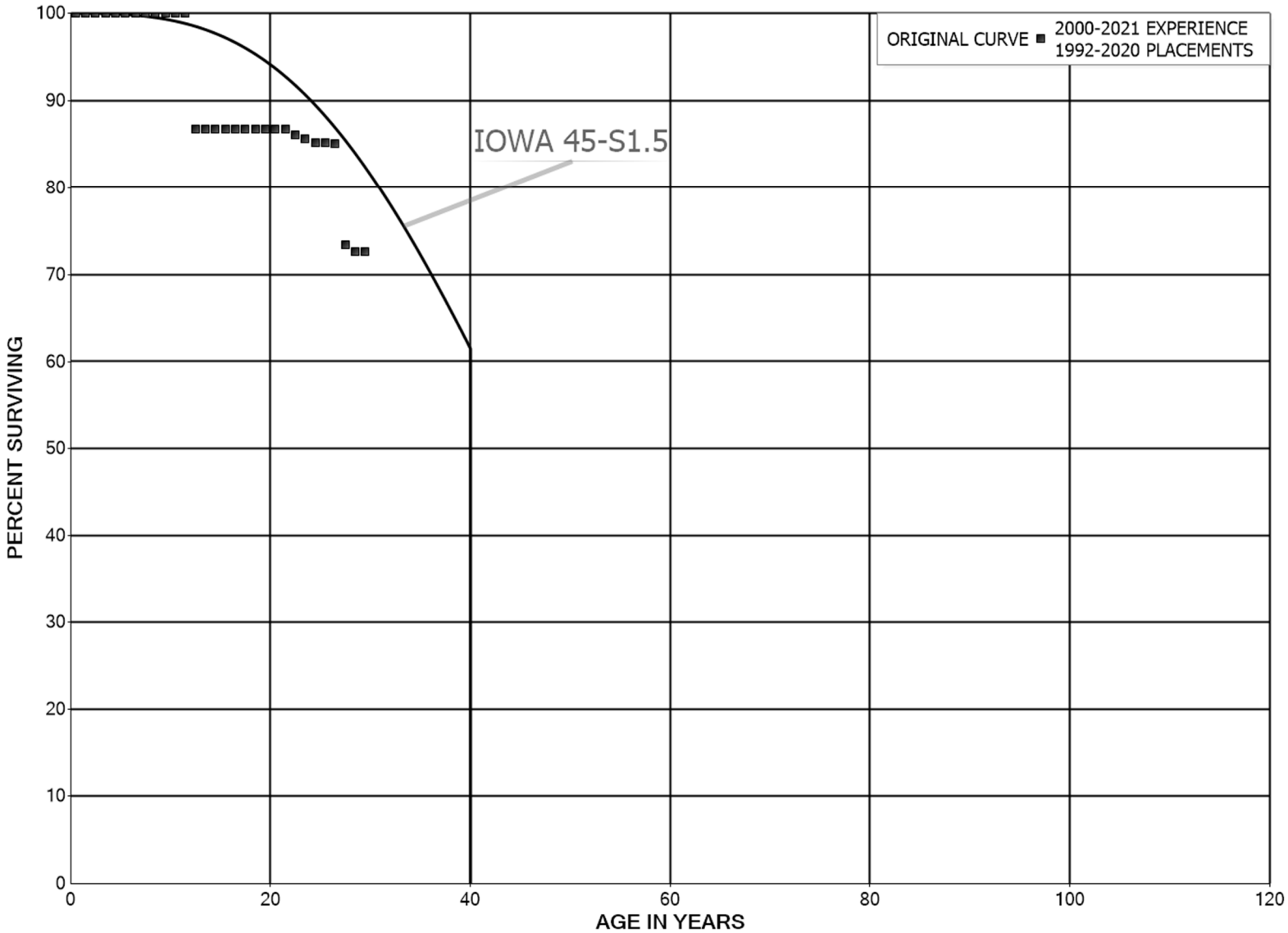
DUKE ENERGY KENTUCKY

ACCOUNT 3410 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1991-2020			EXPERIENCE BAND 2000-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,134,907		0.0000	1.0000	100.00
0.5	3,259,971		0.0000	1.0000	100.00
1.5	3,071,891		0.0000	1.0000	100.00
2.5	2,853,056		0.0000	1.0000	100.00
3.5	2,820,660		0.0000	1.0000	100.00
4.5	2,820,303		0.0000	1.0000	100.00
5.5	2,666,517		0.0000	1.0000	100.00
6.5	2,588,215		0.0000	1.0000	100.00
7.5	35,203,499		0.0000	1.0000	100.00
8.5	34,994,068		0.0000	1.0000	100.00
9.5	34,792,136		0.0000	1.0000	100.00
10.5	33,778,315		0.0000	1.0000	100.00
11.5	33,813,903		0.0000	1.0000	100.00
12.5	33,846,174		0.0000	1.0000	100.00
13.5	33,817,272		0.0000	1.0000	100.00
14.5	33,739,537	10,618	0.0003	0.9997	100.00
15.5	33,715,164	22,463	0.0007	0.9993	99.97
16.5	33,692,702	6,963	0.0002	0.9998	99.90
17.5	33,685,738	15,621	0.0005	0.9995	99.88
18.5	33,670,118		0.0000	1.0000	99.83
19.5	33,670,118		0.0000	1.0000	99.83
20.5	33,670,118		0.0000	1.0000	99.83
21.5	33,670,118	75,984	0.0023	0.9977	99.83
22.5	33,594,134		0.0000	1.0000	99.61
23.5	33,594,134		0.0000	1.0000	99.61
24.5	33,594,134	172,057	0.0051	0.9949	99.61
25.5	33,422,077		0.0000	1.0000	99.10
26.5	33,393,452	14,301	0.0004	0.9996	99.10
27.5	33,346,880	150,447	0.0045	0.9955	99.06
28.5	33,196,433	10,444	0.0003	0.9997	98.61
29.5	6,687		0.0000	1.0000	98.58
30.5					98.58

DUKE ENERGY KENTUCKY
ACCOUNT 3420 FUEL HOLDERS, PRODUCERS AND ACCESSORIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



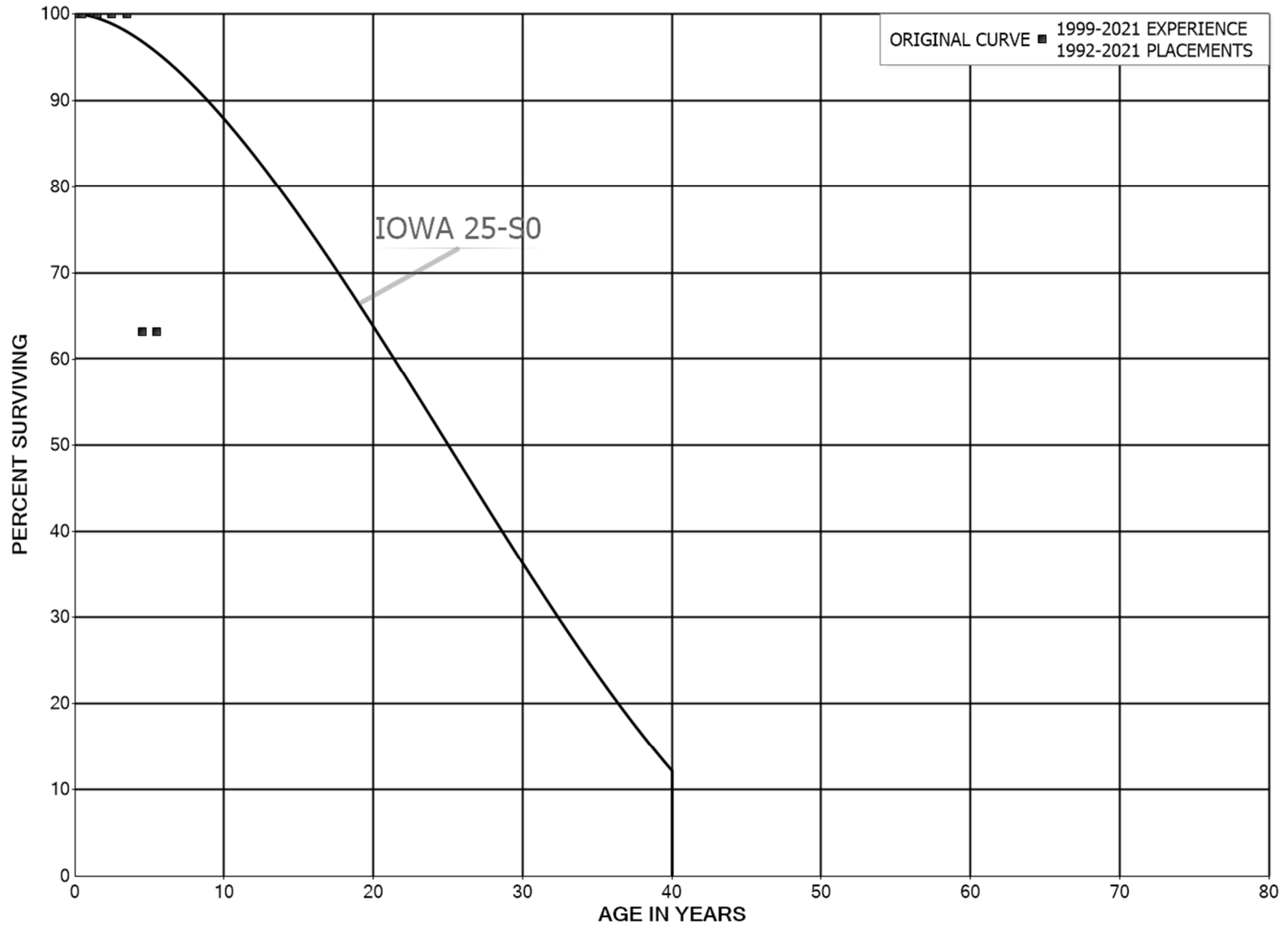
DUKE ENERGY KENTUCKY

ACCOUNT 3420 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2020			EXPERIENCE BAND 2000-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	54,595,384		0.0000	1.0000	100.00
0.5	54,539,743	178	0.0000	1.0000	100.00
1.5	54,322,098		0.0000	1.0000	100.00
2.5	773,025		0.0000	1.0000	100.00
3.5	748,026	154	0.0002	0.9998	100.00
4.5	579,795		0.0000	1.0000	99.98
5.5	635,382	434	0.0007	0.9993	99.98
6.5	634,948		0.0000	1.0000	99.91
7.5	871,352		0.0000	1.0000	99.91
8.5	871,352		0.0000	1.0000	99.91
9.5	172,681		0.0000	1.0000	99.91
10.5	256,378		0.0000	1.0000	99.91
11.5	321,684	42,403	0.1318	0.8682	99.91
12.5	279,281		0.0000	1.0000	86.74
13.5	279,281		0.0000	1.0000	86.74
14.5	15,523,741		0.0000	1.0000	86.74
15.5	15,523,741		0.0000	1.0000	86.74
16.5	15,523,741	59	0.0000	1.0000	86.74
17.5	15,523,682		0.0000	1.0000	86.74
18.5	15,523,682	62	0.0000	1.0000	86.74
19.5	15,523,620		0.0000	1.0000	86.74
20.5	15,468,032		0.0000	1.0000	86.74
21.5	15,468,032	120,530	0.0078	0.9922	86.74
22.5	15,289,036	83,738	0.0055	0.9945	86.06
23.5	15,205,298	70,159	0.0046	0.9954	85.59
24.5	15,135,139		0.0000	1.0000	85.20
25.5	15,051,441	15,945	0.0011	0.9989	85.20
26.5	14,970,191	2,054,051	0.1372	0.8628	85.11
27.5	6,593,300	73,342	0.0111	0.9889	73.43
28.5	6,519,958		0.0000	1.0000	72.61
29.5					72.61

DUKE ENERGY KENTUCKY
ACCOUNT 3430 PRIME MOVERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



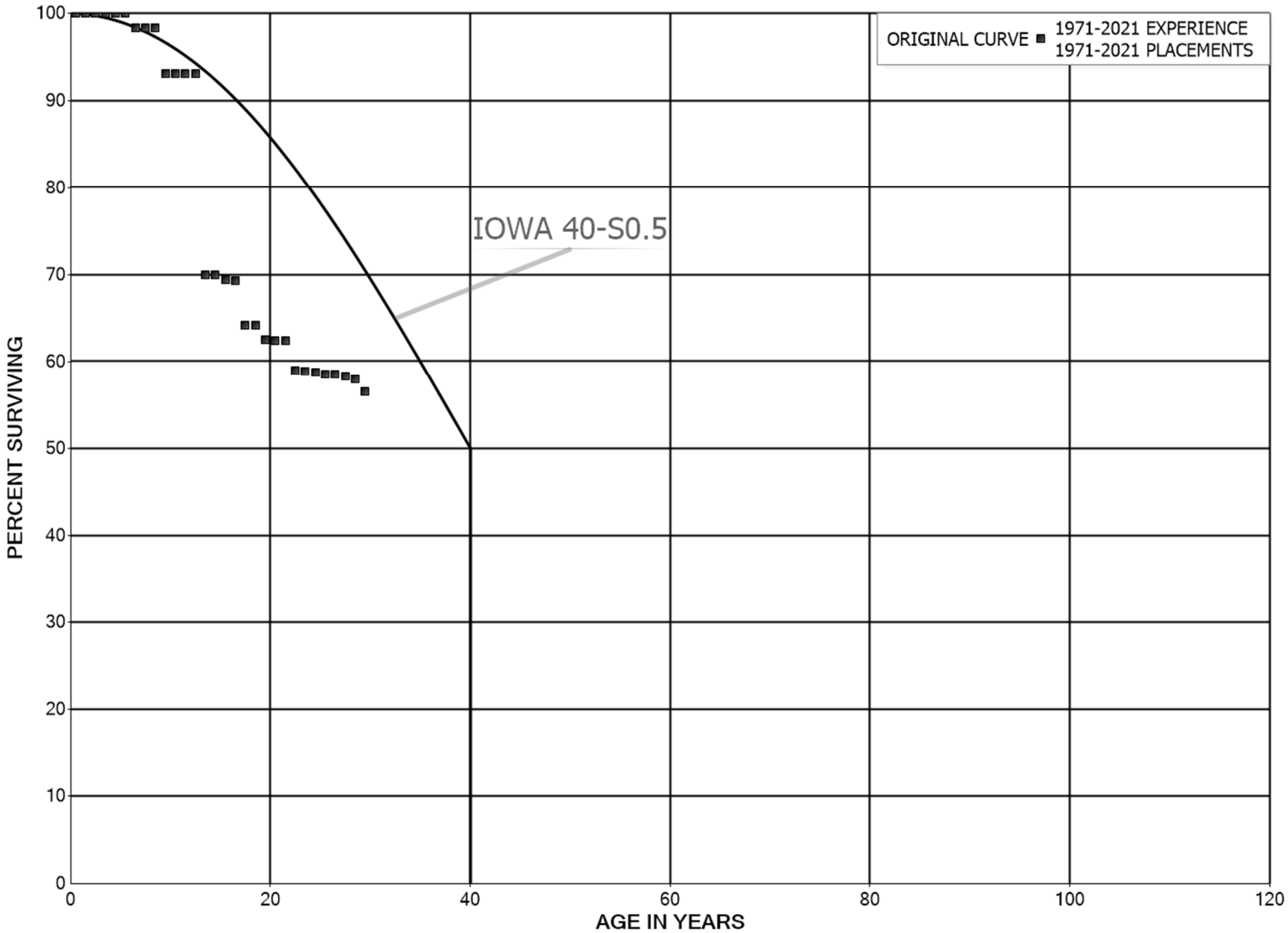
DUKE ENERGY KENTUCKY

ACCOUNT 3430 PRIME MOVERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2021			EXPERIENCE BAND 1999-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	19,203,035		0.0000	1.0000	100.00
0.5	16,021,060		0.0000	1.0000	100.00
1.5	14,609,393		0.0000	1.0000	100.00
2.5	11,698,758		0.0000	1.0000	100.00
3.5	11,694,674	4,308,670	0.3684	0.6316	100.00
4.5	786,578		0.0000	1.0000	63.16
5.5					63.16
6.5	4,038,837		0.0000		
7.5	4,038,837		0.0000		
8.5	4,038,837		0.0000		
9.5	4,038,837		0.0000		
10.5	4,038,837		0.0000		
11.5	4,038,837		0.0000		
12.5	4,038,837		0.0000		
13.5	4,038,837		0.0000		
14.5	4,038,837		0.0000		
15.5	4,038,837		0.0000		
16.5	4,038,837		0.0000		
17.5	4,038,837		0.0000		
18.5	4,038,837		0.0000		
19.5	4,038,837		0.0000		
20.5	4,038,837		0.0000		
21.5	4,038,837		0.0000		
22.5	4,038,837		0.0000		
23.5	4,038,837		0.0000		
24.5	4,038,837		0.0000		
25.5	4,038,837		0.0000		
26.5	4,038,837	4,007,142	0.9922		
27.5	31,695		0.0000		
28.5	31,695	9,350	0.2950		
29.5					

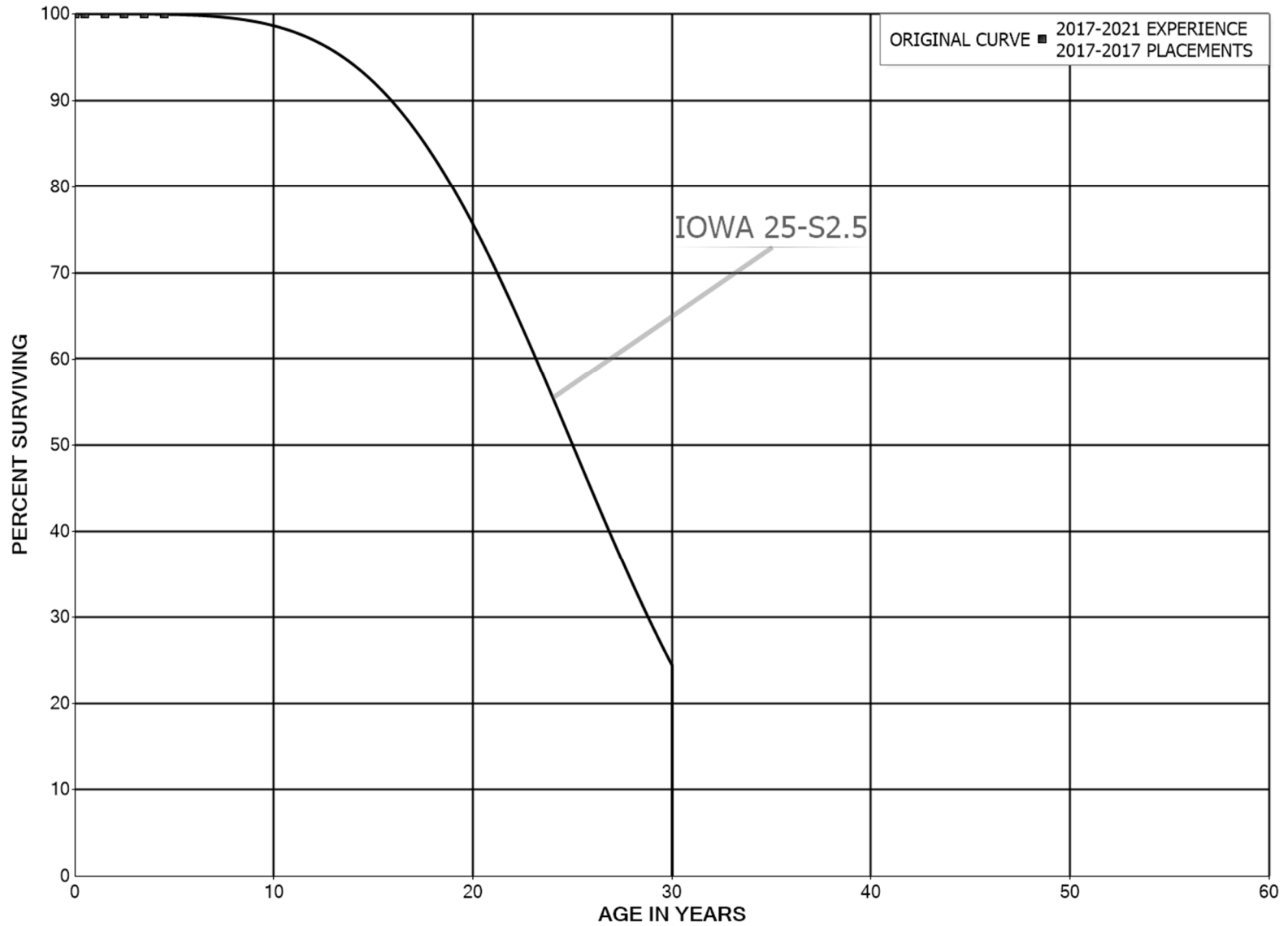
DUKE ENERGY KENTUCKY
ACCOUNT 3440 GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY
 ACCOUNT 3440 GENERATORS
 ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2021			EXPERIENCE BAND 1971-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	115,865,052		0.0000	1.0000	100.00
0.5	115,370,733		0.0000	1.0000	100.00
1.5	116,784,410		0.0000	1.0000	100.00
2.5	110,288,313		0.0000	1.0000	100.00
3.5	109,210,115	5,187	0.0000	1.0000	100.00
4.5	109,204,094	77,342	0.0007	0.9993	100.00
5.5	127,644,188	2,043,080	0.0160	0.9840	99.92
6.5	127,568,030		0.0000	1.0000	98.33
7.5	127,660,049	79,800	0.0006	0.9994	98.33
8.5	105,991,021	5,555,634	0.0524	0.9476	98.26
9.5	116,359,935		0.0000	1.0000	93.11
10.5	73,836,221		0.0000	1.0000	93.11
11.5	65,920,021		0.0000	1.0000	93.11
12.5	50,105,522	12,455,990	0.2486	0.7514	93.11
13.5	37,348,419		0.0000	1.0000	69.97
14.5	191,783,454	1,665,378	0.0087	0.9913	69.97
15.5	179,284,425	94,023	0.0005	0.9995	69.36
16.5	168,729,306	12,438,888	0.0737	0.9263	69.32
17.5	156,276,768	22,233	0.0001	0.9999	64.21
18.5	155,833,029	4,234,129	0.0272	0.9728	64.20
19.5	151,598,900	44,564	0.0003	0.9997	62.46
20.5	139,002,624		0.0000	1.0000	62.44
21.5	136,825,782	7,587,726	0.0555	0.9445	62.44
22.5	128,948,479	249,396	0.0019	0.9981	58.98
23.5	128,699,083	262,865	0.0020	0.9980	58.86
24.5	128,436,218	592,569	0.0046	0.9954	58.74
25.5	127,768,583		0.0000	1.0000	58.47
26.5	127,724,512	290,845	0.0023	0.9977	58.47
27.5	123,394,830	746,944	0.0061	0.9939	58.34
28.5	122,647,886	3,178,547	0.0259	0.9741	57.99
29.5					56.48

DUKE ENERGY KENTUCKY
ACCOUNT 3446 GENERATORS - SOLAR
ORIGINAL AND SMOOTH SURVIVOR CURVES



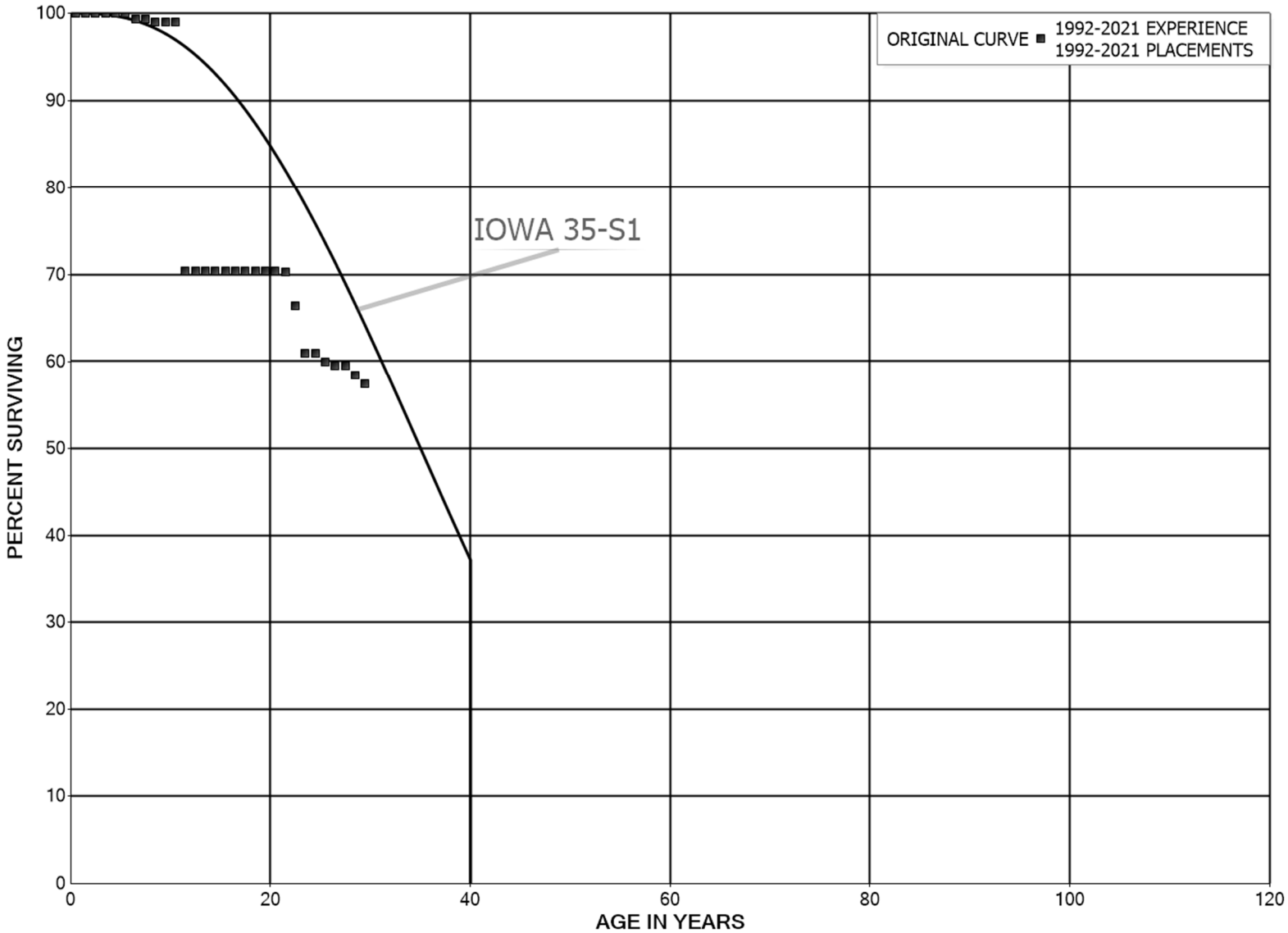
DUKE ENERGY KENTUCKY

ACCOUNT 3446 GENERATORS - SOLAR

ORIGINAL LIFE TABLE

PLACEMENT BAND 2017-2017			EXPERIENCE BAND 2017-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,813,806		0.0000	1.0000	100.00
0.5	9,813,806		0.0000	1.0000	100.00
1.5	9,813,806		0.0000	1.0000	100.00
2.5	9,813,806		0.0000	1.0000	100.00
3.5	9,813,806		0.0000	1.0000	100.00
4.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3450 ACCESSORY ELECTRIC EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



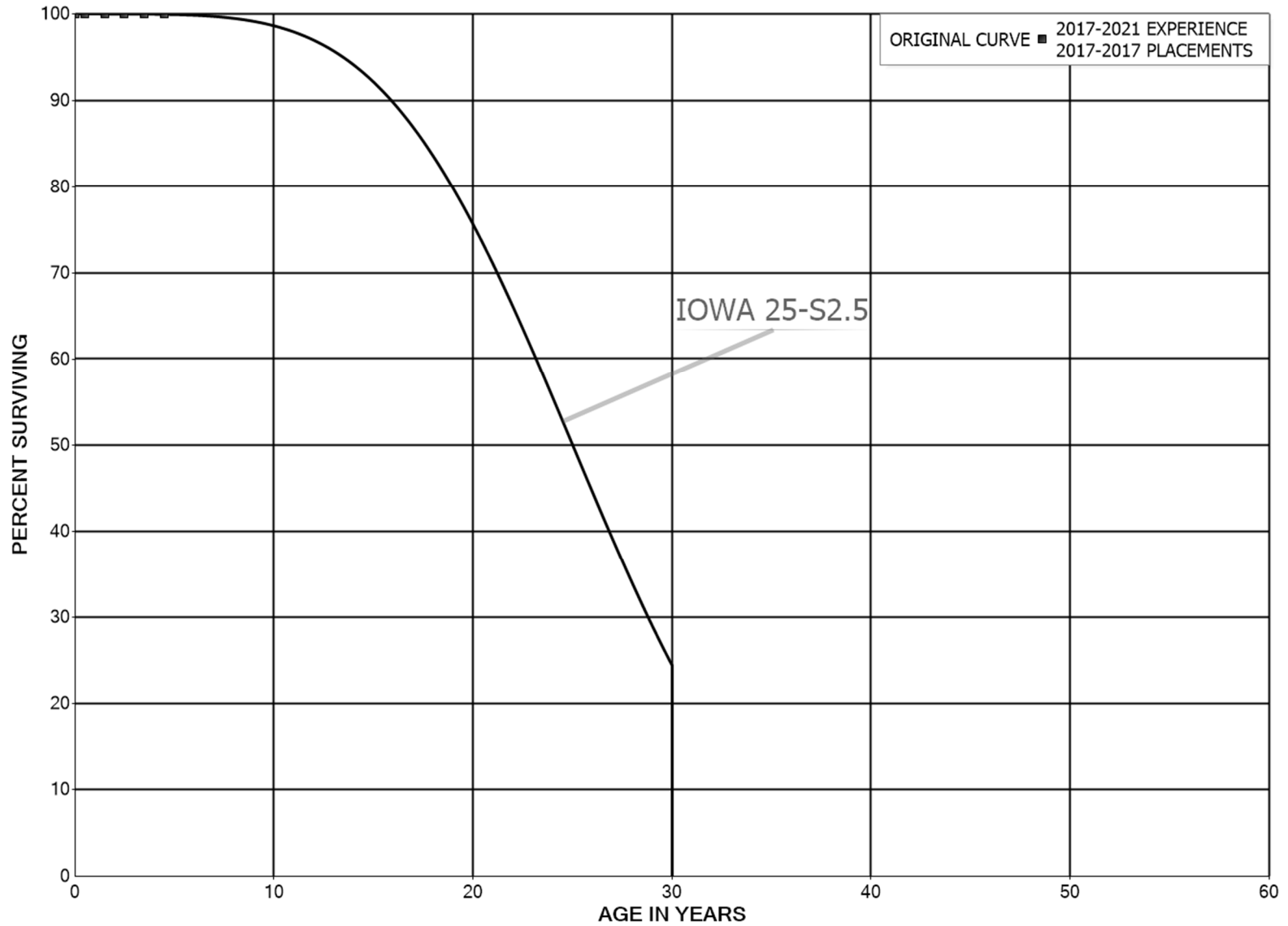
DUKE ENERGY KENTUCKY

ACCOUNT 3450 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,235,312		0.0000	1.0000	100.00
0.5	7,630,698		0.0000	1.0000	100.00
1.5	7,630,698		0.0000	1.0000	100.00
2.5	7,102,386		0.0000	1.0000	100.00
3.5	6,875,271		0.0000	1.0000	100.00
4.5	6,656,633		0.0000	1.0000	100.00
5.5	6,548,311	45,150	0.0069	0.9931	100.00
6.5	6,139,973		0.0000	1.0000	99.31
7.5	5,866,529	24,565	0.0042	0.9958	99.31
8.5	5,357,436		0.0000	1.0000	98.89
9.5	3,174,411		0.0000	1.0000	98.89
10.5	181,905	52,428	0.2882	0.7118	98.89
11.5	129,477		0.0000	1.0000	70.39
12.5	122,214		0.0000	1.0000	70.39
13.5	116,431		0.0000	1.0000	70.39
14.5	16,869,359	6,651	0.0004	0.9996	70.39
15.5	16,854,091		0.0000	1.0000	70.36
16.5	16,854,091		0.0000	1.0000	70.36
17.5	16,854,091		0.0000	1.0000	70.36
18.5	16,854,091		0.0000	1.0000	70.36
19.5	16,811,382		0.0000	1.0000	70.36
20.5	16,805,095	11,907	0.0007	0.9993	70.36
21.5	16,770,071	937,109	0.0559	0.9441	70.31
22.5	15,830,743	1,296,543	0.0819	0.9181	66.39
23.5	14,534,201		0.0000	1.0000	60.95
24.5	14,534,201	234,654	0.0161	0.9839	60.95
25.5	14,286,019	100,781	0.0071	0.9929	59.96
26.5	14,185,238		0.0000	1.0000	59.54
27.5	12,591,603	247,331	0.0196	0.9804	59.54
28.5	12,344,271	216,055	0.0175	0.9825	58.37
29.5					57.35

DUKE ENERGY KENTUCKY
ACCOUNT 3456 ACCESSORY ELECTRIC EQUIPMENT - SOLAR
ORIGINAL AND SMOOTH SURVIVOR CURVES



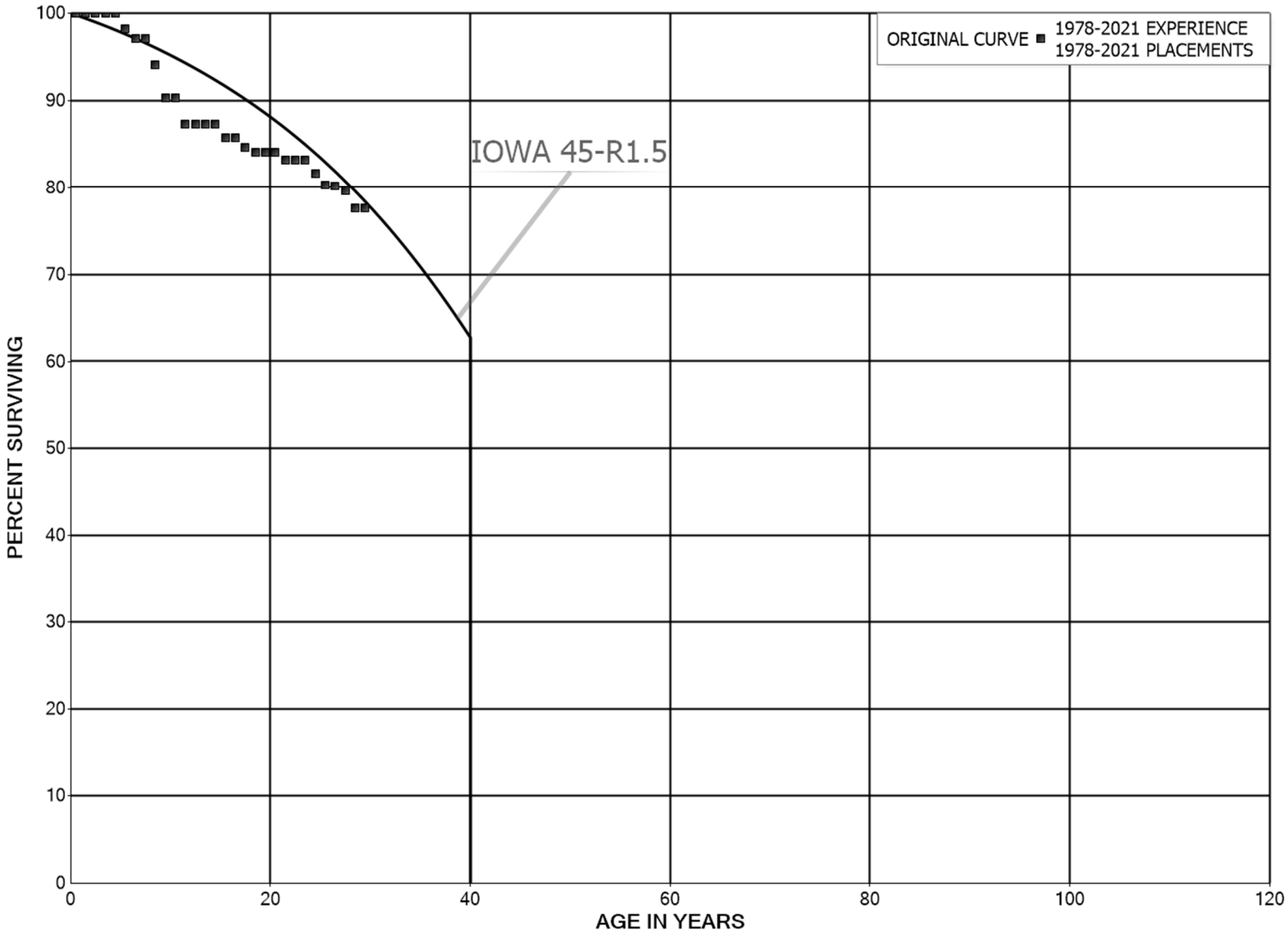
DUKE ENERGY KENTUCKY

ACCOUNT 3456 ACCESSORY ELECTRIC EQUIPMENT - SOLAR

ORIGINAL LIFE TABLE

PLACEMENT BAND 2017-2017			EXPERIENCE BAND 2017-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,616,959		0.0000	1.0000	100.00
0.5	1,616,959		0.0000	1.0000	100.00
1.5	1,616,959		0.0000	1.0000	100.00
2.5	1,616,959		0.0000	1.0000	100.00
3.5	1,616,959		0.0000	1.0000	100.00
4.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1978-2021			EXPERIENCE BAND 1978-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	2,523,748	37	0.0000	1.0000	100.00	
0.5	2,187,132	12	0.0000	1.0000	100.00	
1.5	1,736,920	200	0.0001	0.9999	100.00	
2.5	1,702,902	80	0.0000	1.0000	99.99	
3.5	1,709,570	162	0.0001	0.9999	99.98	
4.5	1,287,558	23,751	0.0184	0.9816	99.97	
5.5	1,554,144	16,311	0.0105	0.9895	98.13	
6.5	1,602,763	218	0.0001	0.9999	97.10	
7.5	1,819,326	56,302	0.0309	0.9691	97.09	
8.5	1,667,174	67,368	0.0404	0.9596	94.08	
9.5	1,605,171	70	0.0000	1.0000	90.28	
10.5	1,307,847	42,546	0.0325	0.9675	90.28	
11.5	1,233,776	40	0.0000	1.0000	87.34	
12.5	1,315,062		0.0000	1.0000	87.34	
13.5	1,283,917		0.0000	1.0000	87.34	
14.5	3,674,927	65,934	0.0179	0.9821	87.34	
15.5	3,532,606	5	0.0000	1.0000	85.77	
16.5	3,535,724	48,385	0.0137	0.9863	85.77	
17.5	3,487,339	20,998	0.0060	0.9940	84.59	
18.5	3,457,692	317	0.0001	0.9999	84.09	
19.5	3,450,763	8	0.0000	1.0000	84.08	
20.5	3,110,762	32,922	0.0106	0.9894	84.08	
21.5	2,957,116	2	0.0000	1.0000	83.19	
22.5	2,514,235	3	0.0000	1.0000	83.19	
23.5	2,503,534	45,998	0.0184	0.9816	83.19	
24.5	2,455,259	41,675	0.0170	0.9830	81.66	
25.5	2,411,150	1,618	0.0007	0.9993	80.27	
26.5	2,404,854	17,054	0.0071	0.9929	80.22	
27.5	2,287,391	59,995	0.0262	0.9738	79.65	
28.5	2,193,331		0.0000	1.0000	77.56	
29.5	11,392		0.0000	1.0000	77.56	
30.5	3,873		0.0000	1.0000	77.56	
31.5	750		0.0000	1.0000	77.56	
32.5	750	0	0.0000	1.0000	77.56	
33.5	750		0.0000	1.0000	77.56	
34.5	750	46	0.0616	0.9384	77.56	
35.5	704		0.0000	1.0000	72.78	
36.5	704	295	0.4197	0.5803	72.78	
37.5	408	0	0.0001	0.9999	42.23	
38.5	408		0.0000	1.0000	42.22	

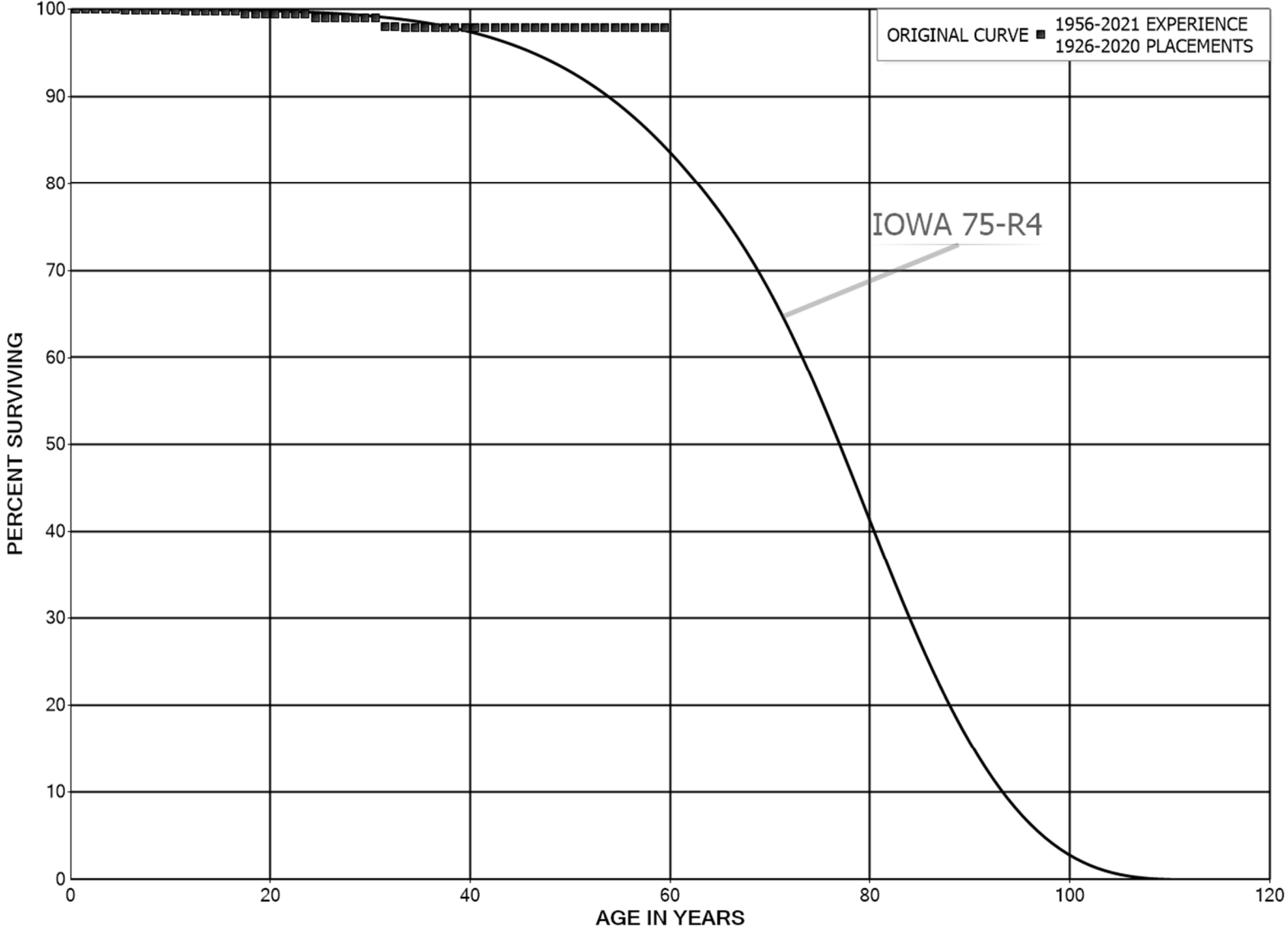
DUKE ENERGY KENTUCKY

ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1978-2021			EXPERIENCE BAND 1978-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	408	79	0.1946	0.8054	42.22	
40.5	329		0.0000	1.0000	34.01	
41.5	329	329	1.0000		34.01	
42.5						

DUKE ENERGY KENTUCKY
ACCOUNT 3501 RIGHTS OF WAY
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3501 RIGHTS OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1926-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,164,457		0.0000	1.0000	100.00
0.5	2,163,045	33	0.0000	1.0000	100.00
1.5	1,758,905		0.0000	1.0000	100.00
2.5	1,753,504		0.0000	1.0000	100.00
3.5	1,637,618		0.0000	1.0000	100.00
4.5	1,644,147	3,357	0.0020	0.9980	100.00
5.5	1,640,837		0.0000	1.0000	99.79
6.5	1,635,420		0.0000	1.0000	99.79
7.5	1,635,420		0.0000	1.0000	99.79
8.5	1,635,420		0.0000	1.0000	99.79
9.5	1,427,369		0.0000	1.0000	99.79
10.5	1,427,369	793	0.0006	0.9994	99.79
11.5	1,332,416	175	0.0001	0.9999	99.74
12.5	1,333,557		0.0000	1.0000	99.73
13.5	1,333,557		0.0000	1.0000	99.73
14.5	1,235,571		0.0000	1.0000	99.73
15.5	1,107,934		0.0000	1.0000	99.73
16.5	1,107,934	3,189	0.0029	0.9971	99.73
17.5	1,124,840		0.0000	1.0000	99.44
18.5	1,124,546		0.0000	1.0000	99.44
19.5	1,124,546		0.0000	1.0000	99.44
20.5	978,865	123	0.0001	0.9999	99.44
21.5	978,742	112	0.0001	0.9999	99.43
22.5	978,631	327	0.0003	0.9997	99.41
23.5	978,303	3,700	0.0038	0.9962	99.38
24.5	974,603		0.0000	1.0000	99.01
25.5	974,603		0.0000	1.0000	99.01
26.5	968,075		0.0000	1.0000	99.01
27.5	968,075		0.0000	1.0000	99.01
28.5	968,237		0.0000	1.0000	99.01
29.5	964,645		0.0000	1.0000	99.01
30.5	964,645	10,509	0.0109	0.9891	99.01
31.5	954,136		0.0000	1.0000	97.93
32.5	947,078	940	0.0010	0.9990	97.93
33.5	927,841		0.0000	1.0000	97.83
34.5	926,484		0.0000	1.0000	97.83
35.5	926,484		0.0000	1.0000	97.83
36.5	926,484		0.0000	1.0000	97.83
37.5	926,484		0.0000	1.0000	97.83
38.5	579,733		0.0000	1.0000	97.83

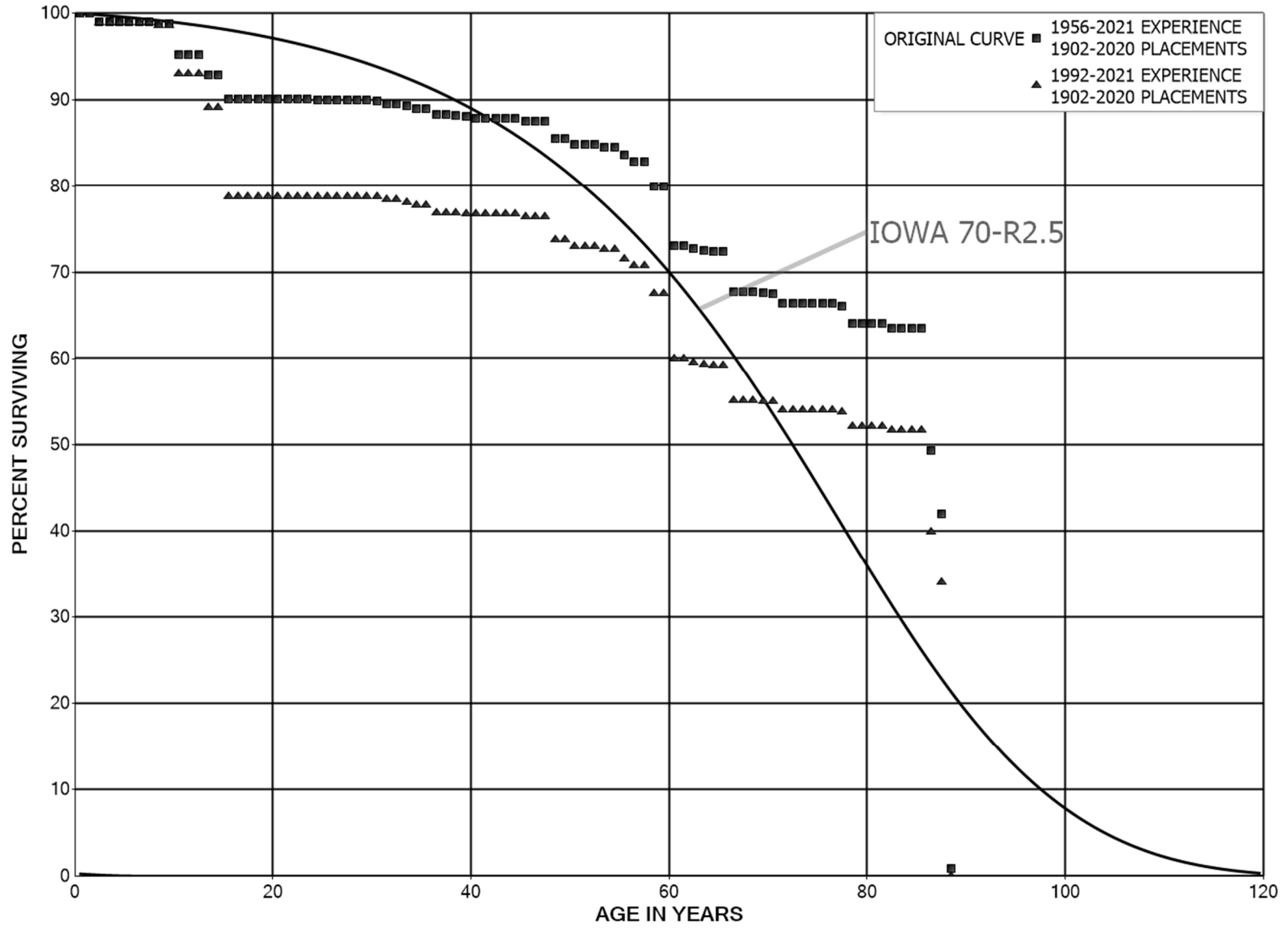
DUKE ENERGY KENTUCKY

ACCOUNT 3501 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	530,434		0.0000	1.0000	97.83
40.5	444,769		0.0000	1.0000	97.83
41.5	444,769		0.0000	1.0000	97.83
42.5	444,769		0.0000	1.0000	97.83
43.5	444,769		0.0000	1.0000	97.83
44.5	444,494		0.0000	1.0000	97.83
45.5	429,896		0.0000	1.0000	97.83
46.5	428,318		0.0000	1.0000	97.83
47.5	401,996		0.0000	1.0000	97.83
48.5	367,219		0.0000	1.0000	97.83
49.5	342,046		0.0000	1.0000	97.83
50.5	332,988		0.0000	1.0000	97.83
51.5	332,543		0.0000	1.0000	97.83
52.5	331,452		0.0000	1.0000	97.83
53.5	326,696		0.0000	1.0000	97.83
54.5	240,382		0.0000	1.0000	97.83
55.5	236,536		0.0000	1.0000	97.83
56.5	161,261		0.0000	1.0000	97.83
57.5	161,261		0.0000	1.0000	97.83
58.5	139,172		0.0000	1.0000	97.83
59.5	138,937		0.0000	1.0000	97.83
60.5	88,889		0.0000	1.0000	97.83
61.5	86,533		0.0000	1.0000	97.83
62.5	84,571		0.0000	1.0000	97.83
63.5	4,762		0.0000	1.0000	97.83
64.5	4,399		0.0000	1.0000	97.83
65.5	1,695		0.0000	1.0000	97.83
66.5	1,695		0.0000	1.0000	97.83
67.5	1,695		0.0000	1.0000	97.83
68.5	1,695		0.0000	1.0000	97.83
69.5	1,695		0.0000	1.0000	97.83
70.5	1,695		0.0000	1.0000	97.83
71.5					97.83

DUKE ENERGY KENTUCKY
ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	7,487,469	6	0.0000	1.0000	100.00	
0.5	7,567,287		0.0000	1.0000	100.00	
1.5	3,063,085	30,890	0.0101	0.9899	100.00	
2.5	3,044,009	379	0.0001	0.9999	98.99	
3.5	3,038,219	698	0.0002	0.9998	98.98	
4.5	3,037,521	51	0.0000	1.0000	98.96	
5.5	3,021,984		0.0000	1.0000	98.95	
6.5	2,647,069	6	0.0000	1.0000	98.95	
7.5	1,957,583	4,568	0.0023	0.9977	98.95	
8.5	1,679,820		0.0000	1.0000	98.72	
9.5	1,328,435	47,444	0.0357	0.9643	98.72	
10.5	1,274,959	10	0.0000	1.0000	95.20	
11.5	1,257,657		0.0000	1.0000	95.20	
12.5	1,260,385	31,741	0.0252	0.9748	95.20	
13.5	1,090,994		0.0000	1.0000	92.80	
14.5	661,250	19,258	0.0291	0.9709	92.80	
15.5	517,598		0.0000	1.0000	90.10	
16.5	558,894		0.0000	1.0000	90.10	
17.5	558,894		0.0000	1.0000	90.10	
18.5	558,894		0.0000	1.0000	90.10	
19.5	558,894		0.0000	1.0000	90.10	
20.5	558,894		0.0000	1.0000	90.10	
21.5	558,894		0.0000	1.0000	90.10	
22.5	558,894		0.0000	1.0000	90.10	
23.5	558,894	1,112	0.0020	0.9980	90.10	
24.5	557,782		0.0000	1.0000	89.92	
25.5	557,782		0.0000	1.0000	89.92	
26.5	607,053		0.0000	1.0000	89.92	
27.5	612,536		0.0000	1.0000	89.92	
28.5	602,592		0.0000	1.0000	89.92	
29.5	602,592	354	0.0006	0.9994	89.92	
30.5	614,012	2,513	0.0041	0.9959	89.86	
31.5	611,498	84	0.0001	0.9999	89.50	
32.5	611,414	1,728	0.0028	0.9972	89.48	
33.5	609,686	1,721	0.0028	0.9972	89.23	
34.5	607,965		0.0000	1.0000	88.98	
35.5	607,965	4,517	0.0074	0.9926	88.98	
36.5	603,448		0.0000	1.0000	88.32	
37.5	603,448	734	0.0012	0.9988	88.32	
38.5	602,713	808	0.0013	0.9987	88.21	

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	601,906	1,389	0.0023	0.9977	88.09
40.5	600,516		0.0000	1.0000	87.89
41.5	600,516	308	0.0005	0.9995	87.89
42.5	600,208	0	0.0000	1.0000	87.84
43.5	600,208	361	0.0006	0.9994	87.84
44.5	599,847	1,717	0.0029	0.9971	87.79
45.5	451,823		0.0000	1.0000	87.54
46.5	451,731		0.0000	1.0000	87.54
47.5	361,651	8,595	0.0238	0.9762	87.54
48.5	353,056	3	0.0000	1.0000	85.46
49.5	353,053	2,388	0.0068	0.9932	85.46
50.5	348,637	139	0.0004	0.9996	84.88
51.5	348,498	24	0.0001	0.9999	84.85
52.5	345,934	1,231	0.0036	0.9964	84.84
53.5	343,702	2	0.0000	1.0000	84.54
54.5	341,088	3,728	0.0109	0.9891	84.54
55.5	337,360	2,969	0.0088	0.9912	83.62
56.5	333,161		0.0000	1.0000	82.88
57.5	330,721	11,652	0.0352	0.9648	82.88
58.5	319,070		0.0000	1.0000	79.96
59.5	319,070	27,426	0.0860	0.9140	79.96
60.5	291,644	25	0.0001	0.9999	73.09
61.5	219,637	1,049	0.0048	0.9952	73.08
62.5	218,588	787	0.0036	0.9964	72.73
63.5	168,298	272	0.0016	0.9984	72.47
64.5	168,026	0	0.0000	1.0000	72.35
65.5	168,026	10,713	0.0638	0.9362	72.35
66.5	107,726		0.0000	1.0000	67.74
67.5	107,726		0.0000	1.0000	67.74
68.5	107,639	129	0.0012	0.9988	67.74
69.5	107,510	197	0.0018	0.9982	67.66
70.5	107,313	1,876	0.0175	0.9825	67.53
71.5	105,437	1	0.0000	1.0000	66.35
72.5	105,437		0.0000	1.0000	66.35
73.5	105,437		0.0000	1.0000	66.35
74.5	105,437		0.0000	1.0000	66.35
75.5	104,947	1	0.0000	1.0000	66.35
76.5	104,945	475	0.0045	0.9955	66.35
77.5	104,471	3,068	0.0294	0.9706	66.05
78.5	101,402	29	0.0003	0.9997	64.11

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	99,930		0.0000	1.0000	64.09
80.5	99,930		0.0000	1.0000	64.09
81.5	99,930	967	0.0097	0.9903	64.09
82.5	70,771		0.0000	1.0000	63.47
83.5	70,771		0.0000	1.0000	63.47
84.5	70,771		0.0000	1.0000	63.47
85.5	70,771	15,864	0.2242	0.7758	63.47
86.5	54,907	8,081	0.1472	0.8528	49.25
87.5	46,826	45,915	0.9806	0.0194	42.00
88.5	911		0.0000	1.0000	0.82
89.5	911		0.0000	1.0000	0.82
90.5	911		0.0000	1.0000	0.82
91.5	911		0.0000	1.0000	0.82
92.5	911		0.0000	1.0000	0.82
93.5	911		0.0000	1.0000	0.82
94.5	911		0.0000	1.0000	0.82
95.5	911		0.0000	1.0000	0.82
96.5	911		0.0000	1.0000	0.82
97.5	911		0.0000	1.0000	0.82
98.5	911		0.0000	1.0000	0.82
99.5	911		0.0000	1.0000	0.82
100.5	911		0.0000	1.0000	0.82
101.5	911		0.0000	1.0000	0.82
102.5	911		0.0000	1.0000	0.82
103.5	911		0.0000	1.0000	0.82
104.5	911		0.0000	1.0000	0.82
105.5	911		0.0000	1.0000	0.82
106.5	911		0.0000	1.0000	0.82
107.5	911		0.0000	1.0000	0.82
108.5	911	911	1.0000		0.82
109.5					

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	7,069,055	6	0.0000	1.0000	100.00	
0.5	7,069,049		0.0000	1.0000	100.00	
1.5	2,583,180	28,958	0.0112	0.9888	100.00	
2.5	2,554,222	379	0.0001	0.9999	98.88	
3.5	2,548,131	698	0.0003	0.9997	98.86	
4.5	2,547,433	51	0.0000	1.0000	98.84	
5.5	2,531,624		0.0000	1.0000	98.84	
6.5	2,156,709	6	0.0000	1.0000	98.84	
7.5	1,467,223	4,542	0.0031	0.9969	98.83	
8.5	1,189,486		0.0000	1.0000	98.53	
9.5	837,610	47,444	0.0566	0.9434	98.53	
10.5	784,135	10	0.0000	1.0000	92.95	
11.5	766,832		0.0000	1.0000	92.95	
12.5	766,832	31,741	0.0414	0.9586	92.95	
13.5	595,867		0.0000	1.0000	89.10	
14.5	166,124	19,258	0.1159	0.8841	89.10	
15.5	169,478		0.0000	1.0000	78.77	
16.5	169,571		0.0000	1.0000	78.77	
17.5	263,891		0.0000	1.0000	78.77	
18.5	263,891		0.0000	1.0000	78.77	
19.5	263,891		0.0000	1.0000	78.77	
20.5	265,919		0.0000	1.0000	78.77	
21.5	265,919		0.0000	1.0000	78.77	
22.5	272,760		0.0000	1.0000	78.77	
23.5	274,672		0.0000	1.0000	78.77	
24.5	279,521		0.0000	1.0000	78.77	
25.5	279,521		0.0000	1.0000	78.77	
26.5	284,201		0.0000	1.0000	78.77	
27.5	286,644		0.0000	1.0000	78.77	
28.5	264,647		0.0000	1.0000	78.77	
29.5	268,375		0.0000	1.0000	78.77	
30.5	268,375	1,175	0.0044	0.9956	78.77	
31.5	339,181		0.0000	1.0000	78.43	
32.5	339,181	1,728	0.0051	0.9949	78.43	
33.5	396,253	1,721	0.0043	0.9957	78.03	
34.5	394,531		0.0000	1.0000	77.69	
35.5	394,531	4,462	0.0113	0.9887	77.69	
36.5	467,961		0.0000	1.0000	76.81	
37.5	468,886		0.0000	1.0000	76.81	
38.5	480,674	729	0.0015	0.9985	76.81	

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	480,246		0.0000	1.0000	76.69
40.5	480,246		0.0000	1.0000	76.69
41.5	480,518		0.0000	1.0000	76.69
42.5	480,518	0	0.0000	1.0000	76.69
43.5	480,518	91	0.0002	0.9998	76.69
44.5	480,427	1,717	0.0036	0.9964	76.68
45.5	332,893		0.0000	1.0000	76.40
46.5	332,801		0.0000	1.0000	76.40
47.5	242,721	8,595	0.0354	0.9646	76.40
48.5	236,854	3	0.0000	1.0000	73.70
49.5	238,425	2,388	0.0100	0.9900	73.70
50.5	234,009	139	0.0006	0.9994	72.96
51.5	234,345	24	0.0001	0.9999	72.92
52.5	271,643	1,231	0.0045	0.9955	72.91
53.5	268,501	2	0.0000	1.0000	72.58
54.5	265,887	3,728	0.0140	0.9860	72.58
55.5	262,160	2,969	0.0113	0.9887	71.56
56.5	257,960		0.0000	1.0000	70.75
57.5	255,520	11,652	0.0456	0.9544	70.75
58.5	243,869		0.0000	1.0000	67.52
59.5	243,869	27,426	0.1125	0.8875	67.52
60.5	216,443	25	0.0001	0.9999	59.93
61.5	144,437	1,049	0.0073	0.9927	59.92
62.5	190,270	787	0.0041	0.9959	59.49
63.5	145,375	272	0.0019	0.9981	59.24
64.5	156,253	0	0.0000	1.0000	59.13
65.5	156,253	10,713	0.0686	0.9314	59.13
66.5	106,816		0.0000	1.0000	55.08
67.5	106,816		0.0000	1.0000	55.08
68.5	106,729	129	0.0012	0.9988	55.08
69.5	106,600	197	0.0018	0.9982	55.01
70.5	106,403	1,876	0.0176	0.9824	54.91
71.5	104,527	1	0.0000	1.0000	53.94
72.5	104,526		0.0000	1.0000	53.94
73.5	104,526		0.0000	1.0000	53.94
74.5	104,526		0.0000	1.0000	53.94
75.5	104,036	1	0.0000	1.0000	53.94
76.5	104,035	475	0.0046	0.9954	53.94
77.5	103,560	3,068	0.0296	0.9704	53.69
78.5	100,492	29	0.0003	0.9997	52.10

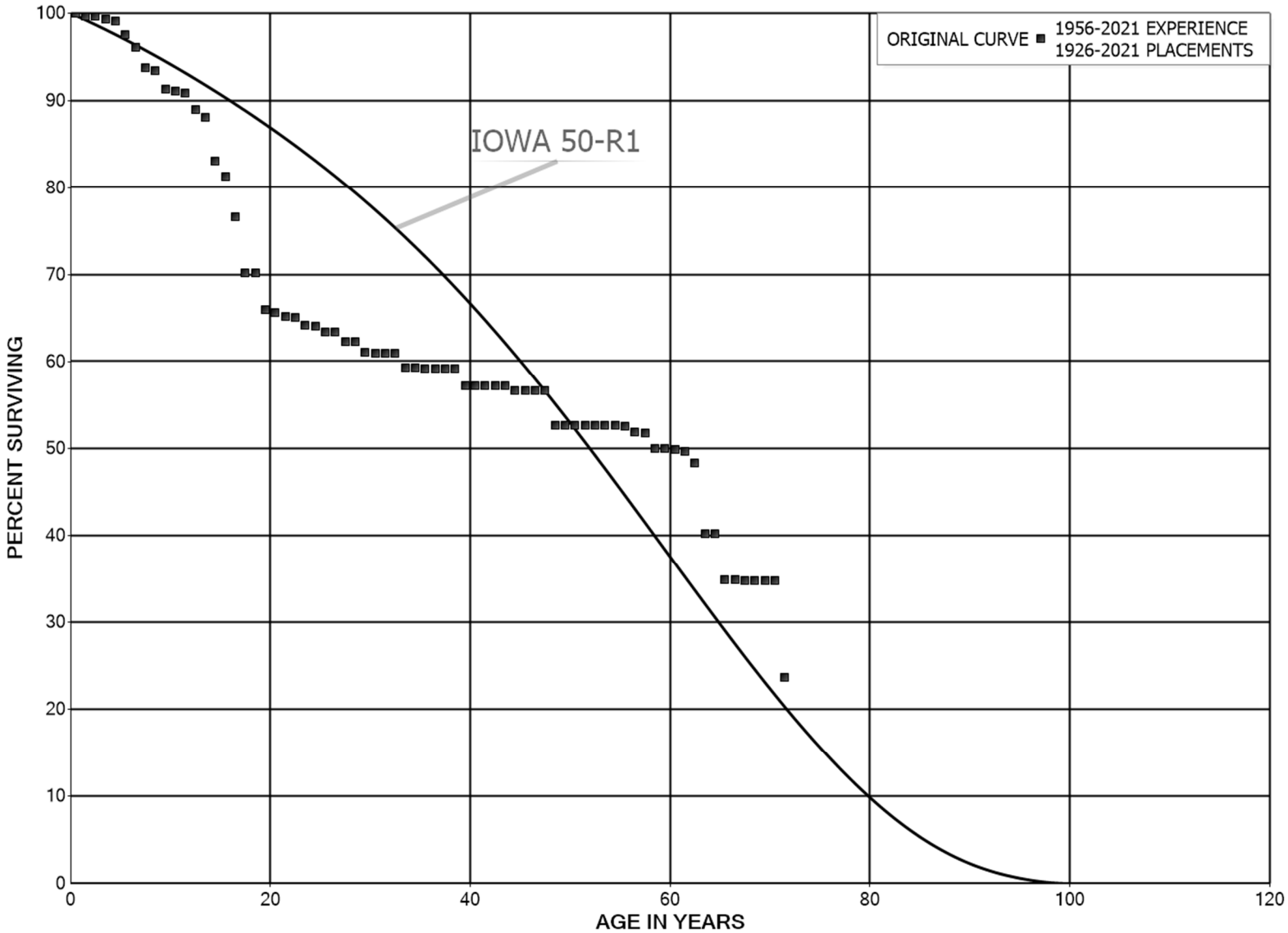
DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	99,020		0.0000	1.0000	52.09
80.5	99,020		0.0000	1.0000	52.09
81.5	99,020	967	0.0098	0.9902	52.09
82.5	69,861		0.0000	1.0000	51.58
83.5	69,861		0.0000	1.0000	51.58
84.5	69,861		0.0000	1.0000	51.58
85.5	69,861	15,864	0.2271	0.7729	51.58
86.5	53,997	8,081	0.1497	0.8503	39.87
87.5	45,915	45,915	1.0000		33.90
88.5					
89.5	911		0.0000		
90.5	911		0.0000		
91.5	911		0.0000		
92.5	911		0.0000		
93.5	911		0.0000		
94.5	911		0.0000		
95.5	911		0.0000		
96.5	911		0.0000		
97.5	911		0.0000		
98.5	911		0.0000		
99.5	911		0.0000		
100.5	911		0.0000		
101.5	911		0.0000		
102.5	911		0.0000		
103.5	911		0.0000		
104.5	911		0.0000		
105.5	911		0.0000		
106.5	911		0.0000		
107.5	911		0.0000		
108.5	911	911	1.0000		
109.5					

DUKE ENERGY KENTUCKY
ACCOUNT 3530 STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1926-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	37,289,788		0.0000	1.0000	100.00
0.5	35,066,371	122,677	0.0035	0.9965	100.00
1.5	24,136,951	14,457	0.0006	0.9994	99.65
2.5	20,046,453	57,116	0.0028	0.9972	99.59
3.5	18,413,068	46,362	0.0025	0.9975	99.31
4.5	16,980,137	258,560	0.0152	0.9848	99.06
5.5	16,706,726	252,276	0.0151	0.9849	97.55
6.5	14,291,742	357,552	0.0250	0.9750	96.08
7.5	12,632,412	36,861	0.0029	0.9971	93.67
8.5	12,426,527	275,948	0.0222	0.9778	93.40
9.5	11,607,976	27,860	0.0024	0.9976	91.32
10.5	11,580,116	35,697	0.0031	0.9969	91.11
11.5	11,532,683	245,565	0.0213	0.9787	90.82
12.5	11,269,097	109,868	0.0097	0.9903	88.89
13.5	11,181,003	632,500	0.0566	0.9434	88.02
14.5	7,953,967	169,828	0.0214	0.9786	83.04
15.5	7,295,027	422,145	0.0579	0.9421	81.27
16.5	6,808,237	569,852	0.0837	0.9163	76.57
17.5	6,195,021	3,008	0.0005	0.9995	70.16
18.5	5,148,561	307,986	0.0598	0.9402	70.13
19.5	4,109,298	20,309	0.0049	0.9951	65.93
20.5	4,089,214	25,188	0.0062	0.9938	65.60
21.5	3,345,631	8,434	0.0025	0.9975	65.20
22.5	3,332,495	45,512	0.0137	0.9863	65.04
23.5	3,183,199	4,924	0.0015	0.9985	64.15
24.5	3,178,274	29,947	0.0094	0.9906	64.05
25.5	3,116,605	3,507	0.0011	0.9989	63.45
26.5	2,595,324	46,020	0.0177	0.9823	63.37
27.5	2,549,304		0.0000	1.0000	62.25
28.5	2,549,304	50,135	0.0197	0.9803	62.25
29.5	1,720,591	1,050	0.0006	0.9994	61.03
30.5	1,575,034		0.0000	1.0000	60.99
31.5	1,575,034	68	0.0000	1.0000	60.99
32.5	1,574,966	45,260	0.0287	0.9713	60.99
33.5	1,529,706		0.0000	1.0000	59.23
34.5	1,529,706	1,228	0.0008	0.9992	59.23
35.5	1,511,840	173	0.0001	0.9999	59.19
36.5	1,443,042		0.0000	1.0000	59.18
37.5	1,443,042		0.0000	1.0000	59.18
38.5	1,143,910	38,077	0.0333	0.9667	59.18

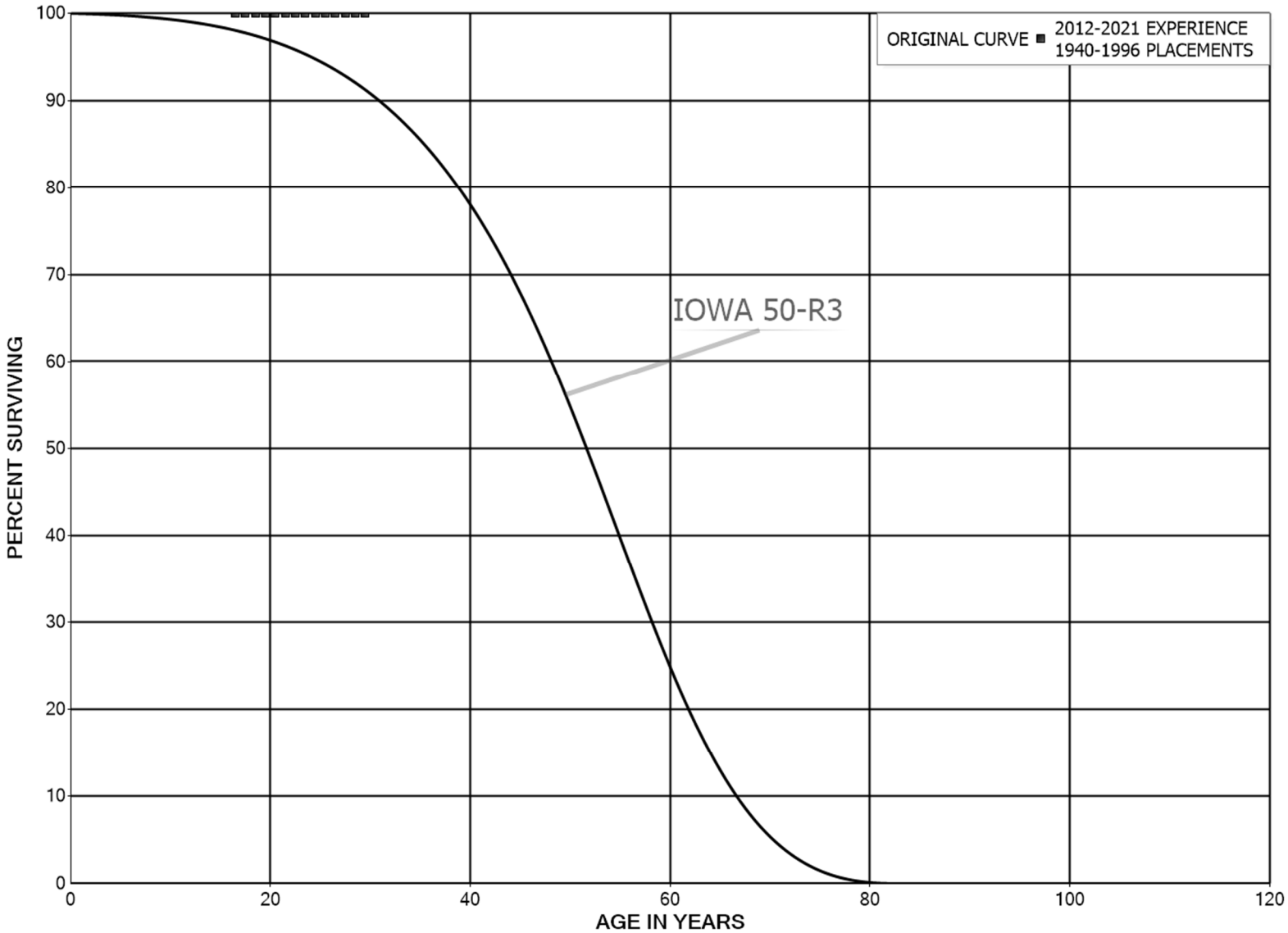
DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,164,309	7	0.0000	1.0000	57.21	
40.5	1,164,301		0.0000	1.0000	57.21	
41.5	1,164,301	1,389	0.0012	0.9988	57.21	
42.5	1,158,527	11	0.0000	1.0000	57.14	
43.5	1,156,706	10,134	0.0088	0.9912	57.14	
44.5	1,146,572	179	0.0002	0.9998	56.64	
45.5	807,980		0.0000	1.0000	56.63	
46.5	805,326	197	0.0002	0.9998	56.63	
47.5	804,722	56,271	0.0699	0.9301	56.62	
48.5	711,840		0.0000	1.0000	52.66	
49.5	711,840	16	0.0000	1.0000	52.66	
50.5	663,792	1	0.0000	1.0000	52.66	
51.5	663,790	12	0.0000	1.0000	52.66	
52.5	663,778	808	0.0012	0.9988	52.66	
53.5	658,985		0.0000	1.0000	52.59	
54.5	658,656	1,582	0.0024	0.9976	52.59	
55.5	655,680	8,238	0.0126	0.9874	52.47	
56.5	450,548	348	0.0008	0.9992	51.81	
57.5	450,200	15,431	0.0343	0.9657	51.77	
58.5	434,769		0.0000	1.0000	49.99	
59.5	434,769	1,537	0.0035	0.9965	49.99	
60.5	430,752	1,556	0.0036	0.9964	49.81	
61.5	363,236	9,493	0.0261	0.9739	49.64	
62.5	353,743	59,920	0.1694	0.8306	48.34	
63.5	28,471		0.0000	1.0000	40.15	
64.5	28,471	3,805	0.1336	0.8664	40.15	
65.5	22,807		0.0000	1.0000	34.78	
66.5	20,786	41	0.0019	0.9981	34.78	
67.5	20,745		0.0000	1.0000	34.72	
68.5	20,745		0.0000	1.0000	34.72	
69.5	20,745		0.0000	1.0000	34.72	
70.5	10,878	3,481	0.3200	0.6800	34.72	
71.5	7,397		0.0000	1.0000	23.61	
72.5	7,397		0.0000	1.0000	23.61	
73.5	7,397		0.0000	1.0000	23.61	
74.5	7,397	4,090	0.5529	0.4471	23.61	
75.5	3,307		0.0000	1.0000	10.55	
76.5	3,307		0.0000	1.0000	10.55	
77.5	3,307		0.0000	1.0000	10.55	
78.5					10.55	

DUKE ENERGY KENTUCKY
ACCOUNT 3531 STATION EQUIPMENT - STEP UP
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3531 STATION EQUIPMENT - STEP UP

ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-1996		EXPERIENCE BAND 2012-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0					
0.5					
1.5					
2.5					
3.5					
4.5					
5.5					
6.5					
7.5					
8.5					
9.5					
10.5					
11.5					
12.5					
13.5					
14.5					
15.5					
16.5	968,381		0.0000	1.0000	100.00
17.5	968,381		0.0000	1.0000	100.00
18.5	968,381		0.0000	1.0000	100.00
19.5	968,381		0.0000	1.0000	100.00
20.5	9,373,634		0.0000	1.0000	100.00
21.5	9,373,634		0.0000	1.0000	100.00
22.5	9,373,634		0.0000	1.0000	100.00
23.5	9,373,634		0.0000	1.0000	100.00
24.5	9,373,634		0.0000	1.0000	100.00
25.5	8,405,253		0.0000	1.0000	100.00
26.5	8,405,253		0.0000	1.0000	100.00
27.5	8,405,253		0.0000	1.0000	100.00
28.5	8,405,253		0.0000	1.0000	100.00
29.5					100.00
30.5					
31.5					
32.5	22,193		0.0000		
33.5	22,193		0.0000		
34.5	22,193		0.0000		
35.5	36,091	22,193	0.6149		
36.5	29,659		0.0000		
37.5	29,659		0.0000		
38.5	35,928	13,897	0.3868		

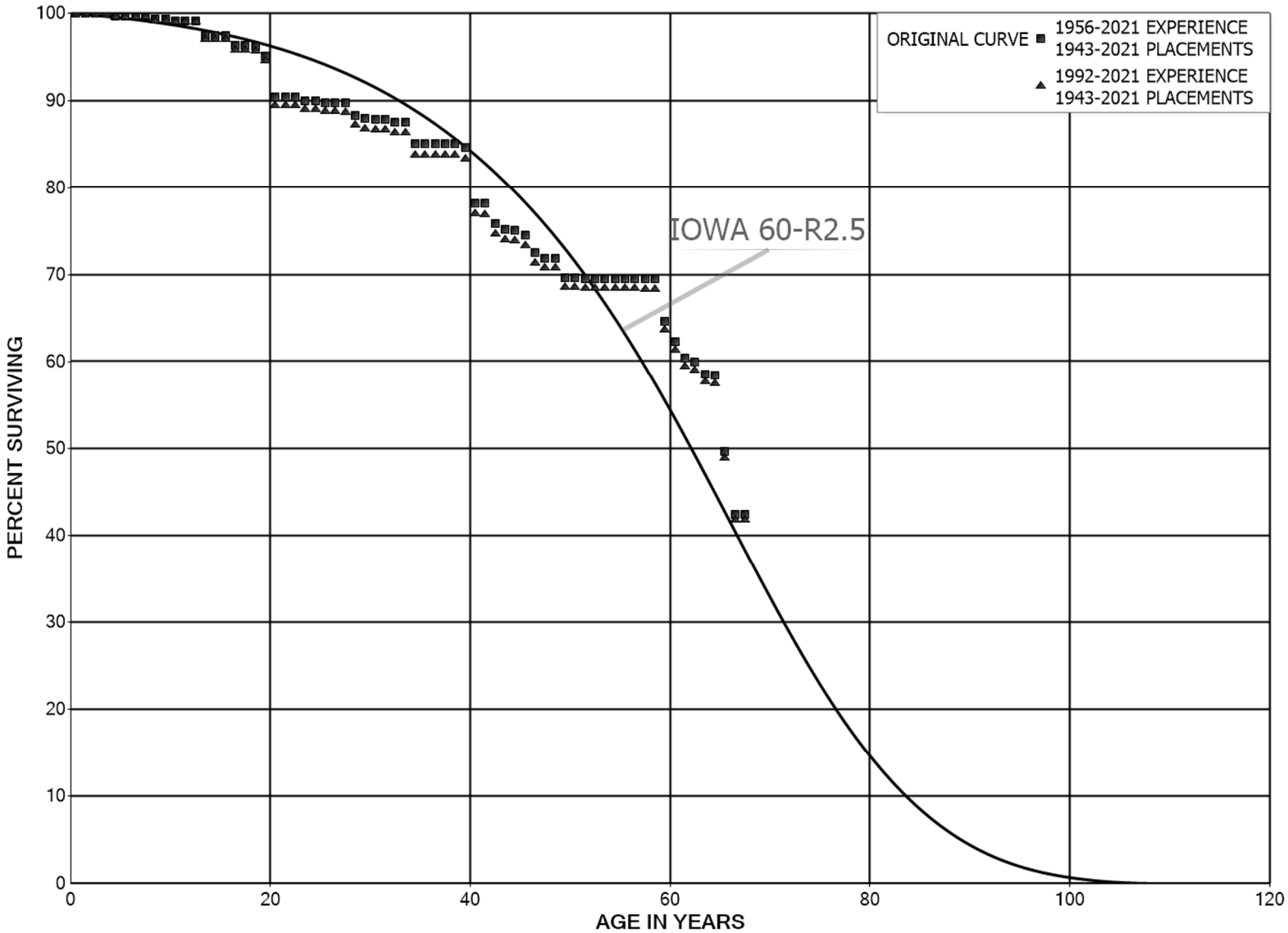
DUKE ENERGY KENTUCKY

ACCOUNT 3531 STATION EQUIPMENT - STEP UP

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1996			EXPERIENCE BAND 2012-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	22,031	15,762	0.7155		
40.5	6,269		0.0000		
41.5	6,269	6,269	1.0000		
42.5					
43.5	5,339		0.0000		
44.5	5,339		0.0000		
45.5	5,339		0.0000		
46.5	5,339	5,339	1.0000		
47.5					
48.5					
49.5					
50.5					
51.5					
52.5	16,550		0.0000		
53.5	16,550		0.0000		
54.5	16,550		0.0000		
55.5	16,550	16,550	1.0000		
56.5					
57.5	900		0.0000		
58.5	900		0.0000		
59.5	900		0.0000		
60.5	900	900	1.0000		
61.5					
62.5					
63.5	18,783		0.0000		
64.5	18,783		0.0000		
65.5	18,783		0.0000		
66.5	18,783	18,783	1.0000		
67.5					
68.5					
69.5					
70.5					
71.5	561		0.0000		
72.5	6,628		0.0000		
73.5	6,628		0.0000		
74.5	6,628	561	0.0847		
75.5	6,067	6,067	1.0000		
76.5					

DUKE ENERGY KENTUCKY
ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE

PLACEMENT BAND 1943-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	55,289,845		0.0000	1.0000	100.00
0.5	52,451,433		0.0000	1.0000	100.00
1.5	42,787,415		0.0000	1.0000	100.00
2.5	35,498,353		0.0000	1.0000	100.00
3.5	31,757,267	127,686	0.0040	0.9960	100.00
4.5	31,786,883		0.0000	1.0000	99.60
5.5	31,814,998		0.0000	1.0000	99.60
6.5	30,356,961		0.0000	1.0000	99.60
7.5	29,098,250	101,291	0.0035	0.9965	99.60
8.5	28,996,959		0.0000	1.0000	99.25
9.5	29,588,560	40,579	0.0014	0.9986	99.25
10.5	29,465,724		0.0000	1.0000	99.12
11.5	27,429,430		0.0000	1.0000	99.12
12.5	26,535,511	462,540	0.0174	0.9826	99.12
13.5	24,142,809		0.0000	1.0000	97.39
14.5	20,994,667		0.0000	1.0000	97.39
15.5	19,402,549	227,166	0.0117	0.9883	97.39
16.5	18,021,641		0.0000	1.0000	96.25
17.5	17,077,810	16,975	0.0010	0.9990	96.25
18.5	15,421,990	175,470	0.0114	0.9886	96.15
19.5	13,955,943	683,187	0.0490	0.9510	95.06
20.5	9,854,448		0.0000	1.0000	90.40
21.5	8,361,574	4,710	0.0006	0.9994	90.40
22.5	8,356,863	35,635	0.0043	0.9957	90.35
23.5	8,321,228		0.0000	1.0000	89.97
24.5	8,321,228	18,286	0.0022	0.9978	89.97
25.5	8,302,942	1,292	0.0002	0.9998	89.77
26.5	8,090,099	5,925	0.0007	0.9993	89.76
27.5	8,084,174	124,760	0.0154	0.9846	89.69
28.5	7,019,778	30,269	0.0043	0.9957	88.31
29.5	6,477,943	9,017	0.0014	0.9986	87.93
30.5	5,368,781		0.0000	1.0000	87.80
31.5	5,334,412	19,543	0.0037	0.9963	87.80
32.5	5,213,735		0.0000	1.0000	87.48
33.5	5,129,934	141,294	0.0275	0.9725	87.48
34.5	4,952,914		0.0000	1.0000	85.07
35.5	4,910,944	1,471	0.0003	0.9997	85.07
36.5	4,857,516		0.0000	1.0000	85.05
37.5	4,456,388	949	0.0002	0.9998	85.05
38.5	3,661,425	19,241	0.0053	0.9947	85.03

DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1943-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,464,818	262,739	0.0758	0.9242	84.58
40.5	3,051,702	1,614	0.0005	0.9995	78.17
41.5	2,938,371	87,764	0.0299	0.9701	78.13
42.5	2,741,867	22,285	0.0081	0.9919	75.79
43.5	2,693,335	3,773	0.0014	0.9986	75.18
44.5	2,293,324	17,444	0.0076	0.9924	75.07
45.5	1,630,404	44,352	0.0272	0.9728	74.50
46.5	1,586,052	13,357	0.0084	0.9916	72.47
47.5	1,436,124		0.0000	1.0000	71.86
48.5	1,386,888	43,524	0.0314	0.9686	71.86
49.5	1,317,782	197	0.0001	0.9999	69.61
50.5	1,116,655	1,514	0.0014	0.9986	69.60
51.5	1,328,637		0.0000	1.0000	69.50
52.5	1,230,152		0.0000	1.0000	69.50
53.5	1,230,152		0.0000	1.0000	69.50
54.5	1,214,340	366	0.0003	0.9997	69.50
55.5	943,626		0.0000	1.0000	69.48
56.5	878,585	323	0.0004	0.9996	69.48
57.5	757,295		0.0000	1.0000	69.46
58.5	746,864	51,545	0.0690	0.9310	69.46
59.5	691,223	25,012	0.0362	0.9638	64.66
60.5	666,211	21,159	0.0318	0.9682	62.32
61.5	625,892	4,301	0.0069	0.9931	60.34
62.5	621,591	14,414	0.0232	0.9768	59.93
63.5	345,876	1,151	0.0033	0.9967	58.54
64.5	344,725	51,583	0.1496	0.8504	58.35
65.5	293,143	42,430	0.1447	0.8553	49.61
66.5	244,561		0.0000	1.0000	42.43
67.5	21,699		0.0000	1.0000	42.43
68.5	21,699		0.0000	1.0000	42.43
69.5	21,699		0.0000	1.0000	42.43
70.5	21,699		0.0000	1.0000	42.43
71.5	10,864	10,864	1.0000		42.43
72.5					

DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE

PLACEMENT BAND 1943-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	48,059,482		0.0000	1.0000	100.00
0.5	46,194,525		0.0000	1.0000	100.00
1.5	36,564,876		0.0000	1.0000	100.00
2.5	29,275,813		0.0000	1.0000	100.00
3.5	25,618,528	127,686	0.0050	0.9950	100.00
4.5	25,797,960		0.0000	1.0000	99.50
5.5	25,856,060		0.0000	1.0000	99.50
6.5	24,520,703		0.0000	1.0000	99.50
7.5	23,673,598	101,291	0.0043	0.9957	99.50
8.5	25,060,730		0.0000	1.0000	99.08
9.5	26,035,660	40,579	0.0016	0.9984	99.08
10.5	26,162,525		0.0000	1.0000	98.92
11.5	24,518,974		0.0000	1.0000	98.92
12.5	23,813,368	462,540	0.0194	0.9806	98.92
13.5	21,446,913		0.0000	1.0000	97.00
14.5	18,705,034		0.0000	1.0000	97.00
15.5	17,774,314	227,166	0.0128	0.9872	97.00
16.5	16,393,407		0.0000	1.0000	95.76
17.5	15,724,916	16,975	0.0011	0.9989	95.76
18.5	14,137,875	175,470	0.0124	0.9876	95.66
19.5	12,730,802	683,187	0.0537	0.9463	94.47
20.5	8,859,490		0.0000	1.0000	89.40
21.5	7,375,982	4,710	0.0006	0.9994	89.40
22.5	7,470,128	35,635	0.0048	0.9952	89.34
23.5	7,434,493		0.0000	1.0000	88.92
24.5	7,450,305	18,286	0.0025	0.9975	88.92
25.5	7,526,271	1,292	0.0002	0.9998	88.70
26.5	7,395,036	5,925	0.0008	0.9992	88.68
27.5	7,441,292	124,760	0.0168	0.9832	88.61
28.5	6,403,769	30,269	0.0047	0.9953	87.13
29.5	5,917,576	9,017	0.0015	0.9985	86.71
30.5	4,808,413		0.0000	1.0000	86.58
31.5	4,814,363	19,543	0.0041	0.9959	86.58
32.5	4,694,052		0.0000	1.0000	86.23
33.5	4,963,350	141,294	0.0285	0.9715	86.23
34.5	4,786,329		0.0000	1.0000	83.78
35.5	4,757,103	1,471	0.0003	0.9997	83.78
36.5	4,830,366		0.0000	1.0000	83.75
37.5	4,429,238	949	0.0002	0.9998	83.75
38.5	3,634,275	19,241	0.0053	0.9947	83.73

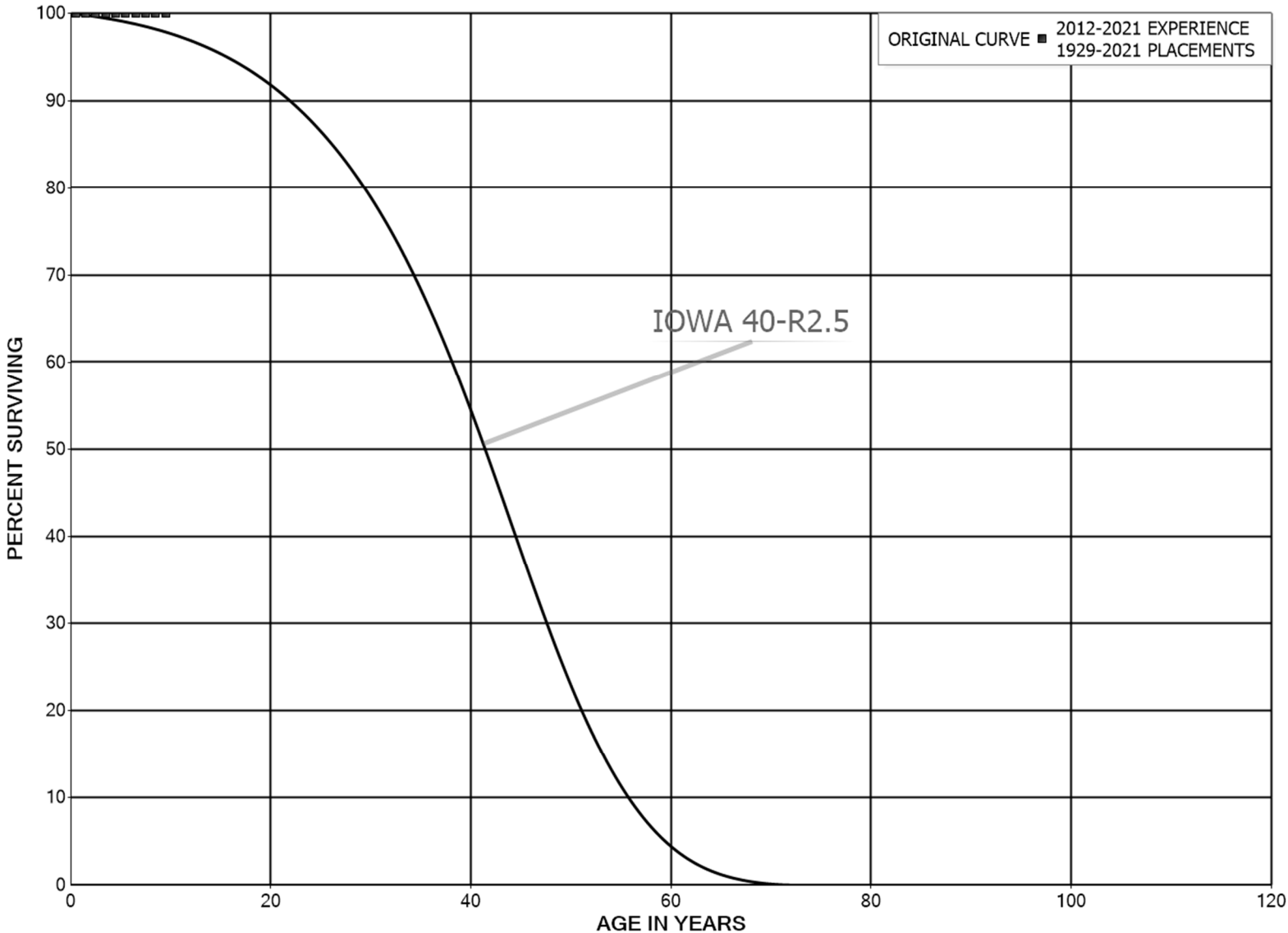
DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1943-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,437,668	262,739	0.0764	0.9236	83.29
40.5	3,028,853	1,614	0.0005	0.9995	76.92
41.5	2,927,506	87,764	0.0300	0.9700	76.88
42.5	2,731,003	22,285	0.0082	0.9918	74.58
43.5	2,682,470	3,773	0.0014	0.9986	73.97
44.5	2,282,460	17,444	0.0076	0.9924	73.87
45.5	1,619,539	44,352	0.0274	0.9726	73.30
46.5	1,575,187	13,357	0.0085	0.9915	71.29
47.5	1,425,259		0.0000	1.0000	70.69
48.5	1,386,888	43,524	0.0314	0.9686	70.69
49.5	1,317,782	197	0.0001	0.9999	68.47
50.5	1,116,655	1,514	0.0014	0.9986	68.46
51.5	1,328,637		0.0000	1.0000	68.37
52.5	1,230,152		0.0000	1.0000	68.37
53.5	1,230,152		0.0000	1.0000	68.37
54.5	1,214,340	366	0.0003	0.9997	68.37
55.5	943,626		0.0000	1.0000	68.35
56.5	878,585	323	0.0004	0.9996	68.35
57.5	757,295		0.0000	1.0000	68.32
58.5	746,864	51,545	0.0690	0.9310	68.32
59.5	691,223	25,012	0.0362	0.9638	63.61
60.5	666,211	21,159	0.0318	0.9682	61.30
61.5	625,892	4,301	0.0069	0.9931	59.36
62.5	621,591	14,414	0.0232	0.9768	58.95
63.5	345,876	1,151	0.0033	0.9967	57.58
64.5	344,725	51,583	0.1496	0.8504	57.39
65.5	293,143	42,430	0.1447	0.8553	48.80
66.5	244,561		0.0000	1.0000	41.74
67.5	21,699		0.0000	1.0000	41.74
68.5	21,699		0.0000	1.0000	41.74
69.5	21,699		0.0000	1.0000	41.74
70.5	21,699		0.0000	1.0000	41.74
71.5	10,864	10,864	1.0000		41.74
72.5					

DUKE ENERGY KENTUCKY
ACCOUNT 3534 STATION EQUIPMENT - STEP UP EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3534 STATION EQUIPMENT - STEP UP EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1929-2021			EXPERIENCE BAND 2012-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	6,453,325		0.0000	1.0000	100.00
0.5	5,838,602		0.0000	1.0000	100.00
1.5	5,838,602		0.0000	1.0000	100.00
2.5	5,838,602		0.0000	1.0000	100.00
3.5	5,838,602		0.0000	1.0000	100.00
4.5	5,838,602		0.0000	1.0000	100.00
5.5	5,838,602		0.0000	1.0000	100.00
6.5	5,838,602		0.0000	1.0000	100.00
7.5	5,838,602		0.0000	1.0000	100.00
8.5	5,838,602		0.0000	1.0000	100.00
9.5					100.00
10.5					
11.5					
12.5					
13.5					
14.5					
15.5					
16.5					
17.5					
18.5					
19.5					
20.5	1,218,688		0.0000		
21.5	1,218,688		0.0000		
22.5	1,218,688		0.0000		
23.5	1,218,688		0.0000		
24.5	1,218,688		0.0000		
25.5	1,218,688		0.0000		
26.5	1,218,688		0.0000		
27.5	1,218,688		0.0000		
28.5	1,218,688		0.0000		
29.5					
30.5					
31.5					
32.5					
33.5					
34.5					
35.5					
36.5					
37.5					
38.5					

DUKE ENERGY KENTUCKY

ACCOUNT 3534 STATION EQUIPMENT - STEP UP EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2021		EXPERIENCE BAND 2012-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	42,134		0.0000		
40.5	42,134		0.0000		
41.5	42,134		0.0000		
42.5	42,134	42,134	1.0000		
43.5					
44.5					
45.5					
46.5					
47.5					
48.5					
49.5					
50.5					
51.5					
52.5	436,903		0.0000		
53.5	436,903		0.0000		
54.5	436,903		0.0000		
55.5	436,903	436,903	1.0000		
56.5					
57.5					
58.5					
59.5					
60.5					
61.5					
62.5					
63.5	233,844		0.0000		
64.5	233,844		0.0000		
65.5	233,844		0.0000		
66.5	235,505	233,844	0.9929		
67.5	1,661		0.0000		
68.5	1,661		0.0000		
69.5	1,661	1,661	1.0000		
70.5					
71.5					
72.5					
73.5					
74.5					
75.5					
76.5					
77.5					
78.5					

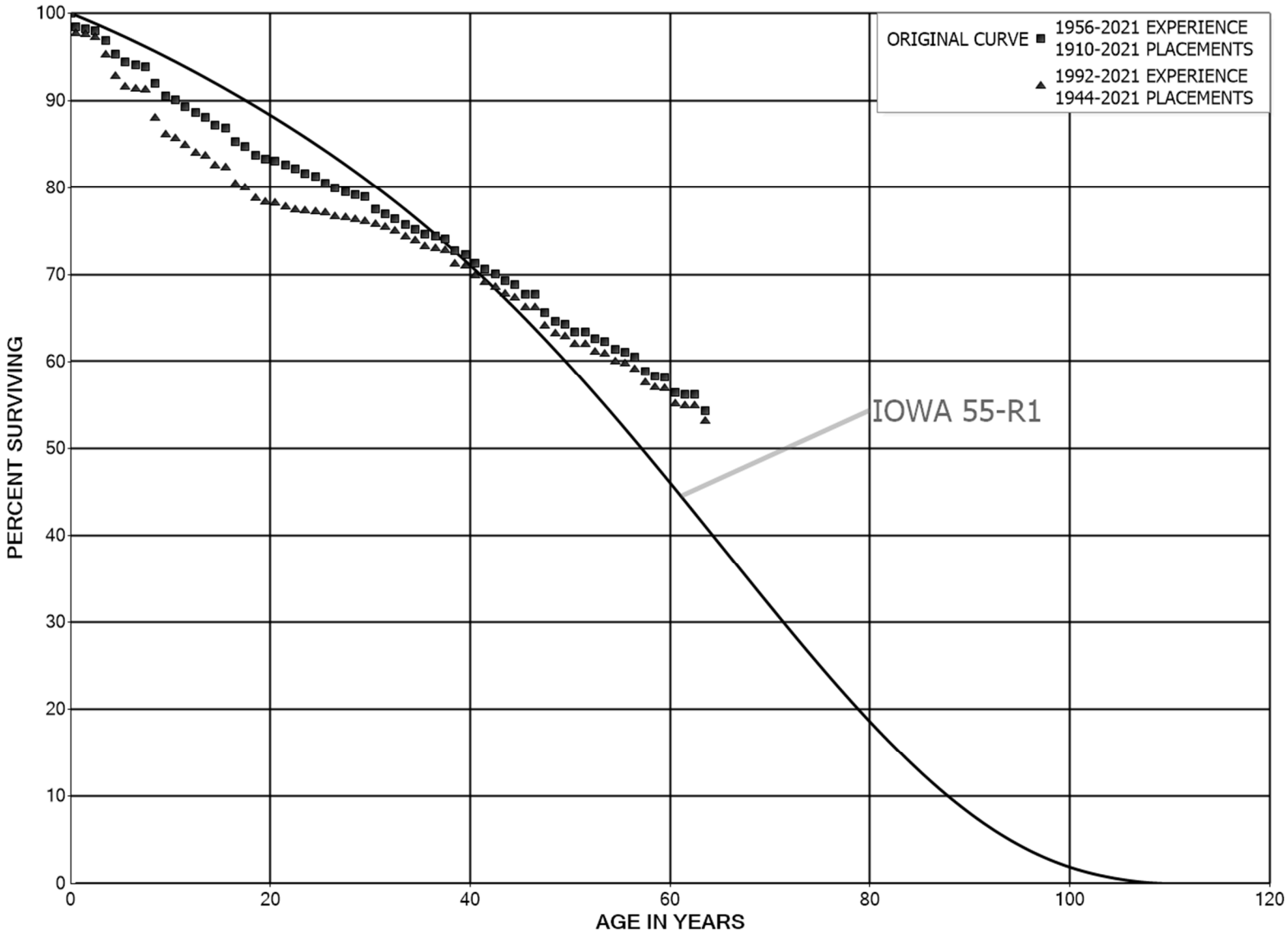
DUKE ENERGY KENTUCKY

ACCOUNT 3534 STATION EQUIPMENT - STEP UP EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2021			EXPERIENCE BAND 2012-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5					
80.5					
81.5					
82.5					
83.5	63,751		0.0000		
84.5	63,751		0.0000		
85.5	63,751		0.0000		
86.5	63,751	63,751	1.0000		
87.5					

DUKE ENERGY KENTUCKY
ACCOUNT 3550 POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1910-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	20,925,502	338,952	0.0162	0.9838	100.00
0.5	16,868,677	29,258	0.0017	0.9983	98.38
1.5	14,754,478	31,552	0.0021	0.9979	98.21
2.5	13,091,835	154,660	0.0118	0.9882	98.00
3.5	12,231,101	201,657	0.0165	0.9835	96.84
4.5	11,318,704	103,081	0.0091	0.9909	95.25
5.5	10,820,829	31,155	0.0029	0.9971	94.38
6.5	10,510,076	24,723	0.0024	0.9976	94.11
7.5	10,225,636	206,866	0.0202	0.9798	93.88
8.5	8,814,236	140,341	0.0159	0.9841	91.99
9.5	7,925,873	42,369	0.0053	0.9947	90.52
10.5	7,757,685	62,348	0.0080	0.9920	90.04
11.5	7,085,566	55,186	0.0078	0.9922	89.31
12.5	6,859,598	40,897	0.0060	0.9940	88.62
13.5	6,660,076	69,487	0.0104	0.9896	88.09
14.5	5,894,304	20,793	0.0035	0.9965	87.17
15.5	5,807,231	106,320	0.0183	0.9817	86.86
16.5	5,509,127	38,553	0.0070	0.9930	85.27
17.5	5,041,878	56,956	0.0113	0.9887	84.68
18.5	4,707,988	25,408	0.0054	0.9946	83.72
19.5	4,277,206	12,139	0.0028	0.9972	83.27
20.5	4,252,455	23,763	0.0056	0.9944	83.03
21.5	4,190,818	22,064	0.0053	0.9947	82.57
22.5	4,069,159	24,800	0.0061	0.9939	82.13
23.5	3,995,939	15,490	0.0039	0.9961	81.63
24.5	3,814,129	39,974	0.0105	0.9895	81.32
25.5	3,714,587	24,850	0.0067	0.9933	80.46
26.5	3,431,747	17,189	0.0050	0.9950	79.92
27.5	3,308,840	13,454	0.0041	0.9959	79.52
28.5	3,170,014	10,603	0.0033	0.9967	79.20
29.5	2,953,684	55,394	0.0188	0.9812	78.94
30.5	2,818,261	17,971	0.0064	0.9936	77.46
31.5	2,734,578	20,276	0.0074	0.9926	76.96
32.5	2,684,362	24,981	0.0093	0.9907	76.39
33.5	2,302,198	13,797	0.0060	0.9940	75.68
34.5	2,233,043	17,850	0.0080	0.9920	75.23
35.5	2,205,680	7,001	0.0032	0.9968	74.63
36.5	2,139,972	7,737	0.0036	0.9964	74.39
37.5	2,118,181	39,256	0.0185	0.9815	74.12
38.5	1,630,693	9,444	0.0058	0.9942	72.75

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,435,191	20,946	0.0146	0.9854	72.32
40.5	1,218,417	11,505	0.0094	0.9906	71.27
41.5	1,182,869	8,426	0.0071	0.9929	70.60
42.5	1,149,956	12,637	0.0110	0.9890	70.09
43.5	1,134,021	8,493	0.0075	0.9925	69.32
44.5	1,115,927	17,237	0.0154	0.9846	68.80
45.5	1,013,404	639	0.0006	0.9994	67.74
46.5	979,750	30,846	0.0315	0.9685	67.70
47.5	732,652	10,351	0.0141	0.9859	65.57
48.5	579,515	2,946	0.0051	0.9949	64.64
49.5	552,077	7,451	0.0135	0.9865	64.31
50.5	436,241	551	0.0013	0.9987	63.44
51.5	421,019	5,334	0.0127	0.9873	63.36
52.5	394,703	1,651	0.0042	0.9958	62.56
53.5	392,875	5,940	0.0151	0.9849	62.30
54.5	380,423	1,490	0.0039	0.9961	61.36
55.5	366,119	3,720	0.0102	0.9898	61.12
56.5	325,367	8,774	0.0270	0.9730	60.50
57.5	169,698	1,627	0.0096	0.9904	58.87
58.5	159,233	226	0.0014	0.9986	58.30
59.5	158,376	5,091	0.0321	0.9679	58.22
60.5	117,792	433	0.0037	0.9963	56.35
61.5	117,360	27	0.0002	0.9998	56.14
62.5	117,333	3,762	0.0321	0.9679	56.13
63.5	113,571		0.0000	1.0000	54.33
64.5	113,571		0.0000	1.0000	54.33
65.5	113,571		0.0000	1.0000	54.33
66.5	113,571		0.0000	1.0000	54.33
67.5	113,571		0.0000	1.0000	54.33
68.5	113,571	4	0.0000	1.0000	54.33
69.5	113,567		0.0000	1.0000	54.33
70.5	113,567	69	0.0006	0.9994	54.33
71.5	113,497	113,351	0.9987	0.0013	54.29
72.5	12		0.0000	1.0000	0.07
73.5	12		0.0000	1.0000	0.07
74.5	12		0.0000	1.0000	0.07
75.5					0.07

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1944-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	14,452,159	338,952	0.0235	0.9765	100.00
0.5	10,515,843	19,886	0.0019	0.9981	97.65
1.5	8,935,480	29,631	0.0033	0.9967	97.47
2.5	7,411,324	148,516	0.0200	0.9800	97.15
3.5	7,515,600	195,762	0.0260	0.9740	95.20
4.5	6,633,616	90,189	0.0136	0.9864	92.72
5.5	6,108,672	10,481	0.0017	0.9983	91.46
6.5	5,779,111	10,521	0.0018	0.9982	91.30
7.5	5,522,864	194,647	0.0352	0.9648	91.14
8.5	5,699,025	119,603	0.0210	0.9790	87.92
9.5	5,290,068	30,430	0.0058	0.9942	86.08
10.5	5,407,959	48,267	0.0089	0.9911	85.58
11.5	4,989,981	47,903	0.0096	0.9904	84.82
12.5	4,837,781	20,776	0.0043	0.9957	84.01
13.5	4,662,128	62,715	0.0135	0.9865	83.65
14.5	3,917,908	9,044	0.0023	0.9977	82.52
15.5	4,028,015	95,845	0.0238	0.9762	82.33
16.5	3,786,234	19,979	0.0053	0.9947	80.37
17.5	3,377,828	49,618	0.0147	0.9853	79.95
18.5	3,218,457	18,534	0.0058	0.9942	78.77
19.5	3,175,509	3,788	0.0012	0.9988	78.32
20.5	3,289,086	19,946	0.0061	0.9939	78.23
21.5	3,237,907	13,637	0.0042	0.9958	77.75
22.5	3,152,475	7,305	0.0023	0.9977	77.42
23.5	3,097,634	4,588	0.0015	0.9985	77.24
24.5	2,942,312	3,085	0.0010	0.9990	77.13
25.5	2,895,338	15,725	0.0054	0.9946	77.05
26.5	2,669,718	5,602	0.0021	0.9979	76.63
27.5	2,765,008	6,865	0.0025	0.9975	76.47
28.5	2,673,123	6,194	0.0023	0.9977	76.28
29.5	2,441,353	11,040	0.0045	0.9955	76.10
30.5	2,414,865	13,340	0.0055	0.9945	75.76
31.5	2,343,805	13,484	0.0058	0.9942	75.34
32.5	2,302,947	19,292	0.0084	0.9916	74.91
33.5	1,963,636	12,177	0.0062	0.9938	74.28
34.5	1,914,957	17,302	0.0090	0.9910	73.82
35.5	1,890,178	5,779	0.0031	0.9969	73.15
36.5	1,831,504	4,497	0.0025	0.9975	72.93
37.5	1,813,005	39,160	0.0216	0.9784	72.75
38.5	1,325,815	4,526	0.0034	0.9966	71.18

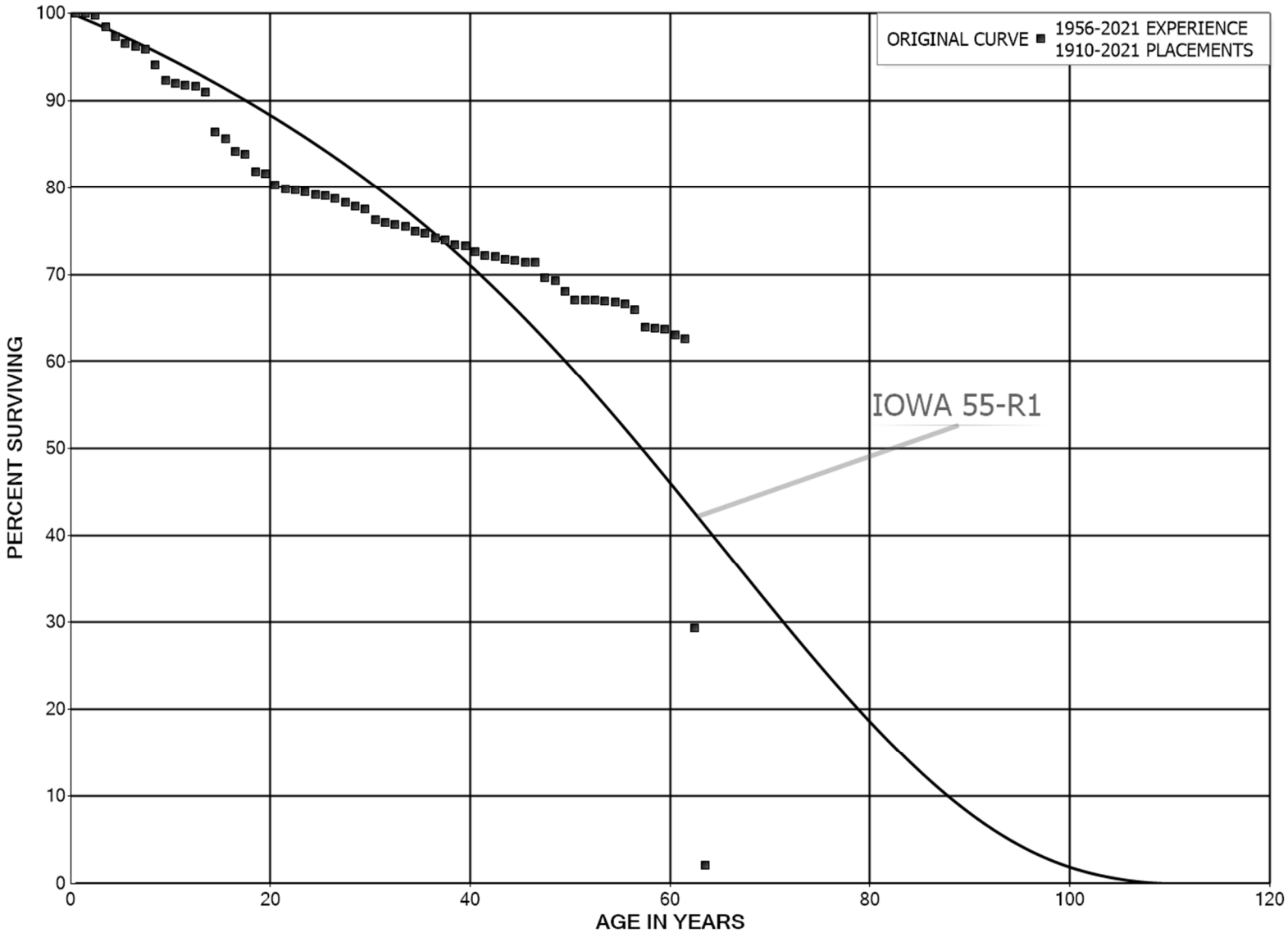
DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1944-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,311,523	20,881	0.0159	0.9841	70.93	
40.5	1,094,813	11,505	0.0105	0.9895	69.81	
41.5	1,059,652	8,334	0.0079	0.9921	69.07	
42.5	1,140,320	12,628	0.0111	0.9889	68.53	
43.5	1,124,393	8,414	0.0075	0.9925	67.77	
44.5	1,106,419	17,237	0.0156	0.9844	67.26	
45.5	1,003,913	639	0.0006	0.9994	66.21	
46.5	970,259	30,711	0.0317	0.9683	66.17	
47.5	723,319	10,351	0.0143	0.9857	64.08	
48.5	570,182	2,946	0.0052	0.9948	63.16	
49.5	542,744	7,451	0.0137	0.9863	62.83	
50.5	426,909	551	0.0013	0.9987	61.97	
51.5	420,846	5,334	0.0127	0.9873	61.89	
52.5	394,678	1,651	0.0042	0.9958	61.11	
53.5	392,851	5,940	0.0151	0.9849	60.85	
54.5	380,398	1,490	0.0039	0.9961	59.93	
55.5	366,119	3,720	0.0102	0.9898	59.70	
56.5	325,367	8,774	0.0270	0.9730	59.09	
57.5	169,698	1,627	0.0096	0.9904	57.50	
58.5	159,233	226	0.0014	0.9986	56.95	
59.5	158,376	5,091	0.0321	0.9679	56.87	
60.5	117,792	433	0.0037	0.9963	55.04	
61.5	117,360	27	0.0002	0.9998	54.84	
62.5	117,333	3,762	0.0321	0.9679	54.82	
63.5	113,571		0.0000	1.0000	53.06	
64.5	113,571		0.0000	1.0000	53.06	
65.5	113,571		0.0000	1.0000	53.06	
66.5	113,571		0.0000	1.0000	53.06	
67.5	113,571		0.0000	1.0000	53.06	
68.5	113,571	4	0.0000	1.0000	53.06	
69.5	113,567		0.0000	1.0000	53.06	
70.5	113,567	69	0.0006	0.9994	53.06	
71.5	113,497	113,351	0.9987	0.0013	53.03	
72.5	12		0.0000	1.0000	0.07	
73.5	12		0.0000	1.0000	0.07	
74.5	12		0.0000	1.0000	0.07	
75.5					0.07	

DUKE ENERGY KENTUCKY
ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1910-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	15,428,880	203	0.0000	1.0000	100.00	
0.5	13,359,139	2,071	0.0002	0.9998	100.00	
1.5	10,563,154	23,452	0.0022	0.9978	99.98	
2.5	9,062,794	127,684	0.0141	0.9859	99.76	
3.5	8,488,839	96,474	0.0114	0.9886	98.36	
4.5	8,416,506	68,155	0.0081	0.9919	97.24	
5.5	7,934,862	21,379	0.0027	0.9973	96.45	
6.5	7,700,020	31,300	0.0041	0.9959	96.19	
7.5	7,638,664	141,547	0.0185	0.9815	95.80	
8.5	7,165,375	136,528	0.0191	0.9809	94.02	
9.5	6,764,891	24,412	0.0036	0.9964	92.23	
10.5	6,623,900	16,121	0.0024	0.9976	91.90	
11.5	6,255,708	7,887	0.0013	0.9987	91.68	
12.5	6,124,290	40,288	0.0066	0.9934	91.56	
13.5	6,053,345	303,571	0.0501	0.9499	90.96	
14.5	5,029,062	45,067	0.0090	0.9910	86.40	
15.5	4,913,540	85,945	0.0175	0.9825	85.62	
16.5	4,773,694	15,662	0.0033	0.9967	84.13	
17.5	4,626,079	112,606	0.0243	0.9757	83.85	
18.5	4,242,005	8,742	0.0021	0.9979	81.81	
19.5	4,157,296	67,787	0.0163	0.9837	81.64	
20.5	4,041,654	25,261	0.0063	0.9937	80.31	
21.5	3,945,276	1,659	0.0004	0.9996	79.81	
22.5	3,829,562	10,912	0.0028	0.9972	79.77	
23.5	3,816,394	17,535	0.0046	0.9954	79.55	
24.5	3,694,550	4,824	0.0013	0.9987	79.18	
25.5	3,617,967	14,453	0.0040	0.9960	79.08	
26.5	3,384,384	20,369	0.0060	0.9940	78.76	
27.5	3,338,292	20,042	0.0060	0.9940	78.29	
28.5	3,266,684	10,876	0.0033	0.9967	77.82	
29.5	2,933,184	47,277	0.0161	0.9839	77.56	
30.5	2,845,446	15,150	0.0053	0.9947	76.31	
31.5	2,765,115	4,992	0.0018	0.9982	75.90	
32.5	2,760,122	11,199	0.0041	0.9959	75.76	
33.5	2,346,679	15,579	0.0066	0.9934	75.46	
34.5	2,328,476	6,905	0.0030	0.9970	74.96	
35.5	2,318,196	17,289	0.0075	0.9925	74.73	
36.5	2,188,868	5,245	0.0024	0.9976	74.18	
37.5	2,182,967	18,561	0.0085	0.9915	74.00	
38.5	1,579,084	1,481	0.0009	0.9991	73.37	

DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,468,159	13,580	0.0092	0.9908	73.30	
40.5	1,227,438	8,363	0.0068	0.9932	72.62	
41.5	1,208,329	1,425	0.0012	0.9988	72.13	
42.5	1,200,078	5,786	0.0048	0.9952	72.04	
43.5	1,194,292	1,155	0.0010	0.9990	71.70	
44.5	1,170,945	3,267	0.0028	0.9972	71.63	
45.5	1,067,672	1,273	0.0012	0.9988	71.43	
46.5	1,045,606	25,691	0.0246	0.9754	71.34	
47.5	855,953	4,380	0.0051	0.9949	69.59	
48.5	721,746	12,265	0.0170	0.9830	69.23	
49.5	700,302	9,677	0.0138	0.9862	68.06	
50.5	614,528	117	0.0002	0.9998	67.11	
51.5	613,348	657	0.0011	0.9989	67.10	
52.5	581,084	346	0.0006	0.9994	67.03	
53.5	580,649	1,070	0.0018	0.9982	66.99	
54.5	572,536	2,534	0.0044	0.9956	66.87	
55.5	550,660	4,742	0.0086	0.9914	66.57	
56.5	480,070	14,562	0.0303	0.9697	66.00	
57.5	379,646	1,188	0.0031	0.9969	64.00	
58.5	367,525	196	0.0005	0.9995	63.80	
59.5	366,511	4,161	0.0114	0.9886	63.76	
60.5	285,255	1,941	0.0068	0.9932	63.04	
61.5	266,864	142,034	0.5322	0.4678	62.61	
62.5	117,665	109,288	0.9288	0.0712	29.29	
63.5	8,376	37	0.0044	0.9956	2.08	
64.5	8,340	16	0.0019	0.9981	2.08	
65.5	8,323	212	0.0254	0.9746	2.07	
66.5	8,112		0.0000	1.0000	2.02	
67.5	8,112		0.0000	1.0000	2.02	
68.5	8,112	1	0.0001	0.9999	2.02	
69.5	8,111	17	0.0020	0.9980	2.02	
70.5	8,094		0.0000	1.0000	2.01	
71.5	8,094	113	0.0139	0.9861	2.01	
72.5	7,981		0.0000	1.0000	1.99	
73.5	7,981		0.0000	1.0000	1.99	
74.5	7,981		0.0000	1.0000	1.99	
75.5	7,981		0.0000	1.0000	1.99	
76.5	7,981		0.0000	1.0000	1.99	
77.5	7,981		0.0000	1.0000	1.99	
78.5	7,981		0.0000	1.0000	1.99	

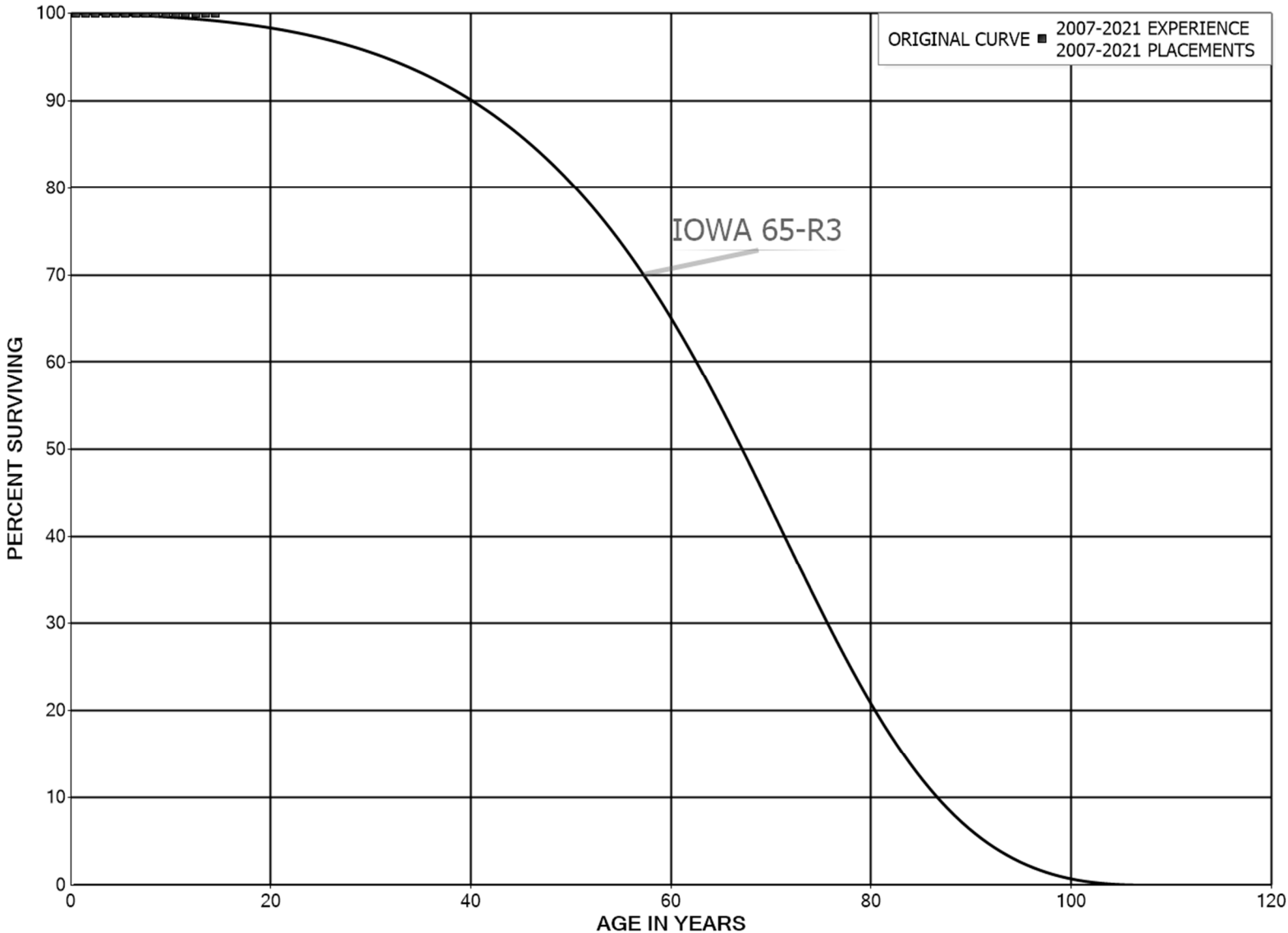
DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	7,981	1,883	0.2359	0.7641	1.99	
80.5	6,098		0.0000	1.0000	1.52	
81.5	6,098		0.0000	1.0000	1.52	
82.5	6,098		0.0000	1.0000	1.52	
83.5	6,098		0.0000	1.0000	1.52	
84.5	6,098		0.0000	1.0000	1.52	
85.5	6,098		0.0000	1.0000	1.52	
86.5	6,098		0.0000	1.0000	1.52	
87.5	6,098		0.0000	1.0000	1.52	
88.5	6,098	27	0.0045	0.9955	1.52	
89.5	6,071		0.0000	1.0000	1.51	
90.5	6,071		0.0000	1.0000	1.51	
91.5	6,071		0.0000	1.0000	1.51	
92.5	6,071	0	0.0000	1.0000	1.51	
93.5	6,071	50	0.0082	0.9918	1.51	
94.5	6,021		0.0000	1.0000	1.50	
95.5	6,021	6,021	1.0000		1.50	
96.5						

DUKE ENERGY KENTUCKY
ACCOUNT 3561 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

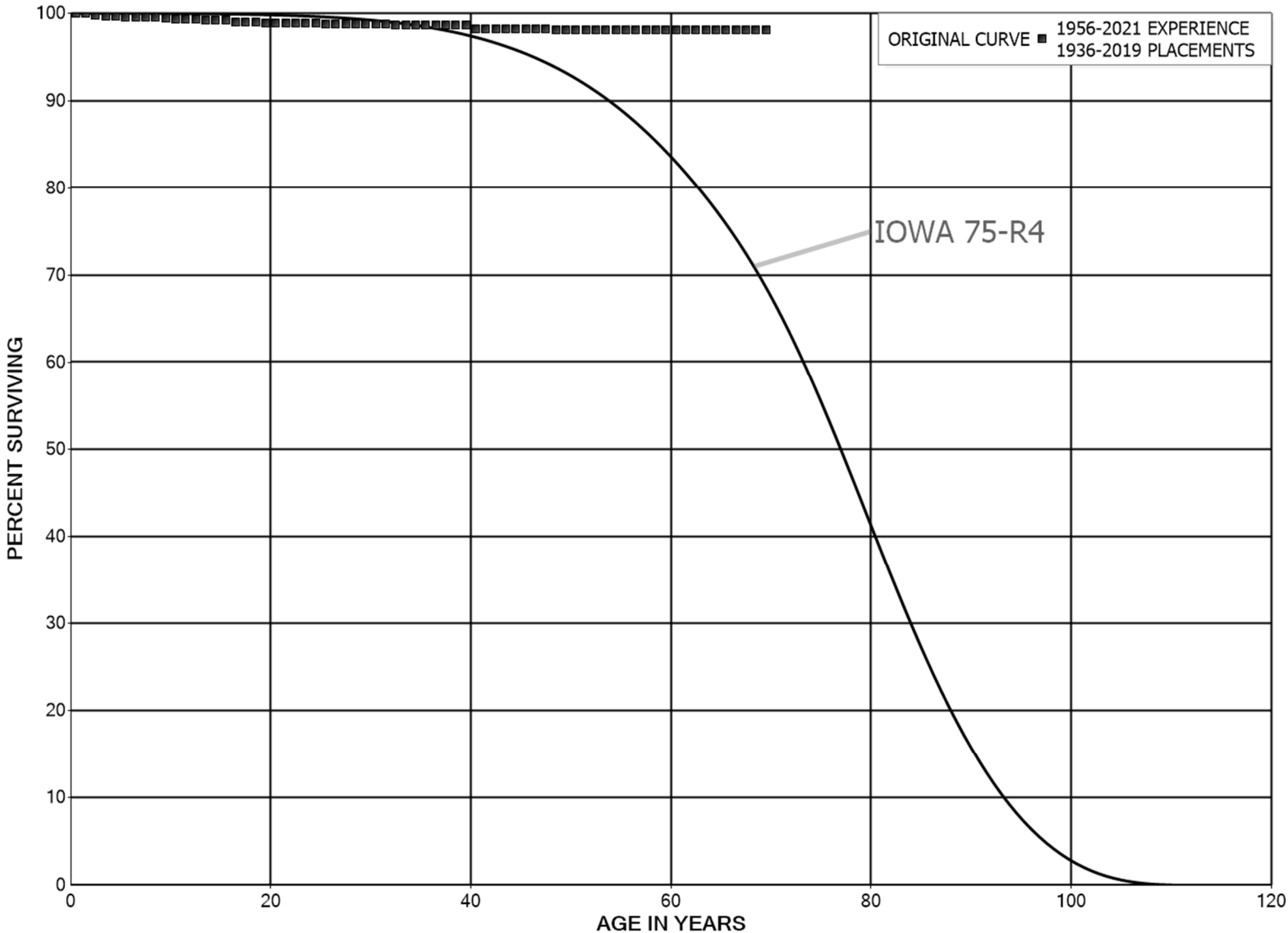
ACCOUNT 3561 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2021 EXPERIENCE BAND 2007-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,841,853		0.0000	1.0000	100.00
0.5	1,187,047		0.0000	1.0000	100.00
1.5	914,774		0.0000	1.0000	100.00
2.5	752,634		0.0000	1.0000	100.00
3.5	457,190		0.0000	1.0000	100.00
4.5	180,619		0.0000	1.0000	100.00
5.5	156,913		0.0000	1.0000	100.00
6.5	128,082		0.0000	1.0000	100.00
7.5	99,459		0.0000	1.0000	100.00
8.5	81,625		0.0000	1.0000	100.00
9.5	36,897		0.0000	1.0000	100.00
10.5	19,605		0.0000	1.0000	100.00
11.5	11,603		0.0000	1.0000	100.00
12.5	4,953		0.0000	1.0000	100.00
13.5	4,274		0.0000	1.0000	100.00
14.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3601 RIGHTS OF WAY
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3601 RIGHTS OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1936-2019			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,462,878		0.0000	1.0000	100.00
0.5	4,473,783	948	0.0002	0.9998	100.00
1.5	4,482,503	10,790	0.0024	0.9976	99.98
2.5	4,464,805	3,382	0.0008	0.9992	99.74
3.5	4,465,663	1,615	0.0004	0.9996	99.66
4.5	4,452,400	3,935	0.0009	0.9991	99.63
5.5	4,450,230	209	0.0000	1.0000	99.54
6.5	4,458,828	1,239	0.0003	0.9997	99.53
7.5	4,460,938	980	0.0002	0.9998	99.51
8.5	4,461,793	2,431	0.0005	0.9995	99.48
9.5	4,460,165	5,195	0.0012	0.9988	99.43
10.5	4,455,301	2,117	0.0005	0.9995	99.31
11.5	4,453,646	1,347	0.0003	0.9997	99.27
12.5	4,457,196	1,492	0.0003	0.9997	99.24
13.5	4,460,869	139	0.0000	1.0000	99.20
14.5	4,462,304	1,621	0.0004	0.9996	99.20
15.5	4,463,714	8,197	0.0018	0.9982	99.16
16.5	4,456,083	1,492	0.0003	0.9997	98.98
17.5	4,459,147	2,116	0.0005	0.9995	98.95
18.5	4,478,172	1,091	0.0002	0.9998	98.90
19.5	4,477,113	1,160	0.0003	0.9997	98.88
20.5	4,475,953	79	0.0000	1.0000	98.85
21.5	4,457,596	388	0.0001	0.9999	98.85
22.5	4,457,208	1,110	0.0002	0.9998	98.84
23.5	4,456,098	1,535	0.0003	0.9997	98.82
24.5	4,454,563	650	0.0001	0.9999	98.78
25.5	4,387,134	179	0.0000	1.0000	98.77
26.5	4,208,005	554	0.0001	0.9999	98.77
27.5	4,064,567	410	0.0001	0.9999	98.75
28.5	3,897,532	750	0.0002	0.9998	98.74
29.5	3,689,846	883	0.0002	0.9998	98.72
30.5	3,404,863	344	0.0001	0.9999	98.70
31.5	3,166,164	1,255	0.0004	0.9996	98.69
32.5	2,891,550	323	0.0001	0.9999	98.65
33.5	2,728,964	411	0.0002	0.9998	98.64
34.5	2,354,371	459	0.0002	0.9998	98.62
35.5	2,127,030	268	0.0001	0.9999	98.61
36.5	1,904,533	139	0.0001	0.9999	98.59
37.5	1,763,777	113	0.0001	0.9999	98.59
38.5	1,525,354	143	0.0001	0.9999	98.58

DUKE ENERGY KENTUCKY

ACCOUNT 3601 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1936-2019			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,410,381	6,052	0.0043	0.9957	98.57	
40.5	1,280,357	8	0.0000	1.0000	98.15	
41.5	1,159,892	54	0.0000	1.0000	98.15	
42.5	1,088,710	121	0.0001	0.9999	98.14	
43.5	1,026,278	10	0.0000	1.0000	98.13	
44.5	973,665	1	0.0000	1.0000	98.13	
45.5	898,113		0.0000	1.0000	98.13	
46.5	836,224		0.0000	1.0000	98.13	
47.5	695,418	84	0.0001	0.9999	98.13	
48.5	617,157		0.0000	1.0000	98.12	
49.5	549,585		0.0000	1.0000	98.12	
50.5	503,848		0.0000	1.0000	98.12	
51.5	456,732		0.0000	1.0000	98.12	
52.5	425,713		0.0000	1.0000	98.12	
53.5	391,103	10	0.0000	1.0000	98.12	
54.5	353,432		0.0000	1.0000	98.12	
55.5	324,863	26	0.0001	0.9999	98.12	
56.5	277,780	12	0.0000	1.0000	98.11	
57.5	256,470	14	0.0001	0.9999	98.10	
58.5	232,867		0.0000	1.0000	98.10	
59.5	202,801		0.0000	1.0000	98.10	
60.5	166,838		0.0000	1.0000	98.10	
61.5	149,610		0.0000	1.0000	98.10	
62.5	138,012		0.0000	1.0000	98.10	
63.5	123,907		0.0000	1.0000	98.10	
64.5	110,002		0.0000	1.0000	98.10	
65.5	95,957		0.0000	1.0000	98.10	
66.5	91,197		0.0000	1.0000	98.10	
67.5	81,694		0.0000	1.0000	98.10	
68.5	79,091		0.0000	1.0000	98.10	
69.5	66,364		0.0000	1.0000	98.10	
70.5	58,017		0.0000	1.0000	98.10	
71.5	56,279		0.0000	1.0000	98.10	
72.5	47,603		0.0000	1.0000	98.10	
73.5	44,254		0.0000	1.0000	98.10	
74.5	42,454		0.0000	1.0000	98.10	
75.5	41,672		0.0000	1.0000	98.10	
76.5	41,342		0.0000	1.0000	98.10	
77.5	40,879		0.0000	1.0000	98.10	
78.5	35,982		0.0000	1.0000	98.10	

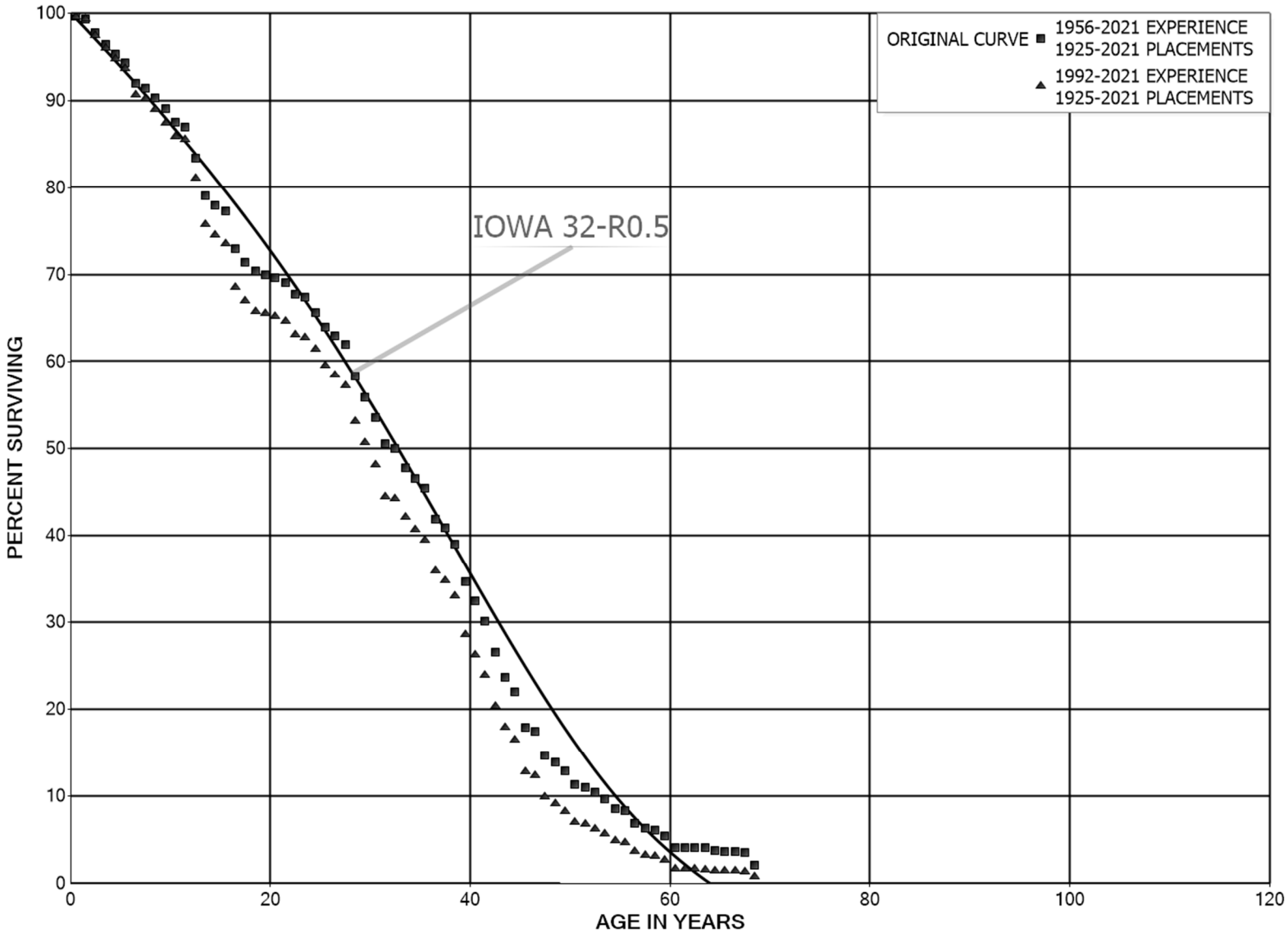
DUKE ENERGY KENTUCKY

ACCOUNT 3601 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1936-2019			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	30,818		0.0000	1.0000	98.10
80.5	29,244		0.0000	1.0000	98.10
81.5	26,213		0.0000	1.0000	98.10
82.5	25,646		0.0000	1.0000	98.10
83.5	21,091		0.0000	1.0000	98.10
84.5					98.10

DUKE ENERGY KENTUCKY
ACCOUNT 3620 STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	92,572,076	370,036	0.0040	0.9960	100.00
0.5	88,429,127	236,593	0.0027	0.9973	99.60
1.5	74,733,681	1,211,495	0.0162	0.9838	99.33
2.5	54,970,504	751,839	0.0137	0.9863	97.72
3.5	46,723,275	528,294	0.0113	0.9887	96.39
4.5	43,110,128	469,307	0.0109	0.9891	95.30
5.5	40,038,801	990,543	0.0247	0.9753	94.26
6.5	37,591,972	201,642	0.0054	0.9946	91.93
7.5	34,547,654	435,681	0.0126	0.9874	91.43
8.5	31,203,755	422,639	0.0135	0.9865	90.28
9.5	29,055,996	506,954	0.0174	0.9826	89.06
10.5	28,330,191	178,029	0.0063	0.9937	87.50
11.5	28,094,916	1,139,050	0.0405	0.9595	86.95
12.5	26,757,056	1,406,697	0.0526	0.9474	83.43
13.5	24,559,042	321,376	0.0131	0.9869	79.04
14.5	23,285,668	225,530	0.0097	0.9903	78.01
15.5	21,621,175	1,202,105	0.0556	0.9444	77.25
16.5	19,542,511	425,883	0.0218	0.9782	72.96
17.5	18,200,035	252,790	0.0139	0.9861	71.37
18.5	17,020,298	112,524	0.0066	0.9934	70.38
19.5	16,018,168	72,458	0.0045	0.9955	69.91
20.5	14,653,701	116,124	0.0079	0.9921	69.60
21.5	14,536,079	280,076	0.0193	0.9807	69.04
22.5	14,231,793	67,275	0.0047	0.9953	67.71
23.5	14,165,983	375,544	0.0265	0.9735	67.39
24.5	13,694,562	337,963	0.0247	0.9753	65.61
25.5	13,490,987	221,904	0.0164	0.9836	63.99
26.5	12,641,298	198,619	0.0157	0.9843	62.94
27.5	12,440,646	737,172	0.0593	0.9407	61.95
28.5	11,117,276	457,680	0.0412	0.9588	58.28
29.5	9,982,209	424,119	0.0425	0.9575	55.88
30.5	9,225,795	525,702	0.0570	0.9430	53.50
31.5	8,700,093	93,289	0.0107	0.9893	50.45
32.5	8,606,804	368,497	0.0428	0.9572	49.91
33.5	7,917,809	211,349	0.0267	0.9733	47.78
34.5	7,704,068	175,689	0.0228	0.9772	46.50
35.5	7,514,736	592,619	0.0789	0.9211	45.44
36.5	6,850,048	176,078	0.0257	0.9743	41.86
37.5	6,505,483	284,129	0.0437	0.9563	40.78
38.5	6,114,849	683,850	0.1118	0.8882	39.00

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,153,936	339,851	0.0659	0.9341	34.64
40.5	4,807,794	335,849	0.0699	0.9301	32.35
41.5	4,465,005	532,369	0.1192	0.8808	30.09
42.5	3,927,952	423,616	0.1078	0.8922	26.51
43.5	3,504,337	253,057	0.0722	0.9278	23.65
44.5	3,244,998	602,743	0.1857	0.8143	21.94
45.5	2,452,507	67,695	0.0276	0.9724	17.86
46.5	2,384,784	371,860	0.1559	0.8441	17.37
47.5	2,012,348	120,772	0.0600	0.9400	14.66
48.5	1,891,576	130,690	0.0691	0.9309	13.78
49.5	1,759,178	204,432	0.1162	0.8838	12.83
50.5	1,548,023	53,735	0.0347	0.9653	11.34
51.5	1,491,432	76,997	0.0516	0.9484	10.95
52.5	1,412,909	103,371	0.0732	0.9268	10.38
53.5	1,309,538	145,494	0.1111	0.8889	9.62
54.5	1,161,007	37,007	0.0319	0.9681	8.55
55.5	1,123,246	196,403	0.1749	0.8251	8.28
56.5	926,844	74,590	0.0805	0.9195	6.83
57.5	764,435	22,215	0.0291	0.9709	6.28
58.5	742,220	80,554	0.1085	0.8915	6.10
59.5	661,667	163,349	0.2469	0.7531	5.44
60.5	498,318	95	0.0002	0.9998	4.10
61.5	476,645	1,117	0.0023	0.9977	4.09
62.5	475,528	6,139	0.0129	0.9871	4.08
63.5	469,389	38,084	0.0811	0.9189	4.03
64.5	431,306	8,926	0.0207	0.9793	3.70
65.5	422,379	3,414	0.0081	0.9919	3.63
66.5	418,965	9,663	0.0231	0.9769	3.60
67.5	409,302	169,540	0.4142	0.5858	3.52
68.5	239,762	18,153	0.0757	0.9243	2.06
69.5	219,681	6,907	0.0314	0.9686	1.90
70.5	212,774	109,514	0.5147	0.4853	1.84
71.5	103,260	2,935	0.0284	0.9716	0.89
72.5	100,325	4,990	0.0497	0.9503	0.87
73.5	95,335		0.0000	1.0000	0.83
74.5	95,335	40	0.0004	0.9996	0.83
75.5	95,296	73	0.0008	0.9992	0.83
76.5	95,223	1,590	0.0167	0.9833	0.83
77.5	93,632		0.0000	1.0000	0.81
78.5	93,632		0.0000	1.0000	0.81

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	93,632	6,434	0.0687	0.9313	0.81	
80.5	87,198		0.0000	1.0000	0.76	
81.5	87,198	870	0.0100	0.9900	0.76	
82.5	86,328		0.0000	1.0000	0.75	
83.5	86,328		0.0000	1.0000	0.75	
84.5	86,328	51,525	0.5969	0.4031	0.75	
85.5	34,803		0.0000	1.0000	0.30	
86.5	34,803	34,803	1.0000		0.30	
87.5						

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	81,961,403	370,031	0.0045	0.9955	100.00
0.5	79,210,047	233,327	0.0029	0.9971	99.55
1.5	65,335,217	1,205,891	0.0185	0.9815	99.26
2.5	45,486,639	668,812	0.0147	0.9853	97.42
3.5	37,926,826	480,352	0.0127	0.9873	95.99
4.5	34,366,108	434,216	0.0126	0.9874	94.78
5.5	31,256,990	976,324	0.0312	0.9688	93.58
6.5	28,463,166	141,669	0.0050	0.9950	90.65
7.5	25,813,519	358,088	0.0139	0.9861	90.20
8.5	23,167,816	396,741	0.0171	0.9829	88.95
9.5	21,417,705	395,682	0.0185	0.9815	87.43
10.5	21,040,175	80,986	0.0038	0.9962	85.81
11.5	21,350,276	1,104,655	0.0517	0.9483	85.48
12.5	20,300,939	1,348,306	0.0664	0.9336	81.06
13.5	18,147,212	290,722	0.0160	0.9840	75.68
14.5	17,432,989	212,482	0.0122	0.9878	74.46
15.5	17,097,764	1,167,424	0.0683	0.9317	73.56
16.5	15,052,060	360,623	0.0240	0.9760	68.53
17.5	13,883,658	232,559	0.0168	0.9832	66.89
18.5	12,883,582	44,945	0.0035	0.9965	65.77
19.5	12,023,253	67,012	0.0056	0.9944	65.54
20.5	11,112,486	86,907	0.0078	0.9922	65.18
21.5	11,068,758	267,195	0.0241	0.9759	64.67
22.5	10,930,056	63,292	0.0058	0.9942	63.11
23.5	10,878,305	237,892	0.0219	0.9781	62.74
24.5	10,603,105	324,394	0.0306	0.9694	61.37
25.5	10,515,906	189,626	0.0180	0.9820	59.49
26.5	9,696,670	197,320	0.0203	0.9797	58.42
27.5	9,896,497	715,868	0.0723	0.9277	57.23
28.5	8,561,629	404,563	0.0473	0.9527	53.09
29.5	7,589,079	379,791	0.0500	0.9500	50.58
30.5	6,926,617	524,852	0.0758	0.9242	48.05
31.5	6,527,014	37,523	0.0057	0.9943	44.41
32.5	6,588,251	313,683	0.0476	0.9524	44.15
33.5	6,123,757	209,421	0.0342	0.9658	42.05
34.5	6,012,765	172,857	0.0287	0.9713	40.61
35.5	5,959,781	551,746	0.0926	0.9074	39.45
36.5	5,448,303	169,619	0.0311	0.9689	35.79
37.5	5,331,208	267,672	0.0502	0.9498	34.68
38.5	4,969,904	675,693	0.1360	0.8640	32.94

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,144,998	339,851	0.0820	0.9180	28.46
40.5	3,870,580	334,166	0.0863	0.9137	26.13
41.5	3,560,880	528,093	0.1483	0.8517	23.87
42.5	3,375,301	417,724	0.1238	0.8762	20.33
43.5	2,958,181	242,638	0.0820	0.9180	17.81
44.5	2,709,295	601,008	0.2218	0.7782	16.35
45.5	1,926,438	67,614	0.0351	0.9649	12.73
46.5	1,859,453	370,413	0.1992	0.8008	12.28
47.5	1,509,969	120,694	0.0799	0.9201	9.83
48.5	1,390,645	129,763	0.0933	0.9067	9.05
49.5	1,271,555	185,995	0.1463	0.8537	8.20
50.5	1,149,089	53,735	0.0468	0.9532	7.00
51.5	1,092,498	76,997	0.0705	0.9295	6.68
52.5	1,015,759	103,371	0.1018	0.8982	6.21
53.5	1,067,808	145,494	0.1363	0.8637	5.57
54.5	919,278	37,007	0.0403	0.9597	4.81
55.5	881,517	196,403	0.2228	0.7772	4.62
56.5	685,114	74,590	0.1089	0.8911	3.59
57.5	522,706	22,215	0.0425	0.9575	3.20
58.5	500,491	80,554	0.1609	0.8391	3.06
59.5	419,937	163,349	0.3890	0.6110	2.57
60.5	256,589	95	0.0004	0.9996	1.57
61.5	356,548	1,117	0.0031	0.9969	1.57
62.5	388,982	6,139	0.0158	0.9842	1.57
63.5	382,844	38,084	0.0995	0.9005	1.54
64.5	379,563	8,926	0.0235	0.9765	1.39
65.5	422,161	3,414	0.0081	0.9919	1.35
66.5	418,965	9,663	0.0231	0.9769	1.34
67.5	409,302	169,540	0.4142	0.5858	1.31
68.5	239,762	18,153	0.0757	0.9243	0.77
69.5	219,681	6,907	0.0314	0.9686	0.71
70.5	212,774	109,514	0.5147	0.4853	0.69
71.5	103,260	2,935	0.0284	0.9716	0.33
72.5	100,325	4,990	0.0497	0.9503	0.32
73.5	95,335		0.0000	1.0000	0.31
74.5	95,335	40	0.0004	0.9996	0.31
75.5	95,296	73	0.0008	0.9992	0.31
76.5	95,223	1,590	0.0167	0.9833	0.31
77.5	93,632		0.0000	1.0000	0.30
78.5	93,632		0.0000	1.0000	0.30

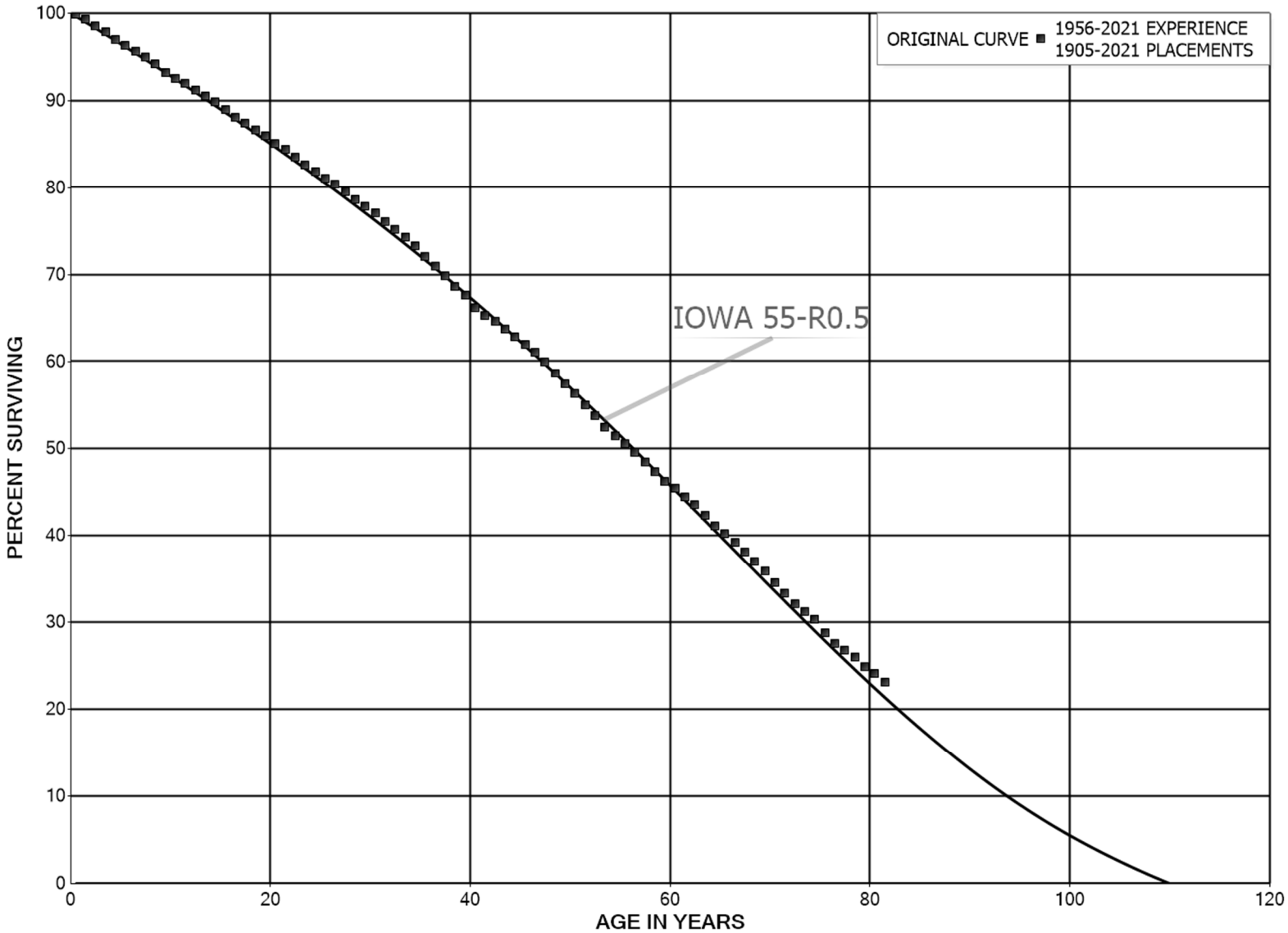
DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	93,632	6,434	0.0687	0.9313	0.30	
80.5	87,198		0.0000	1.0000	0.28	
81.5	87,198	870	0.0100	0.9900	0.28	
82.5	86,328		0.0000	1.0000	0.28	
83.5	86,328		0.0000	1.0000	0.28	
84.5	86,328	51,525	0.5969	0.4031	0.28	
85.5	34,803		0.0000	1.0000	0.11	
86.5	34,803	34,803	1.0000		0.11	
87.5						

DUKE ENERGY KENTUCKY
ACCOUNT 3640 POLES, TOWERS AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	102,224,402	142,825	0.0014	0.9986	100.00
0.5	88,980,239	521,089	0.0059	0.9941	99.86
1.5	84,973,640	642,327	0.0076	0.9924	99.28
2.5	78,889,196	588,051	0.0075	0.9925	98.53
3.5	71,582,543	584,334	0.0082	0.9918	97.79
4.5	65,773,396	469,618	0.0071	0.9929	96.99
5.5	62,187,129	475,547	0.0076	0.9924	96.30
6.5	57,869,356	406,064	0.0070	0.9930	95.56
7.5	54,983,535	436,934	0.0079	0.9921	94.89
8.5	52,201,495	505,319	0.0097	0.9903	94.14
9.5	49,321,460	366,910	0.0074	0.9926	93.23
10.5	48,274,780	301,540	0.0062	0.9938	92.53
11.5	46,787,114	412,098	0.0088	0.9912	91.96
12.5	44,721,272	322,005	0.0072	0.9928	91.15
13.5	44,472,710	346,334	0.0078	0.9922	90.49
14.5	42,953,908	393,521	0.0092	0.9908	89.79
15.5	40,982,355	403,511	0.0098	0.9902	88.96
16.5	39,370,982	326,504	0.0083	0.9917	88.09
17.5	38,331,506	306,696	0.0080	0.9920	87.36
18.5	37,202,255	319,279	0.0086	0.9914	86.66
19.5	36,788,972	347,014	0.0094	0.9906	85.91
20.5	35,803,568	317,610	0.0089	0.9911	85.10
21.5	34,523,966	333,854	0.0097	0.9903	84.35
22.5	32,945,816	359,305	0.0109	0.9891	83.53
23.5	31,170,798	294,642	0.0095	0.9905	82.62
24.5	29,779,675	267,614	0.0090	0.9910	81.84
25.5	28,187,361	262,143	0.0093	0.9907	81.10
26.5	26,315,648	280,204	0.0106	0.9894	80.35
27.5	24,264,710	253,196	0.0104	0.9896	79.50
28.5	22,297,255	233,779	0.0105	0.9895	78.67
29.5	20,437,357	213,528	0.0104	0.9896	77.84
30.5	18,865,181	223,116	0.0118	0.9882	77.03
31.5	17,649,127	225,484	0.0128	0.9872	76.12
32.5	15,723,946	168,285	0.0107	0.9893	75.14
33.5	14,820,352	219,607	0.0148	0.9852	74.34
34.5	13,511,992	212,053	0.0157	0.9843	73.24
35.5	12,533,043	208,018	0.0166	0.9834	72.09
36.5	11,619,162	180,742	0.0156	0.9844	70.89
37.5	10,827,746	190,261	0.0176	0.9824	69.79
38.5	9,961,785	141,224	0.0142	0.9858	68.56

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	9,166,390	188,255	0.0205	0.9795	67.59
40.5	8,242,729	112,750	0.0137	0.9863	66.20
41.5	7,268,629	81,570	0.0112	0.9888	65.30
42.5	6,611,106	85,527	0.0129	0.9871	64.56
43.5	6,088,224	80,455	0.0132	0.9868	63.73
44.5	5,585,891	78,681	0.0141	0.9859	62.89
45.5	5,242,588	76,774	0.0146	0.9854	62.00
46.5	4,913,213	92,350	0.0188	0.9812	61.09
47.5	4,539,220	102,301	0.0225	0.9775	59.95
48.5	4,027,314	85,933	0.0213	0.9787	58.59
49.5	3,623,128	69,283	0.0191	0.9809	57.34
50.5	3,313,765	75,945	0.0229	0.9771	56.25
51.5	3,003,184	69,950	0.0233	0.9767	54.96
52.5	2,737,473	65,938	0.0241	0.9759	53.68
53.5	2,483,898	46,465	0.0187	0.9813	52.39
54.5	2,290,547	42,184	0.0184	0.9816	51.41
55.5	2,108,680	41,466	0.0197	0.9803	50.46
56.5	1,912,087	39,506	0.0207	0.9793	49.47
57.5	1,712,038	42,136	0.0246	0.9754	48.44
58.5	1,577,452	35,218	0.0223	0.9777	47.25
59.5	1,447,861	26,185	0.0181	0.9819	46.20
60.5	1,291,424	27,174	0.0210	0.9790	45.36
61.5	1,179,141	23,929	0.0203	0.9797	44.41
62.5	1,054,440	30,024	0.0285	0.9715	43.51
63.5	935,039	25,822	0.0276	0.9724	42.27
64.5	824,294	19,423	0.0236	0.9764	41.10
65.5	732,785	16,912	0.0231	0.9769	40.13
66.5	630,882	18,617	0.0295	0.9705	39.21
67.5	547,699	14,983	0.0274	0.9726	38.05
68.5	471,657	15,368	0.0326	0.9674	37.01
69.5	393,010	14,010	0.0356	0.9644	35.80
70.5	333,814	11,550	0.0346	0.9654	34.53
71.5	283,179	11,104	0.0392	0.9608	33.33
72.5	244,120	6,312	0.0259	0.9741	32.02
73.5	220,886	6,152	0.0279	0.9721	31.20
74.5	196,716	10,496	0.0534	0.9466	30.33
75.5	178,637	7,290	0.0408	0.9592	28.71
76.5	161,559	4,572	0.0283	0.9717	27.54
77.5	152,017	4,381	0.0288	0.9712	26.76
78.5	144,855	6,443	0.0445	0.9555	25.99

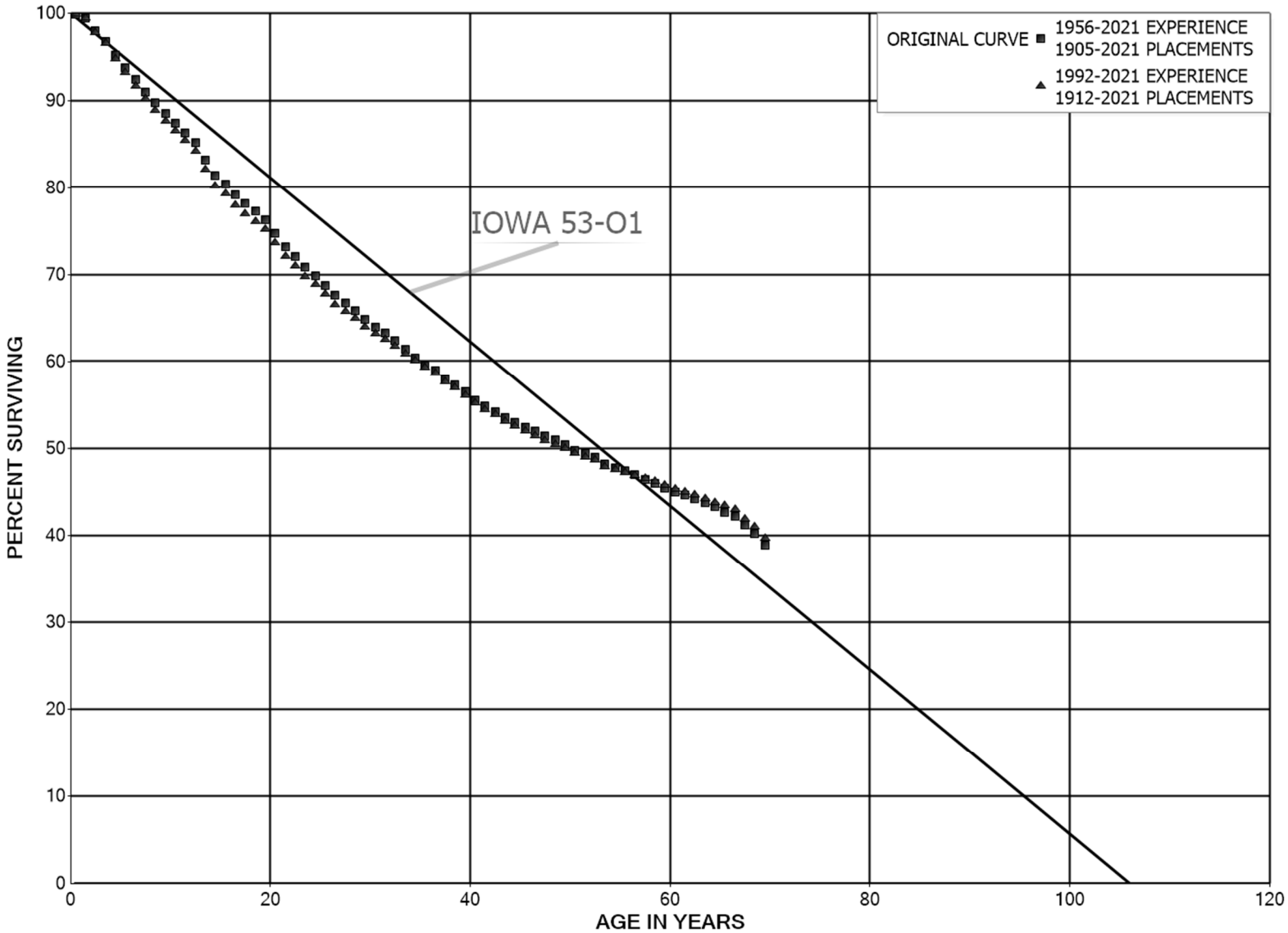
DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	125,382	4,125	0.0329	0.9671	24.83	
80.5	112,799	4,207	0.0373	0.9627	24.01	
81.5	98,278	4,916	0.0500	0.9500	23.12	
82.5	87,441	5,169	0.0591	0.9409	21.96	
83.5	74,888	4,598	0.0614	0.9386	20.66	
84.5	63,792	5,344	0.0838	0.9162	19.39	
85.5	56,733	5,910	0.1042	0.8958	17.77	
86.5	45,250	6,708	0.1482	0.8518	15.92	
87.5	32,574	7,643	0.2346	0.7654	13.56	
88.5	19,862	4,988	0.2511	0.7489	10.38	
89.5	12,600	2,310	0.1833	0.8167	7.77	
90.5	6,383	961	0.1505	0.8495	6.35	
91.5	4,369	560	0.1283	0.8717	5.39	
92.5	2,989	276	0.0925	0.9075	4.70	
93.5	2,162	173	0.0801	0.9199	4.27	
94.5	1,648	68	0.0416	0.9584	3.92	
95.5	1,245	106	0.0855	0.9145	3.76	
96.5	475	81	0.1704	0.8296	3.44	
97.5	316	6	0.0174	0.9826	2.85	
98.5	274	33	0.1194	0.8806	2.80	
99.5	201	8	0.0376	0.9624	2.47	
100.5	158	48	0.3022	0.6978	2.38	
101.5	110	24	0.2217	0.7783	1.66	
102.5	65	0	0.0005	0.9995	1.29	
103.5	47		0.0000	1.0000	1.29	
104.5	25	3	0.1279	0.8721	1.29	
105.5	22		0.0000	1.0000	1.12	
106.5					1.12	

DUKE ENERGY KENTUCKY
ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	162,501,710	225,648	0.0014	0.9986	100.00
0.5	146,402,337	692,684	0.0047	0.9953	99.86
1.5	139,665,258	2,007,088	0.0144	0.9856	99.39
2.5	133,622,342	1,639,471	0.0123	0.9877	97.96
3.5	131,497,152	2,119,300	0.0161	0.9839	96.76
4.5	126,748,047	1,895,908	0.0150	0.9850	95.20
5.5	121,928,943	1,858,226	0.0152	0.9848	93.78
6.5	114,742,577	1,707,908	0.0149	0.9851	92.35
7.5	110,541,196	1,506,227	0.0136	0.9864	90.97
8.5	104,469,761	1,386,418	0.0133	0.9867	89.73
9.5	94,097,151	1,220,637	0.0130	0.9870	88.54
10.5	91,736,985	1,159,434	0.0126	0.9874	87.39
11.5	85,129,900	1,139,125	0.0134	0.9866	86.29
12.5	81,251,381	1,896,121	0.0233	0.9767	85.13
13.5	77,971,053	1,634,361	0.0210	0.9790	83.15
14.5	73,028,228	872,828	0.0120	0.9880	81.40
15.5	66,317,312	1,039,536	0.0157	0.9843	80.43
16.5	62,525,224	749,294	0.0120	0.9880	79.17
17.5	57,168,000	697,264	0.0122	0.9878	78.22
18.5	51,260,694	651,493	0.0127	0.9873	77.27
19.5	50,348,343	1,030,595	0.0205	0.9795	76.29
20.5	47,302,683	968,377	0.0205	0.9795	74.72
21.5	41,831,803	628,235	0.0150	0.9850	73.19
22.5	40,008,607	710,544	0.0178	0.9822	72.09
23.5	37,454,770	505,129	0.0135	0.9865	70.81
24.5	36,033,166	562,580	0.0156	0.9844	69.86
25.5	34,235,756	578,488	0.0169	0.9831	68.77
26.5	31,744,897	436,787	0.0138	0.9862	67.61
27.5	28,107,723	372,870	0.0133	0.9867	66.68
28.5	25,849,595	390,760	0.0151	0.9849	65.79
29.5	23,453,378	294,772	0.0126	0.9874	64.80
30.5	21,493,639	242,306	0.0113	0.9887	63.98
31.5	19,987,240	289,771	0.0145	0.9855	63.26
32.5	17,519,877	257,428	0.0147	0.9853	62.34
33.5	16,526,830	271,326	0.0164	0.9836	61.43
34.5	15,036,312	227,600	0.0151	0.9849	60.42
35.5	13,901,293	141,933	0.0102	0.9898	59.51
36.5	12,891,149	202,850	0.0157	0.9843	58.90
37.5	12,105,883	149,054	0.0123	0.9877	57.97
38.5	11,003,491	153,775	0.0140	0.9860	57.26

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	10,266,083	169,576	0.0165	0.9835	56.46	
40.5	9,638,512	123,895	0.0129	0.9871	55.52	
41.5	8,690,127	92,347	0.0106	0.9894	54.81	
42.5	7,946,933	98,400	0.0124	0.9876	54.23	
43.5	7,552,647	82,981	0.0110	0.9890	53.56	
44.5	7,151,341	76,211	0.0107	0.9893	52.97	
45.5	6,728,894	65,680	0.0098	0.9902	52.40	
46.5	6,237,957	61,386	0.0098	0.9902	51.89	
47.5	5,628,217	45,807	0.0081	0.9919	51.38	
48.5	4,931,595	59,101	0.0120	0.9880	50.96	
49.5	4,508,883	53,029	0.0118	0.9882	50.35	
50.5	4,042,438	30,423	0.0075	0.9925	49.76	
51.5	3,595,985	34,259	0.0095	0.9905	49.39	
52.5	3,354,598	47,636	0.0142	0.9858	48.92	
53.5	3,069,565	28,094	0.0092	0.9908	48.22	
54.5	2,833,851	22,865	0.0081	0.9919	47.78	
55.5	2,519,279	23,707	0.0094	0.9906	47.39	
56.5	2,233,193	26,326	0.0118	0.9882	46.95	
57.5	1,936,329	17,232	0.0089	0.9911	46.39	
58.5	1,724,148	21,459	0.0124	0.9876	45.98	
59.5	1,527,992	15,566	0.0102	0.9898	45.41	
60.5	1,333,029	10,988	0.0082	0.9918	44.95	
61.5	1,229,308	11,331	0.0092	0.9908	44.58	
62.5	1,144,749	11,996	0.0105	0.9895	44.17	
63.5	1,040,013	9,257	0.0089	0.9911	43.70	
64.5	949,702	15,108	0.0159	0.9841	43.31	
65.5	851,749	7,899	0.0093	0.9907	42.62	
66.5	764,720	19,904	0.0260	0.9740	42.23	
67.5	648,665	15,198	0.0234	0.9766	41.13	
68.5	592,531	18,906	0.0319	0.9681	40.17	
69.5	472,291	5,263	0.0111	0.9889	38.88	
70.5	415,174	3,296	0.0079	0.9921	38.45	
71.5	335,856	1,304	0.0039	0.9961	38.15	
72.5	302,189	1,980	0.0066	0.9934	38.00	
73.5	284,997	1,845	0.0065	0.9935	37.75	
74.5	257,358	2,168	0.0084	0.9916	37.51	
75.5	246,591	5,698	0.0231	0.9769	37.19	
76.5	237,182	652	0.0027	0.9973	36.33	
77.5	235,805	1,102	0.0047	0.9953	36.23	
78.5	229,427	1,716	0.0075	0.9925	36.06	

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	218,644	7,302	0.0334	0.9666	35.79
80.5	200,869	1,706	0.0085	0.9915	34.60
81.5	198,707	1,677	0.0084	0.9916	34.30
82.5	188,229	1,296	0.0069	0.9931	34.01
83.5	170,703	564	0.0033	0.9967	33.78
84.5	170,140	1,869	0.0110	0.9890	33.67
85.5	168,271	3,280	0.0195	0.9805	33.30
86.5	165,724	2,522	0.0152	0.9848	32.65
87.5	163,893	7,463	0.0455	0.9545	32.15
88.5	156,430	9,379	0.0600	0.9400	30.69
89.5	146,911	1,735	0.0118	0.9882	28.85
90.5	145,176	13,545	0.0933	0.9067	28.51
91.5	131,631	1,817	0.0138	0.9862	25.85
92.5	129,814	6,337	0.0488	0.9512	25.49
93.5	123,477	2,848	0.0231	0.9769	24.25
94.5	120,609	6,571	0.0545	0.9455	23.69
95.5	114,036	11,805	0.1035	0.8965	22.40
96.5					20.08

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1912-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	133,234,370	191,935	0.0014	0.9986	100.00
0.5	119,506,774	557,222	0.0047	0.9953	99.86
1.5	114,333,444	1,890,484	0.0165	0.9835	99.39
2.5	111,279,365	1,427,775	0.0128	0.9872	97.75
3.5	110,278,220	1,990,691	0.0181	0.9819	96.49
4.5	107,079,260	1,770,066	0.0165	0.9835	94.75
5.5	103,426,131	1,725,296	0.0167	0.9833	93.18
6.5	97,568,792	1,582,573	0.0162	0.9838	91.63
7.5	94,314,046	1,327,260	0.0141	0.9859	90.14
8.5	89,548,657	1,236,219	0.0138	0.9862	88.88
9.5	80,216,828	1,039,450	0.0130	0.9870	87.65
10.5	78,693,235	1,008,216	0.0128	0.9872	86.51
11.5	73,344,790	1,016,842	0.0139	0.9861	85.40
12.5	70,421,443	1,791,290	0.0254	0.9746	84.22
13.5	67,591,048	1,526,175	0.0226	0.9774	82.08
14.5	63,175,134	778,864	0.0123	0.9877	80.22
15.5	57,017,693	948,898	0.0166	0.9834	79.24
16.5	53,822,832	641,464	0.0119	0.9881	77.92
17.5	49,093,114	585,680	0.0119	0.9881	76.99
18.5	44,133,264	525,476	0.0119	0.9881	76.07
19.5	43,857,724	885,693	0.0202	0.9798	75.16
20.5	41,584,813	882,312	0.0212	0.9788	73.65
21.5	36,774,251	562,232	0.0153	0.9847	72.08
22.5	35,310,064	630,549	0.0179	0.9821	70.98
23.5	33,147,284	442,993	0.0134	0.9866	69.71
24.5	32,063,612	508,179	0.0158	0.9842	68.78
25.5	30,692,473	524,203	0.0171	0.9829	67.69
26.5	28,587,984	362,916	0.0127	0.9873	66.54
27.5	25,333,889	307,519	0.0121	0.9879	65.69
28.5	23,359,687	343,324	0.0147	0.9853	64.89
29.5	21,245,971	250,362	0.0118	0.9882	63.94
30.5	19,311,891	206,592	0.0107	0.9893	63.19
31.5	17,972,893	236,432	0.0132	0.9868	62.51
32.5	15,677,438	204,844	0.0131	0.9869	61.69
33.5	14,915,613	203,228	0.0136	0.9864	60.88
34.5	13,605,086	181,873	0.0134	0.9866	60.05
35.5	12,627,746	131,618	0.0104	0.9896	59.25
36.5	11,745,923	194,767	0.0166	0.9834	58.63
37.5	11,106,637	135,157	0.0122	0.9878	57.66
38.5	10,084,922	150,542	0.0149	0.9851	56.96

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1912-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	9,502,865	164,200	0.0173	0.9827	56.11
40.5	8,958,731	122,453	0.0137	0.9863	55.14
41.5	8,116,797	89,689	0.0110	0.9890	54.39
42.5	7,417,923	95,891	0.0129	0.9871	53.78
43.5	7,047,491	80,673	0.0114	0.9886	53.09
44.5	6,690,160	75,130	0.0112	0.9888	52.48
45.5	6,283,833	65,119	0.0104	0.9896	51.89
46.5	5,799,349	60,832	0.0105	0.9895	51.35
47.5	5,191,509	45,205	0.0087	0.9913	50.82
48.5	4,503,140	40,274	0.0089	0.9911	50.37
49.5	4,129,830	46,520	0.0113	0.9887	49.92
50.5	3,682,395	27,183	0.0074	0.9926	49.36
51.5	3,240,099	27,393	0.0085	0.9915	49.00
52.5	3,016,159	43,279	0.0143	0.9857	48.58
53.5	2,762,579	19,762	0.0072	0.9928	47.88
54.5	2,535,197	18,593	0.0073	0.9927	47.54
55.5	2,224,898	16,315	0.0073	0.9927	47.19
56.5	1,946,203	15,187	0.0078	0.9922	46.85
57.5	1,660,478	11,174	0.0067	0.9933	46.48
58.5	1,454,355	14,097	0.0097	0.9903	46.17
59.5	1,265,739	12,227	0.0097	0.9903	45.72
60.5	1,074,114	8,060	0.0075	0.9925	45.28
61.5	973,321	8,217	0.0084	0.9916	44.94
62.5	891,876	7,107	0.0080	0.9920	44.56
63.5	811,618	9,257	0.0114	0.9886	44.21
64.5	721,337	4,919	0.0068	0.9932	43.70
65.5	633,573	5,967	0.0094	0.9906	43.40
66.5	764,538	19,904	0.0260	0.9740	42.99
67.5	648,483	15,027	0.0232	0.9768	41.88
68.5	592,521	18,906	0.0319	0.9681	40.90
69.5	472,281	5,263	0.0111	0.9889	39.60
70.5	415,164	3,296	0.0079	0.9921	39.16
71.5	335,846	1,304	0.0039	0.9961	38.85
72.5	302,179	1,980	0.0066	0.9934	38.70
73.5	284,987	1,845	0.0065	0.9935	38.44
74.5	257,348	2,168	0.0084	0.9916	38.19
75.5	246,581	5,698	0.0231	0.9769	37.87
76.5	237,171	652	0.0027	0.9973	37.00
77.5	235,795	1,091	0.0046	0.9954	36.90
78.5	229,427	1,716	0.0075	0.9925	36.72

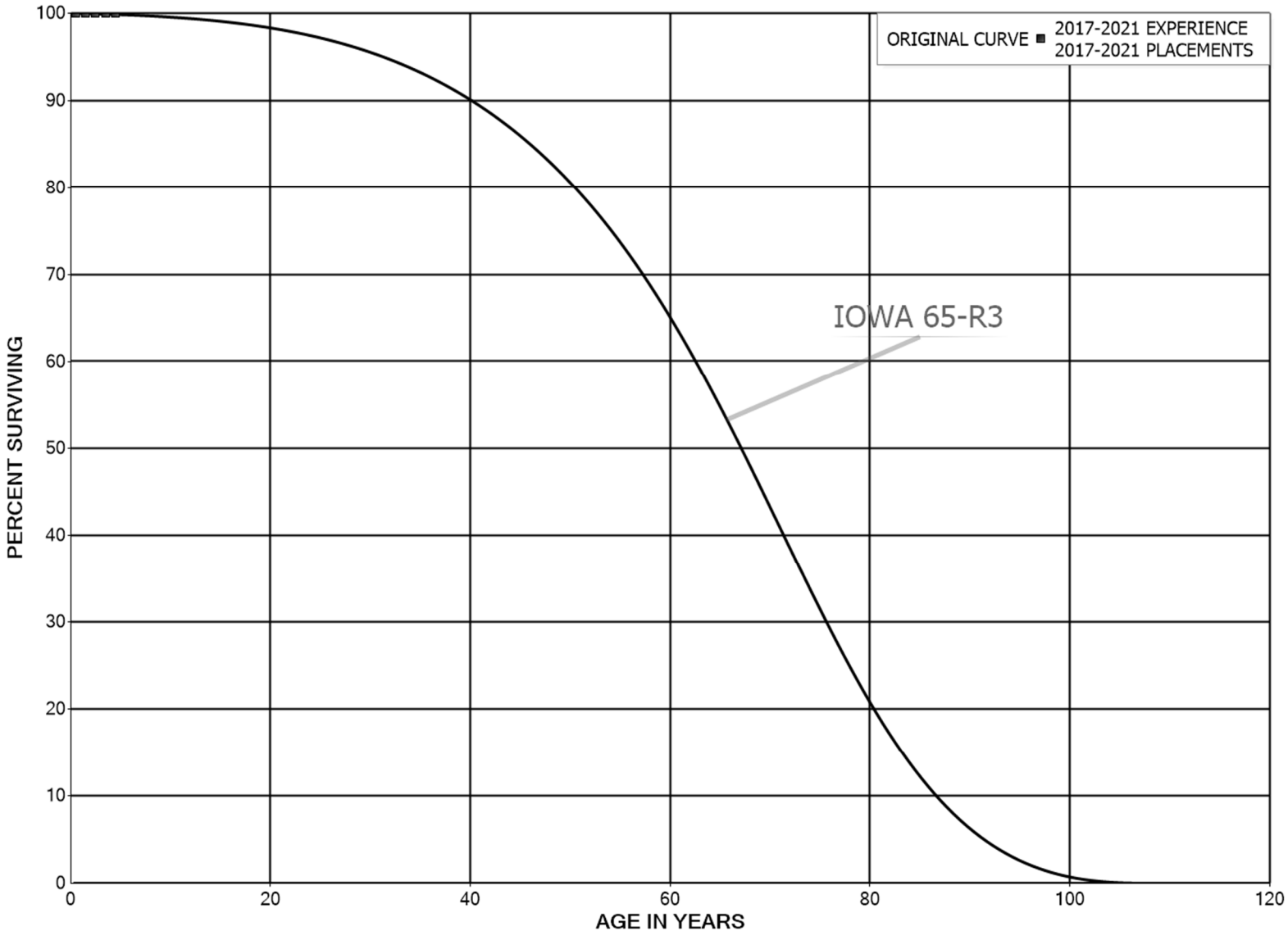
DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1912-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	218,644	7,302	0.0334	0.9666	36.45	
80.5	200,869	1,706	0.0085	0.9915	35.23	
81.5	198,707	1,677	0.0084	0.9916	34.93	
82.5	188,229	1,296	0.0069	0.9931	34.64	
83.5	170,703	564	0.0033	0.9967	34.40	
84.5	170,140	1,869	0.0110	0.9890	34.29	
85.5	168,271	3,280	0.0195	0.9805	33.91	
86.5	165,724	2,522	0.0152	0.9848	33.25	
87.5	163,893	7,463	0.0455	0.9545	32.74	
88.5	156,430	9,379	0.0600	0.9400	31.25	
89.5	146,911	1,735	0.0118	0.9882	29.38	
90.5	145,176	13,545	0.0933	0.9067	29.03	
91.5	131,631	1,817	0.0138	0.9862	26.32	
92.5	129,814	6,337	0.0488	0.9512	25.96	
93.5	123,477	2,848	0.0231	0.9769	24.69	
94.5	120,609	6,571	0.0545	0.9455	24.12	
95.5	114,036	11,805	0.1035	0.8965	22.81	
96.5					20.45	

DUKE ENERGY KENTUCKY
ACCOUNT 3651 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY
ORIGINAL AND SMOOTH SURVIVOR CURVES



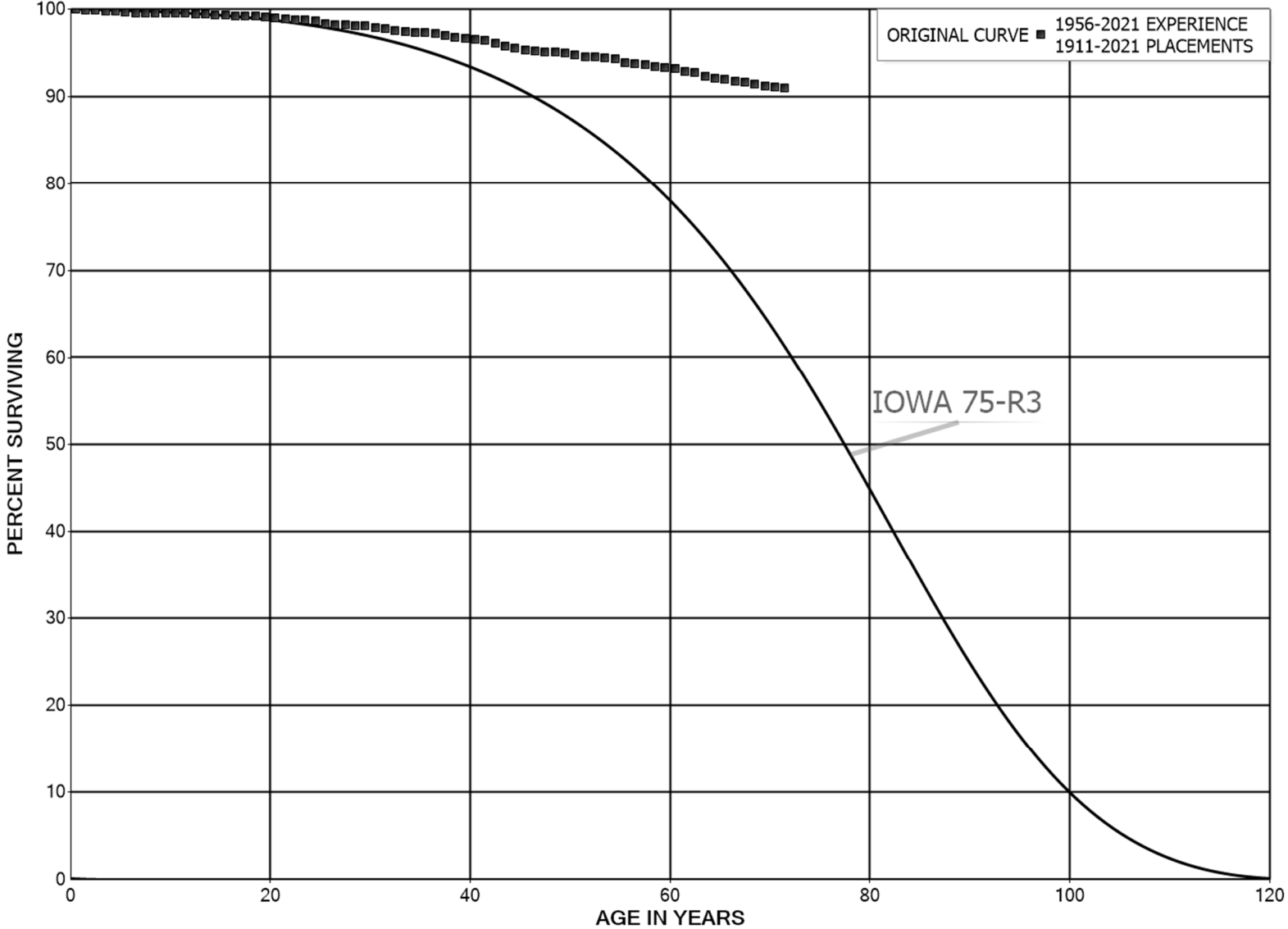
DUKE ENERGY KENTUCKY

ACCOUNT 3651 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 2017-2021			EXPERIENCE BAND 2017-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	7,177,612		0.0000	1.0000	100.00
0.5	5,467,671		0.0000	1.0000	100.00
1.5	5,183,262		0.0000	1.0000	100.00
2.5	4,456,060		0.0000	1.0000	100.00
3.5	4,136,476		0.0000	1.0000	100.00
4.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3660 UNDERGROUND CONDUIT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	42,816,832	2,984	0.0001	0.9999	100.00
0.5	41,016,704	55,743	0.0014	0.9986	99.99
1.5	29,065,071	3,693	0.0001	0.9999	99.86
2.5	23,655,994	23,300	0.0010	0.9990	99.84
3.5	21,098,172	15,870	0.0008	0.9992	99.75
4.5	18,510,244	5,544	0.0003	0.9997	99.67
5.5	18,265,174	16,525	0.0009	0.9991	99.64
6.5	17,679,076	8,186	0.0005	0.9995	99.55
7.5	16,924,404	1,528	0.0001	0.9999	99.50
8.5	16,636,230	2,147	0.0001	0.9999	99.50
9.5	16,203,887	1,926	0.0001	0.9999	99.48
10.5	15,893,834	2,071	0.0001	0.9999	99.47
11.5	15,583,833	1,718	0.0001	0.9999	99.46
12.5	15,273,060	10,160	0.0007	0.9993	99.45
13.5	15,066,337	6,776	0.0004	0.9996	99.38
14.5	14,543,691	12,435	0.0009	0.9991	99.34
15.5	14,080,619	4,494	0.0003	0.9997	99.25
16.5	13,699,313	4,997	0.0004	0.9996	99.22
17.5	13,488,954	5,119	0.0004	0.9996	99.18
18.5	10,429,672	11,720	0.0011	0.9989	99.15
19.5	10,338,701	8,057	0.0008	0.9992	99.03
20.5	10,180,151	12,725	0.0012	0.9988	98.96
21.5	9,765,810	5,794	0.0006	0.9994	98.83
22.5	7,970,785	8,413	0.0011	0.9989	98.78
23.5	7,130,241	5,552	0.0008	0.9992	98.67
24.5	6,253,928	21,593	0.0035	0.9965	98.59
25.5	5,453,388	4,069	0.0007	0.9993	98.25
26.5	4,631,142	819	0.0002	0.9998	98.18
27.5	3,568,578	1,614	0.0005	0.9995	98.16
28.5	2,733,769	1,807	0.0007	0.9993	98.12
29.5	2,112,079	5,615	0.0027	0.9973	98.05
30.5	2,047,604	1,102	0.0005	0.9995	97.79
31.5	1,879,659	3,835	0.0020	0.9980	97.74
32.5	1,707,011	1,855	0.0011	0.9989	97.54
33.5	1,575,700	1,759	0.0011	0.9989	97.44
34.5	1,556,716	298	0.0002	0.9998	97.33
35.5	1,503,665	2,153	0.0014	0.9986	97.31
36.5	1,495,503	3,023	0.0020	0.9980	97.17
37.5	1,392,200	2,759	0.0020	0.9980	96.97
38.5	1,371,862	1,934	0.0014	0.9986	96.78

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,331,519	2,552	0.0019	0.9981	96.64	
40.5	1,329,714	1,523	0.0011	0.9989	96.46	
41.5	1,199,683	3,711	0.0031	0.9969	96.35	
42.5	1,192,334	4,195	0.0035	0.9965	96.05	
43.5	1,181,875	2,362	0.0020	0.9980	95.71	
44.5	1,147,022	3,145	0.0027	0.9973	95.52	
45.5	966,302	534	0.0006	0.9994	95.26	
46.5	759,601	868	0.0011	0.9989	95.21	
47.5	682,114	560	0.0008	0.9992	95.10	
48.5	561,878	442	0.0008	0.9992	95.02	
49.5	539,818	1,367	0.0025	0.9975	94.94	
50.5	453,657	762	0.0017	0.9983	94.70	
51.5	417,510	413	0.0010	0.9990	94.54	
52.5	394,435	414	0.0011	0.9989	94.45	
53.5	393,885	421	0.0011	0.9989	94.35	
54.5	385,072	1,567	0.0041	0.9959	94.25	
55.5	382,506	563	0.0015	0.9985	93.87	
56.5	368,153	435	0.0012	0.9988	93.73	
57.5	362,292	871	0.0024	0.9976	93.62	
58.5	281,981	408	0.0014	0.9986	93.39	
59.5	270,139	388	0.0014	0.9986	93.26	
60.5	251,030	647	0.0026	0.9974	93.12	
61.5	249,271	448	0.0018	0.9982	92.88	
62.5	245,192	1,102	0.0045	0.9955	92.72	
63.5	234,744	673	0.0029	0.9971	92.30	
64.5	227,883	270	0.0012	0.9988	92.04	
65.5	218,933	563	0.0026	0.9974	91.93	
66.5	195,047	179	0.0009	0.9991	91.69	
67.5	191,209	460	0.0024	0.9976	91.61	
68.5	187,540	503	0.0027	0.9973	91.39	
69.5	175,642	174	0.0010	0.9990	91.14	
70.5	170,364	297	0.0017	0.9983	91.05	
71.5	151,138	572	0.0038	0.9962	90.89	
72.5	138,063	3,395	0.0246	0.9754	90.55	
73.5	134,534	1,100	0.0082	0.9918	88.32	
74.5	131,190	2,634	0.0201	0.9799	87.60	
75.5	128,556	1,003	0.0078	0.9922	85.84	
76.5	126,593	595	0.0047	0.9953	85.17	
77.5	125,733	2,944	0.0234	0.9766	84.77	
78.5	120,903	110	0.0009	0.9991	82.79	

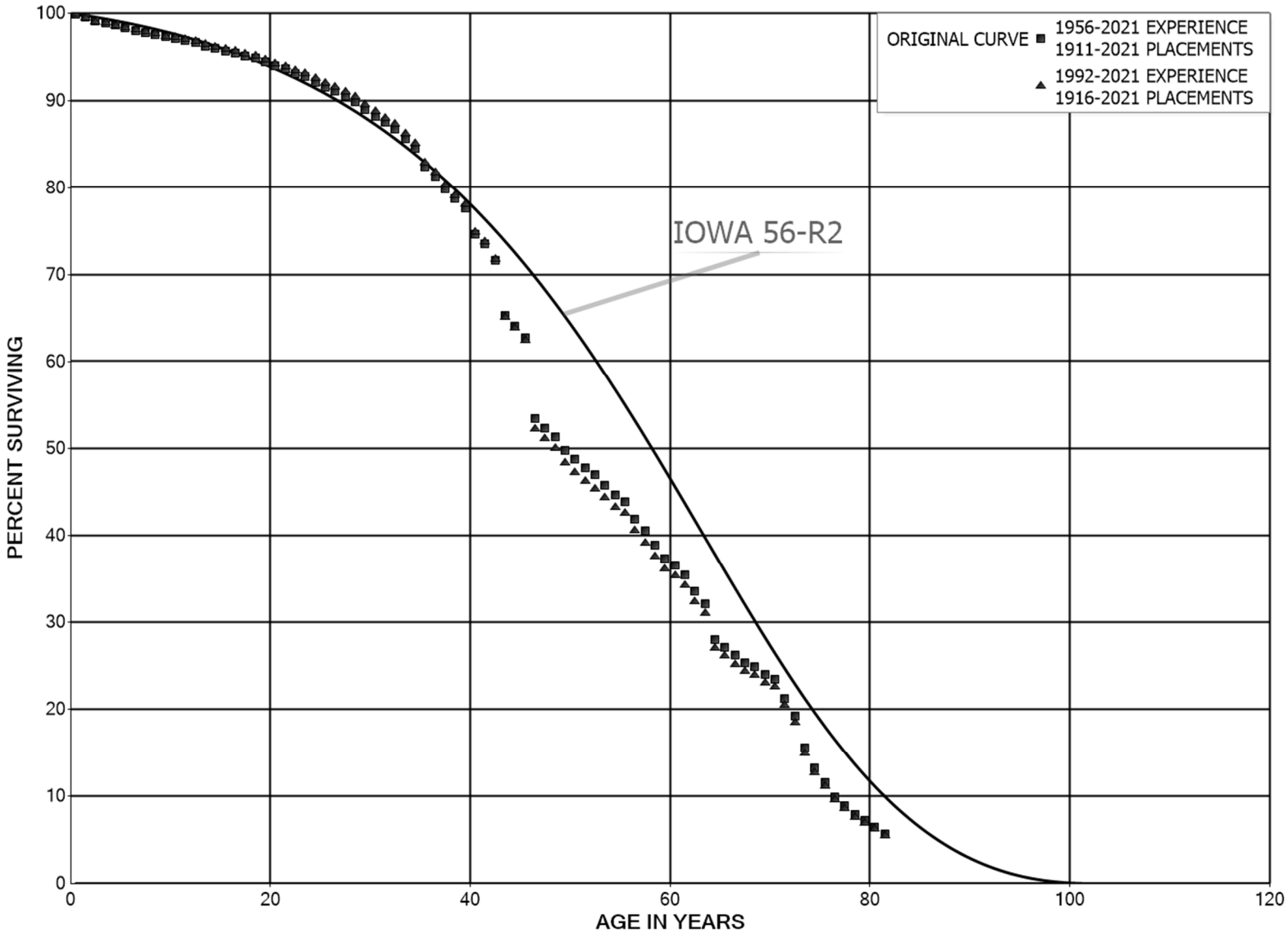
DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	118,779	1,748	0.0147	0.9853	82.71
80.5	107,999	213	0.0020	0.9980	81.49
81.5	62,629	1,500	0.0239	0.9761	81.33
82.5	61,128	661	0.0108	0.9892	79.38
83.5	37,790	1,065	0.0282	0.9718	78.53
84.5	36,634	353	0.0096	0.9904	76.31
85.5	36,281	432	0.0119	0.9881	75.58
86.5	34,395	1,261	0.0367	0.9633	74.68
87.5	33,101	92	0.0028	0.9972	71.94
88.5	32,785	709	0.0216	0.9784	71.74
89.5	29,320	1,241	0.0423	0.9577	70.19
90.5	17,597	514	0.0292	0.9708	67.22
91.5	16,892	168	0.0099	0.9901	65.26
92.5	9,822	98	0.0100	0.9900	64.61
93.5	9,498	25	0.0026	0.9974	63.96
94.5	7,818	837	0.1071	0.8929	63.80
95.5	6,354	13	0.0020	0.9980	56.97
96.5	6,341	225	0.0355	0.9645	56.85
97.5	6,046	95	0.0157	0.9843	54.83
98.5	1,354	15	0.0114	0.9886	53.97
99.5	1,338	10	0.0074	0.9926	53.36
100.5	1,328	2	0.0018	0.9982	52.96
101.5	1,218	414	0.3403	0.6597	52.86
102.5	803	54	0.0672	0.9328	34.88
103.5	749	14	0.0186	0.9814	32.53
104.5	735	9	0.0124	0.9876	31.93
105.5	242		0.0000	1.0000	31.53
106.5	242	154	0.6368	0.3632	31.53
107.5	88	1	0.0138	0.9862	11.45
108.5	87		0.0000	1.0000	11.29
109.5	87		0.0000	1.0000	11.29
110.5					11.29

DUKE ENERGY KENTUCKY
ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	81,387,085	122,832	0.0015	0.9985	100.00
0.5	70,067,636	260,908	0.0037	0.9963	99.85
1.5	64,375,042	262,196	0.0041	0.9959	99.48
2.5	64,292,027	140,935	0.0022	0.9978	99.07
3.5	60,152,565	163,456	0.0027	0.9973	98.85
4.5	58,141,196	175,206	0.0030	0.9970	98.59
5.5	56,650,562	163,772	0.0029	0.9971	98.29
6.5	54,734,808	131,044	0.0024	0.9976	98.01
7.5	53,351,381	143,483	0.0027	0.9973	97.77
8.5	52,502,220	147,242	0.0028	0.9972	97.51
9.5	49,322,892	79,941	0.0016	0.9984	97.23
10.5	48,802,611	125,837	0.0026	0.9974	97.08
11.5	46,787,477	128,520	0.0027	0.9973	96.83
12.5	43,895,121	163,479	0.0037	0.9963	96.56
13.5	41,914,098	129,178	0.0031	0.9969	96.20
14.5	39,618,438	112,020	0.0028	0.9972	95.90
15.5	36,789,578	93,766	0.0025	0.9975	95.63
16.5	32,689,739	105,041	0.0032	0.9968	95.39
17.5	30,886,720	94,338	0.0031	0.9969	95.08
18.5	28,308,595	109,287	0.0039	0.9961	94.79
19.5	27,623,619	150,623	0.0055	0.9945	94.43
20.5	25,504,227	93,478	0.0037	0.9963	93.91
21.5	22,799,055	115,669	0.0051	0.9949	93.57
22.5	20,438,467	90,120	0.0044	0.9956	93.09
23.5	19,620,778	122,753	0.0063	0.9937	92.68
24.5	18,409,331	108,494	0.0059	0.9941	92.10
25.5	17,637,652	97,621	0.0055	0.9945	91.56
26.5	16,826,014	103,886	0.0062	0.9938	91.05
27.5	15,666,457	120,572	0.0077	0.9923	90.49
28.5	13,944,151	132,898	0.0095	0.9905	89.79
29.5	12,808,422	117,094	0.0091	0.9909	88.94
30.5	11,681,554	89,028	0.0076	0.9924	88.13
31.5	10,425,441	88,074	0.0084	0.9916	87.45
32.5	9,110,509	113,185	0.0124	0.9876	86.71
33.5	8,074,128	102,534	0.0127	0.9873	85.64
34.5	6,803,638	175,561	0.0258	0.9742	84.55
35.5	6,044,990	82,928	0.0137	0.9863	82.37
36.5	5,464,753	91,237	0.0167	0.9833	81.24
37.5	4,845,123	68,929	0.0142	0.9858	79.88
38.5	4,378,566	61,408	0.0140	0.9860	78.75

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	4,076,193	159,012	0.0390	0.9610	77.64	
40.5	3,675,974	52,341	0.0142	0.9858	74.61	
41.5	3,213,573	85,053	0.0265	0.9735	73.55	
42.5	2,671,935	236,656	0.0886	0.9114	71.60	
43.5	2,234,444	39,828	0.0178	0.9822	65.26	
44.5	1,809,806	37,625	0.0208	0.9792	64.10	
45.5	1,488,326	222,606	0.1496	0.8504	62.77	
46.5	1,104,881	22,420	0.0203	0.9797	53.38	
47.5	907,016	18,039	0.0199	0.9801	52.29	
48.5	777,618	22,779	0.0293	0.9707	51.25	
49.5	683,621	14,315	0.0209	0.9791	49.75	
50.5	595,729	12,054	0.0202	0.9798	48.71	
51.5	526,897	9,118	0.0173	0.9827	47.73	
52.5	501,858	12,035	0.0240	0.9760	46.90	
53.5	479,836	11,835	0.0247	0.9753	45.78	
54.5	455,790	7,726	0.0170	0.9830	44.65	
55.5	439,251	20,595	0.0469	0.9531	43.89	
56.5	399,277	13,062	0.0327	0.9673	41.83	
57.5	361,332	14,923	0.0413	0.9587	40.46	
58.5	311,219	11,922	0.0383	0.9617	38.79	
59.5	294,118	6,184	0.0210	0.9790	37.31	
60.5	278,492	8,429	0.0303	0.9697	36.52	
61.5	263,872	14,057	0.0533	0.9467	35.42	
62.5	240,089	10,121	0.0422	0.9578	33.53	
63.5	228,529	29,331	0.1283	0.8717	32.12	
64.5	194,384	6,117	0.0315	0.9685	27.99	
65.5	178,414	6,496	0.0364	0.9636	27.11	
66.5	145,107	4,524	0.0312	0.9688	26.13	
67.5	137,767	2,374	0.0172	0.9828	25.31	
68.5	134,359	5,020	0.0374	0.9626	24.88	
69.5	128,829	2,690	0.0209	0.9791	23.95	
70.5	123,770	11,779	0.0952	0.9048	23.45	
71.5	99,890	9,633	0.0964	0.9036	21.21	
72.5	86,195	16,674	0.1934	0.8066	19.17	
73.5	69,521	10,170	0.1463	0.8537	15.46	
74.5	58,372	7,573	0.1297	0.8703	13.20	
75.5	50,799	7,181	0.1414	0.8586	11.49	
76.5	43,446	4,584	0.1055	0.8945	9.86	
77.5	38,862	4,452	0.1145	0.8855	8.82	
78.5	34,347	2,842	0.0827	0.9173	7.81	

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	31,419	3,216	0.1024	0.8976	7.17	
80.5	27,998	3,507	0.1253	0.8747	6.43	
81.5	9,916	1,322	0.1333	0.8667	5.63	
82.5	8,447	1,227	0.1452	0.8548	4.88	
83.5	4,633	910	0.1964	0.8036	4.17	
84.5	3,682	549	0.1492	0.8508	3.35	
85.5	3,132	452	0.1443	0.8557	2.85	
86.5	2,662	332	0.1245	0.8755	2.44	
87.5	2,331	493	0.2116	0.7884	2.13	
88.5	1,813	366	0.2020	0.7980	1.68	
89.5	1,426	515	0.3611	0.6389	1.34	
90.5	835	138	0.1650	0.8350	0.86	
91.5	697	124	0.1772	0.8228	0.72	
92.5	448	82	0.1832	0.8168	0.59	
93.5	366	42	0.1159	0.8841	0.48	
94.5	317	103	0.3230	0.6770	0.43	
95.5	205	66	0.3245	0.6755	0.29	
96.5	138	74	0.5347	0.4653	0.19	
97.5	64	32	0.4923	0.5077	0.09	
98.5	16	8	0.5003	0.4997	0.05	
99.5	8	4	0.5330	0.4670	0.02	
100.5	4	2	0.4266	0.5734	0.01	
101.5	2	1	0.5024	0.4976	0.01	
102.5	1	1	0.5049	0.4951	0.00	
103.5	1		0.0000	1.0000	0.00	
104.5	1	1	1.0000		0.00	
105.5						

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	67,412,847	121,351	0.0018	0.9982	100.00
0.5	57,080,928	220,722	0.0039	0.9961	99.82
1.5	52,731,255	231,496	0.0044	0.9956	99.43
2.5	54,053,417	103,990	0.0019	0.9981	99.00
3.5	50,995,362	132,959	0.0026	0.9974	98.81
4.5	50,348,679	139,172	0.0028	0.9972	98.55
5.5	49,506,993	116,741	0.0024	0.9976	98.28
6.5	48,182,246	104,831	0.0022	0.9978	98.05
7.5	47,560,983	121,991	0.0026	0.9974	97.83
8.5	47,193,263	133,846	0.0028	0.9972	97.58
9.5	44,309,993	63,791	0.0014	0.9986	97.30
10.5	44,120,161	116,385	0.0026	0.9974	97.16
11.5	42,611,048	97,258	0.0023	0.9977	96.91
12.5	40,441,887	120,661	0.0030	0.9970	96.69
13.5	38,781,734	112,951	0.0029	0.9971	96.40
14.5	37,044,656	99,462	0.0027	0.9973	96.12
15.5	34,745,114	86,503	0.0025	0.9975	95.86
16.5	30,869,996	98,054	0.0032	0.9968	95.62
17.5	29,330,581	88,671	0.0030	0.9970	95.32
18.5	27,185,879	105,169	0.0039	0.9961	95.03
19.5	26,624,120	138,804	0.0052	0.9948	94.66
20.5	24,625,540	84,039	0.0034	0.9966	94.17
21.5	22,018,881	105,206	0.0048	0.9952	93.85
22.5	19,698,168	74,500	0.0038	0.9962	93.40
23.5	18,917,284	114,342	0.0060	0.9940	93.04
24.5	17,736,838	93,968	0.0053	0.9947	92.48
25.5	16,995,005	93,857	0.0055	0.9945	91.99
26.5	16,212,814	91,805	0.0057	0.9943	91.48
27.5	15,103,965	98,122	0.0065	0.9935	90.97
28.5	13,488,201	127,999	0.0095	0.9905	90.38
29.5	12,364,621	112,733	0.0091	0.9909	89.52
30.5	11,261,762	88,040	0.0078	0.9922	88.70
31.5	10,018,555	84,388	0.0084	0.9916	88.01
32.5	8,722,944	107,795	0.0124	0.9876	87.27
33.5	7,695,847	100,739	0.0131	0.9869	86.19
34.5	6,440,440	166,487	0.0259	0.9741	85.06
35.5	5,712,962	81,945	0.0143	0.9857	82.86
36.5	5,240,943	89,360	0.0171	0.9829	81.67
37.5	4,629,713	67,214	0.0145	0.9855	80.28
38.5	4,167,249	54,235	0.0130	0.9870	79.11

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	3,878,836	158,947	0.0410	0.9590	78.09	
40.5	3,488,226	51,569	0.0148	0.9852	74.89	
41.5	3,062,584	84,993	0.0278	0.9722	73.78	
42.5	2,537,686	236,526	0.0932	0.9068	71.73	
43.5	2,100,325	39,585	0.0188	0.9812	65.05	
44.5	1,678,736	37,321	0.0222	0.9778	63.82	
45.5	1,357,560	222,492	0.1639	0.8361	62.40	
46.5	975,486	19,783	0.0203	0.9797	52.17	
47.5	780,257	17,157	0.0220	0.9780	51.12	
48.5	652,036	22,518	0.0345	0.9655	49.99	
49.5	560,143	12,622	0.0225	0.9775	48.26	
50.5	475,067	10,490	0.0221	0.9779	47.18	
51.5	493,920	9,038	0.0183	0.9817	46.14	
52.5	470,028	10,304	0.0219	0.9781	45.29	
53.5	470,181	11,493	0.0244	0.9756	44.30	
54.5	446,840	7,577	0.0170	0.9830	43.22	
55.5	430,529	20,534	0.0477	0.9523	42.48	
56.5	390,808	13,062	0.0334	0.9666	40.46	
57.5	352,862	14,697	0.0417	0.9583	39.10	
58.5	303,299	11,752	0.0387	0.9613	37.48	
59.5	286,695	6,184	0.0216	0.9784	36.02	
60.5	272,273	8,429	0.0310	0.9690	35.25	
61.5	257,654	14,057	0.0546	0.9454	34.16	
62.5	237,070	10,121	0.0427	0.9573	32.29	
63.5	225,511	29,331	0.1301	0.8699	30.91	
64.5	191,576	6,117	0.0319	0.9681	26.89	
65.5	175,990	6,496	0.0369	0.9631	26.03	
66.5	142,683	4,524	0.0317	0.9683	25.07	
67.5	135,342	2,374	0.0175	0.9825	24.28	
68.5	133,653	5,020	0.0376	0.9624	23.85	
69.5	128,147	2,690	0.0210	0.9790	22.96	
70.5	123,088	11,373	0.0924	0.9076	22.47	
71.5	99,614	9,633	0.0967	0.9033	20.40	
72.5	85,919	16,674	0.1941	0.8059	18.43	
73.5	69,245	10,170	0.1469	0.8531	14.85	
74.5	58,096	7,573	0.1303	0.8697	12.67	
75.5	50,799	7,181	0.1414	0.8586	11.02	
76.5	43,446	4,584	0.1055	0.8945	9.46	
77.5	38,862	4,452	0.1145	0.8855	8.46	
78.5	34,347	2,842	0.0827	0.9173	7.49	

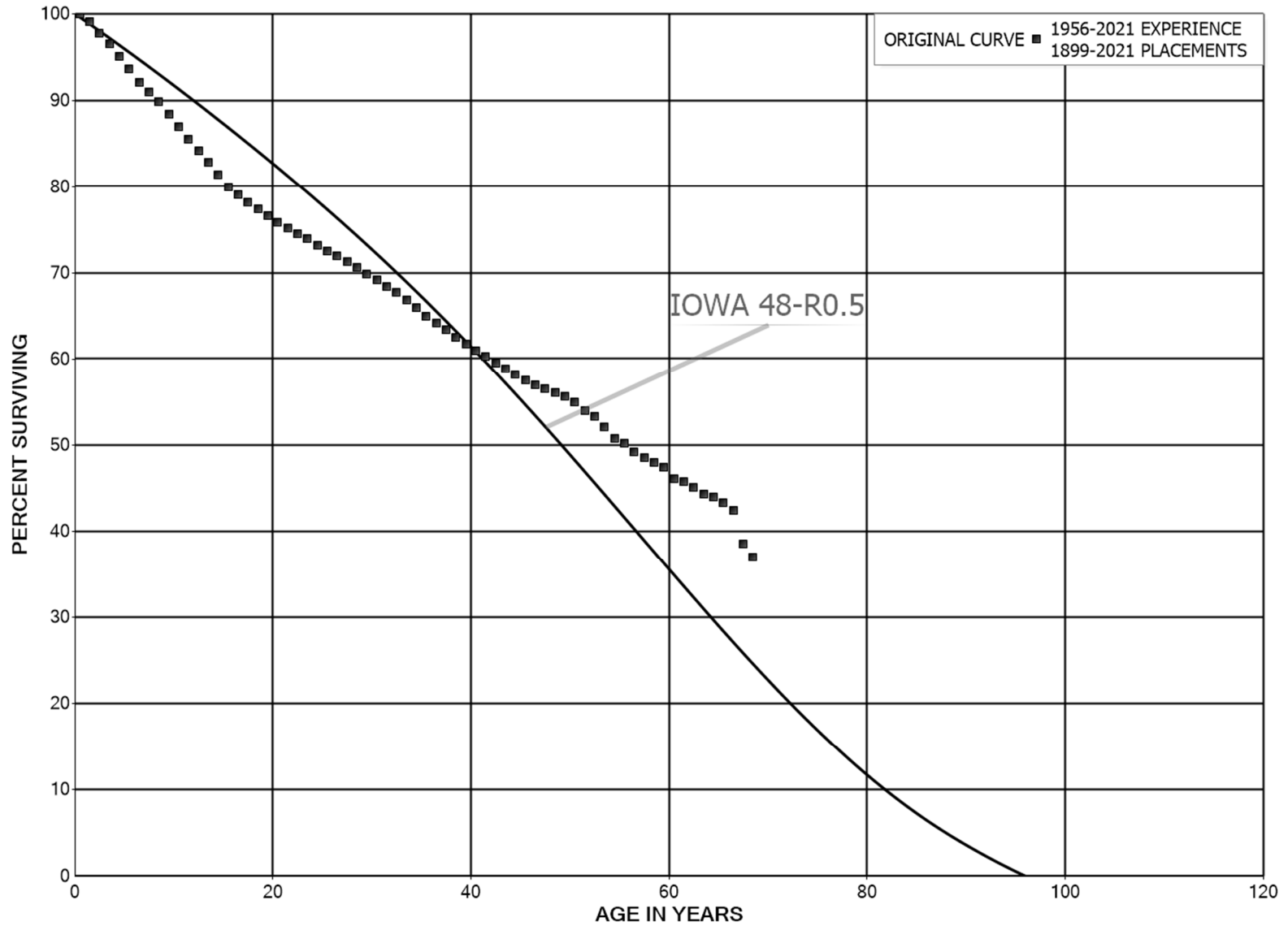
DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	31,419	3,216	0.1024	0.8976	6.87	
80.5	27,998	3,507	0.1253	0.8747	6.17	
81.5	9,916	1,322	0.1333	0.8667	5.40	
82.5	8,447	1,227	0.1452	0.8548	4.68	
83.5	4,633	910	0.1964	0.8036	4.00	
84.5	3,682	549	0.1492	0.8508	3.21	
85.5	3,132	452	0.1443	0.8557	2.73	
86.5	2,662	332	0.1245	0.8755	2.34	
87.5	2,331	493	0.2116	0.7884	2.05	
88.5	1,813	366	0.2020	0.7980	1.61	
89.5	1,426	515	0.3611	0.6389	1.29	
90.5	835	138	0.1650	0.8350	0.82	
91.5	697	124	0.1772	0.8228	0.69	
92.5	448	82	0.1832	0.8168	0.57	
93.5	366	42	0.1159	0.8841	0.46	
94.5	317	103	0.3230	0.6770	0.41	
95.5	205	66	0.3245	0.6755	0.28	
96.5	138	74	0.5347	0.4653	0.19	
97.5	64	32	0.4923	0.5077	0.09	
98.5	16	8	0.5003	0.4997	0.04	
99.5	8	4	0.5330	0.4670	0.02	
100.5	4	2	0.4266	0.5734	0.01	
101.5	2	1	0.5024	0.4976	0.01	
102.5	1	1	0.5049	0.4951	0.00	
103.5	1		0.0000	1.0000	0.00	
104.5	1	1	1.0000		0.00	
105.5						

DUKE ENERGY KENTUCKY
ACCOUNT 3680 LINE TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1899-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	93,972,484	89,206	0.0009	0.9991	100.00
0.5	82,096,636	649,664	0.0079	0.9921	99.91
1.5	84,148,256	1,153,060	0.0137	0.9863	99.11
2.5	84,108,487	1,116,645	0.0133	0.9867	97.76
3.5	82,151,547	1,206,184	0.0147	0.9853	96.46
4.5	79,128,792	1,143,851	0.0145	0.9855	95.04
5.5	76,200,650	1,347,783	0.0177	0.9823	93.67
6.5	72,172,091	850,417	0.0118	0.9882	92.01
7.5	68,499,211	861,056	0.0126	0.9874	90.93
8.5	66,160,556	1,063,305	0.0161	0.9839	89.78
9.5	63,196,619	1,002,829	0.0159	0.9841	88.34
10.5	62,142,274	1,025,623	0.0165	0.9835	86.94
11.5	59,390,695	929,791	0.0157	0.9843	85.50
12.5	56,835,832	921,186	0.0162	0.9838	84.17
13.5	54,755,377	905,264	0.0165	0.9835	82.80
14.5	51,989,434	932,325	0.0179	0.9821	81.43
15.5	49,792,037	579,367	0.0116	0.9884	79.97
16.5	48,165,520	502,890	0.0104	0.9896	79.04
17.5	46,061,491	493,104	0.0107	0.9893	78.22
18.5	44,304,025	452,723	0.0102	0.9898	77.38
19.5	43,090,944	443,754	0.0103	0.9897	76.59
20.5	41,976,774	362,840	0.0086	0.9914	75.80
21.5	40,264,523	326,182	0.0081	0.9919	75.14
22.5	38,393,857	329,184	0.0086	0.9914	74.54
23.5	36,413,254	368,767	0.0101	0.9899	73.90
24.5	34,091,497	291,769	0.0086	0.9914	73.15
25.5	32,521,364	278,183	0.0086	0.9914	72.52
26.5	30,905,263	282,072	0.0091	0.9909	71.90
27.5	28,183,475	264,030	0.0094	0.9906	71.25
28.5	26,021,314	258,210	0.0099	0.9901	70.58
29.5	24,321,180	247,956	0.0102	0.9898	69.88
30.5	22,149,305	234,347	0.0106	0.9894	69.17
31.5	19,968,182	217,037	0.0109	0.9891	68.43
32.5	17,793,032	235,568	0.0132	0.9868	67.69
33.5	15,604,301	199,941	0.0128	0.9872	66.79
34.5	14,271,617	205,059	0.0144	0.9856	65.94
35.5	13,031,394	155,325	0.0119	0.9881	64.99
36.5	11,840,357	159,663	0.0135	0.9865	64.22
37.5	10,714,243	147,056	0.0137	0.9863	63.35
38.5	9,516,603	116,802	0.0123	0.9877	62.48

DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	8,817,002	113,847	0.0129	0.9871	61.71	
40.5	7,883,651	83,898	0.0106	0.9894	60.92	
41.5	7,152,301	86,554	0.0121	0.9879	60.27	
42.5	6,473,016	77,941	0.0120	0.9880	59.54	
43.5	5,771,555	67,781	0.0117	0.9883	58.82	
44.5	5,230,724	57,170	0.0109	0.9891	58.13	
45.5	4,855,944	47,182	0.0097	0.9903	57.50	
46.5	4,412,945	30,985	0.0070	0.9930	56.94	
47.5	3,722,934	33,036	0.0089	0.9911	56.54	
48.5	3,114,277	25,556	0.0082	0.9918	56.04	
49.5	2,604,664	30,105	0.0116	0.9884	55.58	
50.5	2,133,819	36,431	0.0171	0.9829	54.93	
51.5	1,698,314	23,477	0.0138	0.9862	54.00	
52.5	1,379,055	32,009	0.0232	0.9768	53.25	
53.5	1,137,165	27,385	0.0241	0.9759	52.01	
54.5	1,008,217	11,277	0.0112	0.9888	50.76	
55.5	819,567	16,959	0.0207	0.9793	50.19	
56.5	697,467	8,699	0.0125	0.9875	49.15	
57.5	544,563	6,298	0.0116	0.9884	48.54	
58.5	473,534	5,498	0.0116	0.9884	47.98	
59.5	423,029	12,175	0.0288	0.9712	47.42	
60.5	365,207	2,852	0.0078	0.9922	46.06	
61.5	323,162	4,720	0.0146	0.9854	45.70	
62.5	275,721	4,675	0.0170	0.9830	45.03	
63.5	239,814	1,642	0.0068	0.9932	44.27	
64.5	226,743	3,309	0.0146	0.9854	43.96	
65.5	177,537	3,787	0.0213	0.9787	43.32	
66.5	137,663	12,745	0.0926	0.9074	42.40	
67.5	111,277	4,387	0.0394	0.9606	38.47	
68.5	101,695	698	0.0069	0.9931	36.96	
69.5	90,980	1,770	0.0195	0.9805	36.70	
70.5	73,933	3,115	0.0421	0.9579	35.99	
71.5	65,533	468	0.0071	0.9929	34.47	
72.5	61,668	231	0.0037	0.9963	34.23	
73.5	59,525	508	0.0085	0.9915	34.10	
74.5	56,728	251	0.0044	0.9956	33.81	
75.5	56,227	134	0.0024	0.9976	33.66	
76.5	55,608	0	0.0000	1.0000	33.58	
77.5	55,608	48	0.0009	0.9991	33.58	
78.5	55,560	189	0.0034	0.9966	33.55	

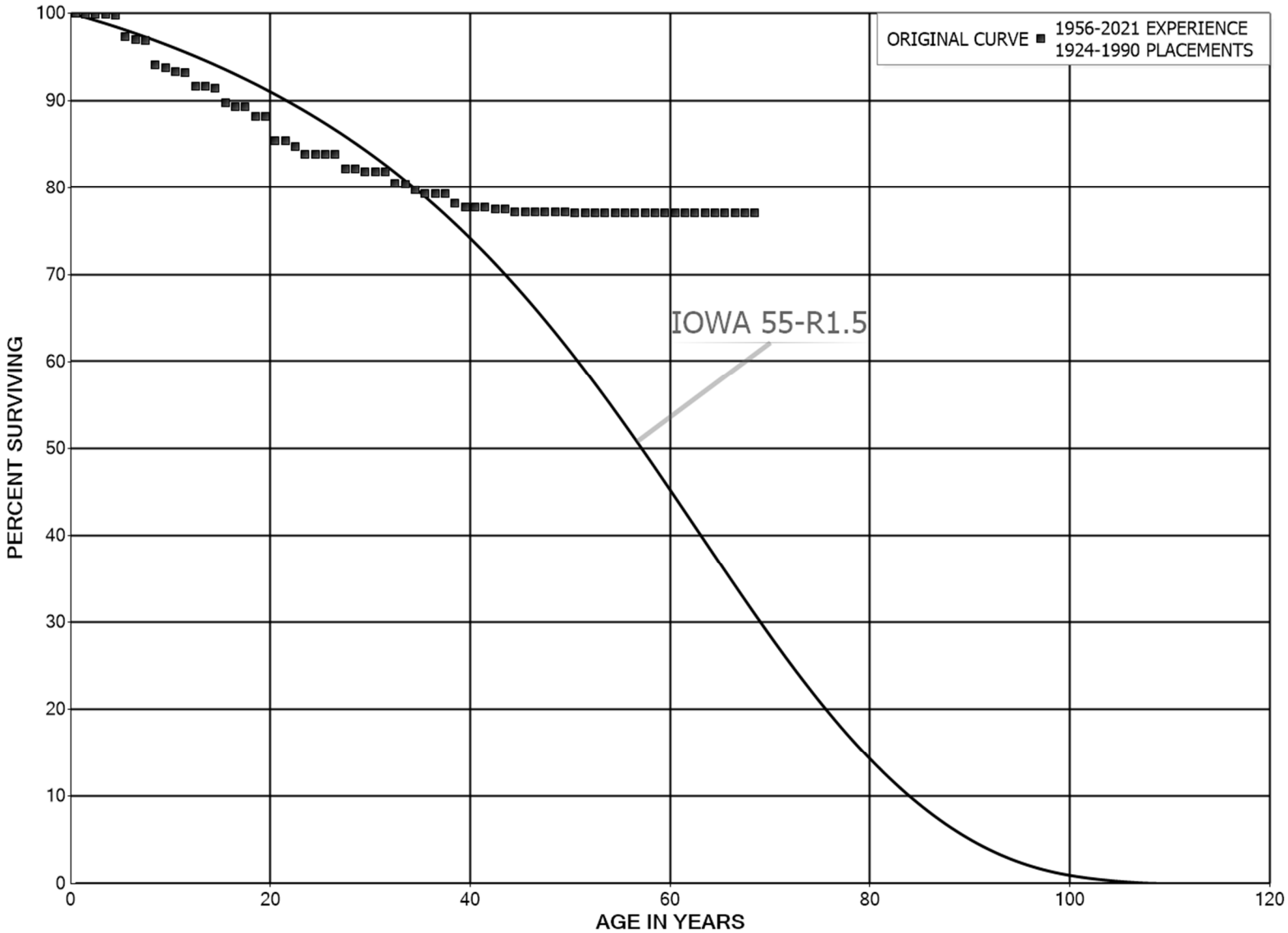
DUKE ENERGY KENTUCKY

ACCOUNT 3680 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	55,206	1,207	0.0219	0.9781	33.43	
80.5	52,806	509	0.0096	0.9904	32.70	
81.5	49,977	123	0.0025	0.9975	32.39	
82.5	49,731	36	0.0007	0.9993	32.31	
83.5	49,581	13	0.0003	0.9997	32.28	
84.5	47,310	201	0.0043	0.9957	32.28	
85.5	45,645	0	0.0000	1.0000	32.14	
86.5	45,298		0.0000	1.0000	32.14	
87.5	44,607	0	0.0000	1.0000	32.14	
88.5	44,424	0	0.0000	1.0000	32.14	
89.5	45,801	1,950	0.0426	0.9574	32.14	
90.5	43,851	62	0.0014	0.9986	30.77	
91.5	43,665	0	0.0000	1.0000	30.73	
92.5	43,485	0	0.0000	1.0000	30.73	
93.5	43,304	97	0.0022	0.9978	30.73	
94.5	44,781	1,010	0.0226	0.9774	30.66	
95.5	43,523	0	0.0000	1.0000	29.97	
96.5	42,863	0	0.0000	1.0000	29.97	
97.5	42,863	82	0.0019	0.9981	29.97	
98.5	42,618	49	0.0011	0.9989	29.91	
99.5	41,965		0.0000	1.0000	29.88	
100.5	41,847	151	0.0036	0.9964	29.88	
101.5	40,956	0	0.0000	1.0000	29.77	
102.5	40,956		0.0000	1.0000	29.77	
103.5	40,956		0.0000	1.0000	29.77	
104.5	40,917		0.0000	1.0000	29.77	
105.5	40,824		0.0000	1.0000	29.77	
106.5	40,824		0.0000	1.0000	29.77	
107.5	40,824	0	0.0000	1.0000	29.77	
108.5	40,823		0.0000	1.0000	29.77	
109.5	40,823		0.0000	1.0000	29.77	
110.5	40,823		0.0000	1.0000	29.77	
111.5	39,891		0.0000	1.0000	29.77	
112.5	39,891		0.0000	1.0000	29.77	
113.5	39,891		0.0000	1.0000	29.77	
114.5	39,891		0.0000	1.0000	29.77	
115.5	39,891		0.0000	1.0000	29.77	
116.5	39,891		0.0000	1.0000	29.77	
117.5	39,891		0.0000	1.0000	29.77	
118.5	39,891		0.0000	1.0000	29.77	
119.5	39,891	8,308	0.2083	0.7917	29.77	
120.5					23.57	

DUKE ENERGY KENTUCKY
ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE

PLACEMENT BAND 1924-1990			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	267,971		0.0000	1.0000	100.00
0.5	277,289	442	0.0016	0.9984	100.00
1.5	290,361	139	0.0005	0.9995	99.84
2.5	320,097	17	0.0001	0.9999	99.79
3.5	323,303	92	0.0003	0.9997	99.79
4.5	334,199	8,295	0.0248	0.9752	99.76
5.5	331,764	1,266	0.0038	0.9962	97.28
6.5	339,385	339	0.0010	0.9990	96.91
7.5	345,628	9,890	0.0286	0.9714	96.82
8.5	338,039	1,100	0.0033	0.9967	94.04
9.5	340,268	1,484	0.0044	0.9956	93.74
10.5	340,703	393	0.0012	0.9988	93.33
11.5	340,310	5,669	0.0167	0.9833	93.22
12.5	334,708		0.0000	1.0000	91.67
13.5	334,719	811	0.0024	0.9976	91.67
14.5	335,744	6,359	0.0189	0.9811	91.45
15.5	329,385	1,561	0.0047	0.9953	89.72
16.5	330,701		0.0000	1.0000	89.29
17.5	330,703	3,956	0.0120	0.9880	89.29
18.5	326,748		0.0000	1.0000	88.22
19.5	326,748	10,565	0.0323	0.9677	88.22
20.5	321,257		0.0000	1.0000	85.37
21.5	321,826	2,358	0.0073	0.9927	85.37
22.5	319,469	3,363	0.0105	0.9895	84.74
23.5	317,846	64	0.0002	0.9998	83.85
24.5	322,183	52	0.0002	0.9998	83.84
25.5	312,484		0.0000	1.0000	83.82
26.5	309,240	6,196	0.0200	0.9800	83.82
27.5	303,216	67	0.0002	0.9998	82.14
28.5	303,880	1,029	0.0034	0.9966	82.12
29.5	302,352		0.0000	1.0000	81.85
30.5	301,651		0.0000	1.0000	81.85
31.5	279,307	4,497	0.0161	0.9839	81.85
32.5	273,717	444	0.0016	0.9984	80.53
33.5	273,274	2,405	0.0088	0.9912	80.40
34.5	270,868	1,404	0.0052	0.9948	79.69
35.5	262,259		0.0000	1.0000	79.28
36.5	262,259		0.0000	1.0000	79.28
37.5	256,304	3,431	0.0134	0.9866	79.28
38.5	252,873	1,452	0.0057	0.9943	78.22

DUKE ENERGY KENTUCKY

ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-1990			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	247,188		0.0000	1.0000	77.77
40.5	247,188		0.0000	1.0000	77.77
41.5	247,188	951	0.0038	0.9962	77.77
42.5	246,237		0.0000	1.0000	77.47
43.5	230,046	731	0.0032	0.9968	77.47
44.5	218,115		0.0000	1.0000	77.22
45.5	194,983		0.0000	1.0000	77.22
46.5	189,770		0.0000	1.0000	77.22
47.5	187,529		0.0000	1.0000	77.22
48.5	181,396		0.0000	1.0000	77.22
49.5	176,874	420	0.0024	0.9976	77.22
50.5	152,988		0.0000	1.0000	77.04
51.5	148,207		0.0000	1.0000	77.04
52.5	122,917		0.0000	1.0000	77.04
53.5	96,040		0.0000	1.0000	77.04
54.5	93,899		0.0000	1.0000	77.04
55.5	87,129		0.0000	1.0000	77.04
56.5	82,013		0.0000	1.0000	77.04
57.5	77,620		0.0000	1.0000	77.04
58.5	63,369		0.0000	1.0000	77.04
59.5	59,386		0.0000	1.0000	77.04
60.5	54,156		0.0000	1.0000	77.04
61.5	54,156		0.0000	1.0000	77.04
62.5	51,285		0.0000	1.0000	77.04
63.5	51,071		0.0000	1.0000	77.04
64.5	48,638		0.0000	1.0000	77.04
65.5	21,685		0.0000	1.0000	77.04
66.5	21,103		0.0000	1.0000	77.04
67.5	19,545		0.0000	1.0000	77.04
68.5	18,092		0.0000	1.0000	77.04
69.5	18,043		0.0000	1.0000	77.04
70.5	12,088		0.0000	1.0000	77.04
71.5	11,671		0.0000	1.0000	77.04
72.5	7,814		0.0000	1.0000	77.04
73.5	7,413		0.0000	1.0000	77.04
74.5	5,113		0.0000	1.0000	77.04
75.5	1,783		0.0000	1.0000	77.04
76.5	18		0.0000	1.0000	77.04
77.5	18		0.0000	1.0000	77.04
78.5	15		0.0000	1.0000	77.04

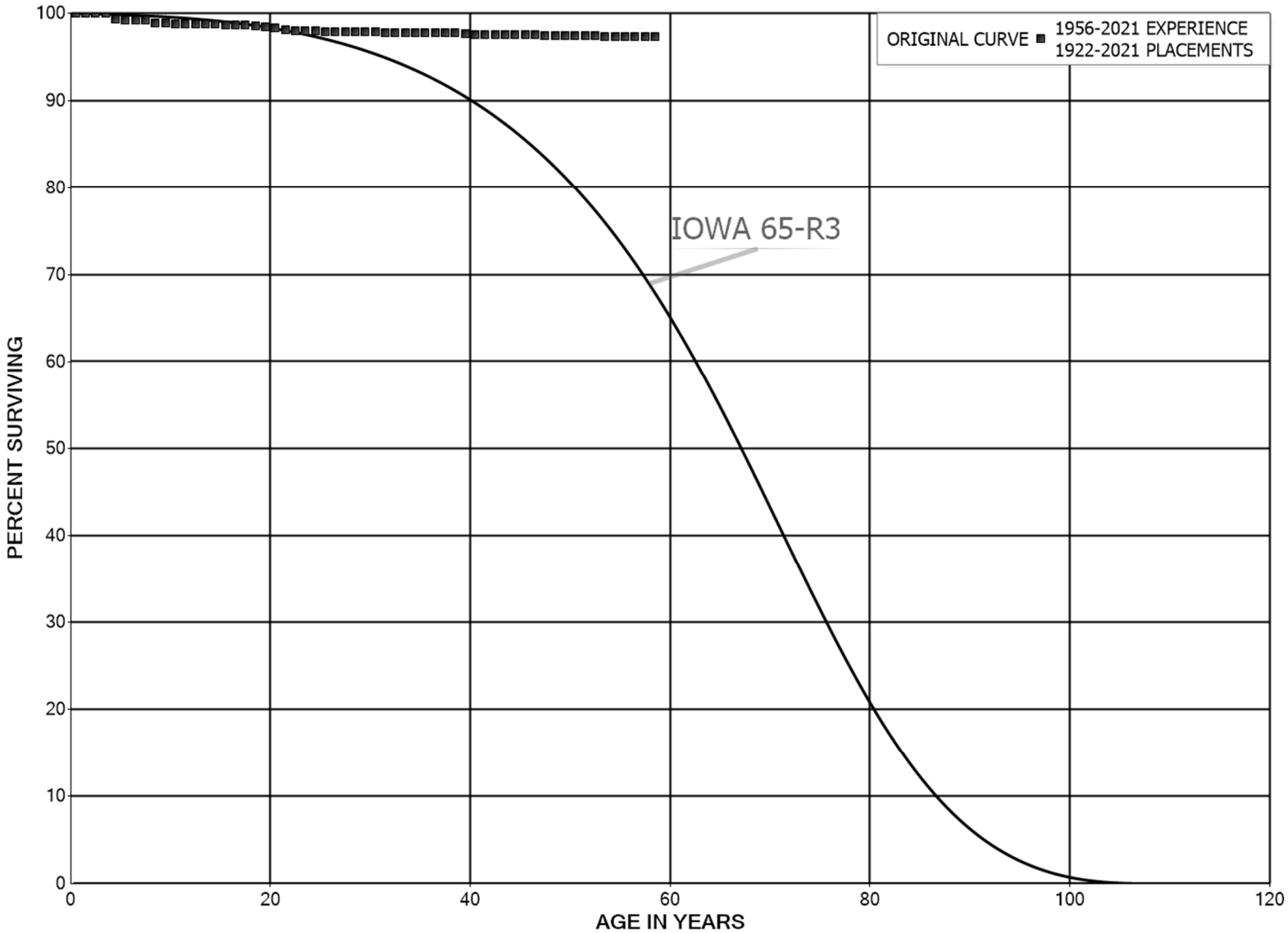
DUKE ENERGY KENTUCKY

ACCOUNT 3682 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-1990			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	5		0.0000	1.0000	77.04
80.5	4		0.0000	1.0000	77.04
81.5	4		0.0000	1.0000	77.04
82.5	4		0.0000	1.0000	77.04
83.5	1		0.0000	1.0000	77.04
84.5					77.04

DUKE ENERGY KENTUCKY
ACCOUNT 3691 SERVICES - UNDERGROUND
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3691 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE

PLACEMENT BAND 1922-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	2,741,993		0.0000	1.0000	100.00	
0.5	2,561,514	619	0.0002	0.9998	100.00	
1.5	2,447,296		0.0000	1.0000	99.98	
2.5	2,473,062	665	0.0003	0.9997	99.98	
3.5	2,462,536	17,691	0.0072	0.9928	99.95	
4.5	2,437,762	677	0.0003	0.9997	99.23	
5.5	2,440,444	431	0.0002	0.9998	99.20	
6.5	2,421,113	1,602	0.0007	0.9993	99.19	
7.5	440,170	1,295	0.0029	0.9971	99.12	
8.5	439,161	156	0.0004	0.9996	98.83	
9.5	439,118	82	0.0002	0.9998	98.79	
10.5	439,091	59	0.0001	0.9999	98.77	
11.5	439,040		0.0000	1.0000	98.76	
12.5	438,120		0.0000	1.0000	98.76	
13.5	438,571	319	0.0007	0.9993	98.76	
14.5	438,030	98	0.0002	0.9998	98.69	
15.5	437,313	163	0.0004	0.9996	98.67	
16.5	437,035	120	0.0003	0.9997	98.63	
17.5	436,956	376	0.0009	0.9991	98.60	
18.5	126,373	229	0.0018	0.9982	98.52	
19.5	126,280	53	0.0004	0.9996	98.34	
20.5	126,227	357	0.0028	0.9972	98.30	
21.5	125,870	53	0.0004	0.9996	98.02	
22.5	124,552	51	0.0004	0.9996	97.98	
23.5	124,501		0.0000	1.0000	97.94	
24.5	124,501	85	0.0007	0.9993	97.94	
25.5	124,415		0.0000	1.0000	97.87	
26.5	124,438		0.0000	1.0000	97.87	
27.5	124,438	23	0.0002	0.9998	97.87	
28.5	124,415	85	0.0007	0.9993	97.85	
29.5	124,330	6	0.0000	1.0000	97.79	
30.5	124,324	42	0.0003	0.9997	97.78	
31.5	124,282		0.0000	1.0000	97.75	
32.5	124,568	3	0.0000	1.0000	97.75	
33.5	124,574	9	0.0001	0.9999	97.75	
34.5	122,506		0.0000	1.0000	97.74	
35.5	122,506		0.0000	1.0000	97.74	
36.5	122,506	19	0.0002	0.9998	97.74	
37.5	122,487	45	0.0004	0.9996	97.73	
38.5	122,442	74	0.0006	0.9994	97.69	

DUKE ENERGY KENTUCKY

ACCOUNT 3691 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	122,368	182	0.0015	0.9985	97.63	
40.5	122,186		0.0000	1.0000	97.49	
41.5	122,186		0.0000	1.0000	97.49	
42.5	122,186		0.0000	1.0000	97.49	
43.5	122,186		0.0000	1.0000	97.49	
44.5	121,316	42	0.0003	0.9997	97.49	
45.5	120,746		0.0000	1.0000	97.45	
46.5	120,264	57	0.0005	0.9995	97.45	
47.5	120,207		0.0000	1.0000	97.41	
48.5	119,432		0.0000	1.0000	97.41	
49.5	118,804		0.0000	1.0000	97.41	
50.5	115,334		0.0000	1.0000	97.41	
51.5	104,256		0.0000	1.0000	97.41	
52.5	87,748	85	0.0010	0.9990	97.41	
53.5	81,294	0	0.0000	1.0000	97.31	
54.5	72,698		0.0000	1.0000	97.31	
55.5	61,883		0.0000	1.0000	97.31	
56.5	56,880		0.0000	1.0000	97.31	
57.5	49,390		0.0000	1.0000	97.31	
58.5	39,566		0.0000	1.0000	97.31	
59.5	35,515		0.0000	1.0000	97.31	
60.5	30,520		0.0000	1.0000	97.31	
61.5	28,772		0.0000	1.0000	97.31	
62.5	26,556		0.0000	1.0000	97.31	
63.5	22,165	0	0.0000	1.0000	97.31	
64.5	20,422		0.0000	1.0000	97.31	
65.5	15,169		0.0000	1.0000	97.31	
66.5	9,481		0.0000	1.0000	97.31	
67.5	9,478	1	0.0001	0.9999	97.31	
68.5	7,380		0.0000	1.0000	97.30	
69.5	7,218		0.0000	1.0000	97.30	
70.5	6,255		0.0000	1.0000	97.30	
71.5	3,532		0.0000	1.0000	97.30	
72.5	2,821		0.0000	1.0000	97.30	
73.5	2,788		0.0000	1.0000	97.30	
74.5	2,787		0.0000	1.0000	97.30	
75.5	2,674		0.0000	1.0000	97.30	
76.5	2,619		0.0000	1.0000	97.30	
77.5	2,611		0.0000	1.0000	97.30	
78.5	2,571		0.0000	1.0000	97.30	

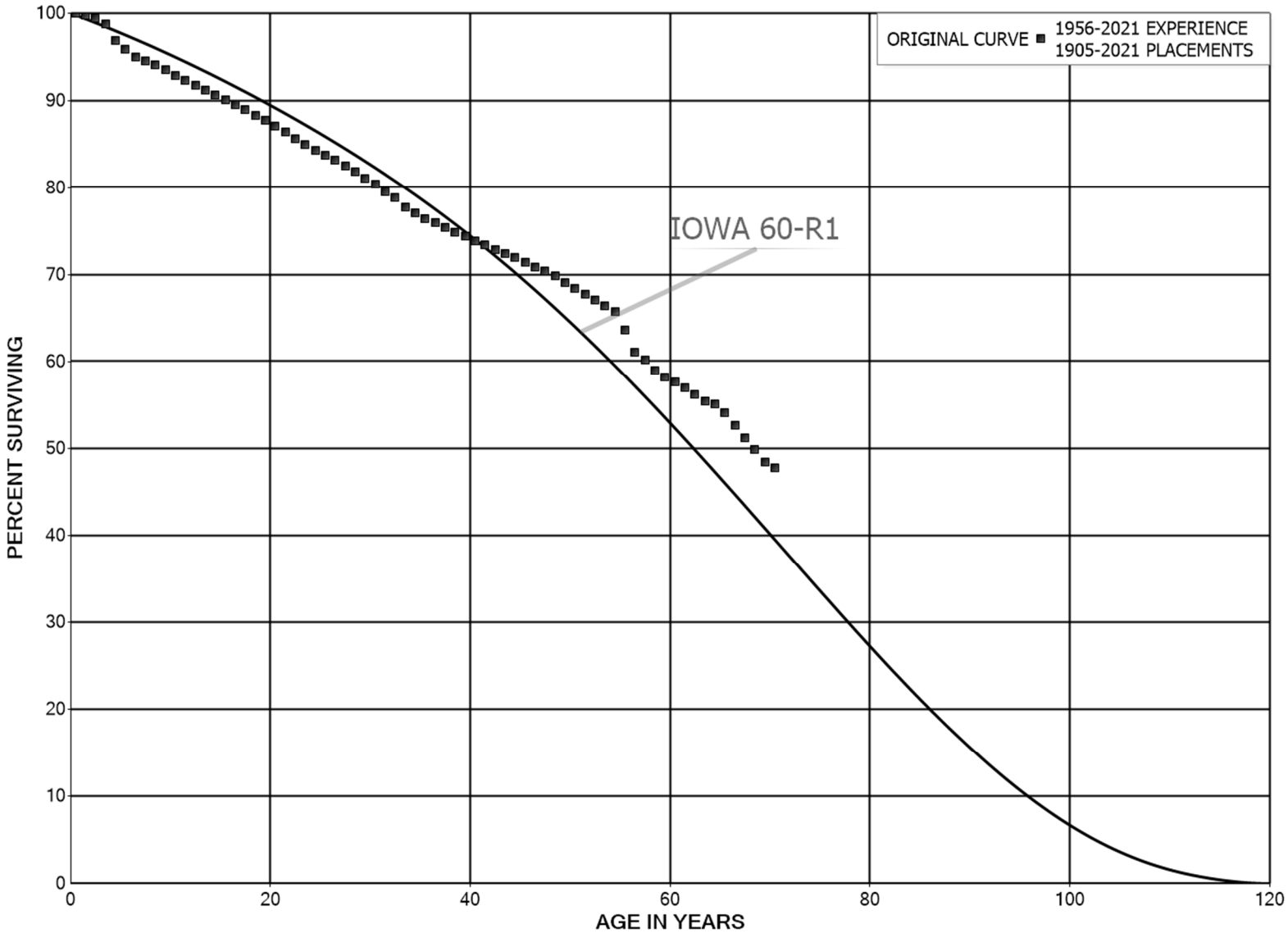
DUKE ENERGY KENTUCKY

ACCOUNT 3691 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,491		0.0000	1.0000	97.30
80.5	2,430		0.0000	1.0000	97.30
81.5	2,388		0.0000	1.0000	97.30
82.5	2,388		0.0000	1.0000	97.30
83.5	2,103		0.0000	1.0000	97.30
84.5					97.30

DUKE ENERGY KENTUCKY
ACCOUNT 3692 SERVICES - OVERHEAD
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	22,988,836	14,257	0.0006	0.9994	100.00
0.5	19,433,482	49,506	0.0025	0.9975	99.94
1.5	18,709,948	60,140	0.0032	0.9968	99.68
2.5	19,683,797	133,467	0.0068	0.9932	99.36
3.5	19,198,976	367,892	0.0192	0.9808	98.69
4.5	18,308,980	187,794	0.0103	0.9897	96.80
5.5	17,665,629	147,704	0.0084	0.9916	95.81
6.5	15,902,707	79,386	0.0050	0.9950	95.00
7.5	15,727,493	81,840	0.0052	0.9948	94.53
8.5	14,429,917	88,467	0.0061	0.9939	94.04
9.5	13,705,963	89,295	0.0065	0.9935	93.46
10.5	13,600,389	78,254	0.0058	0.9942	92.85
11.5	13,222,693	85,585	0.0065	0.9935	92.32
12.5	12,522,178	75,738	0.0060	0.9940	91.72
13.5	11,938,604	71,344	0.0060	0.9940	91.17
14.5	11,419,083	68,456	0.0060	0.9940	90.62
15.5	10,809,015	66,449	0.0061	0.9939	90.08
16.5	10,471,954	68,663	0.0066	0.9934	89.52
17.5	10,269,003	71,522	0.0070	0.9930	88.94
18.5	9,271,178	64,882	0.0070	0.9930	88.32
19.5	9,206,312	68,882	0.0075	0.9925	87.70
20.5	9,134,168	72,522	0.0079	0.9921	87.04
21.5	8,551,689	69,794	0.0082	0.9918	86.35
22.5	8,276,291	63,212	0.0076	0.9924	85.65
23.5	7,963,200	63,845	0.0080	0.9920	84.99
24.5	7,614,962	53,075	0.0070	0.9930	84.31
25.5	7,161,261	49,632	0.0069	0.9931	83.72
26.5	6,823,372	54,248	0.0080	0.9920	83.14
27.5	6,509,888	52,949	0.0081	0.9919	82.48
28.5	6,167,901	53,018	0.0086	0.9914	81.81
29.5	5,821,036	55,140	0.0095	0.9905	81.11
30.5	5,623,838	55,843	0.0099	0.9901	80.34
31.5	5,329,106	46,500	0.0087	0.9913	79.54
32.5	5,037,339	69,442	0.0138	0.9862	78.85
33.5	4,706,432	44,087	0.0094	0.9906	77.76
34.5	4,376,367	34,126	0.0078	0.9922	77.03
35.5	4,059,324	27,595	0.0068	0.9932	76.43
36.5	3,782,958	26,812	0.0071	0.9929	75.91
37.5	3,452,492	23,788	0.0069	0.9931	75.38
38.5	3,214,076	20,715	0.0064	0.9936	74.86

DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,980,170	20,199	0.0068	0.9932	74.37
40.5	2,717,102	19,291	0.0071	0.9929	73.87
41.5	2,497,904	16,721	0.0067	0.9933	73.34
42.5	2,281,783	14,413	0.0063	0.9937	72.85
43.5	2,068,578	13,497	0.0065	0.9935	72.39
44.5	1,888,633	13,101	0.0069	0.9931	71.92
45.5	1,725,340	13,363	0.0077	0.9923	71.42
46.5	1,555,791	11,256	0.0072	0.9928	70.87
47.5	1,388,408	9,597	0.0069	0.9931	70.36
48.5	1,269,863	13,930	0.0110	0.9890	69.87
49.5	1,141,897	11,089	0.0097	0.9903	69.10
50.5	1,021,130	10,152	0.0099	0.9901	68.43
51.5	925,960	9,132	0.0099	0.9901	67.75
52.5	832,163	8,573	0.0103	0.9897	67.08
53.5	758,825	8,230	0.0108	0.9892	66.39
54.5	675,410	21,383	0.0317	0.9683	65.67
55.5	591,773	23,074	0.0390	0.9610	63.59
56.5	512,315	7,461	0.0146	0.9854	61.11
57.5	455,178	9,234	0.0203	0.9797	60.22
58.5	397,634	5,267	0.0132	0.9868	59.00
59.5	343,687	3,705	0.0108	0.9892	58.22
60.5	288,873	2,969	0.0103	0.9897	57.59
61.5	237,675	3,286	0.0138	0.9862	57.00
62.5	193,615	2,885	0.0149	0.9851	56.21
63.5	156,059	794	0.0051	0.9949	55.38
64.5	127,531	2,459	0.0193	0.9807	55.09
65.5	106,159	2,722	0.0256	0.9744	54.03
66.5	102,921	2,808	0.0273	0.9727	52.65
67.5	92,260	2,453	0.0266	0.9734	51.21
68.5	81,110	2,313	0.0285	0.9715	49.85
69.5	69,607	1,087	0.0156	0.9844	48.43
70.5	62,303	913	0.0147	0.9853	47.67
71.5	54,598	168	0.0031	0.9969	46.97
72.5	48,780	228	0.0047	0.9953	46.83
73.5	43,873	162	0.0037	0.9963	46.61
74.5	40,418	242	0.0060	0.9940	46.44
75.5	37,918	1,005	0.0265	0.9735	46.16
76.5	35,862	149	0.0042	0.9958	44.94
77.5	34,743	311	0.0089	0.9911	44.75
78.5	33,429	977	0.0292	0.9708	44.35

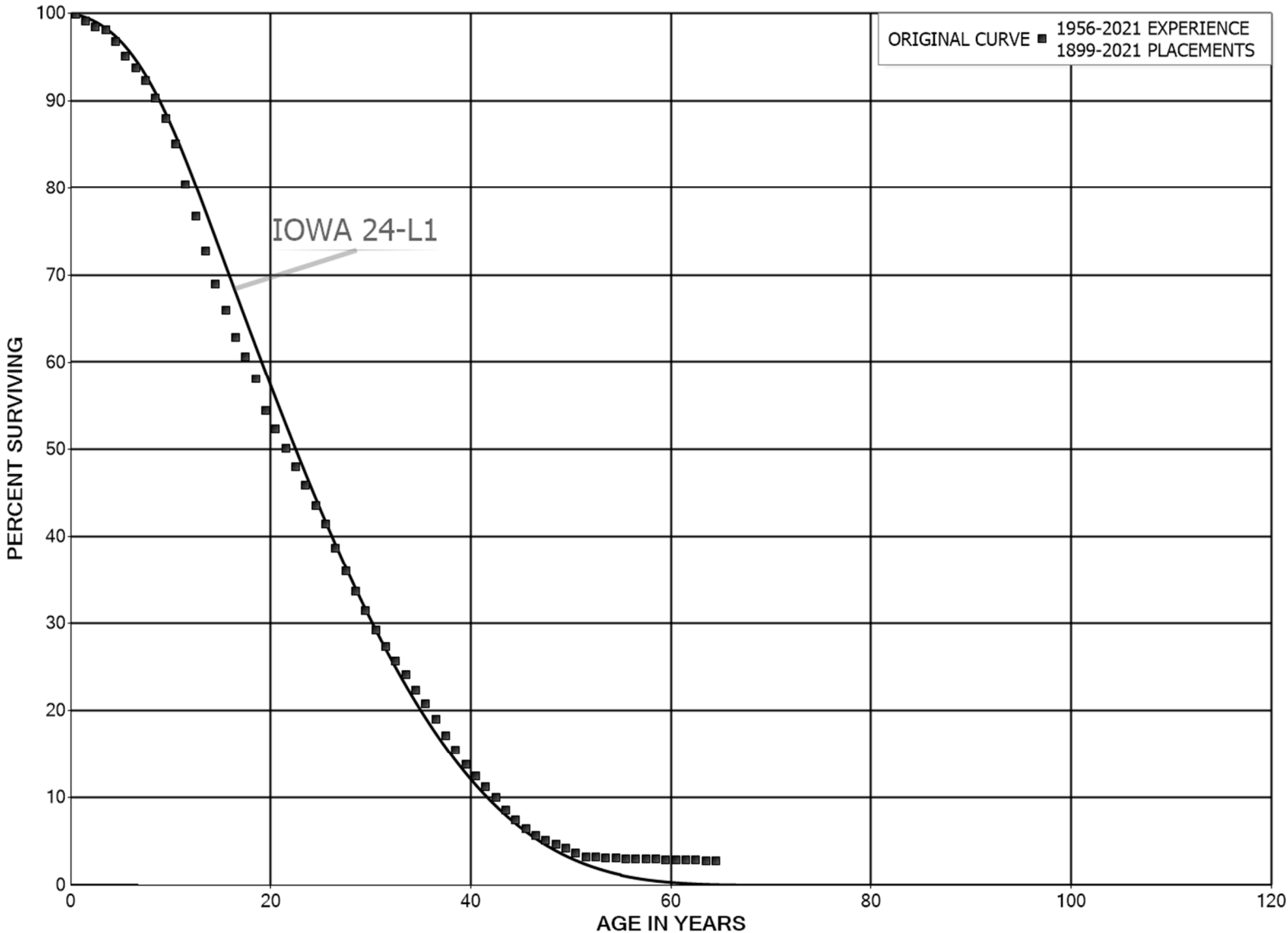
DUKE ENERGY KENTUCKY

ACCOUNT 3692 SERVICES - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	31,725	977	0.0308	0.9692	43.05	
80.5	29,330	334	0.0114	0.9886	41.73	
81.5	27,777	368	0.0132	0.9868	41.25	
82.5	26,245	359	0.0137	0.9863	40.71	
83.5	25,373	207	0.0081	0.9919	40.15	
84.5	25,166		0.0000	1.0000	39.82	
85.5	25,166	138	0.0055	0.9945	39.82	
86.5	25,029	44	0.0018	0.9982	39.60	
87.5	24,985	56	0.0023	0.9977	39.54	
88.5	24,928	5,211	0.2090	0.7910	39.45	
89.5	19,718	895	0.0454	0.9546	31.20	
90.5	18,823	1,282	0.0681	0.9319	29.79	
91.5	17,541	1,095	0.0624	0.9376	27.76	
92.5	16,446	757	0.0460	0.9540	26.02	
93.5	15,689	982	0.0626	0.9374	24.83	
94.5	14,707	726	0.0493	0.9507	23.27	
95.5	13,982	715	0.0511	0.9489	22.12	
96.5					20.99	

DUKE ENERGY KENTUCKY
ACCOUNT 3700 METERS AND METERING EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1899-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	23,484,177	47,056	0.0020	0.9980	100.00
0.5	23,307,289	166,768	0.0072	0.9928	99.80
1.5	23,101,676	148,502	0.0064	0.9936	99.09
2.5	22,617,251	93,805	0.0041	0.9959	98.45
3.5	22,535,204	307,701	0.0137	0.9863	98.04
4.5	22,381,583	375,863	0.0168	0.9832	96.70
5.5	21,905,900	323,625	0.0148	0.9852	95.08
6.5	21,043,447	323,673	0.0154	0.9846	93.67
7.5	20,194,531	418,206	0.0207	0.9793	92.23
8.5	22,085,881	583,765	0.0264	0.9736	90.32
9.5	21,458,882	689,370	0.0321	0.9679	87.93
10.5	18,133,282	1,014,244	0.0559	0.9441	85.11
11.5	17,027,754	757,522	0.0445	0.9555	80.35
12.5	16,218,795	860,370	0.0530	0.9470	76.77
13.5	15,004,166	775,054	0.0517	0.9483	72.70
14.5	13,714,568	604,525	0.0441	0.9559	68.95
15.5	12,856,782	599,424	0.0466	0.9534	65.91
16.5	12,001,448	422,669	0.0352	0.9648	62.83
17.5	11,346,136	485,091	0.0428	0.9572	60.62
18.5	10,519,896	663,404	0.0631	0.9369	58.03
19.5	9,833,280	370,148	0.0376	0.9624	54.37
20.5	8,884,980	378,118	0.0426	0.9574	52.32
21.5	7,923,324	338,548	0.0427	0.9573	50.10
22.5	7,375,386	333,622	0.0452	0.9548	47.96
23.5	6,810,280	332,998	0.0489	0.9511	45.79
24.5	6,250,387	306,157	0.0490	0.9510	43.55
25.5	5,681,259	379,167	0.0667	0.9333	41.42
26.5	5,071,029	353,564	0.0697	0.9303	38.65
27.5	4,506,903	291,147	0.0646	0.9354	35.96
28.5	4,001,965	271,183	0.0678	0.9322	33.63
29.5	3,568,060	243,384	0.0682	0.9318	31.35
30.5	3,204,116	213,509	0.0666	0.9334	29.22
31.5	2,870,961	175,641	0.0612	0.9388	27.27
32.5	2,635,020	158,208	0.0600	0.9400	25.60
33.5	2,427,981	178,117	0.0734	0.9266	24.06
34.5	2,193,381	153,226	0.0699	0.9301	22.30
35.5	1,969,041	166,021	0.0843	0.9157	20.74
36.5	1,746,705	174,065	0.0997	0.9003	18.99
37.5	1,528,165	156,713	0.1025	0.8975	17.10
38.5	1,316,473	139,413	0.1059	0.8941	15.35

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,144,425	114,508	0.1001	0.8999	13.72
40.5	998,161	94,098	0.0943	0.9057	12.35
41.5	865,719	97,534	0.1127	0.8873	11.18
42.5	747,272	108,675	0.1454	0.8546	9.92
43.5	625,479	82,921	0.1326	0.8674	8.48
44.5	528,923	67,334	0.1273	0.8727	7.36
45.5	454,223	53,336	0.1174	0.8826	6.42
46.5	395,117	38,076	0.0964	0.9036	5.67
47.5	335,618	32,295	0.0962	0.9038	5.12
48.5	291,106	30,549	0.1049	0.8951	4.63
49.5	245,688	32,082	0.1306	0.8694	4.14
50.5	205,522	23,387	0.1138	0.8862	3.60
51.5	173,397	3,841	0.0221	0.9779	3.19
52.5	158,231	2,960	0.0187	0.9813	3.12
53.5	142,016	1,670	0.0118	0.9882	3.06
54.5	132,657	1,152	0.0087	0.9913	3.03
55.5	121,783	839	0.0069	0.9931	3.00
56.5	118,844	1,725	0.0145	0.9855	2.98
57.5	110,753	872	0.0079	0.9921	2.94
58.5	105,173	1,129	0.0107	0.9893	2.91
59.5	99,048	734	0.0074	0.9926	2.88
60.5	90,413	1,134	0.0125	0.9875	2.86
61.5	81,726	1,247	0.0153	0.9847	2.82
62.5	75,130	1,157	0.0154	0.9846	2.78
63.5	69,678	614	0.0088	0.9912	2.74
64.5	59,117	193	0.0033	0.9967	2.71
65.5	53,477	295	0.0055	0.9945	2.71
66.5	49,222	274	0.0056	0.9944	2.69
67.5	45,716	124	0.0027	0.9973	2.68
68.5	39,131	315	0.0081	0.9919	2.67
69.5	33,775	315	0.0093	0.9907	2.65
70.5	31,443	1,280	0.0407	0.9593	2.62
71.5	26,848	582	0.0217	0.9783	2.52
72.5	24,220	17	0.0007	0.9993	2.46
73.5	21,191	9	0.0004	0.9996	2.46
74.5	16,892	35	0.0020	0.9980	2.46
75.5	16,037		0.0000	1.0000	2.45
76.5	15,763		0.0000	1.0000	2.45
77.5	15,324		0.0000	1.0000	2.45
78.5	15,119		0.0000	1.0000	2.45

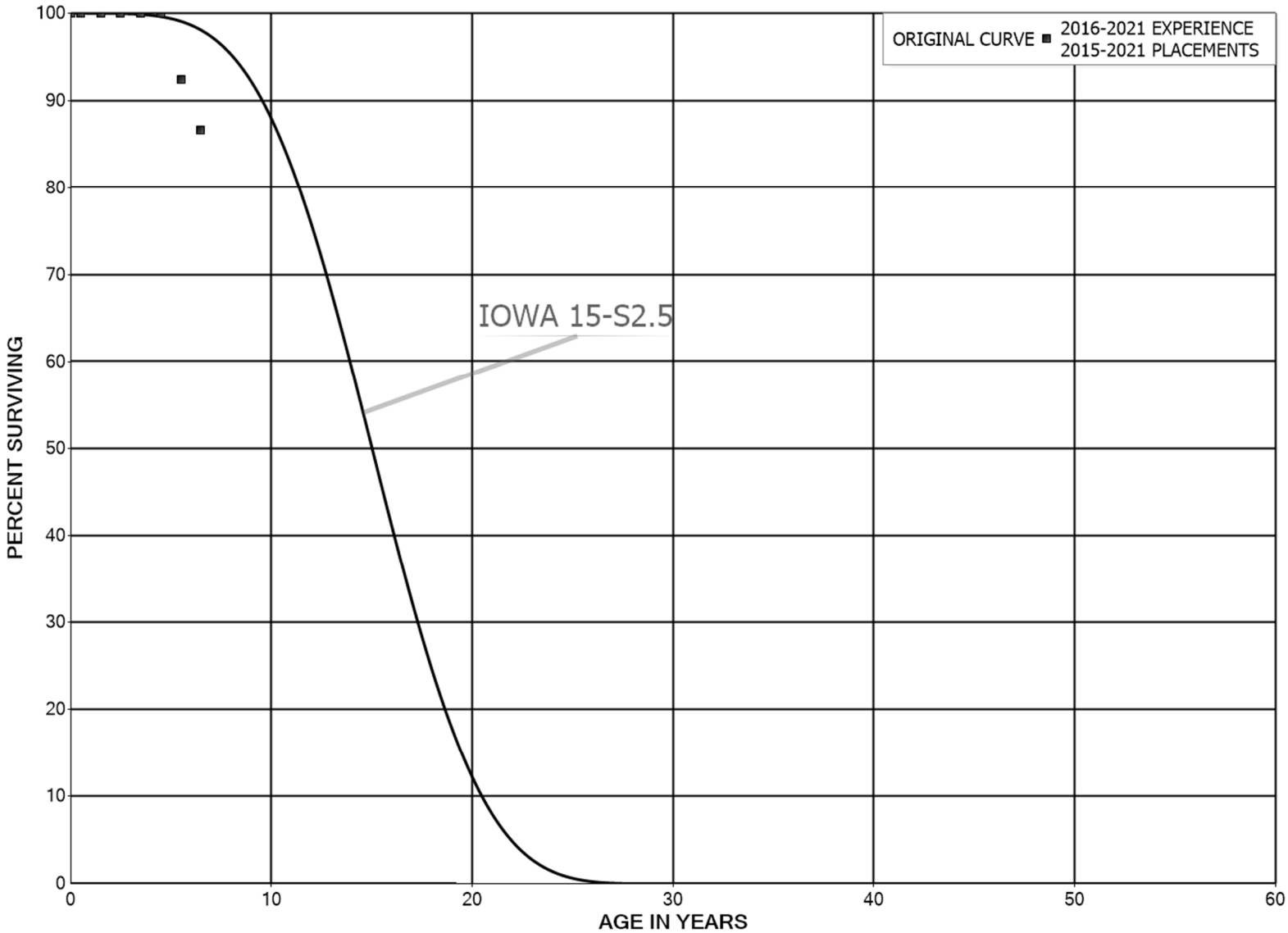
DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	13,846	30	0.0022	0.9978	2.45	
80.5	11,699		0.0000	1.0000	2.45	
81.5	10,940		0.0000	1.0000	2.45	
82.5	9,753	33	0.0034	0.9966	2.45	
83.5	9,561		0.0000	1.0000	2.44	
84.5	8,246		0.0000	1.0000	2.44	
85.5	7,347		0.0000	1.0000	2.44	
86.5	7,106		0.0000	1.0000	2.44	
87.5	6,756		0.0000	1.0000	2.44	
88.5	6,730		0.0000	1.0000	2.44	
89.5	6,730		0.0000	1.0000	2.44	
90.5	5,893		0.0000	1.0000	2.44	
91.5	5,191		0.0000	1.0000	2.44	
92.5	3,711		0.0000	1.0000	2.44	
93.5	2,952		0.0000	1.0000	2.44	
94.5	2,036		0.0000	1.0000	2.44	
95.5	1,642		0.0000	1.0000	2.44	
96.5	1,046		0.0000	1.0000	2.44	
97.5	708		0.0000	1.0000	2.44	
98.5	304		0.0000	1.0000	2.44	
99.5	158		0.0000	1.0000	2.44	
100.5	125		0.0000	1.0000	2.44	
101.5					2.44	

DUKE ENERGY KENTUCKY
ACCOUNT 3702 UoF METERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



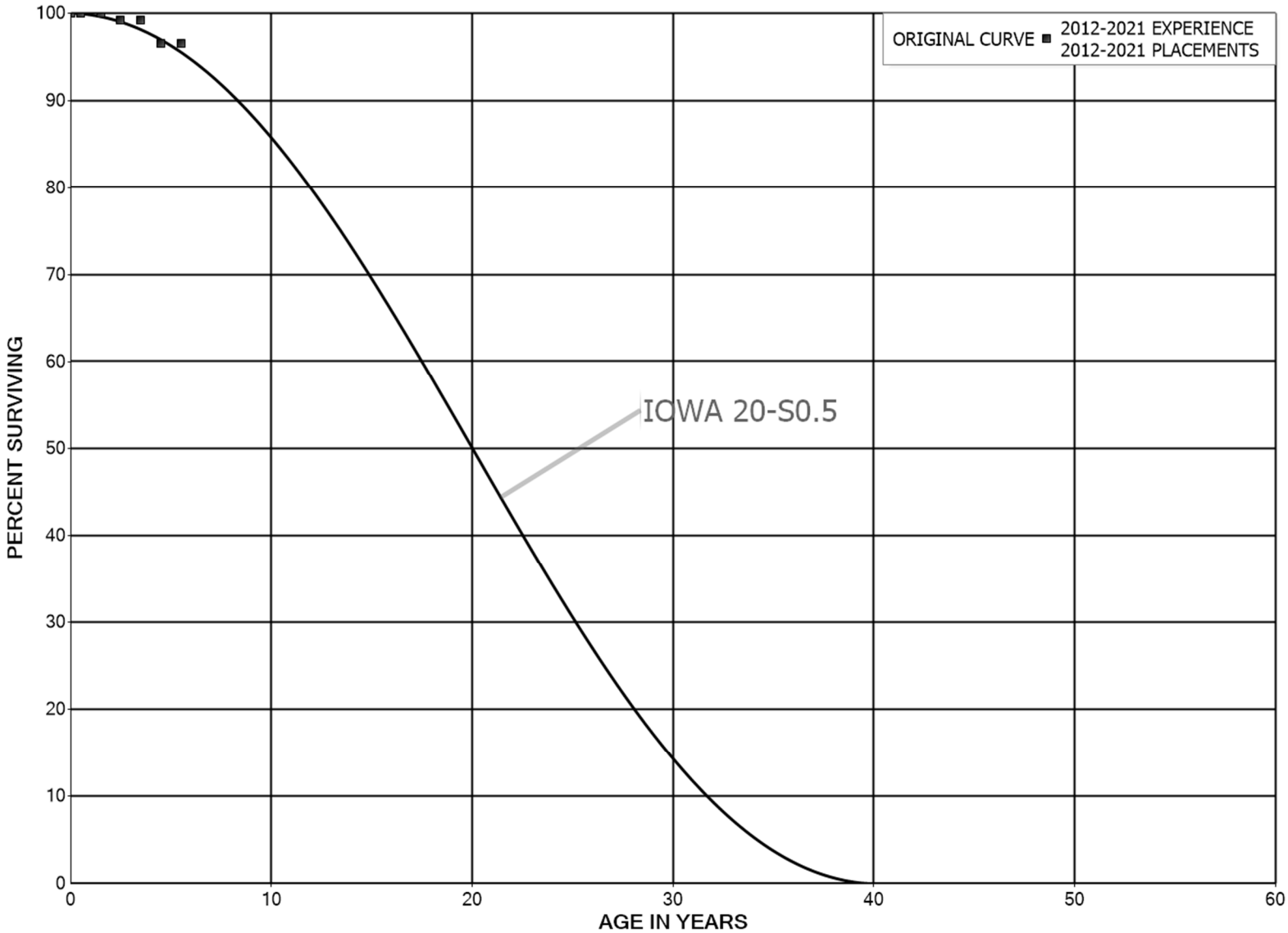
DUKE ENERGY KENTUCKY

ACCOUNT 3702 UoF METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2015-2021			EXPERIENCE BAND 2016-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	25,448,878		0.0000	1.0000	100.00
0.5	25,131,585		0.0000	1.0000	100.00
1.5	25,058,490		0.0000	1.0000	100.00
2.5	511,283		0.0000	1.0000	100.00
3.5	510,419		0.0000	1.0000	100.00
4.5	510,419	38,889	0.0762	0.9238	100.00
5.5	208,337	12,963	0.0622	0.9378	92.38
6.5					86.63

DUKE ENERGY KENTUCKY
ACCOUNT 3711 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING
ORIGINAL AND SMOOTH SURVIVOR CURVES



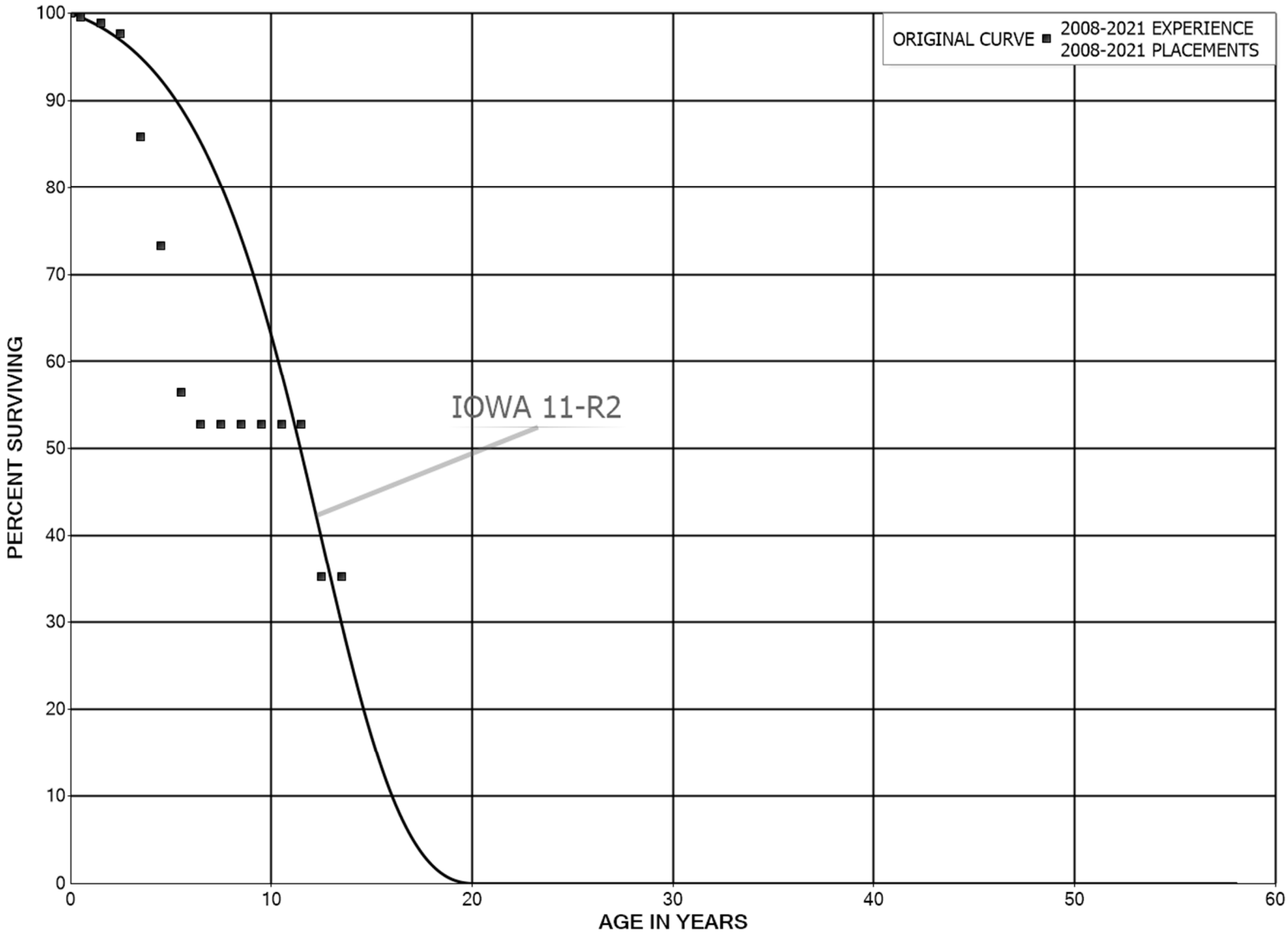
DUKE ENERGY KENTUCKY

ACCOUNT 3711 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 2012-2021			EXPERIENCE BAND 2012-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	181,546		0.0000	1.0000	100.00
0.5	167,757		0.0000	1.0000	100.00
1.5	151,778	1,222	0.0080	0.9920	100.00
2.5	98,501		0.0000	1.0000	99.20
3.5	71,758	1,943	0.0271	0.9729	99.20
4.5	0		0.0000	1.0000	96.51
5.5					96.51

DUKE ENERGY KENTUCKY
ACCOUNT 3712 COMPANY-OWNED OUTDOOR LIGHTING
ORIGINAL AND SMOOTH SURVIVOR CURVES



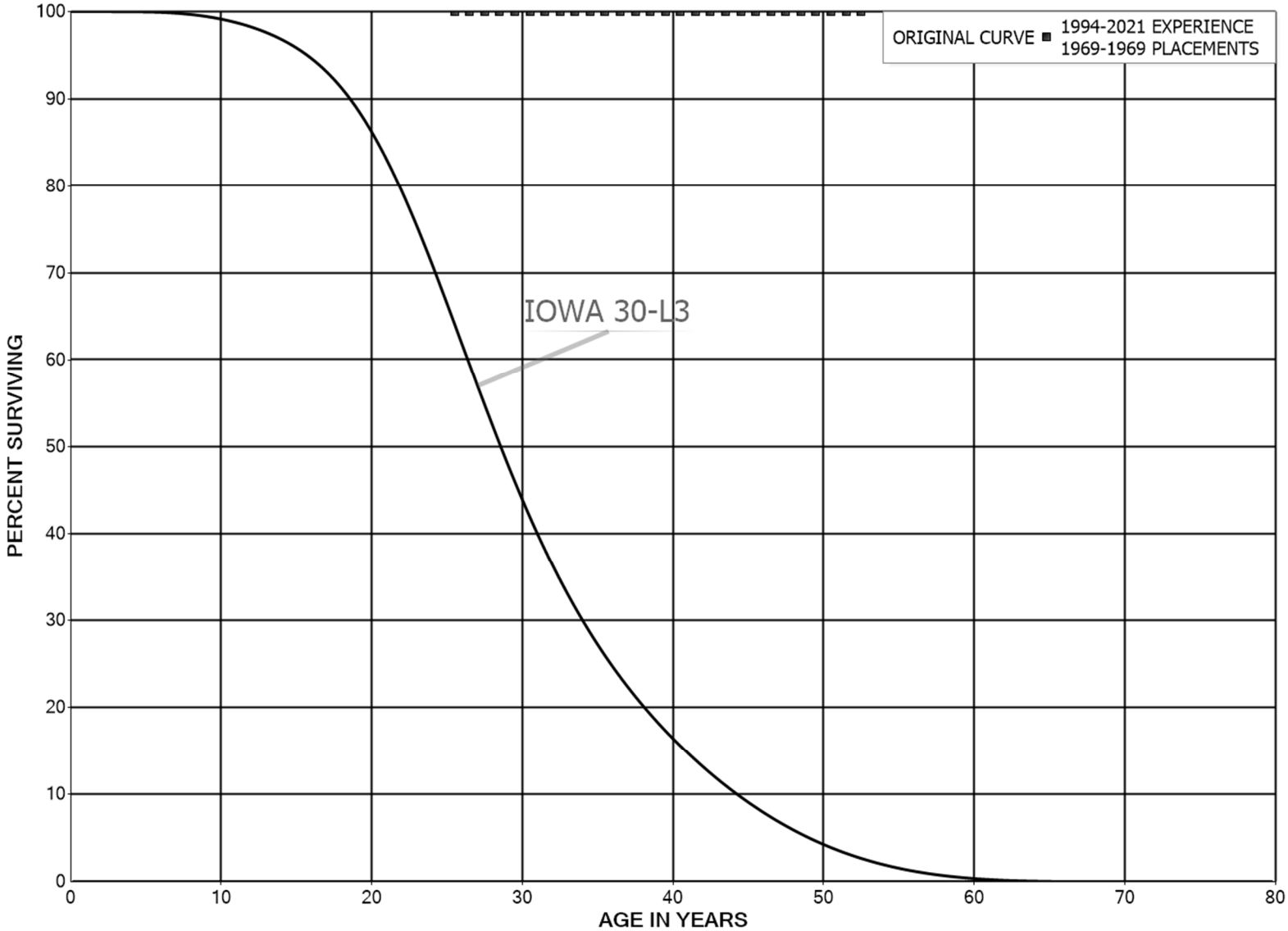
DUKE ENERGY KENTUCKY

ACCOUNT 3712 COMPANY-OWNED OUTDOOR LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 2008-2021			EXPERIENCE BAND 2008-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	962,912	5,104	0.0053	0.9947	100.00
0.5	758,069	4,549	0.0060	0.9940	99.47
1.5	533,651	7,076	0.0133	0.9867	98.87
2.5	381,670	45,792	0.1200	0.8800	97.56
3.5	320,625	47,040	0.1467	0.8533	85.86
4.5	310,295	71,665	0.2310	0.7690	73.26
5.5	102,750	6,613	0.0644	0.9356	56.34
6.5	813		0.0000	1.0000	52.71
7.5	813		0.0000	1.0000	52.71
8.5	813		0.0000	1.0000	52.71
9.5	813		0.0000	1.0000	52.71
10.5	813		0.0000	1.0000	52.71
11.5	813	271	0.3333	0.6667	52.71
12.5	542		0.0000	1.0000	35.14
13.5					35.14

DUKE ENERGY KENTUCKY
ACCOUNT 3720 LEASED PROPERTY ON CUSTOMERS' PREMISES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3720 LEASED PROPERTY ON CUSTOMERS' PREMISES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-1969			EXPERIENCE BAND 1994-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0					
0.5					
1.5					
2.5					
3.5					
4.5					
5.5					
6.5					
7.5					
8.5					
9.5					
10.5					
11.5					
12.5					
13.5					
14.5					
15.5					
16.5					
17.5					
18.5					
19.5					
20.5					
21.5					
22.5					
23.5					
24.5					
25.5	9,647		0.0000	1.0000	100.00
26.5	9,647		0.0000	1.0000	100.00
27.5	9,647		0.0000	1.0000	100.00
28.5	9,647		0.0000	1.0000	100.00
29.5	9,647		0.0000	1.0000	100.00
30.5	9,647		0.0000	1.0000	100.00
31.5	9,647		0.0000	1.0000	100.00
32.5	9,647		0.0000	1.0000	100.00
33.5	9,647		0.0000	1.0000	100.00
34.5	9,647		0.0000	1.0000	100.00
35.5	9,647		0.0000	1.0000	100.00
36.5	9,647		0.0000	1.0000	100.00
37.5	9,647		0.0000	1.0000	100.00
38.5	9,647		0.0000	1.0000	100.00

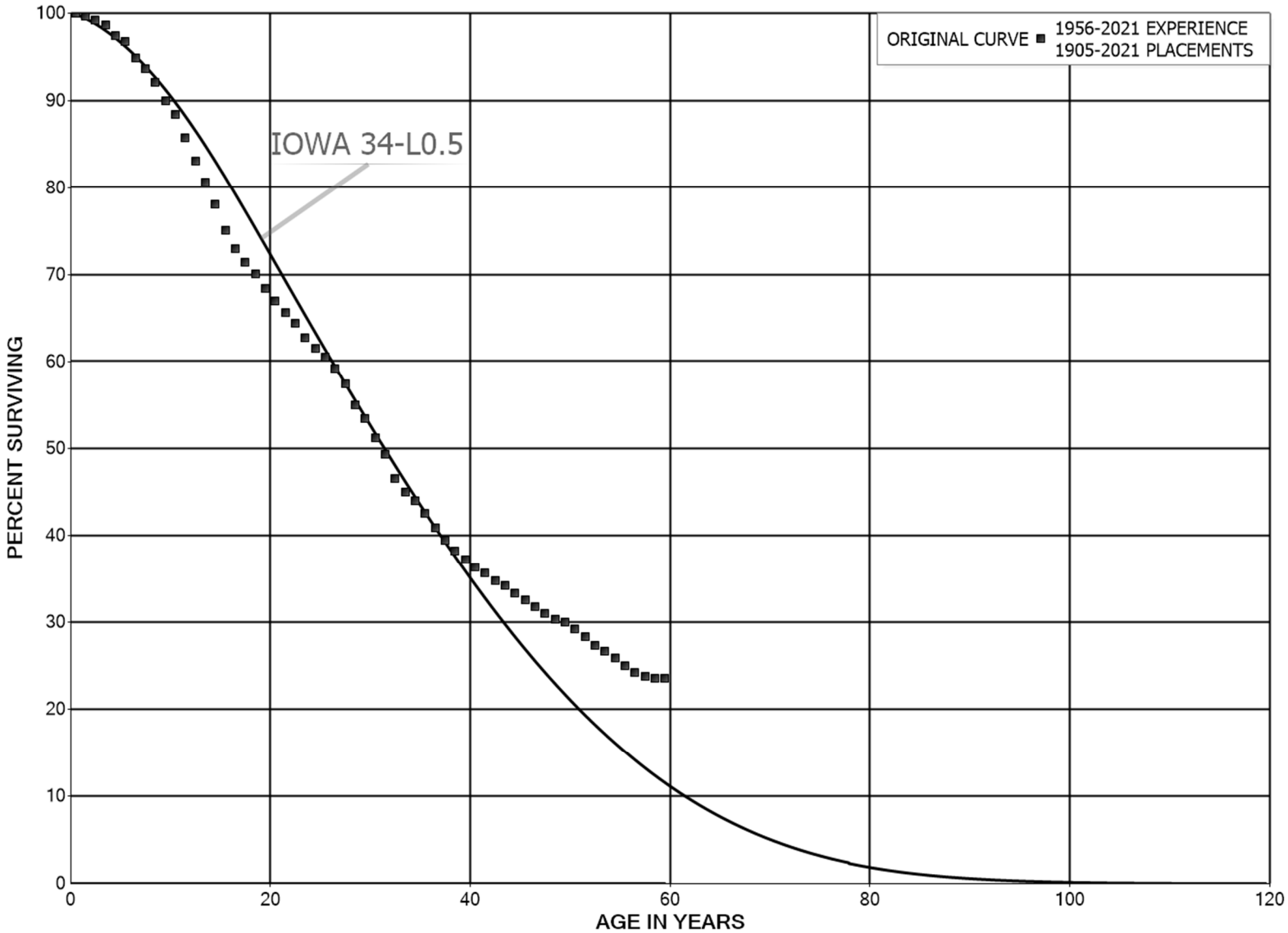
DUKE ENERGY KENTUCKY

ACCOUNT 3720 LEASED PROPERTY ON CUSTOMERS' PREMISES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1969-1969			EXPERIENCE BAND 1994-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	9,647		0.0000	1.0000	100.00
40.5	9,647		0.0000	1.0000	100.00
41.5	9,647		0.0000	1.0000	100.00
42.5	9,647		0.0000	1.0000	100.00
43.5	9,647		0.0000	1.0000	100.00
44.5	9,647		0.0000	1.0000	100.00
45.5	9,647		0.0000	1.0000	100.00
46.5	9,647		0.0000	1.0000	100.00
47.5	9,647		0.0000	1.0000	100.00
48.5	9,647		0.0000	1.0000	100.00
49.5	9,647		0.0000	1.0000	100.00
50.5	9,647		0.0000	1.0000	100.00
51.5	9,647		0.0000	1.0000	100.00
52.5					100.00

DUKE ENERGY KENTUCKY
ACCOUNT 3731 STREET LIGHTING - OVERHEAD
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	5,496,142	3,439	0.0006	0.9994	100.00	
0.5	5,462,009	19,678	0.0036	0.9964	99.94	
1.5	5,415,892	20,946	0.0039	0.9961	99.58	
2.5	5,076,163	30,965	0.0061	0.9939	99.19	
3.5	5,045,219	58,580	0.0116	0.9884	98.59	
4.5	4,559,930	32,808	0.0072	0.9928	97.44	
5.5	4,525,283	90,515	0.0200	0.9800	96.74	
6.5	4,154,543	50,973	0.0123	0.9877	94.81	
7.5	4,115,548	68,926	0.0167	0.9833	93.64	
8.5	4,060,934	95,920	0.0236	0.9764	92.07	
9.5	3,939,750	67,778	0.0172	0.9828	89.90	
10.5	3,877,574	113,239	0.0292	0.9708	88.35	
11.5	3,759,403	119,850	0.0319	0.9681	85.77	
12.5	3,608,597	105,943	0.0294	0.9706	83.04	
13.5	3,502,672	108,714	0.0310	0.9690	80.60	
14.5	3,348,244	130,577	0.0390	0.9610	78.10	
15.5	3,190,820	88,546	0.0278	0.9722	75.05	
16.5	3,054,177	66,939	0.0219	0.9781	72.97	
17.5	2,873,507	53,307	0.0186	0.9814	71.37	
18.5	2,820,200	68,103	0.0241	0.9759	70.05	
19.5	2,748,079	54,892	0.0200	0.9800	68.36	
20.5	2,665,144	54,886	0.0206	0.9794	66.99	
21.5	2,510,917	45,364	0.0181	0.9819	65.61	
22.5	2,320,808	59,794	0.0258	0.9742	64.43	
23.5	2,154,506	41,465	0.0192	0.9808	62.77	
24.5	2,032,248	34,857	0.0172	0.9828	61.56	
25.5	1,951,855	44,353	0.0227	0.9773	60.50	
26.5	1,845,120	52,604	0.0285	0.9715	59.13	
27.5	1,725,230	74,208	0.0430	0.9570	57.44	
28.5	1,578,559	45,108	0.0286	0.9714	54.97	
29.5	1,496,105	62,901	0.0420	0.9580	53.40	
30.5	1,429,557	51,550	0.0361	0.9639	51.15	
31.5	1,339,900	75,915	0.0567	0.9433	49.31	
32.5	1,200,836	38,936	0.0324	0.9676	46.52	
33.5	1,139,565	25,950	0.0228	0.9772	45.01	
34.5	1,097,667	36,662	0.0334	0.9666	43.98	
35.5	1,029,460	41,260	0.0401	0.9599	42.51	
36.5	944,859	31,947	0.0338	0.9662	40.81	
37.5	900,436	29,632	0.0329	0.9671	39.43	
38.5	858,366	21,728	0.0253	0.9747	38.13	

DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	824,905	19,627	0.0238	0.9762	37.17
40.5	784,833	15,104	0.0192	0.9808	36.28
41.5	728,979	17,202	0.0236	0.9764	35.58
42.5	681,052	11,894	0.0175	0.9825	34.75
43.5	650,002	15,845	0.0244	0.9756	34.14
44.5	621,065	14,252	0.0229	0.9771	33.31
45.5	598,300	15,655	0.0262	0.9738	32.54
46.5	561,810	12,539	0.0223	0.9777	31.69
47.5	532,142	11,072	0.0208	0.9792	30.98
48.5	478,070	6,006	0.0126	0.9874	30.34
49.5	435,206	10,690	0.0246	0.9754	29.96
50.5	376,718	12,173	0.0323	0.9677	29.22
51.5	314,661	11,226	0.0357	0.9643	28.28
52.5	253,654	5,919	0.0233	0.9767	27.27
53.5	235,002	7,103	0.0302	0.9698	26.63
54.5	202,488	6,522	0.0322	0.9678	25.83
55.5	156,142	4,878	0.0312	0.9688	25.00
56.5	104,842	1,976	0.0188	0.9812	24.21
57.5	85,943	807	0.0094	0.9906	23.76
58.5	64,750	19	0.0003	0.9997	23.54
59.5	44,398	282	0.0064	0.9936	23.53
60.5	25,112	138	0.0055	0.9945	23.38
61.5	17,271	28	0.0016	0.9984	23.25
62.5	12,756	435	0.0341	0.9659	23.21
63.5	11,142		0.0000	1.0000	22.42
64.5	10,603	648	0.0611	0.9389	22.42
65.5	8,620	348	0.0404	0.9596	21.05
66.5	7,848	249	0.0317	0.9683	20.20
67.5	7,426	178	0.0239	0.9761	19.56
68.5	6,984	248	0.0355	0.9645	19.09
69.5	6,425	11	0.0017	0.9983	18.41
70.5	6,269	2	0.0003	0.9997	18.38
71.5	6,211	346	0.0557	0.9443	18.38
72.5	5,660		0.0000	1.0000	17.35
73.5	5,566		0.0000	1.0000	17.35
74.5	4,277	38	0.0089	0.9911	17.35
75.5	4,137	544	0.1314	0.8686	17.20
76.5	3,517	2	0.0005	0.9995	14.94
77.5	3,494		0.0000	1.0000	14.93
78.5	3,484		0.0000	1.0000	14.93

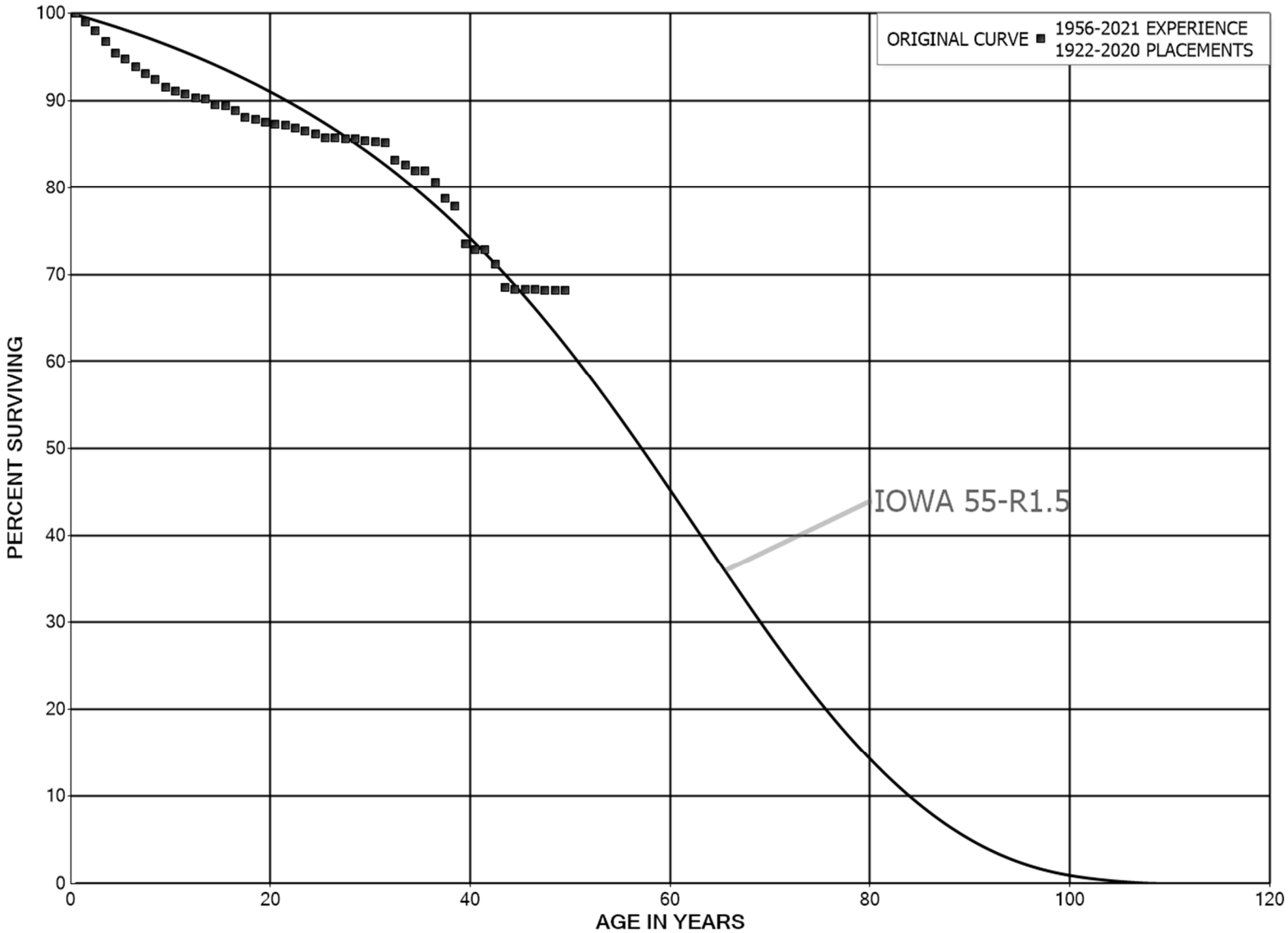
DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	3,459		0.0000	1.0000	14.93
80.5	3,080		0.0000	1.0000	14.93
81.5	2,965		0.0000	1.0000	14.93
82.5	2,939		0.0000	1.0000	14.93
83.5	2,768	24	0.0088	0.9912	14.93
84.5	2,744		0.0000	1.0000	14.80
85.5	2,744		0.0000	1.0000	14.80
86.5	2,744		0.0000	1.0000	14.80
87.5	2,744		0.0000	1.0000	14.80
88.5	2,744		0.0000	1.0000	14.80
89.5	2,744	156	0.0567	0.9433	14.80
90.5	2,588	556	0.2150	0.7850	13.96
91.5	2,032	65	0.0319	0.9681	10.96
92.5	1,967		0.0000	1.0000	10.61
93.5	1,967		0.0000	1.0000	10.61
94.5	1,964		0.0000	1.0000	10.61
95.5	1,964		0.0000	1.0000	10.61
96.5	79		0.0000	1.0000	10.61
97.5	79		0.0000	1.0000	10.61
98.5	79		0.0000	1.0000	10.61
99.5	79		0.0000	1.0000	10.61
100.5	79		0.0000	1.0000	10.61
101.5	79		0.0000	1.0000	10.61
102.5	79		0.0000	1.0000	10.61
103.5	79		0.0000	1.0000	10.61
104.5	79		0.0000	1.0000	10.61
105.5	79		0.0000	1.0000	10.61
106.5	79		0.0000	1.0000	10.61
107.5	79		0.0000	1.0000	10.61
108.5	79		0.0000	1.0000	10.61
109.5	79		0.0000	1.0000	10.61
110.5	79		0.0000	1.0000	10.61
111.5					10.61

DUKE ENERGY KENTUCKY
ACCOUNT 3732 STREET LIGHTING - BOULEVARD
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1922-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,544,374		0.0000	1.0000	100.00
0.5	3,529,753	37,981	0.0108	0.9892	100.00
1.5	3,509,488	32,481	0.0093	0.9907	98.92
2.5	3,475,412	45,238	0.0130	0.9870	98.01
3.5	3,439,330	48,647	0.0141	0.9859	96.73
4.5	3,637,131	24,760	0.0068	0.9932	95.36
5.5	3,613,011	32,820	0.0091	0.9909	94.72
6.5	3,580,191	29,254	0.0082	0.9918	93.85
7.5	3,550,937	27,082	0.0076	0.9924	93.09
8.5	3,523,935	33,170	0.0094	0.9906	92.38
9.5	3,465,720	18,029	0.0052	0.9948	91.51
10.5	3,448,110	12,193	0.0035	0.9965	91.03
11.5	3,402,539	15,473	0.0045	0.9955	90.71
12.5	3,332,081	2,703	0.0008	0.9992	90.30
13.5	3,329,479	24,624	0.0074	0.9926	90.22
14.5	3,266,454	6,565	0.0020	0.9980	89.56
15.5	3,059,432	19,123	0.0063	0.9937	89.38
16.5	2,677,039	24,337	0.0091	0.9909	88.82
17.5	2,266,229	5,151	0.0023	0.9977	88.01
18.5	2,261,226	7,580	0.0034	0.9966	87.81
19.5	2,221,640	5,292	0.0024	0.9976	87.52
20.5	2,203,147	4,667	0.0021	0.9979	87.31
21.5	2,063,180	7,078	0.0034	0.9966	87.12
22.5	1,428,593	4,466	0.0031	0.9969	86.82
23.5	1,280,043	5,340	0.0042	0.9958	86.55
24.5	1,139,464	5,783	0.0051	0.9949	86.19
25.5	1,034,277	365	0.0004	0.9996	85.75
26.5	927,462	632	0.0007	0.9993	85.72
27.5	840,354	381	0.0005	0.9995	85.67
28.5	768,140	2,385	0.0031	0.9969	85.63
29.5	659,357	592	0.0009	0.9991	85.36
30.5	611,642	825	0.0013	0.9987	85.28
31.5	478,850	11,149	0.0233	0.9767	85.17
32.5	383,308	2,639	0.0069	0.9931	83.19
33.5	310,222	2,394	0.0077	0.9923	82.61
34.5	249,662	166	0.0007	0.9993	81.98
35.5	228,434	3,653	0.0160	0.9840	81.92
36.5	186,687	4,418	0.0237	0.9763	80.61
37.5	169,392	1,816	0.0107	0.9893	78.70
38.5	165,168	9,291	0.0563	0.9437	77.86

DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2020			EXPERIENCE BAND 1956-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	145,092	1,257	0.0087	0.9913	73.48	
40.5	131,047		0.0000	1.0000	72.84	
41.5	114,321	2,668	0.0233	0.9767	72.84	
42.5	98,432	3,704	0.0376	0.9624	71.14	
43.5	79,973	159	0.0020	0.9980	68.47	
44.5	72,094		0.0000	1.0000	68.33	
45.5	64,767		0.0000	1.0000	68.33	
46.5	60,249	124	0.0021	0.9979	68.33	
47.5	41,524		0.0000	1.0000	68.19	
48.5	27,899		0.0000	1.0000	68.19	
49.5	26,317	370	0.0141	0.9859	68.19	
50.5	25,947		0.0000	1.0000	67.23	
51.5	25,546		0.0000	1.0000	67.23	
52.5	25,546		0.0000	1.0000	67.23	
53.5	25,546		0.0000	1.0000	67.23	
54.5	25,546	2	0.0001	0.9999	67.23	
55.5	25,545		0.0000	1.0000	67.23	
56.5	20,627		0.0000	1.0000	67.23	
57.5	20,627		0.0000	1.0000	67.23	
58.5	20,373		0.0000	1.0000	67.23	
59.5	20,100		0.0000	1.0000	67.23	
60.5	20,071		0.0000	1.0000	67.23	
61.5	20,050		0.0000	1.0000	67.23	
62.5	19,756		0.0000	1.0000	67.23	
63.5	19,247		0.0000	1.0000	67.23	
64.5	19,247	14	0.0007	0.9993	67.23	
65.5	18,667		0.0000	1.0000	67.18	
66.5	18,305		0.0000	1.0000	67.18	
67.5	18,134		0.0000	1.0000	67.18	
68.5	18,134	71	0.0039	0.9961	67.18	
69.5	17,949	104	0.0058	0.9942	66.91	
70.5	16,587		0.0000	1.0000	66.53	
71.5	16,416	242	0.0147	0.9853	66.53	
72.5	16,174		0.0000	1.0000	65.55	
73.5	16,174		0.0000	1.0000	65.55	
74.5	16,174		0.0000	1.0000	65.55	
75.5	16,174	43	0.0027	0.9973	65.55	
76.5	16,131		0.0000	1.0000	65.37	
77.5	16,131		0.0000	1.0000	65.37	
78.5	15,848	106	0.0067	0.9933	65.37	

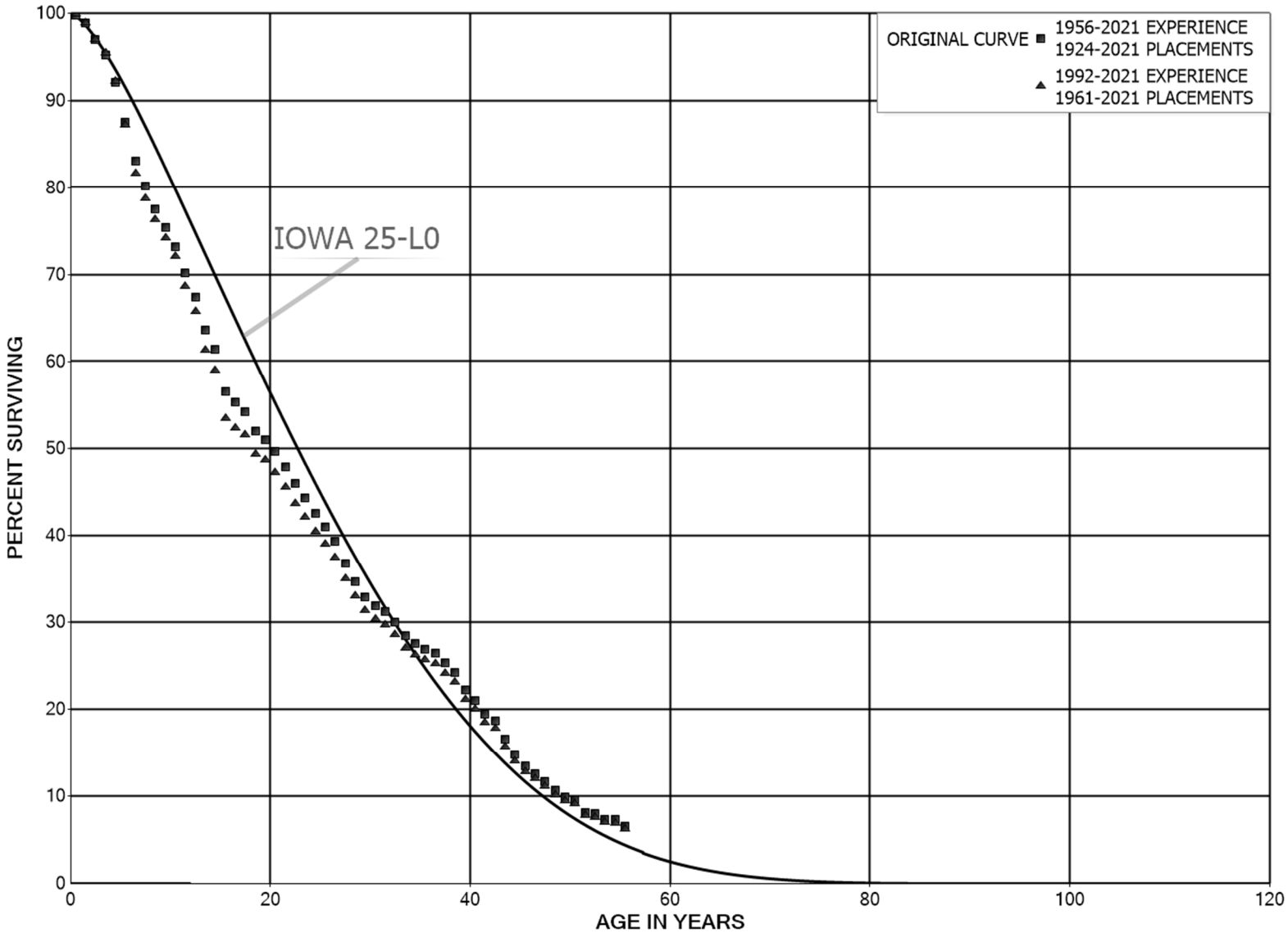
DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	15,715		0.0000	1.0000	64.93
80.5	14,266		0.0000	1.0000	64.93
81.5	14,266		0.0000	1.0000	64.93
82.5	14,202		0.0000	1.0000	64.93
83.5	13,911		0.0000	1.0000	64.93
84.5	13,764		0.0000	1.0000	64.93
85.5	13,710		0.0000	1.0000	64.93
86.5	13,710		0.0000	1.0000	64.93
87.5	13,710		0.0000	1.0000	64.93
88.5	13,356		0.0000	1.0000	64.93
89.5	12,753		0.0000	1.0000	64.93
90.5	10,977		0.0000	1.0000	64.93
91.5	10,923		0.0000	1.0000	64.93
92.5	7,199		0.0000	1.0000	64.93
93.5	5,747		0.0000	1.0000	64.93
94.5	3,751		0.0000	1.0000	64.93
95.5	3,751		0.0000	1.0000	64.93
96.5	3,751		0.0000	1.0000	64.93
97.5	3,751		0.0000	1.0000	64.93
98.5	269		0.0000	1.0000	64.93
99.5					64.93

DUKE ENERGY KENTUCKY
ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1924-2021

EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	6,358,895	14,151	0.0022	0.9978	100.00
0.5	5,941,139	56,658	0.0095	0.9905	99.78
1.5	5,415,872	105,554	0.0195	0.9805	98.83
2.5	4,863,544	89,012	0.0183	0.9817	96.90
3.5	4,541,756	145,421	0.0320	0.9680	95.13
4.5	4,223,089	207,416	0.0491	0.9509	92.08
5.5	3,101,443	157,673	0.0508	0.9492	87.56
6.5	2,852,848	99,087	0.0347	0.9653	83.11
7.5	2,753,744	91,694	0.0333	0.9667	80.22
8.5	2,622,508	72,545	0.0277	0.9723	77.55
9.5	2,511,459	73,159	0.0291	0.9709	75.40
10.5	2,430,666	101,789	0.0419	0.9581	73.21
11.5	2,324,698	89,860	0.0387	0.9613	70.14
12.5	2,214,392	124,600	0.0563	0.9437	67.43
13.5	2,054,779	73,759	0.0359	0.9641	63.64
14.5	1,949,777	152,702	0.0783	0.9217	61.35
15.5	1,759,979	40,323	0.0229	0.9771	56.55
16.5	1,698,781	32,764	0.0193	0.9807	55.25
17.5	1,462,094	60,030	0.0411	0.9589	54.19
18.5	1,401,921	25,673	0.0183	0.9817	51.96
19.5	1,375,895	39,080	0.0284	0.9716	51.01
20.5	1,314,930	44,383	0.0338	0.9662	49.56
21.5	1,264,602	51,853	0.0410	0.9590	47.89
22.5	1,190,336	41,877	0.0352	0.9648	45.92
23.5	1,116,803	45,553	0.0408	0.9592	44.31
24.5	1,042,167	37,065	0.0356	0.9644	42.50
25.5	970,716	40,752	0.0420	0.9580	40.99
26.5	894,750	56,788	0.0635	0.9365	39.27
27.5	810,937	47,157	0.0582	0.9418	36.78
28.5	735,450	38,661	0.0526	0.9474	34.64
29.5	669,046	19,679	0.0294	0.9706	32.82
30.5	621,173	14,139	0.0228	0.9772	31.85
31.5	584,072	23,193	0.0397	0.9603	31.13
32.5	547,852	28,357	0.0518	0.9482	29.89
33.5	507,473	15,428	0.0304	0.9696	28.34
34.5	488,877	10,612	0.0217	0.9783	27.48
35.5	471,526	8,090	0.0172	0.9828	26.89
36.5	456,553	19,081	0.0418	0.9582	26.42
37.5	428,139	18,545	0.0433	0.9567	25.32
38.5	398,287	33,691	0.0846	0.9154	24.22

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-2021			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	348,588	18,362	0.0527	0.9473	22.17
40.5	307,992	23,930	0.0777	0.9223	21.01
41.5	261,321	10,794	0.0413	0.9587	19.37
42.5	224,517	25,628	0.1141	0.8859	18.57
43.5	181,589	19,123	0.1053	0.8947	16.45
44.5	152,582	14,182	0.0929	0.9071	14.72
45.5	128,780	8,142	0.0632	0.9368	13.35
46.5	111,752	8,308	0.0743	0.9257	12.51
47.5	94,536	7,978	0.0844	0.9156	11.58
48.5	78,826	5,333	0.0677	0.9323	10.60
49.5	66,072	2,710	0.0410	0.9590	9.88
50.5	54,093	7,771	0.1437	0.8563	9.48
51.5	40,813	964	0.0236	0.9764	8.12
52.5	32,810	2,467	0.0752	0.9248	7.93
53.5	23,640	303	0.0128	0.9872	7.33
54.5	19,858	2,000	0.1007	0.8993	7.24
55.5	12,080		0.0000	1.0000	6.51
56.5	7,415		0.0000	1.0000	6.51
57.5	3,666		0.0000	1.0000	6.51
58.5	884		0.0000	1.0000	6.51
59.5	128		0.0000	1.0000	6.51
60.5	128		0.0000	1.0000	6.51
61.5	128		0.0000	1.0000	6.51
62.5	128	128	1.0000		6.51
63.5					

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1961-2021			EXPERIENCE BAND 1992-2021			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	4,807,167	7,888	0.0016	0.9984	100.00	
0.5	4,480,218	43,538	0.0097	0.9903	99.84	
1.5	4,044,435	77,783	0.0192	0.9808	98.87	
2.5	3,562,558	57,798	0.0162	0.9838	96.96	
3.5	3,308,248	112,161	0.0339	0.9661	95.39	
4.5	3,058,401	164,452	0.0538	0.9462	92.16	
5.5	2,023,278	128,551	0.0635	0.9365	87.20	
6.5	1,835,898	65,066	0.0354	0.9646	81.66	
7.5	1,800,305	57,414	0.0319	0.9681	78.77	
8.5	1,724,174	45,963	0.0267	0.9733	76.26	
9.5	1,695,899	48,737	0.0287	0.9713	74.22	
10.5	1,693,207	80,897	0.0478	0.9522	72.09	
11.5	1,703,355	72,842	0.0428	0.9572	68.65	
12.5	1,684,107	112,214	0.0666	0.9334	65.71	
13.5	1,589,499	60,589	0.0381	0.9619	61.33	
14.5	1,527,103	143,800	0.0942	0.9058	58.99	
15.5	1,398,191	29,855	0.0214	0.9786	53.44	
16.5	1,385,500	20,431	0.0147	0.9853	52.30	
17.5	1,208,890	51,593	0.0427	0.9573	51.53	
18.5	1,190,654	18,465	0.0155	0.9845	49.33	
19.5	1,191,640	34,351	0.0288	0.9712	48.56	
20.5	1,158,870	39,859	0.0344	0.9656	47.16	
21.5	1,134,455	47,112	0.0415	0.9585	45.54	
22.5	1,087,158	38,612	0.0355	0.9645	43.65	
23.5	1,045,223	41,971	0.0402	0.9598	42.10	
24.5	983,188	34,596	0.0352	0.9648	40.41	
25.5	929,547	38,635	0.0416	0.9584	38.99	
26.5	866,527	55,631	0.0642	0.9358	37.37	
27.5	796,867	46,958	0.0589	0.9411	34.97	
28.5	729,834	37,110	0.0508	0.9492	32.91	
29.5	666,781	19,679	0.0295	0.9705	31.23	
30.5	620,957	14,139	0.0228	0.9772	30.31	
31.5	583,728	22,976	0.0394	0.9606	29.62	
32.5	547,724	28,357	0.0518	0.9482	28.46	
33.5	507,345	15,428	0.0304	0.9696	26.98	
34.5	488,749	10,612	0.0217	0.9783	26.16	
35.5	471,397	8,090	0.0172	0.9828	25.59	
36.5	456,425	19,081	0.0418	0.9582	25.15	
37.5	428,011	18,545	0.0433	0.9567	24.10	
38.5	398,159	33,691	0.0846	0.9154	23.06	

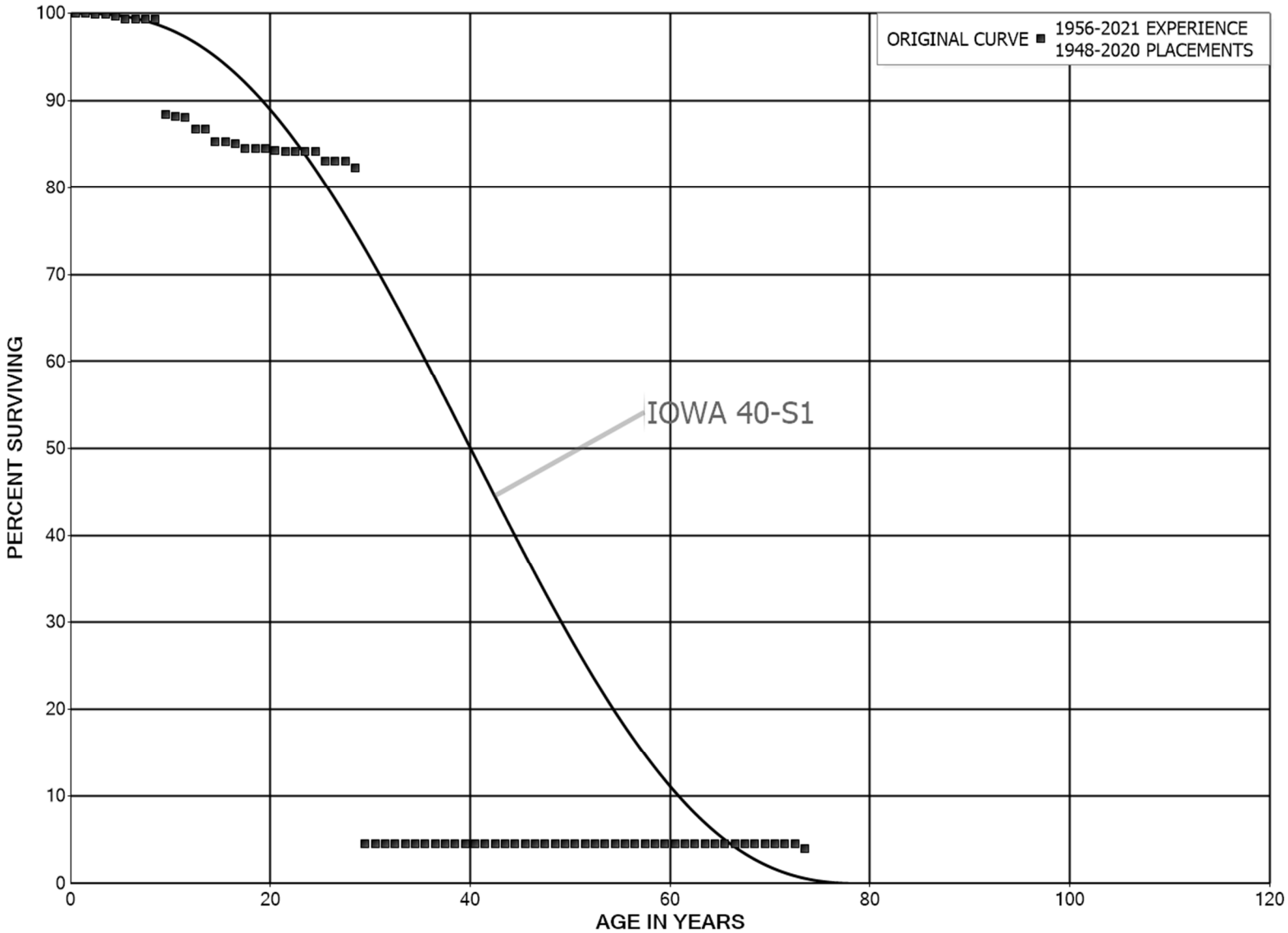
DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1961-2021			EXPERIENCE BAND 1992-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	348,460	18,362	0.0527	0.9473	21.11
40.5	307,864	23,930	0.0777	0.9223	20.00
41.5	261,193	10,794	0.0413	0.9587	18.44
42.5	224,389	25,628	0.1142	0.8858	17.68
43.5	181,461	19,123	0.1054	0.8946	15.66
44.5	152,454	14,182	0.0930	0.9070	14.01
45.5	128,652	8,142	0.0633	0.9367	12.71
46.5	111,624	8,308	0.0744	0.9256	11.90
47.5	94,408	7,978	0.0845	0.9155	11.02
48.5	78,698	5,333	0.0678	0.9322	10.09
49.5	65,944	2,710	0.0411	0.9589	9.40
50.5	53,965	7,771	0.1440	0.8560	9.02
51.5	40,685	964	0.0237	0.9763	7.72
52.5	32,682	2,467	0.0755	0.9245	7.53
53.5	23,512	303	0.0129	0.9871	6.97
54.5	19,729	2,000	0.1014	0.8986	6.88
55.5	11,952		0.0000	1.0000	6.18
56.5	7,286		0.0000	1.0000	6.18
57.5	3,538		0.0000	1.0000	6.18
58.5	756		0.0000	1.0000	6.18
59.5					6.18

DUKE ENERGY KENTUCKY
ACCOUNT 3900 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	559,930		0.0000	1.0000	100.00
0.5	559,930		0.0000	1.0000	100.00
1.5	538,072	885	0.0016	0.9984	100.00
2.5	537,235		0.0000	1.0000	99.84
3.5	543,078	1,460	0.0027	0.9973	99.84
4.5	541,946	1,349	0.0025	0.9975	99.57
5.5	487,717		0.0000	1.0000	99.32
6.5	487,717		0.0000	1.0000	99.32
7.5	505,837		0.0000	1.0000	99.32
8.5	505,837	55,847	0.1104	0.8896	99.32
9.5	449,990	916	0.0020	0.9980	88.35
10.5	449,074	759	0.0017	0.9983	88.17
11.5	419,513	6,356	0.0152	0.9848	88.03
12.5	413,157		0.0000	1.0000	86.69
13.5	353,921	5,843	0.0165	0.9835	86.69
14.5	307,419		0.0000	1.0000	85.26
15.5	307,419	588	0.0019	0.9981	85.26
16.5	306,831	2,160	0.0070	0.9930	85.10
17.5	304,670		0.0000	1.0000	84.50
18.5	304,670		0.0000	1.0000	84.50
19.5	304,670	760	0.0025	0.9975	84.50
20.5	303,911	459	0.0015	0.9985	84.29
21.5	303,451		0.0000	1.0000	84.16
22.5	303,451		0.0000	1.0000	84.16
23.5	303,451		0.0000	1.0000	84.16
24.5	303,451	3,764	0.0124	0.9876	84.16
25.5	299,687		0.0000	1.0000	83.12
26.5	299,687		0.0000	1.0000	83.12
27.5	299,687	2,935	0.0098	0.9902	83.12
28.5	296,752	280,465	0.9451	0.0549	82.30
29.5	16,286		0.0000	1.0000	4.52
30.5	16,286		0.0000	1.0000	4.52
31.5	16,286		0.0000	1.0000	4.52
32.5	16,286		0.0000	1.0000	4.52
33.5	16,286		0.0000	1.0000	4.52
34.5	16,286		0.0000	1.0000	4.52
35.5	16,286		0.0000	1.0000	4.52
36.5	16,286		0.0000	1.0000	4.52
37.5	16,286		0.0000	1.0000	4.52
38.5	16,286		0.0000	1.0000	4.52

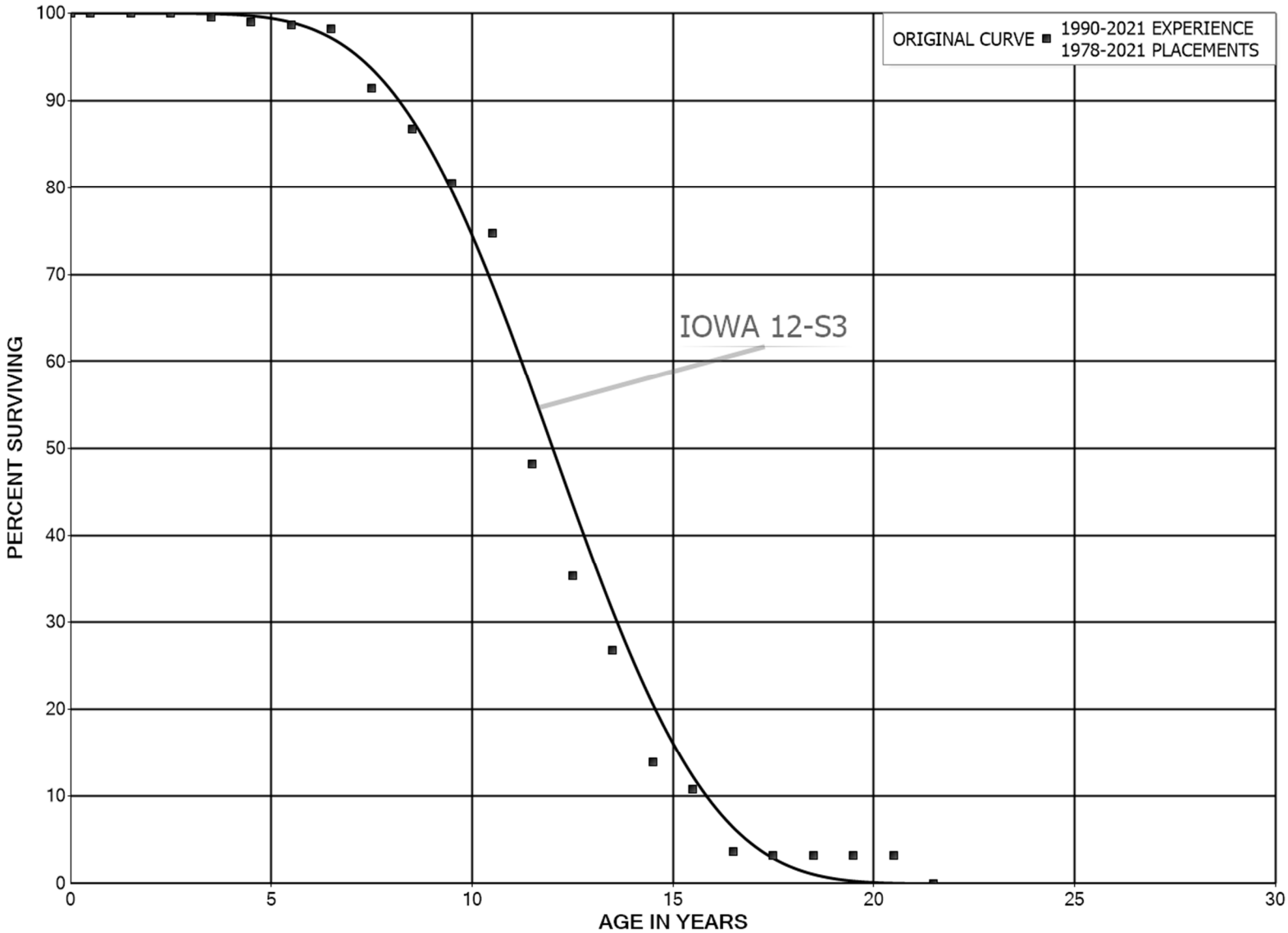
DUKE ENERGY KENTUCKY

ACCOUNT 3900 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2020			EXPERIENCE BAND 1956-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	16,286		0.0000	1.0000	4.52
40.5	16,286		0.0000	1.0000	4.52
41.5	16,286		0.0000	1.0000	4.52
42.5	16,286		0.0000	1.0000	4.52
43.5	16,286		0.0000	1.0000	4.52
44.5	12,989		0.0000	1.0000	4.52
45.5	12,989		0.0000	1.0000	4.52
46.5	12,989		0.0000	1.0000	4.52
47.5	12,989		0.0000	1.0000	4.52
48.5	12,989		0.0000	1.0000	4.52
49.5	12,989		0.0000	1.0000	4.52
50.5	12,989		0.0000	1.0000	4.52
51.5	12,989		0.0000	1.0000	4.52
52.5	12,989		0.0000	1.0000	4.52
53.5	12,989		0.0000	1.0000	4.52
54.5	12,989		0.0000	1.0000	4.52
55.5	12,989		0.0000	1.0000	4.52
56.5	12,989		0.0000	1.0000	4.52
57.5	12,989		0.0000	1.0000	4.52
58.5	12,989		0.0000	1.0000	4.52
59.5	12,989		0.0000	1.0000	4.52
60.5	12,989		0.0000	1.0000	4.52
61.5	12,989		0.0000	1.0000	4.52
62.5	12,989		0.0000	1.0000	4.52
63.5	12,989		0.0000	1.0000	4.52
64.5	12,989		0.0000	1.0000	4.52
65.5	12,989		0.0000	1.0000	4.52
66.5	12,989		0.0000	1.0000	4.52
67.5	12,989		0.0000	1.0000	4.52
68.5	12,989		0.0000	1.0000	4.52
69.5	12,989		0.0000	1.0000	4.52
70.5	12,661		0.0000	1.0000	4.52
71.5	12,661		0.0000	1.0000	4.52
72.5	12,661	1,698	0.1341	0.8659	4.52
73.5					3.91

DUKE ENERGY KENTUCKY
ACCOUNT 3920 TRANSPORTATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



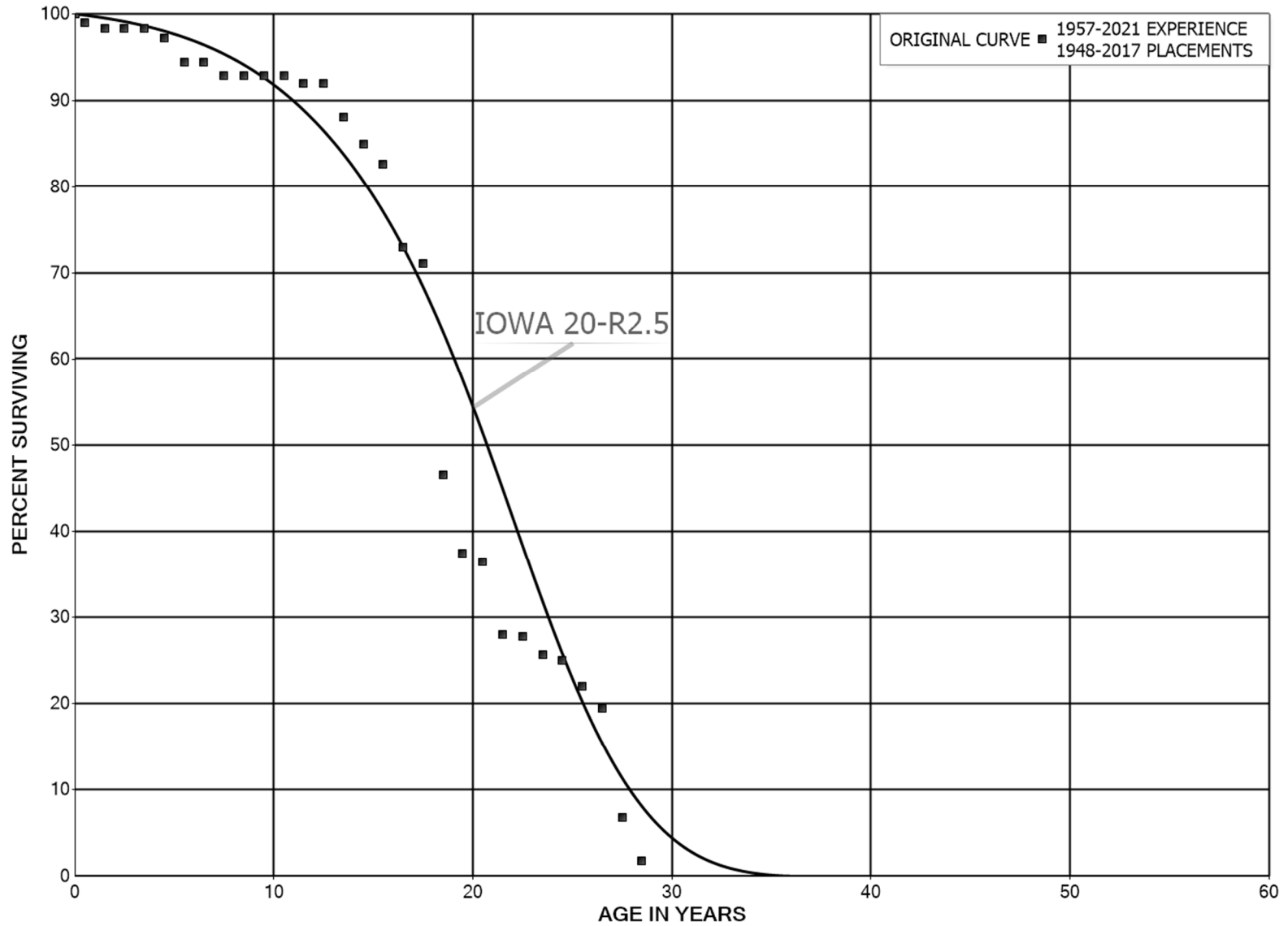
DUKE ENERGY KENTUCKY

ACCOUNT 3920 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1978-2021			EXPERIENCE BAND 1990-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,206,740		0.0000	1.0000	100.00
0.5	3,199,118		0.0000	1.0000	100.00
1.5	2,603,469		0.0000	1.0000	100.00
2.5	2,940,163	16,029	0.0055	0.9945	100.00
3.5	3,040,364	16,752	0.0055	0.9945	99.45
4.5	3,460,791	10,972	0.0032	0.9968	98.91
5.5	3,641,621	15,415	0.0042	0.9958	98.59
6.5	3,578,272	246,789	0.0690	0.9310	98.18
7.5	3,775,103	192,801	0.0511	0.9489	91.40
8.5	4,128,747	297,268	0.0720	0.9280	86.74
9.5	4,459,194	321,061	0.0720	0.9280	80.49
10.5	4,060,888	1,441,390	0.3549	0.6451	74.70
11.5	2,746,695	732,153	0.2666	0.7334	48.18
12.5	2,036,275	497,909	0.2445	0.7555	35.34
13.5	1,538,365	738,102	0.4798	0.5202	26.70
14.5	800,263	180,803	0.2259	0.7741	13.89
15.5	619,460	412,999	0.6667	0.3333	10.75
16.5	206,462	21,227	0.1028	0.8972	3.58
17.5	185,235		0.0000	1.0000	3.21
18.5	185,235		0.0000	1.0000	3.21
19.5	185,235		0.0000	1.0000	3.21
20.5	185,235	185,235	1.0000		3.21
21.5					

DUKE ENERGY KENTUCKY
ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2017			EXPERIENCE BAND 1957-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	479,782	5,120	0.0107	0.9893	100.00
0.5	474,662	2,848	0.0060	0.9940	98.93
1.5	471,814		0.0000	1.0000	98.34
2.5	471,814		0.0000	1.0000	98.34
3.5	506,204	5,805	0.0115	0.9885	98.34
4.5	501,053	14,690	0.0293	0.9707	97.21
5.5	392,625		0.0000	1.0000	94.36
6.5	401,173	6,574	0.0164	0.9836	94.36
7.5	394,599		0.0000	1.0000	92.82
8.5	395,004		0.0000	1.0000	92.82
9.5	395,004		0.0000	1.0000	92.82
10.5	395,004	3,452	0.0087	0.9913	92.82
11.5	391,552		0.0000	1.0000	92.00
12.5	391,552	16,932	0.0432	0.9568	92.00
13.5	374,619	12,873	0.0344	0.9656	88.03
14.5	361,746	10,102	0.0279	0.9721	85.00
15.5	259,621	30,566	0.1177	0.8823	82.63
16.5	202,821	5,209	0.0257	0.9743	72.90
17.5	197,612	68,373	0.3460	0.6540	71.03
18.5	114,961	22,513	0.1958	0.8042	46.45
19.5	92,448	2,246	0.0243	0.9757	37.36
20.5	68,439	16,052	0.2345	0.7655	36.45
21.5	46,549	259	0.0056	0.9944	27.90
22.5	30,554	2,336	0.0765	0.9235	27.74
23.5	28,218	733	0.0260	0.9740	25.62
24.5	27,485	3,256	0.1185	0.8815	24.96
25.5	24,229	2,879	0.1188	0.8812	22.00
26.5	21,350	13,967	0.6542	0.3458	19.39
27.5	7,383	5,489	0.7434	0.2566	6.70
28.5	1,894	553	0.2920	0.7080	1.72
29.5	1,341		0.0000	1.0000	1.22
30.5	1,341		0.0000	1.0000	1.22
31.5	1,341		0.0000	1.0000	1.22
32.5	1,341	606	0.4517	0.5483	1.22
33.5	735		0.0000	1.0000	0.67
34.5	735		0.0000	1.0000	0.67
35.5	735		0.0000	1.0000	0.67
36.5	735		0.0000	1.0000	0.67
37.5	735		0.0000	1.0000	0.67
38.5	735		0.0000	1.0000	0.67

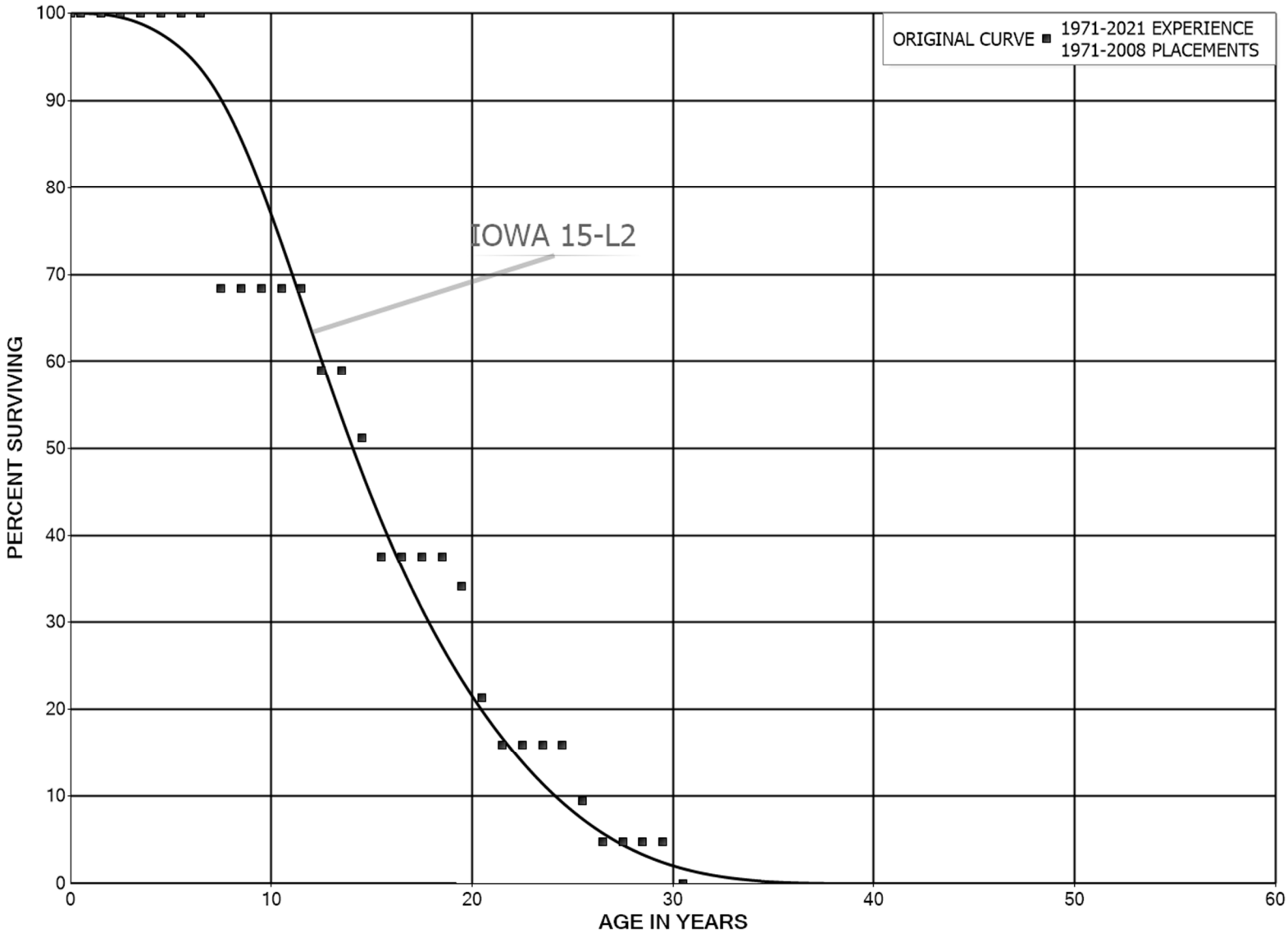
DUKE ENERGY KENTUCKY

ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2017			EXPERIENCE BAND 1957-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	735		0.0000	1.0000	0.67
40.5	735		0.0000	1.0000	0.67
41.5	735		0.0000	1.0000	0.67
42.5	735		0.0000	1.0000	0.67
43.5	735	560	0.7621	0.2379	0.67
44.5	175		0.0000	1.0000	0.16
45.5	175	175	1.0000		0.16
46.5					

DUKE ENERGY KENTUCKY
ACCOUNT 3960 POWER OPERATED EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



DUKE ENERGY KENTUCKY

ACCOUNT 3960 POWER OPERATED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2008			EXPERIENCE BAND 1971-2021		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	126,051		0.0000	1.0000	100.00
0.5	126,051		0.0000	1.0000	100.00
1.5	185,500		0.0000	1.0000	100.00
2.5	185,500		0.0000	1.0000	100.00
3.5	185,500		0.0000	1.0000	100.00
4.5	185,500		0.0000	1.0000	100.00
5.5	221,774		0.0000	1.0000	100.00
6.5	230,837	72,991	0.3162	0.6838	100.00
7.5	157,846		0.0000	1.0000	68.38
8.5	157,846		0.0000	1.0000	68.38
9.5	157,846		0.0000	1.0000	68.38
10.5	190,933		0.0000	1.0000	68.38
11.5	190,933	26,356	0.1380	0.8620	68.38
12.5	164,577		0.0000	1.0000	58.94
13.5	152,807	20,191	0.1321	0.8679	58.94
14.5	132,617	35,307	0.2662	0.7338	51.15
15.5	97,310		0.0000	1.0000	37.53
16.5	97,310		0.0000	1.0000	37.53
17.5	97,310		0.0000	1.0000	37.53
18.5	97,310	9,064	0.0931	0.9069	37.53
19.5	88,246	33,087	0.3749	0.6251	34.04
20.5	55,159	13,984	0.2535	0.7465	21.28
21.5	41,175		0.0000	1.0000	15.88
22.5	41,175		0.0000	1.0000	15.88
23.5	41,175		0.0000	1.0000	15.88
24.5	41,175	16,943	0.4115	0.5885	15.88
25.5	24,232	12,045	0.4970	0.5030	9.35
26.5	12,188		0.0000	1.0000	4.70
27.5	12,188		0.0000	1.0000	4.70
28.5	12,188		0.0000	1.0000	4.70
29.5	12,188	12,188	1.0000		4.70
30.5					

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990		204,571				204,571-	
1991	10,904	93,952	862	156	1	93,796-	860-
1992	44,601	33,254	75		0	33,254-	75-
1993	3,829	2,179	57		0	2,179-	57-
1994	8,622	107,169			0	107,169-	
1995		46,859				46,859-	
1996	20,300	22,697	112		0	22,697-	112-
1997							
1998	236,952	1,816	1		0	1,816-	1-
1999							
2000							
2001							
2002	466,414	124,993	27		0	124,993-	27-
2003	360,388	117,298	33		0	117,298-	33-
2004	1,563,054	14,188	1		0	14,188-	1-
2005	67,932	23,891	35		0	23,891-	35-
2006	5,259	7,978	152		0	7,978-	152-
2007							
2008	95		0		0		0
2009							
2010							
2011	3,604	184,588			0	184,588-	
2012	32,273		0		0		0
2013	140,504	51,500	37		0	51,500-	37-
2014	60,096	15,414	26		0	15,414-	26-
2015	433,044	75,712	17		0	75,712-	17-
2016	23,642	2,850	12		0	2,850-	12-
2017							
2018	83,765	8,487	10		0	8,487-	10-
2019	1,875,000	29,304	2		0	29,304-	2-
2020	256,919-		0		0		0
2021	259,035	109,663	42		0	109,663-	42-
TOTAL	5,442,394	1,278,361	23	156	0	1,278,204-	23-

THREE-YEAR MOVING AVERAGES

90-92	18,502	110,592	598	52	0	110,540-	597-
91-93	19,778	43,128	218	52	0	43,076-	218-
92-94	19,017	47,534	250		0	47,534-	250-
93-95	4,150	52,069			0	52,069-	
94-96	9,641	58,908	611		0	58,908-	611-
95-97	6,767	23,185	343		0	23,185-	343-

DUKE ENERGY KENTUCKY

ACCOUNT 1900 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	85,751	8,171	10		0	8,171-	10-
97-99	78,984	605	1		0	605-	1-
98-00	78,984	605	1		0	605-	1-
99-01							
00-02	155,471	41,664	27		0	41,664-	27-
01-03	275,601	80,764	29		0	80,764-	29-
02-04	796,619	85,493	11		0	85,493-	11-
03-05	663,791	51,792	8		0	51,792-	8-
04-06	545,415	15,352	3		0	15,352-	3-
05-07	24,397	10,623	44		0	10,623-	44-
06-08	1,785	2,659	149		0	2,659-	149-
07-09	32		0		0		0
08-10	32		0		0		0
09-11	1,201	61,529			0	61,529-	
10-12	11,959	61,529	514		0	61,529-	514-
11-13	58,794	78,696	134		0	78,696-	134-
12-14	77,624	22,305	29		0	22,305-	29-
13-15	211,215	47,542	23		0	47,542-	23-
14-16	172,260	31,325	18		0	31,325-	18-
15-17	152,228	26,187	17		0	26,187-	17-
16-18	35,802	3,779	11		0	3,779-	11-
17-19	652,922	12,597	2		0	12,597-	2-
18-20	567,282	12,597	2		0	12,597-	2-
19-21	625,705	46,322	7		0	46,322-	7-
FIVE-YEAR AVERAGE							
17-21	392,176	29,491	8		0	29,491-	8-

DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	42,371		0		0		0
1992	2,324		0		0		0
1993	106,507		0		0		0
1994	69,982		0		0		0
1995	93,406		0		0		0
1996							
1997	23,706		0		0		0
1998	1,522		0		0		0
1999	30,871		0		0		0
2000							
2001							
2002							
2003	139,027		0		0		0
2004							
2005	35,327		0		0		0
2006	4,577	698	15		0	698-	15-
2007	103,253	4,811	5		0	4,811-	5-
2008	52,248	29,431	56		0	29,431-	56-
2009	164,778	38,462	23		0	38,462-	23-
2010	205,463		0		0		0
2011	133,143		0		0		0
2012	137,116	1,729	1	1,178	1	551-	0
2013	208,790	4,535	2	982	0	3,553-	2-
2014	95,194	84,571	89	184-	0	84,754-	89-
2015	238,901	34,324	14	1-	0	34,325-	14-
2016	304,327	68,004	22		0	68,004-	22-
2017	188,595	68,577	36	68-	0	68,645-	36-
2018	32,838	300,424	915		0	300,424-	915-
2019	3,809,329	207,110	5	7,633	0	199,477-	5-
2020	93,354	430,155	461	527	1	429,629-	460-
2021	2,092,566	61,318	3		0	61,318-	3-
TOTAL	8,409,518	1,334,148	16	10,067	0	1,324,081-	16-

THREE-YEAR MOVING AVERAGES

91-93	50,401		0		0		0
92-94	59,604		0		0		0
93-95	89,965		0		0		0
94-96	54,463		0		0		0
95-97	39,038		0		0		0
96-98	8,410		0		0		0
97-99	18,700		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3110 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
98-00	10,798		0		0		0
99-01	10,290		0		0		0
00-02							
01-03	46,342		0		0		0
02-04	46,342		0		0		0
03-05	58,118		0		0		0
04-06	13,301	233	2		0	233-	2-
05-07	47,719	1,836	4		0	1,836-	4-
06-08	53,359	11,647	22		0	11,647-	22-
07-09	106,760	24,235	23		0	24,235-	23-
08-10	140,830	22,631	16		0	22,631-	16-
09-11	167,795	12,821	8		0	12,821-	8-
10-12	158,574	576	0	393	0	184-	0
11-13	159,683	2,088	1	720	0	1,368-	1-
12-14	147,033	30,278	21	659	0	29,619-	20-
13-15	180,962	41,143	23	266	0	40,877-	23-
14-16	212,808	62,299	29	62-	0	62,361-	29-
15-17	243,941	56,968	23	23-	0	56,991-	23-
16-18	175,253	145,668	83	23-	0	145,691-	83-
17-19	1,343,587	192,037	14	2,522	0	189,516-	14-
18-20	1,311,840	312,563	24	2,720	0	309,844-	24-
19-21	1,998,416	232,861	12	2,720	0	230,141-	12-
FIVE-YEAR AVERAGE							
17-21	1,243,337	213,517	17	1,618	0	211,899-	17-

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	422,833		0		0		0
1991	1,469,830		0		0		0
1992	1,290,307		0		0		0
1993	707,064		0		0		0
1994	861,329		0		0		0
1995	2,682,145		0		0		0
1996	32,885		0		0		0
1997	161,263		0		0		0
1998	758,949		0		0		0
1999	1,804,001		0		0		0
2000							
2001							
2002							
2003	7,226,804	1,220,923	17	54,200	1	1,166,723-	16-
2004	2,486,903		0		0		0
2005	3,191,937		0		0		0
2006	240,430	40,960	17		0	40,960-	17-
2007	5,469,792	73,271	1		0	73,271-	1-
2008	3,572,224	80,159	2		0	80,159-	2-
2009	924,041	191,354	21		0	191,354-	21-
2010	1,212,900	79,959	7	87,500	7	7,541	1
2011	1,109,358	42,153	4	1,937	0	40,215-	4-
2012	4,914,871	14,746	0	4,744	0	10,001-	0
2013	1,819,921	2,704	0	2,682	0	22-	0
2014	13,802,178	883,055	6	32,201-	0	915,256-	7-
2015	4,903,758	3,524,212	72	80,135	2	3,444,077-	70-
2016	1,402,060	559,727	40	11,773	1	547,954-	39-
2017	2,128,162	912,244	43	46,736	2	865,508-	41-
2018	2,473,840	12,951,712	524	71,725	3	12,879,987-	521-
2019	12,081,941	3,814,760	32	79,482	1	3,735,278-	31-
2020	16,118,391	8,017,882	50	43,786	0	7,974,095-	49-
2021	19,256,090	1,759,208	9	31,623	0	1,727,585-	9-
TOTAL	114,526,205	34,169,029	30	484,124	0	33,684,905-	29-

THREE-YEAR MOVING AVERAGES

90-92	1,060,990		0		0		0
91-93	1,155,734		0		0		0
92-94	952,900		0		0		0
93-95	1,416,846		0		0		0
94-96	1,192,120		0		0		0
95-97	958,764		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3120 BOILER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	317,699		0		0		0
97-99	908,071		0		0		0
98-00	854,316		0		0		0
99-01	601,334		0		0		0
00-02							
01-03	2,408,935	406,974	17	18,067	1	388,908-	16-
02-04	3,237,902	406,974	13	18,067	1	388,908-	12-
03-05	4,301,881	406,974	9	18,067	0	388,908-	9-
04-06	1,973,090	13,653	1		0	13,653-	1-
05-07	2,967,386	38,077	1		0	38,077-	1-
06-08	3,094,149	64,797	2		0	64,797-	2-
07-09	3,322,019	114,928	3		0	114,928-	3-
08-10	1,903,055	117,158	6	29,167	2	87,991-	5-
09-11	1,082,099	104,489	10	29,812	3	74,676-	7-
10-12	2,412,376	45,619	2	31,394	1	14,225-	1-
11-13	2,614,716	19,868	1	3,121	0	16,746-	1-
12-14	6,845,657	300,168	4	8,258-	0	308,426-	5-
13-15	6,841,952	1,469,990	21	16,872	0	1,453,118-	21-
14-16	6,702,666	1,655,665	25	19,902	0	1,635,762-	24-
15-17	2,811,327	1,665,394	59	46,215	2	1,619,180-	58-
16-18	2,001,354	4,807,895	240	43,412	2	4,764,483-	238-
17-19	5,561,314	5,892,905	106	65,981	1	5,826,924-	105-
18-20	10,224,724	8,261,451	81	64,998	1	8,196,453-	80-
19-21	15,818,807	4,530,617	29	51,630	0	4,478,986-	28-
FIVE-YEAR AVERAGE							
17-21	10,411,685	5,491,161	53	54,671	1	5,436,491-	52-

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	847,893		0		0		0
1992	538,297		0		0		0
1993	102,328		0		0		0
1994	555,226		0		0		0
1995	66,228		0		0		0
1996	5,992		0		0		0
1997	229,904		0		0		0
1998	210,493		0		0		0
1999	40,715		0		0		0
2000							
2001							
2002							
2003	311,366	43,075	14		0	43,075-	14-
2004	582,032		0		0		0
2005	850,980		0		0		0
2006	7,944	1,284	16		0	1,284-	16-
2007	1,044,758	9,522	1		0	9,522-	1-
2008	5,669,977	481,747	8	537,424	9	55,677	1
2009	1,787,235	137,589	8		0	137,589-	8-
2010	549,448		0		0		0
2011	16,313-	78,687	482-		0	78,687-	482
2012	689,392	2,218	0	1,511	0	706-	0
2013	205,842	78,030	38		0	78,030-	38-
2014	904,388	48,776	5	538-	0	49,314-	5-
2015	143,768	37,396	26	4-	0	37,399-	26-
2016	904,828	230,533	25	83,112	9	147,421-	16-
2017	490,139	270,220	55		0	270,220-	55-
2018	2,523,836	908,932	36	743,314	29	165,618-	7-
2019	1,255,969	3,541,847	282	704,873	56	2,836,975-	226-
2020	5,826,342	366,888	6	117,823	2	249,065-	4-
2021	6,092,323	726,528	12	466,504	8	260,023-	4-
TOTAL	32,421,330	6,963,271	21	2,654,019	8	4,309,252-	13-

THREE-YEAR MOVING AVERAGES

91-93	496,173		0		0		0
92-94	398,617		0		0		0
93-95	241,260		0		0		0
94-96	209,149		0		0		0
95-97	100,708		0		0		0
96-98	148,796		0		0		0
97-99	160,371		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3140 TURBOGENERATOR UNITS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
98-00	83,736		0		0		0
99-01	13,572		0		0		0
00-02							
01-03	103,789	14,358	14		0	14,358-	14-
02-04	297,799	14,358	5		0	14,358-	5-
03-05	581,459	14,358	2		0	14,358-	2-
04-06	480,319	428	0		0	428-	0
05-07	634,561	3,602	1		0	3,602-	1-
06-08	2,240,893	164,184	7	179,141	8	14,957	1
07-09	2,833,990	209,619	7	179,141	6	30,478-	1-
08-10	2,668,887	206,445	8	179,141	7	27,304-	1-
09-11	773,456	72,092	9		0	72,092-	9-
10-12	407,509	26,968	7	504	0	26,464-	6-
11-13	292,974	52,978	18	504	0	52,474-	18-
12-14	599,874	43,008	7	324	0	42,683-	7-
13-15	417,999	54,734	13	181-	0	54,914-	13-
14-16	650,995	105,568	16	27,523	4	78,045-	12-
15-17	512,912	179,383	35	27,703	5	151,680-	30-
16-18	1,306,267	469,895	36	275,475	21	194,420-	15-
17-19	1,423,314	1,573,667	111	482,729	34	1,090,938-	77-
18-20	3,202,049	1,605,889	50	522,003	16	1,083,886-	34-
19-21	4,391,545	1,545,088	35	429,733	10	1,115,355-	25-
FIVE-YEAR AVERAGE							
17-21	3,237,722	1,162,883	36	406,503	13	756,380-	23-

DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	32,390		0		0		0
1991	71,444		0		0		0
1992	32,766		0		0		0
1993							
1994							
1995	259,537		0		0		0
1996	69,143		0		0		0
1997	68,288		0		0		0
1998							
1999							
2000							
2001							
2002							
2003	75,714		0		0		0
2004	729,582		0		0		0
2005	69,401		0		0		0
2006							
2007	201,141	9,407	5		0	9,407-	5-
2008	3,085		0		0		0
2009	43,091	49	0		0	49-	0
2010	109,381		0		0		0
2011	142,864	972	1		0	972-	1-
2012	3,785,797		0		0		0
2013	96,218		0		0		0
2014	7,950	18,667	235	1,000	13	17,667-	222-
2015	23,366	8,386	36		0	8,386-	36-
2016	138,337	174,762	126	3,644	3	171,118-	124-
2017							
2018	2,104	880	42		0	880-	42-
2019	243,525	23,367	10		0	23,367-	10-
2020							
2021	20,769	3,759	18		0	3,759-	18-
TOTAL	6,225,893	240,249	4	4,644	0	235,606-	4-

THREE-YEAR MOVING AVERAGES

90-92	45,533		0		0		0
91-93	34,737		0		0		0
92-94	10,922		0		0		0
93-95	86,512		0		0		0
94-96	109,560		0		0		0
95-97	132,323		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3150 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	45,810		0		0		0
97-99	22,763		0		0		0
98-00							
99-01							
00-02							
01-03	25,238		0		0		0
02-04	268,432		0		0		0
03-05	291,566		0		0		0
04-06	266,328		0		0		0
05-07	90,181	3,136	3		0	3,136-	3-
06-08	68,075	3,136	5		0	3,136-	5-
07-09	82,439	3,152	4		0	3,152-	4-
08-10	51,852	16	0		0	16-	0
09-11	98,445	340	0		0	340-	0
10-12	1,346,014	324	0		0	324-	0
11-13	1,341,626	324	0		0	324-	0
12-14	1,296,655	6,222	0	333	0	5,889-	0
13-15	42,512	9,018	21	333	1	8,684-	20-
14-16	56,551	67,272	119	1,548	3	65,724-	116-
15-17	53,901	61,049	113	1,215	2	59,834-	111-
16-18	46,814	58,547	125	1,215	3	57,333-	122-
17-19	81,876	8,082	10		0	8,082-	10-
18-20	81,876	8,082	10		0	8,082-	10-
19-21	88,098	9,042	10		0	9,042-	10-
FIVE-YEAR AVERAGE							
17-21	53,280	5,601	11		0	5,601-	11-

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	46,577		0		0		0
1991	17,681		0		0		0
1992							
1993							
1994	19,547		0		0		0
1995	13,008		0		0		0
1996							
1997							
1998							
1999							
2000							
2001							
2002							
2003	138,740		0		0		0
2004							
2005	113,268	775	1	2,500	2	1,725	2
2006							
2007	36,418	354	1		0	354-	1-
2008							
2009	28,970		0		0		0
2010	1,129,078	13,421	1		0	13,421-	1-
2011	77,470-		0		0		0
2012	29,490		0		0		0
2013	161,855		0		0		0
2014	106,228	6,571	6		0	6,571-	6-
2015	84,021	1,485	2		0	1,485-	2-
2016	123,305	453	0		0	453-	0
2017	7,976-	143,623			0	143,623-	
2018		16,582				16,582-	
2019	353,290	47,256-	13-		0	47,256	13
2020	513,676	1,372	0		0	1,372-	0
2021	244,149		0		0		0
TOTAL	3,073,856	137,380	4	2,500	0	134,880-	4-

THREE-YEAR MOVING AVERAGES

90-92	21,420		0		0		0
91-93	5,894		0		0		0
92-94	6,516		0		0		0
93-95	10,852		0		0		0
94-96	10,852		0		0		0
95-97	4,336		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3160 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98							
97-99							
98-00							
99-01							
00-02							
01-03	46,247		0		0		0
02-04	46,247		0		0		0
03-05	84,003	258	0	833	1	575	1
04-06	37,756	258	1	833	2	575	2
05-07	49,895	376	1	833	2	457	1
06-08	12,139	118	1		0	118-	1-
07-09	21,796	118	1		0	118-	1-
08-10	386,016	4,474	1		0	4,474-	1-
09-11	360,193	4,474	1		0	4,474-	1-
10-12	360,366	4,474	1		0	4,474-	1-
11-13	37,959		0		0		0
12-14	99,191	2,190	2		0	2,190-	2-
13-15	117,368	2,685	2		0	2,685-	2-
14-16	104,518	2,836	3		0	2,836-	3-
15-17	66,450	48,520	73		0	48,520-	73-
16-18	38,443	53,553	139		0	53,553-	139-
17-19	115,105	37,650	33		0	37,650-	33-
18-20	288,989	9,767-	3-		0	9,767	3
19-21	370,372	15,295-	4-		0	15,295	4
FIVE-YEAR AVERAGE							
17-21	220,628	22,864	10		0	22,864-	10-

DUKE ENERGY KENTUCKY

ACCOUNT 3410 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	10,618	936	9		0	936-	9-
2008	22,463	5,016	22		0	5,016-	22-
2009							
2010	15,621	4,410	28		0	4,410-	28-
2011							
2012	6,963		0		0		0
2013							
2014	75,984	5,933	8		0	5,933-	8-
2015							
2016							
2017	172,056	37,476	22		0	37,476-	22-
2018		33,596				33,596-	
2019	14,301	1,238	9		0	1,238-	9-
2020	150,447	54,195	36		0	54,195-	36-
2021	10,444	2,094	20		0	2,094-	20-
TOTAL	478,897	144,893	30		0	144,893-	30-

THREE-YEAR MOVING AVERAGES

07-09	11,027	1,984	18		0	1,984-	18-
08-10	12,694	3,142	25		0	3,142-	25-
09-11	5,207	1,470	28		0	1,470-	28-
10-12	7,528	1,470	20		0	1,470-	20-
11-13	2,321		0		0		0
12-14	27,649	1,978	7		0	1,978-	7-
13-15	25,328	1,978	8		0	1,978-	8-
14-16	25,328	1,978	8		0	1,978-	8-
15-17	57,352	12,492	22		0	12,492-	22-
16-18	57,352	23,691	41		0	23,691-	41-
17-19	62,119	24,103	39		0	24,103-	39-
18-20	54,916	29,676	54		0	29,676-	54-
19-21	58,397	19,176	33		0	19,176-	33-

FIVE-YEAR AVERAGE

17-21	69,450	25,720	37		0	25,720-	37-
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DUKE ENERGY KENTUCKY

ACCOUNT 3420 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2004	42,403		0		0		0
2005							
2006							
2007							
2008							
2009							
2010							
2011							
2012	98,945		0		0		0
2013							
2014	21,496	777	4		0	777-	4-
2015	83,669	4,996	6		0	4,996-	6-
2016	70,159	3,042	4		0	3,042-	4-
2017							
2018							
2019	2,054,051	4,375	0		0	4,375-	0
2020	73,342	2,032,046		100,473	137	1,931,573-	
2021							
TOTAL	2,444,064	2,045,236	84	100,473	4	1,944,763-	80-

THREE-YEAR MOVING AVERAGES

04-06	14,134		0		0		0
05-07							
06-08							
07-09							
08-10							
09-11							
10-12	32,982		0		0		0
11-13	32,982		0		0		0
12-14	40,147	259	1		0	259-	1-
13-15	35,055	1,924	5		0	1,924-	5-
14-16	58,441	2,938	5		0	2,938-	5-
15-17	51,276	2,679	5		0	2,679-	5-
16-18	23,386	1,014	4		0	1,014-	4-
17-19	684,684	1,458	0		0	1,458-	0

DUKE ENERGY KENTUCKY

ACCOUNT 3420 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
18-20	709,131	678,807	96	33,491	5	645,316-	91-
19-21	709,131	678,807	96	33,491	5	645,316-	91-
FIVE-YEAR AVERAGE							
17-21	425,479	407,284	96	20,095	5	387,190-	91-

DUKE ENERGY KENTUCKY

ACCOUNT 3440 GENERATORS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2003	5,187		0		0		0
2004	32,402		0		0		0
2005	8,425,368		0	5,014,886	60	5,014,886	60
2006	4,742		0		0		0
2007	3,708,458		0		0		0
2008	11,539,368	5,444	0		0	5,444-	0
2009	12,561,235		0	2,595,016	21	2,595,016	21
2010	2,460,899		0		0		0
2011	3,261,267		0	786,306	24	786,306	24
2012	6,057,335		0		0		0
2013	199,816		0		0		0
2014	1,410,294-		0		0		0
2015	928,074-	65,681	7-		0	65,681-	7
2016	66,004-	24,500	37-		0	24,500-	37
2017	12,261-	14,900	122-		0	14,900-	122
2018		15,959		2,127,028		2,111,069	
2019	290,845	43,338	15		0	43,338-	15-
2020	2,236,503	93,647	4		0	93,647-	4-
2021	2,912,065	173,627	6	7,638	0	165,989-	6-
TOTAL	51,278,858	437,095	1	10,530,873	21	10,093,777	20

THREE-YEAR MOVING AVERAGES

03-05	2,820,986		0	1,671,629	59	1,671,629	59
04-06	2,820,837		0	1,671,629	59	1,671,629	59
05-07	4,046,189		0	1,671,629	41	1,671,629	41
06-08	5,084,189	1,815	0		0	1,815-	0
07-09	9,269,687	1,815	0	865,005	9	863,190	9
08-10	8,853,834	1,815	0	865,005	10	863,190	10
09-11	6,094,467		0	1,127,107	18	1,127,107	18
10-12	3,926,500		0	262,102	7	262,102	7
11-13	3,172,806		0	262,102	8	262,102	8
12-14	1,615,619		0		0		0
13-15	712,851-	21,894	3-		0	21,894-	3
14-16	801,457-	30,060	4-		0	30,060-	4
15-17	335,446-	35,027	10-		0	35,027-	10
16-18	26,088-	18,453	71-	709,009		690,556	
17-19	92,861	24,732	27	709,009	764	684,277	737

DUKE ENERGY KENTUCKY

ACCOUNT 3440 GENERATORS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
18-20	842,449	50,981	6	709,009	84	658,028	78
19-21	1,813,138	103,537	6	2,546	0	100,991-	6-
FIVE-YEAR AVERAGE							
17-21	1,085,430	68,294	6	426,933	39	358,639	33

DUKE ENERGY KENTUCKY

ACCOUNT 3450 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2003	52,428		0		0		0
2004							
2005							
2006							
2007	6,651	873	13		0	873-	13-
2008	6,268	892	14		0	892-	14-
2009							
2010							
2011	198,105-		0		0		0
2012	1,186,043		0		0		0
2013							
2014	55,185	12,089	22		0	12,089-	22-
2015	1,368,190	17,000	1	8,391	1	8,609-	1-
2016							
2017	146,082	11,870	8		0	11,870-	8-
2018	61,462	2,067	3		0	2,067-	3-
2019							
2020	247,331	27,602	11		0	27,602-	11-
2021	223,341	252	0		0	252-	0
TOTAL	3,154,876	72,645	2	8,391	0	64,254-	2-

THREE-YEAR MOVING AVERAGES

03-05	17,476		0		0		0
04-06							
05-07	2,217	291	13		0	291-	13-
06-08	4,306	588	14		0	588-	14-
07-09	4,306	588	14		0	588-	14-
08-10	2,089	297	14		0	297-	14-
09-11	66,035-		0		0		0
10-12	329,313		0		0		0
11-13	329,313		0		0		0
12-14	413,743	4,030	1		0	4,030-	1-
13-15	474,458	9,696	2	2,797	1	6,899-	1-
14-16	474,458	9,696	2	2,797	1	6,899-	1-
15-17	504,757	9,623	2	2,797	1	6,826-	1-
16-18	69,181	4,646	7		0	4,646-	7-
17-19	69,181	4,646	7		0	4,646-	7-

DUKE ENERGY KENTUCKY

ACCOUNT 3450 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
18-20	102,931	9,890	10		0	9,890-	10-
19-21	156,891	9,285	6		0	9,285-	6-
FIVE-YEAR AVERAGE							
17-21	135,643	8,358	6		0	8,358-	6-

DUKE ENERGY KENTUCKY

ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2003	37,219		0		0		0
2004							
2005	23,673		0		0		0
2006							
2007	82,232	2,907	4		0	2,907-	4-
2008							
2009	146,504		0		0		0
2010	71,076-		0		0		0
2011	90,281	956	1		0	956-	1-
2012							
2013	6,098		0		0		0
2014							
2015							
2016	254-	2,955			0	2,955-	
2017	84,101	4,246	5		0	4,246-	5-
2018	7,407	2,358	32		0	2,358-	32-
2019	17,049	344	2		0	344-	2-
2020	60,742	95	0		0	95-	0
2021							
TOTAL	483,976	13,861	3		0	13,861-	3-

THREE-YEAR MOVING AVERAGES

03-05	20,297		0		0		0
04-06	7,891		0		0		0
05-07	35,302	969	3		0	969-	3-
06-08	27,411	969	4		0	969-	4-
07-09	76,245	969	1		0	969-	1-
08-10	25,143		0		0		0
09-11	55,237	319	1		0	319-	1-
10-12	6,402	319	5		0	319-	5-
11-13	32,126	319	1		0	319-	1-
12-14	2,032		0		0		0
13-15	2,032		0		0		0
14-16	85-	985			0	985-	
15-17	27,949	2,401	9		0	2,401-	9-
16-18	30,418	3,186	10		0	3,186-	10-
17-19	36,186	2,316	6		0	2,316-	6-

DUKE ENERGY KENTUCKY

ACCOUNT 3460 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
18-20	28,399	932	3		0	932-	3-
19-21	25,930	146	1		0	146-	1-
FIVE-YEAR AVERAGE							
17-21	33,860	1,409	4		0	1,409-	4-

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1992	930	2,208	237		0	2,208-	237-
1993							
1994	1,042		0		0		0
1995							
1996							
1997							
1998	1,925		0		0		0
1999	1,918	370-	19-		0	370	19
2000							
2001							
2002							
2003							
2004							
2005	34,703		0		0		0
2006	6,015	9,055	151		0	9,055-	151-
2007	1,175	39,895			0	39,895-	
2008							
2009							
2010	4,149	2,333	56		0	2,333-	56-
2011	56,262	14,966	27		0	14,966-	27-
2012							
2013							
2014	67,048	44,740	67		0	44,740-	67-
2015	60,906	112,689	185		0	112,689-	185-
2016							
2017	55,722		0		0		0
2018							
2019							
2020							
2021							
TOTAL	291,795	225,515	77		0	225,515-	77-

THREE-YEAR MOVING AVERAGES

92-94	657	736	112		0	736-	112-
93-95	347		0		0		0
94-96	347		0		0		0
95-97							
96-98	642		0		0		0
97-99	1,281	123-	10-		0	123	10
98-00	1,281	123-	10-		0	123	10
99-01	639	123-	19-		0	123	19

DUKE ENERGY KENTUCKY

ACCOUNTS 3520 AND 3610 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
00-02							
01-03							
02-04							
03-05	11,568		0		0		0
04-06	13,573	3,018	22		0	3,018-	22-
05-07	13,964	16,317	117		0	16,317-	117-
06-08	2,397	16,317	681		0	16,317-	681-
07-09	392	13,298			0	13,298-	
08-10	1,383	778	56		0	778-	56-
09-11	20,137	5,766	29		0	5,766-	29-
10-12	20,137	5,766	29		0	5,766-	29-
11-13	18,754	4,989	27		0	4,989-	27-
12-14	22,349	14,913	67		0	14,913-	67-
13-15	42,652	52,476	123		0	52,476-	123-
14-16	42,652	52,476	123		0	52,476-	123-
15-17	38,876	37,563	97		0	37,563-	97-
16-18	18,574		0		0		0
17-19	18,574		0		0		0
18-20							
19-21							
FIVE-YEAR AVERAGE							
17-21	11,144		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1996	5,552	1,770	32		0	1,770-	32-
1997							
1998							
1999	4,924		0		0		0
2000							
2001							
2002							
2003	8,271	971	12		0	971-	12-
2004	28,699		0		0		0
2005	8,525	244	3		0	244-	3-
2006							
2007							
2008	25,000		0		0		0
2009							
2010							
2011							
2012							
2013							
2014	10,106	5,940	59		0	5,940-	59-
2015	251,224	67,833	27		0	67,833-	27-
2016	18,716	5,459	29		0	5,459-	29-
2017	124,854	8,210	7		0	8,210-	7-
2018	219,257	21,551	10		0	21,551-	10-
2019							
2020	1,179,021	205,362	17		0	205,362-	17-
2021	1,881,249	225,179	12		0	225,179-	12-
TOTAL	3,765,400	542,518	14		0	542,518-	14-

THREE-YEAR MOVING AVERAGES

96-98	1,851	590	32		0	590-	32-
97-99	1,641		0		0		0
98-00	1,641		0		0		0
99-01	1,641		0		0		0
00-02							
01-03	2,757	324	12		0	324-	12-
02-04	12,323	324	3		0	324-	3-
03-05	15,165	405	3		0	405-	3-
04-06	12,408	81	1		0	81-	1-
05-07	2,842	81	3		0	81-	3-
06-08	8,333		0		0		0
07-09	8,333		0		0		0

DUKE ENERGY KENTUCKY

ACCOUNT 3530 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
08-10	8,333		0		0		0
09-11							
10-12							
11-13							
12-14	3,369	1,980	59		0	1,980-	59-
13-15	87,110	24,591	28		0	24,591-	28-
14-16	93,349	26,410	28		0	26,410-	28-
15-17	131,598	27,167	21		0	27,167-	21-
16-18	120,942	11,740	10		0	11,740-	10-
17-19	114,704	9,920	9		0	9,920-	9-
18-20	466,093	75,638	16		0	75,638-	16-
19-21	1,020,090	143,514	14		0	143,514-	14-
FIVE-YEAR AVERAGE							
17-21	680,876	92,060	14		0	92,060-	14-

DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2000	24,335		0		0		0
2001							
2002	40,579		0		0		0
2003	683,187	13,017	2		0	13,017-	2-
2004	70,129	66,253	94		0	66,253-	94-
2005	105,868	3,406	3		0	3,406-	3-
2006	11,848	5,524	47		0	5,524-	47-
2007	32,151	4,148	13		0	4,148-	13-
2008	154,112	28,695	19	30,651	20	1,956	1
2009	2,241	1,357	61		0	1,357-	61-
2010	109,099	10,604	10		0	10,604-	10-
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018	2,674	1,032	39		0	1,032-	39-
2019							
2020							
2021							
TOTAL	1,236,224	134,036	11	30,651	2	103,385-	8-

THREE-YEAR MOVING AVERAGES

00-02	21,638		0		0		0
01-03	241,255	4,339	2		0	4,339-	2-
02-04	264,632	26,423	10		0	26,423-	10-
03-05	286,395	27,559	10		0	27,559-	10-
04-06	62,615	25,061	40		0	25,061-	40-
05-07	49,956	4,359	9		0	4,359-	9-
06-08	66,037	12,789	19	10,217	15	2,572-	4-
07-09	62,835	11,400	18	10,217	16	1,183-	2-
08-10	88,484	13,552	15	10,217	12	3,335-	4-
09-11	37,113	3,987	11		0	3,987-	11-
10-12	36,366	3,535	10		0	3,535-	10-
11-13							
12-14							
13-15							
14-16							
15-17							

DUKE ENERGY KENTUCKY

ACCOUNTS 3532 AND 3622 STATION EQUIPMENT - MAJOR

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
16-18	891	344	39		0	344-	39-
17-19	891	344	39		0	344-	39-
18-20	891	344	39		0	344-	39-
19-21							
FIVE-YEAR AVERAGE							
17-21	535	206	39		0	206-	39-

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	763	972	127	1,766	232	794	104
1991	14,549	4,066	28	17,670	121	13,605	94
1992	8,323	6,604	79	1,262	15	5,342-	64-
1993	27,199	4,929	18	12,384	46	7,455	27
1994	83,911	17,032	20	150,518	179	133,486	159
1995	46,396	8,076	17	8,057	17	19-	0
1996	109,925	9,135	8		0	9,135-	8-
1997	4,381	5,437	124	279	6	5,158-	118-
1998	4,211	862	20	5,114	121	4,252	101
1999	50,612	14,338	28	18,395	36	4,057	8
2000	9,767	3,084	32		0	3,084-	32-
2001	117,966	20,992	18		0	20,992-	18-
2002	13,673	6,716	49		0	6,716-	49-
2003	517	1,763	341		0	1,763-	341-
2004	12,902	5,311	41		0	5,311-	41-
2005	36,647	17,279	47	2,000	5	15,279-	42-
2006	47,381	3,638	8		0	3,638-	8-
2007	75,430	45,207	60		0	45,207-	60-
2008	43,933	5,851	13		0	5,851-	13-
2009	19,683	17,472	89		0	17,472-	89-
2010							
2011	69,526	18,700	27		0	18,700-	27-
2012	20,502		0		0		0
2013	9,915		0		0		0
2014	4,760	8,199	172		0	8,199-	172-
2015		3,338				3,338-	
2016	16,021	33,955	212		0	33,955-	212-
2017	45,555	54,776	120		0	54,776-	120-
2018		84,870				84,870-	
2019	3,366	73	2		0	73-	2-
2020							
2021	995,920	1,972,555	198	1,882	0	1,970,673-	198-
TOTAL	1,893,732	2,375,229	125	219,327	12	2,155,902-	114-

THREE-YEAR MOVING AVERAGES

90-92	7,878	3,880	49	6,899	88	3,019	38
91-93	16,690	5,200	31	10,439	63	5,239	31
92-94	39,811	9,521	24	54,721	137	45,200	114
93-95	52,502	10,012	19	56,986	109	46,974	89
94-96	80,077	11,414	14	52,858	66	41,444	52
95-97	53,567	7,549	14	2,779	5	4,770-	9-

DUKE ENERGY KENTUCKY

ACCOUNT 3550 POLES AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	39,506	5,145	13	1,798	5	3,347-	8-
97-99	19,735	6,879	35	7,929	40	1,050	5
98-00	21,530	6,095	28	7,836	36	1,741	8
99-01	59,448	12,805	22	6,132	10	6,673-	11-
00-02	47,135	10,264	22		0	10,264-	22-
01-03	44,052	9,823	22		0	9,823-	22-
02-04	9,031	4,597	51		0	4,597-	51-
03-05	16,689	8,118	49	667	4	7,451-	45-
04-06	32,310	8,743	27	667	2	8,076-	25-
05-07	53,152	22,041	41	667	1	21,375-	40-
06-08	55,581	18,232	33		0	18,232-	33-
07-09	46,349	22,844	49		0	22,844-	49-
08-10	21,205	7,775	37		0	7,775-	37-
09-11	29,737	12,057	41		0	12,057-	41-
10-12	30,009	6,233	21		0	6,233-	21-
11-13	33,314	6,233	19		0	6,233-	19-
12-14	11,726	2,733	23		0	2,733-	23-
13-15	4,891	3,846	79		0	3,846-	79-
14-16	6,927	15,164	219		0	15,164-	219-
15-17	20,525	30,690	150		0	30,690-	150-
16-18	20,525	57,867	282		0	57,867-	282-
17-19	16,307	46,573	286		0	46,573-	286-
18-20	1,122	28,314			0	28,314-	
19-21	333,095	657,542	197	627	0	656,915-	197-
FIVE-YEAR AVERAGE							
17-21	208,968	422,455	202	376	0	422,078-	202-

DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	399	425	107	26	7	399-	100-
1991	5,146	752	15	11,297	220	10,545	205
1992	6,930	5,658	82	584	8	5,074-	73-
1993	10,050	915	9	385	4	530-	5-
1994	74,663	15,269	20		0	15,269-	20-
1995	47,175	6,437	14	7,803	17	1,366	3
1996	115,748		0		0		0
1997							
1998	50		0		0		0
1999	38,345	27,198-	71-	1,288	3	28,486	74
2000							
2001	140,500	13,093	9		0	13,093-	9-
2002	2,879	3,919	136		0	3,919-	136-
2003		1,834				1,834-	
2004	5,376	6,881	128		0	6,881-	128-
2005	20,039		0	2,000	10	2,000	10
2006	71,240	11,817	17		0	11,817-	17-
2007	39,937	6,050	15		0	6,050-	15-
2008	64,045	16,180	25		0	16,180-	25-
2009	456	1,919-	421-		0	1,919	421
2010							
2011		1,563-				1,563	
2012							
2013	13,949		0		0		0
2014	10,588		0		0		0
2015		1,589				1,589-	
2016	4,853	7,125	147		0	7,125-	147-
2017	43	10	24		0	10-	24-
2018	6,523	6,995	107		0	6,995-	107-
2019	289,816		0		0		0
2020	2,822		0		0		0
2021	246,104	532,334	216	943	0	531,391-	216-
TOTAL	1,217,675	606,603	50	24,327	2	582,276-	48-

THREE-YEAR MOVING AVERAGES

90-92	4,158	2,279	55	3,969	95	1,691	41
91-93	7,375	2,442	33	4,089	55	1,647	22
92-94	30,547	7,281	24	323	1	6,958-	23-
93-95	43,963	7,540	17	2,729	6	4,811-	11-
94-96	79,195	7,235	9	2,601	3	4,634-	6-
95-97	54,308	2,146	4	2,601	5	455	1

DUKE ENERGY KENTUCKY

ACCOUNT 3560 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	38,599		0		0		0
97-99	12,798	9,066-	71-	430	3	9,495	74
98-00	12,798	9,066-	71-	430	3	9,495	74
99-01	59,615	4,702-	8-	430	1	5,131	9
00-02	47,793	5,670	12		0	5,670-	12-
01-03	47,793	6,282	13		0	6,282-	13-
02-04	2,752	4,211	153		0	4,211-	153-
03-05	8,472	2,905	34	667	8	2,238-	26-
04-06	32,219	6,233	19	667	2	5,566-	17-
05-07	43,739	5,956	14	667	2	5,289-	12-
06-08	58,407	11,349	19		0	11,349-	19-
07-09	34,812	6,770	19		0	6,770-	19-
08-10	21,500	4,754	22		0	4,754-	22-
09-11	152	1,161-	764-		0	1,161	764
10-12		521-				521	
11-13	4,650	521-	11-		0	521	11
12-14	8,179		0		0		0
13-15	8,179	530	6		0	530-	6-
14-16	5,147	2,905	56		0	2,905-	56-
15-17	1,632	2,908	178		0	2,908-	178-
16-18	3,806	4,710	124		0	4,710-	124-
17-19	98,794	2,335	2		0	2,335-	2-
18-20	99,720	2,332	2		0	2,332-	2-
19-21	179,581	177,445	99	314	0	177,130-	99-
FIVE-YEAR AVERAGE							
17-21	109,061	107,868	99	189	0	107,679-	99-

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	35,343	23,601	67		0	23,601-	67-
1991		14,827				14,827-	
1992	21,444	3,732	17		0	3,732-	17-
1993	395,717	4,265	1		0	4,265-	1-
1994	608,354	59,357	10	2,449-	0	61,807-	10-
1995	141,231	28,005	20	214	0	27,791-	20-
1996	35,982	13,491	37	16	0	13,476-	37-
1997	63,344	7,053	11	70	0	6,983-	11-
1998	686,272	3,445-	1-		0	3,445	1
1999	181,674-	7,267	4-	5,655	3-	1,612-	1
2000							
2001							
2002							
2003	134,044	50,103	37		0	50,103-	37-
2004	3,033	857	28		0	857-	28-
2005	121,086	25,083	21		0	25,083-	21-
2006	115,429	160,756	139		0	160,756-	139-
2007	45,070	1,576	3		0	1,576-	3-
2008	18,828	864	5		0	864-	5-
2009	511	1,009	197		0	1,009-	197-
2010	59,547	27,855	47		0	27,855-	47-
2011	260,714	62,252	24		0	62,252-	24-
2012							
2013	356,343	67,546	19	16,665	5	50,881-	14-
2014	638,580	204,028	32		0	204,028-	32-
2015	372,145	44,602	12	15,327	4	29,275-	8-
2016	30,518	10,846	36		0	10,846-	36-
2017	24,595	4,715	19		0	4,715-	19-
2018	3,168,288	168,588	5		0	168,588-	5-
2019	2,356,661	40,437	2		0	40,437-	2-
2020	1,064,614	307,364	29		0	307,364-	29-
2021	7,240,542	498,290	7		0	498,290-	7-
TOTAL	17,816,562	1,834,927	10	35,497	0	1,799,430-	10-

THREE-YEAR MOVING AVERAGES

90-92	18,929	14,053	74		0	14,053-	74-
91-93	139,054	7,608	5		0	7,608-	5-
92-94	341,838	22,452	7	816-	0	23,268-	7-
93-95	381,768	30,543	8	745-	0	31,288-	8-
94-96	261,856	33,618	13	740-	0	34,358-	13-
95-97	80,186	16,183	20	100	0	16,083-	20-

DUKE ENERGY KENTUCKY

ACCOUNT 3620 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	261,866	5,700	2	28	0	5,671-	2-
97-99	189,314	3,625	2	1,908	1	1,717-	1-
98-00	168,199	1,274	1	1,885	1	611	0
99-01	60,558-	2,422	4-	1,885	3-	537-	1
00-02							
01-03	44,681	16,701	37		0	16,701-	37-
02-04	45,692	16,987	37		0	16,987-	37-
03-05	86,054	25,348	29		0	25,348-	29-
04-06	79,849	62,232	78		0	62,232-	78-
05-07	93,861	62,472	67		0	62,472-	67-
06-08	59,776	54,399	91		0	54,399-	91-
07-09	21,470	1,150	5		0	1,150-	5-
08-10	26,295	9,909	38		0	9,909-	38-
09-11	106,924	30,372	28		0	30,372-	28-
10-12	106,754	30,036	28		0	30,036-	28-
11-13	205,686	43,266	21	5,555	3	37,711-	18-
12-14	331,641	90,525	27	5,555	2	84,970-	26-
13-15	455,689	105,392	23	10,664	2	94,728-	21-
14-16	347,081	86,492	25	5,109	1	81,383-	23-
15-17	142,419	20,054	14	5,109	4	14,945-	10-
16-18	1,074,467	61,383	6		0	61,383-	6-
17-19	1,849,848	71,247	4		0	71,247-	4-
18-20	2,196,521	172,130	8		0	172,130-	8-
19-21	3,553,939	282,030	8		0	282,030-	8-
FIVE-YEAR AVERAGE							
17-21	2,770,940	203,879	7		0	203,879-	7-

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	217,732	98,829	45	151,720	70	52,891	24
1991	220,355	160,349	73	133,244	60	27,105-	12-
1992	838,996	181,086	22	373,355	45	192,269	23
1993	187,297	118,920	63	213,890	114	94,970	51
1994	383,269	194,529	51	144,301	38	50,228-	13-
1995	477,684	171,827	36	380,720	80	208,893	44
1996	174,965	58,850	34	32,929-	19-	91,778-	52-
1997	147,637	45,107-	31-	107,087	73	152,194	103
1998	207,158	27,024	13	20,768	10	6,256-	3-
1999	395,043	108,686	28	7,371	2	101,315-	26-
2000	102,198	7,376-	7-		0	7,376	7
2001	548,586	74,872	14	12,273	2	62,599-	11-
2002	101,028	5,918	6		0	5,918-	6-
2003	138,540	153,817	111		0	153,817-	111-
2004	504,478	3,253	1		0	3,253-	1-
2005	656,916	76,489	12	4	0	76,485-	12-
2006	307,789	6,199	2		0	6,199-	2-
2007	485,951	38,788	8		0	38,788-	8-
2008	406,689	35,745	9		0	35,745-	9-
2009	329,339	191,659	58	46-	0	191,705-	58-
2010	299,289	467,435	156		0	467,435-	156-
2011	270,974	2,001	1		0	2,001-	1-
2012	154,070	72,712	47		0	72,712-	47-
2013	295,418		0		0		0
2014	571,297	392,057	69	272	0	391,785-	69-
2015	15,426	60,190	390	6-	0	60,197-	390-
2016	655,881	314,794	48		0	314,794-	48-
2017	244,982	740,748	302	76,865	31	663,883-	271-
2018	409,478	1,465,094	358	1,989	0	1,463,105-	357-
2019	276,844	67,523	24		0	67,523-	24-
2020	392,112	186,530	48		0	186,530-	48-
2021	793,617	2,463,131	310	123-	0	2,463,253-	310-
TOTAL	11,211,038	7,886,572	70	1,590,755	14	6,295,817-	56-

THREE-YEAR MOVING AVERAGES

90-92	425,694	146,755	34	219,440	52	72,685	17
91-93	415,549	153,452	37	240,163	58	86,711	21
92-94	469,854	164,845	35	243,849	52	79,004	17
93-95	349,417	161,759	46	246,304	70	84,545	24
94-96	345,306	141,735	41	164,031	48	22,295	6
95-97	266,762	61,857	23	151,626	57	89,769	34

DUKE ENERGY KENTUCKY

ACCOUNT 3640 POLES, TOWERS AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	176,586	13,589	8	31,642	18	18,053	10
97-99	249,946	30,201	12	45,076	18	14,875	6
98-00	234,800	42,778	18	9,380	4	33,398-	14-
99-01	348,609	58,728	17	6,548	2	52,179-	15-
00-02	250,604	24,471	10	4,091	2	20,380-	8-
01-03	262,718	78,202	30	4,091	2	74,111-	28-
02-04	248,015	54,329	22		0	54,329-	22-
03-05	433,311	77,853	18	1	0	77,851-	18-
04-06	489,728	28,647	6	1	0	28,645-	6-
05-07	483,552	40,492	8	1	0	40,491-	8-
06-08	400,143	26,911	7		0	26,911-	7-
07-09	407,326	88,731	22	15-	0	88,746-	22-
08-10	345,106	231,613	67	15-	0	231,629-	67-
09-11	299,867	220,365	73	15-	0	220,380-	73-
10-12	241,444	180,716	75		0	180,716-	75-
11-13	240,154	24,904	10		0	24,904-	10-
12-14	340,261	154,923	46	91	0	154,832-	46-
13-15	294,047	150,749	51	88	0	150,661-	51-
14-16	414,201	255,680	62	88	0	255,592-	62-
15-17	305,430	371,911	122	25,619	8	346,291-	113-
16-18	436,780	840,212	192	26,284	6	813,927-	186-
17-19	310,435	757,788	244	26,284	8	731,504-	236-
18-20	359,478	573,049	159	663	0	572,386-	159-
19-21	487,524	905,728	186	41-	0	905,769-	186-
FIVE-YEAR AVERAGE							
17-21	423,407	984,605	233	15,746	4	968,859-	229-

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	303,463	136,626	45	75,581	25	61,045-	20-
1991	227,749	147,390	65	155,875	68	8,484	4
1992	313,481	219,476	70	84,048	27	135,428-	43-
1993	240,027	136,014	57	84,089	35	51,925-	22-
1994	611,884	406,780	66	170,730	28	236,049-	39-
1995	596,355	234,379	39	342,025	57	107,646	18
1996	312,145	12,935	4	18,101-	6-	31,036-	10-
1997	80,667	130,365	162	19,621	24	110,744-	137-
1998	138,235	14,622	11	16,660	12	2,038	1
1999	393,713	121,417	31	2,920	1	118,497-	30-
2000	130,205	844	1		0	844-	1-
2001	729,041	196,330	27	45,423	6	150,907-	21-
2002	25,330-	55,995	221-		0	55,995-	221
2003	118,377	362,994	307		0	362,994-	307-
2004	836,373	35,574	4		0	35,574-	4-
2005	813,573	459,814	57	44	0	459,770-	57-
2006	390,352	63,797	16		0	63,797-	16-
2007	973,394	389,352	40		0	389,352-	40-
2008	538,581	224,711	42		0	224,711-	42-
2009	632,125	200,030	32	1,889	0	198,141-	31-
2010	935,685	1,403,092	150		0	1,403,092-	150-
2011	860,354	5,419	1		0	5,419-	1-
2012	1,303,520	352,308	27		0	352,308-	27-
2013	2,705,340		0		0		0
2014	7,116,082	1,161,243	16	7,705	0	1,153,538-	16-
2015	1,436,963-	328,128	23-	110-	0	328,238-	23
2016	3,273,645	989,485	30		0	989,485-	30-
2017	1,314,887	1,074,671	82	112,011	9	962,660-	73-
2018	724,734	1,690,786	233	1,989	0	1,688,797-	233-
2019	2,613,458	32,091	1		0	32,091-	1-
2020	2,763,999	484,622	18		0	484,622-	18-
2021	1,413,688	3,901,868	276	358-	0	3,902,226-	276-
TOTAL	31,942,842	14,973,158	47	1,102,041	3	13,871,117-	43-

THREE-YEAR MOVING AVERAGES

90-92	281,564	167,831	60	105,168	37	62,663-	22-
91-93	260,419	167,627	64	108,004	41	59,623-	23-
92-94	388,464	254,090	65	112,956	29	141,134-	36-
93-95	482,755	259,057	54	198,948	41	60,109-	12-
94-96	506,795	218,031	43	164,885	33	53,146-	10-
95-97	329,723	125,893	38	114,515	35	11,378-	3-

DUKE ENERGY KENTUCKY

ACCOUNT 3650 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	177,016	52,641	30	6,060	3	46,581-	26-
97-99	204,205	88,801	43	13,067	6	75,734-	37-
98-00	220,718	45,628	21	6,527	3	39,101-	18-
99-01	417,653	106,197	25	16,114	4	90,083-	22-
00-02	277,972	84,390	30	15,141	5	69,249-	25-
01-03	274,029	205,106	75	15,141	6	189,966-	69-
02-04	309,807	151,521	49		0	151,521-	49-
03-05	589,441	286,127	49	15	0	286,113-	49-
04-06	680,099	186,395	27	15	0	186,380-	27-
05-07	725,773	304,321	42	15	0	304,307-	42-
06-08	634,109	225,954	36		0	225,954-	36-
07-09	714,700	271,365	38	630	0	270,735-	38-
08-10	702,131	609,278	87	630	0	608,648-	87-
09-11	809,388	536,180	66	630	0	535,551-	66-
10-12	1,033,186	586,940	57		0	586,940-	57-
11-13	1,623,071	119,242	7		0	119,242-	7-
12-14	3,708,314	504,517	14	2,568	0	501,948-	14-
13-15	2,794,820	496,457	18	2,531	0	493,925-	18-
14-16	2,984,255	826,285	28	2,531	0	823,754-	28-
15-17	1,050,523	797,428	76	37,300	4	760,128-	72-
16-18	1,771,089	1,251,647	71	38,000	2	1,213,647-	69-
17-19	1,551,026	932,516	60	38,000	2	894,516-	58-
18-20	2,034,064	735,833	36	663	0	735,170-	36-
19-21	2,263,715	1,472,860	65	119-	0	1,472,980-	65-
FIVE-YEAR AVERAGE							
17-21	1,766,153	1,436,807	81	22,728	1	1,414,079-	80-

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	2,240	6,496	290	9,926	443	3,431	153
1991	3,988	2,036	51	3,033-	76-	5,069-	127-
1992	8,711	3,249	37	2,761	32	489-	6-
1993	2,058	1,169	57		0	1,169-	57-
1994	2,013	894	44		0	894-	44-
1995	1,881	1,411	75		0	1,411-	75-
1996							
1997	1,360	217-	16-		0	217	16
1998							
1999	1,518	505	33		0	505-	33-
2000							
2001							
2002	4,609		0		0		0
2003	6,541	1,563	24		0	1,563-	24-
2004	3,222		0		0		0
2005	22,393	5,165	23		0	5,165-	23-
2006	11,712		0		0		0
2007	4,158	45	1		0	45-	1-
2008	5,640	1,135	20		0	1,135-	20-
2009	961	38	4		0	38-	4-
2010	991	74,897			0	74,897-	
2011	375	1	0		0	1-	0
2012	437	11,184			0	11,184-	
2013	44,240		0		0		0
2014	17,399	10,597	61	42	0	10,556-	61-
2015	8,309	149,206		99-	1-	149,305-	
2016	25,192	37	0		0	37-	0
2017		28,474-		6,494		34,967	
2018	41,871	1,623	4		0	1,623-	4-
2019	1,872		0		0		0
2020	1		0		0		0
2021	18,722	8,719	47		0	8,719-	47-
TOTAL	242,413	251,280	104	16,091	7	235,189-	97-

THREE-YEAR MOVING AVERAGES

90-92	4,980	3,927	79	3,218	65	709-	14-
91-93	4,919	2,152	44	90-	2-	2,242-	46-
92-94	4,261	1,771	42	920	22	850-	20-
93-95	1,984	1,158	58		0	1,158-	58-
94-96	1,298	768	59		0	768-	59-
95-97	1,080	398	37		0	398-	37-

DUKE ENERGY KENTUCKY

ACCOUNT 3660 UNDERGROUND CONDUIT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	453	72-	16-		0	72	16
97-99	959	96	10		0	96-	10-
98-00	506	168	33		0	168-	33-
99-01	506	168	33		0	168-	33-
00-02	1,536		0		0		0
01-03	3,717	521	14		0	521-	14-
02-04	4,790	521	11		0	521-	11-
03-05	10,718	2,242	21		0	2,242-	21-
04-06	12,442	1,722	14		0	1,722-	14-
05-07	12,754	1,737	14		0	1,737-	14-
06-08	7,170	393	5		0	393-	5-
07-09	3,586	406	11		0	406-	11-
08-10	2,531	25,357			0	25,357-	
09-11	776	24,979			0	24,979-	
10-12	601	28,694			0	28,694-	
11-13	15,017	3,729	25		0	3,729-	25-
12-14	20,692	7,260	35	14	0	7,247-	35-
13-15	23,316	53,268	228	19-	0	53,287-	229-
14-16	16,967	53,280	314	19-	0	53,299-	314-
15-17	11,167	40,256	360	2,131	19	38,125-	341-
16-18	22,354	8,938-	40-	2,165	10	11,103	50
17-19	14,581	8,950-	61-	2,165	15	11,115	76
18-20	14,581	541	4		0	541-	4-
19-21	6,865	2,906	42		0	2,906-	42-
FIVE-YEAR AVERAGE							
17-21	12,493	3,626-	29-	1,299	10	4,925	39

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	87,401	30,394	35	23,927	27	6,467-	7-
1991	31,879	17,356	54	36,234	114	18,877	59
1992	42,260	14,850	35	9,879	23	4,971-	12-
1993	69,647	24,244	35	15,918	23	8,326-	12-
1994	97,300	39,946	41	35,687	37	4,259-	4-
1995	75,590	44,001	58	261,764-	346-	305,765-	405-
1996	34,498	3,291	10	1,099	3	2,192-	6-
1997	3,146	11,711-	372-	6,457	205	18,168	577
1998	1,662	5,918	356	2,565	154	3,353-	202-
1999	27,742	5,107	18		0	5,107-	18-
2000							
2001	8,202		0		0		0
2002	29,273		0		0		0
2003	50,583	20,187	40		0	20,187-	40-
2004	221,372	75-	0		0	75	0
2005	199,633	100,118	50	7	0	100,111-	50-
2006	91,793	1,805	2		0	1,805-	2-
2007	186,161	16,972	9		0	16,972-	9-
2008	165,461	57,868	35		0	57,868-	35-
2009	221,383	80,193	36	152-	0	80,345-	36-
2010	94,652	797,328	842		0	797,328-	842-
2011	172,050	167-	0		0	167	0
2012	191,577	55,921	29		0	55,921-	29-
2013	527,957		0		0		0
2014	441,377	68,658	16	481	0	68,177-	15-
2015	23,839-	56,707	238-	16-	0	56,723-	238
2016	236,215	34,154	14		0	34,154-	14-
2017	177,846	61,315	34	3,688-	2-	65,003-	37-
2018	243,960	123,284	51		0	123,284-	51-
2019	815,636	61,384	8		0	61,384-	8-
2020	227,739	71,586	31		0	71,586-	31-
2021	471,639	265,699	56	24-	0	265,724-	56-
TOTAL	5,221,795	2,046,334	39	133,391-	3-	2,179,725-	42-

THREE-YEAR MOVING AVERAGES

90-92	53,847	20,867	39	23,347	43	2,480	5
91-93	47,929	18,817	39	20,677	43	1,860	4
92-94	69,736	26,346	38	20,495	29	5,852-	8-
93-95	80,846	36,064	45	70,053-	87-	106,117-	131-
94-96	69,129	29,079	42	74,993-	108-	104,072-	151-
95-97	37,745	11,860	31	84,736-	224-	96,596-	256-

DUKE ENERGY KENTUCKY

ACCOUNT 3670 UNDERGROUND CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	13,102	834-	6-	3,374	26	4,208	32
97-99	10,850	229-	2-	3,008	28	3,236	30
98-00	9,802	3,675	37	855	9	2,820-	29-
99-01	11,982	1,702	14		0	1,702-	14-
00-02	12,492		0		0		0
01-03	29,353	6,729	23		0	6,729-	23-
02-04	100,409	6,704	7		0	6,704-	7-
03-05	157,196	40,077	25	2	0	40,075-	25-
04-06	170,932	33,949	20	2	0	33,947-	20-
05-07	159,196	39,632	25	2	0	39,629-	25-
06-08	147,805	25,548	17		0	25,548-	17-
07-09	191,002	51,678	27	51-	0	51,728-	27-
08-10	160,499	311,797	194	51-	0	311,847-	194-
09-11	162,695	292,451	180	51-	0	292,502-	180-
10-12	152,759	284,361	186		0	284,361-	186-
11-13	297,194	18,585	6		0	18,585-	6-
12-14	386,970	41,526	11	160	0	41,366-	11-
13-15	315,165	41,788	13	155	0	41,633-	13-
14-16	217,918	53,173	24	155	0	53,018-	24-
15-17	130,074	50,725	39	1,235-	1-	51,960-	40-
16-18	219,340	72,918	33	1,229-	1-	74,147-	34-
17-19	412,481	81,994	20	1,229-	0	83,224-	20-
18-20	429,112	85,418	20		0	85,418-	20-
19-21	505,005	132,890	26	8-	0	132,898-	26-
FIVE-YEAR AVERAGE							
17-21	387,364	116,654	30	743-	0	117,396-	30-

DUKE ENERGY KENTUCKY

ACCOUNTS 3680 AND 3682 LINE TRANSFORMERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	362,018	281,670	78	218,313	60	63,357-	18-
1991	266,727	70,694	27	165,931	62	95,237	36
1992	375,952	101,792	27	115,679	31	13,887	4
1993	487,171	39,446	8	170,173	35	130,728	27
1994	574,496	167,718	29	241,011	42	73,293	13
1995	482,193	63,494	13	336,495	70	273,001	57
1996	446,033	16,438	4	148,036	33	131,599	30
1997	265,872	15,936	6	177,691	67	161,755	61
1998	215,514	3,437	2	110,476	51	107,039	50
1999	264,966	21,062	8	110,002	42	88,941	34
2000	13,975	6,880-	49-		0	6,880	49
2001	551,332	14,567	3	1,066	0	13,501-	2-
2002	334,527	2,260	1		0	2,260-	1-
2003	310,036	41,328	13		0	41,328-	13-
2004	376,438	860	0		0	860-	0
2005	563,912	73,053	13		0	73,053-	13-
2006	208,781	3,202	2		0	3,202-	2-
2007	528,209	11,499	2		0	11,499-	2-
2008	197,196	2,225	1		0	2,225-	1-
2009	965,741	31,994	3	77-	0	32,071-	3-
2010	53,216	577,525			0	577,525-	
2011	134,367	737	1		0	737-	1-
2012	180,054	39,145	22		0	39,145-	22-
2013	131,425		0		0		0
2014	477,978	89,621	19	362	0	89,259-	19-
2015	672,040	340,393	51	65,764	10	274,629-	41-
2016	1,829,330	12,300	1		0	12,300-	1-
2017	710,145	442,465	62	26,532	4	415,933-	59-
2018	715,201	1,192,946	167	140	0	1,192,806-	167-
2019	900,734	46,489	5		0	46,489-	5-
2020	1,182,994	38,789	3		0	38,789-	3-
2021	1,218,878	1,569,101	129	35-	0	1,569,135-	129-
TOTAL	15,997,452	5,305,303	33	1,887,560	12	3,417,743-	21-

THREE-YEAR MOVING AVERAGES

90-92	334,899	151,385	45	166,641	50	15,256	5
91-93	376,616	70,644	19	150,595	40	79,950	21
92-94	479,206	102,985	21	175,621	37	72,636	15
93-95	514,620	90,219	18	249,227	48	159,007	31
94-96	500,908	82,550	16	241,848	48	159,298	32
95-97	398,033	31,956	8	220,741	55	188,785	47

DUKE ENERGY KENTUCKY

ACCOUNTS 3680 AND 3682 LINE TRANSFORMERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	309,140	11,937	4	145,401	47	133,465	43
97-99	248,784	13,478	5	132,723	53	119,245	48
98-00	164,818	5,873	4	73,493	45	67,620	41
99-01	276,758	9,583	3	37,023	13	27,440	10
00-02	299,945	3,315	1	355	0	2,960-	1-
01-03	398,632	19,385	5	355	0	19,030-	5-
02-04	340,334	14,816	4		0	14,816-	4-
03-05	416,795	38,414	9		0	38,414-	9-
04-06	383,044	25,705	7		0	25,705-	7-
05-07	433,634	29,251	7		0	29,251-	7-
06-08	311,395	5,642	2		0	5,642-	2-
07-09	563,715	15,239	3	26-	0	15,265-	3-
08-10	405,384	203,915	50	26-	0	203,940-	50-
09-11	384,441	203,419	53	26-	0	203,444-	53-
10-12	122,546	205,802	168		0	205,802-	168-
11-13	148,616	13,294	9		0	13,294-	9-
12-14	263,153	42,922	16	121	0	42,801-	16-
13-15	427,148	143,338	34	22,042	5	121,296-	28-
14-16	993,116	147,438	15	22,042	2	125,396-	13-
15-17	1,070,505	265,053	25	30,765	3	234,287-	22-
16-18	1,084,892	549,237	51	8,891	1	540,346-	50-
17-19	775,360	560,633	72	8,891	1	551,743-	71-
18-20	932,976	426,075	46	47	0	426,028-	46-
19-21	1,100,869	551,460	50	12-	0	551,471-	50-
FIVE-YEAR AVERAGE							
17-21	945,590	657,958	70	5,327	1	652,631-	69-

DUKE ENERGY KENTUCKY
ACCOUNTS 3691 AND 3692 SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	53,521	55,416	104	12,566	23	42,850-	80-
1991	67,772	63,859	94	39	0	63,820-	94-
1992	52,070	46,374	89	8,328	16	38,046-	73-
1993	57,132	54,546	95	8,066	14	46,480-	81-
1994	62,665	37,281	59	11,630	19	25,651-	41-
1995	68,188	31,387	46	34,873	51	3,486	5
1996	56,475	33,400	59	2,906	5	30,493-	54-
1997	49,435	5,919	12	6,259	13	340	1
1998	72,403	41,964	58	7,514	10	34,451-	48-
1999	68,815	19,196	28		0	19,196-	28-
2000	2,737	3,885-	142-		0	3,885	142
2001	77,480	13,283	17	308	0	12,975-	17-
2002	10,930		0		0		0
2003	47,881	3,299	7		0	3,299-	7-
2004	262,044		0		0		0
2005	146,322	115,968	79		0	115,968-	79-
2006	189,787	16	0		0	16-	0
2007	433,399	339	0		0	339-	0
2008	238,365	8,308	3		0	8,308-	3-
2009	152,224	34,526	23	57-	0	34,583-	23-
2010	10,643	254,394			0	254,394-	
2011	29,666		0		0		0
2012	12,427	11,184	90		0	11,184-	90-
2013	10,233		0		0		0
2014	126,074	4,963	4	24	0	4,939-	4-
2015	4,862-	5,045	104-		0	5,045-	104
2016	26,336	62,677	238	54-	0	62,730-	238-
2017	22,550	194,759	864	3,307	15	191,451-	849-
2018	10,932	133,018		22-	0	133,040-	
2019	11,628	112,620	969	23-	0	112,643-	969-
2020	8,213	78,090	951	16-	0	78,106-	951-
2021	8,368	141,408		62-	1-	141,470-	
TOTAL	2,441,854	1,559,354	64	95,586	4	1,463,768-	60-

THREE-YEAR MOVING AVERAGES

90-92	57,787	55,216	96	6,978	12	48,239-	83-
91-93	58,991	54,926	93	5,478	9	49,449-	84-
92-94	57,289	46,067	80	9,341	16	36,726-	64-
93-95	62,662	41,071	66	18,190	29	22,882-	37-
94-96	62,443	34,023	54	16,470	26	17,553-	28-
95-97	58,033	23,568	41	14,679	25	8,889-	15-

DUKE ENERGY KENTUCKY

ACCOUNTS 3691 AND 3692 SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	59,438	27,094	46	5,560	9	21,535-	36-
97-99	63,551	22,360	35	4,591	7	17,769-	28-
98-00	47,985	19,092	40	2,505	5	16,587-	35-
99-01	49,678	9,531	19	103	0	9,429-	19-
00-02	30,383	3,133	10	103	0	3,030-	10-
01-03	45,430	5,527	12	103	0	5,425-	12-
02-04	106,952	1,100	1		0	1,100-	1-
03-05	152,083	39,756	26		0	39,756-	26-
04-06	199,385	38,662	19		0	38,661-	19-
05-07	256,503	38,775	15		0	38,774-	15-
06-08	287,184	2,888	1		0	2,888-	1-
07-09	274,663	14,391	5	19-	0	14,410-	5-
08-10	133,744	99,076	74	19-	0	99,095-	74-
09-11	64,178	96,307	150	19-	0	96,326-	150-
10-12	17,579	88,526	504		0	88,526-	504-
11-13	17,442	3,728	21		0	3,728-	21-
12-14	49,578	5,382	11	8	0	5,374-	11-
13-15	43,815	3,336	8	8	0	3,328-	8-
14-16	49,182	24,228	49	10-	0	24,238-	49-
15-17	14,675	87,494	596	1,085	7	86,409-	589-
16-18	19,939	130,151	653	1,077	5	129,074-	647-
17-19	15,037	146,799	976	1,087	7	145,711-	969-
18-20	10,257	107,909		20-	0	107,930-	
19-21	9,403	110,706		34-	0	110,740-	
FIVE-YEAR AVERAGE							
17-21	12,338	131,979		637	5	131,342-	

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	93,976	11,420	12	81,341	87	69,921	74
1991	90,291	7,855	9	89,564	99	81,709	90
1992	255,062	9,174	4	84,464	33	75,290	30
1993	329,246	8,920	3	89,303	27	80,383	24
1994	283,205	15,510	5	59,032	21	43,523	15
1995	155,278	13,244	9	49,500	32	36,257	23
1996	240,095	10,670	4	64,189	27	53,520	22
1997	239,605	19,453	8	75,142	31	55,690	23
1998	329,257	19,083	6	61,248	19	42,165	13
1999	670,128	2,766	0	11,691	2	8,925	1
2000							
2001	447,957		0		0		0
2002							
2003	387,642	104,633	27	25,649	7	78,984-	20-
2004	297,843	17	0		0	17-	0
2005	576,514		0		0		0
2006	653,849		0		0		0
2007	590,455		0		0		0
2008	1,366,259		0		0		0
2009	276,416		0		0		0
2010		645-				645	
2011	811,880	76,497	9		0	76,497-	9-
2012	600,159	60,900	10		0	60,900-	10-
2013	65,697		0		0		0
2014	320,832	24,788	8		0	24,788-	8-
2015							
2016	3,055,318		0		0		0
2017	622,807		0		0		0
2018	112,286	193,192	172		0	193,192-	172-
2019	436,108	301,426	69		0	301,426-	69-
2020	571,278		0		0		0
2021		818				818-	
TOTAL	13,879,442	879,719	6	691,123	5	188,596-	1-

THREE-YEAR MOVING AVERAGES

90-92	146,443	9,483	6	85,123	58	75,640	52
91-93	224,866	8,649	4	87,777	39	79,128	35
92-94	289,171	11,201	4	77,600	27	66,399	23
93-95	255,909	12,558	5	65,945	26	53,387	21
94-96	226,193	13,141	6	57,574	25	44,433	20
95-97	211,659	14,455	7	62,944	30	48,489	23

DUKE ENERGY KENTUCKY

ACCOUNT 3700 METERS AND METERING EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	269,653	16,402	6	66,860	25	50,458	19
97-99	412,997	13,767	3	49,360	12	35,593	9
98-00	333,128	7,283	2	24,313	7	17,030	5
99-01	372,695	922	0	3,897	1	2,975	1
00-02	149,319		0		0		0
01-03	278,533	34,878	13	8,550	3	26,328-	9-
02-04	228,495	34,883	15	8,550	4	26,334-	12-
03-05	420,666	34,883	8	8,550	2	26,334-	6-
04-06	509,402	6	0		0	6-	0
05-07	606,939		0		0		0
06-08	870,188		0		0		0
07-09	744,377		0		0		0
08-10	547,558	215-	0		0	215	0
09-11	362,765	25,284	7		0	25,284-	7-
10-12	470,680	45,584	10		0	45,584-	10-
11-13	492,578	45,799	9		0	45,799-	9-
12-14	328,896	28,563	9		0	28,563-	9-
13-15	128,843	8,263	6		0	8,263-	6-
14-16	1,125,383	8,263	1		0	8,263-	1-
15-17	1,226,042		0		0		0
16-18	1,263,470	64,397	5		0	64,397-	5-
17-19	390,401	164,873	42		0	164,873-	42-
18-20	373,224	164,873	44		0	164,873-	44-
19-21	335,795	100,748	30		0	100,748-	30-
FIVE-YEAR AVERAGE							
17-21	348,496	99,087	28		0	99,087-	28-

DUKE ENERGY KENTUCKY

ACCOUNT 3712 COMPANY-OWNED OUTDOOR LIGHTING

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011	1,579-		0		0		0
2012	389-	5,592			0	5,592-	
2013							
2014							
2015							
2016							
2017	102,165	4,769-	5-	675	1	5,444	5
2018	44,527	52,597	118		0	52,597-	118-
2019	3,422		0		0		0
2020	18,916		0		0		0
2021	18,043	685	4		0	685-	4-
TOTAL	185,105	54,106	29	675	0	53,431-	29-

THREE-YEAR MOVING AVERAGES

11-13	656-	1,864	284-		0	1,864-	284
12-14	130-	1,864			0	1,864-	
13-15							
14-16							
15-17	34,055	1,590-	5-	225	1	1,814	5
16-18	48,897	15,943	33	225	0	15,718-	32-
17-19	50,038	15,943	32	225	0	15,718-	31-
18-20	22,288	17,532	79		0	17,532-	79-
19-21	13,461	228	2		0	228-	2-

FIVE-YEAR AVERAGE

17-21	37,415	9,703	26	135	0	9,568-	26-
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DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	20,216	7,522	37	4,336	21	3,187-	16-
1991	9,619	6,948	72	3,286	34	3,662-	38-
1992	9,688	4,726	49	1,156	12	3,570-	37-
1993	16,190	4,106	25	1,333	8	2,773-	17-
1994	28,579	5,619	20	13,033	46	7,413	26
1995	29,964	6,883	23	46,611	156	39,728	133
1996	18,284	4,333	24	7	0	4,326-	24-
1997	5,424	1,902-	35-	108	2	2,010	37
1998	13,430	2,834	21	8	0	2,826-	21-
1999	29,130	5,860	20		0	5,860-	20-
2000	5,110	1,868-	37-		0	1,868	37
2001	512,299	6,338	1	234	0	6,104-	1-
2002	10,538	461	4		0	461-	4-
2003	14,022	105	1		0	105-	1-
2004	77,153	288	0		0	288-	0
2005	121,631	29,975	25	14	0	29,961-	25-
2006	43,772	119	0		0	119-	0
2007	39,262	2,090	5		0	2,090-	5-
2008	40,843	401	1		0	401-	1-
2009	55,463	6,831	12	1-	0	6,832-	12-
2010	4,469	16,355	366		0	16,355-	366-
2011	4,784	7-	0		0	7	0
2012	7,687	11,581	151		0	11,581-	151-
2013	47,445		0		0		0
2014	78,900	5,364	7	55	0	5,308-	7-
2015	78,784-	699	1-		0	699-	1
2016	122,126	744	1		0	744-	1-
2017	190,772	137,937	72	220	0	137,717-	72-
2018		32,303				32,303-	
2019							
2020		1,096				1,096-	
2021		43				43-	
TOTAL	1,478,014	297,785	20	70,399	5	227,386-	15-

THREE-YEAR MOVING AVERAGES

90-92	13,174	6,399	49	2,926	22	3,473-	26-
91-93	11,832	5,260	44	1,925	16	3,335-	28-
92-94	18,152	4,817	27	5,174	29	357	2
93-95	24,911	5,536	22	20,326	82	14,790	59
94-96	25,609	5,612	22	19,883	78	14,272	56
95-97	17,891	3,104	17	15,575	87	12,471	70

DUKE ENERGY KENTUCKY

ACCOUNT 3731 STREET LIGHTING - OVERHEAD

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	12,379	1,755	14	41	0	1,714-	14-
97-99	15,994	2,264	14	39	0	2,225-	14-
98-00	15,890	2,275	14	3	0	2,273-	14-
99-01	182,179	3,443	2	78	0	3,365-	2-
00-02	175,982	1,644	1	78	0	1,566-	1-
01-03	178,953	2,302	1	78	0	2,224-	1-
02-04	33,904	285	1		0	285-	1-
03-05	70,935	10,123	14	5	0	10,118-	14-
04-06	80,852	10,127	13	5	0	10,123-	13-
05-07	68,222	10,728	16	5	0	10,723-	16-
06-08	41,292	870	2		0	870-	2-
07-09	45,189	3,107	7		0	3,108-	7-
08-10	33,591	7,862	23		0	7,863-	23-
09-11	21,572	7,726	36		0	7,727-	36-
10-12	5,646	9,310	165		0	9,310-	165-
11-13	19,972	3,858	19		0	3,858-	19-
12-14	44,677	5,648	13	18	0	5,630-	13-
13-15	15,853	2,021	13	18	0	2,002-	13-
14-16	40,747	2,269	6	18	0	2,251-	6-
15-17	78,038	46,460	60	73	0	46,387-	59-
16-18	104,299	56,995	55	73	0	56,922-	55-
17-19	63,591	56,747	89	73	0	56,674-	89-
18-20		11,133				11,133-	
19-21		380				380-	
FIVE-YEAR AVERAGE							
17-21	38,154	34,276	90	44	0	34,232-	90-

DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	3,523	2,720	77	6,087	173	3,367	96
1991	15,833	5,713	36	4,585	29	1,129-	7-
1992	18,138	7,473	41	11,314	62	3,842	21
1993	9,699	2,227	23	9,587	99	7,360	76
1994	6,263	3,760	60	6,179	99	2,419	39
1995	11,168	1,070	10	1,952	17	882	8
1996	15,106	4,906	32		0	4,906-	32-
1997	9,535	761-	8-		0	761	8
1998	29,706	703	2		0	703-	2-
1999	24,055	3,273	14		0	3,273-	14-
2000							
2001	10,627		0		0		0
2002	22,424		0		0		0
2003	3,503	1,182	34		0	1,182-	34-
2004	20,786		0		0		0
2005	30,122	3,362	11		0	3,362-	11-
2006	25,595		0		0		0
2007	48,101		0		0		0
2008	18,175	491	3		0	491-	3-
2009	27,543	2,369	9		0	2,369-	9-
2010	14,568	88,454	607		0	88,454-	607-
2011	27,464	6	0		0	6-	0
2012	13,982	40	0		0	40-	0
2013	23,915		0		0		0
2014	2,248	204	9		0	204-	9-
2015	11,573-		0		0		0
2016	15,664	27	0		0	27-	0
2017	12,829		0		0		0
2018		13,393				13,393-	
2019							
2020		1,052-				1,052	
2021							
TOTAL	448,997	139,562	31	39,704	9	99,858-	22-

THREE-YEAR MOVING AVERAGES

90-92	12,498	5,302	42	7,329	59	2,027	16
91-93	14,557	5,138	35	8,495	58	3,358	23
92-94	11,367	4,486	39	9,027	79	4,540	40
93-95	9,043	2,352	26	5,906	65	3,554	39
94-96	10,845	3,245	30	2,710	25	535-	5-
95-97	11,936	1,738	15	651	5	1,088-	9-

DUKE ENERGY KENTUCKY

ACCOUNT 3732 STREET LIGHTING - BOULEVARD

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	18,116	1,616	9		0	1,616-	9-
97-99	21,098	1,072	5		0	1,072-	5-
98-00	17,920	1,326	7		0	1,326-	7-
99-01	11,561	1,091	9		0	1,091-	9-
00-02	11,017		0		0		0
01-03	12,185	394	3		0	394-	3-
02-04	15,571	394	3		0	394-	3-
03-05	18,137	1,515	8		0	1,515-	8-
04-06	25,501	1,121	4		0	1,121-	4-
05-07	34,606	1,121	3		0	1,121-	3-
06-08	30,624	164	1		0	164-	1-
07-09	31,273	953	3		0	953-	3-
08-10	20,095	30,438	151		0	30,438-	151-
09-11	23,192	30,277	131		0	30,277-	131-
10-12	18,671	29,500	158		0	29,500-	158-
11-13	21,787	16	0		0	16-	0
12-14	13,382	82	1		0	82-	1-
13-15	4,863	68	1		0	68-	1-
14-16	2,113	77	4		0	77-	4-
15-17	5,640	9	0		0	9-	0
16-18	9,498	4,473	47		0	4,473-	47-
17-19	4,276	4,464	104		0	4,464-	104-
18-20		4,114				4,114-	
19-21		351-				351	
FIVE-YEAR AVERAGE							
17-21	2,566	2,468	96		0	2,468-	96-

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	50,637	8,814	17	3,300	7	5,514-	11-
1991	27,156	15,496	57	11,821	44	3,675-	14-
1992	23,087	13,123	57	5,159	22	7,964-	34-
1993	23,870	9,722	41	2,151	9	7,572-	32-
1994	28,547	10,620	37	2,667	9	7,954-	28-
1995	30,221	14,882	49	2,433	8	12,449-	41-
1996	26,883	7,686	29	37	0	7,649-	28-
1997	32,974	300-	1-	5-	0	296	1
1998	38,832	7,785	20	421	1	7,364-	19-
1999	29,017	10,110	35		0	10,110-	35-
2000	359	53-	15-		0	53	15
2001	177,694	8,915	5		0	8,915-	5-
2002	6,178		0		0		0
2003	10,245	122	1		0	122-	1-
2004	49,285	13-	0		0	13	0
2005	89,573	39,459	44	162	0	39,297-	44-
2006	52,577		0		0		0
2007	37,824	125	0		0	125-	0
2008	23,212	188	1		0	188-	1-
2009	38,423	2,354	6		0	2,354-	6-
2010	10,419	56,752	545		0	56,752-	545-
2011	44,849	245	1		0	245-	1-
2012	1,917	54	3		0	54-	3-
2013	3,978		0		0		0
2014	1,029		0		0		0
2015	1,776-	6	0		0	6-	0
2016	21,779	197	1		0	197-	1-
2017	24,850	459	2		0	459-	2-
2018	64,022	85,984	134	3,539	6	82,445-	129-
2019	871,135		0		0		0
2020	119,629	167	0		0	167-	0
2021	277,219	322	0		0	322-	0
TOTAL	2,235,645	293,220	13	31,683	1	261,537-	12-

THREE-YEAR MOVING AVERAGES

90-92	33,627	12,478	37	6,760	20	5,718-	17-
91-93	24,704	12,781	52	6,377	26	6,404-	26-
92-94	25,168	11,155	44	3,325	13	7,830-	31-
93-95	27,546	11,742	43	2,417	9	9,325-	34-
94-96	28,550	11,063	39	1,712	6	9,351-	33-
95-97	30,026	7,422	25	822	3	6,601-	22-

DUKE ENERGY KENTUCKY

ACCOUNT 3733 STREET LIGHTING - CUSTOMER POLES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	32,897	5,057	15	151	0	4,906-	15-
97-99	33,608	5,865	17	139	0	5,726-	17-
98-00	22,736	5,947	26	140	1	5,807-	26-
99-01	69,023	6,324	9		0	6,324-	9-
00-02	61,410	2,954	5		0	2,954-	5-
01-03	64,706	3,012	5		0	3,012-	5-
02-04	21,902	36	0		0	36-	0
03-05	49,701	13,189	27	54	0	13,135-	26-
04-06	63,812	13,149	21	54	0	13,095-	21-
05-07	59,992	13,195	22	54	0	13,141-	22-
06-08	37,871	104	0		0	104-	0
07-09	33,153	889	3		0	889-	3-
08-10	24,018	19,764	82		0	19,764-	82-
09-11	31,230	19,784	63		0	19,784-	63-
10-12	19,062	19,017	100		0	19,017-	100-
11-13	16,915	100	1		0	100-	1-
12-14	2,308	18	1		0	18-	1-
13-15	1,077	2	0		0	2-	0
14-16	7,010	68	1		0	68-	1-
15-17	14,951	221	1		0	221-	1-
16-18	36,884	28,880	78	1,180	3	27,700-	75-
17-19	320,002	28,814	9	1,180	0	27,635-	9-
18-20	351,596	28,717	8	1,180	0	27,537-	8-
19-21	422,661	163	0		0	163-	0
FIVE-YEAR AVERAGE							
17-21	271,371	17,386	6	708	0	16,679-	6-

DUKE ENERGY KENTUCKY

ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	605		0		0		0
1991	5,340	40	1	735	14	695	13
1992	8,212		0	3,910	48	3,910	48
1993							
1994							
1995	10,407	309	3	323	3	14	0
1996							
1997	44,002		0		0		0
1998	18,745		0		0		0
1999	23,244		0		0		0
2000							
2001	8,635		0	160	2	160	2
2002	10,236		0		0		0
2003	20,304		0		0		0
2004	1,820		0	20-	1-	20-	1-
2005							
2006							
2007							
2008							
2009							
2010							
2011	9,374		0	990	11	990	11
2012							
2013							
2014							
2015							
2016	32,610		0		0		0
2017		5,433-		1,907		7,340	
2018							
2019							
2020							
2021							
TOTAL	193,534	5,084-	3-	8,005	4	13,089	7

THREE-YEAR MOVING AVERAGES

90-92	4,719	13	0	1,548	33	1,535	33
91-93	4,517	13	0	1,548	34	1,535	34
92-94	2,737		0	1,303	48	1,303	48
93-95	3,469	103	3	108	3	5	0
94-96	3,469	103	3	108	3	5	0
95-97	18,136	103	1	108	1	5	0

DUKE ENERGY KENTUCKY

ACCOUNT 3921 TRANSPORTATION EQUIPMENT - TRAILERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
96-98	20,916		0		0		0
97-99	28,664		0		0		0
98-00	13,996		0		0		0
99-01	10,626		0	53	1	53	1
00-02	6,290		0	53	1	53	1
01-03	13,058		0	53	0	53	0
02-04	10,787		0	7-	0	7-	0
03-05	7,375		0	7-	0	7-	0
04-06	607		0	7-	1-	7-	1-
05-07							
06-08							
07-09							
08-10							
09-11	3,125		0	330	11	330	11
10-12	3,125		0	330	11	330	11
11-13	3,125		0	330	11	330	11
12-14							
13-15							
14-16	10,870		0		0		0
15-17	10,870	1,811-	17-	636	6	2,447	23
16-18	10,870	1,811-	17-	636	6	2,447	23
17-19		1,811-		636		2,447	
18-20							
19-21							
FIVE-YEAR AVERAGE							
17-21		1,087-		381		1,468	

DUKE ENERGY KENTUCKY

ACCOUNT 3960 POWER OPERATED EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	26,356	132	1	10,350	39	10,218	39
1992	13,984		0	3,405	24	3,405	24
1993	72,991		0	21,640	30	21,640	30
1994	8,093	101	1	852	11	751	9
1995							
1996							
1997							
1998	16,943		0	1,030	6	1,030	6
1999							
2000							
2001	33,087		0	4,880	15	4,880	15
2002							
2003							
2004	33,349		0		0		0
2005	35,306		0	17,765	50	17,765	50
2006							
2007							
2008							
2009							
2010							
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
TOTAL	240,110	233	0	59,922	25	59,689	25

THREE-YEAR MOVING AVERAGES

91-93	37,777	44	0	11,798	31	11,754	31
92-94	31,689	34	0	8,632	27	8,599	27
93-95	27,028	34	0	7,497	28	7,464	28
94-96	2,698	34	1	284	11	250	9
95-97							
96-98	5,648		0	343	6	343	6
97-99	5,648		0	343	6	343	6

DUKE ENERGY KENTUCKY

ACCOUNT 3960 POWER OPERATED EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YEAR MOVING AVERAGES							
98-00	5,648		0	343	6	343	6
99-01	11,029		0	1,627	15	1,627	15
00-02	11,029		0	1,627	15	1,627	15
01-03	11,029		0	1,627	15	1,627	15
02-04	11,116		0		0		0
03-05	22,885		0	5,922	26	5,922	26
04-06	22,885		0	5,922	26	5,922	26
05-07	11,769		0	5,922	50	5,922	50
06-08							
07-09							
08-10							
09-11							
10-12							
11-13							
12-14							
13-15							
14-16							
15-17							
16-18							
17-19							
18-20							
19-21							

FIVE-YEAR AVERAGE

17-21

AG-DR-01-117
ATTACHMENTS 5 THRU 10
FILED ELECTRONICALLY IN
EXCEL FORMAT

TRANSACTION CODE DESCRIPTIONS

<u>Code</u>	<u>Description</u>
0	<u>Regular Retirement.</u> All retirements from plant which occur in the course of normal operations for causes that are to be covered by depreciation accruals. Typically, these include all causes other than those listed below.
1	<u>Reimbursed Retirement.</u> Retirement for which the Company received payment approximating or exceeding the depreciated original cost of the property, and such payment was recorded as a credit to the depreciation reserve account. Reimbursed retirements are usually related to extraordinary circumstances such as fire or other accidents for which the loss is covered by insurance, and to property moved or abandoned due to the requirements or requests of outside parties, for which the Company is reimbursed.
2	<u>Sale.</u> Transfer of ownership of property for which the Company received payment approximating or exceeding the depreciated original cost, and the property would not have been retired at or near that time if the sale had not occurred. Sales are generally related to circumstances in which the property has not actually been retired, but continues in public service following the transaction. Sales in lieu of abandonment are classified as regular retirements.
3	<u>Transfer.</u> Transfer of property between accounts or property groups. Use for both transfers-in and transfers-out, and for intraaccount transfers.
4	<u>Beginning-of-Interval Transfer.</u> Transfer of property between accounts or property groups that is to be considered as occurring at the beginning rather than the end of the age interval. Includes major transfers of property into the account or property group, such as to initiate an account or to substantially increase the size of an existing account.
5	<u>Acquisition.</u> Purchase, trade, or similar transaction where property previously in public service was acquired.
6	<u>Adjustment.</u> Used for control purposes in Plant Accounting data, and for adjustments, special appropriations, or transfers to or from the Depreciation Reserve account in Cost of Removal and Salvage data.
7	<u>Outlier Retirement.</u> A retirement that occurs under unusual circumstances such that the analyst deems it appropriate that it be excluded from the retirements used in the service life or salvage study.
8	<u>Ending Balance.</u> The balance of plant in service as of December 31 of the most recent year included in the Experience Band, or as of a specific calculation date.
9	<u>Beginning Balance.</u> The balance of plant in service as of December 31 of the year preceding the first year included in the Experience Band.
9	<u>Gross Addition.</u> Placements of plant in service as replacements of plant retired or as additions to plant in service.

Note: Corrections should be assigned the same code as the transaction being corrected.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-118

REQUEST:

Refer to the Spanos Testimony, Gannett Fleming Depreciation Study, pages 232 – 234 of 382, which shows an escalation of decommissioning estimates to future values. Provide the rate of escalation assumed in these calculations and explain why that rate is appropriate.

RESPONSE:

The escalation rate of 2.5% was utilized in the calculation up to the retirement date of each location. The escalation rate used in the terminal net salvage calculation is supported by the CPI data series, which are available at www.bls.gov and long term CPI forecasts, which are available from the Federal Reserve Bank of Philadelphia's Livingston Survey (at <https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey>).

PERSON RESPONSIBLE: John J. Spanos

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-119

REQUEST:

Refer to the Spanos Testimony generally. For each generating unit, provide the date of installation, the probable retirement date reflected in the present depreciation rates and the probable retirement date reflected in the Gannett Fleming depreciation study. In addition, provide a copy of all studies and all other source documents relied on for the proposed probable retirement dates reflected in the Gannett Fleming depreciation study.

RESPONSE:

The initial major installation date and probable retirement year for each generating unit used in the Depreciation Study are presented on page III-6 of Exhibit JS-1 attached to the Direct Testimony of John J. Spanos. The probable retirement years used in development of the current rates are provided in the 2016 Depreciation Study report submitted in Case No. 2017-00321. There are no studies that have been performed for each of the units, however, there are Company plans that support the retirement dates. Additionally, there are many other life spans of similar units in the industry that were compared to establish an expected industry range as well as recent retirements of units that support the life spans for these facilities. AG-DR-01-119 Attachments 1 through 3 set forth the industry ranges for Steam, Other Production and Solar, however, it is important to understand the type of assets in the attachments to understand the circumstance of their life span.

PERSON RESPONSIBLE: John J. Spanos

EXPERIENCED AND ESTIMATED LIFE SPANS OF SIMPLE CYCLE GAS POWER PLANTS - NEWER TECHNOLOGIES

COMPANY	LOCATION/UNIT	INSTALLATION / MAJOR INVESTMENT YEAR	RETIREMENT DATE	LIFE SPAN
COMPANY 01	PLANT/UNIT 1	1972	2032	60
COMPANY 02	PLANT/UNIT 1	1990, 1994	2034	44, 40
COMPANY 02	PLANT/UNIT 2	1975	2030	55
COMPANY 02	PLANT/UNIT 3	2003	2031	28
COMPANY 02	PLANT/UNIT 4	2003	2043	40
COMPANY 02	PLANT/UNIT 5	1970	2030	60
COMPANY 02	PLANT/UNIT 7	1974	2024	50
COMPANY 02	PLANT/UNIT 8	1970	2025	55
COMPANY 02	PLANT/UNIT 9	1970, 2009	2029	59, 20
COMPANY 03	PLANT/UNIT 1	2014	2060	46
COMPANY 04	PLANT/UNIT 1	2002	2042	40
COMPANY 04	PLANT/UNIT 2	1999	2034	35
COMPANY 04	PLANT/UNIT 3	2002	2028	26
COMPANY 04	PLANT/UNIT 4	1978	2018	40
COMPANY 05	PLANT/UNIT 1	1957	2014	57
COMPANY 05	PLANT/UNIT 2	1958	2020	62
COMPANY 05	PLANT/UNIT 3	1973, 2000	2027	54, 27
COMPANY 05	PLANT/UNIT 4	2013	2058	45
COMPANY 05	PLANT/UNIT 5	1959, 2014	2022	63, 8
COMPANY 05	PLANT/UNIT 6	1962	2023	61
COMPANY 05	PLANT/UNIT 7	1966	2024	58
COMPANY 05	PLANT/UNIT 8	1980, 2003	2030	50, 27
COMPANY 06	PLANT/UNIT 1	2008	2058	50
COMPANY 07	PLANT/UNIT 11	1975, 1997	2022	47, 25
COMPANY 07	PLANT/UNIT 2	2008	2056	48
COMPANY 07	PLANT/UNIT 5	2008	2056	48
COMPANY 07	PLANT/UNIT 8	1981	2026	45
COMPANY 07	PLANT/UNIT 9	1958, 2014	2034	76, 20
COMPANY 08	PLANT/UNIT 1	1994, 2002	2034	40, 32
COMPANY 08	PLANT/UNIT 2	2000	2040	40
COMPANY 08	PLANT/UNIT 3	1967, 2005	2025	58
COMPANY 09	PLANT/UNIT 1	2004	2044	40
COMPANY 09	PLANT/UNIT 2	2004	2044	40
COMPANY 09	PLANT/UNIT 3	1996	2036	40
COMPANY 09	PLANT/UNIT 4	2000	2040	40
COMPANY 10	PLANT/UNIT 1	2010	2040	30
COMPANY 11	PLANT/UNIT 1	1993	2033	40
COMPANY 11	PLANT/UNIT 2	2001	2041	40
COMPANY 11	PLANT/UNIT 3	2000	2040	40
COMPANY 11	PLANT/UNIT 4	2005	2040	35
COMPANY 11	PLANT/UNIT 5	2005	2040	35
COMPANY 11	PLANT/UNIT 6	2005	2040	35
COMPANY 11	PLANT/UNIT 7	2005	2040	35
COMPANY 12	PLANT/UNIT 1	1977	2030	53
COMPANY 12	PLANT/UNIT 2	2003	2048	45
COMPANY 12	PLANT/UNIT 3	2001	2046	45
COMPANY 13	PLANT/UNIT 1	1970, 2005	2030	60, 25
COMPANY 13	PLANT/UNIT 2	1969, 2013	2023	54, 10
COMPANY 13	PLANT/UNIT 3	1968, 2004	2023	55, 19
COMPANY 14	PLANT/UNIT 2	2000	2035	35
COMPANY 15	PLANT/UNIT 1	1975, 2000	2035	60, 35
COMPANY 15	PLANT/UNIT 10	1989	2035	46
COMPANY 15	PLANT/UNIT 11	1981, 1994	2035	54, 41
COMPANY 15	PLANT/UNIT 12	2012	2042	30
COMPANY 15	PLANT/UNIT 2	1975, 2000	2035	60, 35
COMPANY 15	PLANT/UNIT 3	1977, 2001	2035	58, 34
COMPANY 15	PLANT/UNIT 4	1979, 2000	2035	56, 35

COMPANY 15	PLANT/UNIT 5	1974, 1998	2035	61, 37
COMPANY 15	PLANT/UNIT 6	2005	2050	45
COMPANY 15	PLANT/UNIT 7	2002	2047	45
COMPANY 15	PLANT/UNIT 9	1989	2030	41
COMPANY 16	PLANT/UNIT 1	2000	2040	40
COMPANY 16	PLANT/UNIT 2	1974, 2004	2029	55, 25
COMPANY 16	PLANT/UNIT 3	1964, 2004	2029	65, 25
COMPANY 16	PLANT/UNIT 4	1967, 2004	2032	65, 28
COMPANY 17	PLANT/UNIT 1	2014	2054	40
COMPANY 18	PLANT/UNIT 1	1995	2035	40
COMPANY 18	PLANT/UNIT 2	2002	2043	41
COMPANY 18	PLANT/UNIT 3	2000	2040	40
COMPANY 18	PLANT/UNIT 4	2007	2047	40
COMPANY 19	PLANT/UNIT 1	1994	2024	30
COMPANY 19	PLANT/UNIT 2	1994	2024	30
COMPANY 19	PLANT/UNIT 3	1974, 2007	2028	54, 21
COMPANY 19	PLANT/UNIT 4	1968, 2015	2025	57, 10
COMPANY 19	PLANT/UNIT 5	1971, 2015	2028	57, 13
COMPANY 19	PLANT/UNIT 6	1960	2019	59
COMPANY 20	PLANT/UNIT 1	1999	2044	45
COMPANY 20	PLANT/UNIT 2	2003	2044	41
COMPANY 20	PLANT/UNIT 3	1971	2023	52
COMPANY 20	PLANT/UNIT 4	1973	2023	50
COMPANY 20	PLANT/UNIT 5	1993	2043	50
COMPANY 20	PLANT/UNIT 6	2001	2043	42
COMPANY 20	PLANT/UNIT 7	1969	2023	54
COMPANY 20	PLANT/UNIT 8	1973	2023	50
COMPANY 21	PLANT/UNIT 1	1991	2031	40
COMPANY 21	PLANT/UNIT 2	1990	2017	27
COMPANY 21	PLANT/UNIT 3	1990	2017	27
COMPANY 21	PLANT/UNIT 5	1962, 1977	2017	55, 40
COMPANY 21	PLANT/UNIT 6	1953	2016	63
COMPANY 21	PLANT/UNIT 7	1996	2017	21
COMPANY 21	PLANT/UNIT 8	1978, 2017	2037	59, 20
COMPANY 21	PLANT/UNIT 9	1978, 2017	2037	59, 20
COMPANY 22	PLANT/UNIT 1	1991	2041	50
COMPANY 22	PLANT/UNIT 2	2010	2060	50
COMPANY 22	PLANT/UNIT 3	2010	2060	50
COMPANY 22	PLANT/UNIT 4	1997	2025	28
COMPANY 22	PLANT/UNIT 5	1969	2029	60
COMPANY 22	PLANT/UNIT 6	1969	2029	60
COMPANY 22	PLANT/UNIT 7	1999	2049	50
COMPANY 22	PLANT/UNIT 8	1969	2029	60
COMPANY 22	PLANT/UNIT 9	1968	2019	51
COMPANY 23	PLANT/UNIT 1	1990	2030	40
COMPANY 23	PLANT/UNIT 10	1968	2018	50
COMPANY 23	PLANT/UNIT 11	1977	2019	42
COMPANY 23	PLANT/UNIT 12	1985	2020	35
COMPANY 23	PLANT/UNIT 13	1980	2020	40
COMPANY 23	PLANT/UNIT 14	1977	2021	44
COMPANY 23	PLANT/UNIT 2	1989	2029	40
COMPANY 23	PLANT/UNIT 3	2000, 2014	2044	44, 30
COMPANY 23	PLANT/UNIT 4	2001, 2010	2043	42, 33
COMPANY 23	PLANT/UNIT 5	1992	2032	40
COMPANY 23	PLANT/UNIT 8	1976, 2015	2046	70, 31
COMPANY 23	PLANT/UNIT 9	1974, 2015	2044	70, 29
COMPANY 24	PLANT/UNIT 1	1968, 2008	2028	60, 20
COMPANY 24	PLANT/UNIT 2	1979	2020	41
COMPANY 24	PLANT/UNIT 3	1979	2020	41
COMPANY 25	PLANT/UNIT 1	1999	2039	40
COMPANY 25	PLANT/UNIT 10	2001	2041	40

COMPANY 25	PLANT/UNIT 2	1971, 1999	2024	53, 25
COMPANY 25	PLANT/UNIT 3	1974, 1996	2020	46, 24
COMPANY 25	PLANT/UNIT 4	1997, 2013	2037	40, 24
COMPANY 25	PLANT/UNIT 5	2000	2040	40
COMPANY 25	PLANT/UNIT 6	2009	2049	40
COMPANY 25	PLANT/UNIT 7	1968, 2012	2017	49, 5
COMPANY 25	PLANT/UNIT 8	2017	2057	40
COMPANY 25	PLANT/UNIT 9	1970	2024	54
COMPANY 26	PLANT/UNIT 2	1969	2019	50
COMPANY 26	PLANT/UNIT 3	1974, 2007	2025	51, 18
COMPANY 26	PLANT/UNIT 4	1976, 1991	2026	50, 35
COMPANY 27	PLANT/UNIT 1	1970	2018	48
COMPANY 27	PLANT/UNIT 2	1970	2021	51
COMPANY 27	PLANT/UNIT 3	1970	2025	55
COMPANY 27	PLANT/UNIT 4	1970	2025	55
COMPANY 28	PLANT/UNIT 1	1995	2025	30
COMPANY 28	PLANT/UNIT 2	2006	2036	30
COMPANY 28	PLANT/UNIT 3	2008	2038	30
COMPANY 29	PLANT/UNIT 1	1993	2034	41
COMPANY 29	PLANT/UNIT 2	1993	2034	41
COMPANY 29	PLANT/UNIT 3	2009	2044	35
COMPANY 29	PLANT/UNIT 4	1967	2019	52
COMPANY 29	PLANT/UNIT 5	1978	2019	41
COMPANY 29	PLANT/UNIT 6	1973	2019	46
COMPANY 29	PLANT/UNIT 7	1971	2019	48
COMPANY 30	PLANT/UNIT 1	2001	2041	40
COMPANY 30	PLANT/UNIT 10	2002, 2011	2042	40, 31
COMPANY 30	PLANT/UNIT 11	2004	2044	40
COMPANY 30	PLANT/UNIT 12	2004	2044	40
COMPANY 30	PLANT/UNIT 13	2004	2044	40
COMPANY 30	PLANT/UNIT 14	2004	2044	40
COMPANY 30	PLANT/UNIT 15	1970, 2000	2025	55, 25
COMPANY 30	PLANT/UNIT 2	2001	2041	40
COMPANY 30	PLANT/UNIT 3	1999, 2008	2039	40, 31
COMPANY 30	PLANT/UNIT 4	1999	2039	40
COMPANY 30	PLANT/UNIT 5	1995, 2007	2035	40, 28
COMPANY 30	PLANT/UNIT 6	1994	2034	40
COMPANY 30	PLANT/UNIT 7	1995	2035	40
COMPANY 30	PLANT/UNIT 8	1996, 2000	2036	40, 36
COMPANY 30	PLANT/UNIT 9	2002	2042	40
COMPANY 31	PLANT/UNIT 1	2003	2048	45
COMPANY 31	PLANT/UNIT 2	2000	2045	45
COMPANY 31	PLANT/UNIT 3	2000	2045	45
COMPANY 31	PLANT/UNIT 4	2003	2048	45
COMPANY 32	PLANT/UNIT 1	1991	2031	40
COMPANY 32	PLANT/UNIT 2	2016	2056	40
COMPANY 32	PLANT/UNIT 3	2016	2056	40
COMPANY 32	PLANT/UNIT 4	1991	2031	40
COMPANY 32	PLANT/UNIT 5	1971, 2011	2027	56, 16
COMPANY 32	PLANT/UNIT 6	2021	2061	40
COMPANY 33	PLANT/UNIT 1	1992	2032	40
COMPANY 34	PLANT/UNIT 1	2008	2048	40
COMPANY 34	PLANT/UNIT 2	2001	2041	40
COMPANY 34	PLANT/UNIT 3	2005	2046	41
COMPANY 35	PLANT/UNIT 4	1963	2021	58
COMPANY 35	PLANT/UNIT 5	1968	2021	53
COMPANY 35	PLANT/UNIT 6	2006	2056	50
COMPANY 35	PLANT/UNIT 7	1971	2026	55
COMPANY 35	PLANT/UNIT 8	1973	2026	53
COMPANY 36	PLANT/UNIT 1	1969	2033	64
COMPANY 36	PLANT/UNIT 11	1970	2023	53

COMPANY 36	PLANT/UNIT 12	2019	2064	45
COMPANY 36	PLANT/UNIT 13	2008	2053	45
COMPANY 36	PLANT/UNIT 14	2001	2041	40
COMPANY 36	PLANT/UNIT 15	1975	2022	47
COMPANY 36	PLANT/UNIT 16	1969	2020	51
COMPANY 36	PLANT/UNIT 18	2015	2055	40
COMPANY 36	PLANT/UNIT 19	1970	2025	55
COMPANY 36	PLANT/UNIT 2	1974	2033	59
COMPANY 36	PLANT/UNIT 21	1969	2020	51
COMPANY 37	PLANT/UNIT 1	1972	2034	62
COMPANY 37	PLANT/UNIT 10	1980	2034	54
COMPANY 37	PLANT/UNIT 11	1994	2027	33
COMPANY 37	PLANT/UNIT 2	1972	2027	55
COMPANY 37	PLANT/UNIT 3	1973	2024	51
COMPANY 37	PLANT/UNIT 4	1976	2027	51
COMPANY 37	PLANT/UNIT 5	1992	2037	45
COMPANY 37	PLANT/UNIT 6	1974	2034	60
COMPANY 37	PLANT/UNIT 7	1993	2038	45
COMPANY 37	PLANT/UNIT 8	1997	2042	45
COMPANY 37	PLANT/UNIT 9	2000	2045	45
COMPANY 38	PLANT/UNIT 1	1971	2023	52
COMPANY 38	PLANT/UNIT 10	2000	2050	50
COMPANY 38	PLANT/UNIT 11	2002	2023	21
COMPANY 38	PLANT/UNIT 12	2001	2050	49
COMPANY 38	PLANT/UNIT 13	2002	2022	20
COMPANY 38	PLANT/UNIT 14	2002	2050	48
COMPANY 38	PLANT/UNIT 2	1971	2023	52
COMPANY 38	PLANT/UNIT 3	1971	2028	57
COMPANY 38	PLANT/UNIT 4	1999	2050	51
COMPANY 38	PLANT/UNIT 7	2000	2050	50
COMPANY 38	PLANT/UNIT 8	2000	2050	50
COMPANY 38	PLANT/UNIT 9	1975	2024	49

ALLIANT ENERGY - IPL
AVISTA
BLACK HILLS POWER
CHEYENNE LIGHT, FUEL AND POWER COMPANY
CHUGACH ELECTRIC ASSOC.
CON EDISON NEW YORK
DOMINION ENERGY SOUTH CAROLINA, INC.
DOMINION RESOURCES, INC.
DUKE ENERGY CAROLINAS
DUKE ENERGY FLORIDA
DUKE ENERGY INDIANA
DUKE ENERGY KENTUCKY
DUKE ENERGY PROGRESS
EL PASO ELECTRIC COMPANY
EVERGY METRO, INC.
EVERGY MISSOURI WEST, INC.
EXELON GENERATION COMPANY
FLORIDA POWER AND LIGHT COMPANY
GREEN MOUNTAIN POWER
IDAHO POWER COMPANY
INDIANAPOLIS POWER AND LIGHT
KENTUCKY UTILITIES COMPANY
LIBERTY UTILITIES
LOUISVILLE GAS AND ELECTRIC
MADISON GAS AND ELECTRIC
MARITIME ELECTRIC
MIDAMERICAN ENERGY CO.
NEVADA POWER COMPANY
NIPSCO ELECTRIC
OKLAHOMA GAS & ELECTRIC CO.
OMAHA PUBLIC POWER DISTRICT
PACIFIC GAS & ELECTRIC COMPANY
PORTLAND GENERAL ELECTRIC
PUBLIC SERVICE OF OKLAHOMA
SIERRA PACIFIC POWER COMPANY
TENNESSEE VALLEY AUTHORITY
WISCONSIN POWER AND LIGHT CO.
WISCONSIN PUBLIC SERVICE COMPANY

EXPERIENCED AND ESTIMATED LIFE SPANS OF SOLAR GENERATING PLANTS

COMPANY	LOCATION/UNIT	INSTALLATION / MAJOR INVESTMENT YEAR	RETIREMENT DATE	LIFE SPAN
COMPANY 01	PLANT/UNIT 1	2007	2032	25
COMPANY 02	PLANT/UNIT 1	2016	2041	25
COMPANY 03	PLANT/UNIT 1	2004	2029	25
COMPANY 04	PLANT/UNIT 1	2009	2029	20
COMPANY 05	PLANT/UNIT 1	2011	2031	20
COMPANY 06	PLANT/UNIT 1	2009	2029	20
COMPANY 07	PLANT/UNIT 1	2009	2034	25
COMPANY 08	PLANT/UNIT 1	2011	2031	20
COMPANY 08	PLANT/UNIT 2	2016	2036	20
COMPANY 09	PLANT/UNIT 1	2016	2041	25
COMPANY 11	PLANT/UNIT 1	2016	2041	25
COMPANY 11	PLANT/UNIT 2	2018	2043	25
COMPANY 11	PLANT/UNIT 3	2017	2042	25
COMPANY 12	PLANT/UNIT 1	2012	2037	25
COMPANY 12	PLANT/UNIT 10	2009	2034	25
COMPANY 12	PLANT/UNIT 2	2012	2037	25
COMPANY 12	PLANT/UNIT 3	2012	2037	25
COMPANY 12	PLANT/UNIT 4	2013	2038	25
COMPANY 12	PLANT/UNIT 5	2013	2038	25
COMPANY 12	PLANT/UNIT 6	2013	2038	25
COMPANY 12	PLANT/UNIT 7	2011	2036	25
COMPANY 12	PLANT/UNIT 8	2011	2036	25
COMPANY 12	PLANT/UNIT 9	2011	2036	25
COMPANY 13	PLANT/UNIT 1	2013	2038	25
COMPANY 14	PLANT/UNIT 1	2010	2035	25
COMPANY 14	PLANT/UNIT 10	2016	2041	25
COMPANY 14	PLANT/UNIT 11	2013	2038	25
COMPANY 14	PLANT/UNIT 12	2014	2039	25
COMPANY 14	PLANT/UNIT 13	2010	2035	25
COMPANY 14	PLANT/UNIT 2	2009	2035	26
COMPANY 14	PLANT/UNIT 3	2009	2034	25
COMPANY 14	PLANT/UNIT 4	2009	2034	25
COMPANY 14	PLANT/UNIT 5	2014	2039	25
COMPANY 14	PLANT/UNIT 6	2014	2039	25
COMPANY 14	PLANT/UNIT 7	2016	2041	25
COMPANY 14	PLANT/UNIT 8	2016	2041	25
COMPANY 14	PLANT/UNIT 9	2016	2041	25
COMPANY 15	PLANT/UNIT 1	2004	2024	20
COMPANY 16	PLANT/UNIT 1	2015	2040	25
COMPANY 16	PLANT/UNIT 2	2015	2040	25
COMPANY 16	PLANT/UNIT 3	2016	2041	25
COMPANY 16	PLANT/UNIT 4	2015	2040	25
COMPANY 17	PLANT/UNIT 1	2017	2042	25
COMPANY 18	PLANT/UNIT 1	2015	2045	30
COMPANY 19	PLANT/UNIT 1	2015	2040	25
COMPANY 20	PLANT/UNIT 1	2009	2039	30
COMPANY 20	PLANT/UNIT 10	2018	2048	30
COMPANY 20	PLANT/UNIT 11	2019	2049	30
COMPANY 20	PLANT/UNIT 12	2018	2048	30
COMPANY 20	PLANT/UNIT 13	2018	2048	30
COMPANY 20	PLANT/UNIT 14	2018	2048	30
COMPANY 20	PLANT/UNIT 15	2018	2048	30
COMPANY 20	PLANT/UNIT 16	2020	2050	30
COMPANY 20	PLANT/UNIT 17	2020	2050	30
COMPANY 20	PLANT/UNIT 18	2020	2050	30
COMPANY 20	PLANT/UNIT 19	2018	2048	30
COMPANY 20	PLANT/UNIT 2	2010	2040	30

COMPANY 20	PLANT/UNIT 20	2020	2049	29
COMPANY 20	PLANT/UNIT 21	2020	2050	30
COMPANY 20	PLANT/UNIT 22	2020	2050	30
COMPANY 20	PLANT/UNIT 23	2020	2050	30
COMPANY 20	PLANT/UNIT 24	2021	2051	30
COMPANY 20	PLANT/UNIT 25	2021	2051	30
COMPANY 20	PLANT/UNIT 26	2020	2050	30
COMPANY 20	PLANT/UNIT 27	2020	2050	30
COMPANY 20	PLANT/UNIT 28	2020	2050	30
COMPANY 20	PLANT/UNIT 29	2020	2050	30
COMPANY 20	PLANT/UNIT 3	2010	2045	35
COMPANY 20	PLANT/UNIT 30	2019	2049	30
COMPANY 20	PLANT/UNIT 31	2019	2049	30
COMPANY 20	PLANT/UNIT 32	2020	2050	30
COMPANY 20	PLANT/UNIT 33	2020	2050	30
COMPANY 20	PLANT/UNIT 34	2019	2049	30
COMPANY 20	PLANT/UNIT 35	2021	2051	30
COMPANY 20	PLANT/UNIT 36	2021	2051	30
COMPANY 20	PLANT/UNIT 37	2021	2051	30
COMPANY 20	PLANT/UNIT 38	2020	2050	30
COMPANY 20	PLANT/UNIT 39	2020	2050	30
COMPANY 20	PLANT/UNIT 4	2016	2046	30
COMPANY 20	PLANT/UNIT 40	2021	2051	30
COMPANY 20	PLANT/UNIT 41	2020	2050	30
COMPANY 20	PLANT/UNIT 42	2021	2051	30
COMPANY 20	PLANT/UNIT 43	2021	2051	30
COMPANY 20	PLANT/UNIT 44	2021	2051	30
COMPANY 20	PLANT/UNIT 45	2021	2051	30
COMPANY 20	PLANT/UNIT 46	2018	2048	30
COMPANY 20	PLANT/UNIT 5	2016	2046	30
COMPANY 20	PLANT/UNIT 6	2016	2046	30
COMPANY 20	PLANT/UNIT 7	2020	2050	30
COMPANY 20	PLANT/UNIT 8	2018	2048	30
COMPANY 20	PLANT/UNIT 9	2018	2048	30
COMPANY 21	PLANT/UNIT 1	2016	2051	25, 35
COMPANY 21	PLANT/UNIT 2	2016	2051	25, 35
COMPANY 21	PLANT/UNIT 3	2016	2051	25, 35
COMPANY 22	PLANT/UNIT 1	2017	2032	15
COMPANY 22	PLANT/UNIT 2	2017	2032	15
COMPANY 23	PLANT/UNIT 1	2015	2040	25
COMPANY 24	PLANT/UNIT 1	2016	2041	25
COMPANY 24	PLANT/UNIT 2	2019	2044	25
COMPANY 25	PLANT/UNIT 1	2016	2046	30
COMPANY 25	PLANT/UNIT 10	2020	2050	30
COMPANY 25	PLANT/UNIT 11	2021	2051	30
COMPANY 25	PLANT/UNIT 2	2016	2046	30
COMPANY 25	PLANT/UNIT 3	2018	2048	30
COMPANY 25	PLANT/UNIT 4	2017	2047	30
COMPANY 25	PLANT/UNIT 5	2020	2050	30
COMPANY 25	PLANT/UNIT 6	2019	2049	30
COMPANY 25	PLANT/UNIT 7	2019	2049	30
COMPANY 25	PLANT/UNIT 8	2020	2050	30
COMPANY 25	PLANT/UNIT 9	2019	2049	30

ALLIANT - IPL
ALLIANT - WPL
AVISTA
CENTRAL VERMONT PUBLIC SERVICE CORPORATION
DOMINION ENERGY SOUTH CAROLINA, INC.
DOMINION VIRGINIA POWER
DUKE ENERGY CAROLINAS
DUKE ENERGY FLORIDA
DUKE ENERGY KENTUCKY
DUKE ENERGY PROGRESS
EL PASO ELECTRIC COMPANY
EVERGY METRO, INC.
EVERGY MISSOURI WEST, INC.
FLORIDA POWER & LIGHT COMPANY
GREEN MOUNTAIN POWER
KENTUCKY UTILITIES COMPANY
MADISON GAS AND ELECTRIC
NEVADA POWER COMPANY
OKLAHOMA GAS AND ELECTRIC
OMAHA PUBLIC POWER DISTRICT
PACIFIC GAS AND ELECTRIC
SAN DIEGO GAS AND ELECTRIC
SIERRA PACIFIC POWER COMPANY
SOUTHERN CALIFORNIA EDISON

EXPERIENCED AND ESTIMATED LIFE SPANS OF COAL FIRED GENERATING PLANTS

COMPANY	LOCATION/UNIT	INSTALLATION / MAJOR INVESTMENT YEAR	RETIREMENT DATE	LIFE SPAN
COMPANY 01	PLANT/UNIT 1	1972, 2015	2024	52, 9
COMPANY 01	PLANT/UNIT 2	1974, 2015	2028	54, 13
COMPANY 01	PLANT/UNIT 3	1978, 2004	2039	61, 35
COMPANY 01	PLANT/UNIT 4	1982, 2004	2039	57, 35
COMPANY 01	PLANT/UNIT 5	1990, 2015	2045	55, 30
COMPANY 01	PLANT/UNIT 6	1990, 2011	2066	76, 55
COMPANY 02	PLANT/UNIT 1	1980	2020	40
COMPANY 02	PLANT/UNIT 2	1984	2030	46
COMPANY 03	PLANT/UNIT 1	1979, 2002	2044	65, 42
COMPANY 03	PLANT/UNIT 2	2010	2074	64
COMPANY 03	PLANT/UNIT 3	1954	2016	62
COMPANY 03	PLANT/UNIT 4	1957, 1993	2016	59, 23
COMPANY 03	PLANT/UNIT 5	1959, 1993	2016	57, 23
COMPANY 03	PLANT/UNIT 6	1963, 1991	2033	70, 42
COMPANY 03	PLANT/UNIT 7	1969, 1991	2034	65, 43
COMPANY 04	PLANT/UNIT 1	1954, 2012	2035	81, 23
COMPANY 04	PLANT/UNIT 2	1958, 2002	2038	80, 36
COMPANY 04	PLANT/UNIT 3	1970, 2010	2045	75, 35
COMPANY 04	PLANT/UNIT 4	1996	2071	75
COMPANY 04	PLANT/UNIT 5	2004	2044	40
COMPANY 04	PLANT/UNIT 6	2018	2054	36
COMPANY 05	PLANT/UNIT 1	1979, 2013	2040	61, 27
COMPANY 05	PLANT/UNIT 1	1977, 2014	2035	58, 21
COMPANY 05	PLANT/UNIT 2	1977, 2010	2037	60, 27
COMPANY 05	PLANT/UNIT 3	1983	2040	57
COMPANY 05	PLANT/UNIT 4	1968, 2014	2026	58, 12
COMPANY 05	PLANT/UNIT 5	1981, 2014	2034	53, 20
COMPANY 05	PLANT/UNIT 6	1968, 2009	2035	67, 26
COMPANY 05	PLANT/UNIT 7	1967, 2008	2024	57, 16
COMPANY 06	PLANT/UNIT 1	1957	2025	68
COMPANY 06	PLANT/UNIT 2	1975, 2014	2038	63, 24
COMPANY 07	PLANT/UNIT 1	1983, 2007	2040	57, 33
COMPANY 07	PLANT/UNIT 2	1981, 2014	2040	59, 26
COMPANY 07	PLANT/UNIT 3	1961, 1993	2021	60, 28
COMPANY 07	PLANT/UNIT 4	1975, 2014	2035	60, 21
COMPANY 07	PLANT/UNIT 5	1979, 2013	2040	61, 27
COMPANY 07	PLANT/UNIT 6	1978, 2009	2040	62, 31
COMPANY 07	PLANT/UNIT 7	2007	2049	42
COMPANY 08	PLANT/UNIT 1	1981, 2008	2025	44, 17
COMPANY 08	PLANT/UNIT 13	1965, 1998	2023	58, 25
COMPANY 08	PLANT/UNIT 14	1976, 1998	2023	47, 25
COMPANY 08	PLANT/UNIT 15	1978, 2004	2029	51, 25
COMPANY 08	PLANT/UNIT 16	1980, 2011	2029	49, 18
COMPANY 08	PLANT/UNIT 17	1983, 2011	2029	46, 18
COMPANY 08	PLANT/UNIT 18	1977, 2006	2029	52, 23
COMPANY 08	PLANT/UNIT 19	1974, 2010	2029	55, 19
COMPANY 08	PLANT/UNIT 2	1984	2027	43
COMPANY 08	PLANT/UNIT 20	1974, 2008	2025	51, 17
COMPANY 08	PLANT/UNIT 21	1975, 2009	2025	50, 16
COMPANY 08	PLANT/UNIT 22	1976, 2010	2025	49, 15
COMPANY 08	PLANT/UNIT 23	1979, 2011	2025	46, 14
COMPANY 08	PLANT/UNIT 24	1963, 2011	2028	65, 17
COMPANY 08	PLANT/UNIT 25	1968, 2011	2028	60, 17
COMPANY 08	PLANT/UNIT 26	1971, 1981	2028	57, 47
COMPANY 08	PLANT/UNIT 27	1978, 2011	2026	48, 15
COMPANY 08	PLANT/UNIT 28	1984	2037	53
COMPANY 08	PLANT/UNIT 29	2007	2037	30
COMPANY 08	PLANT/UNIT 3	1986	2027	41
COMPANY 08	PLANT/UNIT 4	1980, 2003	2025	45, 22

COMPANY 08	PLANT/UNIT 5	1979, 2004	2026	47, 22
COMPANY 08	PLANT/UNIT 6	1959, 2010	2023	64, 13
COMPANY 08	PLANT/UNIT 7	1960, 2010	2023	63, 13
COMPANY 08	PLANT/UNIT 8	1964, 2010	2023	59, 13
COMPANY 08	PLANT/UNIT 9	1972, 2010	2023	51, 13
COMPANY 09	PLANT/UNIT 1	1953, 2004	2022	69, 18
COMPANY 09	PLANT/UNIT 2	1967, 2010	2028	61, 18
COMPANY 09	PLANT/UNIT 3	1970, 2012	2042	72, 30
COMPANY 09	PLANT/UNIT 4	1976	2039	63
COMPANY 10	PLANT/UNIT 1	2008	2038	30
COMPANY 11	PLANT/UNIT 10	1964, 2011	2034	70, 23
COMPANY 11	PLANT/UNIT 11	1969, 2008	2039	70, 31
COMPANY 11	PLANT/UNIT 12	1965, 2003	2035	70, 32
COMPANY 11	PLANT/UNIT 13	1966, 2003	2036	70, 33
COMPANY 11	PLANT/UNIT 14	1973, 2004	2043	70, 39
COMPANY 11	PLANT/UNIT 15	1957, 2006	2022	65, 16
COMPANY 11	PLANT/UNIT 16	1959, 1987	2024	65, 37
COMPANY 11	PLANT/UNIT 17	1995	2050	55
COMPANY 11	PLANT/UNIT 18	1996	2051	55
COMPANY 11	PLANT/UNIT 19	2004	2047	43
COMPANY 11	PLANT/UNIT 20	2012	2067	55
COMPANY 11	PLANT/UNIT 3	1992	2012	20
COMPANY 11	PLANT/UNIT 4	1953, 1987	2015	62, 28
COMPANY 11	PLANT/UNIT 5	1954, 1987	2015	61, 28
COMPANY 11	PLANT/UNIT 6	1959, 2003	2015	56, 12
COMPANY 11	PLANT/UNIT 7	1962, 2003	2027	65, 24
COMPANY 11	PLANT/UNIT 8	1952, 1983	2022	70, 39
COMPANY 11	PLANT/UNIT 9	1960, 2011	2030	70, 19
COMPANY 12	PLANT/UNIT 1	1967, 1996	2032	65, 36
COMPANY 12	PLANT/UNIT 2	1968, 2001	2033	65, 32
COMPANY 12	PLANT/UNIT 3	1972, 2002	2037	65, 35
COMPANY 12	PLANT/UNIT 4	1973, 2002	2038	65, 36
COMPANY 12	PLANT/UNIT 5	1974, 2003	2039	65, 36
COMPANY 13	PLANT/UNIT 1	1943, 1953	2038	95, 85
COMPANY 14	PLANT/UNIT 1	1976, 2013	2023	47, 10
COMPANY 14	PLANT/UNIT 2	1979, 2013	2023	44, 10
COMPANY 14	PLANT/UNIT 3	1983	2023	40
COMPANY 14	PLANT/UNIT 4	1986	2023	37
COMPANY 14	PLANT/UNIT 5	1962	2022	60
COMPANY 14	PLANT/UNIT 6	1968	2022	54
COMPANY 14	PLANT/UNIT 7	1974	2028	54
COMPANY 14	PLANT/UNIT 8	2008	2068	60
COMPANY 15	PLANT/UNIT 1	1962, 1979	2014	52, 35
COMPANY 15	PLANT/UNIT 2	1970, 1992	2014	44, 22
COMPANY 15	PLANT/UNIT 3	1998	2045	47
COMPANY 15	PLANT/UNIT 4	1953, 1979	2014	61, 35
COMPANY 15	PLANT/UNIT 5	2010	2060	50
COMPANY 15	PLANT/UNIT 6	1978, 2011	2039	61, 28
COMPANY 16	PLANT/UNIT 1	1981, 2002	2041	60, 39
COMPANY 17	PLANT/UNIT 1	1974, 2000	2019	45, 19
COMPANY 17	PLANT/UNIT 2	1975, 1998	2019	44, 21
COMPANY 17	PLANT/UNIT 3	1976, 1997	2019	43, 22
COMPANY 17	PLANT/UNIT 4	1965, 2008	2013	48, 5
COMPANY 17	PLANT/UNIT 5	1968, 2009	2013	45, 4
COMPANY 17	PLANT/UNIT 6	1976, 2009	2013	37, 4
COMPANY 17	PLANT/UNIT 7	1983, 2008	2017	34, 9
COMPANY 18	PLANT/UNIT 1	1958, 1999	2018	60, 19
COMPANY 18	PLANT/UNIT 2	1963, 1994	2018	55, 24
COMPANY 18	PLANT/UNIT 3	1960	2023	63
COMPANY 18	PLANT/UNIT 4	1981, 2001	2041	60, 40
COMPANY 18	PLANT/UNIT 5	2008	2050	42
COMPANY 19	PLANT/UNIT 1	2009	2039	30
COMPANY 19	PLANT/UNIT 2	2010	2040	30

COMPANY 20	PLANT/UNIT 1	1978	2040	62
COMPANY 20	PLANT/UNIT 12	1966, 2014	2030	64, 16
COMPANY 20	PLANT/UNIT 13	1974, 2008	2030	56, 22
COMPANY 20	PLANT/UNIT 14	2006	2030	24
COMPANY 20	PLANT/UNIT 2	1980	2040	60
COMPANY 20	PLANT/UNIT 3	1983	2040	57
COMPANY 20	PLANT/UNIT 4	1960, 1990	2019	59, 29
COMPANY 20	PLANT/UNIT 5	1962, 1992	2019	57, 27
COMPANY 20	PLANT/UNIT 6	1969, 1993	2019	50, 26
COMPANY 20	PLANT/UNIT 7	1980, 2009	2040	60, 31
COMPANY 20	PLANT/UNIT 8	2010	2060	50
COMPANY 21	PLANT/UNIT 1	1964, 2005	2027	63, 22
COMPANY 21	PLANT/UNIT 2	1971, 2006	2027	56, 21
COMPANY 21	PLANT/UNIT 3	1983, 2009	2029	46, 20
COMPANY 21	PLANT/UNIT 4	1966, 2008	2028	62, 20
COMPANY 21	PLANT/UNIT 5	1968, 2007	2028	60, 21
COMPANY 21	PLANT/UNIT 6	1973, 2008	2029	56, 21
COMPANY 21	PLANT/UNIT 7	1980, 2007	2029	49, 22
COMPANY 22	PLANT/UNIT 1	1944	2011	67
COMPANY 22	PLANT/UNIT 10	1960, 2008	2012	52, 4
COMPANY 22	PLANT/UNIT 11	1961, 2008	2026	65, 18
COMPANY 22	PLANT/UNIT 12	1970, 2008	2035	65, 27
COMPANY 22	PLANT/UNIT 13	1972, 2008	2037	65, 29
COMPANY 22	PLANT/UNIT 14	1976, 2005	2041	65, 36
COMPANY 22	PLANT/UNIT 15	1975, 2007	2040	65, 33
COMPANY 22	PLANT/UNIT 16	1978, 2002	2043	65, 41
COMPANY 22	PLANT/UNIT 17	1979, 1994	2044	65, 50
COMPANY 22	PLANT/UNIT 18	1982, 2008	2047	65, 39
COMPANY 22	PLANT/UNIT 2	1950, 1991	2003	53, 12
COMPANY 22	PLANT/UNIT 3	1953	2015	62
COMPANY 22	PLANT/UNIT 4	1954	2015	61
COMPANY 22	PLANT/UNIT 5	1954, 2003	2015	61, 12
COMPANY 22	PLANT/UNIT 6	1956, 2007	2015	59, 8
COMPANY 22	PLANT/UNIT 7	1968, 1993	2016	48, 23
COMPANY 22	PLANT/UNIT 8	1959, 2007	2012	53, 5
COMPANY 22	PLANT/UNIT 9	1958, 2007	2012	54, 5
COMPANY 23	PLANT/UNIT 1	1981, 2008	2025	44, 17
COMPANY 23	PLANT/UNIT 13	1965, 1998	2030	65, 32
COMPANY 23	PLANT/UNIT 14	1976, 1998	2030	54, 32
COMPANY 23	PLANT/UNIT 15	1978, 2004	2042	64, 38
COMPANY 23	PLANT/UNIT 16	1980, 2011	2042	62, 31
COMPANY 23	PLANT/UNIT 17	1983, 2011	2042	59, 31
COMPANY 23	PLANT/UNIT 18	1977, 2006	2036	59, 30
COMPANY 23	PLANT/UNIT 19	1974, 2010	2036	62, 26
COMPANY 23	PLANT/UNIT 2	1984	2027	43
COMPANY 23	PLANT/UNIT 20	1974, 2008	2028	54, 20
COMPANY 23	PLANT/UNIT 21	1975, 2009	2032	57, 23
COMPANY 23	PLANT/UNIT 22	1976, 2010	2037	61, 27
COMPANY 23	PLANT/UNIT 23	1979, 2011	2037	58, 26
COMPANY 23	PLANT/UNIT 24	1963, 2011	2029	66, 18
COMPANY 23	PLANT/UNIT 25	1968, 2011	2029	61, 18
COMPANY 23	PLANT/UNIT 26	1971, 1981	2029	58, 48
COMPANY 23	PLANT/UNIT 27	1978, 2011	2039	61, 28
COMPANY 23	PLANT/UNIT 28	1984	2037	53
COMPANY 23	PLANT/UNIT 29	2007	2037	30
COMPANY 23	PLANT/UNIT 3	1986	2027	41
COMPANY 23	PLANT/UNIT 4	1980, 2003	2025	45, 22
COMPANY 23	PLANT/UNIT 5	1979, 2004	2026	47, 22
COMPANY 23	PLANT/UNIT 6	1959, 2010	2027	68, 17
COMPANY 23	PLANT/UNIT 7	1960, 2010	2027	67, 17
COMPANY 23	PLANT/UNIT 8	1964, 2010	2027	63, 17
COMPANY 23	PLANT/UNIT 9	1972, 2010	2027	55, 17
COMPANY 24	PLANT/UNIT 1	1975, 2014	2035	60, 21

COMPANY 24	PLANT/UNIT 10	1955	2011	56
COMPANY 24	PLANT/UNIT 2	1978, 2014	2038	60, 24
COMPANY 24	PLANT/UNIT 3	1953, 2004	2015	62, 11
COMPANY 24	PLANT/UNIT 4	1970, 1985	2018	48, 33
COMPANY 24	PLANT/UNIT 5	1985, 2012	2045	60, 33
COMPANY 24	PLANT/UNIT 6	1959, 2003	2015	56, 12
COMPANY 24	PLANT/UNIT 7	1962, 2003	2015	53, 12
COMPANY 24	PLANT/UNIT 8	1947	2009	62
COMPANY 24	PLANT/UNIT 9	1954	2011	57
COMPANY 25	PLANT/UNIT 1	1969, 2001	2045	76, 44
COMPANY 25	PLANT/UNIT 3	1980, 2009	2040	60, 31
COMPANY 25	PLANT/UNIT 4	2010	2060	50
COMPANY 25	PLANT/UNIT 5	1973, 2007	2038	65, 31
COMPANY 25	PLANT/UNIT 6	1977, 2013	2038	61, 25
COMPANY 26	PLANT/UNIT 1	1956, 1991	2019	63, 28
COMPANY 26	PLANT/UNIT 2	1963, 1993	2019	56, 26
COMPANY 26	PLANT/UNIT 3	1971, 2012	2028	57, 16
COMPANY 26	PLANT/UNIT 4	1974, 2015	2034	60, 19
COMPANY 26	PLANT/UNIT 5	1977, 2015	2034	57, 19
COMPANY 26	PLANT/UNIT 6	1981, 2014	2037	56, 23
COMPANY 26	PLANT/UNIT 7	1984, 2014	2037	53, 23
COMPANY 26	PLANT/UNIT 8	1990, 2011	2066	76, 55
COMPANY 27	PLANT/UNIT 1	1954, 1997	2016	62, 19
COMPANY 27	PLANT/UNIT 2	1970, 1994	2030	60, 36
COMPANY 27	PLANT/UNIT 3	1980, 2003	2040	60, 37
COMPANY 27	PLANT/UNIT 4	1982, 2002	2042	60, 40
COMPANY 27	PLANT/UNIT 5	2005	2045	40
COMPANY 28	PLANT/UNIT 1	1979	2026	47
COMPANY 28	PLANT/UNIT 2	1980	2016	36
COMPANY 28	PLANT/UNIT 3	1986	2046	60
COMPANY 29	PLANT/UNIT 1	1975, 2012	2022	47, 10
COMPANY 29	PLANT/UNIT 2	1976, 2014	2022	46, 8
COMPANY 29	PLANT/UNIT 3	1984	2035	51
COMPANY 29	PLANT/UNIT 4	1986	2035	49
COMPANY 30	PLANT/UNIT 1	1980	2020	40
COMPANY 30	PLANT/UNIT 2	1974	2034	60
COMPANY 30	PLANT/UNIT 3	1981	2025	44
COMPANY 30	PLANT/UNIT 4	1985	2025	40
COMPANY 31	PLANT/UNIT 1	1984	2034	50
COMPANY 31	PLANT/UNIT 2	1986	2036	50
COMPANY 31	PLANT/UNIT 3	1983	2028	45
COMPANY 32	PLANT/UNIT 1	1959, 2008	2024	65, 16
COMPANY 32	PLANT/UNIT 2	1961, 2008	2026	65, 18
COMPANY 32	PLANT/UNIT 3	1970, 2012	2035	65, 23
COMPANY 32	PLANT/UNIT 4	1973, 2012	2038	65, 26
COMPANY 32	PLANT/UNIT 5	1989	2047	58
COMPANY 33	PLANT/UNIT 1	1977, 2012	2042	65, 30
COMPANY 33	PLANT/UNIT 10	1971, 1973	2030	59, 57
COMPANY 33	PLANT/UNIT 11	1975	2030	55
COMPANY 33	PLANT/UNIT 2	1978, 2013	2043	65, 30
COMPANY 33	PLANT/UNIT 3	1984, 2013	2049	65, 36
COMPANY 33	PLANT/UNIT 4	1979, 2014	2044	65, 30
COMPANY 33	PLANT/UNIT 5	1980, 2013	2045	65, 32
COMPANY 33	PLANT/UNIT 6	1958	2023	65
COMPANY 33	PLANT/UNIT 7	1964	2028	64
COMPANY 33	PLANT/UNIT 8	1969	2029	60
COMPANY 33	PLANT/UNIT 9	1971, 1975	2030	59, 55
COMPANY 34	PLANT/UNIT 1	1953, 1989	2016	63, 27
COMPANY 34	PLANT/UNIT 3	1973, 1993	2016	43, 23
COMPANY 35	PLANT/UNIT 1	1965, 2008	2034	69, 26
COMPANY 35	PLANT/UNIT 2	1974, 2003	2037	63, 34
COMPANY 35	PLANT/UNIT 3	1972, 2010	2026	54, 16
COMPANY 35	PLANT/UNIT 4	2012	2048	36

COMPANY 35	PLANT/UNIT 5	1951, 1990	2030	79, 40
COMPANY 35	PLANT/UNIT 6	1957, 2009	2024	67, 15
COMPANY 36	PLANT/UNIT 1	1981	2025	44
COMPANY 36	PLANT/UNIT 2	1985	2025	40
COMPANY 37	PLANT/UNIT 1	1967	2035	68
COMPANY 37	PLANT/UNIT 2	1996	2020	24
COMPANY 37	PLANT/UNIT 3	1963	2032	69
COMPANY 37	PLANT/UNIT 4	1978	2037	59
COMPANY 37	PLANT/UNIT 5	2017	2047	30
COMPANY 38	PLANT/UNIT 1	1974	2029	55
COMPANY 38	PLANT/UNIT 2	1978	2029	51
COMPANY 38	PLANT/UNIT 3	1982	2034	52
COMPANY 38	PLANT/UNIT 4	1984	2034	50
COMPANY 39	PLANT/UNIT 1	1967	2023	56
COMPANY 39	PLANT/UNIT 2	1973	2028	55
COMPANY 39	PLANT/UNIT 3	1973	2026	53
COMPANY 39	PLANT/UNIT 4	1956	2031	75
COMPANY 39	PLANT/UNIT 5	1954	2027	73
COMPANY 39	PLANT/UNIT 6	1955	2026	71
COMPANY 39	PLANT/UNIT 7	1953	2033	80
COMPANY 39	PLANT/UNIT 8	1954	2033	79

ALLIANT ENERGY - IPL
AMEREN MO
AVISTA
BLACK HILLS POWER
CHEYENNE LIGHT, FUEL & POWER COMPANY
CITIZENS ENERGY GROUP
DOMINION ENERGY SOUTH CAROLINA, INC.
DOMINION RESOURCES, INC.
DUKE ENERGY CAROLINAS
DUKE ENERGY FLORIDA
DUKE ENERGY INDIANA
DUKE ENERGY KENTUCKY
DUKE ENERGY PROGRESS
EAST KENTUCKY POWER COOPERATIVE, INC.
EVERGY METRO, INC.
EVERGY MISSOURI WEST, INC.
EXELEON GENERATION COMPANY
FLORIDA POWER & LIGHT COMPANY
IDAHO POWER COMPANY
INDIANAPOLIS POWER & LIGHT
KENTUCKY UTILITIES
LOUISVILLE GAS AND ELECTRIC
MADISON GAS AND ELECTRIC COMPANY
MIDAMERICAN ENERGY COMPANY
MONOGAHELA POWER COMPANY
NEVADA POWER COMPANY
NIPSCO ELECTRIC
OKLAHOMA GAS AND ELECTRIC COMPANY
OMAHA PUBLIC POWER DISTRICT
PACIFIC GAS AND ELECTRIC COMPANY
PACIFICORP
PACIFICORP - OREGON
PORTLAND GENERAL ELECTRIC
PUBLIC SERVICE COMPANY OF OKLAHOMA
PUGET SOUND ENERGY
SIERRA PACIFIC POWER COMPANY
TENNESSEE VALLEY AUTHORITY
WISCONSIN POWER AND LIGHT COMPANY
WISCONSIN PUBLIC SERVICE COMPANY

DUKE ENERGY KENTUCKY, INC.
 CASE NO. 2022-00372
 DEPRECIATION AND AMORTIZATION ACCRUAL RATES AND
 JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS,
 FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP
 THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

STEAM PRODUCTION PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
 TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No. (A)	FERC Acct. No. (B-1)	Company Acct. No. (B-2)	Account Title or Major Property Grouping (C)	Adjusted Jurisdiction 13-Month Average		Proposed Accrual Rate (F)	Calculated Depr/Amort Expense (G=DxF)	Current Accrual Rate (H)	Calculated Depr/Amort Expense (I=DxH)	Difference Actual vs Proposed (J=G-I)	Effective Tax Rate (K)	ADIT Impact (L=J*K)
				Plant Investment (1) (D)	Accumulated Balance (E)							
				\$	\$		\$					
1	310	3100	Land and Land Rights	7,267,197	108,998	0.00%	0					
2	311	3110	Structures & Improvements	185,879,874	51,418,002	6.30%	11,710,432	2.47%	4,591,233	7,119,199	24.925%	1,774,460
3	312	3120	Boiler Plant Equipment	553,244,784	308,069,611	4.33%	23,955,499	2.24%	12,392,683	11,562,816	24.925%	2,882,032
4	312	3123	Boiler Plant Equip - SCR Catalyst	7,714,318	6,804,874	5.91%	455,916	4.56%	351,773	104,143	24.925%	25,958
5	314	3140	Turbogenerator Equipment	118,509,201	49,273,455	4.53%	5,368,467	2.36%	2,796,817	2,571,650	24.925%	640,984
6	315	3150	Accessory Electric Equipment	51,143,847	31,953,342	2.99%	1,529,201	2.24%	1,145,622	383,579	24.925%	95,607
7	316	3160	Miscellaneous Powerplant Equipment	24,584,185	12,356,024	4.88%	1,199,708	3.17%	779,319	420,389	24.925%	104,782
8	317	3170	AROs	0	0	Various						
9			Case 2015-120 Acq of DPL Share of East Bend	8,481,722	0	-	490,618		490,618	-	24.925%	-
10			Completed Construction Not Classified	0	0	4.71%						
11		108	Retirement Work in Progress	0	(20,745,348)		0					
12			Total Steam Production Plant	956,825,128	439,238,958		44,709,841		22,548,065	22,161,776		5,523,823

(1) Plant Investment includes Completed Construction Not Classified (Account 106).

DUKE ENERGY KENTUCKY, INC.
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 THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

OTHER PRODUCTION PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
 TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No. (A)	FERC Acct. No. (B-1)	Company Acct. No. (B-2)	Account Title or Major Property Grouping (C)	Adjusted Jurisdiction 13-Month Average		Proposed Accrual Rate (F)	Calculated Depr/Amort Expense (G=DxF)	Current Accrual Rate (H)	Calculated Depr/Amort Expense (I=DxH)	Difference Actual vs Proposed (J=G-I)	Effective Tax Rate (K)	ADIT Impact (L=J*K)
				Plant Investment (1) (D)	Accumulated Balance (E)							
				\$	\$		\$					
1	340	3400	Land and Land Rights	2,280,504	5,013	0.00%	0					
2	340	3401	Rights of Way	0	0	0.00%	0	3.77%				
3	341	3410	Structures & Improvements	36,701,684	29,607,072	1.77%	649,620	2.52%	924,882	(275,262)	24.925%	(68,609)
4	342	3420	Fuel Holders, Producers, Accessories	60,960,351	8,394,494	5.46%	3,328,435	2.13%	1,298,455	2,029,980	24.925%	505,972
5	343	3430	Prime Movers	6,907,974	(5,073,353)	6.14%	424,150	3.36%	232,108	192,042	24.925%	47,866

6	344	3440	Generators	213,483,294	154,693,792	2.83%	6,041,577	3.36%	7,173,039	(1,131,462)	24.925%	(282,017)
7	344	3446	Solar Generators	15,778,050	2,777,310	5.22%	823,614	3.36%	530,142	293,472	24.925%	73,148
8	345	3450	Accessory Electric Equipment	19,872,233	13,601,830	3.23%	641,873	3.82%	759,119	(117,246)	24.925%	(29,224)
9	345	3456	Solar Accessory Electric Equipment	1,729,695	357,643	5.51%	95,306	3.82%	66,074	29,232	24.925%	7,286
10	346	3460	Miscellaneous Plant Equipment	5,174,581	3,672,820	2.62%	135,574	3.71%	191,977	(56,403)	24.925%	(14,058)
11			Completed Construction Not Classified	0	0	3.37%	0					
12		108	Retirement Work in Progress	0	(1,056,015)							
13 Total Other Production Plant				362,888,366	206,980,606		12,140,149		11,175,798	964,351		240,365

(1) Plant Investment includes Completed Construction Not Classified (Account 106).

DUKE ENERGY KENTUCKY, INC.
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 JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS,
 FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP
 THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

TRANSMISSION PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
 TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No.	FERC Acct. No.	Company Acct. No.	Account Title or Major Property Grouping	Adjusted Jurisdiction		Proposed Accrual Rate	Calculated Depr/Amort Expense	Current Accrual Rate	Calculated Depr/Amort Expense	Difference Actual vs Proposed	Effective Tax Rate	ADIT Impact
				13-Month Average Plant Investment (1)	Accumulated Balance							
(A)	(B-1)	(B-2)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I=DxH)	(J=G-I)	(K)	(L=J*K)
				\$	\$		\$					
1	350	3500	Land	5,678,092	0	0.00%	0					
2	350	3501	Rights of Way	1,854,560	759,310	0.93%	17,247	1.27%	23,553	(6,306)	24.925%	(1,572)
3	352	3520	Structures & Improvements	8,390,230	698,873	1.69%	141,795	1.96%	164,449	(22,654)	24.925%	(5,646)
4	353	3530	Station Equipment	39,920,032	1,031,605	2.31%	922,153	2.16%	862,273	59,880	24.925%	14,925
5	353	3531	Station Equipment - Step Up	13,036,026	5,166,147	2.52%	328,508	2.05%	267,239	61,269	24.925%	15,271
6	353	3532	Station Equipment - Major	15,874,714	2,690,777	1.78%	282,570	1.73%	274,633	7,937	24.925%	1,978
7	353	3534	Station Equipment - Step Up Equipment	10,665,478	2,701,283	2.87%	306,099	4.13%	440,484	(134,385)	24.925%	(33,496)
8	355	3550	Poles & Fixtures	18,509,390	(5,530,155)	2.57%	475,691	1.76%	325,765	149,926	24.925%	37,369
9	356	3560	Overhead Conductors & Devices	17,517,922	2,873,042	2.09%	366,125	1.91%	334,592	31,533	24.925%	7,860
10	356	3561	Overhead Conductors - Clear R/W	3,076,253	165,128	1.54%	47,374	1.74%	53,527	(6,153)	24.925%	(1,534)
11			Completed Construction Not Classified	0	0	2.26%	0					
12		108	Retirement Work in Progress	0	(2,587,798)		0					
13 Total Transmission Plant				134,522,697	7,968,212		2,887,562		2,746,514	141,048		35,156

(1) Plant Investment includes Completed Construction Not Classified (Account 106).

DUKE ENERGY KENTUCKY, INC.
 CASE NO. 2022-00372
 DEPRECIATION AND AMORTIZATION ACCRUAL RATES AND
 JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS,
 FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP
 THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

DISTRIBUTION PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
 TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No. (A)	FERC Acct. No. (B-1)	Company Acct. No. (B-2)	Account Title or Major Property Grouping (C)	Adjusted Jurisdiction 13-Month Average		Proposed Accrual Rate (F)	Calculated Depr/Amort Expense (G=DxF)	Current Accrual Rate (H)	Calculated Depr/Amort Expense (I=DxH)	Difference Actual vs Proposed (J=G-I)	Effective Tax Rate (K)	ADIT Impact (L=J*K)
				Plant Investment (1) (D)	Accumulated Balance (E)							
				\$	\$		\$					
1	360	3600	Land and Land Rights	14,002,572	0	0.00%	0	0.00%				
2	360	3601	Rights of Way	5,271,275	3,291,028	0.69%	36,372	1.03%	54,294	(17,922)	24.925%	(4,467)
3	361	3610	Structures & Improvements	1,574,856	(25,424)	1.88%	29,607	2.26%	35,592	(5,985)	24.925%	(1,492)
4	362	3620	Station Equipment	84,729,397	4,768,344	3.91%	3,312,919	2.35%	1,991,141	1,321,778	24.925%	329,453
5	362	3622	Station Equipment - Major	48,596,984	11,312,329	1.73%	840,728	1.59%	772,692	68,036	24.925%	16,958
6	363	3630	Storage Battery Equipment	0	0	6.78%	0	6.78%	-	-	24.925%	-
7	364	3640	Poles, Towers & Fixtures	83,333,055	30,990,566	2.38%	1,983,327	2.09%	1,741,661	241,666	24.925%	60,235
8	365	3650	Overhead Conductors & Devices	158,797,704	35,621,917	2.51%	3,985,822	2.14%	3,398,271	587,551	24.925%	146,447
9	365	3651	Overhead Conductors - Clear R/W	8,339,117	780,656	1.50%	125,087	1.65%	137,595	(12,508)	24.925%	(3,118)
10	366	3660	Underground Conduit	48,256,715	10,202,119	1.60%	772,107	1.80%	868,621	(96,514)	24.925%	(24,056)
11	367	3670	Underground Conductors & Devices	92,338,668	22,348,131	2.53%	2,336,168	2.07%	1,911,410	424,758	24.925%	105,871
12	368	3680	Line Transformers	82,913,299	27,662,987	2.03%	1,683,140	1.68%	1,392,943	290,197	24.925%	72,331
13	368	3682	Customers Transformer Installation	305,481	280,477	0.53%	1,619	0.31%	947	672	24.925%	167
14	369	3691	Services - Underground	3,419,442	852,325	1.97%	67,363	1.87%	63,944	3,419	24.925%	852
15	369	3692	Services - Overhead	19,903,748	11,107,185	1.70%	338,364	1.21%	240,835	97,529	24.925%	24,309
16	370	3700	Meters	3,047,358	1,077,149	4.60%	140,178	6.32%	192,593	(52,415)	24.925%	(13,064)
17	370	3702	AMI Meters	30,331,889	9,418,376	6.12%	1,856,312	6.85%	2,077,734	(221,422)	24.925%	(55,190)
18	371	3711, 3712	Company Owned Outdoor Lighting	1,232,302	(10,153)	10.78%	132,842	5.26%	64,819	68,023	24.925%	16,955
19	372	3720	Leased Property on Customers	10,769	9,668	N/A	(2)	N/A				
20	373	3731	Street Lighting - Overhead	2,799,022	2,239,367	1.25%	34,988	0.73%	20,433	14,555	24.925%	3,628
21	373	3732	Street Lighting - Boulevard	3,760,097	2,751,140	1.12%	42,113	1.18%	44,369	(2,256)	24.925%	(562)
22	373	3733	Street Lighting - Cust, Private Outdoor Lighting	0	0	4.21%	0	2.67%	-	-	24.925%	-
23	373	3734	Light Choice OLE	0	0	4.21%	0	2.67%	-	-	24.925%	-
24			Completed Construction Not Classified	0	0	2.61%	0					
25		108	Retirement Work in Progress	0	(22,560,697)		0					
26 Total Distribution Plant				692,963,750	152,117,490		17,719,056		15,009,895	2,709,161		675,258

(1) Plant Investment includes Completed Construction Not Classified (Account 106).
 (2) This account is fully depreciated.

DUKE ENERGY KENTUCKY, INC.
CASE NO. 2022-00372
DEPRECIATION AND AMORTIZATION ACCRUAL RATES AND
JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS,
FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP
THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

GENERAL PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No. (A)	FERC Acct. No. (B-1)	Company Acct. No. (B-2)	Account Title or Major Property Grouping (C)	Adjusted Jurisdiction 13-Month Average		Proposed Accrual Rate (F)	Calculated Depr/Amort Expense (G=DxH)	Current Accrual Rate (H)	Calculated Depr/Amort Expense (I=DxH)	Difference Actual vs Proposed (J=G-I)	Effective Tax Rate (K)	ADIT Impact (L=J*K)
				Plant Investment (1) (D)	Accumulated Balance (E)							
				\$	\$							
1	303	3030	Miscellaneous Intangible Plant	37,376,913	15,807,767	Various	5,181,547	Various	5,181,547	-	24.925%	-
2	390	3900	Structures & Improvements	202,337	69,547	3.33%	6,738	3.40%	6,879	(141)	24.925%	(35)
3	391	3910	Office Furniture & Equipment	456,050	32,355	5.00%	22,803	5.00%	22,803	-	24.925%	-
4	391	3910-URR	Office Furniture & Equipment		166	NA	(1,744)			(1,744)	24.925%	(435)
5	391	3911	Electronic Data Proc Equip	6,629,656	2,043,801	20.00%	1,325,931	20.00%	1,325,931	(0)	24.925%	(0)
6	391	3911-URR	Electronic Data Proc Equip		32,267	NA	(16,380)			(16,380)	24.925%	(4,083)
7	392	3920	Transportation Equipment	1,155,292	518,087	6.20%	Transp Expense	8.56%	Transp Expense	Transp Expense	24.925%	Transp Expense
8	392	3921	Trailers	334,258	224,156	1.93%	Transp Expense	3.84%	Transp Expense	Transp Expense	24.925%	Transp Expense
9	394	3940	Tools, Shop & Garage Equipment	4,170,777	1,378,493	4.00%	166,831	4.00%	166,831	(0)	24.925%	(0)
10	394	3940-URR	Tools, Shop & Garage Equipment		(5,733)	NA	8,000			8,000	24.925%	1,994
11	396	3960	Power Operated Equipment	14,461	9,699	4.18%	Transp Expense	6.74%	Transp Expense	Transp Expense	24.925%	Transp Expense
12	397	3970	Communication Equipment	16,197,847	4,545,813	6.67%	1,080,396	6.67%	1,080,396	(0)	24.925%	(0)
13	397-URR	3970	Communication Equipment		10,000	NA	(5,942)	6.67%		(5,942)	24.925%	(1,481)
14			Completed Construction Not Classified	0	0	8.20%	0					
15		108	Retirement Work in Progress	0	13,552							
16			Total General Plant	66,537,591	24,679,970		7,768,180		7,784,388	(16,208)		(4,040)
17			Total Electric Plant	2,213,737,532	830,985,236		85,224,788		59,264,659.02	25,960,128.28		6,470,561.97

(1) Plant Investment includes Completed Construction Not Classified (Account 106).
(2) 5 year life for Unrecovered Reserve for Amortization

DUKE ENERGY KENTUCKY, INC.
 CASE NO. 2022-00372
 DEPRECIATION AND AMORTIZATION ACCRUAL RATES AND
 JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS,
 FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP
 THIRTEEN MONTH AVERAGE AS OF JUNE 30, 2024

COMMON PLANT

DATA: BASE PERIOD "X" FORECASTED PERIOD
 TYPE OF FILING: "X" ORIGINAL UPDATED REVISED

Line No. (A)	FERC Acct. No. (B-1)	Company Acct. No. (B-2)	Account Title or Major Property Grouping (C)	Adjusted Jurisdiction 13-Month Average		Proposed Accrual Rate (F)	Calculated Depr/Amort Expense (G=DxF)	Current Accrual Rate (H)	Calculated Depr/Amort Expense (I=DxH)	Difference Actual vs Proposed (J=G-I)	Effective Tax Rate (K)	ADIT Impact (L=J*K)
				Plant Investment (1) (D)	Accumulated Balance (E)							
				\$	\$							
1		1030	Miscellaneous Intangible Plant	25,479,678	22,575,506	Various (4)	0	Various				
2		1890	Land and Land Rights	1,183,573	0	0.00%	0	0.00%				
3		1900	Structures & Improvements	12,370,141	(2,162,935)	Various (2)	0	0.00%	-	-	24.925%	-
4		1910	Office Furniture & Equipment	896,326	330,332	5.00%	44,816	5.00%	44,816	(0)	24.925%	(0)
5		1910-URR	Office Furniture & Equipment		73	NA	(12,200)			(12,200)		
6		1911	Office Furniture & Equipment - EDP Equipment	1,336	(10,099)	10.01%	134	20.00%	267	(133)	24.925%	(33)
7		1911-URR	Office Furniture & Equipment - EDP Equipment		(7,680)	NA	6,208			6,208		
8		1940	Tools, Shop & Garage Equipment	126,798	71,770	4.00%	5,072	4.00%	5,072	0	24.925%	0
9		1940-URR	Tools, Shop & Garage Equipment		2,400	NA	(4,480)			(4,480)		
10		1970	Communication Equipment	6,533,621	5,091,915	6.67%	435,793	6.67%	435,793	0	24.925%	0
11		1970-URR	Communication Equipment		502,133	NA	(699,420)			(699,420)		
12		1980	Miscellaneous Equipment	108,282	46,520	6.67%	7,222	6.67%	7,222	(0)	24.925%	(0)
13		1980-URR	Miscellaneous Equipment		(573)	NA	750			750		
14		1990	ARO - Common Plant		0	Various						
15			Completed Construction Not Classified		0	4.18%	0					
16		108	Retirement Work in Progress		3,224							
17			Total Common Plant	46,699,755	26,442,586		(216,105)		493,170	(709,275)		(33)
18			Common Plant Allocated to Electric									
19		71.36%	Original Cost	33,324,946								
20		71.36%	Reserve		18,869,429							
20		71.36%	Annual Provision				(154,213)		351,926	(506,139)		(24)
21			Total Electric Plant Including Allocated Common	2,247,062,478	849,854,665		85,070,575		59,616,585	25,453,989		6,470,538

(1) Plant Investment includes Completed Construction Not Classified (Account 106).
 (2) Composite of four groups in Structures & Improvements account.
 (3) 5 year life for Unrecovered Reserve for Amortization

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-121

REQUEST:

Refer to the Direct Testimony of Huyen C. Dang (“Dang Testimony”), at 5 – 6, SCH_B-3.2, and the calculation of depreciation expense in the test year using the Company’s proposed depreciation rates.

a. Provide the proposed depreciation rates for production plant disaggregated into depreciation, interim net salvage, and terminal net salvage.

b. Provide the depreciation expense for production plant disaggregated into depreciation expense, interim net salvage, and terminal net salvage. Provide all calculations in Excel live format with all formulas intact.

c. Confirm that the Company’s proposed dollar decommissioning expense (terminal net salvage) for each of its generating units will not change as the result of capital (plant) additions and interim retirements at those generating units after December 31, 2021 until the date of retirement. If this is not correct, then provide a corrected statement and explain in detail what changes in the scope of work and the cost of that work will be required to decommission each of the generating units and restore the sites after each of the generating units are retired compared to the estimates developed and presented by 1898 & Co in this proceeding.

RESPONSE:

a. A remaining life depreciation rate that is based on interim net salvage by account and terminal net salvage by location cannot accurately be segregated by the

requested components. However, the attached schedule, AG-DR-01-121 Attachment, sets forth the breakdown of the proposed rates and expense based on the most reasonable assumptions of percentages allocated to each component.

b. See response to (a) above.

c. The determination of the proposed decommissioning costs and the terminal net salvage estimated using that value are developed based on information available at a specific point in time. In this case, the study conducted by 1898 & Co. was completed in July of 2022 and based on information and assumptions current at that time. In the future, the decommissioning study by facility could be updated to reflect current conditions and practices which would include the current plant balance for each unit (i.e., would reflect the “result of capital additions and interim retirements of each generating unit at the time”); however, until such time as an updated decommissioning study would be performed, the decommissioning costs estimated in this case are the proposed decommissioning costs.

PERSON RESPONSIBLE: John J. Spanos

DUKE ENERGY KENTUCKY

PROPOSED ANNUAL ACCRUAL RATES SEGREGATED INTO THREE COMPONENTS
 RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2021

ACCOUNT (1)	PROBABLE RETIREMENT DATE (2)	SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	ORIGINAL COST AS OF DECEMBER 31, 2021 (5)	BOOK DEPRECIATION RESERVE (6)	FUTURE ACCRUALS (7)	CALCULATED ANNUAL ACCRUAL (8) (9)=(8)/(5)		CAPITAL RECOVERY ANNUAL ACCRUAL (10) (11)		TERMINAL NET SALVAGE ANNUAL ACCRUAL (12) (13)		INTERIM NET SALVAGE ANNUAL ACCRUAL (14) (15)		
							AMOUNT	RATE	AMOUNT	RATE	AMOUNT	RATE	AMOUNT	RATE	
STEAM PRODUCTION PLANT															
3110	STRUCTURES AND IMPROVEMENTS	06-2035	85-S1 *	(10)	183,717,638.42	46,934,083	155,155,319	11,576,821	6.30	10,548,002	5.74	716,499	0.39	312,320	0.17
3120	BOILER PLANT EQUIPMENT	06-2035	45-S0.5 *	(10)	545,368,156.24	298,832,215	301,072,757	23,609,292	4.33	21,482,356	3.94	1,472,494	0.27	654,442	0.12
3123	BOILER PLANT EQUIPMENT - SCR CATALYST	06-2035	10-S2.5 *	(10)	7,984,157.58	5,266,747	2,717,411	472,160	5.91	472,160	5.91	0	-	0	-
3140	TURBOGENERATOR UNITS	06-2035	40-S0.5 *	(10)	109,285,792.05	59,323,750	60,890,621	4,954,311	4.53	4,517,168	4.13	306,000	0.28	131,143	0.12
3150	ACCESSORY ELECTRIC EQUIPMENT	06-2035	65-R2.5 *	(10)	48,173,349.90	33,908,388	19,082,297	1,442,046	2.99	1,316,795	2.73	86,712	0.18	38,539	0.08
3160	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2035	55-S0 *	(10)	23,997,105.75	11,357,282	15,039,534	1,171,041	4.88	1,067,853	4.45	71,991	0.30	31,196	0.13
TOTAL STEAM PRODUCTION PLANT					918,526,199.94	455,622,465	553,957,939	43,225,671	4.71	39,404,335		2,653,696		1,167,640	
OTHER PRODUCTION PLANT															
3410	STRUCTURES AND IMPROVEMENTS	06-2040	60-R4 *	(8)	36,379,260.23	27,885,105	11,404,496	645,377	1.77	598,084	1.64	32,741	0.09	14,552	0.04
3420	FUEL HOLDERS, PRODUCERS AND ACCESSORIES	06-2040	45-S1.5 *	(8)	61,310,889.91	6,744,645	59,471,116	3,347,024	5.46	3,107,912	5.07	165,539	0.27	73,573	0.12
3430	PRIME MOVERS	06-2040	25-S0 *	(8)	10,340,709.70	1,522,502	9,645,464	635,081	6.14	590,616	5.71	31,022	0.30	13,443	0.13
3440	GENERATORS	06-2040	40-S0.5 *	(8)	211,248,425.04	137,426,306	90,721,993	5,985,695	2.83	5,563,198	2.63	295,748	0.14	126,749	0.06
3446	GENERATORS - SOLAR														
	CRITTENDEN	06-2047	25-S2.5 *	(20)	4,143,038.53	787,881	4,183,765	214,222	5.17	177,763	4.29	29,830	0.72	6,629	0.16
	WALTON	06-2047	25-S2.5 *	(20)	5,670,767.07	1,078,410	5,726,510	293,216	5.17	292,649	5.16	567	0.01	0	-
	TOTAL GENERATORS - SOLAR				9,813,805.60	1,866,291	9,910,275	507,438		470,412		30,397		6,629	
3450	ACCESSORY ELECTRIC EQUIPMENT	06-2040	35-S1 *	(8)	19,858,901.69	12,312,595	9,135,019	642,291	3.23	596,616	3.00	31,774	0.16	13,901	0.07
3456	ACCESSORY ELECTRIC EQUIPMENT - SOLAR														
	CRITTENDEN	06-2047	25-S2.5 *	(20)	637,652.33	85,328	679,855	34,811	5.46	28,881	4.53	4,846	0.76	1,084	0.17
	WALTON	06-2047	25-S2.5 *	(20)	979,306.42	131,046	1,044,122	53,462	5.46	51,699	5.28	98	0.01	1,665	0.17
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - SOLAR				1,616,958.75	216,374	1,723,977	88,273		80,580		4,944		2,749	
3460	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2040	45-R1.5 *	(8)	5,152,109.78	3,329,034	2,235,245	135,197	2.62	125,408	2.43	6,698	0.13	3,091	0.06
TOTAL OTHER PRODUCTION PLANT					355,721,060.70	191,302,852	194,247,585	11,986,376	3.37	11,132,825		598,864		254,687	
TOTAL DEPRECIABLE PRODUCTION PLANT					1,274,247,260.64	646,925,317	748,205,524	55,212,047	4.33	50,537,160		3,252,560		1,422,327	

* CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-122

REQUEST:

Provide a schedule showing per books actual O&M expenses and by FERC O&M/A&G expense account/subaccount for 2020, 2021, 2022, and projected for the test year. Further, show the amounts separated into costs incurred directly by Duke Kentucky, charges from Duke Ohio, charges from DEBS, charges from any other affiliate, less any charges from Duke Kentucky to any other affiliate.

RESPONSE:

Please see AG-DR-01-122 Attachment 1 for actual expense in 2020, 2021, and 2022.

Please see AG-DR-01-122 Attachment 2 for expense in the projected test year.

PERSON RESPONSIBLE:

Danielle L. Weatherston – actual expenses
Grady “Tripp” S. Carpenter – forecasted expenses

Duke Energy Kentucky - Electric Only
 Schedule of O&M Costs by Source
 For the Calendar Year 2020

Responsibility Center Level 02 Name - Description1	Account CB - Description	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	
536_DEK - Duke Energy Kentucky	0500000 - Suprvsn and Engrg - Steam Oper	34,573	(8,552)	33,212	10,457	11,657	11,758	15,239	12,133	6,948	
	0501150 - Coal & Other Fuel Handling	58,370	(6,527)	-	2,719	-	-	4,381	263	-	
	0501190 - Sale Of Fly Ash-Expenses	26,971	22,085	15,941	14,452	4,553	2,725	28,552	16,373	11,821	
	0502020 - Ammonia - Qualifying	40,204	26,654	26,815	-	-	32,107	48,665	52,715	29,308	
	0502040 - COST OF LIME	999,132	618,353	891,960	46,229	70	1,204,657	1,559,954	1,399,445	978,457	
	0502100 - Fossil Steam Exp-Other	75,467	87,907	(14,389)	15,494	12,311	54,535	174,487	(34,578)	257,078	
	0502410 - Steam Oper-Bottom Ash/Fly Ash	974	1,477	1,477	2,111	3,850	(690)	6,977	99	1,169	
	0505000 - Electric Expenses-Steam Oper	863	3,285	25,725	8,978	2,934	1,124	10,080	7,272	-	
	0506000 - Misc Fossil Power Expenses	193,860	22,130	68,451	47,167	24,530	41,357	28,480	11,289	42,713	
	0510000 - Suprvsn and Engrng-Steam Maint	1,851	1,495	2,534	3,398	2,379	1,508	2,169	3,020	1,643	
	0510100 - Suprvsn & Engrng-Steam Maint R	-	-	-	-	-	-	-	-	-	
	0511000 - Maint Of Structures-Steam	259,496	163,681	196,301	186,105	327,172	145,907	266,146	150,410	268,129	
	0512100 - Maint Of Boiler Plant-Other	1,119,947	725,984	896,114	475,816	954,072	1,017,597	560,479	492,777	1,215,723	
	0513100 - Maint Of Electric Plant-Other	79,865	28,970	(7,341)	22,084	43,504	76,956	154,466	142,397	88,707	
	0514000 - Maintenance - Misc Steam Plant	314,431	258,626	268,145	343,296	253,073	192,815	371,502	234,101	459,553	
	0514300 - Maintenance - Misc Steam Plant	-	-	-	-	-	-	-	-	-	
	0524000 - Misc Expenses-Nuc Oper	(1)	-	1	-	-	-	-	-	-	
	0528000 - Maint Suprvsn and Engrng-Nuc	-	(1)	1	-	-	-	-	-	-	
	0530000 - Maint Of Reactor Plt Equip-Nuc	-	-	-	-	-	-	-	-	-	
	0531100 - Maint Electric Plt-Other-Nuc	-	-	-	-	-	-	-	-	-	
	0532100 - Maint Misc Nuclear Plt-Other	-	-	-	-	-	-	-	-	-	
	0546000 - Suprvsn and Engrng-CT Oper	14,364	8,548	5,394	5,262	4,888	4,514	11,049	6,136	3,743	
	0547150 - Natural Gas Handling-CT	-	-	-	-	-	-	-	-	-	
	0548100 - Generation Expenses-Other CT	-	-	-	-	-	-	-	-	-	
	0548200 - Prime Movers - Generators-CT	3,239	2,086	1,502	166	923	5,151	18,562	7,666	3,440	
	0549000 - Misc-Power Generation Expenses	57,437	39,289	36,488	42,703	42,864	29,534	55,339	40,545	89,973	
	0551000 - Suprvsn and Engrng-CT Maint	141	109	248	217	201	174	232	346	296	
	0552000 - Maintenance Of Structures-CT	7,696	14,353	9,413	17,058	18,859	30,978	11,433	8,518	17,570	
	0552220 - Solar: Maint of Structures	-	-	3,705	8,299	3,378	6,710	-	-	11,142	
	0553000 - Maint-Gentg and Elect Equip-CT	48,722	54,074	68,951	20,744	43,282	5,360	42,340	6,317	277,282	
	0554000 - Misc Power Generation Plant-CT	13,687	27,713	27,722	9,188	11,874	16,950	15,406	23,868	62,516	
	0554220 - Solar: Maint Misc Gen Plt	-	-	1,965	-	-	-	-	-	-	
	0557000 - Other Expenses-Oper	2,641	(7,765)	26,851	(808)	1,281	2	4,008	15,503	9,212	
	0557450 - Commissions/Brokerage Expense	4,063	4,110	4,110	-	8,224	4,176	4,236	4,684	5,496	
	0561100 - Load Dispatch-Reliability	-	-	-	-	-	-	57	-	-	
	0561200 - Load Dispatch-Monitor&OprTrnSys	-	-	-	-	-	-	201	-	-	
	0561300 - Load Dispatch - TransSvc&Sch	-	-	-	-	-	-	29	-	-	
	0561400 - Scheduling-Sys Cntrl&Disp Svs	44,023	129,112	111,502	127,687	127,544	127,096	125,433	126,675	127,873	
	0561800 - Reliability-Plan&Stds Dev	-	-	-	-	-	-	-	-	-	
	0562000 - Station Expenses	1,553	3,356	1,335	840	1,539	513	2,951	2,769	698	
	0563000 - Overhead Line Expenses-Trans	-	126	673	-	22,325	47	-	-	-	
	0565000 - Transm Of Elec By Others	-	-	142,500	-	-	142,500	-	-	142,500	
	0566000 - Misc Trans Exp-Other	26	625	772	692	90	21	419	250	168	
	0566100 - Misc Trans-Trans Lines Related	-	-	-	-	-	-	-	-	4	
	0569000 - Maint Of Structures-Trans	111	84	281	78	118	63	182	306	305	
	0569200 - Maint Of Computer Software	(1)	(2)	-	-	-	4,318	-	-	(44)	
	0570100 - Maint Stat Equip-Other-Trans	686	898	803	318	1,097	98	38	2,515	1,056	
	0570200 - Main-Ctr Brkr&Trnsf Mtrs-Trans	756	1,324	17	110	1,171	1,198	903	518	454	
	0571000 - Maint Of Overhead Lines-Trans	64,871	(30,830)	56,703	38,312	7,875	7,283	17,144	5,699	13,730	
	0580000 - Supervsn and Engrng-Dist Oper	530	4,662	608	1,027	1,489	1,750	1,988	2,538	3,936	
	0581004 - Load Dispatch-Dist of Elec	-	-	-	(1)	(1)	(1)	(1)	(1)	(1)	
	0582100 - Station Expenses-Other-Dist	526	653	540	236	445	558	222	231	250	
	0583100 - Overhead Line Exps-Other-Dist	176	117	31,653	83,042	58,703	10,175	(1,365)	83,522	-	
	0583200 - Transf Set Rem Reset Test-Dist	-	-	-	-	-	-	-	-	-	
	0584000 - Underground Line Expenses-Dist	23,877	15,714	16,282	23,605	69,554	20,865	28,976	11,134	18,012	
	0586000 - Meter Expenses-Dist	27,942	14,436	29,146	12,592	15,631	26,891	36,886	28,891	23,027	
	0587000 - Cust Install Exp-Other Dist	55,926	38,889	46,582	34,474	41,013	50,941	63,683	35,003	50,280	
	0588100 - Misc Distribution Exp-Other	76,562	42,489	59,511	40,020	29,625	43,075	29,790	57,140	49,847	
	0589000 - Rents-Dist Oper	4,015	14	(1,130)	3,897	23,981	(2,852)	18,316	21,782	4,118	
	0590000 - Supervsn and Engrng-Dist Maint	1,916	3,583	3,223	2,745	2,948	2,323	3,117	4,323	2,720	
	0592100 - Maint Station Equip-Other-Dist	149	2,516	247	426	463	891	325	14	1,027	
	0592200 - Cir Brkr&Trnsf Mtrs Rely-Dist	867	6,973	2,411	665	2,367	620	386	388	915	
	0593000 - Maint Overhd Lines-Other-Dist	277,881	110,357	44,646	538,063	42,853	221,906	69,369	139,118	95,268	
	0593100 - Right-Of-Way Maintenance-Dist	187,455	408,669	630,890	471,580	278,964	431,385	358,445	213,687	351,977	
	0594000 - Maint-Underground Lines-Dist	18,130	(3,355)	138,976	(81,391)	14,070	12,354	17,269	(13,147)	20,405	
	0595100 - Maint Line Transfrs-Other-Dist	456	-	-	4,725	3,749	-	-	-	3,659	
	0596000 - Maint-Streetlightng/Signal-Dist	3,893	2,363	30,322	13,392	20,560	15,420	17,307	17,047	5,059	
	0597000 - Maintenance Of Meters-Dist	8,930	5,862	5,272	-	17,666	19,466	2,866	-	-	
	0901000 - Supervision-Cust Accts	-	-	-	92	8	-	-	-	-	
	0902000 - Meter Reading Expense	16,871	14,090	12,100	11,352	11,972	12,029	15,261	11,628	12,106	

536_DEK - Duke Energy Kentucky	0903000 - Cust Records & Collection Exp	5,460	4,530	4,253	467	17,633	2,982	2,837	20	(26)
	0903100 - Cust Contracts & Orders-Local			(1)						
	0903200 - Cust Billing & Acct									
	0903300 - Cust Collecting-Local			(1)						
	0903891 - IC Collection Agent Revenue	(18,168)	(17,506)	(14,513)	(12,072)	(12,397)	(13,880)	(14,926)	(14,748)	(13,623)
	0904001 - BAD DEBT EXPENSE					1,162	8,827	(303)	(101)	(80)
	0908000 - Cust Asst Exp-Conservation Pro	(0)	0	(0)		(0)	(0)	(0)	(0)	(0)
	0910000 - Misc Cust Serv/Inform Exp	(209)	(104)	(254)	(125)	(110)	(119)	(173)	(114)	(203)
	0910100 - Exp-Rs Reg Prod/Svces-CstAccts	(7)	-	(5)	(4)					
	0912000 - Demonstrating & Selling Exp	(0)	(2)		(0)		719	588	420	505
	0920000 - A & G Salaries	(209,311)	(209,926)	(346,506)	(79,191)	(957,621)	(143,877)	(374,963)	(356,221)	(439,491)
	0920001 - SC O&M Labor Deferral				(605)	(598)	(587)	(877)	(591)	(598)
	0920100 - Salaries & Wages - Proj Supt -				(2)					
	0921100 - Employee Expenses	(7,428)	(13,085)	(11,547)	(6,218)	(3,633)	(2,331)	(3,287)	(1,428)	(2,006)
	0921101 - Employee Exp - NC					(0)				
	0921110 - Relocation Expenses			(0)	(4)	(0)	(0)	(27)		(0)
	0921200 - Office Expenses	(9,605)	(12,971)	(18,324)	(11,425)	(18,988)	(14,600)	(15,553)	(22,079)	(15,849)
	0921300 - Telephone And Telegraph Exp	(9)	(2)	(9)	(14)	(13)	11	(6)	(0)	(5)
	0921400 - Computer Services Expenses	(10,403)	(5,474)	(4,120)	(9,871)	(1,185)	(26,477)	(14,495)	(1,084)	(3,385)
	0921540 - Computer Rent (Go Only)	(24,967)	(23,978)	(25,257)	(23,801)	(25,714)	(14,499)	(27,902)	(25,872)	(27,612)
	0921600 - Other	(0)	-	(17)			(0)			(0)
	0921980 - Office Supplies & Expenses			(0)					(3)	
	0923000 - Outside Services Employed	(32,914)	(29,604)	(34,800)	(38,910)	(29,925)	(22,253)	(35,458)	(16,525)	(27,178)
	0923100 - Outside Svcs Cont - Proj Supt -			(41)	(3)	44				
	0924000 - Property Insurance	(34)	(14)	(1)	(1)	(1)	(1)		(2)	(1)
	0925000 - Injuries & Damages	7,565	3,978	10,000	607	331	57	2,078	5,871	9,067
	0925051 - INTER-CO GEN LIAB EXP	19,885	19,885	19,885	19,885	19,885	19,885	19,885	19,885	19,885
	0926000 - Employee Benefits	464	(336)	(100)	(53)	(4)	(8)	(8,858)	(5)	(22)
	0926600 - Employee Benefits-Transferred	(181,020)	(153,786)	(307,929)	(143,476)	(128,151)	(93,651)	(178,368)	(151,499)	(138,606)
	0928006 - State Reg Comm Proceeding	10,957	10,957	10,957	10,957	25,420	23,966	20,024	12,596	12,712
	0929500 - Admin Exp Transf	(102,706)	(87,199)	(62,495)	(76,030)	(56,517)	(60,823)	(93,940)	(88,180)	(78,736)
	0930200 - Misc General Expenses	39,307	33,766	34,286	33,482	32,640	28,647	32,912	25,769	40,375
	0930210 - Industry Association Dues	(41,363)	41,363							
	0930230 - Dues To Various Organizations			(342)	(342)			(342)		
	0930250 - Buy/Sell Transf Employee Homes	(2,945)		(102)	(102)	(15)	(142)	2,225	(0)	1
	0930940 - General Expenses	(20)	(4)	(27)	(3)	(1)	(1)	(1)	(1)	(0)
	0931001 - Rents-A&G	(4,495)	(5,025)	(5,527)	(4,823)	(5,106)	(5,650)	(5,528)	(5,707)	(5,206)
	0935100 - Maint General Plant-Elec				(1)	(1)				
	0935200 - Cust Infor & Computer Control	40	(326)	(523)	(92)	81	(396)	935	(336)	505
536_DEK - Duke Energy Kentucky Total		3,614,194	2,414,470	3,198,433	2,251,966	1,443,845	3,710,937	3,520,151	2,677,612	4,192,483
503_DEO - Duke Energy Ohio										
	0511000 - Maint Of Structures-Steam							12		
	0512100 - Maint Of Boiler Plant-Other						180			
	0513100 - Maint Of Electric Plant-Other	1,673	721	388	2,072	305	8,560	285	1,188	802
	0514000 - Maintenance - Misc Steam Plant			141						
	0520000 - Maintenance Of Structures-CT								1,547	
	0553000 - Maint-Gengt and Elect Equip-CT		756	9,521	10,286	4,334	3,769	707	1,554	8,986
	0557000 - Other Expenses-Oper	26,449	30,647	43,187	33,124	45,786	50,691	51,602	55,372	43,676
	0562000 - Station Expenses	918	1,240	585	652	272	137	9,219	804	(8,401)
	0563000 - Overhead Line Expenses-Trans		429							
	0566000 - Misc Trans Exp-Other	1	274	156	(431)		97	107	328	263
	0569000 - Maint Of Structures-Trans									
	0570100 - Maint Stat Equip-Other- Trans	622	221	291	829		296	770	5,211	3,642
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans						332	1,919	177	
	0571000 - Maint Of Overhead Lines-Trans			51,372	106,622	41,957	91,900	13,685	7,975	6,962
	0582100 - Station Expenses-Other-Dist	3,135	1,364	206		226	148			607
	0583100 - Overhead Line Exps-Other-Dist	264	-		423					
	0586000 - Meter Expenses-Dist	3,636	13,319	8,771	3,731	7,032	6,732	13,485	11,452	10,599
	0587000 - Cust Install Exp-Other Dist	18,382	11,866	7,651	7,914	11,203	13,146	14,198	11,495	8,458
	0588100 - Misc Distribution Exp-Other	8,377	16,955	21,125	13,096	14,282	15,775	13,459	6,469	1,146
	0590000 - Supervsn and Engrng-Dist Maint	287	3,955			-	(3,672)	(6,540)	364	(2,896)
	0592100 - Maint Station Equip-Other-Dist		836		4,140			347		3,031
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	212	5,782	4,177		178	1,941	716		73
	0593000 - Maint Overhd Lines-Other-Dist	28,441	5,070	23,841	66,494	12,322	18,266	34,690	8,402	10,166
	0593100 - Right-Of-Way Maintenance-Dist		460		537					
	0594000 - Maint-Underground Lines-Dist	4,530	(3,384)	6,944	17,098	(14,140)	289	1,200	774	1,497
	0596000 - Maint-StreetLightng/Signal-Dist	196		1,343		37	12	39		16
	0597000 - Maintenance Of Meters-Dist	17,235	15,087	14,744	13,747	17,502	18,301	23,370	18,417	16,722
	0598100 - Main Misc Dist Plt-Other-Dist									
	0880000 - Gas Distribution-Other Expense			(17)						
	0901000 - Supervision-Cust Accts	2,120		2,150	3,496	2,947	3,090	3,060	2,600	3,725
	0902000 - Meter Reading Expense	16,319	14,671	12,974	14,236	15,322	16,165	15,341	15,174	15,846
	0903000 - Cust Records & Collection Exp	612	367	332	799	327	328	269	530	301
	0903100 - Cust Contracts & Orders-Local						56	77	62	70
	0903200 - Cust Billing & Acct	0	0	617	1		53	73	59	66
	0903300 - Cust Collecting-Local			494			42	58	47	53
	0910000 - Misc Cust Serv/Inform Exp			21		(21)				
	0912000 - Demonstrating & Selling Exp	24,060	24,048	24,843	24,820	24,791	24,875	25,060	25,117	25,086
	0920000 - A & G Salaries	(1,820)	1,965	2,215	2,287	11,094	(4,312)			
	0921100 - Employee Expenses	(88)	135	60	116	33	2	22	(313)	

503_DEO - Duke Energy Ohio	0921200 - Office Expenses		18	1,637	13	(1,588)	3		(75)	
	0923000 - Outside Services Employed	10		5	743	179	1,776	31	5	2
	0926000 - Employee Benefits			200						
	0926600 - Employee Benefits-Transferred	23,877	20,711	25,584	30,938	23,848	20,253	25,173	20,758	20,163
	0928030 - Professional Fees Consultant						(1,425)			
	0930200 - Misc General Expenses			17			-			
	0932000 - Maintenance Of Gen Plant-Gas		26,981							
503_DEO - Duke Energy Ohio Total		179,449	194,495	266,250	357,784	218,229	287,807	242,430	195,493	170,664
110_SERVICE_COMPANY - Duke Energy Business Service	0500000 - Suprvsn and Engrg - Steam Oper	180,230	179,563	175,311	160,627	160,128	180,287	176,878	188,099	185,623
	0500100 - Fossil Oper Superv&Engineer-Re			125						
	0501150 - Coal & Other Fuel Handling	1,897	1,857	1,965	1,920	1,888	1,885	1,782	1,922	1,924
	0501190 - Sale Of Fly Ash-Expenses			81						
	0502100 - Fossil Steam Exp-Other	29,610	24,814	28,791	36,929	38,998	18,184	28,883	27,456	27,904
	0506000 - Misc Fossil Power Expenses	47,739	58,190	69,478	86,160	65,512	44,073	41,898	53,011	45,825
	0510000 - Suprvsn and Engrng-Steam Maint	166,878	176,096	179,646	181,249	127,141	142,688	149,107	152,248	136,553
	0510100 - Suprvsn & Engrng-Steam Maint R	93	122	135	116	1325	77	138	95	97
	0511000 - Maint Of Structures-Steam	6,660	10,788	11,279	4,972	17,726	25,830	5,012	7,894	7,217
	0512100 - Maint Of Boiler Plant-Other	5,653	8,601	13,995	11,548	80,050	42,015	14,591	18,191	52,583
	0513100 - Maint Of Electric Plant-Other	7,770	8,006	1,662	2,485	5,787	5,791	2,659	5,854	2,191
	0514000 - Maintenance - Misc Steam Plant	3,619	508	244	6,946	1,942	137	3,121	250	4,249
	0528000 - Maint Suprvsn and Engrng-Nuc	2		(2)						
	0535000 - Supervsn and Engrng-Hydro Oper			-	-	-	-	-	-	-
	0546000 - Suprvsn and Engrng-CT Oper	30,488	28,584	28,928	25,859	25,702	21,858	17,991	15,607	21,547
	0547150 - Natural Gas Handling-CT	423	467	473	451	433	463	425	483	446
	0548100 - Generation Expenses-Other CT	3,440	2,939	3,446	7,505	5,186	362	1,918	1,561	1,404
	0549000 - Misc-Power Generation Expenses	34,782	42,040	51,758	48,445	45,538	41,531	29,892	39,243	33,134
	0551000 - Suprvsn and Engrng-CT Maint	10,982	10,997	11,166	12,177	9,825	14,358	14,235	16,509	17,083
	0552000 - Maintenance Of Structures-CT			2,085	901			574	502	
	0553000 - Maint-Genitg and Elect Equip-CT	1,700			828				2,369	819
	0554000 - Misc Power Generation Plant-CT	12,158	12,519	11,739	12,042	11,446	9,088	10,208	9,570	9,362
	0556000 - System Cnts & Load Dispatching		13	31	11		7	12	82	
	0557000 - Other Expenses-Oper	(507,723)	569,855	108,478	688,802	946,397	(714,322)	(779,091)	478,904	924,223
	0557451 - EA & Coal Broker Fees		1,332							
	0560000 - Supervsn and Engrng-Trans Oper	257	267	198	404	489	442	349	335	404
	0561100 - Load Dispatch-Reliability	7,224	7,312	7,487	7,473	7,276	7,348	7,296	6,479	7,029
	0561200 - Load Dispatch-Mnitor&OprTrnSys	33,219	33,608	39,986	33,982	33,603	33,097	33,462	30,253	33,029
	0561300 - Load Dispatch - TransSvc&Sch	4,485	4,535	5,277	4,591	4,535	4,492	4,528	4,108	4,453
	0561400 - Scheduling-Sys Cntrl&Disp Svs	59,323	53,961	64,071	49,198	41,156	51,604	73,947	77,519	76,681
	0561800 - Reliability-Plan&Stds Dev	163,702	110,353	209,087	159,534	159,626	154,538	154,781	155,052	154,806
	0562000 - Station Expenses	14,299	3,317	1,401	3,419	2,750	3,765	7,027	2,700	3,602
	0563000 - Overhead Line Expenses-Trans	794	752	3,748	660	590	1,505	377	6,836	355
	0565000 - Transm Of Elec By Others	1,752,319	837,207	1,343,270	1,388,871	1,282,930	1,751,354	1,719,359	1,658,316	1,727,055
	0566000 - Misc Trans Exp-Other	7,627	8,254	39,703	(27,416)	70,523	4,920	7,273	6,828	5,732
	0566100 - Misc Trans-Trans Lines Related									30
	0569000 - Maint Of Structures-Trans	1,601	430	1,537	1,525	1,900	1,283	4,211	5,841	3,476
	0569100 - Maint of Computer Hardware			21						
	0569200 - Maint Of Computer Software	21,888	8,526	9,675	14,933	7,752	8,602	7,878	10,622	8,418
	0570100 - Maint Stat Equip-Other- Trans	10,855	3,339	4,206	2,009	14,205	1,632	154	18,176	5,944
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans	12,888	1,208	94	2,100	2,248	2,894	11,665	8,226	3,679
	0571000 - Maint Of Overhead Lines-Trans	7,815	4,784	(9,106)	20,268	66,621	95,666	32,402	85,597	7,905
	0575700 - Market Facilitation-Mntr&Comp	187,987	114,302	150,113	115,444	115,526	159,558	221,730	152,239	158,025
	0580000 - Supervsn and Engrng-Dist Oper	2,177	2,238	2,346	2,411	2,745	2,654	2,815	2,785	2,815
	0581004 - Load Dispatch-Dist of Elec	35,990	24,940	57,443	23,482	24,179	24,249	31,802	22,105	22,827
	0582100 - Station Expenses-Other-Dist	4,206	1,398	1,847	2,163	5,199	5,408	1,435	2,031	1,833
	0583100 - Overhead Line Exps-Other-Dist		350	71						
	0583200 - Transf Set Rem Reset Test-Dist	3,400	2,903	2,974	2,847	3,210	2,640	3,949	2,513	2,652
	0584000 - Underground Line Expenses-Dist			4,207	(1,331)	6,500	-	-	-	-
	0586000 - Meter Expenses-Dist	12	258		64	6	24	11	2	
	0587000 - Cust Install Exp-Other Dist			5						
	0588100 - Misc Distribution Exp-Other	27,432	111,183	53,028	(97,708)	53,806	38,219	43,514	45,232	54,304
	0590000 - Supervsn and Engrng-Dist Maint	7,778	4,430	7,499	4,702	5,150	3,636	11,115	5,407	4,833
	0592100 - Maint Station Equip-Other-Dist	2,583	9,742	1,054	3,572	6,971	18,651	7,276	269	8,121
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	13,650	24,237	8,836	12,466	7,008	10,310	8,396	4,570	7,767
	0593000 - Maint Overhd Lines-Other-Dist	(18,372)	17,217	33,185	38,019	23,801	24,330	120,763	37,391	23,788
	0593100 - Right-Of-Way Maintenance-Dist	4,813	14	16	15	7	7	7	7	7
	0594000 - Maint-Underground Lines-Dist	1,560	182	2,897	1,331	1,849	6,048	434	5,408	8,910
	0595100 - Maint Line Transfers-Other-Dist	1,401	1,414	1,498	2,229	2,400	168	1,584	1,440	1,493

Duke Energy Kentucky - Electric Only
 Schedule of O&M Costs by Source
 For the Calendar Year 2021

Responsibility Center Level 02 Name - Description1	Account CB - Description	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021
536_DEK - Duke Energy Kentucky	0500000 - Suprvsn and Engrg - Steam Oper	64,097	9,893	(49,973)	11,943	9,682	7,066	10,424	7,860	11,400
	0501150 - Coal & Other Fuel Handling	47,213		104,347	49,847		78,043	76,265	44,864	54,426
	0501190 - Sale Of Fly Ash-Expenses	19,245	15,288	39,746	30,426	24,301	27,245	33,599	31,525	29,510
	0502020 - Ammonia - Qualifying	54,039	58,395	73,871	52,900	70,240	93,233	96,358	96,831	(649)
	0502040 - COST OF LIME	1,168,145	1,466,952	1,449,009	1,078,293	1,091,301	1,383,980	1,443,911	1,107,268	462,019
	0502100 - Fossil Steam Exp-Other	288,746	50,932	479,952	272,943	21,769	503,400	394,404	304,839	320,330
	0502410 - Steam Oper-Bottom Ash/Fly Ash	(18)	1,791	1,662	2,715	(705)	1,855	9,115	397	
	0505000 - Electric Expenses-Steam Oper	49,941		108,260	52,121		109,050	82,586	58,335	67,726
	0506000 - Misc Fossil Power Expenses	10,359	22,164	46,403	29,395		11,500	29,958	21,730	36,455
	0510000 - Suprvsn and Engrng-Steam Maint	1,892	2,591	3,223	3,037		2,430	2,843	4,481	19,283
	0510100 - Suprvsn & Engrng-Steam Maint R	-	-	-	-	-	-	-	-	-
	0511000 - Maint Of Structures-Steam	136,452	157,741	246,286	196,499	310,458	438,624	244,272	255,049	502,743
	0512100 - Maint Of Boiler Plant-Other	569,236	706,855	466,493	719,043	582,766	106,868	476,960	546,898	1,080,962
	0513100 - Maint Of Electric Plant-Other	36,027	49,776	272,005	55,507	72,744	96,478	(32,920)	41,653	391,089
	0514000 - Maintenance - Misc Steam Plant	183,402	302,330	(19,100)	152,859	303,855	4,196	183,242	222,971	743,132
	0530000 - Maint Of Reactor Pft Equip-Nuc	-	-	-	-	-	-	-	-	-
	0531100 - Maint Electric Pft-Other-Nuc	-	-	-	-	-	-	-	-	-
	0546000 - Suprvsn and Enginring-CT Oper	10,531	9,275	7,214	6,452	9,431	6,936	8,937	7,763	2,721
	0547150 - Natural Gas Handling-CT	-	-	-	-	-	-	-	-	-
	0548100 - Generation Expenses-Other CT	-	-	-	-	-	-	-	-	-
	0548200 - Prime Movers - Generators- CT	5,347	9,603	3,084	6,616	6,005	18,665	11,180	12,481	11,304
	0549000 - Misc-Power Generation Expenses	36,292	44,526	47,596	42,318	46,269	28,279	58,409	75,351	46,373
	0551000 - Suprvsn and Enginring-CT Maint	199	281	360	339	246	357	260	273	212
	0552000 - Maintenance Of Structures-CT	20,162	30,246	7,306	4,844		10,266	13,291	24,417	10,483
	0552220 - Solar: Maint of Structures						582	2,525		12,368
	0553000 - Maint-Gentg and Elect Equip-CT	38,127	5,244	243,817	5,923	21,874	131,402	145,551	277,857	156,870
	0554000 - Misc Power Generation Plant-CT	35,258	18,465	18,447	7,901	16,208	10,665	14,190	6,027	8,579
	0557000 - Other Expenses-Oper	30,109	1,780	13,376	14,056	10,157	6,691	6,664	(1,157,213)	(720,752)
	0557450 - Commissions/Brokerage Expense	4,248	4,110	4,110	4,277	4,556	4,036	4,110	5,054	5,878
	0561100 - Load Dispatch-Reliability		418							
	0561200 - Load Dispatch-Mnitor&OprTrnSys		1,463							
	0561300 - Load Dispatch - TransSvc&Sch		209							
	0561400 - Scheduling-Sys Cntrl&Disp Svs	126,339	122,669	162,964	159,260	211,752	251,598	248,417	124,171	197,141
	0561800 - Reliability-Plan&Stds Dev									
	0562000 - Station Expenses	592	1,221	3,170	(1,075)	13,212	1,552	1,695	983	529
	0563000 - Overhead Line Expenses-Trans				258					1,040
	0565000 - Transm Of Elec By Others			139,250			139,250			139,250
	0566000 - Misc Trans Exp-Other	53	183	177	431	(70)	585	172	223	87
	0569000 - Maint Of Structures-Trans	80	204	46	347	336	326	660	929	210
	0569100 - Maint of Computer Hardware									
	0569200 - Maint Of Computer Software		4,159	283	(1)	(3,842)				
	0570100 - Maint Stat Equip-Other- Trans	210	(1,561)	257	849	662	1,014	709	966	809
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans	2,468	692	2,451	(1,345)	3,972	1,748	4,141	3,965	5,070
	0571000 - Maint Of Overhead Lines-Trans	2,218	55,782	7,743	1,059	4,400	23,760	(7,030)	35,919	827
	0580000 - Supervsn and Engrng-Dist Oper		1,433	4,027	3,838	2,229	1,138	2,667	996	2,177
	0582100 - Station Expenses-Other-Dist	355	679	458	593	705	4,073	1,779	1,989	190
	0583100 - Overhead Line Exps-Other-Dist				26,274	38,545	16,559	15,728	35,117	2,412
	0583200 - Transf Set Rem Reset Test-Dist									
	0584000 - Underground Line Expenses-Dist	14,685	18,385	18,420	54,530	52,429	40,022	37,858	34,805	25,042
	0586000 - Meter Expenses-Dist	12,273	15,584	21,235	25,341	22,955	25,352	30,309	18,503	13,323
	0587000 - Cust Install Exp-Other Dist	34,329	40,485	36,978	48,682	44,225	58,879	43,878	40,278	31,762
	0588100 - Misc Distribution Exp-Other	28,278	60,832	44,014	46,909	56,681	54,967	45,572	49,837	28,796
	0589000 - Rents-Dist Oper	36,648	3,600	(6,210)	8,533	810	4,429	1,170	-	(18,507)
	0590000 - Supervsn and Engrng-Dist Maint	945	1,175	695	981	918	652	738	684	799
	0591000 - Maintenance Of Structures-Dist	44	190				18	18		
	0592100 - Maint Station Equip-Other-Dist	214	835	255	365	605	1,811	3,303	4,963	911
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	1,285	2,288	1,049	1,247	8,464	6,085	9,862	9,240	9,019
	0593000 - Maint Overhd Lines-Other-Dist	160,812	107,924	195,137	185,778	148,796	267,843	183,509	218,070	129,574
	0593100 - Right-Of-Way Maintenance-Dist	225,107	424,402	295,860	242,571	284,356	514,243	258,900	373,512	439,140
	0594000 - Maint-Underground Lines-Dist	5,792	4,895	9,024	15,371	24,378	17,604	5,589	6,734	6,946
	0595100 - Maint Line Transfrs-Other-Dist			1,248	2,408					769
	0596000 - Maint-StreetLightng/Signl-Dist	5,672	14,706	9,078	26,272	13,362	12,208	8,188	16,922	21,314
	0901000 - Supervision-Cust Accts	310								
	0902000 - Meter Reading Expense	10,146	10,493	10,018	11,126	11,204	9,688	14,118	10,733	11,328
	0903000 - Cust Records & Collection Exp	7,935	2,323	7,733	6,117	6,134	5,360	8,829	5,226	5,075
	0903100 - Cust Contracts & Orders-Local									
	0903200 - Cust Billing & Acct									
	0903300 - Cust Collecting-Local									
	0903891 - IC Collection Agent Revenue	(18,628)	(20,159)	(15,972)	(13,868)	(13,608)	(15,750)	(15,996)	(16,905)	(14,446)

536_DEK - Duke Energy Kentucky	0904001 - BAD DEBT EXPENSE	(40)	(20)	(20)			(20)			(20)	
	0908000 - Cust Asst Exp-Conservation Pro	(0)	(0)	(0)		(0)	(0)	(0)	(0)	(0)	
	0910000 - Misc Cust Serv/Inform Exp	(158)	(108)	(171)	(93)	(19)	(13)	(11)	(11)	(11)	
	0910100 - Exp-Rs Reg Prod/Svces-CstAccts			(1)			(2)	(5)	(2)	(2)	
	0912000 - Demonstrating & Selling Exp	209	822	349	19	434	243	163	145	847	
	0920000 - A & G Salaries	(191,911)	(221,392)	(402,678)	(195,746)	(196,121)	7,044	(195,959)	(208,937)	621,833	
	0920001 - SC O&M Labor Deferral	(893)	(1,138)	(889)	(551)	(593)	(578)	(821)	(600)	(606)	
	0921100 - Employee Expenses	(2,652)	(2,653)	(3,147)	(2,266)	(3,125)	(2,572)	(2,953)	(3,612)	(3,378)	
	0921110 - Relocation Expenses	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(19)	
	0921200 - Office Expenses	(16,224)	(12,468)	(27,388)	(17,463)	(17,647)	(26,923)	(18,708)	(22,866)	(18,299)	
	0921300 - Telephone And Telegraph Exp	(0)	(5)	(19)	(145)	(98)	(109)	(3)	173	(3)	
	0921400 - Computer Services Expenses	(6,767)	(7,142)	(10,059)	(5,078)	(6,725)	(17,149)	2,604	(15,422)	(9,594)	
	0921540 - Computer Rent (Go Only)	(27,138)	(27,546)	(28,902)	(25,252)	(26,132)	(20,204)	(29,396)	(39,364)	(29,584)	
	0921600 - Other							(1)			
	0921980 - Office Supplies & Expenses			(0)							
	0923000 - Outside Services Employed	(21,204)	(24,683)	(30,164)	(19,348)	(31,645)	(26,054)	(22,357)	(23,101)	(34,737)	
	0924000 - Property Insurance	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	
	0925000 - Injuries & Damages	2,393	9,086	2,450	8,692	900	2,134	1,071	5,866	2,955	
	0925051 - INTER-CO GEN LIAB EXP	25,799	25,799	25,799	25,799	25,799	25,799	25,799	25,799	25,799	
	0926000 - Employee Benefits	(8)	(120)	(19)	(11)	(14)	(9,534)	(1)	(13)	(23)	
	0926600 - Employee Benefits-Transferred	(122,326)	(131,035)	(189,975)	(122,183)	(106,420)	(60,132)	(160,711)	(121,942)	(149,617)	
	0928006 - State Reg Comm Proceeding	12,227	12,227	12,227	12,227	12,227	12,227	12,227	12,227	18,801	
	0929500 - Admin Exp Transf	(37,600)	(40,389)	(29,603)	(37,954)	(31,037)	(37,025)	(64,186)	(32,720)	(28,705)	
	0930200 - Misc General Expenses	(182,356)	38,505	40,318	37,132	37,032	46,169	34,789	35,434	70,100	
	0930210 - Industry Association Dues	(43,032)	43,032								
	0930230 - Dues To Various Organizations								4,399		
	0930240 - Director'S Expenses									(0)	
	0930250 - Buy/Sell Transf Employee Homes	-		(64)					38		
	0930940 - General Expenses	(0)	(1)	(1)	(1)	(1)	(2)	(0)	(1)	(3)	
	0931001 - Rents-A&G	(5,501)	(5,958)	(8,598)	(5,236)	(6,084)	(5,498)	(5,787)	(5,271)	(5,617)	
	0935100 - Maint General Plant-Elec										
	0935200 - Cust Infor & Computer Control	(103)	(283)	(99)	(119)	(337)	(28)	(18)	(193)	(41)	
	536_DEK - Duke Energy Kentucky Total	2,849,929	3,498,276	3,866,228	3,305,531	3,209,958	4,438,469	3,798,678	2,602,192	4,829,906	
	503_DEO - Duke Energy Ohio	0513100 - Maint Of Electric Plant-Other	1,497	600	2,143	605	237	804	1,017	781	7,788
		052000 - Maintenance Of Structures-CT	3,753				2,243				
		0523000 - Maint-Gentg and Elect Equip-CT	165	8,744	19,580	20,894	(17,563)	2,260	5,922	1,826	10,570
		0524000 - Misc Power Generation Plant-CT			546						
		0525000 - Other Expenses-Oper	37,880	22,569	32,705	30,727	48,504	40,076	59,200	35,585	49,474
		0526000 - Station Expenses		2,011	936	1,495	819	1,662	752	922	2,897
		0526600 - Misc Trans Exp-Other	1	296		183	244	708	277	175	136
		0529000 - Maint Of Structures-Trans					664			34	415
0529100 - Maint of Computer Hardware											
0529700 - Maint Stat Equip-Other- Trans		260		875	749	136	676			249	
0529700 - Main-Cir BrkrsTrnsf Mtrs-Trans		7,755	1,993	1,694	1,440	1,285	3,048	(548)	1,091	(1,529)	
0529700 - Maint Of Overhead Lines-Trans		6,802		(26,601)	5,938	-	82,131		81		
0528100 - Station Expenses-Other-Dist			1,783	585	91	1,598	1,055	1,089		(233)	
0528400 - Underground Line Expenses-Dist				-		84	25	425			
0528600 - Meter Expenses-Dist		6,394	17,147	17,234	13,324	17,621	12,894	20,316	18,219	9,444	
0528700 - Cust Install Exp-Other Dist		11,713	11,639	7,786	14,412	17,336	13,081	18,669	12,301	12,011	
05288100 - Misc Distribution Exp-Other		2,540	5,293	6,913	4,917	2,895	8,732	6,689	11,001	7,861	
0529000 - Supervsn and Engrng-Dist Maint		71	5,017	3,740	533	(3,586)	858	626	(659)	499	
05291000 - Maintenance Of Structures-Dist								64			
0529100 - Maint Station Equip-Other-Dist			680	716				4,912	2,606	5,515	
0529200 - Cir BrkrsTrnsf Mtrs Rely-Dist		4,519	3,548	4,425	670	1,702	4,991	3,002	10,642	(13,503)	
05293000 - Maint Overhd Lines-Other-Dist		5,942	9,224	5,601	7,973	(428)	12,265	36,427	13,070	27,692	
05294000 - Maint-Underground Lines-Dist		676	203	804	1,858	351	87	1	590	2,586	
05296000 - Maint-StreetLightng/Signal-Dist		2,349			837	(1,796)			1,254	287	
0529700 - Maintenance Of Meters-Dist		18,260	21,005	18,170	19,795	19,413	19,595	21,843	16,042	16,853	
0901000 - Supervision-Cust Accts		4,439	4,715	4,112	2,816	3,728	6,477	4,582	3,205	4,535	
0902000 - Meter Reading Expense		12,750	11,977	12,907	14,073	13,262	11,436	17,413	14,647	8,336	
0903000 - Cust Records & Collection Exp		1,338	2,726	5,452	3,627	2,714	3,141	3,493	1,108	984	
0903100 - Cust Contracts & Orders-Local		150	129	122	317	405			2		
0903200 - Cust Billing & Acct		(55)	122	333	734	1,045	0	0	3	0	
0903300 - Cust Collecting-Local		111	97	92	214	296			2		
0912000 - Demonstrating & Selling Exp		25,443	25,552	26,506	25,914	26,063	26,712	29,071	27,988	26,944	
0920000 - A & G Salaries			230	1,151			315	462			
0921100 - Employee Expenses			10	2	9				1		
0921200 - Office Expenses			10		9	10	21	10	9	6	
0923000 - Outside Services Employed				22			209				
0926000 - Employee Benefits							79				
0926600 - Employee Benefits-Transferred		23,556	28,650	29,883	28,476	18,791	28,054	38,050	28,115	28,925	
0930200 - Misc General Expenses											
503_DEO - Duke Energy Ohio Total		178,307	185,970	178,432	202,633	158,071	281,393	273,765	200,407	208,975	
110_SERVICE_COMPANY - Duke Energy Business Service		0500000 - Suprvsn and Engrg - Steam Oper	205,826	191,667	188,978	180,512	191,424	196,170	152,659	175,362	160,618
	0501150 - Coal & Other Fuel Handling	5,999	5,068	5,479	3,208	2,770	3,525	3,007	3,288	3,325	
	0501190 - Sale Of Fly Ash-Expenses					295	303	304	300		
	0502100 - Fossil Steam Exp-Other	28,699	29,074	27,272	29,099	26,254	29,329	29,348	33,119	31,047	
	0505000 - Electric Expenses-Steam Oper								24	141	
	0506000 - Misc Fossil Power Expenses	52,203	58,620	54,494	60,415	64,174	48,972	51,398	43,468	40,873	

110_SERVICE_COMPANY - Duke Energy Business Service	0510000 - Suprvsn and Engrng-Steam Maint	159,777	176,021	173,574	161,874	167,663	179,896	178,708	164,992	167,362
	0510100 - Suprvsn & Engrng-Steam Maint R	113	110	100	100	418	133	125	140	(325)
	0511000 - Maint Of Structures-Steam	4,838	4,185	8,645	5,270	4,362	4,671	6,125	4,019	6,845
	0512100 - Maint Of Boiler Plant-Other	4,248	6,626	2,240	2,641	9,817	2,048	2,602	3,563	14,762
	0513100 - Maint Of Electric Plant-Other	5,447	947	15,200	2,815	17,348	26,548	(19,573)	4,477	7,821
	0514000 - Maintenance - Misc Steam Plant	1,639	461		6,548	3,913	5,139	1,798	232	613
	0535000 - Supervsn and Engrng-Hydro Oper									
	0546000 - Suprvsn and Enginring-CT Oper	15,702	22,183	18,112	18,546	18,941	17,916	18,585	17,505	15,804
	0547150 - Natural Gas Handling-CT	461	446	483	471	488	469	486	499	504
	0548100 - Generation Expenses-Other CT	2,449	1,737	1,778	1,643	2,016	1,163	1,946	1,884	1,466
	0548200 - Prime Movers - Generators- CT									
	0549000 - Misc-Power Generation Expenses	39,649	37,369	41,929	45,082	37,039	51,640	29,154	51,664	15,837
	0551000 - Suprvsn and Enginring-CT Maint	15,958	16,859	16,934	16,144	15,895	19,712	16,619	13,187	14,444
	0552000 - Maintenance Of Structures-CT	198								550
	0553000 - Maint-Genrg and Elect Equip-CT			9,511	1,654	3,428	17,567	12,011	(21,959)	3,632
	0554000 - Misc Power Generation Plant-CT	9,067	9,167	10,738	8,749	9,777	8,403	9,579	9,773	10,906
	0556000 - System Cnts & Load Dispatching	22		11	5	18	17		8	8
	0557000 - Other Expenses-Oper	(392,066)	619,121	(285,145)	60,703	216,220	198,693	1,382,255	651,394	1,353,309
	0557451 - EA & Coal Broker Fees				2,668					
	0560000 - Supervsn and Engrng-Trans Oper	292	358	386	480	413	400	381	315	333
	0561100 - Load Dispatch-Reliability	7,142	7,010	7,102	7,046	7,037	(2,348)	6,290	6,066	6,007
	0561200 - Load Dispatch-Mntor&OprTrnSys	47,053	32,575	32,708	32,734	32,629	(497)	29,708	28,821	28,846
	0561300 - Load Dispatch - TransSvc&Sch	4,422	4,391	4,422	4,416	4,408	(318)	3,990	3,872	3,868
	0561400 - Scheduling-Sys Cntrl&Disp Svs	65,897	67,182	60,851	53,693	53,364	73,951	77,653	73,665	70,775
	0561800 - Reliability-Plan&Stds Dev	177,226	177,456	260,809	177,435	178,063	178,543	179,554	179,359	179,231
	0562000 - Station Expenses	9,852	5,116	16,252	2,900	2,598	4,549	9,908	4,709	3,244
	0563000 - Overhead Line Expenses-Trans	377	379	221	1,220	421	444	444	451	8,026
	0565000 - Transm Of Elec By Others	1,699,005	1,420,807	1,767,359	1,628,738	1,355,175	1,816,278	1,642,488	1,465,919	1,566,721
	0566000 - Misc Trans Exp-Other	5,688	7,004	7,876	7,113	6,986	8,915	5,552	6,255	9,948
	0566100 - Misc Trans-Trans Lines Related	781	1,839	2,074	1,151	1,150	1,095	924	870	727
	0569000 - Maint Of Structures-Trans	1,238	2,032	555	1,670	2,791	2,050	3,809	4,544	2,278
	0569100 - Maint of Computer Hardware						21			
	0569200 - Maint Of Computer Software	9,972	6,840	12,239	9,264	6,570	7,145	5,480	5,497	5,870
	0570100 - Maint Stat Equip-Other- Trans	3,114	3,231	1,408	1,813	6,770	4,153	1,445	3,936	9,065
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans	30,798	3,700	1,508	1,558	2,201	5,948	6,310	424	571
	0571000 - Maint Of Overhead Lines-Trans	51,952	(32,872)	10,617	(1,374)	6,009	4,701	22,188	4,258	3,769
	0575700 - Market Facilitation-Mntr&Comp	182,960	178,911	166,713	143,867	127,423	186,066	198,811	186,701	168,254
	0580000 - Supervsn and Engrng-Dist Oper	2,050	2,181	2,886	2,613	3,924	2,566	2,071	2,394	2,058
	0581004 - Load Dispatch-Dist of Elec	25,015	24,728	24,907	25,629	49,389	25,959	34,323	24,312	44,497
	0582100 - Station Expenses-Other-Dist	11,194	3,834	4,269	482	5,371	13,725	10,571	8,481	1,533
	0583100 - Overhead Line Exps-Other-Dist							68		
	0583200 - Transf Set Rem Reset Test-Dist	2,999	3,051	3,085	2,931	2,920	3,013	3,996	2,956	3,094
	0584000 - Underground Line Expenses-Dist	(6,955)								
	0586000 - Meter Expenses-Dist				1,544		181		338	
	0587000 - Cust Install Exp-Other Dist							730		
	0588100 - Misc Distribution Exp-Other	53,930	40,475	42,112	42,427	41,379	49,088	42,524	44,273	46,905
	0590000 - Supervsn and Engrng-Dist Maint	5,776	2,851	3,368	5,206	4,897	4,779	5,393	5,034	3,757
	0591000 - Maintenance Of Structures-Dist	696	1,860				65			
	0592100 - Maint Station Equip-Other-Dist	3,399	6,841	2,033	1,753	6,132	10,541	14,362	20,464	1,995
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	13,677	18,311	7,903	5,445	15,718	15,043	17,137	11,225	11,018
	0593000 - Maint Overhd Lines-Other-Dist	23,586	5,406	14,133	23,412	22,556	27,157	34,103	32,592	17,760
	0593100 - Right-Of-Way Maintenance-Dist	7	10	15	15	6	801	691	5,831	6,596
	0594000 - Maint-Underground Lines-Dist	6,380	2,023	2,979	1,182	13,498	6,029	5,363		1,126
	0595100 - Maint Line Transfrs-Other-Dist	1,338	1,413	1,377	1,452	1,462	1,391	1,245	1,490	1,445
	0596000 - Maint-StreetLightng/Signl-Dist		300							
	0597000 - Maintenance Of Meters-Dist	3,514	3,886	2,430	1,885	1,024	1,268	799	591	1,997
	0901000 - Supervision-Cust Accts	106	93	127	118	140	140	143	138	136
	0902000 - Meter Reading Expense							50		
	0903000 - Cust Records & Collection Exp	201,255	173,162	376,809	29,831	185,138	181,039	274,676	313,859	222,681
	0903100 - Cust Contracts & Orders-Local	7,465	7,800	6,939	7,243	7,663	6,631	7,304	8,336	7,082
	0903200 - Cust Billing & Acct	46,143	46,178	52,732	50,019	42,946	44,487	47,199	46,728	45,154
	0903300 - Cust Collecting-Local	7,541	7,865	7,382	7,527	7,783	6,683	8,570	7,698	7,060
	0903400 - Cust Receiv & Collect Exp-Edp	232	178	259	213	242	228	273	247	236
	0904001 - BAD DEBT EXPENSE	4,712	(200)	(468)	(114)	4,094	641	(1,305)	50	2,888
	0908000 - Cust Asst Exp-Conservation Pro	0	0	0	0	0	0	0	0	0
	0910000 - Misc Cust Serv/Inform Exp	12,414	10,009	12,284	11,343	10,541	11,525	9,101	14,656	14,274
	0910100 - Exp-Rs Reg Prod/Svces-CstAccts	2,112	793	1,517	42,553	21,870	4,870	1,103	857	1,796
	0912000 - Demonstrating & Selling Exp	39,893	43,981	17,495	15,480	18,889	12,773	20,602	28,116	14,314

536_DEK - Duke Energy Kentucky	0903300 - Cust Collecting-Local												
	0903891 - IC Collection Agent Revenue	(28,627)	(24,840)	(17,545)		(18,809)	(37,516)	(22,770)	(21,288)	(20,311)			
	0904001 - BAD DEBT EXPENSE				(20)		(20)						
	0908000 - Cust Asst Exp-Conservation Pro	(0)	(0)		(0)	(0)	(1)	(0)	(20)	(0)			
	0910000 - Misc Cust Serv/Inform Exp		(4)	(2)	(2)			-					
	0910100 - Exp-Rs Reg Prod/Svces-CstAccts	27		0			(120)	(0)	(0)				
	0912000 - Demonstrating & Selling Exp	486	280	729	331	1,315	1,215	442	309	309			
	0920000 - A & G Salaries	(159,055)	(175,362)	(72,854)	(172,545)	(173,633)	17,338	(173,987)	(181,706)	(332,209)			
	0920001 - SC O&M Labor Deferral	(284)	(264)	(247)	(295)	(287)	(290)	(464)	(267)	(301)			
	0920100 - Salaries & Wages - Proj Supt -												
	0921100 - Employee Expenses	(2,423)	(2,883)	(2,264)	(4,348)	(4,809)	(4,745)	(4,077)	(5,230)	(4,873)			
	0921101 - Employee Exp - NC												
	0921110 - Relocation Expenses	(0)	(0)	(0)	(0)	(0)	(0)		(1)	(0)			
	0921200 - Office Expenses	(16,773)	(19,653)	(16,434)	(17,035)	(17,578)	(17,420)	(14,626)	(15,927)	(16,796)			
	0921300 - Telephone And Telegraph Exp	(0)	(2)	(3)	(5)	(0)	(0)	(0)	(4)	(2)			
	0921400 - Computer Services Expenses	(5,777)	(3,739)	(9,060)	(3,205)	(12,185)	(8,726)	(5,638)	(5,509)	(4,719)			
	0921540 - Computer Rent (Go Only)	(25,126)	(25,843)	(25,871)	(23,825)	(24,022)	(22,401)	(19,795)	(19,506)	(19,905)			
	0921600 - Other	(1)	(1)				(1)		(2)	(1)			
	0921980 - Office Supplies & Expenses		(0)										
	0923000 - Outside Services Employed	(9,992)	(30,468)	(28,473)	(18,325)	(21,223)	(25,171)	(20,489)	(27,528)	(21,297)			
	0924000 - Property Insurance	(0)	(0)	(0)		(1)	(0)	(0)	(0)	(0)			
	0925000 - Injuries & Damages			300	2,981	899	360	500	745				
	0925051 - INTER-CO GEN LIAB EXP	21,832	21,832	21,832	21,832	21,832	21,832	21,832	21,832	21,832			
	0926000 - Employee Benefits	(2)	(4)	(16)	(0)	(6)	(15,109)	(10)	(9)	(1)			
	0926430 - Employees' Recreation Expense		(2)				(0)						
	0926600 - Employee Benefits-Transferred	(137,775)	(121,037)	(103,251)	(137,219)	(128,899)	(67,805)	(174,266)	(142,929)	(194,156)			
	0928006 - State Reg Comm Proceeding	12,227	12,227	12,227	12,227	12,227	12,227	12,227	12,227	12,227			
	0929500 - Admin Exp Transf	(48,396)	(40,752)	(38,793)	(47,805)	(32,882)	(40,367)	(86,775)	(41,587)	(48,890)			
	0930150 - Miscellaneous Advertising Exp					(0)							
	0930200 - Misc General Expenses	24,403	31,385	29,087	30,860	26,894	27,124	27,458	27,768	25,833			
	0930230 - Dues To Various Organizations	(0)								4,492			
	0930250 - Buy/Sell Transf Employee Homes	(2)	(93)	(4)	(123)	(59)	(137)	(469)	(823)	3			
	0930600 - Leased Circuit Charges-Other			-									
	0930940 - General Expenses	(19)	(1)	(1)	(1)	(1)	(2)	24	(1)	(1)			
	0931001 - Rents-A&G	(4,980)	(5,184)	(5,034)	(5,524)	(5,156)	(5,288)	(4,934)	(4,997)	(5,377)			
	0935100 - Maint General Plant-Elec												
	0935200 - Cust Infor & Computer Control	(139)	(111)	(125)	(49)	(156)	(41)	(892)	(32)	170			
536_DEK - Duke Energy Kentucky Total		3,052,449	4,587,593	4,283,532	3,561,988	4,007,674	3,631,610	3,431,924	1,640,875	4,437,926			
503_DEO - Duke Energy Ohio		3,044	542	658	1,427	3,444	211	2,755	3,623	1,613			
	0513100 - Maint Of Electric Plant-Other												
	0552000 - Maintenance Of Structures-CT					1,948							
	0553000 - Maint-Genlg and Elect Equip-CT	1,835	2,469	3,813	3,191	2,223	11,944	6,799	15,163	2,729			
	0557000 - Other Expenses-Oper	17,146	25,551	40,076	14,970	37,434	28,961	24,236	25,376	21,152			
	0561100 - Load Dispatch-Reliability									3			
	0561200 - Load Dispatch-Monitor&OprTrnSys									10			
	0561300 - Load Dispatch - TransSvc&Sch									1			
	0562000 - Station Expenses	3,285	336			28	9,830	(2,952)	213	1,680			
	0566000 - Misc Trans Exp-Other	203	572	215	202	165	(699)	68	214	4			
	0569000 - Maint Of Structures-Trans	1,326					636						
	0570100 - Maint Stat Equip-Other- Trans	1,842	2,527	748		4,533	88	1,389					
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans	381	-	-	413		600		268	3,556			
	0571000 - Maint Of Overhead Lines-Trans	1,469		19,492	2,637	5,784	1,037	14,530	14,432				
	0582100 - Station Expenses-Other-Dist	150		65		5,740	(1,154)	7,197	(9)				
	0586000 - Meter Expenses-Dist	11,639	13,877	39,514	38,635	36,857	32,428	19,831	20,021	13,450			
	0587000 - Cust Install Exp-Other Dist	6,764	8,901	8,078	6,683	7,512	5,354	8,094	7,165	4,843			
	0588100 - Misc Distribution Exp-Other	1,306	4,651	4,122	9,059	3,533	950	2,277	4,375	1,863			
	0590000 - Supervsn and Engrng-Dist Maint	785	1,114	1,010	1,057	1,192	920	1,219	1,541	1,447			
	0592100 - Maint Station Equip-Other-Dist					111	223	1,139	364	32			
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	498	2,870	760			13,428	2,452	2,910				
	0593000 - Maint Overhd Lines-Other-Dist	4,999	24,861	12,755	18,985	16,493	15,936	46,357	16,245	9,938			
	0593100 - Right-Of-Way Maintenance-Dist						545						
	0594000 - Maint-Underground Lines-Dist	504	1,680	2,457	302	1,475	535	1,365	1,579	4,290			
	0596000 - Maint-StreetLightng/Signl-Dist	(9)	10		1,358	27	248		226	178			
	0597000 - Maintenance Of Meters-Dist	27,531	20,262	22,357	22,727	25,464	23,458	29,935	24,062	25,131			
	0901000 - Supervision-Cust Accts	4,910	3,488	5,194	3,809	3,267	3,754	3,481	3,538	3,299			
	0902000 - Meter Reading Expense	8,150	10,187	10,263	10,859	6,924	7,523	10,272	6,816	6,028			
	0903000 - Cust Records & Collection Exp	3,283	4,593	3,886	2,081	1,537	1,364	2,070	1,416	1,225			
	0903100 - Cust Contracts & Orders-Local	316	131	198									
	0903200 - Cust Billing & Acct	299	124	161	0	0	0	0	0	0			
	0903300 - Cust Collecting-Local	239	99	128									
	0912000 - Demonstrating & Selling Exp	27,329	29,078	27,541	27,476	28,064	28,629	34,162	28,325	27,804			
	0913001 - Advertising Expense												
	0920000 - A & G Salaries												
	0921100 - Employee Expenses		2	9	11	4	18	18	20	16			
	0921200 - Office Expenses	(53)	6	1	1								
	0926000 - Employee Benefits		96		53			178		37			
	0926600 - Employee Benefits-Transferred	24,242	27,043	29,772	28,978	28,344	27,703	36,086	28,387	22,398			
	0930200 - Misc General Expenses			46		-		46	(46)				
503_DEO - Duke Energy Ohio Total		153,411	185,070	232,560	195,674	222,107	213,710	240,360	206,321	167,159			
110_SERVICE_COMPANY - Duke Energy Business Service	0500000 - Suprvsn and Engrg - Steam Oper	201,921	195,762	189,680	187,323	186,548	176,885	197,045	163,121	162,496			

110_SERVICE_COMPANY - Duke Energy Business Service	0501150 - Coal & Other Fuel Handling	3,165	3,401	3,486	3,824	3,300	3,195	3,228	3,871	3,429
	0501190 - Sale Of Fly Ash-Expenses	308	277	384	349	357	352	360	362	357
	0502100 - Fossil Steam Exp-Other	33,943	29,325	30,056	27,839	23,410	21,084	11,228	13,192	16,090
	0506000 - Misc Fossil Power Expenses	35,172	73,329	56,676	53,955	49,994	80,314	55,270	58,577	61,085
	0510000 - Suprvsn and Engrng-Steam Maint	149,267	153,210	152,168	137,427	137,630	128,743	130,639	144,195	151,785
	0510100 - Suprvsn and Engrng-Steam Maint R			13	15		16	35	2	
	0511000 - Maint Of Structures-Steam	3,757	3,465	4,351	3,682	3,200	1,925	3,588	6,553	3,057
	0512100 - Maint Of Boiler Plant-Other	3,263	2,697	2,287	1,861	11,032	1,682	1,687	7,794	23,097
	0513100 - Maint Of Electric Plant-Other	2,673	2,467	3,184	13,446		12,280	8,655	18,932	11,350
	0514000 - Maintenance - Misc Steam Plant	60	176	2			2,957	1,286	1,288	970
	0546000 - Suprvsn and Engrng-CT Oper	16,667	15,337	16,797	17,316	17,440	17,334	16,369	19,780	19,472
	0547150 - Natural Gas Handling-CT	485	472	577	545	548	582	453	442	407
	0548100 - Generation Expenses-Other CT	1,813	2,027	2,070	1,977	1,848	1,750	2,123	298	3,242
	0548200 - Prime Movers - Generators- CT			0	0	3	20	0	0	4
	0549000 - Misc-Power Generation Expenses	25,137	53,729	40,460	43,835	44,525	48,352	44,155	39,907	41,795
	0551000 - Suprvsn and Engrng-CT Maint	15,113	15,278	16,060	15,793	15,564	16,198	16,435	13,932	14,979
	0552000 - Maintenance Of Structures-CT			12,192	510	879	221			
	0553000 - Maint-Gengt and Elect Equip-CT	316	301	3,278	7,605	5,860	1,376	18	1,757	3,407
	0554000 - Misc Power Generation Plant-CT	8,685	9,644	10,992	10,204	9,296	9,048	8,708	9,142	7,442
	0556000 - System Cnts & Load Dispatching	28			9					
	0557000 - Other Expenses-Oper	(580,913)	(1,465,708)	(790,918)	(93,038)	24,118	2,084,116	2,408,367	326,823	1,769,186
	0557451 - EA & Coal Broker Fees	900					2,500	10,000		
	0560000 - Supervsn and Engrng-Trans Oper	347	294	380	377	481	405	274	304	156
	0561100 - Load Dispatch-Reliability	5,643	6,872	7,273	6,612	6,391	6,611	6,215	6,543	6,307
	0561200 - Load Dispatch-Minitor&OprTrnSys	28,046	32,245	33,319	31,198	29,859	30,398	29,216	31,072	29,903
	0561300 - Load Dispatch - TransSvc&Sch	3,747	4,338	4,502	4,190	4,019	4,099	3,927	4,171	4,015
	0561400 - Scheduling-Sys Cntrl&Disp Svs	69,330	64,111	64,375	59,001	53,747	31,389	70,234	69,004	56,453
	0561800 - Reliability-Plan&Stds Dev	161,303	169,497	170,327	169,769	170,239	171,368	172,494	172,282	172,096
	0562000 - Station Expenses	7,135	10,455	8,407	6,933	8,407	8,916	11,388	4,089	3,144
	0563000 - Overhead Line Expenses-Trans	3,088	3,954	279	1,556		48,960			1,002
	0565000 - Transm Of Elec By Others	1,461,585	1,547,297	1,705,953	1,438,319	1,626,625	1,937,412	1,747,987	1,926,407	1,662,773
	0566000 - Misc Trans-Trans Lines Related	5,402	5,956	7,214	4,964	6,018	8,160	5,129	6,925	4,408
	0566100 - Misc Trans-Trans Lines Related	558	645	748	746	718	644	244	221	271
	0569000 - Maint Of Structures-Trans	761	1,234	736	3,666	361	2,436	1,731		324
	0569200 - Maint Of Computer Software	8,502	5,268	5,582	6,139	5,733	5,570	4,597	5,161	5,085
	0570100 - Maint Stat Equip-Other- Trans	4,746	2,541	5,797	5,882	6,188	2,966	6,315	4,453	394
	0570200 - Main-Cir BrkrsTrnsf Mtrs-Trans	3,439	4,685	2,898	11,956	7,799	2,581	9,306	8,437	10,384
	0571000 - Maint Of Overhead Lines-Trans	4,076	4,595	4,976	6,926	4,342	9,265	48,614	5,789	9,726
	0575700 - Market Facilitation-Mntr&Comp	56,735	104,226	141,665	166,164	148,552	179,900	181,032	177,672	166,468
	0580000 - Supervsn and Engrng-Dist Oper	2,042	1,851	3,145	2,996	3,657	4,116	3,675	3,325	2,552
	0581004 - Load Dispatch-Dist of Elec	33,510	27,022	31,581	(5,654)	29,148	19,915	34,230	19,574	82,330
	0582100 - Station Expenses-Other-Dist	9,106	14,352	13,183	2,500	7,815	9,892	(1,432)	2,932	942
	0583200 - Transf Set Rem Reset Test-Dist	2,509	3,372	3,443	2,680	3,061	3,069	4,246	3,270	3,277
	0587000 - Cust Install Exp-Other Dist							372	282	451
	0588100 - Misc Distribution Exp-Other	35,579	43,338	47,247	48,294	49,442	46,490	48,549	56,629	52,148
	0590000 - Supervsn and Engrng-Dist Maint	4,771	4,192	6,376	6,152	6,706	5,844	5,227	7,279	6,134
	0592100 - Maint Station Equip-Other-Dist	13,925	10,814	3,148	3,891	5,479	4,426	3,580	5,349	4,963
	0592200 - Cir BrkrsTrnsf Mtrs Rely-Dist	9,598	14,227	17,804	14,263	18,149	19,435	16,581	22,470	18,978
	0593000 - Maint Overhd Lines-Other-Dist	12,443	32,333	40,347	27,211	20,287	25,722	82,509	27,749	22,556
	0593100 - Right-Of-Way Maintenance-Dist	3,808	897	921	554	876	917	870	679	862
	0594000 - Maint-Underground Lines-Dist	5,684		4,760		2,005	4,393	69	867	8,876
	0595100 - Maint Line Transfrs-Other-Dist	1,419	1,540	1,371	1,488	1,584	1,326	1,365	1,527	1,482
	0597000 - Maintenance Of Meters-Dist	2,791	3,028	489	918	2,508	1,417	1,451	1,476	1,593
	0599023 - Other Misc Expense	1	(1)							
	0823000 - Storage-Gas Losses									
	0901000 - Supervision-Cust Accts	(1,242)								
	0903000 - Cust Records & Collection Exp	382,442	290,356	285,105	333,406	308,425	235,998	299,070	254,191	180,609
	0903100 - Cust Contracts & Orders-Local	14,253	18,115	22,048	18,022	19,495	13,814	19,603	(407)	8,976
	0903200 - Cust Billing & Acct	56,006	55,634	67,676	49,514	54,788	49,072	57,053	38,854	46,389
	0903300 - Cust Collecting-Local	12,657	15,881	19,569	15,178	16,344	12,618	18,312	645	7,960
	0903400 - Cust Receiv & Collect Exp-Edp	223	230	235	222	277	267	292	291	271
	0904000 - Uncollectible Accounts				(32,837)	(10,704)	(10,419)	(26,479)	(26,903)	(826,433)
	0904001 - BAD DEBT EXPENSE	862	4,195	176	8,052	6,988	236	57,636	(34,616)	2,507
	0904003 - Cust Acctg-Loss On Sale-A/R									
	0905000 - Misc Customer Accts Expenses									1
	0908000 - Cust Asst Exp-Conservation Pro	0	0		0		1	0	131	1
	0910000 - Misc Cust Serv/Inform Exp	17,604	12,996	26,462	12,169	12,762	10,764	18,617	9,899	9,192
	0910100 - Exp-Rs Reg Prod/Svces-CstAccts	5,644	1,564	2,639	1,803	13,250	2,689	2,167	2,355	3,414
	0912000 - Demonstrating & Selling Exp	30,078	16,586	19,981	16,438	18,644	19,740	16,682	22,273	25,245

Duke Energy Kentucky - Electric Only
Schedule of O&M Costs by Source
For the Forecast Period July 2023 - June 2024

Account	DEK	DEO	DEBS	Other Affiliates	Total
0500000	(2,498,201)		2,151,532	974,440	627,771
0501150	730,431		39,998	272,889	1,043,317
0501180				3,780	3,780
0501190			2,505	4,122,000	4,124,505
0502020	281,300			-	281,300
0502040	7,527,600			-	7,527,600
0502100	3,170,789		367,273	-	3,538,062
0505000	1,299,923			-	1,299,923
0506000	1,329,565		1,046,576	3,783	2,379,924
0510000	33,311		2,768,804	86,752	2,888,868
0510100	(0)		1,714	13,322	15,036
0511000	3,950,140		109,935	560,499	4,620,575
0512100	10,872,465			-	10,872,465
0513100	2,379,791			-	2,379,791
0514000	430,188			-	430,188
0546000	(157,759)		242,205	-	84,445
0547150	(0)		5,900	26,363	32,263
0548100	(0)		19,640	-	19,640
0548200	169,662			916	170,578
0549000	503,112		168,021	1,076	672,209
0551000	22,055		441,165	472	463,693
0552000	202,758			-	202,758
0553000	516,817			-	516,817
0554000	331,566			-	331,566
0556000			90,366	-	90,366
0557000	1,788,756	65,108	3,771,450	391,156	6,016,470
0557450	74,120			-	74,120
0561100			99,347	17,935	117,282
0561200			228,833	62,773	291,606
0561300			109,382	8,968	118,350
0561400	1,200,000			-	1,200,000
0561800			2,000,000	-	2,000,000
0562000	9,386		87,591	-	96,977
0563000	7,848		29,504	-	37,352
0565000			20,970,377	-	20,970,377
0566000	91,416		237,850	27,677	356,942
0566100			5,897	-	5,897
0569000	4,803		5,834	-	10,636
0569200			51,617	19,341	70,957
0570100	27,937		36,980	-	64,917
0570200	64,155		6,435	-	70,591
0571000	1,086,535		485,693	52,104	1,624,331
0575700	11,255		2,895,600	-	2,906,855
0581004			388,683	-	388,683
0582100	4,926		42,469	-	47,394
0583100	149,921			-	149,921
0583200	52,239		38,309	45,618	136,166
0584000	344,829			-	344,829
0586000	114,049	92,947		-	206,996
0587000	740,207	44,738		9,486	794,431
0588100	817,583	15,622	1,693,043	189,345	2,715,594
0590000	34,520	15,344	63,363	-	113,228
0591000	1,227		13,588	-	14,815
0592100	39,541		83,311	-	122,852
0592200	87,655			-	87,655
0593000	2,190,367		1,139,427	47,056	3,376,851
0593100	4,744,220		(7,986)	-	4,736,233
0594000	78,676			-	78,676
0595100	21,838		17,102	-	38,940
0596000	20,274	149,054		-	169,328
0597000	52,564	246,233		45,745	344,542

0598100	9,431			-	9,431
0901000		(12,536)	5,093	4,057	(3,386)
0902000		129,356		10,107	139,464
0903000	63,002	33,704	2,126,694	64,736	2,288,135
0903100	7,546	4,892	253,686	200,528	466,651
0903200			316,802	313,887	630,688
0903300			297,039	232,827	529,866
0903400			31,669	19,263	50,932
0903891	(187,567)			-	(187,567)
0904003			1,316,781	-	1,316,781
0910000			169,632	95	169,727
0910100			103,987	33,770	137,757
0912000		231,514	248,146	923,793	1,403,453
0913001			39,096	-	39,096
0920000	(2,309,597)		8,288,570	2,113,170	8,092,143
0921100	(54,456)		257,236	107,367	310,147
0921110			11	-	11
0921200	144,124		51,423	28,038	223,584
0921400	(290,062)		456,478	9,308	175,725
0921540	(94,598)		103,179	1,456	10,037
0921600			58	-	58
0921980			2,480,242	-	2,480,242
0923000	(369,551)		1,572,252	344,497	1,547,198
0924000			2,687	-	2,687
0924050			1,621,250	-	1,621,250
0924980			181,718	-	181,718
0925000	89,514		183,881	-	273,394
0925051	357,671			-	357,671
0925200			5,345	-	5,345
0925980			15,217	-	15,217
0926000	2,444		4,385,653	-	4,388,097
0926600	(1,937,909)	202,335	3,723,646	913,549	2,901,622
0926999			(1,101,264)		(1,101,264)
0928006	111,664		708,940	-	820,604
0929500	(896,380)			-	(896,380)
0930150			351,440	-	351,440
0930200	342,773		126,348	(13,126)	455,995
0930210			42,878	-	42,878
0930220			98,500	-	98,500
0930230			69,305	-	69,305
0930240			52,003	-	52,003
0930250	(424)		424	1,200	1,200
0930940			1,674	-	1,674
0931001			18,381	34,104	52,485
0931008			2,601,371	-	2,601,371
Total	39,943,984	1,218,312	73,156,806	12,326,123	126,645,224

Forecasted test year O&M is approximately \$2 million higher than 2022 actuals due to intercompany rent expense for the Electric System Operation Control Center being charged to KY from OH beginning 1/1/23.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-123

REQUEST:

Refer to the response to the immediately preceding question.

a. Provide a schedule for each year that further details the charges from DEBS by FERC expense account/subaccount into directly assigned and allocated. For those charges that are allocated, provide the total DEBS expense, the allocation factor utilized, and the amount charged to Duke Kentucky.

b. Provide a schedule for each year that further details the charges from Duke Ohio by FERC expense account/subaccount into directly assigned and allocated. For those charges that are allocated, provide the total Duke Ohio expense, the allocation factor utilized, and the amount charged to Duke Kentucky.

RESPONSE:

a. Please see AG-DR-01-123(a) Attachment.

b. Please see AG-DR-01-123(b) Attachment.

PERSON RESPONSIBLE:

Jeffrey R. Setser – a.
Danielle L. Weatherston – b.

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

FERC AC	Sum of Amount		Grand Total
	Allocated	Direct	
0403		490,617.96	490,617.96
0408	373,341.69	604,325.82	977,667.51
0415		(785,854.95)	(785,854.95)
0416		3,566.01	3,566.01
0417	5,095.59	1,698.10	6,793.69
0419	(7,527.55)		(7,527.55)
0426	119,227.61	314,136.00	433,363.61
0431	117,699.57	203,680.69	321,380.26
0451		1,238.41	1,238.41
0454	(422.00)	(80,365.16)	(80,787.16)
0457	-	(156,183.30)	(156,183.30)
0500	294,946.04	1,912,867.58	2,207,813.62
0501	93.91	21,290.96	21,384.87
0502	54,205.82	316,484.48	370,690.30
0506	72,479.90	654,922.42	727,402.32
0510	210,296.67	1,598,484.66	1,808,781.33
0511	10,568.98	68,308.97	78,877.95
0512		587,868.91	587,868.91
0513	20,581.17	57,216.77	77,797.94
0514		23,550.28	23,550.28
0528	224.40	(1.94)	222.46
0535	-	-	-
0546		262,257.22	262,257.22
0547		3,436.12	3,436.12
0548		33,791.38	33,791.38
0549	(1,745.97)	275,375.90	273,629.93
0551		168,893.63	168,893.63
0552		18,985.67	18,985.67
0553	182.32	19,244.26	19,426.58
0554	3.84	338.89	342.73
0556		185.36	185.36
0557	6.65	2,644,740.66	2,644,747.31
0560		4,241.90	4,241.90
0561	1,908.52	3,395,185.33	3,397,093.85
0562		53,324.94	53,324.94
0563		11,630.61	11,630.61
0565		18,855,742.30	18,855,742.30
0566	1,073.32	144,999.07	146,072.39

DUKE ENERGY KENTUCKY
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ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

FERC AC	Sum of Amount		Grand Total
	Allocated	Direct	
0569	377.31	148,641.45	149,018.76
0570		133,679.62	133,679.62
0571		332,299.88	332,299.88
0575		1,722,632.17	1,722,632.17
0580		34,155.28	34,155.28
0581	45.89	369,014.62	369,060.51
0582		34,819.12	34,819.12
0583		36,533.83	36,533.83
0584		9,831.27	9,831.27
0586	12.33	366.04	378.37
0587	13.83		13.83
0588	158,783.37	418,851.78	577,635.15
0590		75,312.08	75,312.08
0592		187,296.77	187,296.77
0593	51,112.78	324,477.18	375,589.96
0594		50,069.54	50,069.54
0595		18,314.26	18,314.26
0596		29,504.98	29,504.98
0597		31,308.05	31,308.05
0880		16.77	16.77
0902	35.65	26,523.50	26,559.15
0903	2,300,315.69	1,099,898.17	3,400,213.86
0904		(4,067.85)	(4,067.85)
0908	4.04		4.04
0909	53.70	1,253.90	1,307.60
0910	42,968.73	16,463.13	59,431.86
0912	470.90	191,971.06	192,441.96
0913	254.31		254.31
0920	4,837,292.27	2,790,196.53	7,627,488.80
0921	3,406,703.13	567,708.88	3,974,412.01
0923	1,144,389.59	2,722,302.60	3,866,692.19
0924	158,140.91		158,140.91
0925	23,067.98	72,293.14	95,361.12
0926	1,045,374.33	2,293,881.42	3,339,255.75
0928	144.00	696,944.35	697,088.35
0930	366,290.23	199,259.87	565,550.10
0931	100,780.19	889,103.27	989,883.46
0935	1,030.97	7,040.00	8,070.97

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
Grand Total	14,909,902.61	47,258,122.57	62,168,025.18

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
0402		34.00	34.00
0403	-	490,617.96	490,617.96
0408	450,597.73	929,896.19	1,380,493.92
0415		(915,677.21)	(915,677.21)
0416		10,064.50	10,064.50
0417	7,670.15	2,920.12	10,590.27
0419	(3,756.85)		(3,756.85)
0421	(386.09)	(0.01)	(386.10)
0426	1,145,364.65	500,741.25	1,646,105.90
0431	27,540.85	254,703.70	282,244.55
0451		25,647.73	25,647.73
0454	(96.00)	(82,228.57)	(82,324.57)
0456		(536.28)	(536.28)
0457	-	(229,225.02)	(229,225.02)
0500	295,814.06	1,921,293.99	2,217,108.05
0501	32.12	35,621.66	35,653.78
0502	57,291.61	326,199.24	383,490.85
0506	39,586.50	635,689.90	675,276.40
0510	198,133.86	1,917,110.07	2,115,243.93
0511	8,006.09	24,785.31	32,791.40
0512	24.44	96,119.75	96,144.19
0513	21,290.25	76,486.42	97,776.67
0514		26,735.10	26,735.10
0528	(223.60)		(223.60)
0535	-	-	-
0546		203,186.61	203,186.61
0547		3,581.35	3,581.35
0548	15.67	27,132.78	27,148.45
0549	180.09	302,673.13	302,853.22
0551	25.56	189,701.49	189,727.05
0552		1,633.05	1,633.05
0553	5.66	27,745.92	27,751.58
0554	1.70	1,011.80	1,013.50
0556		117.77	117.77
0557	7.65	2,848,656.04	2,848,663.69
0560		4,185.42	4,185.42
0561	9,721.11	3,451,745.20	3,461,466.31
0562		74,398.50	74,398.50
0563		9,299.17	9,299.17

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
0565		19,037,617.36	19,037,617.36
0566	2,468.33	99,668.63	102,136.96
0569	2.46	109,939.13	109,941.59
0570		114,981.90	114,981.90
0571		110,430.16	110,430.16
0575		1,922,718.94	1,922,718.94
0580		27,935.41	27,935.41
0581		373,632.31	373,632.31
0582		70,239.60	70,239.60
0583		38,152.00	38,152.00
0584		(6,955.00)	(6,955.00)
0586		93.42	93.42
0587		3,165.32	3,165.32
0588	118,648.67	383,639.94	502,288.61
0590		58,821.99	58,821.99
0591		2,621.36	2,621.36
0592		237,835.27	237,835.27
0593	647.24	245,593.21	246,240.45
0594		45,308.11	45,308.11
0595		16,781.85	16,781.85
0596		(886.87)	(886.87)
0597		28,967.62	28,967.62
0902	66.13		66.13
0903	2,678,843.51	1,743,964.38	4,422,807.89
0904		(1,833.99)	(1,833.99)
0908	1.93		1.93
0910	33,492.72	67,469.85	100,962.57
0912	714.12	216,673.90	217,388.02
0913	83.37	3,296.53	3,379.90
0920	5,039,456.12	2,902,679.52	7,942,135.64
0921	3,738,518.42	335,197.49	4,073,715.91
0922	(2.84)		(2.84)
0923	753,453.74	1,456,728.40	2,210,182.14
0924	165,936.25		165,936.25
0925	18,367.24	26,424.84	44,792.08
0926	866,757.10	2,096,584.45	2,963,341.55
0928	(142.80)	686,709.78	686,566.98
0930	180,643.66	247,513.16	428,156.82
0931	110,216.32	818,122.06	928,338.38

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-123(a) Attachment

Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
0935	31,107.46	98.58	31,206.04
Grand Total	15,996,126.36	46,711,998.64	62,708,125.00

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
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FERC AC	Sum of Amount		Grand Total
	Allocated	Direct	
0402		46.42	46.42
0403		490,617.96	490,617.96
0408	323,831.34	827,180.18	1,151,011.52
0415		(934,099.88)	(934,099.88)
0416		1,946.66	1,946.66
0417	2,000.14	1,548.16	3,548.30
0419	(2,614.17)		(2,614.17)
0421	-	0.02	0.02
0426	313,770.82	713,166.27	1,026,937.09
0431	346,096.70	152,237.15	498,333.85
0432	-		-
0451		66,467.18	66,467.18
0454		(82,516.73)	(82,516.73)
0457		(218,485.42)	(218,485.42)
0500	329,362.08	1,611,801.21	1,941,163.29
0501	8.46	25,604.22	25,612.68
0502	57,447.75	187,538.26	244,986.01
0506	40,769.14	597,642.07	638,411.21
0510	198,298.49	1,341,390.59	1,539,689.08
0511	2,378.93	10,181.79	12,560.72
0512	5.21	303,458.09	303,463.30
0513	20,793.39	65,815.63	86,609.02
0514		7,329.19	7,329.19
0546	1.16	151,491.81	151,492.97
0547		3,054.23	3,054.23
0548	76.94	23,701.86	23,778.80
0549	210.23	258,155.31	258,365.54
0551		142,367.77	142,367.77
0552		14,095.38	14,095.38
0553		23,945.64	23,945.64
0554		3,087.00	3,087.00
0555		(636.00)	(636.00)
0556		37.30	37.30
0557	15.86	1,895,181.28	1,895,197.14
0560		3,289.61	3,289.61
0561	10,796.33	3,129,541.98	3,140,338.31
0562		63,347.07	63,347.07
0563		108,179.18	108,179.18
0565		20,569,945.53	20,569,945.53

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
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Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
0566	2,425.43	64,081.91	66,507.34
0569		58,865.46	58,865.46
0570		99,114.22	99,114.22
0571		106,553.87	106,553.87
0575		1,800,216.72	1,800,216.72
0580		30,503.87	30,503.87
0581	67.11	289,897.60	289,964.71
0582		59,117.07	59,117.07
0583		33,784.55	33,784.55
0587		3,166.66	3,166.66
0588	94,362.67	962,803.88	1,057,166.55
0590		57,226.53	57,226.53
0592		212,519.10	212,519.10
0593		299,942.09	299,942.09
0594		25,746.98	25,746.98
0595		14,219.33	14,219.33
0597		14,492.18	14,492.18
0599	-		-
0717		1,176.03	1,176.03
0735		6,512.84	6,512.84
0742		6,959.35	6,959.35
0804		493.14	493.14
0807		257,597.63	257,597.63
0823	10.61	(10.61)	-
0850		2,070.13	2,070.13
0859		13,355.78	13,355.78
0863		451,820.92	451,820.92
0871		26,035.67	26,035.67
0874		746,780.28	746,780.28
0875		7,915.18	7,915.18
0876		24,243.36	24,243.36
0878		44,167.47	44,167.47
0879		321,207.60	321,207.60
0880		484,188.51	484,188.51
0887		194,463.12	194,463.12
0889		19,723.21	19,723.21
0892		70,370.62	70,370.62
0893		93,924.43	93,924.43
0894		84,845.37	84,845.37

DUKE ENERGY KENTUCKY
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Sum of Amount	Column Labels		
FERC AC	Allocated	Direct	Grand Total
0902	123.87	6.48	130.35
0903	2,231,762.36	3,178,502.32	5,410,264.68
0904		76,246.44	76,246.44
0908	23.64	95,164.01	95,187.65
0909	1.85		1.85
0910	64,940.99	308,126.13	373,067.12
0912	191.59	231,512.07	231,703.66
0913	190.88	22,317.35	22,508.23
0920	4,191,776.97	3,353,242.75	7,545,019.72
0921	3,564,897.67	605,255.38	4,170,153.05
0922	0.58		0.58
0923	902,725.37	1,236,267.82	2,138,993.19
0924	183,314.35		183,314.35
0925	16,560.17	27,430.93	43,991.10
0926	652,393.57	2,794,419.38	3,446,812.95
0928	3,224.69	799,047.71	802,272.40
0930	263,716.85	696,725.44	960,442.29
0931	97,314.30	1,175,994.76	1,273,309.06
0932		3,404.51	3,404.51
0935	31,844.82	3,759.53	35,604.35
Grand Total	13,945,119.14	53,155,169.03	67,100,288.17

DUKE ENERGY KENTUCKY
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Sum of Amount FERC AC	Column Labels		
	Allocated	Direct	Grand Total
0408	449,503.65	738,328.25	1,187,831.90
0417		45,366.01	45,366.01
0426	109,818.72	419,705.82	529,524.54
0431	4,651.57		4,651.57
0457	(116,026.22)	677.52	(115,348.70)
0500	78,894.61	1,842,210.64	1,921,105.25
0501		83,487.66	83,487.66
0502	61,001.97	210,046.17	271,048.15
0506	102,386.80	642,996.23	745,383.03
0510	111,774.95	2,015,913.30	2,127,688.25
0511		3,388.44	3,388.44
0512		(1,980,000.00)	(1,980,000.00)
0546		236,922.00	236,922.00
0547		2,095.57	2,095.57
0549		223,016.14	223,016.14
0551		229,994.67	229,994.67
0556		96,493.21	96,493.21
0557		2,454,483.12	2,454,483.12
0560		3,081.07	3,081.07
0561		344,199.42	344,199.42
0562		54,175.08	54,175.08
0563		14,616.20	14,616.20
0565		20,200,000.00	20,200,000.00
0566	(1,239.81)	324,871.88	323,632.06
0569		142,834.45	142,834.45
0570		60,857.51	60,857.51
0571		328,745.34	328,745.34
0575		2,780,388.36	2,780,388.36
0580		11,431.03	11,431.03
0581		450,582.35	450,582.35
0582		72,970.38	72,970.38
0583		26,810.67	26,810.67
0588	4,672.16	1,018,999.09	1,023,671.25
0591		2,662.55	2,662.55
0592		438,516.55	438,516.55
0593		1,178,534.82	1,178,534.82
0595		11,456.90	11,456.90
0902		9,701.60	9,701.60

DUKE ENERGY KENTUCKY
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Sum of Amount FERC AC	Column Labels		
	Allocated	Direct	Grand Total
0903	1,512,550.28	819,325.61	2,331,875.89
0904		1,074,470.09	1,074,470.09
0910	39,539.48	51,122.74	90,662.22
0912	290.73	269,934.10	270,224.83
0913	567.23		567.23
0920	4,344,224.28	2,655,355.78	6,999,580.05
0921	3,179,528.44	360,171.01	3,539,699.45
0923	926,895.07	645,266.33	1,572,161.40
0924	165,468.70	606,586.32	772,055.02
0925	20,226.96	396,855.22	417,082.19
0926	1,094,521.52	5,824,489.73	6,919,011.25
0928		728,859.60	728,859.60
0929		(432,982.32)	(432,982.32)
0930	562,452.67	111,133.92	673,586.59
0931	38,131.00	1,094,277.75	1,132,408.75
Grand Total	12,689,834.75	48,945,425.86	61,635,260.61

DUKE ENERGY KENTUCKY
 Case No. 2022-00372
 ATTORNEY GENERAL
 AG-DR-01-123(b) Attachment

Duke Energy Kentucky - Electric Only
 Schedule of Charges Allocated from DEO to DEK
 For the Calendar Year 2020

Business Unit Hierarchy	DE_KENTUCKY_ELEC - Duke Energy Kentucky Electric
Account Hierarchy	(Multiple Items)
Journal Name	All

Monetary Amount	Account CB - Description	Journal Description	Fiscal Year	Calendar Quarter			Accounting Period												Grand Total
			2020	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	
	0903000 - Cust Records & Collection Exp	DEO DEK CS CUST ELEC GAS	31.40		71.06	64.49	69.33	76.68	73.95	56.84	73.97	69.72	64.03	54.32	67.17	772.96			
	0903100 - Cust Contracts & Orders-Local	DEO DEK CS CUST ELEC GAS	184.06	261.00	314.67	276.37	265.26	379.92	350.52	384.87	378.89	327.12	334.19	417.67	3,874.54				
	0903200 - Cust Billing & Acct	DEO DEK CS CUST ELEC GAS	293.01	564.03	539.48	592.16	536.39	644.32	548.04	654.39	631.74	549.40	1,193.57	642.04	7,388.57				
	0903300 - Cust Collecting-Local	DEO DEK CS CUST ELEC GAS	152.61	374.08	1,515.64	209.15	200.75	287.51	265.25	2,392.82	1,341.82	247.56	252.90	316.09	7,556.18				
	0920000 - A & G Salaries	DEO DEK OTH CUST ELEC GAS	3,478.89	3,403.87	3,972.12	3,662.09	3,522.65	3,788.64	3,398.31	3,644.15	3,447.62	3,516.35	3,486.81	2,946.99	42,268.49				
	0921100 - Employee Expenses	DEO DEK OTH CUST ELEC GAS	216.44	140.02	54.82	84.91	45.71	45.71	44.54	39.43	39.73	39.05	48.19	67.78	866.33				
	0921200 - Office Expenses	DEO DEK OTH CUST ELEC GAS	17.00	2.55	3.00	12.40		3.72	16.72	9.70	2.55		216.27	290.77					
	0921400 - Computer Services Expenses	DEO DEK OTH CUST ELEC GAS											6.32	6.32					
	0923000 - Outside Services Employed	DEO DEK OTH CUST ELEC GAS	115.21	97.82	95.51	79.53	69.83	71.19	68.07	243.71	124.91	94.33	108.65	9,254.41	10,423.17				
	0926600 - Employee Benefits-Transferred	DEO DEK CS CUST ELEC GAS	143.17	208.02	229.82	219.06	216.80	276.29	248.98	283.95	278.15	238.08	261.45	355.91	2,959.68				
	0931001 - Rents-A&G	DEO DEK OTH CUST ELEC GAS	651.98	643.51	746.41	684.12	659.44	715.50	639.60	676.99	643.80	649.89	727.70	669.05	8,107.99				
						58.40									58.40				
	Grand Total		5,283.77	5,765.96	7,535.96	5,947.52	5,593.51	6,286.75	5,636.87	8,403.98	6,958.93	5,732.13	6,474.64	14,953.38	84,573.40				

Total DEK 84,573.40
 Total DEO 828,338.88

Allocation Factor for DEK Elec 10.21% COKI-CSKE allocation rate

DUKE ENERGY KENTUCKY
 Case No. 2022-00372
 ATTORNEY GENERAL
 AG-DR-01-123(b) Attachment

Duke Energy Kentucky - Electric Only
 Schedule of Charges Allocated from DEO to DEK
 For the Calendar Year 2021

Business Unit Hierarchy	DE_KENTUCKY_ELEC - Duke Energy Kentucky Electric
Account Hierarchy	(Multiple Items)
Journal Name	(Multiple Items)

Monetary Amount	Fiscal Year 2021	Calendar Quarter Accounting Period												Grand Total
		Q1 2021	Q2 2021			Q3 2021			Q4 2021					
Account CB - Description	Journal Description	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	
0903000 - Cust Records & Collection Exp	DEO DEK CS CUST ELEC GAS	71.81	79.43	86.01	2.88	1.49	5.51	2.83	1.49	2.83	1.49	2.83	0.92	259.32
0903100 - Cust Contracts & Orders-Local	DEO DEK CS CUST ELEC GAS	382.56	424.10	432.57	227.67	256.76	255.19	249.62	284.41	235.61	230.51	148.15	541.74	3,668.89
0903200 - Cust Billing & Acct	DEO DEK CS CUST ELEC GAS	638.39	713.30	747.37	215.36	243.24	241.76	236.49	269.39	223.23	218.40	140.50	514.61	4,402.04
0903300 - Cust Collecting-Local	DEO DEK CS CUST ELEC GAS	289.50	320.93	327.34	1,158.29	194.30	193.11	188.90	215.22	178.30	1,317.39	112.12	409.98	4,905.38
0920000 - A & G Salaries	DEO DEK OTH CUST ELEC GAS	3,728.61	3,923.01	3,761.78	3,845.38	3,542.21	3,699.65	3,864.42	4,058.43	3,976.96	4,292.66	4,073.48	10,903.21	53,669.80
0921100 - Employee Expenses	DEO DEK OTH CUST ELEC GAS	58.35	49.35	64.82	49.35	44.19	60.69	66.36	40.87	56.31	168.23	44.19	447.13	1,149.84
0921200 - Office Expenses	DEO DEK OTH CUST ELEC GAS	5.67	3.56	12.32			1.03	6.86	6.76	1.55	38.66	9.03	43.94	129.38
0923000 - Outside Services Employed	DEO DEK OTH CUST ELEC GAS	91.22	127.67	125.54	106.20	87.87	92.40	101.74	111.15	118.25	53.77	123.96	116.71	1,256.48
0926600 - Employee Benefits-Transferred	DEO DEK CS CUST ELEC GAS	278.32	287.41	304.45	125.90	142.24	137.98	136.94	155.74	130.72	128.83	88.88	15.81	1,933.22
0930200 - Misc General Expenses	DEO DEK OTH CUST ELEC GAS	700.53	739.45	697.03	727.85	666.43	706.36	753.88	769.76	754.01	807.87	860.33	107.78	8,291.28
							9,279.00							9,279.00
Grand Total		6,244.96	6,668.21	6,559.23	6,458.68	5,178.73	14,672.68	5,608.04	5,913.22	5,677.77	7,257.81	5,603.47	13,101.83	88,944.63

Total DEK 88,944.63
 Total DEO 862,702.52

Allocation Factor for DEK Elec 10.31% COK1-CSKE allocation rate

DUKE ENERGY KENTUCKY
 Case No. 2022-00372
 ATTORNEY GENERAL
 AG-DR-01-123(b) Attachment

Duke Energy Kentucky - Electric Only
 Schedule of Charges Allocated from DEO to DEK
 For the Calendar Year 2022

Business Unit Hierarchy	DE_KENTUCKY_ELEC - Duke Energy Kentucky Electric
Account Hierarchy	(Multiple Items)
Journal Name	(Multiple Items)

Account CB - Description	Journal Description	Fiscal Year 2022 Calendar Quarter Accounting Period												Grand Total	
		Q1 2022 Jan 2022	Feb 2022	Mar 2022	Q2 2022			Q3 2022			Q4 2022				
0903000 - Cust Records & Collection Exp	DEO DEK CS CUST ELEC GAS		0.30		0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.61	2.11
0903100 - Cust Contracts & Orders-Local	DEO DEK CS CUST ELEC GAS	1.38	142.04	149.13	148.52	133.53	167.17	84.37	154.88	141.61	167.70	158.59	352.71	1,801.63	
0903200 - Cust Billing & Acct	DEO DEK CS CUST ELEC GAS	4.56	135.05	141.07	140.85	126.66	158.50	80.16	146.85	134.31	158.99	150.37	335.07	1,712.44	
0903300 - Cust Collecting-Local	DEO DEK CS CUST ELEC GAS	1.05	107.49	1,327.97	112.38	101.05	126.52	63.84	117.21	107.16	126.91	120.03	266.91	2,578.52	
0912000 - Demonstrating & Selling Exp	DEO DEK OTH CUST ELEC GAS								502.50					502.50	
0920000 - A & G Salaries	DEO DEK OTH CUST ELEC GAS	40.69	3,157.50	5,417.34	4,741.59	3,990.73	4,816.86	5,383.90	5,431.42	4,664.50	3,690.98	4,044.09	7,002.31	52,381.91	
0921100 - Employee Expenses	DEO DEK OTH CUST ELEC GAS	0.42	161.39	44.92	305.30	349.02	295.21	102.44	525.44	128.47	144.09	186.40	224.58	2,467.68	
0921200 - Office Expenses	DEO DEK OTH CUST ELEC GAS		3.34		7.87	7.59			2.72	1.16		4.03	8.03	34.74	
0923000 - Outside Services Employed	DEO DEK OTH CUST ELEC GAS	(2.08)	12.43	620.74	59.30		172.07	8.02					25.27	895.75	
0926600 - Employee Benefits-Transferred	DEO DEK CS CUST ELEC GAS	0.77	77.36	80.62	80.93	74.48	94.51	47.50	84.29	78.95	94.02	57.38	180.14	950.95	
0930230 - Dues To Various Organizations	DEO DEK OTH CUST ELEC GAS	7.84	599.41	949.17	914.42	800.56	970.54	1,094.23	1,091.89	942.00	728.66	524.19	1,295.79	9,918.70	
0931001 - Rents-A&G	DEO DEK OTH CUST ELEC GAS		189.69			100.50								189.69	
Grand Total		54.63	4,586.00	8,730.96	6,511.31	5,684.27	6,801.53	6,864.61	8,057.35	6,198.31	5,111.50	5,245.23	9,691.42	73,537.12	

Total DEK 73,537.12
 Total DEO 731,712.64

Allocation Factor for DEK Elec 10.05% COKI-CSKE allocation rate

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-124

REQUEST:

Refer to the Application generally. Provide a schedule showing the local franchise fee rider revenue and the local franchise fee expense for each month in the base period and the test year. If the revenue and expense amounts are not equivalent in the test year, please explain why they are not and provide a reconciliation of the two amounts for each month during the test year.

RESPONSE:

Please see AG-DR-01-124 Attachment.

When customer bills are generated, the associated franchise fee is booked to Account 241348 (Franchise Fee Payable). This is a balance sheet account. On a monthly basis the franchise fees are remitted to the different localities. At time of payment, Account 241348 is reduced by the amount of the payment. The difference between what is accrued and paid in the attached is mostly related to the City of Ludlow and the City of Highland Heights with the variance being paid to the Cities in a subsequent period. The variance amount represents a timing difference and remains in Account 0241348 until it is ultimately paid to the appropriate jurisdiction.

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Kentucky
Franchise Tax Revenue and Expense

	Accrual	Payment	Difference
	241348	241348	
Jan-21	604,938.43	578,942.59	25,995.84
Feb-21	565,573.13	549,822.58	15,750.55
Mar-21	522,610.79	552,498.06	(29,887.27)
Apr-21	378,243.99	380,036.42	(1,792.43)
May-21	362,118.95	353,284.87	8,834.08
Jun-21	416,022.22	424,835.39	(8,813.17)
Jul-21	486,699.63	463,583.40	23,116.23
Aug-21	477,059.09	454,514.96	22,544.13
Sep-21	477,115.35	454,974.28	22,141.07
Oct-21	383,195.19	365,350.38	17,844.81
Nov-21	488,144.75	485,366.51	2,778.24
Dec-21	726,092.67	713,753.54	12,339.13
			110,851.21

	Accrual	Payment	Difference
	241348	241348	
Jan-22	913,594.02	895,822.67	17,771.35
Feb-22	846,624.96	849,488.20	(2,863.24)
Mar-22	609,604.98	595,012.16	14,592.82
Apr-22	434,411.52	434,974.48	(562.96)
May-22	473,928.03	471,625.76	2,302.27
Jun-22	566,220.93	539,351.86	26,869.07
Jul-22	689,337.88	794,469.97	(105,132.09)
Aug-22	553,604.43	553,386.06	218.37
Sep-22	549,072.65	548,839.69	232.96
Oct-22	568,910.75	568,624.34	286.41
Nov-22	534,506.97	558,065.61	(23,558.64)
Dec-22	910,874.41	910,539.25	335.16
			(69,508.52)

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-125

REQUEST:

Refer to the Application generally. Provide the two most recent pension and OPEB actuarial reports for Duke Energy, Duke Ohio, and the Company.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachments only)

Please see AG-DR-01-125 Confidential Attachment 1 for 2020 actuarial report, AG-DR-01-125 Confidential Attachment 2 for 2021 actuarial report and AG-DR-01-125 Confidential Attachment 3 for 2020 and 2021 actuarial report amounts for Duke Energy, Duke Ohio and the Company.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Jacob J. Stewart

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-125
CONFIDENTIAL ATTACHMENT 1**

FILED UNDER SEAL

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-125
CONFIDENTIAL ATTACHMENT 2**

FILED UNDER SEAL

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-125
CONFIDENTIAL ATTACHMENT 3**

FILED UNDER SEAL

**Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023**

PUBLIC AG-DR-01-126

REQUEST:

Refer to the Application generally. Provide the pension and OPEB actuarial reports for Duke Energy, Duke Ohio, and the Company and/or all other support for the test year pension cost and expense and OPEB cost and expense included in the test year.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Please see AG-DR-01-126 Confidential Attachment.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Jacob J. Stewart

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-126
CONFIDENTIAL ATTACHMENT**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-127

REQUEST:

Refer to the Application generally. Provide a schedule of FTEs and payroll dollars separated between expense, capital, and other, for Duke Kentucky by department and by month for 2018, 2019, 2020, 2021, 2022, and budgeted in each month for 2023.

RESPONSE:

Payroll Dollars:

Please see AG-DR-01-127 Attachment 1 for amounts charged to Duke Energy Kentucky Electric and separated between expense, capital, and other by month for each of the periods requested.

Actual Headcounts:

Please see AG-DR-01-127 Attachment 2 for actual headcounts by month for Duke Energy Kentucky payroll company by department for 2018 – January 17, 2023.

Budgeted Headcounts:

The Company does not budget headcount.

PERSON RESPONSIBLE: Jacob J. Stewart

Request:

127. Refer to the Application generally. Provide a schedule of FTEs and payroll dollars separated between expense, capital, and other, for DEK by department and by month for 2018, 2019, 2020, 2021, 2022 and budgeted in each month for 2023.

Response:

See the below table for payroll labor cost for Duke Energy Kentucky (Electric). Amounts extracted from the company's general ledger system (budget) for the test period.

Payroll Labor Costs (Budget 2023)							
	Expense		Capital		Other deferred		Total
January	\$ 3,631,093	\$	836,444	\$	79,306	\$	4,546,843
February	\$ 1,864,745	\$	808,544		79,527	\$	2,752,815
March	\$ 1,889,057	\$	875,564		81,734	\$	2,846,355
April	\$ 1,933,443	\$	864,369		82,270	\$	2,880,082
May	\$ 1,934,596	\$	875,213		82,251	\$	2,892,060
June	\$ 2,150,608	\$	874,777		91,978	\$	3,117,364
July	\$ 2,057,263	\$	1,027,301		82,167	\$	3,166,731
August	\$ 1,928,844	\$	947,824		82,387	\$	2,959,055
September	\$ 1,931,606	\$	917,570		82,253	\$	2,931,429
October	\$ 1,927,645	\$	956,431		82,233	\$	2,966,309
November	\$ 1,940,294	\$	954,429		82,245	\$	2,976,968
December	\$ 2,289,785	\$	1,000,371		91,565	\$	3,381,721
Total	\$ 25,478,979	\$	10,938,838	\$	999,915	\$	37,417,732

Payroll Labor Costs (2022)							
	Expense		Capital		Other deferred		Total
January	\$ 1,476,080	\$	889,602	\$	30,344	\$	2,396,026
February	\$ 1,694,551	\$	1,020,007		32,140	\$	2,746,698
March	\$ 1,697,691	\$	1,120,014		34,983	\$	2,852,688
April	\$ 1,573,465	\$	1,078,541		29,398	\$	2,681,404
May	\$ 1,638,494	\$	1,030,595		32,187	\$	2,701,277
June	\$ 1,559,699	\$	1,122,589		38,051	\$	2,720,339
July	\$ 2,048,209	\$	1,114,572		35,081	\$	3,197,862
August	\$ 1,612,065	\$	1,080,917		30,446	\$	2,723,428
September	\$ 1,492,092	\$	1,124,774		24,318	\$	2,641,184
October	\$ 1,673,398	\$	1,025,624		(17,644)	\$	2,681,377
November	\$ 1,463,222	\$	1,027,357		31,615	\$	2,522,194
December	\$ 1,579,534	\$	1,046,445		43,164	\$	2,669,143
Total	\$ 19,508,501	\$	12,681,037	\$	344,082	\$	32,533,620

Payroll Labor Costs (2021)				
	Expense	Capital	Other deferred	Total
January	\$ 1,541,965	\$ 894,764	\$ 27,627	\$ 2,464,356
February	\$ 1,681,609	\$ 1,021,405	59,529	\$ 2,762,543
March	\$ 1,634,851	\$ 1,164,807	50,427	\$ 2,850,086
April	\$ 1,550,651	\$ 1,042,084	31,513	\$ 2,624,249
May	\$ 1,630,453	\$ 1,071,550	43,989	\$ 2,745,992
June	\$ 1,595,368	\$ 1,004,227	55,001	\$ 2,654,596
July	\$ 1,868,867	\$ 1,163,102	40,008	\$ 3,071,978
August	\$ 1,487,852	\$ 1,013,921	140,082	\$ 2,641,855
September	\$ 1,589,402	\$ 1,079,436	41,747	\$ 2,710,585
October	\$ 1,602,233	\$ 1,122,606	62,183	\$ 2,787,022
November	\$ 1,464,378	\$ 1,168,728	54,094	\$ 2,687,200
December	\$ 1,648,634	\$ 1,133,567	(17,112)	\$ 2,765,089
Total	\$ 19,296,264	\$ 12,880,200	\$ 589,087	\$ 32,765,551

Payroll Labor Costs (2020)				
	Expense	Capital	Other deferred	Total
January	\$ 1,847,502	\$ 1,159,763	\$ 80,176	\$ 3,087,442
February	\$ 1,593,588	\$ 1,083,834	96,962	\$ 2,774,384
March	\$ 1,666,418	\$ 1,110,266	116,628	\$ 2,893,312
April	\$ 1,683,382	\$ 1,133,699	60,106	\$ 2,877,186
May	\$ 1,632,713	\$ 1,015,182	29,134	\$ 2,677,028
June	\$ 1,593,283	\$ 1,050,110	74,425	\$ 2,717,818
July	\$ 1,856,348	\$ 1,197,959	63,668	\$ 3,117,975
August	\$ 1,592,332	\$ 1,055,665	27,843	\$ 2,675,840
September	\$ 1,593,453	\$ 1,088,898	47,563	\$ 2,729,913
October	\$ 1,644,469	\$ 1,073,604	87,463	\$ 2,805,535
November	\$ 1,566,714	\$ 1,020,001	50,554	\$ 2,637,270
December	\$ 1,572,135	\$ 1,081,801	(60,910)	\$ 2,593,026
Total	\$ 19,842,335	\$ 13,070,782	\$ 673,612	\$ 33,586,730

Payroll Labor Costs (2019)				
	Expense	Capital	Other deferred	Total
January	\$ 1,490,595	\$ 1,025,326	\$ 56,995	\$ 2,572,916
February	\$ 1,610,085	\$ 1,095,923	\$ 152,950	\$ 2,858,959
March	\$ 1,964,086	\$ 1,373,186	\$ 152,216	\$ 3,489,488
April	\$ 1,746,677	\$ 1,156,403	\$ 135,478	\$ 3,038,558
May	\$ 1,740,380	\$ 1,149,248	\$ 135,342	\$ 3,024,970
June	\$ 1,557,405	\$ 1,208,230	\$ 104,837	\$ 2,870,472
July	\$ 1,536,486	\$ 1,093,614	\$ 102,487	\$ 2,732,587
August	\$ 1,968,305	\$ 1,466,672	\$ 163,219	\$ 3,598,196
September	\$ 1,556,628	\$ 1,099,961	\$ 117,329	\$ 2,773,918
October	\$ 1,675,928	\$ 1,117,373	\$ 156,002	\$ 2,949,303
November	\$ 1,531,040	\$ 1,148,173	\$ 100,205	\$ 2,779,418
December	\$ 1,287,014	\$ 883,009	\$ 37,869	\$ 2,207,892
Total	\$ 19,664,629	\$ 13,817,118	\$ 1,414,929	\$ 34,896,676

Payroll Labor Costs (2018)				
	Expense	Capital	Other deferred	Total
January	\$ 1,612,380	\$ 841,231	\$ 27,510	\$ 2,481,121
February	1,689,696	998,364	183,628	2,871,688
March	2,358,063	1,400,023	165,704	3,923,790
April	1,829,194	1,331,348	121,706	3,282,247
May	1,861,974	1,225,392	106,753	3,194,119
June	2,010,986	1,204,297	110,821	3,326,105
July	1,540,410	962,657	75,143	2,578,210
August	1,847,692	1,204,090	127,110	3,178,892
September	1,677,054	999,802	99,949	2,776,806
October	1,626,639	970,980	117,196	2,714,816
November	1,733,318	904,661	79,428	2,717,407
December	1,349,336	909,068	123,373	2,381,777
Total	\$ 21,136,742	\$ 12,951,914	\$ 1,338,321	\$ 35,426,977

Actual Headcount by Month and Year for DEK Pay Company

Headcount at Month End. Only full time employees, includes temps

Year	Level 4 Dept	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
2018	Distb, Cust Ops & DE Carolina	86	84	83	81	80	78	77	81	80	79	73	74
	Gas Operations	48	48	48	48	48	47	49	48	47	46	49	48
	Generation & Transmission	73	73	72	75	73	73	73	73	73	73	73	73
2018 Total		207	205	203	204	201	198	199	202	200	198	195	195
2019	Distb, Cust Ops & DE Carolina	61	58	55	58	58	57	56	56	57			
	Gas Operations	47	46	44	46	46	47	48	48	48			
	Generation & Transmission	73	73	73	71	71	71	71	71	70	70	69	69
	Distb, Cust Experience & Svcs										60	60	60
	Energy Solutions,MW/FL&NatGas										47	47	48
2019 Total		181	177	172	175	175	175	175	175	175	177	176	177
2020	Distb, Cust Experience & Svcs	67	70	67	67	67	64	64	64	64	64	63	59
	Energy Solutions,MW/FL&NatGas	48	47	46	46	46	46	45	44	44	42	41	44
	Generation & Transmission	69	68	68	68	67	67	66	65	64	64	64	64
2020 Total		184	185	181	181	180	177	175	173	172	170	168	167
2021	Cust Experience,Solutions&Svcs							49	44	42	48	49	51
	Distb, Cust Experience & Svcs	54	56	56	54	51	52						
	Energy Solutions,MW/FL&NatGas	44	47	47	45								
	Generation & Transmission	63	62	62	61	62	62	63	65	63	63	63	64
	StrategySustainableSols&NatGas					45	47	47	46	46	43	45	46
2021 Total		161	165	165	160	158	161	159	155	151	154	157	161
2022	Cust Experience,Solutions&Svcs	53	53	51	51	52	53	53	54				
	CustExp,Sols&Svcs,SupplyChain									56	55	55	52
	EntrpsTech, Sust Sols & NatGas									44	43	46	48
	Generation & Transmission	64	64	62	59	60	59	57	60	59	60	59	58
	StrategySustainableSols&NatGas	46	46	45	45	43	43	43	43				
2022 Total		163	163	158	155	155	155	153	157	159	158	160	158
2023	CustExp,Sols&Svcs,SupplyChain	53											
as of 1/17/23	EntrpsTech, Sust Sols & NatGas	44											
	Generation	58											
2023 Total		155											

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-128

REQUEST:

Refer to the Application generally. Provide a schedule of FTEs and payroll dollars separated between expense, capital, and other, for DEBS by department and by month for 2018, 2019, 2020, 2021, 2022, and budgeted in each month for 2023.

RESPONSE:

Payroll Dollars:

See AG-DR-01-128 Attachment 1 for dollars separated between expense, capital, and other, for DEBS by department and by month for the periods requested.

Actual Headcounts:

See AG-DR-01-128 Attachment 2 for actual headcounts by month by department for 2018 – January 17, 2023.

Budgeted Headcounts:

The Company does not budget headcount.

PERSON RESPONSIBLE: Jacob J. Stewart

Request:

128. Refer to the application generally. Provide a schedule of FTEs and payroll dollars separated between expense, capital, and other, for DEBS by department and by month for 2018, 2019, 2020, 2021, 2022, and budgeted in each month 2023.

Response:

See the below tables for payroll labor cost for DEBS. Amounts extracted from the company's general ledger system.

Payroll Labor Costs (Budgeted 2023)				
	Expense	Capital	Other deferred	Total
January	\$ 25,787,051	\$ 8,014,929	\$ 3,103,329	\$ 36,905,309
February	\$ 25,999,120	\$ 7,996,447	3,042,226	\$ 37,037,794
March	\$ 26,847,005	\$ 8,259,146	3,079,422	\$ 38,185,573
April	\$ 26,947,106	\$ 8,267,066	3,093,921	\$ 38,308,093
May	\$ 27,085,904	\$ 8,271,463	3,101,350	\$ 38,458,717
June	\$ 28,118,308	\$ 8,534,355	4,123,637	\$ 40,776,300
July	\$ 27,007,321	\$ 8,280,120	3,101,867	\$ 38,389,308
August	\$ 27,043,388	\$ 8,277,539	3,101,845	\$ 38,422,771
September	\$ 26,947,465	\$ 8,272,162	3,101,577	\$ 38,321,205
October	\$ 27,023,988	\$ 8,272,699	3,225,452	\$ 38,522,139
November	\$ 26,984,427	\$ 8,272,699	3,225,373	\$ 38,482,500
December	\$ 27,903,454	\$ 8,536,888	4,281,663	\$ 40,722,005
Total	\$ 323,694,537	\$ 99,255,515	\$ 39,581,660	\$ 462,531,712

Payroll Labor Costs (2022)				
	Expense	Capital	Other deferred	Total
January	\$ 20,859,112	\$ 1,475,609	\$ 2,308,073	\$ 24,642,795
February	\$ 23,064,676	\$ 1,654,509	2,769,657	\$ 27,488,842
March	\$ 24,795,159	\$ 1,609,040	2,764,709	\$ 29,168,907
April	\$ 21,557,791	\$ 1,759,393	2,603,314	\$ 25,920,498
May	\$ 21,901,190	\$ 1,678,849	2,706,372	\$ 26,286,411
June	\$ 24,336,103	\$ 2,130,430	660,450	\$ 27,126,983
July	\$ 21,489,682	\$ 2,254,971	3,349,054	\$ 27,093,706
August	\$ 20,915,492	\$ 2,764,481	2,795,426	\$ 26,475,400
September	\$ 20,529,295	\$ 2,433,442	2,605,665	\$ 25,568,402
October	\$ 20,753,092	\$ 2,709,429	2,671,862	\$ 26,134,382
November	\$ 19,804,009	\$ 2,643,342	1,546,333	\$ 23,993,684
December	\$ 15,465,489	\$ 2,010,976	2,482,581	\$ 19,959,047
Total	\$ 255,471,091	\$ 25,124,470	\$ 29,263,496	\$ 309,859,057

Payroll Labor Costs (2021)							
	Expense		Capital		Other deferred		Total
January	\$ 20,906,520	\$	1,337,891	\$	2,256,169	\$	24,500,581
February	\$ 22,704,804	\$	1,063,733		2,622,834	\$	26,391,370
March	\$ 22,883,462	\$	1,533,570		2,596,194	\$	27,013,225
April	\$ 21,536,734	\$	1,423,852		2,387,747	\$	25,348,332
May	\$ 21,269,311	\$	1,465,474		2,526,818	\$	25,261,603
June	\$ 23,817,992	\$	1,491,300		568,655	\$	25,877,948
July	\$ 20,577,072	\$	1,482,582		3,067,029	\$	25,126,683
August	\$ 21,004,051	\$	2,012,264		2,469,906	\$	25,486,221
September	\$ 20,295,828	\$	1,736,785		2,244,586	\$	24,277,198
October	\$ 22,670,782	\$	1,709,792		1,301,261	\$	25,681,836
November	\$ 18,934,877	\$	1,549,435		2,384,610	\$	22,868,922
December	\$ 17,399,565	\$	1,596,189		2,313,120	\$	21,308,874
Total	\$ 254,000,997	\$	18,402,867	\$	26,738,928	\$	299,142,793

Payroll Labor Costs (2020)							
	Expense		Capital		Other deferred		Total
January	\$ 21,131,447	\$	1,328,787	\$	2,713,729	\$	25,173,962
February	\$ 21,772,444	\$	1,469,028		2,540,827	\$	25,782,299
March	\$ 22,807,899	\$	1,508,400		2,638,868	\$	26,955,167
April	\$ 23,345,001	\$	1,498,014		2,499,022	\$	27,342,036
May	\$ 22,108,471	\$	1,590,958		2,529,469	\$	26,228,898
June	\$ 23,228,769	\$	1,660,284		1,354,775	\$	26,243,828
July	\$ 21,773,935	\$	1,644,063		2,053,854	\$	25,471,852
August	\$ 21,347,666	\$	1,895,009		2,473,080	\$	25,715,755
September	\$ 20,426,368	\$	1,449,126		2,312,491	\$	24,187,985
October	\$ 20,815,681	\$	1,607,702		2,456,455	\$	24,879,839
November	\$ 20,029,177	\$	1,139,195		510,386	\$	21,678,758
December	\$ 16,432,888	\$	1,411,945		2,283,439	\$	20,128,272
Total	\$ 255,219,746	\$	18,202,511	\$	26,366,393	\$	299,788,650

Payroll Labor Costs (2019)				
	Expense	Capital	Other deferred	Total
January	\$ 20,738,790	\$ 1,045,255	\$ 1,760,134	\$ 23,544,179
February	\$ 22,620,700	\$ 1,140,981	2,328,554	\$ 26,090,235
March	\$ 23,017,616	\$ 1,275,357	3,110,321	\$ 27,403,294
April	\$ 22,067,906	\$ 1,361,966	2,164,375	\$ 25,594,247
May	\$ 21,024,780	\$ 1,489,538	2,318,146	\$ 24,832,463
June	\$ 22,350,995	\$ 1,808,174	1,164,211	\$ 25,323,379
July	\$ 18,933,979	\$ 1,148,814	2,054,080	\$ 22,136,873
August	\$ 20,963,115	\$ 2,226,638	3,110,027	\$ 26,299,780
September	\$ 18,918,122	\$ 1,385,256	2,078,776	\$ 22,382,154
October	\$ 22,880,053	\$ 1,107,231	1,580,133	\$ 25,567,417
November	\$ 20,101,661	\$ 1,167,753	2,090,300	\$ 23,359,715
December	\$ 18,363,684	\$ 2,035,885	1,439,523	\$ 21,839,092
Total	\$ 251,981,401	\$ 17,192,850	\$ 25,198,579	\$ 294,372,829

Payroll Labor Costs (2018)				
	Expense	Capital	Other deferred	Total
January	\$ 20,489,890	\$ 697,883	1,746,386	\$ 22,934,159
February	\$ 22,085,602	\$ 816,554	2,171,169	\$ 25,073,326
March	\$ 23,067,626	\$ 920,003	2,883,310	\$ 26,870,939
April	\$ 23,301,563	\$ 867,039	2,078,089	\$ 26,246,692
May	\$ 22,987,925	\$ 943,152	2,114,809	\$ 26,045,886
June	\$ 23,239,213	\$ 1,139,519	1,986,029	\$ 26,364,761
July	\$ 20,315,796	\$ 800,481	1,934,840	\$ 23,051,116
August	\$ 23,909,842	\$ 1,002,998	2,930,072	\$ 27,842,911
September	\$ 22,499,595	\$ 944,781	868,527	\$ 24,312,903
October	\$ 22,693,522	\$ 1,837,439	2,127,169	\$ 26,658,131
November	\$ 21,342,847	\$ 973,515	2,079,752	\$ 24,396,114
December	\$ 16,889,495	\$ 2,600,578	1,289,886	\$ 20,779,960
Total	\$ 262,822,916	\$ 13,543,943	\$ 24,210,038	\$ 300,576,897

Actual Headcount by Month and Year for DEBS Pay Company

Headcount at Month End. Only full time employees, includes temps

Year	Level 4 Dept	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
2018	Admin Svcs & Human Resources	514	522	520	520	537	547	544	542	539	539	542	541
	CEO & Staff	11	11	11	11	11	11	11	11	11	11	11	11
	Distb, Cust Ops & DE Carolina	1,390	1,395	1,375	1,405	1,411	1,416	1,449	1,446	1,468	1,474	1,480	1,455
	Energy Solutions&MW/FL Regions	196	206	228	224	232	232	235	240	244	252	259	276
	Finance & Technology	2,458	2,484	2,510	2,546	2,590	2,621	2,647	2,599	2,600	2,607	2,607	2,610
	Gas Operations	265	267	271	270	294	294	288	288	287	282	281	280
	Generation & Transmission	2,330	2,343	2,355	2,336	2,348	2,377	2,394	2,379	2,390	2,380	2,378	2,362
	Legal, E&C & External Affairs	321	327	306	308	311	310	310	310	309	313	314	319
	Strategy Execution Office	2	2	2	2	2	2	1	1	1	1	1	1
2018 Total		7,487	7,557	7,578	7,622	7,736	7,810	7,879	7,816	7,849	7,859	7,873	7,855
2019	Admin Svcs & Human Resources	529	528	523	518	530	538	537	528	523			
	CEO & Staff	11	11	11	11	11	11	11	11	11			
	Distb, Cust Ops & DE Carolina	1,487	1,499	1,466	1,477	1,481	1,483	1,484	1,485	1,472			
	Energy Solutions&MW/FL Regions	285	289	272	273	274	274	274	272	276			
	Finance & Technology	2,546	2,548	2,516	2,498	2,513	2,504	2,484	2,457	2,469			
	Gas Operations	282	284	284	285	292	294	292	296	299			
	Generation & Transmission	2,367	2,350	2,325	2,303	2,294	2,220	2,186	2,149	2,167	1441	1429	1408
	Legal, E&C & External Affairs	318	319	347	349	351	353	352	347	349			
	Distb, Cust Experience & Svcs										1588	1591	1584
	Energy Solutions,MW/FL&NatGas										461	476	488
	External Affairs & DE Carolinas										154	149	149
	Finance & Security										750	754	765
	Human Resources										245	245	247
	Legal, Audit and E&C										197	197	197
	CEO & Staff										10	10	10
	Office of CEO Admin Support										1	1	1
	Transformation, IT & Admin										2716	2720	2718
2019 Total		7,825	7,828	7,744	7,714	7,746	7,677	7,620	7,545	7,566	7,563	7,572	7,567

Actual Headcount by Month and Year for DEBS Pay Company

Headcount at Month End. Only full time employees, includes temps

Year	Level 4 Dept	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
2020	Distb, Cust Experience & Svcs	1526	1506	1480	1475	1437	1418	1403	1391	1379	1369	1360	1344
	Energy Solutions,MW/FL&NatGas	492	497	504	507	509	517	514	512	512	515	520	534
	External Affairs & CARs Region			149	150	149	147	145	146	146	146	146	146
	External Affairs & DE Carolinas	146	145										
	Finance & Security	745	744	764	770	765	766	763	764	759	756	754	754
	Generation & Transmission	1405	1403	1392	1386	1379	1389	1376	1358	1350	1346	1348	1333
	Human Resources	240	243	247	246	243	244						
	Legal, Audit and E&C	195	194	193	195	194	192	191	191	191	190	191	190
	CEO & Staff	10	10	10	10	10	10	10	10	9	9	9	9
	Office of CEO Admin Support	1	1	1	1	1	1	1	1	1	1	1	1
	Transformation, IT & Admin	2735	2731	2745	2733	2725	2742	2983	2951	2936	2931	2922	2917
2020 Total		7495	7474	7485	7473	7412	7426	7386	7324	7283	7263	7251	7228
2021	Carolinas Jurisdictions												1
	Cust Experience,Solutions&Svcs							1524	1508	1530	1527	1535	1528
	Distb, Cust Experience & Svcs	1348	1350	1369	1246	1544	1539						
	Energy Solutions,MW/FL&NatGas	673	672	675	682								
	External Affairs & CARs Region	147	148	146	146								
	External Affairs & Corp Comms					141	140	140	139	139	136	138	138
	Finance							521	517	516	517	519	519
	Finance & Security	751	752	754	748	750	750						
	FL&MW, Pricing&Strat Solutions					62	63	64	63	65	71	73	73
	Generation & Transmission	1338	1319	1316	1318	1276	1270	1261	1247	1238	1236	1237	1233
	Human Resources					218	212	213	212	210	210	218	221
	Legal, Audit and E&C	188	185	185	190	189	192	191	186	187	186	185	185
	CEO & Staff	9	9	9	9	13	13	13	12	12	12	12	12
	Office of CEO Admin Support	1	1	1	1	1	1	1	1	1	1	1	1
	StrategySustainableSols&NatGas					561	575	582	588	587	587	604	575
	Supply Chain, IT & Admin Svcs					2586	2580	2816	2819	2815	2805	2825	2840
	Transformation, IT & Admin	2927	2924	2935	3011								
2021 Total		7382	7360	7390	7351	7341	7335	7326	7292	7300	7288	7347	7326

Duke Energy Kentucky
Case No. 2022-00372
Attorney General’s First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-129

REQUEST:

Refer to the Adams Testimony in regard to maintaining the current 5-year cycle trimming as part of the Company’s vegetation management program.

- a. Provide the amounts of O&M spend by year by subaccount for each year 2018 through 2022 and projected for the forecast test period. This includes all distribution and transmission subaccounts.
- b. Provide the number of miles trimmed and the average cost per mile for each year 2018 through 2022 and projected for the forecast test period.
- c. Provide a copy(ies) of the contract(s) with the contractor(s) that performs the vegetation management services for Duke Kentucky.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachments only)

a. The current 5-year cycle vegetation management program only applies to Distribution. See the table below for Distribution vegetation management O&M spend by year by subaccount for 2018 through 2022, and the projection for the forecast test period.

Account ID CB	Fiscal Year					Test Year
	2018	2019	2020	2021	2022	
0593000	\$125,071	\$135,831	\$160,758	\$201,348	\$250,818	\$168,735
0593100	\$4,201,319	\$5,863,468	\$3,988,789	\$3,890,398	\$4,578,693	\$4,736,233
Total	\$4,326,390	\$5,999,299	\$4,149,548	\$4,091,747	\$4,829,511	\$4,904,968

b. See the table below for the number of miles trimmed and the average cost per mile for each year 2018 through 2022, and projection for the forecast test period.

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	Test Year
Miles Maintained	240.95	323.18	305.33	287.57	300.22	288
Average Cost Per Mile	\$17,956	\$18,563	\$13,590	\$14,229	\$16,087	\$17,031

c. Please see AG-DR-01-129(c) Confidential Attachments 1 through 14.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Danielle L. Weatherston/Grady “Tripp” S. Carpenter – a.
Ron A. Adams – b., c.

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-129(c)
CONFIDENTIAL ATTACHMENTS
1-14**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-130

REQUEST:

Refer to the Application generally. Indicate whether Duke Kentucky is a C corporation for federal income tax purposes. If not, then describe Duke Kentucky's entity status for federal income tax purposes.

RESPONSE:

Duke Energy Kentucky is a C corporation for federal income tax purposes.

PERSON RESPONSIBLE: John R. Panizza

**Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023**

AG-DR-01-131

REQUEST:

Refer to the Application generally. Indicate whether Duke Ohio is a C corporation for federal income tax purposes. If not, then describe Duke Ohio's entity status for federal income tax purposes.

RESPONSE:

Duke Energy Ohio is a C corporation for federal income tax purposes.

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-132

REQUEST:

Refer to the Application generally. Provide a copy of Duke Ohio's 2021 federal income tax returns.

RESPONSE:

Objection. Overbroad and irrelevant. This request is beyond the scope of reasonable discovery and is not likely to lead to the discovery of admissible or relevant evidence. The tax returns of Duke Energy Ohio have no bearing on Duke Energy Kentucky's application. Without waiving said objection, and to the extent discoverable, the Company would agree to make the tax returns of Duke Energy Ohio available for inspection at the Company's offices in Frankfort at a mutually agreeable and reasonable time and date.

PERSON RESPONSIBLE: As to objection, Legal
 As to response, John R. Panizza

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-133

REQUEST:

Refer to the Application generally. Provide a copy of Duke Energy's 2021 federal income tax returns.

RESPONSE:

Objection. Overbroad and irrelevant. This request is beyond the scope of reasonable discovery and is not likely to lead to the discovery of admissible or relevant evidence. The tax returns of Duke Energy Corp have no bearing on Duke Energy Kentucky's application. Without waiving said objection, and to the extent discoverable, the Company would agree to make the tax returns of Duke Energy Kentucky available for inspection at the Company's offices in Frankfort at a mutually agreeable and reasonable time and date.

PERSON RESPONSIBLE: As to objection, Legal
 As to response, John R. Panizza

**Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023**

AG-DR-01-134

REQUEST:

Refer to the Application generally. Provide a copy of Duke Energy, Duke Ohio, and Duke Kentucky's income tax allocation agreement(s).

RESPONSE:

Please see attached AG-DR-01-134 Attachment.

PERSON RESPONSIBLE: John R. Panizza

DUKE ENERGY CORPORATION AND CONSENTING MEMBERS OF ITS
CONSOLIDATED GROUP

FOURTH AMENDED AGREEMENT FOR
FILING CONSOLIDATED INCOME TAX
RETURNS AND FOR ALLOCATION OF
CONSOLIDATED INCOME TAX

Duke Energy Corporation, a Delaware corporation (“Duke Energy”), and its Members hereby agree as of January 1, 2016 to join annually in the filing of a consolidated Federal income tax return and to allocate the consolidated Federal income tax liabilities and benefits among the Members of the Consolidated Group in accordance with the provisions of this Agreement (“Agreement”). This F o u r t h A m e n d e d Agreement supersedes and replaces in its entirety the Third Amended Agreement for Filing Consolidated Income Tax Returns and for Allocation of Consolidated Income and Tax Liabilities and Benefits dated July 2, 2012, to clarify certain terms and reflect changes in parties to the agreement.

1. DEFINITIONS

“Affiliate” means a corporation, or a company that is treated as a corporation or a company wholly owned by an entity treated as a corporation that is disregarded for purposes of U.S. federal income taxation, other than the common parent which is a Member of the Affiliated Group.

“Affiliated Group” means a group of corporations, or companies that are treated as corporations or disregarded for purposes of U.S. federal income taxation, as defined in Internal Revenue Code¹ section 1504 and the regulations enacted thereunder.

“Consolidated Group” means a group filing (or required to file) consolidated returns for the tax year.

“Consolidated tax” is the aggregate current Federal income tax liability for the Consolidated Group for a tax year shown on the consolidated Federal income tax return, including any adjustments thereto, or as described in section 5 hereof.

“Corporate taxable income” is the positive taxable income of an Affiliate for a tax year, computed as though such company had filed a separate return on the same basis as used in the consolidated return, except that dividend income from Affiliates shall be disregarded, and other intercompany transactions, eliminated in consolidation, shall be given appropriate effect.

¹ All references to the “Internal Revenue Code” or “IRC” are to the Internal Revenue Code of 1986, as amended.

"Corporate taxable loss" is the taxable loss of an Affiliate for a tax year, computed as though such entity had filed a Separate return on the same basis as used in the consolidated return, except that dividend income from Affiliates shall be disregarded, and other intercompany transactions, eliminated in consolidation, shall be given appropriate effect.

"Corporate tax credit" is a negative separate regular tax of an Affiliate for a tax year, equal to the amount by which the consolidated regular tax is reduced by including the Corporate taxable loss of such Affiliate in the consolidated tax return.

"Group" means a group of Affiliates as defined in IRC section 1504.

"Separate return" is the tax liability calculated on the taxable income or loss of an Affiliate as though such entity were not a Member of a Consolidated Group.

"Member" is an Affiliate, including any Regulated Business as indicated in section 3 herein, which is part of the Affiliated Group as defined in IRC section 1504 that files consolidated tax returns and agrees to be subject to this Agreement.

These definitions shall apply, as appropriate, in the context of the regular income tax and the Alternative Minimum Tax ("AMT") unless otherwise indicated in the Agreement.

2. FILING OF RETURNS

A U.S. consolidated federal income tax return shall be filed by Duke Energy as the common parent for the tax year ended December 31, 2016, and for each subsequent taxable period for which the Affiliated Group is required or permitted to do so. Each Member of the Affiliated Group consents to the filing by Duke Energy of consolidated federal income tax returns for all taxable periods in which it is eligible to be a member of the Affiliated Group. Duke Energy and each Member of the Affiliated Group agrees to execute and file such consents, elections and other documents, and to take such other action as may be necessary, required or appropriate for the proper filing of such returns. Duke Energy will timely pay the Affiliated Group's federal income tax liability for each taxable year.

3. REGULATED BUSINESSES OPERATING IN LLC OR LP FORM

For purposes of allocating the consolidated federal and state tax liabilities and tax benefits under this Agreement, each business operating as a LLC, or LP that is subject to the rules and regulations of the Federal Energy Regulatory Commission or state utilities commissions (hereinafter, a “Regulated Business”) shall be considered a Member of the Consolidated Group, and shall be responsible for tax due on its allocable share of taxable income (or shall be entitled to a credit for its allocable share of tax loss), as set forth in Sections 4 through 7 hereof. For purposes of this Agreement, the determination of a Regulated Business’s allocable share shall be made (i) as if such Regulated Business was a taxable or regarded entity for U.S. federal income tax purposes and (ii) utilizing the separate “taxable income” method.

4. ALLOCATION PROCEDURES FOR CONSOLIDATED FEDERAL INCOME TAXES

For all taxable periods, Duke Energy shall calculate the consolidated federal income tax liability (including, if applicable, alternative minimum tax liability) of the Affiliated Group for the period. The Members agree that their respective shares of the Consolidated tax liability for each year shall be an amount equal to the amount determined under the taxable income method in accordance with IRC section 1552(a)(1)¹, with the absorption of tax benefits determined under the percentage method in accordance with Treas. Reg. section 1.1502-33(d)(3)², using 100% as the applicable percentage for allocation of any excess of a member’s Separate return liability over that determined under the income method. To the extent that the Consolidated Group federal income tax liability is reduced by a loss or tax credit available to it as a result of the inclusion of a Member in the consolidated federal income tax return, Duke Energy shall make a payment or an inter-company account adjustment for the amount of the benefit to the Member as determined in accordance with this section.

To illustrate the above, the Consolidated tax liability shall be allocated among the Members of the Group utilizing the separate return “taxable income” allocation method attributable to each Member, in the following manner:

- a) Each Member, which has a Corporate taxable loss, will be entitled to a Corporate payment or intercompany credit equal to the amount by which the consolidated regular income tax is reduced by including the corporate tax loss of such Member in the consolidated tax return.

¹ Under IRC section 1552(a)(1), tax liability is apportioned to each member of the group in accordance with the ratio of the consolidated taxable income attributable to each member bears to the consolidated taxable income .

² The percentage method under this regulation “allocates tax liability based on the absorption of tax attributes, without taking into account the ability of any member to subsequently absorb its own tax attributes. The allocation under this method is in addition to the allocation under section 1552.”

The Members having corporate taxable income will be allocated an amount of regular income tax liability equal to the sum of the consolidated regular tax liability and the Corporate tax credits allocated to the Members having corporate tax losses based on the ratio that each such Member's Corporate taxable income bears to the total corporate taxable income of all Members having Corporate taxable income.

If the aggregate of the Members' Corporate taxable losses are not entirely utilized on the current year's consolidated return, the consolidated carryback or carryforward of such losses to the applicable taxable year(s) will be allocated to each Member having a Corporate taxable loss in the ratio that such Member's separate Corporate tax loss bears to the total corporate tax losses of all Members having Corporate taxable losses.

- b) The consolidated AMT will be allocated among the Members in accordance with the procedures and principles set forth in Proposed Treasury Regulation section 1.1502-55 in the form such Regulation existed on the date on which this Agreement was executed.
- c) Tax benefits such as general business credits, foreign tax benefits, or other tax credits shall be apportioned directly to those Members whose investments or contributions generated the credit or benefit.

If the credit or benefit cannot be entirely utilized to offset current Consolidated tax, the consolidated credit carryback or carryforward shall be apportioned to those Members whose investments or contributions generated the credit or benefit in proportion to the relative amounts of credits or benefits generated by each Member.

- d) If the amount of Consolidated tax allocated to any Member under this Agreement, as determined above, exceeds the separate return tax of such Member, such excess shall be reallocated among those Members whose allocated tax liability is less than the amount of their respective separate return tax liabilities. The reallocation shall be proportionate to the respective reductions in separate return tax liability of such Members. Any remaining unallocated tax liability shall be assigned to Duke Energy. The term "tax" and "tax liability" used in the subsection shall include regular tax and AMT.

5. TAX PAYMENTS AND COLLECTIONS FOR ALLOCATIONS

Duke Energy shall make any calculations on behalf of the Members necessary to comply with the estimated tax provisions of the Internal Revenue Code of 1986 as amended. Based on such calculations, Duke Energy shall charge or refund to the Members appropriate amounts at intervals consistent with the dates indicated by IRC section 6655. Duke Energy shall be responsible for paying to the Internal Revenue Service

the consolidated current Federal income tax liability.

After filing the consolidated Federal income tax return and allocating the Consolidated tax liability among the Members, Duke Energy and the Members agree to settle between them the difference, if any, between the allocable federal income tax liability as determined under this Agreement and the sum of all payments or inter-company adjustments previously made relating to that tax year no later than ninety (90) days after the filing of the consolidated Federal income tax return.

6. ALLOCATION OF STATE TAX LIABILITIES OR BENEFITS

State and local income tax liabilities will be allocated, where appropriate, among Members in accordance with principles similar to those employed in the Agreement for the allocation of consolidated Federal income tax liability.

7. TAX RETURN ADJUSTMENTS

In the event the consolidated tax return is subsequently adjusted by the Internal Revenue Service, state tax authorities, amended returns, claims for refund, or otherwise, such adjustments shall be reflected in the same manner as though they had formed part of the original consolidated return. Interest paid or received, and penalties imposed on account of any adjustment will be allocated to the responsible Member.

8. NEW MEMBERS

If, at any time, a corporation becomes a Member of the affiliated group, the parties hereto agree that such new Member shall become a party to this Agreement and execute a duplicate copy of this Agreement. Unless otherwise specified, such new Member shall have similar rights and obligations of all other Members under this Agreement, effective as of the day they become a member of the Affiliated Group that elects to file a consolidated return.

9. MEMBERS LEAVING THE AFFILIATED GROUP

In the event that any Member of the Affiliated Group at any time leaves the Group and, under any applicable statutory provision or regulation, that Member is assigned and is deemed to take with it all or a portion of any of the tax attributes (including, but not limited to, net operating losses, credit carryforwards, and Minimum Tax Credit carryforwards) of the Affiliated Group, then, to the extent the amount of the attributes so assigned differs from the amount of such attributes previously allocated to such Member under this Agreement, the leaving Member shall appropriately settle with the Group. Such settlement shall consist of payment on a dollar-for-dollar basis for all differences in credits and, in the case of net operating loss differences, in an amount computed by reference to the highest marginal corporate tax rate. The settlement amounts shall be allocated among the

remaining Members of the Group in proportion to the relative level of attributes possessed by each Member and the attributes of each Member shall be adjusted accordingly.

10. SUCCESSORS, ASSIGNS

The provisions and terms of the Agreement shall be binding on and inure to the benefit of any successor or assignee by reason of merger, acquisition of assets, or otherwise, of any of the Members hereto.

11. AMENDMENTS AND TERMINATION

This Agreement may be amended at any time by the written agreement of the parties hereto at the date of such amendment and may be terminated at any time by the written consent of all such parties.

12. GOVERNING LAW

This Agreement is made under the law of the State of Delaware, which law shall be controlling in all matters relating to the interpretation, construction, or enforcement hereof.

13. EFFECTIVE DATE

This Agreement is effective for the allocation of the current Federal income tax liabilities of the Members for the consolidated tax year 2016 and all subsequent years until this Agreement is revised in writing.

The above procedure for apportioning the consolidated annual net current federal and state tax liabilities and tax benefits of Duke Energy and consenting Members of its Consolidated Group have been agreed to by each of the below listed Members of the Consolidated Group as evidenced by the signature of an officer of each entity.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed on its behalf by an appropriate officer thereunto duly authorized.

DUKE ENERGY CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

CINERGY CORP.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY BUSINESS SERVICES LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

DUKE ENERGY OHIO, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY INDIANA, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

SOUTH CONSTRUCTION COMPANY, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY KENTUCKY, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY CAROLINAS, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

MIAMI POWER CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

TRI-STATE IMPROVEMENT COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

KO TRANSMISSION COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY COMMERCIAL ENTERPRISES, INC.

By: Nancy M. Wright
Nancy M. Wright
Secretary

CINERGY GLOBAL POWER, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

CINERGY GLOBAL RESOURCES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE TECHNOLOGIES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DE NUCLEAR ENGINEERING, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

DETFI MANAGEMENT, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY MARKETING AMERICA, LLC

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

DUKE ENERGY REGISTRATION SERVICES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY SERVICES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKENET VENTURECO, INC.

By: Nancy M. Wright
Nancy M. Wright
Assistant Corporate Secretary

EASTOVER MINING COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY CHINA CORP.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY CORPORATE SERVICES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

PROGRESS ENERGY, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY PROGRESS, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

DUKE ENERGY FLORIDA, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

CAROFUND, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

CAPITAN CORPORATION

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

PROGRESS ENERGY ENVIROTREE, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

STRATEGIC RESOURCE SOLUTIONS CORP.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

FLORIDA PROGRESS FUNDING CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

PROGRESS CAPITAL HOLDINGS, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

PIH, INC.

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

PIH TAX CREDIT FUND III, INC.

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

PIH TAX CREDIT FUND IV, INC.

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

PIH TAX CREDIT FUND V, INC.

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

PROGRESS TELECOMMUNICATIONS CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

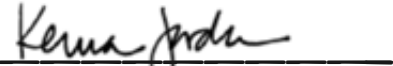
PROGRESS FUELS CORPORATION

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary


PROGRESS SYNFUEL HOLDINGS, INC.

By: 
Nancy M. Wright
Assistant Secretary


DUKE ENERGY RENEWABLES, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

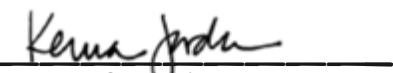
CINERGY GLOBAL HOLDINGS, INC.

By: 
Dina O. Riemann
Secretary

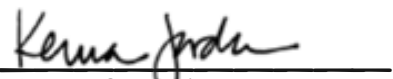
DUKE ENERGY ONE, INC.

By: 
Nancy M. Wright
Secretary

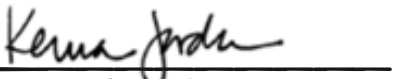
DUKE-RELIANT RESOURCES, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

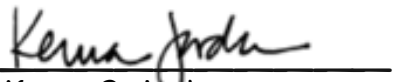
DUKE ENERGY GENERATION SERVICES, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

CINERGY CLIMATE CHANGE INVESTMENTS, LLC

By: 
Kenna C. Jordan
Assistant Secretary

CINERGY SOLUTIONS – UTILITY, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

CALDWELL POWER COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

CATAWBA MFG. & ELECTRIC POWER CO.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

CLAIBORNE ENERGY SERVICES, INC.

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DIXILYN-FIELD DRILLING COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY MARKETING CORP.

By: Nancy M. Wright
Nancy M. Wright
Assistant Secretary

EASTOVER LAND COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

ENERGY PIPELINES INTERNATIONAL COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

GREENVILLE GAS AND ELECTRIC LIGHT AND POWER COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

SOUTHERN POWER COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

WESTERN CAROLINA POWER COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

WATEREE POWER COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY TRANSMISSION HOLDING COMPANY, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

CATAMOUNT ENERGY CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

CATAMOUNT RUMFORD CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

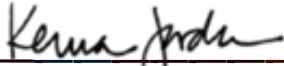
CATAMOUNT SWEETWATER CORPORATION

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

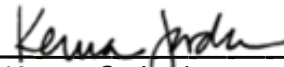
CEC UK1 HOLDING CORP.

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

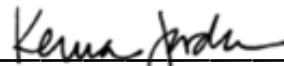
CEC UK2 HOLDING CORP.

By: 
Kenna C. Jordan
Assistant Secretary

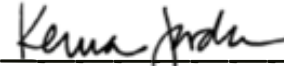
EQUINOX VERMONT CORPORATION

By: 
Kenna C. Jordan
Assistant Secretary

DUKE PROJECT SERVICES, INC.

By: 
Kenna C. Jordan
Assistant Secretary


PANENERGY CORP.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

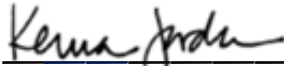
BISON INSURANCE COMPANY LIMITED

By: 
R. Lance Burnette
Secretary


NORTHSOUTH INSURANCE COMPANY LIMITED

By: 
R. Lance Burnette
Secretary

DUKE ENERGY INTERNATIONAL, LLC

By: 
Kenna C. Jordan
Assistant Secretary

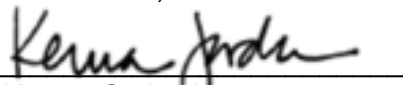
DUKE ENERGY GLOBAL INVESTMENTS, LLC

By: 
Stephen G. De May
Treasurer/Vice President

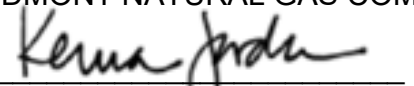
RE SFCITY1, LP
(BY ITS PARENT, DUKE ENERGY RENEWABLES, INC.)

By: 
Nancy M. Wright
Assistant Corporate Secretary

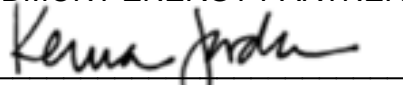
RP-ORLANDO, LLC

By: 
Kenna C. Jordan
Assistant Secretary

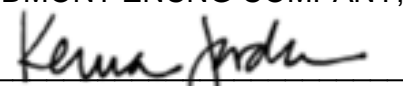
PIEDMONT NATURAL GAS COMPANY, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

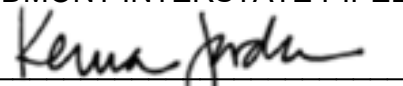
PIEDMONT ENERGY PARTNERS, INC.

By: 
Kenna C. Jordan
Assistant Secretary

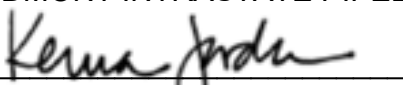
PIEDMONT ENCNG COMPANY, LLC

By: 
Kenna C. Jordan
Assistant Secretary

PIEDMONT INTERSTATE PIPELINE COMPANY

By: 
Kenna C. Jordan
Assistant Secretary

PIEDMONT INTRASTATE PIPELINE COMPANY

By: 
Kenna C. Jordan
Assistant Secretary

PIEDMONT ENERGY COMPANY

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

PIEDMONT CONSTITUTION PIPELINE COMPANY, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

REC SOLAR COMMERCIAL CORPORATION

By: Nancy M. Wright
Nancy M. Wright
Secretary

DUKE ENERGY SABAL TRAIL, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

PROJECT OXYGEN HOLDINGS I, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

DUKE ENERGY SUPPLY COMPANY, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

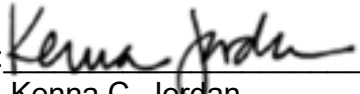
DUKE ENERGY BREEZE HOLDINGS, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

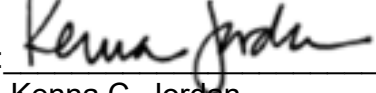
DUKE ENERGY SUN HOLDINGS, LLC

By: Kenna Jordan
Kenna C. Jordan
Assistant Secretary

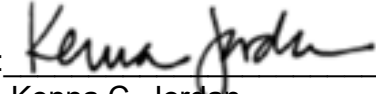
DUKE ENERGY RENEWABLES SOLAR HOLDINGS, INC.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

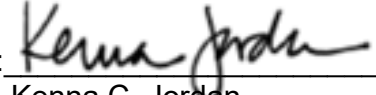
DUKE ENERGY RENEWABLES SOLAR, LLC

By: 
Kenna C. Jordan
Assistant Secretary

DUKE SUSTAINRNG HOLDING CORP.

By: 
Kenna C. Jordan
Assistant Corporate Secretary

DUKE ENERGY INDIANA HOLDCO, LLC

By: 
Kenna C. Jordan
Assistant Secretary

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-135

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request for Information ("Commission Staff's First Request"), SCH_H tab in the SCH_J1-Base tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook, and the state income tax rate of 5.0%.

a. Confirm that this state income tax rate is for Kentucky only and does not reflect an average or weighted average of any other or all Duke Energy utility jurisdictions.

b. Confirm that Duke Kentucky is a subsidiary of Duke Ohio. Indicate whether Duke Kentucky is included in Duke Ohio's state income tax return. If so, then describe how Duke Ohio derives the Ohio apportionment ratio for Ohio taxable income.

c. Provide the Ohio state income tax rate in 2021, 2022, and forecast for 2023 and 2024.

d. Indicate if Duke Ohio or Duke Kentucky files a Kentucky state income tax return. If the former, then describe how Duke Ohio derives the Kentucky apportionment ratio for Kentucky taxable income.

e. Confirm that the 99.37% shown on printed line 11 is the Kentucky retail jurisdiction ratio. If confirmed, then provide the calculation of the 99.37%. If denied, then describe this ratio and provide the calculation.

RESPONSE:

a. Yes, this state income tax rate is for Kentucky only and does not reflect an

average or weighted average of any other or all Duke Energy utility jurisdictions.

b. Yes, Duke Energy Kentucky is a subsidiary of Duke Energy Ohio. Ohio does not have a state corporate income tax; therefore, there is no return for Duke Energy Ohio for Duke Energy Kentucky to be included in.

c. Ohio does not have a state corporate income tax. The rate is zero for 2021-2024.

d. Yes, Duke Energy Corporation files a unitary combined tax return for Kentucky. Duke Energy Ohio and Duke Energy Kentucky are included within the Unitary group. The Kentucky apportionment ratio is based on sales in Kentucky divided by sales everywhere.

e. The 99.37% apportionment rate used is based on historical apportionment rates that do not fluctuate greatly from year to year (apportionment is based on the sales in Kentucky as compared to sales everywhere). ASC 740 provides the basis for determination of the deferred tax rate. The rate for deferred taxes is the rate that is applicable for periods in which temporary differences are expected to reverse. The apportionment rates used in the calculation of state deferred taxes do not fluctuate greatly over time due to the nature of the utility business. Therefore, historical rates are a reasonable indicator of future rates. Each year after the state income tax returns are filed, the most recent apportionment rates are analyzed to determine if adjustments are necessary.

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-136

REQUEST:

Refer to Duke's response to the Commission Staff's First Request, Item 56, the electronic workpapers, and further to the worksheet tab WPB-6's which show the ADIT amounts by month for each account in total.

- a. Provide another schedule in the same format for the months January 2021 through July 2022.
- b. Provide the ADIT in accounts 190, 282, and 283 by temporary difference for each month January 2021 through June 2024.

RESPONSE:

- a. Please see AG-DR-01-136 Attachment, tab (a) for the ADIT amounts by month for January 2021 through July 2022.
- b. Please see AG-DR-01-136 Attachment, tab (b).

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Corporation

2021001 ELECTRIC ADIT: PP&E

Sum of R257_FAS 109_END

Table with 27 columns: Actuals Jan-2021, Actuals Feb-2021, Actuals Mar-2021, Actuals Apr-2021, Actuals May-2021, Actuals Jun-2021, Actuals Jul-2021, Actuals Aug-2021, Actuals Sep-2021, Actuals Oct-2021, Actuals Nov-2021, Actuals Dec-2021, Actuals Jan-2022, Actuals Feb-2022, Actuals Mar-2022, Actuals Apr-2022, Actuals May-2022, Actuals Jun-2022, Actuals Jul-2022, Actuals Aug-2022, Actuals Sep-2022, Actuals Oct-2022, Actuals Nov-2022, Actuals Dec-2022, Actuals Jan-2023, Actuals Feb-2023, Actuals Mar-2023, Actuals Apr-2023, Actuals May-2023, Actuals Jun-2023, Actuals Jul-2023, Actuals Aug-2023, Actuals Sep-2023, Actuals Oct-2023, Actuals Nov-2023, Actuals Dec-2023. Rows include categories like TAX RECONCILE ITEM DESC, ACQUISITION ADJMT, AFUDC Equity, Casualty Loss, Safety Restoration Allowback, Cleaning Cost, Depreciation 100% Non-Deduct, Hardware Capitalized, Impairment Adjustment, Leased Meter Adjust, Method Life, Non-cash Overheads, OPERATING LEASES BOOK, Percentage Repair Allowance, P&E Investment, P&E Tax, Software Capitalized, Software Expense, Tax Dept Adjust, Tax Expenditures, and TIC.

Summary rows for DEK Elec Tax Total, Less ADIT related to ARO, Less ADIT generated from non-cash transactions, Adjusted Electric Balance, and Sum of R257_FAS 109_END.

GAS

Sum of R257_FAS 109_END

Table with 27 columns: Actuals Jan-2021, Actuals Feb-2021, Actuals Mar-2021, Actuals Apr-2021, Actuals May-2021, Actuals Jun-2021, Actuals Jul-2021, Actuals Aug-2021, Actuals Sep-2021, Actuals Oct-2021, Actuals Nov-2021, Actuals Dec-2021, Actuals Jan-2022, Actuals Feb-2022, Actuals Mar-2022, Actuals Apr-2022, Actuals May-2022, Actuals Jun-2022, Actuals Jul-2022, Actuals Aug-2022, Actuals Sep-2022, Actuals Oct-2022, Actuals Nov-2022, Actuals Dec-2022, Actuals Jan-2023, Actuals Feb-2023, Actuals Mar-2023, Actuals Apr-2023, Actuals May-2023, Actuals Jun-2023, Actuals Jul-2023, Actuals Aug-2023, Actuals Sep-2023, Actuals Oct-2023, Actuals Nov-2023, Actuals Dec-2023. Rows include categories like TAX RECONCILE ITEM DESC, AFUDC Equity, ARO, Depr Cap Trans Equip, Depreciation Ltd, Entertainment 100% Non-Deduct, Highway Bill, ITC Basis Reduction, Leased Meter Adjust, Meters & Trans, Method Life, Non-cash Overheads, Percentage Repair Allowance, P&E Tax, Software Capitalized, Software Expense, Tax Dept Adjust, and TIC.

Summary rows for DEK Gas Tax Total, Less ADIT related to ARO, Less ADIT generated from non-cash transactions, Adjusted Gas Balance, and Sum of R257_FAS 109_END.

Adjusted Gas Balance

Summary rows for Total Adjusted Balance, PP&E-6, and CRA.

Note: The cumulative temporary difference detail for FERC ADIT Account 282 is better represented through the Power Tax system than the One Source Tax Provision system. Therefore, for this category the Power Tax format is being used rather than the One Source Tax Provision system for 282. The One Source Tax Provision system will still provide the FERC ADIT Account 190 and 283 detail. Due to differences in how One Source Tax Provision and Power Tax organize and report their data, we cannot provide a breakout similar to the WP 8 format for 282 (i.e. by Gas Utility, Electric Utility and Non-Utility). We are providing the detail for 282 in total for DEK Electric and GAS and showing how that agrees to the total of the three categories per the WP 8.

Forecast Sep 2022	Forecast Oct 2022	Forecast Nov 2022	Forecast Dec 2022	Forecast Jan 2023	Forecast Feb 2023	Forecast Mar 2023	Forecast Apr 2023	Forecast May 2023	Forecast Jun 2023	Forecast Jul 2023	Forecast Aug 2023	Forecast Sep 2023	Forecast Oct 2023	Forecast Nov 2023	Forecast Dec 2023	Forecast Jan 2024	Forecast Feb 2024	Forecast Mar 2024	Forecast Apr 2024	Forecast May 2024	Forecast Jun 2024
2,206	2,212	2,218	2,224	2,230	2,235	2,242	2,248	2,253	2,259	2,267	2,273	2,280	2,286	2,291	2,300	2,306	2,312	2,319	2,325	2,331	2,339
(1,786,310)	(1,770,238)	(1,756,070)	(1,743,051)	(1,730,954)	(1,719,003)	(1,708,151)	(1,698,346)	(1,689,548)	(1,681,698)	(1,674,746)	(1,668,540)	(1,662,938)	(1,657,890)	(1,653,347)	(1,649,252)	(1,645,557)	(1,642,202)	(1,639,137)	(1,636,312)	(1,633,677)	(1,631,193)
(1,034,803)	(1,042,977)	(1,051,183)	(1,059,943)	(1,067,294)	(1,074,909)	(1,082,853)	(1,091,098)	(1,099,214)	(1,107,452)	(1,114,244)	(1,121,634)	(1,129,284)	(1,137,252)	(1,145,272)	(1,153,272)	(1,161,272)	(1,170,272)	(1,179,272)	(1,187,272)	(1,195,272)	(1,203,272)
(1,098,224)	(1,122,051)	(1,146,211)	(1,170,742)	(1,195,673)	(1,220,954)	(1,246,525)	(1,272,326)	(1,298,297)	(1,324,458)	(1,350,829)	(1,377,430)	(1,404,281)	(1,431,892)	(1,459,273)	(1,486,934)	(1,514,785)	(1,542,826)	(1,571,057)	(1,600,478)	(1,630,089)	(1,659,890)
(867,170)	(869,558)	(871,908)	(874,326)	(876,812)	(879,366)	(881,941)	(884,537)	(887,164)	(889,821)	(892,507)	(895,222)	(897,966)	(900,739)	(903,541)	(906,372)	(909,232)	(912,121)	(915,039)	(917,986)	(920,962)	(923,967)
4,196,151	4,207,731	4,219,078	4,230,778	4,242,361	4,253,886	4,265,283	4,276,584	4,287,849	4,299,074	4,310,208	4,321,298	4,332,412	4,343,500	4,354,592	4,365,638	4,376,755	4,387,812	4,398,750	4,409,650	4,420,500	4,431,300
3,070,895	3,073,370	3,076,674	3,080,237	3,103,978	3,111,684	3,120,735	3,128,424	3,136,284	3,143,662	3,150,527	3,156,934	3,162,900	3,168,466	3,173,662	3,178,466	3,182,966	3,187,166	3,191,166	3,194,966	3,198,566	3,202,066
6,240	6,250	6,274	6,291	6,307	6,320	6,341	6,367	6,397	6,429	6,462	6,498	6,536	6,574	6,612	6,650	6,688	6,726	6,764	6,802	6,840	6,878
319,462	320,314	321,228	322,128	323,094	324,017	324,933	325,826	326,750	327,681	328,598	329,514	330,418	331,311	332,193	333,064	333,924	334,773	335,611	336,438	337,254	338,059
(34,463)	(34,559)	(34,662)	(34,748)	(34,835)	(34,921)	(35,003)	(35,110)	(35,197)	(35,292)	(35,383)	(35,479)	(35,571)	(35,667)	(35,767)	(35,871)	(35,978)	(36,089)	(36,193)	(36,299)	(36,407)	(36,517)
(66)	(69)	(72)	(76)	(80)	(85)	(90)	(95)	(101)	(107)	(113)	(119)	(125)	(131)	(137)	(143)	(149)	(155)	(161)	(167)	(173)	(179)
(76,119)	(76,239)	(76,324)	(76,346)	(76,308)	(77,129)	(77,233)	(77,345)	(77,463)	(77,590)	(77,726)	(77,871)	(78,026)	(78,190)	(78,363)	(78,545)	(78,736)	(78,936)	(79,144)	(79,359)	(79,582)	(79,812)
(2,046)	(2,050)	(2,056)	(2,060)	(2,066)	(2,071)	(2,076)	(2,081)	(2,086)	(2,091)	(2,096)	(2,101)	(2,106)	(2,111)	(2,116)	(2,121)	(2,126)	(2,131)	(2,136)	(2,141)	(2,146)	(2,151)
26,546	27,020	27,003	27,168	27,236	27,303	27,383	27,451	27,519	27,618	27,688	27,784	27,910	27,981	28,085	28,181	28,233	28,319	28,392	28,466	28,541	28,617
(65,269)	(65,454)	(65,666)	(65,903)	(66,165)	(66,452)	(66,764)	(67,101)	(67,463)	(67,850)	(68,262)	(68,699)	(69,171)	(69,668)	(70,190)	(70,737)	(71,309)	(71,906)	(72,528)	(73,175)	(73,847)	(74,544)
289,243	289,058	289,818	290,621	291,348	292,071	292,821	293,548	294,300	295,040	295,788	296,544	297,307	298,076	298,851	299,632	300,420	301,214	302,022	302,833	303,647	304,464
(385,844)	(385,858)	(385,883)	(385,947)	(386,000)	(386,053)	(386,105)	(386,157)	(386,208)	(386,259)	(386,309)	(386,359)	(386,408)	(386,456)	(386,503)	(386,549)	(386,594)	(386,638)	(386,681)	(386,723)	(386,764)	(386,804)
1,457,978	1,462,000	1,465,943	1,470,028	1,474,683	1,479,828	1,485,311	1,489,021	1,492,014	1,494,433	1,496,422	1,497,927	1,500,000	1,501,677	1,503,000	1,504,000	1,504,750	1,505,250	1,505,600	1,505,850	1,506,000	1,506,100
(103,269)	(103,369)	(103,462)	(103,547)	(103,623)	(103,691)	(103,751)	(103,803)	(103,848)	(103,886)	(103,917)	(103,941)	(103,959)	(103,972)	(103,980)	(103,983)	(103,981)	(103,975)	(103,968)	(103,959)	(103,947)	(103,932)
63,438	63,613	63,785	63,952	64,122	64,281	64,428	64,568	64,709	64,843	64,972	65,097	65,218	65,335	65,449	65,559	65,665	65,767	65,865	65,959	66,049	66,135
(157,997,022)	(158,433,024)	(158,860,293)	(159,300,629)	(159,809,125)	(160,369,979)	(160,965,229)	(161,561,226)	(162,163,877)	(162,769,811)	(163,374,592)	(163,976,342)	(164,579,891)	(165,179,146)	(165,770,146)	(166,356,833)	(166,935,144)	(167,501,144)	(168,059,888)	(168,616,464)	(169,165,888)	(169,713,144)
57,766	58,061	58,222	58,366	58,511	58,663	58,820	58,977	59,139	59,288	59,437	59,587	59,737	59,887	60,037	60,186	60,334	60,481	60,627	60,772	60,916	61,059
1,959,656	1,960,954	1,970,363	1,979,827	1,989,388	1,998,885	2,008,357	2,017,869	2,027,369	2,036,869	2,046,369	2,055,869	2,065,369	2,074,869	2,084,369	2,093,869	2,103,369	2,112,869	2,122,369	2,131,869	2,141,369	2,150,869
(2,420,947)	(2,417,061)	(2,417,062)	(2,423,765)	(2,429,957)	(2,435,877)	(2,441,597)	(2,447,164)	(2,452,514)	(2,457,697)	(2,462,660)	(2,467,460)	(2,472,144)	(2,476,760)	(2,481,260)	(2,485,660)	(2,489,960)	(2,494,160)	(2,498,260)	(2,502,260)	(2,506,160)	(2,509,960)
(215,977)	(213,645)	(214,221)	(214,815)	(215,352)	(215,887)	(216,419)	(216,952)	(217,484)	(218,016)	(218,548)	(219,079)	(220,161)	(220,885)	(221,248)	(222,075)	(222,667)	(223,244)	(223,918)	(224,499)	(225,082)	(225,651)
67,716	67,896	68,078	68,260	68,442	68,624	68,806	68,987	69,169	69,351	69,532	69,713	69,894	70,075	70,256	70,437	70,618	70,799	70,979	71,160	71,341	71,522
(1,766)	(1,771)	(1,776)	(1,781)	(1,785)	(1,789)	(1,793)	(1,797)	(1,801)	(1,805)	(1,809)	(1,813)	(1,817)	(1,821)	(1,825)	(1,829)	(1,833)	(1,837)	(1,841)	(1,845)	(1,849)	(1,853)
(65,204)	(65,388)	(65,655)	(65,917)	(66,165)	(66,503)	(66,778)	(67,040)	(67,313)	(67,589)	(67,868)	(68,151)	(68,438)	(68,729)	(69,024)	(69,322)	(69,623)	(69,926)	(70,231)	(70,538)	(70,847)	(71,158)
(1,369,468)	(1,373,247)	(1,376,950)	(1,380,709)	(1,384,221)	(1,387,657)	(1,391,093)	(1,395,148)	(1,398,627)	(1,403,711)	(1,409,214)	(1,415,132)	(1,421,460)	(1,428,199)	(1,435,252)	(1,442,621)	(1,450,300)	(1,458,299)	(1,466,618)	(1,474,257)	(1,482,216)	(1,490,495)
54,540	54,891	54,838	54,890	55,128	55,265	55,345	55,363	55,394	55,504	55,564	55,594	55,599	55,603	55,607	55,609	55,610	55,610	55,610	55,610	55,610	55,610
(28,900)	(28,908)	(28,908)	(28,910)	(28,912)	(28,914)	(28,916)	(28,918)	(28,920)	(28,922)	(28,924)	(28,926)	(28,928)	(28,930)	(28,932)	(28,934)	(28,936)	(28,938)	(28,940)	(28,942)	(28,944)	(28,946)
(15,067)	(15,171)	(15,176)	(15,180)	(15,082)	(15,082)	(15,081)	(15,079)	(15,076)	(15,074)	(15,072)	(15,070)	(15,068)	(15,066)	(15,064)	(15,062)	(15,060)	(15,058)	(15,056)	(15,054)	(15,052)	(15,050)
(67,050,830)	(67,244,885)	(67,230,246)	(67,213,212)	(67,212,265)	(68,148,179)	(68,517,179)	(68,517,349)	(68,487,723)	(68,726,635)	(68,928,427)	(69,033,211)	(69,052,261)	(69,046,405)	(69,033,665)	(69,018,175)	(69,000,548)	(69,000,665)	(69,000,665)	(69,000,665)	(69,000,665)	(69,000,665)
710,887	721,874	723,821	725,628	727,643	729,449	731,511	733,287	735,216	737,288	739,226	741,222	743,282	745,462	747,565	749,327	750,358	751,600	752,966	754,357	755,781	757,311
3,311,206	3,340,706	3,368,700	3,396,307	3,423,766	3,451,025	3,478,079	3,504,866	3,531,400	3,557,666	3,583,666	3,609,400	3,634,866	3,660,066	3,684,966	3,709,600	3,733,966	3,758,066	3,781,866	3,805,366	3,828,566	3,851,466
(231,471,721)	(231,111,688)	(231,137,431)	(231,182,451)	(231,166,373)	(231,447,201)	(231,228,416)	(231,613,344)	(231,461,431)	(231,760,608)	(231,852,662)	(231,893,347)	(231,911,647)	(231,908,288)	(231,927,031)	(231,949,938)	(231,971,246)	(231,988,366)	(231,999,800)	(232,006,566)	(232,011,666)	(232,016,166)

Forecast Sep 2022	Forecast Oct 2022	Forecast Nov 2022	Forecast Dec 2022	Forecast Jan 2023	Forecast Feb 2023	Forecast Mar 2023	Forecast Apr 2023	Forecast May 2023	Forecast Jun 2023	Forecast Jul 2023	Forecast Aug 2023	Forecast Sep 2023	Forecast Oct 2023	Forecast Nov 2023	Forecast Dec 2023	Forecast Jan 2024	Forecast Feb 2024	Forecast Mar 2024	Forecast Apr 2024	Forecast May 2024	Forecast Jun 2024
(411,165)	(413,298)	(415,263)	(417,002)	(421,747)	(423,263)	(424,300)	(425,369)	(426,534)	(427,558)	(428,323)	(429,010)	(429,621)	(430,154)	(430,619)	(431,014)	(431,450)	(431,826)	(432,142)	(432,498)	(432,814)	(433,170)
(720,769)	(722,722)	(724,567)	(726,516)	(728,683)	(730,844)	(732,904)	(734,943)	(736,940)	(738,893)	(740,800)	(742,660)	(744,709)	(746,574)	(748,239)	(749,681)	(750,981)	(752,081)	(753,081)	(753,981)	(754,881)	(755,681)
(883,914)	(885,767)	(887,517)	(889,367)	(891,426)	(893,448)	(895,428)	(897,363)														

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-137

REQUEST:

Refer to the Panizza Testimony at 4 – 6. Provide the balance of unprotected Excess Accumulated Deferred Income Taxes (“EDIT”) in account 254 for each month December 2020 through the latest month with available data, separated between federal EDIT and state EDIT. Notate any true-ups in the balances related to actual tax returns and explain the derivation of the amortization amounts for each of the months that the amortization amounts changed for both federal EDIT and state EDIT.

RESPONSE:

Please see AG-DR-01-137 Attachment.

PERSON RESPONSIBLE: John R. Panizza

DE Kentucky - Electric
Federal EDIT Workpaper

EDIT:	Protected to Unprotected			
	Protected	Mvmt	Unprotected PP&E	Unprotected Non PP&E
Estimate As Of 12/31/2017	(35,298,360)	(367,668)	(29,180,237)	(3,466,986)
2018 Return True Up	(2,879,815)	(29,996)	-	20,162
2018 PP&E True Up	(9,637,532)	(100,385)	7,205,565	-
Protected to unprotected mvmt	146,320	351,728	(146,320)	(21,974,672)
Total EDIT To Be Amortized	(47,815,707)	(146,320)	(21,974,672)	(3,446,824)

Balances Used to Compute 10-yr Amortization
Beginning in 2019 per Rate Order (29,565,800) (3,466,986)
Per Month Amount (246,382) (28,892)

Cumulative Balances

	Protected EDIT Amortization	Amortization Of Unprotected PP&E ARAM Rate	Amortization Of Unprotected PP&E EDIT \$3.303M Annual	Amortization Of Unprotected Non PP&E EDIT \$3.303M Annual	MTD EDIT Amortization	YTD EDIT Amortization	Protected	Unprotected PP&E	Unprotected Non PP&E	Total
Jan-18	36,580	-	-	(36,580)	-	-	(47,779,127)	(21,974,672)	(3,483,404)	(73,237,203)
Feb-18	36,580	-	-	(36,580)	-	-	(47,742,547)	(21,974,672)	(3,519,984)	(73,237,203)
Mar-18	36,580	-	-	(36,580)	-	-	(47,705,967)	(21,974,672)	(3,556,564)	(73,237,203)
Apr-18	36,580	-	-	(36,580)	-	-	(47,669,387)	(21,974,672)	(3,593,145)	(73,237,203)
May-18	91,917	3.12%	246,233	28,892	367,041	367,041	(47,577,470)	(21,728,439)	(3,564,253)	(72,870,162)
Jun-18	91,917	3.12%	246,233	28,892	367,041	734,082	(47,485,553)	(21,482,207)	(3,535,361)	(72,503,121)
Jul-18	91,917	3.12%	246,233	28,892	367,041	1,101,123	(47,393,636)	(21,235,974)	(3,506,470)	(72,136,080)
Aug-18	91,917	3.12%	246,233	28,892	367,041	1,468,164	(47,301,719)	(20,989,742)	(3,477,578)	(71,769,039)
Sep-18	99,416	3.12%	246,483	28,724	374,622	1,842,786	(47,202,303)	(20,743,259)	(3,448,855)	(71,394,417)
Oct-18	99,416	3.12%	246,483	28,724	374,622	2,217,408	(47,102,887)	(20,496,777)	(3,420,131)	(71,019,795)
Nov-18	99,416	3.12%	246,483	28,724	374,622	2,592,030	(47,003,471)	(20,250,294)	(3,391,408)	(70,645,173)
Dec-18	(373,274)	-	247,348	28,724	(97,203)	2,494,827	(47,376,745)	(20,002,947)	(3,362,684)	(70,742,376)
Balance	(47,376,745)		(49,815,128)	(6,858,562)						
Jan-19	73,160	-	492,763	57,783	623,707	623,707	(47,376,745)	(20,002,947)	(3,362,684)	(70,742,376)
Feb-19	36,580	-	246,382	28,892	311,853	935,560	(47,303,585)	(19,510,183)	(3,304,901)	(70,118,669)
Mar-19	36,580	-	246,382	28,892	311,853	1,247,413	(47,267,005)	(19,263,802)	(3,276,010)	(69,806,816)
Apr-19	36,580	-	246,382	28,892	311,853	1,559,267	(47,230,425)	(19,017,420)	(3,247,118)	(69,494,963)
May-19	36,580	-	246,382	28,892	311,853	1,871,120	(47,193,845)	(18,771,038)	(3,218,226)	(69,183,109)
Jun-19	36,580	-	246,382	28,892	311,853	2,182,973	(47,157,264)	(18,524,657)	(3,189,335)	(68,871,256)
Jul-19	36,580	-	246,382	28,892	311,853	2,494,826	(47,120,684)	(18,278,275)	(3,160,443)	(68,559,403)
Aug-19	36,580	-	246,382	28,892	311,853	2,806,680	(47,084,104)	(18,031,893)	(3,131,552)	(68,247,550)
Sep-19	36,580	-	246,382	28,892	311,853	3,118,533	(47,047,524)	(17,785,512)	(3,102,660)	(67,935,696)
Oct-19	36,580	-	246,382	28,892	311,853	3,430,386	(47,010,944)	(17,539,130)	(3,073,769)	(67,623,843)
2018 True ups (Booked in Nov. 19 - RTP Dataset)	145,446	-	246,382	(48,482)	96,964	3,215,497	(46,865,498)	(17,539,130)	(3,122,251)	(67,526,879)
Nov-19	169,907	-	246,382	28,892	445,180	3,660,677	(46,695,591)	(17,292,748)	(3,093,359)	(67,081,699)
Dec-19	48,701	-	246,382	28,892	323,974	3,984,651	(46,646,890)	(17,046,367)	(3,064,468)	(66,757,725)
Balance	(46,646,890)		(46,858,548)	(6,560,345)						
Jan-20	48,701	-	246,382	28,892	323,974	323,974	(46,598,190)	(16,799,985)	(3,035,576)	(66,433,751)
Feb-20	48,701	-	246,382	28,892	323,974	647,948	(46,549,489)	(16,553,603)	(3,006,685)	(66,109,777)
Mar-20	48,701	-	246,382	28,892	323,974	971,922	(46,500,788)	(16,307,222)	(2,977,793)	(65,785,803)
Apr-20	48,701	-	246,382	28,892	323,974	1,295,896	(46,452,088)	(16,060,840)	(2,948,901)	(65,461,829)
May-20	48,701	-	246,382	28,892	323,974	1,619,869	(46,403,387)	(15,814,458)	(2,920,010)	(65,137,855)
Jun-20	48,701	-	246,382	28,892	323,974	1,943,843	(46,354,686)	(15,568,077)	(2,891,118)	(64,813,881)
Jul-20	48,701	-	246,382	28,892	323,974	2,267,817	(46,305,986)	(15,321,695)	(2,862,227)	(64,489,908)
Aug-20	48,701	-	246,382	28,892	323,974	2,591,791	(46,257,285)	(15,075,313)	(2,833,335)	(64,165,934)
Sep-20	48,701	-	246,382	28,892	323,974	2,915,765	(46,208,584)	(14,828,932)	(2,804,444)	(63,841,960)
Oct-20	48,701	-	246,382	28,892	323,974	3,239,739	(46,159,884)	(14,582,550)	(2,775,552)	(63,517,986)
Nov-20	48,701	-	246,382	28,892	323,974	3,563,713	(46,111,183)	(14,336,168)	(2,746,661)	(63,194,012)
2019 ARAM True ups booked in RTP dataset	(560,965)	-	-	-	(560,965)	3,002,747	(46,672,148)	(14,089,787)	(2,717,769)	(63,479,704)
2020 EDIT Estimate Adj. included - 12/1/2020	64,293	-	246,382	28,892	339,566	3,342,313	(46,607,856)	(14,089,787)	(2,717,769)	(63,415,412)
Balance	(46,607,856)		(43,901,968)	(6,213,647)						
Jan-21	50,000	-	246,382	28,892	325,273	325,273	(46,557,856)	(13,843,405)	(2,688,877)	(63,090,138)
Feb-21	50,000	-	246,382	28,892	325,273	650,546	(46,507,856)	(13,597,023)	(2,659,986)	(62,764,865)
Mar-21	50,000	-	246,382	28,892	325,273	975,820	(46,457,856)	(13,350,642)	(2,631,094)	(62,439,592)
Apr-21	50,000	-	246,382	28,892	325,273	1,301,093	(46,407,856)	(13,104,260)	(2,602,203)	(62,114,319)
May-21	50,000	-	246,382	28,892	325,273	1,626,366	(46,357,856)	(12,857,878)	(2,573,311)	(61,789,046)
Jun-21	50,000	-	246,382	28,892	325,273	1,951,639	(46,307,856)	(12,611,497)	(2,544,420)	(61,463,772)
Jul-21	50,000	-	246,382	28,892	325,273	2,276,913	(46,257,856)	(12,365,115)	(2,515,528)	(61,138,499)
Aug-21	50,000	-	246,382	28,892	325,273	2,602,186	(46,207,856)	(12,118,733)	(2,486,637)	(60,813,226)
Sep-21	50,000	-	246,382	28,892	325,273	2,927,459	(46,157,856)	(11,872,352)	(2,457,745)	(60,487,953)
Oct-21	50,000	-	246,382	28,892	325,273	3,252,732	(46,107,856)	(11,625,970)	(2,428,854)	(60,162,680)
Nov-21	50,000	-	246,382	28,892	325,273	3,578,005	(46,057,856)	(11,379,588)	(2,399,962)	(59,837,406)
2020 ARAM True ups booked in RTP dataset	173,889	-	-	-	173,889	3,751,895	(45,883,967)	(11,379,588)	(2,399,962)	(59,663,517)
2020 EDIT True Up KY Rate Case Change	(41,568)	-	-	-	(41,568)	3,710,327	(45,925,535)	(11,379,588)	(2,399,962)	(59,705,085)
2021 EDIT Estimate Adj. included	204,160	-	246,382	28,892	479,433	4,189,760	(45,721,375)	(11,133,207)	(2,371,070)	(59,225,652)
Balance	(45,721,375)		(40,945,388)	(5,866,948)						
Jan-22	81,670	-	246,382	28,892	356,943	356,943	(45,639,705)	(10,886,825)	(2,342,179)	(58,868,709)
Feb-22	81,670	-	246,382	28,892	356,943	713,885	(45,558,036)	(10,640,443)	(2,313,287)	(58,511,766)
Mar-22	81,670	-	246,382	28,892	356,943	1,070,828	(45,476,366)	(10,394,062)	(2,284,396)	(58,154,824)
Apr-22	81,670	-	246,382	28,892	356,943	1,427,771	(45,394,697)	(10,147,680)	(2,255,504)	(57,797,881)
May-22	81,670	-	246,382	28,892	356,943	1,784,714	(45,313,027)	(9,901,298)	(2,226,613)	(57,440,938)
Jun-22	81,670	-	246,382	28,892	356,943	2,141,656	(45,231,358)	(9,654,917)	(2,197,721)	(57,083,995)
Jul-22	81,670	-	246,382	28,892	356,943	2,498,599	(45,149,688)	(9,408,535)	(2,168,830)	(56,727,053)

DE Kentucky - Electric
 Federal EDIT Workpaper

EDIT:	Protected to Unprotected		Unprotected PP&E	Unprotected Non PP&E
	Protected	Mvmt		
Estimate As Of 12/31/2017	(35,298,360)	(367,668)	(29,180,237)	(3,466,986)
2018 Return True Up	(2,879,815)	(29,996)	-	20,162
2018 PP&E True Up	(9,637,532)	(100,385)	7,205,565	-
Protected to unprotected mvmt	146,320	351,728	(146,320)	(21,974,672)
Total EDIT To Be Amortized	(47,815,707)	(146,320)	(21,974,672)	(3,446,824)

Balances Used to Compute 10-yr Amortization
 Beginning in 2019 per Rate Order (29,565,800) (3,466,986)
 Per Month Amount (246,382) (28,892)

Cumulative Balances

	Protected EDIT Amortization	ARAM Rate	Amortization Of Unprotected PP&E		MTD EDIT Amortization	YTD EDIT Amortization	Protected	Unprotected PP&E	Unprotected Non PP&E	Total
			EDIT \$3.303M Annual	Unprotected Non PP&E EDIT \$3.303M Annual						
Aug-22	81,670		246,382	28,892	356,943	2,855,542	(45,068,019)	(9,162,153)	(2,139,938)	(56,370,110)
Sep-22	81,670		246,382	28,892	356,943	3,212,485	(44,986,349)	(8,915,772)	(2,111,046)	(56,013,167)
Oct-22	81,670		246,382	28,892	356,943	3,569,427	(44,904,680)	(8,669,390)	(2,082,155)	(55,656,225)
Nov-22	81,670		246,382	28,892	356,943	3,926,370	(44,823,010)	(8,423,008)	(2,053,263)	(55,299,282)
Dec-22	81,670		246,382	28,892	356,943	4,283,313	(44,741,341)	(8,176,627)	(2,024,372)	(54,942,339)
Balance	(44,741,341)		(37,988,808)	(5,520,249)						
Jan-23	98,238		246,382	28,892	373,511	373,511	(44,643,103)	(7,930,245)	(1,995,480)	
Feb-23	98,238		246,382	28,892	373,511	747,022	(44,544,865)	(7,683,863)	(1,966,589)	
Mar-23	98,238		246,382	28,892	373,511	1,120,533	(44,446,627)	(7,437,482)	(1,937,697)	
Apr-23	98,238		246,382	28,892	373,511	1,494,044	(44,348,390)	(7,191,100)	(1,908,806)	
May-23	98,238		246,382	28,892	373,511	1,867,555	(44,250,152)	(6,944,718)	(1,879,914)	
Jun-23	98,238		246,382	28,892	373,511	2,241,066	(44,151,914)	(6,698,337)	(1,851,023)	
Jul-23	98,238		246,382	28,892	373,511	2,614,577	(44,053,676)	(6,451,955)	(1,822,131)	
Aug-23	98,238		246,382	28,892	373,511	2,988,088	(43,955,439)	(6,205,573)	(1,793,239)	
Sep-23	98,238		246,382	28,892	373,511	3,361,599	(43,857,201)	(5,959,192)	(1,764,348)	
Oct-23	98,238		246,382	28,892	373,511	3,735,110	(43,758,963)	(5,712,810)	(1,735,456)	
Nov-23	98,238		246,382	28,892	373,511	4,108,621	(43,660,725)	(5,466,428)	(1,706,565)	
Dec-23	98,238		246,382	28,892	373,511	4,482,132	(43,562,487)	(5,220,047)	(1,677,673)	
Balance	(43,562,487)		(35,032,228)	(5,173,551)						
Jan-24	123,341		246,382	28,892	398,614	398,614	(43,439,146.52)	(4,973,665.15)	(1,648,781.66)	
Feb-24	123,341		246,382	28,892	398,614	797,228	(43,315,805.54)	(4,727,283.48)	(1,619,890.11)	
Mar-24	123,341		246,382	28,892	398,614	1,195,843	(43,192,464.57)	(4,480,901.81)	(1,590,998.56)	
Apr-24	123,341		246,382	28,892	398,614	1,594,457	(43,069,123.60)	(4,234,520.15)	(1,562,107.01)	
May-24	123,341		246,382	28,892	398,614	1,993,071	(42,945,782.62)	(3,988,138.48)	(1,533,215.46)	
Jun-24	123,341		246,382	28,892	398,614	2,391,685	(42,822,441.65)	(3,741,756.81)	(1,504,323.91)	
Balance	(42,822,442)		(33,553,938)	(5,000,201)						

	Protected	Unprotected PP&E	Unprotected Non PP&E	Total
Amount - March 2022 to August 2022	490,017	1,478,290	173,349	2,141,656
Amount - September 2022 to February 2023	523,154	1,478,290	173,349	2,174,793
Total Base Period	1,013,171	2,956,580	346,699	4,316,449
Amount - July 2023-June 2024	1,329,472	2,956,580	346,699	4,632,751
Total Test Period	1,329,472	2,956,580	346,699	4,632,751

To Sch E-1

Note: Protected ARAM amortization amounts were updated for 2023-2024 due to depreciation study being implemented in this rate case.

Duke Energy Kentucky
State EDIT

Electric - SEDIT

Base EDIT (1,327,151) *Balance used to compute 10-year amortization*
True Ups (2,440) *Amount is not being amortized*

	Amortization	Cumulative Balance
Dec-19	-	(1,329,591)
Mar-20	-	(1,329,591)
Jun-20	22,119	(1,307,472)
Sep-20	33,179	(1,274,293)
Nov-20	22,119	(1,252,174)
Dec-20	11,060	(1,241,114)
Jan-21	11,060	(1,230,055)
Feb-21	11,060	(1,218,995)
Mar-21	11,060	(1,207,935)
Apr-21	11,060	(1,196,876)
May-21	11,060	(1,185,816)
Jun-21	11,060	(1,174,757)
Jul-21	11,060	(1,163,697)
Aug-21	11,060	(1,152,638)
Sep-21	11,060	(1,141,578)
Oct-21	11,060	(1,130,518)
Nov-21	11,060	(1,119,459)
Dec-21	11,060	(1,108,399)
Jan-22	11,060	(1,097,340)
Feb-22	11,060	(1,086,280)
Mar-22	11,060	(1,075,220)
Apr-22	11,060	(1,064,161)
May-22	11,060	(1,053,101)
Jun-22	11,060	(1,042,042)
Jul-22	11,060	(1,030,982)
Aug-22	11,060	(1,019,922)
Sep-22	11,060	(1,008,863)
Oct-22	11,060	(997,803)
Nov-22	11,060	(986,744)
Dec-22	11,060	(975,684)
Jan-23	11,060	(964,624)
Feb-23	11,060	(953,565)
Mar-23	11,060	(942,505)
Apr-23	11,060	(931,446)
May-23	11,060	(920,386)
Jun-23	11,060	(909,327)
Jul-23	11,060	(898,267)
Aug-23	11,060	(887,207)
Sep-23	11,060	(876,148)
Oct-23	11,060	(865,088)
Nov-23	11,060	(854,029)
Dec-23	11,060	(842,969)
Jan-24	11,060	(831,909)
Feb-24	11,060	(820,850)

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-138

REQUEST:

Refer to the Panizza Testimony at pages 4 – 6, and to Schedule E-1, page 3 of 3 in regard to the balances of federal and state EDIT and the amortization amounts reducing income tax expense in the test year.

- a. Provide the EDIT balances used to compute the 10-year amortization of unprotected EDIT included in the test year.
- b. Provide the amortization amounts recorded to date and projected to be recorded each year starting in 2018 and going through the end of the projected test year for both the protected and unprotected federal and state EDIT.

RESPONSE

- a. Please see AG-DR-01-137 Attachment.
- b. Please see AG-DR-01-137 Attachment.

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-139

REQUEST:

Provide a schedule showing the EDIT by temporary difference for DEBS (total DEBS and allocation to Duke Kentucky-Electric Division) due to the remeasurement of ADIT resulting from the lower federal income tax rate due to the Tax Cuts and Jobs Act, the allocation of the remeasured balance to Duke Kentucky, and the amortization that has taken place based on the Commission's Order from Case No. 2019-00271 at page 23.¹

RESPONSE:

Objection. Irrelevant, overbroad, and not likely to lead to the discovery of relevant and admissible evidence. Moreover, this request is objectionable insofar as the information was provided in the 2019-00271 case in response to Discovery issued by the Attorney General (*see e.g.* Case No. 2019-00271, Response to AG-DR-01-014) and is publicly available and thus equally accessible to the Attorney General. Moreover, the issue was addressed by the Commission in that proceeding. Without waiving said objection, and to the extent discoverable, the Commission's Order stated the \$214,000 of DEBS EDITs allocated to Duke Energy Kentucky electric should be amortized over 5-years for a revenue reduction of \$43,000. This revenue reduction was included in the rates approved in Case No. 2019-00271. The rates were effective May 1, 2020.

¹ Case No. 2019-00271, *Electronic Application of Duke Energy Kentucky, Inc. for 1) An Adjustment of the Electric Rates; 2) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All Other Required Approvals and Relief* (Ky. PSC Apr. 27, 2020), Order at 23.

See the table below for the 5-year amortization schedule.

Year	Months	Amortization	Balance
			\$214,000
2020	7	\$24,967	\$189,033
2021	12	\$42,800	\$146,233
2022	12	\$42,800	\$103,433
2023	12	\$42,800	\$60,633
2024	12	\$42,800	\$17,833
2025	5	\$17,833	0

PERSON RESPONSIBLE: As to objection, Legal
As to response, Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-140

REQUEST:

Describe how the DEBS EDIT is reflected in the Duke Kentucky electric revenue requirement. Provide the amounts reflected in rate base and/or cost of capital by temporary difference and the related effect on the Duke Kentucky electric revenue requirement, if any. Provide all data, assumptions, and calculations, including electronic workpapers with all formulas intact.

RESPONSE:

The DEBS EDIT amortization was inadvertently not included in the Duke Energy electric revenue requirement in this proceeding. The Commission's order stated that the revenue requirement was to be reduced by the 5-year amortization of the \$214,000 of DEBS EDIT allocated to Duke Energy Kentucky electric not any adjustment to rate base and/or cost of capital. The unamortized balance on June 30, 2023, will be \$82,033. The 5-year amortization of the June 30, 2023, unamortized balance of \$16,407 should have been a reduction in the revenue requirement.

PERSON RESPONSIBLE: Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General’s First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-141

REQUEST:

Refer to the Panizza Testimony at 6.

- a. Provide the calculations of estimated test year property tax expense, including copies of the sources of the property tax rates, in electronic format with all formulas intact.
- b. Provide the most current and the after increase property tax rates related to the anticipated tax rate increases and explain how each were determined.
- c. Quantify the projected increase amounts for property tax expense associated with the “anticipated property tax rate increases” as opposed to all other causes of projected property tax expense increases.

RESPONSE:

- a. Please see AG-DR-01-141 Attachment 1 for the calculation and AG-DR-01-141 Attachment 2 for the sources of property tax rates.
- b. See the table below for the most current and the after increase property tax rates related to the anticipated tax rate increases.

	Current - 2021 Estimated ETR	2022 Estimated ETR After Increase	2023 Estimated ETR After Increase	2024 Estimated ETR After Increase
Effective Tax Rates (ETR)	0.679%	0.755%	0.766%	0.801%

ETR explanation: Expected tax paid divided by expected property plant and equipment balance

c. Test Period (7/1/23-6/30/24) estimated property tax due to anticipated property tax rate increases is \$322,242.

PERSON RESPONSIBLE: John R. Panizza

Duke Energy Kentucky
 Case No. 2022-00372
 Attorney General's First Set Data Requests
 AG-DR-01-141

Description	Calendar Year Tax Estimate
Property Tax Year 2021*	15,652,921
Est. % Increase ('21 to '22)	14.60%
Property Tax Year 2022	17,938,524
Est. % Increase ('22 to '23)	5.26%
Property Tax Year 2023	18,881,301
Est. % Increase ('23 to '24)	9.80%
Property Tax Year 2024	20,732,221
Test Period (7/1/23-6/30/24) Est. Tax Exp.	19,806,761
Test Period (7/1/23-6/30/24) Est. Tax Exp. Submitted	19,652,376
Variance**	154,385

*Based on actual notice of values and tax bills, see KyPSC Case No. 2022-00372 AG-DR-01-141 Attachment B

**Variance Reasoning: Modeling variance

Kentucky Calendar Year 2021 Notice of Value

61A240 (10-12)

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF REVENUE
 OFFICE OF PROPERTY VALUATION
 PUBLIC SERVICE BRANCH
 STATION 32 4TH FL, 501 HIGH STREET
 FRANKFORT, KY 40601-2103
 Phone (502) 564-8175 Fax (502) 564-8192

NOTICE OF ASSESSMENT

DUKE ENERGY KENTUCKY INC
ATTN: PROPERTY TAX DEPARTMENT
550 SOUTH TRYON (DEC-444P)
CHARLOTTE, NC 28202-0000

GNC: 005260
TYPE CO: GEU
TAX TYPE: 035
TAX ID: 310473080

This Notice of Assessment will become final on 12/13/2021, 60 days from the notice date. A corresponding Notice of Tax Due is being sent from the Compliance and Accounts Receivable System based on the Total Assessment shown below. The Notice of Tax Due will provide the state tax liability, any applicable interest and/or filing penalties that may be assessed. Local taxes will be billed separately by the local taxing jurisdictions where your property is located.

If you protest this assessment, see enclosed 61F009 Notification-Protesting your Assessment. You must submit a written protest in accordance with KRS 131.110; and as required by KRS 132.825(10) and KRS 136.180(2), your protest must specify the valuation you claim to be true. Your written protest stating your claimed value and your payment of tax for your claimed value must be submitted to the Department of Revenue on or before 12/13/2021 or no further remedies will be available regarding this assessment per KRS 134.590. Submit your protest and payment to: ATTN: Public Service Branch, Division of State Valuation, KENTUCKY DEPARTMENT OF REVENUE, Sta. 32, 4th Floor, 501 High Street, Frankfort, KY 40601-2103. You may contact the Public Service Branch at Phone (502) 564-8175 and Fax (502) 564-8192.

NOTICE DATE: 10/14/2021 TAX YEAR: 2021 (For Year Ending December 31, 2020)

PROPERTY CLASS	TAX RATE Per \$100	ASSESSED VALUE	STATE TAX DUE
Subject to State and Local Tax			
Real Estate	0.119	\$579,060,599.00	\$689,082.11
**Tangible Personal Property	0.45	\$366,884,401.00	\$1,650,979.80
Business Inventory	0.05	\$0.00	\$0.00
Inventory In Transit	0.00	\$0.00	\$0.00
Subject to State Tax Only			
Foreign Trade Zone Property	0.001	\$0.00	\$0.00
Recycling Equipment	0.45	\$0.00	\$0.00
Manufacturing Machinery	0.15	\$528,157,097.00	\$792,235.65
Pollution Control Equipment	0.15	\$0.00	\$0.00
Business Inventory (MM)	0.05	\$20,385,371.00	\$10,192.69
IRB Property	0.015	\$0.00	\$0.00
IRB Property Nontaxable	0.00	\$0.00	\$0.00
TOTALS		\$1,494,487,468.00	\$3,142,490.25

** Excludes Motor Vehicles \$1,737,667.00

A 10% penalty is charged for late filed returns per KRS 132.290(3). A 20% penalty is charged for omitted property per KRS 132.290(4). Applicable interest will be applied when late or omitted.

2021 PUBLIC SERVICE COMPANY ASSESSMENT

STATE AND LOCAL	TAX RATE Per \$100		ASSESSED VALUE	STATE TAX DUE	
Real Estate	0.119	38.75%	579,060,599	689,082.11	
Tangible Property	0.45	24.55%	366,884,401	1,650,979.81	
Business Inventory	0.05	0.00%	0	0.00	
Inventory In Transit	0.00	0.00%	0	0.00	
		63.30%	945,945,001	2,340,061.92	
STATE TAX ONLY					
Foreign Trade Zone Tangible	0.001	0.00%	0	0.00	
Recycling Equipment	0.45	0.00%	0	0.00	
Manufacturing Machinery	0.15	35.34%	528,157,097	792,235.65	
Pollution Control Equipment	0.15	0.00%	0	0.00	
Telephonic Equipment	0.15	0.00%	0	0.00	
Business Inventory (MM)	0.05	1.36%	20,385,371	10,192.69	
IRB Property Taxable	0.015	0.00%	0	0.00	
IRB Property Nontaxable	0.00	0.00%	0	0.00	
		36.70%	548,542,468	802,428.33	
TOTAL ASSESSED VALUE AND STATE TAX DUE		100.00%	1,494,487,469	3,142,490.25	20.5812%
LOCAL TAX DUE				12,126,270.53	79.4188%
TOTAL TAX DUE				15,268,760.78	1.0217%
NUMBER OF COUNTIES FOR LOCAL TAX	7				

- 1 PERCENTAGE OF STATE TAX TO TOTAL TAX
- 2 PERCENTAGE OF LOCAL TAX TO TOTAL TAX
- 3 PERCENTAGE OF TOTAL TAX TO TOTAL ASSESSED VALUE

North Carolina Calendar Year 2021 Tax Bills



Mecklenburg County Tax Collector
 PO Box 31457
 Charlotte, NC 28231-1457
<http://MeckNC.gov/taxes>

BUS MECKLENBURG CHARLOTTE



2021 Property Tax Bill

BILL NUMBER
 0008168966-2021-2021-0000-00

Page 1 of 2

7212006844 PRESORT 6844 1 AV 0.395 P1C26 <34>



DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # (DEC-41B)
 CHARLOTTE NC 28202-4200

RECEIVED

JUL 30 2021

Tax Year 2021
 Year For 2021
 Bill Date 08/02/2021
 Due Date 09/01/2021

Interest Begins 01/06/2022
 *Pay before this date to avoid interest.
 Interest accrues at the rate of 2% the first month
 and 0.75% each month thereafter until balance is paid.

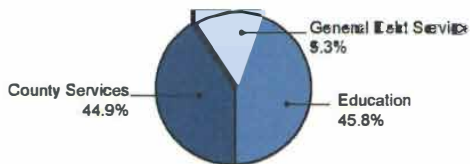
PROPERTY DESCRIPTION	
Property Location	526 CHURCH ST CHARLOTTE NC 28202
Legal Description	PUBLIC UTILITY COMPANY
Parcel ID	
Acreage	

PROPERTY VALUES (\$)	
Personal Property Value	29,741
Real Property Value	0
Real Deferred Value	0
Exclusion / Relief	0
Exemption	0
Total Taxable Value	29,741

Mecklenburg Tax Allocation		
Service	Percentage	Amount (\$)
Education	45.8%	84.03
County Services	44.9%	82.38
General Debt Service	9.3%	17.06
Total	100%	183.47

Bill Line Items	Rates/Fees	Amount Due (\$)
MECKLENBURG TAX	0.6169	183.47
CHARLOTTE TAX	0.3481	103.53
SPECIAL DISTRICT 1 TAX	0.0136	4.04
SPECIAL DISTRICT 2 TAX	0.0227	6.75

TOTAL AMOUNT DUE ⇒ **297.79**



Keep upper portion of this statement for your records.

Payment Stub Please detach and return this stub with your payment. Do not send cash. Payment Stub

Use this 24-digit bill number for all payment references. 0008168966-2021-2021-0000-00	Parcel ID	Bill Date	Due Date	Amount Due By	Total Amount Due (\$) 297.79
		08/02/2021	09/01/2021	01/05/2022	



000816896620212021000000

DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # (DEC-41B)
 CHARLOTTE NC 28202-4200

MECKLENBURG COUNTY TAX COLLECTOR
 PO BOX 71063
 CHARLOTTE, NC 28272-1063



0000029779620212021000000081689666



Mecklenburg County Tax Collector
 PO Box 31457
 Charlotte, NC 28231-1457
<http://MeckNC.gov/taxes>



2021 Property Tax Bill

BILL NUMBER

0008142144-2021-2021-0000-00

Page 1 of 2

9212006618 PRESORT 6818 1 AV 0.395 P1C26 <34>



DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # DEC44P
 CHARLOTTE NC 28202-4200

Tax Year 2021
 Year For 2021
 Bill Date 08/02/2021
 Due Date 09/01/2021

Interest Begins 01/06/2022
 *Pay before this date to avoid interest.
 Interest accrues at the rate of 2% the first month
 and 0.75% each month thereafter until balance is paid.

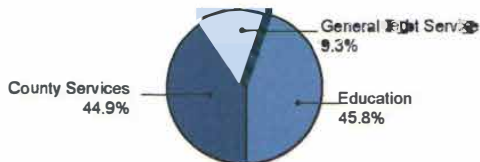
PROPERTY DESCRIPTION	
Property Location	610 TODDVILLE RD CHARLOTTE NC 28214
Legal Description	PUBLIC UTILITY COMPANY
Parcel ID	
Acreage	

PROPERTY VALUES (\$)	
Personal Property Value	4,321
Real Property Value	0
Real Deferred Value	0
Exclusion / Relief	0
Exemption	0
Total Taxable Value	4,321

Mecklenburg Tax Allocation		
Service	Percentage	Amount (\$)
Education	45.8%	12.21
County Services	44.9%	11.97
General Debt Service	9.3%	2.48
Total	100%	26.66

Bill Line Items	Rates/Fees	Amount Due (\$)
MECKLENBURG TAX	0.6169	26.66
CHARLOTTE TAX	0.3481	15.04

TOTAL AMOUNT DUE ➡ **41.70**



Keep upper portion of this statement for your records.

Payment Stub Please detach and return this stub with your payment. Do not send cash. Payment Stub

Use this 24-digit bill number for all payment references. 0008142144-2021-2021-0000-00	Parcel ID	Bill Date	Due Date	Amount Due By	Total Amount Due (\$)
		08/02/2021	09/01/2021	01/05/2022	41.70



000814214420212021000000

DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # DEC44P
 CHARLOTTE NC 28202-4200

MECKLENBURG COUNTY TAX COLLECTOR
 PO BOX 71063
 CHARLOTTE, NC 28272-1063



000000417072021202100000081421447



Mecklenburg County Tax Collector
 PO Box 31457
 Charlotte, NC 28231-1457
<http://MeckNC.gov/taxes>



2021 Property Tax Bill

BILL NUMBER

0008142149-2021-2021-0000-00

Page 1 of 2

9212006856 PRESORT 6856 1 AV 0.395 P1C26 <34>



DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # DEC41P
 CHARLOTTE NC 28202-4200

Tax Year 2021
 Year For 2021
 Bill Date 08/02/2021
 Due Date 09/01/2021

Interest Begins 01/06/2022
 *Pay before this date to avoid interest.
 Interest accrues at the rate of 2% the first month
 and 0.75% each month thereafter until balance is paid.

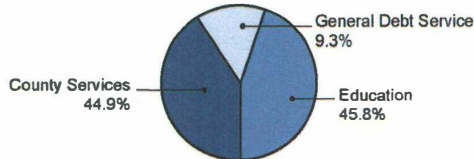
PROPERTY DESCRIPTION	
Property Location	401 S COLLEGE ST CHARLOTTE NC 28202
Legal Description	PUBLIC UTILITY COMPANY
Parcel ID	
Acreage	

PROPERTY VALUES (\$)	
Personal Property Value	1,922,572
Real Property Value	0
Real Deferred Value	0
Exclusion / Relief	0
Exemption	0
Total Taxable Value	1,922,572

Mecklenburg Tax Allocation		
Service	Percentage	Amount (\$)
Education	45.8%	5,432.04
County Services	44.9%	5,325.30
General Debt Service	9.3%	1,103.01
Total	100%	11,860.35

Bill Line Items	Rates/Fees	Amount Due (\$)
MECKLENBURG TAX	0.6169	11,860.35
CHARLOTTE TAX	0.3481	6,692.47
SPECIAL DISTRICT 1 TAX	0.0136	261.47
SPECIAL DISTRICT 2 TAX	0.0227	436.42

TOTAL AMOUNT DUE ⇒ 19,250.71



Keep upper portion of this statement for your records.

Payment Stub Please detach and return this stub with your payment. Do not send cash. Payment Stub

Use this 24-digit bill number for all payment references. 0008142149-2021-2021-0000-00	Parcel ID	Bill Date	Due Date	Amount Due By	Total Amount Due (\$)
		08/02/2021	09/01/2021	01/05/2022	19,250.71



000814214920212021000000

DUKE ENERGY KENTUCKY INC
 550 S TRYON ST # DEC41P
 CHARLOTTE NC 28202-4200

MECKLENBURG COUNTY TAX COLLECTOR
 PO BOX 71063
 CHARLOTTE, NC 28272-1063



0001925071120212021000000081421494

Ohio Calendar Year 2021 Notice of Value



Department of
Taxation

Excise & Energy Tax Division
P.O. Box 530
Columbus, Ohio 43216-0530
(855) 466-3921 Fax: (614) 728-1806
tax.ohio.gov eFax: (206) 350-6722

August 04, 2021

Charles Long
DUKE ENERGY KENTUCKY, INC.
550 S. TRYON ST.
PO BOX 1321 (DEC41B)
CHARLOTTE, NC 28202

RECEIVED

AUG 09 2021

Re: Valuation Notice of Taxable Personal Property for Tax Year 2021

Dear: Charles Long:

I have completed my review of your company's 2021 Annual Report filed with the Ohio Department of Taxation. The enclosed valuation notice reflects the proposed taxable value of your company's personal property. Please review the notice and compare with your own calculations.

If you desire a conference concerning the proposed value, please contact the undersigned within three weeks from the date of this letter.

Sincerely,

Carmella Davidson

Carmella Davidson-Barber
Tax Examiner
Phone: (614) 387-1827
E-mail: carmella.davidson-barber@tax.state.oh.us

2021 VALUATION NOTICE

NAME: Duke Energy Kentucky, Inc.
FEIN: 31-0473080
CLASS: ELECTRIC COMPANY

Taxable Property	True Value
Production Plant (Placed in Service on or before 10/4/99)	148,409,596
Production Plant (Placed in Service after 10/4/99)	_____
Transmission Plant	1,887,722
Distribution Plant	1,020
General Plant	1,357,944
Account 104 - Electric Plant Leased to Others	_____
Account 105 - Electric Plant Held for Future Use	_____
Account 114 - Plant Acquisition Adjustment	_____
Account 116 - Other Electric Plant Adjustments	_____
Account 118 - Other Utility Plant	_____
Account 120.6 - Nuclear Fuel	_____
Account 121 - Nonutility Property	_____
Account 151 - Fuel Stock	_____
Account 154 - Plant Materials and Operating Supplies	5,346,576
Account 155 - Merchandise	_____
Account 156 - Other Materials and Supplies	_____
Total True Value:	<u>157,002,858</u>

	True Value		Taxable Value
True Value of all Production Plant Property	<u>148,409,596</u>	24%	<u>35,618,300</u>
True Value of General Plant & Account 104 - 156 Property	<u>6,704,520</u>	24%	<u>1,609,080</u>
True Value of Transmission & Distribution Plant	<u>1,888,742</u>	85%	<u>1,605,430</u>
Total General, T & D and all Other Property:	<u>8,593,262</u>		<u>3,214,510</u>
Total Taxable Value of Property			<u>38,832,810</u>
(Penalty if applicable)		Percent: _____	_____
Total Taxable Value / with Penalty			<u>38,832,810</u>

Agent: CDB **Date:** 8/4/2021

2021 VALUATION NOTICE By TAXING DISTRICT

DUKE ENERGY KENTUCKY, INC.

FEIN: 31-0473080

550 S. TRYON ST.
 PO BOX 1321 (DEC41B)

CLASS: EL

BASE TYPE: ELECTRIC

CHARLOTTE NC 28202

	BASE 1	BASE 2	BASE 3	VALUE
COUNTY: 9 BUTLER				
0180 MADISON TWP-EDGEWOOD CSD	17,272,415	296,819,191	148,409,595	38,647,670
BUTLER COUNTY TOTAL:	17,272,415	296,819,191	148,409,595	38,647,670
COUNTY: 13 CLERMONT				
0420 UNION TWP-WEST CLERMONT LSD	0		0	0
CLERMONT COUNTY TOTAL:	0		0	0
COUNTY: 31 HAMILTON				
1110 CINCINNATI CORP-CINCINNATI CSD	1,055,621		0	185,140
HAMILTON COUNTY TOTAL:	1,055,621		0	185,140
GRAND TOTAL:	18,328,036	296,819,191	148,409,595	38,832,810

IF YOU HAVE ANY QUESTIONS CONCERNING THIS VALUATION NOTICE PLEASE CONTACT: Carmella Davidson (614) 387-1827

West Virginia Calendar Year 2021 Notice of Value



Dave Hardy
Secretary of Revenue

Matthew R Irby
State Tax Commissioner

STATE TAX DEPARTMENT

SEPTEMBER 15, 2021

DUKE ENERGY KENTUCKY INC
PROPERTY TAX DEPARTMENT
550 SOUTH TRYON ST (DEC-44P)
CHARLOTTE NC 28202

RECEIVED

SEP 21 2021

PURSUANT TO PROVISIONS OF CHAPTER 11, ARTICLE 6, SECTION 9 OF THE WEST VIRGINIA CODE, AS AMENDED, AND REENACTED BY HOUSE BILL NO. 1439 BY THE WEST VIRGINIA LEGISLATURE, REGULAR SESSION, 1986, I HAVE PLACED THE FOLLOWING TENTATIVE ASSESSMENT ON YOUR PROPERTY FOR TAX YEAR 2022

CLASS III & IV

\$622,400

PLEASE NOTE THAT IN ACCORDANCE WITH WEST VIRGINIA LAW THE ASSESSED VALUATION IS BEING ISSUED AT 60% OF THE ESTIMATED MARKET VALUE OF TAXABLE PROPERTY LOCATED IN WEST VIRGINIA. THE TAX STATEMENT FOR THIS ASSESSED VALUATION WILL BE ISSUED FROM THE STATE AUDITOR'S OFFICE IN JULY 2022

GIVEN UNDER MY HAND THIS 15TH DAY OF SEPTEMBER, 2021

MATTHEW R IRBY
STATE TAX COMMISSIONER

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-142

REQUEST:

Refer to the Application, Volume 10, Schedule F-6, page 166 of 199, which depicts the estimated rate case expenses by category. Refer also to Duke Kentucky's response to the Commission Staff's First Request, Item 14, Attachment 1 and 2, depicting rate case expenses incurred to date and copies of invoices processed to date.

- a. An estimate of \$85,000 was included for a "Generation Retirement Study."

Explain why this amount was included in the rate case estimate and whether it should still be considered an incremental cost for this rate case. It does not appear that such a study was filed in this case. If it was filed, then identify where. If it was not filed, then provide a copy of the study.

- b. For each of the invoices processed for "Guidant Group/Contractor Staffing," describe the services provided and explain why they should be considered incremental costs for this rate case.

- c. For each of the estimated cost categories shown on Schedule F-6 that sum to \$1,136,000, indicate how much of that estimate relates to "Guidant Group/Contractor Staffing."

- d. For each of the contract employees invoiced by "Guidant Group/Contractor Staffing" to date listed below, indicate how long this person has been employed by the

Guidant Group on behalf of the Company and the role that person plays or job title. If the person was hired just for this rate case, so indicate.

Abbe Greenfield

Kate Carter

Tracie Otto

Jan Bulstra

Dallas Bowles

RESPONSE:

a. The estimate of \$85,000 for a “Generation Retirement Study” is for the support from Concentric Energy Advisor, Inc. pertaining to the ratemaking treatment of the East Bend Station and is an incremental cost for this rate case. See STAFF-DR-01-014 Attachment 3, page 14 through 24 for the contract for these services. A Generation Retirement Study was not provided, the wording is referring to the expert witness work of Lisa Quilici.

b. See the response to (d) for a description of the type of services provided. Rather than hiring additional Company employees, these contractors were hired to handle the additional workload associated specifically with this Kentucky electric base rate case or with rate cases in Duke Energy’s other jurisdictions. The contractors employed through Guidant only charge the Duke Energy Kentucky electric base rate case expense account when directly working on this Duke Energy Kentucky electric rate case which is the only work they are performing for Duke Energy Kentucky.

c. The estimate that relates to “Guidant Group/Contractor Staffing” is \$176,000 for consultants and \$65,000 for Lead/Lag Study.

d. Contractors

i. Abbe Greenfield –

Ms. Greenfield began employment through the Guidant Group for the Company beginning April 2022. Her title is a Financial Analyst Subject Matter Expert (SME). Ms. Greenfield’s work has been to coordinate the lead lag study and her work is limited to this scope. The Company contracted with her as she previously worked on other jurisdiction’s rate cases from 2017 to 2020 and her current contract is specific to this case.

ii. Kate Carter –

Ms. Carter has been employed by the Company through Guidant Group nonconsecutively for 7 years. Her title is Financial Analyst SME. She was contracted by the accounting function to support rate case preparation, filing, and discovery. Her contract is specifically for rate cases including the Company’s current Duke Energy Kentucky electric rate case.

iii. Tracie Otto –

Ms. Otto’s employment through Guidant Group for the Company has been nonconsecutive since May 2020. Her title is Senior Project Manager. Her role is to internally manage the rate case process including preparation of the case, filing support, and discovery. Her current contract is for this rate case and other rate cases in the Kentucky and Ohio jurisdictions.

iv. Jan Bulstra –

Mr. Bulstra's employment through Guidant Group for the Company began in September 2018. His title is Financial Analyst SME. Mr. Bulstra's is contracted to support the accounting function. His role is to support rate cases and the depreciation studies.

v. Dallas Bowles –

Ms. Bowles' employment through Guidant Group/Contractor Staffing for the Company began at the end of August 2022. Her title is Paralegal. She was contracted to provide additional support to the Duke Energy Kentucky electric rate case as well as current rate cases and an additional regulatory filing in a neighboring jurisdiction.

PERSON RESPONSIBLE: Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-143

REQUEST:

Refer to the electronic workpapers provided in Duke Kentucky's response to the Commission Staff 's First Request, Item 56, and further to Schedule B-5 and the related tab WPB-5's. Provide a schedule in the same format as the various workpapers with the actual inventory and prepaid amounts for each month January 2021 through the most recent month for which actual information is available for all working capital balances.

RESPONSE:

Please see AG-DR-01-143 Attachment for the monthly working capital balances from January 2021 through December 2022.

PERSON RESPONSIBLE: Danielle L. Weatherston

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 GAS ENRICHER LIQUIDS
 FOR THE PERIOD 2021 - 2022

WPB-5.1b

LINE NO.	MONTH	ACCT 151126 AMOUNT (A) \$	ALLOC. (B) %	ALLOCATED AMOUNT
1	Period			
2	January 2021	4,960,266	35.80%	1,775,775
3	February	4,944,231	35.80%	1,770,035
4	March	4,944,231	35.80%	1,770,035
5	April	4,944,231	35.80%	1,770,035
6	May	4,944,231	35.80%	1,770,035
7	June	4,944,231	35.80%	1,770,035
8	July	4,944,231	35.80%	1,770,035
9	August	4,944,231	35.80%	1,770,035
10	September	4,944,231	35.80%	1,770,035
11	October	4,944,231	35.80%	1,770,035
12	November	4,647,403	35.80%	1,663,770
13	December 2021	4,647,403	35.80%	1,663,770
14				
15	January 2022	3,995,676	35.80%	1,430,452
16	February	1,634,821	35.80%	585,266
17	March	0	35.80%	0
18	April	0	35.80%	0
19	May	0	35.80%	0
20	June	0	35.80%	0
21	July	0	35.80%	0
22	August	0	35.80%	0
23	September	0	35.80%	0
24	October	0	35.80%	0
25	November	0	35.80%	0
26	December 2022	0	35.80%	0

(A) Source: Company Records
 (B) Percent Applicable to Kentucky Customers.

DUKE ENERGY KENTUCKY, INC.
ELECTRIC DEPARTMENT
CASE NO. 2022-00372
NATURAL GAS STORAGE BALANCE (ACCT NOS. 164100 & 174273)
FOR THE PERIOD 2021 - 2022

WPB-5.1f

LINE NO.	<u>MONTH</u>	<u>AMOUNT (A)</u> \$
1	Period	
2	January 2021	1,412,580
3	February	929,271
4	March	496,603
5	April	917,404
6	May	1,536,372
7	June	1,948,243
8	July	2,482,712
9	August	3,128,390
10	September	3,708,247
11	October	4,327,337
12	November	4,287,188
13	December 2021	3,655,016
14		
15	January 2022	3,080,684
16	February	2,112,099
17	March	1,008,360
18	April	2,050,721
19	May	3,023,868
20	June	4,662,829
21	July	5,870,680
22	August	7,060,122
23	September	8,461,688
24	October	8,315,846
25	November	7,937,536
26	December 2022	7,149,540

(A) Company Records

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 MATERIAL & SUPPLIES
 FOR THE PERIOD 2021 - 2022

WPB-5.1d

LINE NO.	MONTH	ACCOUNT	ACCOUNT	ACCOUNT	ACCOUNT	ACCOUNT	ACCOUNT	ACCOUNT	ACCOUNT
		154100 - Gas	154410 - Gas	154100 - Elec	154200 - Elec	154410 - Elec	154990 - Elec	163110 - Gas	163110 - Elec
		\$	\$	\$	\$	\$	\$	\$	\$
1	Period								
2	January 2021	268,409	53,263	15,626,144	2,051,245	(0)	0	54,543	(124,238)
3	February	314,830	56,497	15,616,391	1,804,348	(0)	0	88,798	(125,272)
4	March	269,210	64,221	15,477,183	1,815,925	(0)	0	83,003	(115,565)
5	April	267,132	66,346	15,443,691	2,075,436	(0)	0	(53,317)	(48,484)
6	May	311,071	68,779	15,593,956	1,863,894	(0)	0	(16,275)	46,230
7	June	298,099	68,779	15,890,463	1,684,673	(0)	0	22,406	213,050
8	July	276,338	74,973	16,203,141	2,015,870	3,850	0	69,981	276,501
9	August	271,718	79,983	14,923,412	1,743,157	21,420	0	95,901	293,256
10	September	295,002	79,983	14,620,133	1,789,555	21,568	0	117,844	338,083
11	October	316,190	82,703	14,279,600	1,765,187	22,117	0	108,002	249,311
12	November	276,421	82,703	14,218,284	1,765,187	22,117	0	111,760	204,787
13	December 2021	318,367	88,583	14,270,622	2,006,300	23,445	0	97,653	(220,979)
14									
15	January 2022	306,707	95,806	14,373,676	2,047,556	23,445	0	86,707	(193,345)
16	February	305,583	98,546	14,305,752	2,058,841	23,445	0	107,788	(120,717)
17	March	305,173	101,781	14,317,347	2,601,894	26,192	0	93,409	(120,435)
18	April	278,413	105,436	15,603,481	2,219,061	26,192	0	90,497	(143,361)
19	May	302,531	111,171	15,791,812	2,407,663	26,192	0	80,861	14,805
20	June	282,327	113,775	15,747,261	2,260,629	36,494	0	(108,726)	31,030
21	July	264,590	118,419	15,683,544	2,435,282	37,236	0	(124,782)	240,185
22	August	307,225	122,293	15,732,673	2,440,032	40,843	0	(110,738)	462,241
23	September	330,692	124,847	15,666,893	2,167,463	40,928	0	(121,074)	576,032
24	October	321,444	127,179	15,525,590	2,371,450	40,928	0	(52,463)	641,515
25	November	323,262	127,179	15,544,843	2,492,213	40,928	0	5,981	808,569
26	December 2022	322,730	129,061	15,314,747	2,108,360	40,928	0	68,585	1,410,061

Note: Source is Company general ledger.

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 PREPAYMENTS
 FOR THE PERIOD 2021 - 2022

WPB-5.1g

LINE NO.	MONTH	Prepaid Insurance - Elec 165075 (A) \$	Prepaid Insurance - Gas 165075 (A) \$	Public Utility Fees - Gas 165400 (A) \$	Public Utility Fees - Elec 165400 (A) \$	Collateral Asset Elec 165520 (A) \$
1	Period					
2	January 2021	1,077,105	111,223	85,059	295,392	(43,468)
3	February	979,187	101,112	68,047	237,738	(43,468)
4	March	881,268	91,001	51,035	177,235	(43,468)
5	April	783,349	80,889	34,024	119,581	142,090
6	May	685,431	70,778	17,012	60,502	(42,723)
7	June	587,512	60,667	183,156	664,479	(42,723)
8	July	489,593	50,556	167,893	609,106	(42,723)
9	August	391,675	40,445	152,630	553,733	(56,889)
10	September	293,756	30,334	137,367	498,359	(1,276,900)
11	October	195,837	20,222	122,104	470,542	979,161
12	November	97,919	10,111	106,841	415,169	2,414,954
13	December 2021	(0)	0	91,578	359,795	842,560
14						
15	January 2022	1,417,455	102,149	76,315	276,866	(38,455)
16	February	1,288,596	92,863	61,052	221,493	(37,801)
17	March	1,159,736	83,576	45,789	166,120	(39,230)
18	April	1,030,877	74,290	30,526	112,137	375,128
19	May	902,017	65,004	15,263	56,763	649,791
20	June	773,157	55,718	160,494	555,855	(17,627)
21	July	644,298	46,431	147,119	509,534	(17,883)
22	August	515,438	37,145	133,745	463,212	(17,883)
23	September	386,579	27,859	120,370	416,891	(17,883)
24	October	257,719	18,573	106,996	370,570	(17,883)
25	November	128,860	9,286	93,621	324,249	(17,883)
26	December 2022	0	0	80,247	277,927	(18,063)

(A) Company Records

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 FUEL
 FOR THE PERIOD 2021 - 2022

WPB-5.1h

LINE NO.	MONTH	Coal Stocks		Diesel Fuel 151140 (A) \$	Natural Gas Woodsdale 151660 (A) \$	Propane Woodsdale 151700 (A) \$
		151130 (A) \$	151131 (A) \$			
1	Period					
2	January 2021	11,539,791	4,008,479	8,711,058	0	0
3	February	9,828,379	2,434,124	8,695,604	0	0
4	March	8,713,274	3,515,691	9,217,986	0	0
5	April	7,791,588	2,893,026	9,123,686	0	0
6	May	6,481,989	2,552,877	9,108,847	0	0
7	June	5,522,551	4,263,212	9,016,252	0	0
8	July	5,475,583	3,585,558	8,844,198	0	0
9	August	7,850,546	2,763,407	8,785,221	0	0
10	September	10,233,282	0	8,744,478	0	0
11	October	10,559,404	0	8,744,478	0	0
12	November	10,714,235	2,506,970	8,655,428	0	0
13	December 2021	14,360,220	4,618,162	9,223,023	0	0
14						
15	January 2022	12,580,823	4,198,709	9,335,620	0	0
16	February	13,077,347	2,443,140	9,237,321	0	0
17	March	12,226,620	3,266,499	9,352,847	0	0
18	April	13,103,839	933,433	9,468,141	0	0
19	May	10,887,179	3,898,966	9,495,981	0	0
20	June	10,636,708	3,538,322	9,759,261	0	0
21	July	9,810,522	3,983,724	9,799,685	0	0
22	August	12,965,126	3,512,231	9,583,208	0	0
23	September	18,033,083	(9,777)	9,401,765	0	0
24	October	19,011,127	5,069,091	9,676,446	0	0
25	November	22,289,437	8,019,149	9,644,283	0	0
26	December 2022	22,401,621	11,031,095	5,175,424	0	0

(A) Company Records

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 EMISSION ALLOWANCES
 FOR THE PERIOD 2021 - 2022

WPB-5.1i

LINE NO.	MONTH	SO2 EA 158150 (A) \$	NOx 158170 (A) \$	NOx 158183 (A) \$	Total EA Inventory \$
1	Period				
2	January 2021	0	0	0	0
3	February	0	0	0	0
4	March	0	0	0	0
5	April	0	0	0	0
6	May	0	0	0	0
7	June	0	0	0	0
8	July	0	0	0	0
9	August	0	0	0	0
10	September	0	0	0	0
11	October	0	0	0	0
12	November	0	0	0	0
13	December 2021	0	0	0	0
14					
15	January 2022	0	0	0	0
16	February	0	0	0	0
17	March	0	0	0	0
18	April	0	0	0	0
19	May	0	0	0	0
20	June	0	0	0	0
21	July	0	0	0	0
22	August	0	0	0	0
23	September	0	0	0	0
24	October	0	0	0	0
25	November	0	0	0	0
26	December 2022	0	0	0	0

(A) The Company is proposing to recover emission allowance inventory in its Environmental Surcharge Mechanism.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-144

REQUEST:

Refer to the Application generally. Describe in detail how the Company allocates fuel expense between off-system sales and native load. Provide a copy of all documentation of this allocation methodology.

RESPONSE:

The primary tool used to allocate Duke Energy Kentucky fuel expense between off-system sales (non-native sales) and native load is a production costing model, Sumatra, which is jointly supported by Power Costs, Inc., and Duke Energy information technology resources. The model incorporates generator information such as heat rates, emission rates, generating unit fuel costs, emissions allowance costs, and variable operating and maintenance costs. This is the same data used in the Energy Cost Manual, which is also the basis for the supply offers to PJM. We also include as inputs to the model actual hourly data, including native load demand, generating unit output (*i.e.*, megawatt-hour generation), and actual native load purchased power information from the billing system.

Sumatra then “economically dispatches” or matches, on an hourly basis, the demand (load) with available supply resources (*i.e.*, generation or purchases) that are economically “stacked,” *i.e.*, generally prioritized based on production costs, lowest cost to highest cost. Consequently, the Sumatra model economically allocates the production costs for serving native load with units on-line for testing assigned to native load.

All the Company's generating resources are generally included as available resources in this process. Post-analysis data includes information such as actual unit forced and maintenance outages. In recognition that the PJM day-ahead and real-time markets are separate markets (for both energy and ancillary services) we also restrict the availability of certain specific generating capacity that cleared in the day-ahead market for non-native demand.

The day-ahead energy market generation awards from PJM are stacked against the day-ahead load cleared by PJM, providing Duke Energy Kentucky native customers first call on the lowest cost generation in the day-ahead market. Generation that clears day-ahead in excess of day-ahead load is committed to day-ahead non-native sales. Then, utilizing the actual real-time generation and load, everything is restacked, and Duke Energy Kentucky native customers are assigned the lowest cost generation that did not clear for non-native in the day ahead, but was dispatched in the real-time energy market. If Duke Energy Kentucky's real-time native load is greater than the available real-time generation not committed in the day ahead energy market to non-native, then Duke Energy Kentucky will purchase energy from PJM to make-up the difference. If Duke Energy Kentucky's real-time native load is less than the available real-time generation not committed in the day-ahead market to non-native, then any excess generation is considered as a real-time non-native energy market sale. All costs associated with generators that clear day ahead for non-native energy market sales or in real-time for non-native energy market sales are assigned to a non-native cost allocation. Duke Energy Kentucky native customers will only pay for fuel and/or PJM charges associated with the units that are assigned to them.

PERSON RESPONSIBLE: John D. Swez

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-145

REQUEST:

Refer to the Application generally. Provide the accounts payable balances for construction work in progress (“CWIP”) (construction) (Electric Division) at month-end for each month January 2021 through December 2022 (actuals), January 2023 through June 2024 (forecast). Describe the process the Company utilized to determine the accounts payable balances for CWIP (construction). If these payables are maintained in a separate subaccount, then provide the balances for the months requested by subaccount.

RESPONSE:

The accounts payable balances for CWIP are accumulated in a vouchers payable account, Account 0232016, along with multitudes of varying items. As such, a breakout of that information does not exist. Account 0232996, delineated as “capital – accruals” on AG-DR-01-090 Attachments is only used for manual accounts payable capital accruals.

PERSON RESPONSIBLE: Danielle L. Weatherston

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-146

REQUEST:

Refer to the Application generally. Provide the accounts payable balances for fuel inventories (Electric Division) at month-end for each month January 2021 through December 2022 (actuals), January 2023 through June 2024 (forecast). Describe the process the Company utilized to determine the accounts payable balances for fuel inventories. If these payables are maintained in a separate subaccount, then provide the balances for the months requested by subaccount.

RESPONSE:

Please see AG-DR-01-0146 Attachment for January 2021 through December 2022. The Company maintains separate accounts payable accounts for fuel inventories. Forecasted test year accounts payable balances related to fuel are below:

Jan-23	6,715,513
Feb-23	5,488,382
Mar-23	4,567,591
Apr-23	4,404,160
May-23	4,877,882
Jun-23	6,681,273
Jul-23	8,368,076
Aug-23	7,263,739
Sept-23	6,486,745
Oct-23	4,742,293
Nov-24	4,661,689
Dec-24	6,508,622

Jan-24	7,560,118
Feb-24	5,541,176
Mar-24	5,388,044
Apr-24	3,837,466
May-24	4,105,635
Jun-24	5,632,019

PERSON RESPONSIBLE:

Danielle L. Weatherston – actual balances

Grady “Tripp” S. Carpenter – forecasted balances

EMT Jurisdiction (Multiple Items)
 Business Unit CB A1
 Business Unit CB - Da A1

TTD Actual Amount	Fiscal Year 2021		Calendar Quarter			Accounting Period																				
	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024										
Account CB	Account CB Description Long	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022	
022190	Accounts Payable-Coal	(1,510,247.75)	(2,738,792.80)	(5,381,711.14)	(5,025,062.74)	(5,002,001.71)	(4,161,165.57)	(5,841,343.49)	(2,788,321.05)	(1,133.48)	(1,133.48)	(2,508,105.67)	(3,234,993.17)	(2,794,176.42)	(1,900,228.69)	(3,900,198.73)	(735,942.09)	(2,562,661.95)	(4,010,308.02)	(2,871,296.92)	(2,286,500.77)	(293,533.29)	(5,560,376.19)	(7,424,626.11)	(5,416,695.10)	
022175	LIMESTONE & FREIGHT PAYABLE	(1,770,878.41)	(583,069.54)	(636,685.57)	(727,259.61)	(592,572.03)	(603,488.06)	(865,592.91)	(666,037.56)	(8,869.88)	0.00	0.00	(33,517.22)	(797,002.48)	(790,593.39)	(1,047,507.98)	(797,658.31)	(825,350.17)	(1,351,446.45)	(951,518.02)	(60,113.69)	(698,294.53)	(717,751.40)	(514,209.96)	(698,294.53)	(482,193.03)
022176	Passport Payable	(50,980.29)	(50,980.77)	(89,489.63)	(49,305.60)	(82,264.43)	(87,055.49)	(90,509.88)	(91,349.88)	612.42	0.01	0.01	(8,584.18)	(113,303.67)	(83,853.55)	(106,351.64)	(70,326.74)	(108,322.80)	(20,287.70)	(113,118.98)	(37,278.95)	(64,320.09)	6.07	(43,461.35)	(64,507.88)	
022180	Accounts Payable-Oil Stocks	(107,669.64)	(313,463.58)	(97,490.56)	0.00	(14,060.88)	0.00	0.00	0.00	0.00	0.00	0.00	(408,395.78)	(234,339.18)	(140,821.77)	0.00	(18,149.67)	(35,213.18)	(49,009.57)	(62,915.33)	(53,391.72)	(70,647.54)	(74,151.32)	(1,282,409.93)		
022181	Natural Gas Payable	(45,391.00)	(298,305.00)	0.00	(84,695.00)	(510,950.00)	(333,151.00)	(384,994.80)	(788,510.00)	(291,600.00)	(291,600.00)	(564,600.00)	(1,044,000.00)	(70,560.00)	(312,309.00)	(160,850.00)	0.00	(893,000.00)	(2,102,900.00)	(1,290,795.00)	(216,950.00)	(427,860.00)	(1,508,792.75)	(748,805.50)		
Grand Total		(1,485,126.09)	(4,629,653.79)	(4,085,777.80)	(1,879,878.01)	(4,245,879.65)	(5,187,759.12)	(5,184,725.08)	(8,354,218.59)	(114,190.79)	(292,713.47)	(1,677,703.66)	(3,737,490.50)	(4,978,911.79)	(2,985,987.40)	(5,364,307.79)	(1,192,826.81)	(3,592,795.60)	(6,474,042.17)	(4,207,863.44)	(1,777,556.74)	(799,846.44)	(5,679,083.70)	(9,879,158.06)	(13,951,664.42)	

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-147

REQUEST:

Refer to the Application generally. Provide the accounts payable balances for materials and supplies inventories (Electric Division) at month-end for each month January 2021 through December 2022 (actuals), January 2023 through June 2024 (forecast). Describe the process the Company utilized to determine the accounts payable balances for materials and supplies inventories. If these payables are maintained in a separate subaccount, then provide the balances for the months requested by subaccount.

RESPONSE:

The accounts payable balance associated with limestone inventories is included in AG-DR-01-146. The accounts payable balances for other M&S accounts and stores expense are accumulated in a vouchers payable account, Account 0232016, along with multitudes of varying items. As such, a breakout of that information does not exist.

PERSON RESPONSIBLE: Danielle L. Weatherston

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-148

REQUEST:

Refer to the Application generally. Provide the accounts payable balances for prepayments (Electric Division) at month-end for each month January 2021 through December 2022 (actuals), January 2023 through June 2024 (forecast). Describe the process the Company utilized to determine the accounts payable balances for fuel inventories. If these payables are maintained in a separate subaccount, then provide the balances for the months requested by subaccount.

RESPONSE:

The accounts payable balances for prepayments are accumulated in a vouchers payable account, Account 0232016, along with multitudes of varying items. As such, a breakout of that information does not exist.

PERSON RESPONSIBLE: Danielle L. Weatherston

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-149

REQUEST:

Refer to the electronic workpapers provided in Duke Kentucky's response to the Commission Staff's First Request, Item 56, and further to tab BASE PERIOD containing actual and projected monthly revenues and costs by subaccount during the months in the base year. Provide an update for all accounts with actual monthly data through the latest month with available data.

RESPONSE:

Please see STAFF-DR-01-003 Attachment for the update of actual data through October 2022. Please see the monthly updates to STAFF-DR-01-003 for the update to actuals for the remaining projected months.

PERSON RESPONSIBLE: Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-150

REQUEST:

Refer to the electronic workpapers provided in Duke Kentucky's response to the Commission Staff's First Request, Item 56, and further to the worksheet tab WPC_2, which contains WPC-2a and WPC-2b showing revenue breakdowns in the base and forecast periods.

a. Provide the calculations and all support for the sales for resale revenues in the base period and in the test year.

b. Provide the actual Sales for Resale recorded in account 447 for each month from January 2019 through December 2022.

c. Provide the actual Other Electric Revenues recorded in account 456 for each month from January 2019 through December 2022.

d. Explain why the Sales for Resale revenues (line 13) decline in the test year compared to the base year by almost \$22.3 million. Provide all workpapers and other analyses, including electronic workpapers in live Excel format with all formulas intact.

e. Provide the reduction in expense related to the reduction in the Sales for Resale revenues noted in part (d) of this question. Provide all workpapers and other analyses, including electronic workpapers in live Excel format with all formulas intact.

f. Explain why the Other Electric Revenues decline in the test year compared to the base year by almost \$5.9 million. Provide all workpapers and other analyses, including electronic workpapers in live Excel format with all formulas intact.

RESPONSE:

a. Please see AG-DR-01-150(a) Attachment, for support of sales for resale revenues shown on WPC-2a and WPC-2b. These amounts have been eliminated from the test period on Schedule D-2.20.

b. Please see AG-DR-01-150(b) Attachment for the actual Sales for Resale recorded in account 447 for each month from January 2019 through December 2022.

c. Please see AG-DR-01-150(c) Attachment for the actual Other Electric Revenues recorded in account 456 for each month from January 2019 through December 2022.

d. AG-DR-01-150(a) Attachment shows that the base year included \$12,392,230 for amounts recorded to comply with FERC Order No. 668. FERC Order No. 668 requires public utilities that conduct energy transactions through an RTO to report these transactions on a net basis in FERC account 555 Purchased Power or FERC account 447 Sales for Resale. The amounts recorded to account 447 Sales for Resale in the base period are offset in expense account 555. These transactions are not budgeted. In addition as Company witness John D. Swez discusses in his direct testimony, the Company's dispatch models are showing a declining net capacity factor at East Bend primarily driven by variable costs of the unit as compared to energy market revenues. This resulted in lower forecasted sales for resale in the test year. Sales for resale revenues and associated expenses are eliminated from the test period on Schedule D-2.20.

e. See the table below for the reduction in expense related to the reduction in the Sales for Resale revenues. The fuel associated with sales for resale was recorded in

account 501100 in the actual portion of the base period and 501996 in the forecast portion of the base period and the forecasted test year.

		Non-Native Fuel		
		Base Period	Forecast Period	Change
501100	Coal Consumed - Fossil Steam	\$3,618,627		
501996	Fuel Expense	\$3,309,048	\$3,763,221	
	Reduction in Fuel Expense	\$6,927,675	\$3,763,221	(\$3,164,454)

f. Other Electric Revenues are higher in the base year as compared to the test year due to revenues of \$5,834,022 related to make whole payments and financial transmission rights (FTRs) recorded in the actual portion of the base year, but not budgeted in forecasted periods.

PERSON RESPONSIBLE: Grady “Tripp” S. Carpenter – a., d., e.
Danielle L. Weatherston – b., c.

Duke Energy Kentucky, Inc.
Sales for Resale

Account	Account Description	Product		March	April	May	June	July	August	September	October	November	December	January	February	Base
				2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2023	
				Actual	Actual	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected	
447150	Sales For Resale - Outside	CAPCTY	(1)	0	0	0	0	438,184	222,684	0	0	0	0	0	0	660,868
		FACASM	(2)	57,215	25,468	38,154	59,781	71,403	46,286	0	0	0	0	0	0	298,307
		FER668	(3)	5,702,721	0	0	6,689,509	0	0	0	0	0	0	0	0	12,392,230
		SLSRSL	(4)	693,926	1,136,182	2,800,109	3,134,175	846,308	749,245	370,152	0	1,099,751	1,188,322	1,419,790	1,027,055	14,465,015
447150 Total				6,453,862	1,161,650	2,838,263	9,883,465	1,355,895	1,018,215	370,152	0	1,099,751	1,188,322	1,419,790	1,027,055	27,816,420

Account	Account Description	Product		July	August	September	October	November	December	January	February	March	April	May	June	Forecasted
				2023	2023	2023	2023	2023	2023	2023	2023	2024	2024	2024	2024	
				Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	
447150	Sales For Resale - Outside	CAPCTY	(1)	0	0	0	0	0	0	0	0	0	0	0	0	0
		FACASM	(2)	0	0	0	0	0	0	0	0	0	0	0	0	0
		FER668	(3)	0	0	0	0	0	0	0	0	0	0	0	0	0
		SLSRSL	(4)	566,848	30,502	0	136,462	31,822	0	3,376,886	1,264,978	114,639	13,368	0	0	5,535,505
447150 Total				566,848	30,502	0	136,462	31,822	0	3,376,886	1,264,978	114,639	13,368	0	0	5,535,505

- (1) Represents the net of all capacity transactions invoiced by PJM. These transactions are budgeted to account 555, not account 447 and therefore not included in Sales for Resale in the projected months of the base period and the forecasted test period.
- (2) Represents the Ancillary services PJM billing line items recorded to account 447. No amounts were included in the projected months of the base period and the forecasted test period.
- (3) An accounting entry required by FERC 668 order. These amounts are offset in account 555 with zero margin impact and therefore not budgeted.
- (4) Represents sales of excess generation to PJM

Sales for Resale - Account 447

Account	Account Description	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
447150	Sales For Resale - Outside	849,951.78	198,509.98	2,227,591.21	(172,827.67)	757,415.95	1,668,797.58	1,331,415.71	789,904.89	2,742,162.91	(360,115.27)	31,168.92	1,633,701.84
Total		849,951.78	198,509.98	2,227,591.21	(172,827.67)	757,415.95	1,668,797.58	1,331,415.71	789,904.89	2,742,162.91	(360,115.27)	31,168.92	1,633,701.84

Sales for Resale - Account 447

Account	Account Description	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
447150	Sales For Resale - Outside	238,326.99	45,457.47	1,591,777.37	(504,139.61)	(69,549.75)	1,092,311.07	1,047,391.31	716,052.63	1,701,599.45	31,300.49	165,870.19	2,987,925.01
Total		238,326.99	45,457.47	1,591,777.37	(504,139.61)	(69,549.75)	1,092,311.07	1,047,391.31	716,052.63	1,701,599.45	31,300.49	165,870.19	2,987,925.01

Sales for Resale - Account 447

Account	Account Description	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
447150	Sales For Resale - Outside	1,041,652.65	1,274,062.97	741,991.33	1,349,403.30	1,609,615.78	2,737,501.91	464,440.57	1,101,120.28	3,628,463.15	68,642.61	55,396.20	1,450,507.65
Total		1,041,652.65	1,274,062.97	741,991.33	1,349,403.30	1,609,615.78	2,737,501.91	464,440.57	1,101,120.28	3,628,463.15	68,642.61	55,396.20	1,450,507.65

Sales for Resale - Account 447

Account	Account Description	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
447150	Sales For Resale - Outside	1,291,789.61	518,473.19	6,453,862.27	1,161,650.43	2,838,263.01	9,883,464.85	1,355,895.06	1,018,215.29	5,279,287.42	757,091.05	846,845.42	19,802,198.87
Total		1,291,789.61	518,473.19	6,453,862.27	1,161,650.43	2,838,263.01	9,883,464.85	1,355,895.06	1,018,215.29	5,279,287.42	757,091.05	846,845.42	19,802,198.87

Other Electric Revenues - Account 456

Account	Account Description	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
456025	RSG Rev - MISO Make Whole	9,949.83	103,459.31	23,071.39	56,948.00	0.09	(527.83)	328,980.73	260,675.07	244,913.41	106,151.34	21,595.85	94,066.72	1,249,283.91
456040	Sales Use Tax Coll Fee	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	600.00
456075	Data Processing Service	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	960.00
456100	Profit Or Loss On Sale Of M&S								190.53					190.53
456110	Transmission Charge PTP	5,617.79	9,027.11	1,850.59	2,932.02	3,541.39	3,526.98	5,969.83	5,397.89	5,311.16	4,403.67	4,506.17	4,152.76	56,237.36
456111	Other Transmission Revenues	796,493.82	154,995.61	7,296.31	68,940.91	52,281.91	40,534.40	1,137,736.25	297,814.27	476,042.95	128,268.61	224,741.00	420,557.10	3,805,703.14
456610	Other Electric Revenues													0.00
456630	Gross Up-Contr In Aid Of Const													0.00
456970	Wheel Transmission Rev - ED	5,301.40	6,691.75	5,510.70	5,712.20	4,343.30	3,944.20	4,136.60	4,979.65	5,184.40	5,057.65	4,895.15	5,229.25	60,986.25
Total		817,492.84	274,303.78	37,858.99	134,663.13	60,296.69	47,607.75	1,476,953.41	569,187.41	731,581.92	244,011.27	255,868.17	524,135.83	5,173,961.19

Other Electric Revenues - Account 456

Account	Account Description	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total
456025	RSG Rev - MISO Make Whole	0.25	(1,304.29)	0.01	0.00	13,380.00	101,346.45	593,580.88	272,679.12	18,451.49	317,692.25	130,122.79	461,428.89	1,907,377.84
456040	Sales Use Tax Coll Fee	50.00	50.00	50.00	50.00	50.00	50.00	50.00	49.98	49.97	50.02	50.02	49.98	599.97
456075	Data Processing Service	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	960.00
456100	Profit Or Loss On Sale Of M&S													0.00
456110	Transmission Charge PTP	3,470.06	18,244.03	1,521.28	6,630.54	5,468.54	5,896.46	11,965.73	11,207.75	10,301.92	2,302.21	7,295.94	1,127.97	85,432.43
456111	Other Transmission Revenues	(37,466.55)	(155,181.57)	35,809.90	60,400.05	59,392.75	88,166.70	741,761.77	45,519.39	(88,301.17)	232,847.95	46,573.37	19,082.13	1,048,604.72
456610	Other Electric Revenues													0.00
456630	Gross Up-Contr In Aid Of Const													0.00
456970	Wheel Transmission Rev - ED	5,474.95	5,329.35	5,194.15	4,086.55	3,499.60	4,017.00	4,332.90	4,948.45	4,861.35	4,514.90	3,439.80	4,188.60	53,887.60
Total		(28,391.29)	(132,782.48)	42,655.34	71,247.14	81,870.89	199,556.61	1,351,771.28	334,484.69	(54,556.44)	557,487.33	187,561.92	485,957.57	3,096,862.56

Other Electric Revenues - Account 456

Account	Account Description	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Total
456025	RSG Rev - MISO Make Whole	27,803.66	399,030.56	59,088.87	256,011.57	198,018.07	227,296.19	425,371.16	517,004.75	101,895.16	213,712.41	357,397.20	202,349.36	2,984,978.96
456040	Sales Use Tax Coll Fee	50.02	49.98	50.02	50.00	50.00	49.98	50.02	50.00	50.02	49.98	49.99	49.99	600.00
456075	Data Processing Service	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	960.00
456100	Profit Or Loss On Sale Of M&S					653.64								653.64
456110	Transmission Charge PTP	5,808.38	9,219.49	7,235.48	5,913.27	10,009.53	5,409.45	9,665.23	13,239.78	16,001.02	7,419.47	9,935.72	10,153.34	110,010.16
456111	Other Transmission Revenues	(37,496.44)	338,661.46	824,911.42	210,971.69	383,014.88	191,981.13	291,645.14	191,388.48	99,580.74	90,060.63	99,528.60	48,296.08	2,732,543.81
456610	Other Electric Revenues	5,000.00	10,000.00											15,000.00
456630	Gross Up-Contr In Aid Of Const					(31,592.94)								(31,592.94)
456970	Wheel Transmission Rev - ED	4,598.10	4,077.45	4,307.55	3,506.10	3,636.10	4,284.15	4,965.35	4,788.55	5,242.90	4,529.85	3,513.25	4,436.90	51,886.25
Total		5,843.72	761,118.94	895,673.34	476,532.63	563,869.28	429,100.90	731,776.90	726,551.56	222,849.84	315,852.34	470,504.76	265,365.67	5,865,039.88

Other Electric Revenues - Account 456

Account	Account Description	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
456025	RSG Rev - MISO Make Whole	68,312.97	8.29	37,393.01	170,522.16	83,100.77	312,112.89	958,954.81	550,934.15	419,900.56	449,236.58	912,674.90	506,340.05	4,469,491.14
456040	Sales Use Tax Coll Fee	49.97	49.98	50.02	50.02	50.00	49.99	49.97	50.02	50.00		50.00	50.00	549.97
456075	Data Processing Service	80.00												80.00
456100	Profit Or Loss On Sale Of M&S													0.00
456110	Transmission Charge PTP	12,824.68	20,438.31	16,599.08	11,335.85	11,006.95	14,167.66	14,481.02	14,947.43	18,433.40	11,259.91	16,092.16	14,514.04	176,100.49
456111	Other Transmission Revenues	(82,211.43)	40,304.92	129,257.55	109,053.69	158,341.58	1,738,484.01	831,988.83	753,877.11	749,956.74	679,131.84	278,312.15	269,661.34	5,656,158.33
456610	Other Electric Revenues		6,250.00											6,250.00
456630	Gross Up-Contr In Aid Of Const													0.00
456970	Wheel Transmission Rev - ED	4,382.30	5,609.50	5,057.65	4,492.80	3,775.20	4,463.55	5,122.00	4,915.30	5,054.40	4,765.80	3,129.10	4,557.80	55,325.40
Total		3,438.49	72,661.00	188,357.31	295,454.52	256,274.50	2,069,278.10	1,810,596.63	1,324,724.01	1,193,395.10	1,144,394.13	1,210,258.31	795,123.23	10,363,955.33

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-151

REQUEST:

Refer to the McClellan Testimony at 13 – 15, wherein he generally describes the different results when using 30 years or 10 years of weather normalized data for forecasting peak load and MWh sales, including the forecast peak load and MWh sales for the base year through the end of the test year.

a. Indicate whether the Company developed a forecast of the peak load and MWh sales for the test year using 10 years of weather normalized data given the slight warming trend noted by Mr. McClellan. If it did, then provide the forecasts for the base year through the end of the test year, including all underlying data and statistical analyses.

b. In addition, provide all reasons why the Company chose to use 30 years instead of 10 years of weather normalized data to develop the forecast peak load and MWh sales for the test year. Specifically explain why the use of 30 years instead of 10 years does not diminish the forecast peak load and MWh sales for the base year through the end of the test year.

RESPONSE:

a. The Company did not develop a forecast and MWh sales for the test year using a 10-year normal.

b. The Company uses a 30-year normal for planning purposes. Using a longer history helps to capture weather over a longer time and to include some colder winters as well as warmer summers. Additionally, the sample standard error of a 10-year sample of

temperature is higher than the sample standard error of a 30-year sample. The number of years were not chosen to influence the forecast peak load and MWh sales which would be driven by the sample mean; instead, the calculations were motivated by the reduction of the sample standard error. Recent years do suggest a slight warming trend for the data, and this trend is robust to statistical testing, but the impact of this trend is smaller than the year-to-year variability that would result under a 10-year normal.

In Itron's 2022 Annual Energy Survey, a survey with 73 respondents, only 13% of respondents reported that they used averages of '10 Years of Less' to represent normal weather in 2022. 30% of respondents reported that they use averages of '30 Years', placing it well within the mainstream of the industry.

PERSON RESPONSIBLE: Max W. McClellan

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-152

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request for Information, KWH Sales tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook.

a. Provide the Company's budget for each column for each month January 2022 through August 2022.

b. Provide the Company's actual for each column for each month January 2022 through February 2022 and September 2022 through December 2022.

c. Provide the Company's forecast for each column for each month March 2023 through June 2024, the bridge period between the end of the base year and the start of the test year.

d. Provide all reasons why it is reasonable for forecast residential sales in October 2023 to be less than forecast in October 2022.

e. Provide all reasons why it is reasonable for forecast residential sales in November 2023 to be less than in November 2022.

f. Provide all reasons why it is reasonable for forecast residential sales in December 2023 to be less than in December 2022.

g. Provide all reasons why it is reasonable for forecast residential sales in January 2024 to be less than forecast in January 2023.

RESPONSE:

a. Please see AG-DR-01-152 Attachment 1 for the Company's budget for each column for each month January 2022 through August 2022.

b. Please see AG-DR-01-152 Attachment 2 for the Company's actual for each column for each month January 2022 through February 2022 and September 2022 through December 2022.

c. Please see AG-DR-01-152 Attachment 3 for the Company's forecast for each column for each month March 2023 through June 2024.

d. The residential usage per customer model incorporates sales history, economic activity measures, weather, appliance saturations, and appliance efficiencies. At the time the forecast was prepared, recent residential sales history included Y2020 with unprecedented high usage-per customer. Taking all above into consideration, the high usage-per-customer was not forecast to continue indefinitely nor was it forecast to return to a normal level abruptly. For example, the unprecedented amount of working from home and remote schooling due to the public health conditions in Y2020 would have been expected to decrease over time. Additionally, appliance intensities, particularly those related to heating and therefore winter months, have been expected to decline for the near future.

e. See response to (d) above.

f. See response to (d) above.

g. See response to (d) above.

PERSON RESPONSIBLE: Max W. McClellan

DUKE ENERGY KENTUCKY, INC.
 Billed KWH Sales

KWH Sales

	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Lighting</u>	<u>OPA</u>	<u>Total Excl. Inter-Dept</u>	<u>Inter-Dept</u>	<u>Total Retail</u>	
2022 January	161,084,200	126,105,100	65,407,790	1,135,330	22,879,810	376,612,230	117,450	376,729,680	Budget
February	141,260,810	118,028,110	64,030,770	1,196,760	21,632,490	346,148,940	104,500	346,253,440	Budget
March	123,306,310	112,882,360	62,956,740	1,119,620	21,077,860	321,342,890	100,600	321,443,490	Budget
April	92,680,870	111,230,780	63,725,450	1,198,130	20,799,850	289,635,080	56,830	289,691,910	Budget
May	84,788,760	112,958,490	63,145,160	1,018,030	20,943,420	282,853,860	44,130	282,897,990	Budget
June	113,645,070	128,081,950	67,900,950	1,131,120	22,207,410	332,966,500	48,780	333,015,280	Budget
July	155,744,120	141,274,600	70,452,770	1,141,030	23,863,330	392,475,850	49,850	392,525,700	Budget
August	152,167,630	137,707,880	70,924,960	1,104,090	24,248,800	386,153,360	57,990	386,211,350	Budget
Total	1,024,677,770	988,269,270	528,544,590	9,044,110	177,652,970	2,728,188,710	580,130	2,728,768,840	

DUKE ENERGY KENTUCKY, INC.
 Billed KWH Sales

KWH Sales

		<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Lighting</u>	<u>OPA</u>	<u>Total Excl. Inter-Dept</u>	<u>Inter-Dept</u>	<u>Total Retail</u>	
2022	January	149,898,637	123,040,974	58,522,108	1,100,440	19,446,984	352,009,143	133,321	352,142,464	Actual
	February	150,870,718	117,110,827	57,710,215	1,058,451	21,027,445	347,777,656	59,985	347,837,641	Actual
	September	135,441,231	146,886,681	89,593,967	3,397,598	24,548,757	399,868,233	49,009	399,917,242	Actual
	October	89,188,421	104,616,989	66,608,908	1,182,512	20,134,861	281,731,690	16,054	281,747,745	Actual
	November	85,962,560	111,001,539	44,341,520	1,086,874	12,409,578	254,802,071	9,151	254,811,222	Actual
	December	133,909,514	110,285,543	64,604,050	989,550	22,256,691	332,045,348	24,927	332,070,274	Actual
	Total	745,271,081	712,942,553	381,380,768	8,815,424	119,824,315	1,968,234,141	292,447	1,968,526,589	

DUKE ENERGY KENTUCKY, INC.
Billed KWH Sales

KWH Sales

		<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Lighting</u>	<u>OPA</u>	<u>Total</u> <u>Excl. Inter-Dept</u>	<u>Inter-Dept</u>	<u>Total</u> <u>Retail</u>	
2023	March	125,461,780	120,418,370	62,636,800	1,116,620	21,319,920	330,953,490	100,600	331,054,090	Forecast
	April	92,949,370	117,042,390	63,210,600	1,195,120	20,906,520	295,304,000	56,830	295,360,830	Forecast
	May	85,063,770	118,771,100	62,603,620	1,015,030	21,057,750	288,511,270	44,130	288,555,400	Forecast
	June	113,967,500	133,946,880	67,422,600	1,128,120	22,352,600	338,817,700	48,780	338,866,480	Forecast
	July	156,184,670	147,254,390	69,883,520	1,138,030	23,916,280	398,376,890	49,850	398,426,740	Forecast
	August	152,642,550	143,710,530	70,403,190	1,101,080	24,321,810	392,179,160	57,990	392,237,150	Forecast
	September	141,182,590	142,979,890	70,922,370	1,151,920	25,205,410	381,442,180	54,350	381,496,530	Forecast
	October	94,343,440	124,334,810	65,530,600	1,094,350	22,372,380	307,675,580	49,920	307,725,500	Forecast
	November	89,170,250	117,160,930	64,453,180	1,157,100	19,676,620	291,618,080	46,470	291,664,550	Forecast
	December	122,408,990	127,885,870	65,621,600	1,157,350	21,926,290	339,000,100	97,710	339,097,810	Forecast
2024	January	159,264,430	132,199,520	64,119,830	1,130,860	22,921,740	379,636,380	117,450	379,753,830	Forecast
	February	147,013,520	125,325,470	63,614,040	1,192,290	22,072,710	359,218,030	104,500	359,322,530	Forecast
	March	126,647,510	122,311,870	63,071,340	1,115,150	21,418,180	334,564,050	100,600	334,664,650	Forecast
	April	93,278,210	117,354,900	62,997,490	1,193,660	20,876,160	295,700,420	56,830	295,757,250	Forecast
	May	85,389,840	119,070,270	62,339,390	1,013,560	21,020,460	288,833,520	44,130	288,877,650	Forecast
	June	114,356,100	134,310,450	67,206,050	1,126,650	22,323,430	339,322,680	48,780	339,371,460	Forecast
	Total	1,899,324,520	2,044,077,640	1,046,036,220	18,026,890	353,688,260	5,361,153,530	1,078,920	5,362,232,450	

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-153

REQUEST:

Refer to the McClellan Testimony at 10, wherein he addresses the addition of one new very large commercial customer in the test year.

a. Confirm that the effects of this customer on peak demand and on MWh sales to the commercial class are included in the test year.

b. Provide the monthly increase in peak demand and on MWh sales to the commercial class in each month of the test year from this customer.

RESPONSE:

a. The effects of this customer on peak demand and on MWh sales to the commercial class are included in the test year.

b. Please see the amounts below which come from an impact to the forecast modeling and may differ from actual usage.

	MW	MWh
Mar-22	12.2	5,840
Apr-22	12.1	5,840
May-22	12.7	5,840
Jun-22	12.7	5,840
Jul-22	12.7	5,840
Aug-22	12.7	5,840
Sep-22	12.7	5,840
Oct-22	12.6	5,840
Nov-22	12.1	5,840
Dec-22	12.2	5,840
Jan-23	24.3	11,680
Feb-23	24.3	11,680

PERSON RESPONSIBLE: Max W. McClellan

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-154

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request for Information, Item 56, SCH_I4 tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook.

a. Indicate if the forecast number of customers and the forecast MWh sales for each class are estimated on an independent basis or in some interdependent manner. Describe how each forecast is developed and provide all data, calculations, and electronic workpapers in Excel live format with all formulas intact.

b. Indicate if the forecast usage per customer is simply the result of the forecast MWh sales divided by the forecast number of customers or is estimated on an independent basis.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

a. For the Residential and Commercial classes, the forecast number of customers and the forecast MWh sales are estimated in an interdependent manner. Residential and Commercial customers are modeled using the MetrixND software from Itron. Then, the Residential and Commercial forecast MWh sales are the product of those modeled customers and the modeled usage per customer (UPC). For all other classes the forecast number of customers and the forecast MWh sales are estimated on an independent basis, similarly through use of the MetrixND software.

Please see AG-DR-01-154(a) Confidential Attachment for data and coefficients for the major MetrixND customer and sales models.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

b. The forecast usage per customer of the SCH_I4 tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook is simply the result of the forecast MWh sales divided by the forecast number of customers.

PERSON RESPONSIBLE: Max W. McClellan

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-154
CONFIDENTIAL ATTACHMENT 1**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-155

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, Base Period Cust tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. Provide an extended version of this tab to add the forecast information in the same format for each month March 2023 through June 2023.

RESPONSE:

Please see AG-DR-01-155 Attachment for the additional forecast information from March 2023 through June 2023.

PERSON RESPONSIBLE: Grady "Tripp" S. Carpenter

DUKE ENERGY KENTUCKY, INC.
 CASE NO. 2022-00372
 REVENUE STATISTICS-TOTAL COMPANY
 16 MONTHS ENDED JUNE 30, 2023

NO. OF CUSTOMERS BY CLASS (YEAR-END)	Mar-22 (Actual)	Apr-22 (Actual)	May-22 (Actual)	Jun-22 (Actual)	Jul-22 (Actual)	Aug-22 (Actual)	Sep-22 (Budget)	Oct-22 (Budget)	Nov-22 (Budget)	Dec-22 (Budget)	Jan-23 (Budget)	Feb-23 (Budget)	Mar-23 (Budget)	Apr-23 (Budget)	May-23 (Budget)	Jun-23 (Budget)	Total	Average	
RETAIL -																			
RESIDENTIAL	132,247	134,353	134,347	134,510	134,722	134,794	131,946	132,295	132,334	132,645	133,016	132,930	133,135	132,656	133,204	132,540	2,131,674	133,230	
COMMERCIAL	14,198	12,630	12,607	12,660	12,672	12,664	13,861	13,924	13,928	13,961	13,949	13,940	13,962	13,918	13,976	13,906	216,776	13,549	
INDUSTRIAL	350	338	337	336	331	331	351	350	350	351	349	349	350	348	350	348	5,519	345	
LIGHTING	693	526	526	526	526	525	480	482	482	483	485	485	486	488	490	487	8,170	511	
OPA	895	914	909	909	903	898	930	924	925	927	924	924	925	924	928	924	14,683	918	
TOTAL RETAIL	148,383	148,761	148,726	148,941	149,154	149,212	147,588	147,975	148,019	148,367	148,723	148,628	148,858	148,334	148,948	148,205	2,376,822	148,551	
KWH SALES BY CLASS																			
RETAIL -																			
RESIDENTIAL	108,373,984	100,917,703	94,733,919	127,810,507	153,830,716	158,403,512	140,672,300	95,209,130	90,008,270	123,626,670	163,786,160	143,573,550	125,461,760	92,949,370	85,063,770	113,967,500	1,918,388,841		
COMMERCIAL	104,693,591	61,940,501	111,714,028	81,789,008	187,701,747	156,155,298	136,936,730	119,632,940	112,358,480	123,141,560	133,863,670	125,673,090	117,042,390	118,771,100	133,946,860	1,945,778,381			
INDUSTRIAL	54,198,864	23,632,740	47,605,705	(27,830,418)	164,732,942	92,372,091	71,365,900	65,961,980	64,832,040	65,948,390	85,051,570	63,768,840	62,836,800	63,210,600	62,603,620	67,422,600	1,007,512,264		
LIGHTING	1,036,306	106,222	1,025,671	2,003,462	1,069,427	(1,224,632)	1,154,930	1,097,360	1,160,110	1,160,360	1,132,320	1,193,760	1,116,620	1,195,120	1,015,030	1,128,120	15,370,185		
OPA	17,784,336	7,745,332	18,151,499	(1,216,265)	43,520,330	25,246,060	25,104,860	22,286,110	19,593,430	21,809,840	23,128,580	21,887,800	21,319,920	20,906,520	21,057,750	22,352,600	330,678,702		
TOTAL RETAIL	286,085,081	194,342,498	273,230,820	182,555,293	550,855,162	430,952,329	375,234,720	304,187,520	287,952,330	335,686,820	386,962,300	356,097,040	330,953,490	295,304,000	288,511,270	338,817,700	5,217,728,373		

(A) Represents billed sales.

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-156

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, SCH_G3 tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. Extend this schedule to include columns for expense, capitalized, and other for both the forecast period and the test year.

RESPONSE:

The data provided for SCH_G3 is not based on labor dollars booked to the general ledger to Duke Energy Kentucky electric but is compiled using a combination of actual compensation and projected compensation data. See SCH_G1 tab in the referenced file for a breakdown of total labor, incentive, employee benefits, and payroll taxes charged to O&M for Duke Energy Kentucky electric for the base period and forecast period.

PERSON RESPONSIBLE: Jacob J. Stewart

Duke Energy Kentucky
Case No. 2022-00372
Attorney General’s First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-157

REQUEST:

Refer to Duke Kentucky’s response to the Commission Staff’s First Request, Item 56, SCH_G1 in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. On this schedule the test year labor expense is \$0.289 million *less* than in the base period, yet the test year payroll tax expense is \$0.538 *more* than in the base period. Explain and reconcile this apparent anomaly.

RESPONSE:

Schedule G-1 base period payroll taxes only included payroll tax account 408960 and inadvertently did not include all of the payroll tax general ledger accounts, 408150, 408151, 408112 and 408700. The correct base period payroll tax amount is \$1,760,600.

See the table below showing the correction.

	Sch G-1	Additional Payroll Accounts	Corrected Sch G-1
Base Period:			
Labor	\$25,445,029		\$25,445,029
Payroll Taxes	\$1,386,899	\$373,701	\$1,760,600

The actual portion of the base period payroll tax expense included a reduction of \$201,677 for the COVID Retention Credit. Once the base period payroll taxes are adjusted for the credit, the forecasted test period payroll taxes are \$37,549 lower than the base period payroll taxes which is consistent with the lower labor in the forecasted test period.

	Sch G-1	Corrected Sch G-1	Excluding Credit Sch G-1
Base Period:			
Labor	\$25,445,029	\$25,445,029	\$25,445,029
Payroll Taxes	\$1,386,899	\$1,760,600	\$1,962,277
Forecasted Period:			
Labor	\$25,155,941	\$25,155,941	\$25,155,941
Payroll Taxes	\$1,924,728	\$1,924,728	\$1,924,728
Labor FP vs. BP	(\$289,088)	(\$289,088)	(\$289,088)
P/R taxes FP vs. BP	\$537,829	\$164,128	(\$37,549)

PERSON RESPONSIBLE: Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-158

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, WPH-a as part of the SCH_H tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook.

a. Provide the underlying data and calculations of the percentages shown on this workpaper. In addition, describe the data and calculations relied on for this purpose, including a description of the source of the data.

b. Provide the same information for each month from January 2019 through December 2022 and forecast for January 2023 through June 2023.

RESPONSE:

a. Please see AG-DR-01-158(a) Attachment for the underlying data and calculations of the percentages comprising the discount rate that Duke Energy Kentucky sells its receivables to Cinergy Receivable LLC (CRC) for January 2019 through December 2022. The percentages on WPH-a for July 2023 through June 2024 used the actual percentages from July 2021 through June 2022. This discount is a function of net charge-offs, collection costs, late charges, accounts receivable turnover and an interest rate, currently LIBOR. See the response to AG-DR-01-093 for a description of the data and the calculation of the discount.

b. Please see AG-DR-01-158(b) Attachment for the same information for each month from January 2019 through December 2022 and forecast for January 2023 through June 2023.

PERSON RESPONSIBLE: Lisa D. Steinkuhl

Discount Formula:

<https://www.mercantile.com/credit/box>

Discount for activity during month of: Dec-22

Collection Charge	0.25%
LIBOR Rate @ last day of prior month	4.1400%
Spread over index	1.00%
Discount Rate	5.14%

DEX

Net Charge off %, as calculated	0.39%
Override Factor	
Net Charge off %	0.39%
Late Charge %, as calculated	0.36%
Override Factor	
Late Charge %	0.36%
Turnover Rate, as calculated	11.58%
Override Factor	
Turnover Rate	11.58%

Required Discount - Rounded to 0.XX% **0.87%**

Note: The Required Discount is calculated using example data through the month of J. Cells that require input are shown in red in the protection.

	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18					
Net Charge offs	232,340	116,619	91,587	183,004	148,765	159,184	294,268	247,624	246,392	269,415	262,057	179,331	216,236	89,106	59,861	59,020	96,566	149,675	155,061	159,313	146,307	147,702	143,758	139,416	159,184	127,447	73,621	146,407	150,490	171,359	187,467	121,000	191,389	140,293	161,234	159,108	126,694	54,623	61,629					
Cross Charge offs	291,193	246,531	185,008	270,964	221,131	268,945	344,808	312,303	324,193	359,231	347,955	245,453	274,925	197,755	151,240	119,887	154,892	195,265	205,109	219,216	200,460	199,312	212,769	194,613	244,278	200,263	162,493	194,818	209,228	215,244	228,251	175,688	242,030	220,945	203,900	192,841	136,214	133,408						
Total Recoveries	58,253	127,912	93,439	85,990	72,366	78,761	60,540	64,677	77,801	86,816	85,008	66,122	58,689	112,659	94,379	54,867	58,326	45,610	50,039	62,903	54,153	42,610	69,011	55,197	45,094	78,816	88,872	54,411	55,736	43,885	40,784	54,686	50,641	65,636	59,611	44,792	66,147	81,591	71,780					
Billings	51,390,439	50,602,169	47,481,299	34,134,119	30,681,839	32,110,656	33,469,269	34,705,682	34,057,057	29,879,491	29,085,684	36,013,694	41,787,769	44,371,096	37,337,752	31,395,616	28,547,647	35,271,577	36,092,376	37,275,704	37,065,442	31,470,212	30,332,277	40,003,197	47,351,584	39,389,368	36,761,975	31,170,471	28,407,697	30,627,950	35,022,772	34,325,800	31,728,157	28,650,261	32,418,437	39,642,418	53,200,358	43,985,687	38,039,507					
12 months NCOs	2,789,624	2,828,741	2,740,586	2,835,970	2,865,946	2,791,534	2,777,764	2,899,079	2,494,382	2,488,658	2,540,957	2,456,186	2,439,482	2,405,969	2,371,243	2,242,259	2,190,390	2,140,551	2,020,344	1,929,033	1,828,948	1,707,235	1,599,396	1,549,021	1,531,969	1,574,310	1,591,070	1,675,451	1,729,381	1,751,065	1,789,471	1,748,158	1,799,240	1,796,831	1,803,307	1,822,999	1,799,509	1,677,885	1,665,893					
12 month (billings 9 month lagged)	516,036,963	516,338,908	516,846,463	516,271,968	516,875,759	514,231,922	525,124,467	529,695,100	529,293,511	514,025,847	517,499,951	510,795,865	502,349,772	501,026,197	494,680,039	489,054,844	481,347,323	474,948,945	468,020,878	459,184,669	443,620,189	434,004,528	427,777,455	417,633,908	414,895,492	412,781,213	415,002,134	416,543,241	421,115,363	424,129,748	426,714,469	426,981,162	430,950,665	436,514,480	431,529,732	430,959,075	430,791,830	430,581,860	425,942,253					
Charge off %	0.54%	0.55%	0.53%	0.55%	0.55%	0.53%	0.53%	0.49%	0.47%	0.47%	0.49%	0.48%	0.48%	0.48%	0.46%	0.46%	0.45%	0.43%	0.42%	0.41%	0.39%	0.37%	0.37%	0.38%	0.38%	0.37%	0.38%	0.40%	0.41%	0.41%	0.42%	0.41%	0.42%	0.41%	0.42%	0.41%	0.39%	0.39%	0.39%					
Weightings	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%		
Current 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%		
Preceding 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	
Oldest 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Weighted Charge-offs	0.54%	0.55%	0.53%	0.55%	0.55%	0.53%	0.53%	0.49%	0.47%	0.47%	0.49%	0.48%	0.48%	0.48%	0.46%	0.46%	0.45%	0.43%	0.42%	0.41%	0.39%	0.37%	0.37%	0.38%	0.38%	0.37%	0.38%	0.40%	0.41%	0.41%	0.42%	0.41%	0.42%	0.41%	0.42%	0.41%	0.39%	0.39%	0.39%	0.39%				

	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	
Net Charge offs	66,214	156,700	197,747	212,571	182,959	175,704	119,136	216,012	206,719	169,364	91,606	126,204	111,374	164,344	167,423	169,417	149,795	164,763	116,092	142,619	184,160	97,103	27,350	70,304	54,432	80,039	152,493	57,593	117,103	73,709	34,215	85,599	269,979	144,516	167,499	53,326	320,039	359,369	220,714	
Cross Charge offs	119,852	255,637	249,764	259,477	238,837	215,307	187,028	289,864	241,230	213,972	157,527	205,758	169,716	215,221	205,261	213,773	196,404	214,068	169,638	213,678	224,511	142,207	98,600	133,863	115,636	146,867	209,267	117,675	58,378	112,222	86,961	128,363	309,118	191,203	213,227	153,191	381,107	402,123	289,660	
Total Recoveries	55,638	48,958	43,016	46,646	53,897	40,693	71,891	53,942	34,511	53,709	65,921	81,564	57,336	53,877	37,838	50,356	46,610	49,305	52,547	71,060	40,331	45,105	71,249	63,559	61,203	66,828	56,774	60,082	41,275	38,513	52,776	42,764	43,139	46,686	45,728	98,865	70,168	42,754	46,236	
Billings	36,540,156	32,424,040	40,100,043	41,531,541	36,376,832	37,418,239	36,112,585	36,998,793	46,967,348	52,406,576	50,274,024	43,270,123	37,051,901	33,195,311	37,871,501	39,556,140	36,080,182	37,116,920	35,437,823	35,006,659	47,775,420	50,581,094	45,011,300	40,157,479	32,849,201	30,479,801	33,835,958	36,899,208	36,860,101	38,076,637	31,613,806	33,892,916	45,708,663	52,002,715	50,512,137	45,609,351	36,506,696	33,970,615	37,819,339	
12 months NCO's	1,589,500	1,595,710	1,622,098	1,647,202	1,709,161	1,699,476	1,668,320	1,723,098	1,770,709	1,894,278	1,841,262	1,903,837	1,950,397	1,959,841	1,928,317	1,884,163	1,850,398	1,840,057	1,841,013	1,787,820	1,745,081	1,681,920	1,617,854	1,562,784	1,506,821	1,422,516	1,407,586	1,296,763	1,164,071	1,070,917	991,140	934,119	1,016,918	1,063,332	1,203,480	1,186,502	1,453,009	1,732,339	1,800,559	
12 month billing (9 month lagged)	424,876,946	421,926,745	416,591,460	413,771,529	416,897,869	421,146,664	425,341,983	427,216,815	432,589,200	436,693,543	446,077,038	452,586,406	454,637,438	460,327,520	467,799,843	472,276,199	479,695,129	478,901,346	485,189,683	490,426,299	490,830,244	491,703,314	489,474,772	487,490,370	487,202,720	486,001,401	486,256,840	484,284,608	485,046,278	483,217,007	477,564,322	474,641,729	470,630,030	467,520,520	463,387,078	461,231,045	462,010,865	462,070,662		
Charge off %	0.37%	0.38%	0.39%	0.40%	0.41%	0.41%	0.40%	0.40%	0.41%	0.42%	0.43%	0.43%	0.43%	0.43%	0.42%	0.40%	0.39%	0.38%	0.38%	0.36%	0.34%	0.33%	0.32%	0.31%	0.29%	0.27%	0.24%	0.22%	0.21%	0.20%	0.21%	0.23%	0.26%	0.26%	0.32%	0.32%	0.37%	0.39%		
Weightings	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%
Current 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Preceding 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Oldest 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Weighted Charge-offs	0.41%	0.41%	0.42%	0.42%	0.41%	0.41%	0.40%	0.40%	0.41%	0.42%	0.43%	0.43%	0.43%	0.43%	0.42%	0.40%	0.39%	0.38%	0.38%	0.36%	0.34%	0.33%	0.32%	0.31%	0.29%	0.27%	0.24%	0.22%	0.21%	0.20%	0.21%	0.23%	0.26%	0.26%	0.32%	0.32%	0.37%	0.39%		

	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21				
Late Charges	148,369	193,456	127,503	231,063	204,400	211,743	209,071	163,829	346,116	265,189	270,175	241,701	189,475	162,016	100,001	183,802	188,709	168,800	189,182	179,516	272,513	225,097	211,240	127,572	(8,398)	6,709	(11,796)	25,347	(18,897)	14,084	13,773	32,735	84,390	315,954	226,509	234,050	162,456	136,683	151,288				
Bills	36,546,166	52,424,940	45,100,943	41,531,541	36,378,832	37,818,239	36,112,285	36,098,731	46,087,348	52,406,878	52,274,024	43,270,123	37,051,901	33,156,311	37,871,601	39,566,140	36,080,382	37,116,300	33,437,833	38,008,693	47,775,420	50,581,094	45,011,300	40,157,479	32,849,201	30,479,801	33,833,668	36,899,038	36,880,191	38,076,837	31,613,808	33,893,916	45,768,863	52,002,716	50,512,137	45,900,351	36,506,508	33,970,915	37,819,339				
12 month Late Charges	2,266,280	2,347,846	2,377,250	2,450,586	2,387,084	2,421,466	2,491,172	2,526,908	2,665,648	2,728,135	2,830,874	2,842,686	2,683,792	2,652,372	2,634,960	2,587,789	2,582,008	2,539,185	2,519,296	2,534,983	2,461,379	2,402,186	2,403,257	2,289,129	2,091,255	1,935,948	1,804,061	1,645,517	1,428,220	1,273,384	1,097,975	951,195	743,272	833,229	788,492	894,560	1,065,804	1,194,779	1,357,883				
12 month billings	432,889,200	436,605,543	446,077,636	452,586,406	454,637,438	460,327,520	467,789,843	472,370,199	479,695,129	478,901,348	485,189,683	490,420,299	490,932,044	491,703,314	489,474,772	487,499,370	487,202,720	486,901,401	486,229,640	484,234,508	485,042,578	483,217,097	477,954,372	474,841,729	470,639,030	467,923,520	463,887,978	461,231,045	462,970,682	459,146,664	458,032,921	455,966,165	457,387,786	462,888,623	468,340,495	471,997,690	475,488,704	479,472,084					
Late Charge %	0.52%	0.54%	0.53%	0.53%	0.53%	0.53%	0.53%	0.53%	0.56%	0.57%	0.54%	0.54%	0.55%	0.54%	0.54%	0.53%	0.53%	0.52%	0.52%	0.51%	0.50%	0.50%	0.48%	0.44%	0.41%	0.36%	0.31%	0.28%	0.31%	0.28%	0.24%	0.21%	0.16%	0.18%	0.17%	0.19%	0.23%	0.25%	0.28%				
Weightings																																											
Current 12 months	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	
Preceding 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	
Oldest 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Weighted Late Charges	0.52%	0.53%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.52%	0.50%	0.49%	0.47%	0.45%	0.44%	0.43%	0.42%	0.41%	0.42%	0.41%	0.42%	0.41%	0.40%	0.41%	0.40%	0.40%	0.40%		

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22		
Receivable Balance Data																									
012100																									
CUST ACCTS REC - UTILITY SERM	52,586,129	53,818,951	42,189,746	35,874,495	35,070,943	34,417,802	38,407,110	35,117,040	34,383,989	29,133,037	33,138,856	47,921,955	66,659,103	69,721,276	47,568,107	41,305,257	42,715,568	32,541,168	49,425,901	44,162,084	45,319,521	44,948,613	39,174,465		
0142100																									
ARR - Government Assistance	28,820	488,717	238,126	371,331	388,731	339,854	294,623	355,898	351,882	366,885	346,425	366,856	368,278	368,762	418,356	408,633	386,232	364,871	1,846,711	1,146,094	1,364,236	1,516,338	1,418,937		
0173100																									
CUST ACCTS REC - ELEC UNBILLED	12,205,360	13,443,106	10,825,178	10,510,253	12,393,861	14,772,326	14,573,922	17,331,055	14,426,887	15,694,085	16,346,649	19,401,430	17,866,770	13,540,329	12,275,291	19,379,459	25,362,238	20,372,969	25,478,721	25,045,924	26,301,586	22,216,003	36,803,179		
0173100																									
CUST ACCTS REC - GAS UNBILLED	6,691,437	6,549,463	3,871,943	3,031,836	2,065,047	1,816,100	1,839,139	2,027,082	1,996,927	3,107,317	7,006,148	8,024,125	9,876,941	8,072,496	5,397,499	4,158,151	3,933,252	2,817,915	2,812,351	3,141,755	3,279,485	5,207,307	8,052,787		
018600																									
ARR DPPL CCCCC OPERATORS	21,586,444	23,411,237	37,421,921	49,893,714	49,816,692	51,937,081	59,114,734	60,861,995	60,168,365	65,441,367	68,737,478	75,043,560	96,872,092	91,720,493	69,680,292	66,443,701	72,907,316	66,718,969	78,720,689	73,624,800	76,192,668	73,207,497	78,441,498		
Total	115,893,360	125,111,052	93,535,690	82,684,587	85,330,630	89,602,985	102,336,702	97,804,079	90,341,233	104,372,307	117,630,878	131,242,973	142,627,665	133,588,704	118,767,152	128,802,655	131,792,003	112,265,319	135,479,226	126,817,803	130,941,115	128,736,427	146,429,669		
Sales Data																									
Electric Billings	31,680,716	31,058,229	27,457,354	25,967,413	25,994,039	29,673,463	35,308,502	33,344,582	34,673,734	27,372,739	29,910,178	37,173,069	45,044,700	40,529,970	26,104,435	21,353,216	27,033,985	35,109,055	54,150,973	44,263,691	41,100,007	39,439,689	32,465,368		
Prior Unbilled	(15,219,345)	(12,026,360)	(13,043,106)	(10,825,178)	(10,510,253)	(12,193,961)	(14,772,326)	(14,573,922)	(17,331,055)	(15,694,088)	(18,346,649)	(19,401,430)	(17,866,770)	(13,540,329)	(12,275,291)	(19,379,459)	(25,362,238)	(20,372,969)	(25,478,721)	(25,045,924)	(26,301,586)	(22,216,003)	(36,803,179)		
Current Unbilled	13,026,360	13,043,106	10,825,178	10,510,253	12,193,961	14,772,326	14,573,922	17,331,055	14,426,887	15,694,088	16,346,649	19,401,430	17,866,770	13,540,329	12,275,291	19,379,459	25,362,238	20,372,969	25,478,721	25,045,924	26,301,586	22,216,003	36,803,179		
Total Electric	18,496,731	13,024,976	20,239,424	25,652,490	27,677,747	32,951,839	36,110,698	36,159,725	39,789,559	29,039,640	32,463,739	38,277,670	43,038,030	36,983,658	24,843,937	28,443,984	39,018,846	49,139,789	49,294,725	43,692,994	44,111,609	33,354,106	41,052,444		
Gas Billing	18,654,465	18,740,289	14,033,619	8,364,880	5,914,269	4,596,935	5,847,955	5,712,966	4,404,678	4,248,231	8,602,420	18,914,531	24,716,369	27,878,630	17,123,483	11,020,101	7,914,421	7,416,053	5,019,589	3,787,068	5,491,568	7,031,144	11,296,701		
Prior Unbilled	(8,014,433)	(6,649,433)	(3,871,943)	(3,031,843)	(2,065,047)	(1,816,100)	(1,839,139)	(2,027,082)	(1,996,927)	(3,107,317)	(7,006,148)	(8,024,125)	(9,876,941)	(8,072,496)	(5,397,499)	(4,158,151)	(3,933,252)	(2,817,915)	(2,812,351)	(3,141,755)	(3,279,485)	(5,207,307)	(8,052,787)		
Current Unbilled	6,691,437	6,549,463	3,871,943	3,031,836	2,065,047	1,816,100	1,839,139	2,027,082	1,996,927	3,107,317	7,006,148	8,024,125	9,876,941	8,072,496	5,397,499	4,158,151	3,933,252	2,817,915	2,812,351	3,141,755	3,279,485	5,207,307	8,052,787		
Total Gas	17,529,869	18,559,859	14,435,099	7,666,555	4,949,271	4,929,988	5,870,904	5,690,925	4,419,761	4,141,914	15,232,525	26,248,205	26,912,188	14,648,486	9,789,725	7,889,269	6,500,710	4,603,138	2,976,713	2,976,017	4,114,609	5,629,248	8,058,966	14,572,181	
Other	4,498,114	721,872	4,068,338	2,252,321	2,462,317	3,637,641	1,933,847	1,029,448	2,044,811	2,688,878	3,081,680	3,899,913	3,301,303	1,127,116	4,627,187	14,729,147	12,072,265	3,301,694	6,402,380	2,613,860	2,551,417	3,584,177			
Total Retail Sales	47,498,314	45,306,029	40,733,051	35,511,368	34,887,734	40,148,757	45,974,738	43,924,482	46,824,901	47,647,470	68,105,877	100,150,291	117,989,609	133,959,630	114,913,274	114,260,837	124,542,063	118,244,440	148,201,745	143,099,013	144,944,458	145,050,402	163,929,627		
CCCCO Sales																									
Total Receivables Originated	67,484,734	61,386,900	60,733,901	56,361,306	61,887,734	65,148,797	69,724,738	63,992,982	67,447,480	68,105,877	100,150,291	117,989,609	133,959,630	144,913,274	114,260,837	114,260,837	124,542,063	118,244,440	148,201,745	143,099,013	144,944,458	145,050,402	163,929,627		
REC BALANCE / MONTHLY BILLINGS	1.51	1.44	1.41	1.41	1.43	1.28	1.35	1.27	1.36	1.28	1.22	1.26	1.32	1.44	1.46	1.63	1.32	1.35	1.35	1.50	1.65	1.35			
DAYS	45.85	43.75	42.74	42.78	43.51	41.45	38.92	41.45	38.92	37.14	38.20	40.04	43.86	44.46	40.44	40.01	41.83	41.10	41.03	45.74	50.31	40.99			
TURNOVER RATE	12.56%	11.99%	11.71%	11.71%	11.62%	10.93%	11.26%	10.61%	11.36%	10.68%	10.18%	10.47%	10.97%	12.02%	12.18%	13.55%	10.96%	11.46%	11.26%	12.52%	13.39%	11.23%			
Weightings																									
Current 12 months	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%	33.34%		
Preceding 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%		
Oldest 12 months	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%		
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		
Weighted Turnover Rate	11.46%	11.46%	11.30%	11.31%	11.31%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.30%	11.46%	11.46%	11.46%	11.46%	11.30%	11.30%		

Notes - Items in red are inputs
 (b) Represents amounts billed for miscellaneous charges included in
 * Unbilled account #'s changed in July 2023. Accounts 142850, 142

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 UNCOLLECTIBLE ACCOUNTS EXPENSE
 SALE OF RECEIVABLES DISCOUNT RATE

Line No.	Description	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
1	Charge offs	0.3980%	0.4028%	0.3976%	0.3976%	0.4001%	0.4018%	0.4066%	0.4070%	0.4066%	0.4041%	0.4024%	0.3965%
2	Collection Costs	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
3	Late Charges	-0.5271%	-0.5304%	-0.5336%	-0.5309%	-0.5291%	-0.5306%	-0.5296%	-0.5284%	-0.5259%	-0.5268%	-0.5248%	-0.5229%
4	Time Value	<u>0.5992%</u>	<u>0.5976%</u>	<u>0.5960%</u>	<u>0.5933%</u>	<u>0.5990%</u>	<u>0.5887%</u>	<u>0.5830%</u>	<u>0.5614%</u>	<u>0.5493%</u>	<u>0.5427%</u>	<u>0.5124%</u>	<u>0.5064%</u>
5													
6	Total Discount	0.5200%	0.5200%	0.5100%	0.5100%	0.5200%	0.5100%	0.5100%	0.4900%	0.4800%	0.4700%	0.4400%	0.4300%
7													
8	Less: Time Value	<u>0.5992%</u>	<u>0.5976%</u>	<u>0.5960%</u>	<u>0.5933%</u>	<u>0.5990%</u>	<u>0.5887%</u>	<u>0.5830%</u>	<u>0.5614%</u>	<u>0.5493%</u>	<u>0.5427%</u>	<u>0.5124%</u>	<u>0.5064%</u>
9													
10	Uncollectible Factor	-0.0792%	-0.0776%	-0.0860%	-0.0833%	-0.0790%	-0.0787%	-0.0730%	-0.0714%	-0.0693%	-0.0727%	-0.0724%	-0.0764%
		<u>Jan-20</u>	<u>Feb-20</u>	<u>Mar-20</u>	<u>Apr-20</u>	<u>May-20</u>	<u>Jun-20</u>	<u>Jul-20</u>	<u>Aug-20</u>	<u>Sep-20</u>	<u>Oct-20</u>	<u>Nov-20</u>	<u>Dec-20</u>
1	Charge offs	0.3956%	0.3978%	0.3887%	0.3801%	0.3791%	0.3714%	0.3670%	0.3658%	0.3558%	0.3477%	0.3375%	0.3285%
2	Collection Costs	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
3	Late Charges	-0.5238%	-0.5230%	-0.5234%	-0.5212%	-0.5199%	-0.5050%	-0.4970%	-0.4867%	-0.4733%	-0.4547%	-0.4408%	-0.4299%
4	Time Value	<u>0.5082%</u>	<u>0.5052%</u>	<u>0.4848%</u>	<u>0.4211%</u>	<u>0.3508%</u>	<u>0.3335%</u>	<u>0.3300%</u>	<u>0.3309%</u>	<u>0.3275%</u>	<u>0.3270%</u>	<u>0.3234%</u>	<u>0.3314%</u>
5													
6	Total Discount	0.4300%	0.4300%	0.4000%	0.3300%	0.2600%	0.2500%	0.2500%	0.2600%	0.2600%	0.2700%	0.2700%	0.2800%
7													
8	Less: Time Value	<u>0.5082%</u>	<u>0.5052%</u>	<u>0.4848%</u>	<u>0.4211%</u>	<u>0.3508%</u>	<u>0.3335%</u>	<u>0.3300%</u>	<u>0.3309%</u>	<u>0.3275%</u>	<u>0.3270%</u>	<u>0.3234%</u>	<u>0.3314%</u>
9													
10	Uncollectible Factor	-0.0782%	-0.0752%	-0.0848%	-0.0911%	-0.0908%	-0.0835%	-0.0800%	-0.0709%	-0.0675%	-0.0570%	-0.0534%	-0.0514%
		<u>Jan-21</u>	<u>Feb-21</u>	<u>Mar-21</u>	<u>Apr-21</u>	<u>May-21</u>	<u>Jun-21</u>	<u>Jul-21</u>	<u>Aug-21</u>	<u>Sep-21</u>	<u>Oct-21</u>	<u>Nov-21</u>	<u>Dec-21</u>
1	Charge offs	0.3214%	0.3281%	0.3285%	0.3360%	0.3340%	0.3517%	0.3659%	0.3656%	0.3683%	0.3686%	0.3722%	0.3665%
2	Collection Costs	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
3	Late Charges	-0.4220%	-0.4087%	-0.4163%	-0.4051%	-0.4040%	-0.4056%	-0.4015%	-0.4035%	-0.4039%	-0.4034%	-0.4021%	-0.4025%
4	Time Value	<u>0.3306%</u>	<u>0.3306%</u>	<u>0.3278%</u>	<u>0.3291%</u>	<u>0.3300%</u>	<u>0.3239%</u>	<u>0.3255%</u>	<u>0.3278%</u>	<u>0.3255%</u>	<u>0.3248%</u>	<u>0.3199%</u>	<u>0.3260%</u>
5													
6	Total Discount	0.2800%	0.3000%	0.2900%	0.3100%	0.3100%	0.3200%	0.3400%	0.3400%	0.3400%	0.3400%	0.3400%	0.3400%
7													
8	Less: Time Value	<u>0.3306%</u>	<u>0.3306%</u>	<u>0.3278%</u>	<u>0.3291%</u>	<u>0.3300%</u>	<u>0.3239%</u>	<u>0.3255%</u>	<u>0.3278%</u>	<u>0.3255%</u>	<u>0.3248%</u>	<u>0.3199%</u>	<u>0.3260%</u>
9													
10	Uncollectible Factor	-0.0506%	-0.0306%	-0.0378%	-0.0191%	-0.0200%	-0.0039%	0.0145%	0.0122%	0.0145%	0.0152%	0.0201%	0.0140%
		<u>Jan-22</u>	<u>Feb-22</u>	<u>Mar-22</u>	<u>Apr-22</u>	<u>May-22</u>	<u>Jun-22</u>	<u>Jul-22</u>	<u>Aug-22</u>	<u>Sep-22</u>	<u>Oct-22</u>	<u>Nov-22</u>	<u>Dec-22</u>

1	Charge offs	0.3619%	0.3711%	0.3685%	0.3689%	0.3751%	0.3660%	0.3526%	0.3496%	0.3523%	0.3582%	0.3619%	0.3930%
2	Collection Costs	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
3	Late Charges	-0.4000%	-0.3923%	-0.3966%	-0.3996%	-0.4024%	-0.3922%	-0.3776%	-0.3693%	-0.3670%	-0.3655%	-0.3680%	-0.3622%
4	Time Value	<u>0.3280%</u>	<u>0.3212%</u>	<u>0.3381%</u>	<u>0.3607%</u>	<u>0.4073%</u>	<u>0.4362%</u>	<u>0.5151%</u>	<u>0.5797%</u>	<u>0.6047%</u>	<u>0.6673%</u>	<u>0.7461%</u>	<u>0.7892%</u>
5													
6	Total Discount	0.3400%	0.3500%	0.3600%	0.3800%	0.4300%	0.4600%	0.5400%	0.6100%	0.6400%	0.7100%	0.7900%	0.8700%
7													
8	Less: Time Value	<u>0.3280%</u>	<u>0.3212%</u>	<u>0.3381%</u>	<u>0.3607%</u>	<u>0.4073%</u>	<u>0.4362%</u>	<u>0.5151%</u>	<u>0.5797%</u>	<u>0.6047%</u>	<u>0.6673%</u>	<u>0.7461%</u>	<u>0.7892%</u>
9													
10	Uncollectible Factor	0.0120%	0.0288%	0.0219%	0.0193%	0.0227%	0.0238%	0.0249%	0.0303%	0.0353%	0.0427%	0.0439%	0.0808%

		Forecasted																	
		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Charge offs	0.3214%	0.3281%	0.3285%	0.3360%	0.3340%	0.3517%	0.3659%	0.3656%	0.3683%	0.3686%	0.3722%	0.3665%	0.3619%	0.3711%	0.3685%	0.3689%	0.3751%	0.3660%
2	Collection Costs	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%	0.0500%
3	Late Charges	-0.4220%	-0.4087%	-0.4163%	-0.4051%	-0.4040%	-0.4056%	-0.4015%	-0.4035%	-0.4039%	-0.4034%	-0.4021%	-0.4025%	-0.4000%	-0.3923%	-0.3966%	-0.3996%	-0.4024%	-0.3922%
4	Time Value	<u>0.3306%</u>	<u>0.3306%</u>	<u>0.3278%</u>	<u>0.3291%</u>	<u>0.3300%</u>	<u>0.3239%</u>	<u>0.3255%</u>	<u>0.3278%</u>	<u>0.3255%</u>	<u>0.3248%</u>	<u>0.3199%</u>	<u>0.3260%</u>	<u>0.3280%</u>	<u>0.3212%</u>	<u>0.3381%</u>	<u>0.3607%</u>	<u>0.4073%</u>	<u>0.4362%</u>
5																			
6	Total Discount	0.2800%	0.3000%	0.2900%	0.3100%	0.3100%	0.3200%	0.3400%	0.3400%	0.3400%	0.3400%	0.3400%	0.3400%	0.3400%	0.3500%	0.3600%	0.3800%	0.4300%	0.4600%
7																			
8	Less: Time Value	<u>0.3306%</u>	<u>0.3306%</u>	<u>0.3278%</u>	<u>0.3291%</u>	<u>0.3300%</u>	<u>0.3239%</u>	<u>0.3255%</u>	<u>0.3278%</u>	<u>0.3255%</u>	<u>0.3248%</u>	<u>0.3199%</u>	<u>0.3260%</u>	<u>0.3280%</u>	<u>0.3212%</u>	<u>0.3381%</u>	<u>0.3607%</u>	<u>0.4073%</u>	<u>0.4362%</u>
9																			
10	Uncollectible Factor	-0.0506%	-0.0306%	-0.0378%	-0.0191%	-0.0200%	-0.0039%	0.0145%	0.0122%	0.0145%	0.0152%	0.0201%	0.0140%	0.0120%	0.0288%	0.0219%	0.0193%	0.0227%	0.0238%

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-159

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, D-2.28 tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. In the Commission's final Order in Case 2019-00271 at 19, the Commission stated:

Duke Kentucky also included \$0.856 million of non-executive incentive compensation, \$0.223 million of executive incentive compensation, and \$0.502 million of director's stock expense in its test year. A portion of these incentive payments would only be paid out in the event that a predetermined "circuit breaker" Earnings per Share (EPS) value is met in the fiscal year. Duke Kentucky states that if EPS is less than the circuit breaker value, then test-year expenses that would not be paid out equals \$0.661 million.

The Commission agrees with the adjustment to payroll taxes associated with incentive compensation and finds that Duke Kentucky's payroll tax expense should be reduced by \$0.065 million, a revenue requirement reduction of \$0.066 million. Additionally, the Commission finds that Duke Kentucky's incentive compensation that is directly tied to EPS of \$0.661 million should be removed from the test-year expenses, a revenue requirement reduction of \$0.663 million.¹

a. Identify and describe all incentive compensation plans that have a "circuit breaker" EPS threshold that must be met before there is any payout regardless of the factors that determine the amount of the payout.

b. Indicate whether the Company's adjustment to exclude incentive compensation expense tied to measures of financial performance excludes all incentive

¹ Case No. 2019-00271, *Electronic Application of Duke Energy Kentucky, Inc. for 1) An Adjustment of the Electric Rates; 2) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All Other Required Approvals and Relief* (Ky. PSC Apr. 27, 2020), Order at 19.

compensation expense tied to the “circuit breaker” EPS threshold. If not, then provide the additional incentive compensation expense that would be excluded from the requested base revenue requirement to be consistent with Commission’s Order in Case 2019-00271. Provide all calculations in live Excel format with all formulas intact. In addition, source all data used for this purpose and provide a copy of the source documents and/or other source materials.

c. Refer further to WPD-2.28a, line 3, Operation Excellence with a weighting of 10% in the STI plan metrics.

i. Refer to the table in the Stewart Testimony at 30. Confirm that the Operational Excellence category referred to on WPD-2.28a is further separated into reliability and combined safety/environmental categories with a weighting of 5% to each category, consistent with the table in Mr. Stewart’s testimony, but does not reflect the weighting of 12.5% to each of those same categories for the “Senior Management Committee (SMC)” as shown on the table in Mr. Stewart’s testimony. Explain this apparent inconsistency.

ii. Provide a revised version of WPD-2.28a that is consistent with the weighting of 12.5% to each category for the “Senior Management Committee (SMC)” as shown on the above referenced table in the Stewart testimony.

RESPONSE:

a. None of the Duke Energy incentive plans include a “circuit breaker” EPS threshold that must be met before there is any payout. Within the short-term incentive (STI) plan, all non-EPS measures have non-EPS target levels that must be reached in order

for an STI payout related to those measures to be paid. The circuit breaker is only activated if the EPS achieved is equal to or less than the circuit breaker. The circuit breaker is set between minimum and target EPS; therefore, if actual EPS is greater than the EPS circuit breaker, all measures will be paid out based on the scorecard. Only if actual EPS is less than the EPS circuit breaker will payouts for all measures, including the team component, be reduced, and capped at the EPS achievement. As described in Section V of the direct testimony of Jacob J. Stewart, the circuit breaker is designed to provide assurance that Duke Energy will not make incentive payouts when it is not financially prudent to do so. If engaged, it strikes a balance between rewarding strong operational performance with providing a mechanism to keep incentive payouts affordable during challenging years. The current circuit breaker serves a different purpose than the circuit breaker in the Company's STI plan prior to 2021. Prior to 2021, the circuit breaker had to be met prior to any payout, whereas currently a payout can be achieved even if the circuit breaker is not met.

b. No, the Company's adjustment to exclude incentive compensation expense tied to measures of financial performance do not exclude any measures other than EPS. The EPS circuit breaker in effect at the time of Case No. 2019-00271 is not consistent with the current circuit breaker design, which is described in the response to part (a).

- c.
- i. See AG-DR-01-159(c) Attachment 1 for an updated Table 2 Summary of Incentive Plan Components. In the updated table in the "STI – Senior Management Committee (SMC)" section, we correctly reflect for this population that Operational Excellence is split equally between Reliability and Safety/Environmental at 6.25% each for a total weighting of 12.5%. We also add the Climate metric weighted at 12.5%.

- ii. See AG-DR-01-159(c) Attachment 2 for a revised version of WPD-2.28a that is consistent with the weighting of 12.5% to each category for the “Senior Management Committee (SMC).”

PERSON RESPONSIBLE: Jacob J. Stewart
Lisa D. Steinkuhl

Updated TABLE 2: SUMMARY OF INCENTIVE PLAN COMPONENTS

Incentive Plan	Incentive Plan Components	Weighting	Proposed Percentage Recoverable
STI – Non-Leadership	EPS	50%	0%
	O&M	5%	5%
	Operational Excellence - Reliability	5%	5%
	Operational Excellence - Safety/Environmental	5%	5%
	Customer Satisfaction	10%	10%
	Team	25%	25%
STI – Leadership (other than SMC)	EPS	50%	0%
	O&M	10%	10%
	Operational Excellence - Reliability	5%	5%
	Operational Excellence - Safety/Environmental	5%	5%
	Customer Satisfaction	10%	10%
	Individual Goals	20%	20%
STI – Senior Management Committee (SMC)	EPS	50%	0%
	O&M	12.5%	12.5%
	Operational Excellence - Reliability	6.25%	6.25%
	Operational Excellence - Safety/Environmental	6.25%	6.25%
	Customer Satisfaction	12.5%	12.5%
	Climate	12.5%	12.5%
Non-Executive LTI	Restricted stock units	100%	0%
Executive LTI	Restricted stock units	30%	0%
	Performance shares (70%)		
	<ul style="list-style-type: none"> • Total Shareholder Return (TSR) relative to that of the companies in the Philadelphia Utility Index 	17.5%	0%
	<ul style="list-style-type: none"> • Cumulative adjusted Earnings Per Share (EPS) 	35%	0%
	<ul style="list-style-type: none"> • Total Incident Case Rate (TICR) 	17.5%	17.5%
UEIP	Various by union - based on EPS, safety, customer satisfaction, etc.	100%	100%

DUKE ENERGY KENTUCKY, INC.
 ELECTRIC DEPARTMENT
 CASE NO. 2022-00372
 INCENTIVE COMPENSATION
 SHORT TERM INCENTIVE

WPD-2.28a
 WITNESS RESPONSIBLE:
 L. D. STEINKUHL

Line No.	Plan Measure	Weight	DE Kentucky	DE Carolinas	Service Company	DE Ohio	DE Indiana	DE Progress	DE Florida	Piedmont	Total to DE Kentucky
1	EPS	50%	\$127,440	\$118,923	\$938,719	\$15,482	\$8,451	\$11,929	\$3,298	\$458	\$ 1,224,700
2	O&M	5%	12,066	11,892	87,749	1,548	845	1,193	330	46	115,669
3	Operational Excellence	10%	25,262	23,785	185,703	3,096	1,690	2,386	660	92	242,674
4	Customer Satisfaction (CSAT)	10%	25,262	23,785	185,703	3,096	1,690	2,386	660	92	242,674
5	Team	25%	64,850	59,461	479,563	7,741	4,225	5,965	1,649	229	623,683
6	Total	100%	\$ 254,880	\$ 237,846	\$ 1,877,437	\$ 30,963	\$ 16,901	\$ 23,859	\$ 6,597	\$ 917	\$ 2,449,400
1	EPS	50%	\$4,520		\$40,815						\$ 45,335
2	O&M	12.5%	1,130		10,204						11,334
3	Operational Excellence	12.5%	1,130		10,204						11,334
4	Customer Satisfaction (CSAT)	12.5%	1,130		10,204						11,334
5	Climate	12.5%	1,130		10,204						11,334
6	Total	100%	\$ 9,040	\$ -	\$ 81,631	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,671
7	Non-Utility Accounts O&M accounts including eliminations on D-2.22										\$ 97,399
8	Accounts 500-935 (Income Statement) excluding eliminations on D-2.22										<u>2,442,672</u>
9	Total										<u>\$ 2,540,071</u>
10	EPS weighted										50%
11	EPS related recorded to Income Statement (Line 8 * Line 10)										To Sch D-2.28 <--- <u>\$ 1,221,336</u>

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-160

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, D-2.20 tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. Refer further to the Profit Sharing Mechanism ("PSM") amount reflected in cell row 23. Explain why the Commission should not reset the baseline for the PSM to \$0 rather than setting it to \$1.595 million as shown in cell row 23 on this tab.

RESPONSE:

Objection. Misstates facts. Cell 23 Profit Sharing Mechanism of \$1,594,610 is the amount included in the Company's forecasted financial statements and is not a "baseline". This proforma adjustment eliminates all of the items in the forecasted financial statements that are included in Rider PSM so that the amount included in base rates is \$0.

Please see the Commission's Order in Case No 2017-00321 rejecting the Attorney General's recommendation that forecasted OSS margins be removed from the Rider PSM and included as a reduction to base rates, finding that not including PSM margins in base rates is "reasonable and should be approved..."¹ The Commission has not and should not set a "baseline" for the Rider PSM. As explained in the rebuttal testimony of Sarah E. Lawler in Case No. 2017-00321, including an amount other than \$0 related to the PSM in base rates would be a significant departure from the formula for Rider PSM that the

¹ *In re Electronic Application of Duke Energy Kentucky, Inc., for: 1) An Adjustment of the Electric Rates; 2) Approval of an Environmental Compliance Plan and Surcharge mechanism; 3) Approval of New Tariffs; 4) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 5) All Other Required Approvals and Relief*, Case No 2017-00321 (Ky.P.S.C. Apr. 13, 2018) Pg. 15.

Commission has approved on multiple occasions since 2007. The Company's profit-sharing mechanism has many components and trying to guesstimate a baseline in base rates would add an unnecessary complication to the process without any benefits to customers. The current Rider PSM process that has existed since 2007 transparently details the profits to be shared with customers. Adding a baseline into base rates would not change how much is credited or charged to customers but would take away that transparency that exists today. Rider PSM is updated quarterly and would then have to be compared to what is in base rates. Customers would then not be able to see on their bill their true Rider PSM credit or charge.

PERSON RESPONSIBLE:

As to objection, Legal

As to response, Lisa D. Steinkuhl

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-161

REQUEST:

Refer to DEBS's 2021 FERC Form 60 at pages 201 and 301.

a. Refer to the amount of net income after taxes reflected on page 301, at line 62, and the amount of income taxes on page 301 at lines 42 – 44. Explain how the service company reflected net income of approximately \$34.867 million after net income tax expense of approximately \$22.375 million in 2021 as opposed to net income and income taxes at around zero if all costs were charged to affiliates at cost.

b. Refer to page 201, at lines 14 and 15. The balance of Unappropriated Retained Earnings at the end of 2021 was approximately \$623.579 million and dividends paid during 2021 were \$0. Confirm that the amount of Unappropriated Retained Earnings represents profits retained at DEBS, after annual dividends to stockholders, and that those profits represent billings to affiliates in excess of actual costs on a cumulative basis.

c. Are any costs charged to affiliates, such as Duke Kentucky, based on an equity return on investment component as opposed to just the return of component and interest charges? If so, explain and describe the basis for the equity return added to costs charged to affiliates as well as the actual return on equity percentage added during 2021 and the projected return on equity percentage for the test year.

d. Provide a schedule showing the monthly forecasted net income for DEBS, before and after income taxes, for each month during 2021 and 2022.

e. Provide a schedule showing the monthly forecasted recovery of equity return for DEBS, including income taxes, charged to Duke Kentucky, including charges directly to Duke Kentucky from DEBS and all charges from other affiliates that include charges from DEBS. Provide all calculations, including electronic spreadsheets in live format with all formulas intact.

RESPONSE:

a. The Service Company charges a return for the use of DEBS assets to the jurisdictions. This represents a cost of capital for assets on the Service Company that are used in the operations of Duke Energy and its subsidiary companies. For 2021, the return on DEBS assets was \$57.2 million, income tax expense was \$22.4 million, resulting in net income of approximately \$34.8 million.

b. The amount of Unappropriated Retained Earnings does represent billings in excess of costs recorded on DEBS ledger on a cumulative basis. The nature of these billings in excess of costs can be categorized into two categories. Prior to the Duke Cinergy merger, which brought Kentucky under Duke Energy Corporation, the legacy Duke Corporation utilized a tax strategy in which the Service Company charged a management fee for services provided. The cost to the utilities, primarily Duke Energy Carolinas, was recorded to a below the line non-utility account. The reorganization associated with the Duke Cinergy merger negated this strategy going forward. The second category is the return on DEBS assets. The Service Company to Utility Service Agreement states that the company shall cover all costs of doing business. Cost as defined in the agreement means “fully embedded costs, namely, the sum of (1) direct costs, (2) indirect costs and (3) costs of capital.” The return on DEBS assets is a charge to recover the cost of capital to the utilities for the use of these assets.

c. A return on DEBS assets is recorded based on a monthly calculation of DEBS assets. These assets include PP&E, prepaid pension assets and inventory. The PP&E is determined based on NET PP&E less CWIP less associated deferred taxes. Prepaid pension assets are determined by taking the prepaid qualified pension, less the non-qualified pension and OPEB liabilities and decreasing by a deferred tax amount. The inventory amount is the amount reflected on the inventory balance sheet for DEBS. The total allocated amount of assets assigned to the Regulated Utility is multiplied by a revenue requirement percentage to achieve the allowed rate of return in the jurisdiction. The amount allocated to the utility is based on a 3-factor allocation for PP&E and inventory assets. The pension assets are allocated based on DEBS labor usage. This process is applicable to 2021, 2022 and for the forecasted test year. The revenue requirement percentage used in Kentucky is based on the pre-tax rate of return from the 2019 Kentucky electric base rate case, Case No. 2019-00271, order April 27, 2020, for all forecasted periods.

d. Please see table below:

Period	Before Taxes (\$000)	After Taxes (\$000)
Jan-21	5,616	3,689
Feb-21	5,616	3,689
Mar-21	5,616	3,689
Apr-21	5,616	3,689
May-21	5,616	3,689
Jun-21	5,616	3,689
Jul-21	5,616	3,689
Aug-21	5,616	3,689
Sep-21	5,616	3,689
Oct-21	5,616	3,689
Nov-21	5,616	3,689
Dec-21	5,616	3,689
Jan-22	5,747	3,839
Feb-22	5,747	3,839
Mar-22	5,747	3,839
Apr-22	5,747	3,839
May-22	5,747	3,839
Jun-22	5,747	3,839
Jul-22	5,747	3,839
Aug-22	5,747	3,839
Sep-22	5,747	3,839
Oct-22	5,747	3,839
Nov-22	5,747	3,839
Dec-22	5,747	3,839

e. Please see AG-DR-01-161(e) Attachment.

PERSON RESPONSIBLE: Jeffery R. Setser

DUKE ENERGY KENTUCKY
Case No. 2022-00372
ATTORNEY GENERAL
AG-DR-01-161(e) Attachment

2021

Test Period PPE Return			Test Period PEN Return			Test Period INV Return			Total Return			After Tax Return				
1	2021	43,281	1	2021	27,924	1	2021	1,947	1	2021	73,152	1	2021	73,152	22.0%	57,058
2	2021	43,281	2	2021	27,924	2	2021	1,947	2	2021	73,152	2	2021	73,152	22.0%	57,058
3	2021	43,281	3	2021	27,924	3	2021	1,947	3	2021	73,152	3	2021	73,152	22.0%	57,058
4	2021	43,281	4	2021	27,924	4	2021	1,947	4	2021	73,152	4	2021	73,152	22.0%	57,058
5	2021	43,281	5	2021	27,924	5	2021	1,947	5	2021	73,152	5	2021	73,152	22.0%	57,058
6	2021	43,281	6	2021	27,924	6	2021	1,947	6	2021	73,152	6	2021	73,152	22.0%	57,058
7	2021	43,281	7	2021	27,924	7	2021	1,947	7	2021	73,152	7	2021	73,152	22.0%	57,058
8	2021	43,281	8	2021	27,924	8	2021	1,947	8	2021	73,152	8	2021	73,152	22.0%	57,058
9	2021	43,281	9	2021	27,924	9	2021	1,947	9	2021	73,152	9	2021	73,152	22.0%	57,058
10	2021	43,281	10	2021	27,924	10	2021	1,947	10	2021	73,152	10	2021	73,152	22.0%	57,058
11	2021	43,281	11	2021	27,924	11	2021	1,947	11	2021	73,152	11	2021	73,152	22.0%	57,058
12	2021	43,281	12	2021	27,924	12	2021	1,947	12	2021	73,152	12	2021	73,152	22.0%	57,058
519,375			335,087			23,368			877,830			877,830 684,693				

2022

Test Period PPE Return			Test Period PEN Return			Test Period INV Return			Total Return			After Tax Return				
1	2022	41,480	1	2022	26,700	1	2022	2,006	1	2022	70,186	1	2022	70,186	22.0%	54,744
2	2022	41,480	2	2022	26,700	2	2022	2,006	2	2022	70,186	2	2022	70,186	22.0%	54,744
3	2022	41,480	3	2022	26,700	3	2022	2,006	3	2022	70,186	3	2022	70,186	22.0%	54,744
4	2022	41,480	4	2022	26,700	4	2022	2,006	4	2022	70,186	4	2022	70,186	22.0%	54,744
5	2022	41,480	5	2022	26,700	5	2022	2,006	5	2022	70,186	5	2022	70,186	22.0%	54,744
6	2022	41,480	6	2022	26,700	6	2022	2,006	6	2022	70,186	6	2022	70,186	22.0%	54,744
7	2022	41,480	7	2022	26,700	7	2022	2,006	7	2022	70,186	7	2022	70,186	22.0%	54,744
8	2022	41,480	8	2022	26,700	8	2022	2,006	8	2022	70,186	8	2022	70,186	22.0%	54,744
9	2022	41,480	9	2022	26,700	9	2022	2,006	9	2022	70,186	9	2022	70,186	22.0%	54,744
10	2022	41,480	10	2022	26,700	10	2022	2,006	10	2022	70,186	10	2022	70,186	22.0%	54,744
11	2022	41,480	11	2022	26,700	11	2022	2,006	11	2022	70,186	11	2022	70,186	22.0%	54,744
12	2022	41,480	12	2022	26,700	12	2022	2,006	12	2022	70,186	12	2022	70,186	22.0%	54,744
497,761			320,398			24,075			842,234			842,234 656,929				

SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS						DPC 20056 Duke Power Governance	DEP 50991 DE Progress	DEF 50992 Progress Florida	DEO 75956 KO Transmis sion	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGSG OV)	DEO	DEK 75957 DE Kentucky (USFRELG	
SA #	Function	Function	Allocation Method	Operati ng Unit	Alloc Pool	St Cd								
Fac ROR	Facilities Rate of Return Allocation	Allocates the Service Company's portion of	<i>Three Factor Formula</i>	DURR	Facilities ROR Gvrnce	CG1	34.25%	23.53%	16.62%		3.46%	1.58%	5.04%	1.16%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)										
											7.90%		
							12	12	12	12	12	12	
							0.75%	0.72%	0.64%	0.88%	0.86%	0.88%	0.66%
0931008 for expense	78000	8000 for expense											
0456949 for income	78000	9957 for income					GO22	PCGS	PFGS	GO27	GO24	GO25	GO28
		Budget value:											
					566,755,841		1,447,766	963,509	601,277	-	168,971	79,100	43,281

DEK 75958 DE Kentucky (USFRGSG)	DEK	DEI 75960	Comm Pwr 75961 Cinergy Sol Hldng Co Inc (GOV)	Comm	Comm Trans 75964	Gas Oper 75965	Piedmont 47151 Piedmont Gas Del	Other 10157 PanEnergy governance	Other 75963 Cinergy Ventures LLC (Gov)	Other	Total
0.38%	1.54%	10.27%	2.92%	2.92%	0.02%	0.01%	5.73%	0.01%	0.06%	0.07%	100.00%

12		12	12		12	12	12	12	12		
0.73%		0.66%	0.75%		0.75%	0.75%	0.72%	0.75%	0.75%		
GO29		GO31	GO32		SG38	SG39	SG37	GO21	GO34		
15,632		381,248	123,430		845	423	234,091	423	2,536		4,062,533

**DEBS PP&E Return Calculation
 2021 Budget**

Net PPE	950,000,000	
CWIP	(285,000,000)	648,686,047
DEC capital lease NBV	(57,941,919)	
Deferred taxes - PIS (below)	(40,302,240)	0.07
Total	566,755,841	

Deferred taxes Federal and State	54,267,892
Sub total	54,267,892
CWIP * 3.52%	(10,012,690)
Sub-Total	44,255,202
Deferred taxes Cap lease	(3,952,962)
Total	40,302,240

D

SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS						DPC 20056 Duke Power Governance	DEP 50991 DE Progress	DEF 50992 Progress Florida	DEO 75956 KO Transmis sion	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGS GOV)	DEO	DEK 75957 DE Kentucky (USFRELG	
SA #	Function	Function	Allocation Method	Operati ng Unit	Alloc Pool	St Cd								
Fac ROR	Facilities Rate of Return Allocation	Allocates the Service Company's portion of	<i>Three Factor Formula</i>	DURR	Facilities ROR Gvrnce	CG1	34.25%	23.53%	16.62%		3.46%	1.58%	5.04%	1.16%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)											
												7.90%		
							12	12	12	12	12	12		
							0.75%	0.72%	0.64%	0.88%	0.86%	0.88%	0.66%	
0931008 for expense	78000	8000 for expense												
0456949 for income	78000	9957 for income					GO22	PCGS	PFGS	GO27	GO24	GO25	GO28	
		Budget value:	25,500,000				65,139	43,351	27,053	-	7,602	3,559	1,947	
							65,139	43,351	27,053	-	7,602	3,559	-	1,947

DEK 75958 DE Kentucky (USFRGSG)	DEK	DEI 75960	Comm Pwr 75961 Cinergy Sol Hldng Co Inc (GOV)	Comm	Comm Trans 75964	Gas Oper 75965	Peidmont 47151 Piedmont gas Del	Other 10157 PanEnergy y governan	Other 75963 Cinergy Ventures LLC	Other	Total
0.38%	1.54%	10.27%	2.92%	2.92%	0.02%	0.01%	5.73%	0.01%	0.06%	0.07%	100.00%

12		12	12		12	12	12	12	12		
0.73%		0.66%	0.75%		0.75%	0.75%	0.72%	0.75%	0.75%		
GO29		GO31	GO32		SG38	SG39	SG37	GO21	GO34		
703		17,153	5,553		38	19	10,532	19	114		182,785
											2021 Budget
											2,193,422.54

703	-	17,153	5,553	-	38	19	10,532	19	114		182,785
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SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS					DPC 20056 Duke Power Governance	DEP 50991 DE Progress	PEF 50992 Progress Florida	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGSG OV)	DEO	DEK 75957 DE (USFRELG)	DEK 75958 DE (USFRGS)	
SA #	Function	Function	Allocation Method	Operating Unit	St Cd								
Fac ROR	Labor Allocation	Allocates the Service Company's pension dollars	Labor Allocation			28.21%	17.64%	12.05%	10.76%	4.03%	14.78%	3.26%	1.08%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)										
												7.90%	
						12	12	12	12	12		12	12
						0.75%	0.72%	0.64%	0.86%	0.88%		0.66%	0.73%
0931008 for expense	78000	8000 for expense											
0456949 for income	78000	9957 for income				GO22	PCGS	PFGS	GO24	GO25		GO28	GO29
		Budget value:											
						130,000,000							
						273,492	165,638	100,030	120,476	46,252		27,924	10,175

2019 DEBS Labor Allocation (For 2020)

For Residual Entry & Incentive True Up Entity	DEBS Labor %	BU	OU										
DEC	28.21%	20018	0944			273,492	165,638	100,030	120,476	46,252	-	27,924	10,175
DEOH - Gas	4.03%	75028	GDOH										
DEOH - Electric	10.76%	75025	EL01										
DEK - Gas	1.08%	75088	GDKY										
DEK - Electric	3.26%	75080	EL02										
DEI	17.12%	75110	EL03										
DEP	17.64%	50120	PECO										
DEF	12.05%	50220	X60D										
CP Degs	1.32%	75290	CMPR										
Other Consol	0.33%	10046	A622	Other									
Piedmont	4.18%	47108	PNGN										
CT Gas	0.01%	75528	DEPH	Other									
CT Electric	0.02%	75526	DCTR	Other									
	100.00%												

Source: 2019 Summary

DEK	DEI	Comm Pwr 75961 Cinergy Sol Hldng Co Inc	Piedmont 47151 Piedmont	Other 10157 PanEnergy governance	Other	Total
4.34%	17.12%	1.32%	4.18%	0.36%	4.54%	100.00%

12	12	12	12		
0.66%	0.75%	0.72%	0.75%		
GO31	GO32	SG37	GO21		
145,748	12,825	39,139	3,524	945,222	
		2021 Budget		11,342,666	
-	145,748	12,825	39,139	3,524	945,222

DEK	DEI	Comm Pwr	Piedmont	Other	Other	Total
		75961	47151	10157		
		Cinergy	Piedmont			
	75960	Sol Hldng		PanEnergy		
		Co Inc		governance		

SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS					DPC 20056 Duke Power Governance	DEP 50991 DE Progress	DEF 50992 Progress Florida	DEO 75956 KO Transmis sion	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGSG OV)	DEO	DEK 75957 DE Kentucky (USFRELG	
SA #	Function	Function	Allocation Method	Operati ng Unit Alloc Pool	St Cd								
Fac ROR	Facilities Rate of Return Allocation	Allocates the Service Company's portion of	<i>Three Factor Formula</i>	DURR Facilities ROR Gvrnce	DG1	33.90%	22.69%	17.12%	0.05%	3.59%	1.53%	5.17%	1.15%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)									
					12	12	12	12	12	12	12	7.90%
0931008 for expense	78000	8000 for expense			0.71%	0.70%	0.64%	0.88%	0.86%	0.88%		0.66%
0456949 for income	78000	9957 for income			GO22	PCGS	PFGS	GO27	GO24	GO25		GO28
		Budget value:	547,892,940		1,324,915	874,362	598,752	2,420	169,484	74,048		41,480

DEK 75958 DE Kentucky (USFRGSG)	DEK	DEI 75960	Comm Pwr 75961 Cinergy Sol Hldng Co Inc (GOV)	Comm	Comm Trans 75964	Gas Oper 75965	Piedmont 47151 Piedmont Gas Del	Other 10157 PanEnergy governance	Other 75963 Cinergy Ventures LLC (Gov)	Other	Total
0.43%	1.58%	10.13%	3.28%	3.28%	0.01%	0.01%	5.99%	0.01%	0.11%	0.12%	100.00%

12		12	12		12	12	12	12	12		
0.73%		0.60%	0.71%		0.71%	0.71%	0.72%	0.71%	0.71%		
GO29		GO31	GO32		SG38	SG39	SG37	GO21	GO34		
17,100		331,159	128,192		391	391	236,569	391	4,299		3,803,953

**DEBS PP&E Return Calculation
 2022 Budget**

			REF
Net PPE	825,000,000		WKTB A A1
CWIP	(250,000,000)	575,000,000	WKTB A A1
DEC capital lease NBV			B
Deferred taxes - PIS (below)	(27,107,060)	0.05	Below
Total	547,892,940		

Deferred taxes Federal and State	38,307,060	
Sub total	38,307,060	
CWIP * 4.48%	(11,200,000)	D
Sub-Total	27,107,060	
Deferred taxes Cap lease	0	
Total	27,107,060	

38,307,060 New fixed asset Deferred taxes

SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS						DPC 20056 Duke Power Governance	DEP 50991 DE Progress	DEF 50992 Progress Florida	DEO 75956 KO Transmis sion	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGS GOV)	DEO	DEK 75957 DE Kentucky (USFRELG	
SA #	Function	Function	Allocation Method	Operati ng Unit	Alloc Pool	St Cd								
Fac ROR	Facilities Rate of Return Allocation	Allocates the Service Company's portion of	<i>Three Factor Formula</i>	DURR	Facilities ROR Gvrnce	DG1	33.90%	22.69%	17.12%	0.05%	3.59%	1.53%	5.17%	1.15%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)										
											7.90%		
							12	12	12	12	12	12	
0931008 for expense	78000	8000 for expense					0.71%	0.70%	0.64%	0.88%	0.86%	0.88%	0.66%
0456949 for income	78000	9957 for income					GO22	PCGS	PFGS	GO27	GO24	GO25	GO28
		Budget value:											
			26,500,000				64,082	42,290	28,960	117	8,197	3,581	2,006

DEK 75958 DE Kentucky (USFRGSG)	DEK 75960	DEI 75960	Comm Pwr 75961 Cinergy Sol Hldng Co Inc (GOV)	Comm	Comm Trans 75964	Gas Oper 75965	Peidmont 47151 Piedmont gas Del	Other 10157 PanEnergy y governan	Other 75963 Cinergy Ventures LLC	Other	Total
0.43%	1.58%	10.13%	3.28%	3.28%	0.01%	0.01%	5.99%	0.01%	0.11%	0.12%	100.00%

12	12	12	12	12	12	12	12	12	12		
0.73%	0.60%	0.71%	0.71%	0.71%	0.71%	0.72%	0.71%	0.71%			
GO29	GO31	GO32	SG38	SG39	SG37	GO21	GO34				
827	16,017	6,200	19	19	11,442	19	208				183,986

SERVICE COMPANY COST ALLOCATION DETAILS COST ALLOCATIONS IN SERVICE AGREEMENTS					DPC 20056 Duke Power Governance	DEP 50991 DE Progress	PEF 50992 Progress Florida	DEO 75953 DE Ohio (USFRELG OV)	DEO 75954 DE Ohio (USFRGSG OV)	DEO	DEK 75957 DE (USFRELG)	DEK 75958 DE (USFRGS)	
SA #	Function	Function	Allocation Method	Operating Unit	St Cd								
Fac ROR	Labor Allocation	Allocates the Service Company's pension dollars	Labor Allocation			28.47%	17.58%	12.19%	9.96%	4.18%	14.13%	3.17%	1.05%

Account #	Res Type	Resp Center	Revenue Requirement (provided by each)										
												7.90%	
						12	12	12	12	12		12	12
0931008 for expense	78000	8000 for expense				0.71%	0.70%	0.64%	0.86%	0.88%		0.66%	0.73%
0456949 for income	78000	9957 for income				GO22	PCGS	PFGS	GO24	GO25		GO28	GO29
		Budget value:											
						128,000,000							
						259,959	158,228	99,614	109,798	47,222		26,700	9,793

2020 DEBS Labor Allocation (For 2021)

For Residual Entry & Incentive True Up

Entity	DEBS Labor %	BU	OU	
DEC	28.47%	20018	0944	
DEOH - Gas	4.18%	75028	GDOH	
DEOH - Electric	9.96%	75025	EL01	
DEK - Gas	1.05%	75088	GDKY	
DEK - Electric	3.17%	75080	EL02	
DEI	16.86%	75110	EL03	
DEP	17.58%	50120	PECO	
DEF	12.19%	50220	X60D	
CP Degs	1.55%	75290	CMPR	
Other Consol	0.66%	10046	A622	Other
Piedmont	4.28%	47108	PNGN	
CT Gas	0.05%	75528	DEPH	Other
CT Electric	0.01%	75526	DCTR	Other

100.00%

DEK	DEI	Comm Pwr 75961 Cinergy Sol Hldng Co Inc	Piedmont 47151 Piedmont	Other 10157 PanEnergy governance	Other	Total
	75960					
4.22%	16.86%	1.55%	4.28%	0.72%	0.72%	100.00%

	12	12	12	12	
	0.60%	0.71%	0.72%	0.71%	
	GO31	GO32	SG37	GO21	
	128,756	14,131	39,519	6,557	900,276
			2022 Budget		10,803,310

DEK	DEI	Comm Pwr	Piedmont	Other	Other	Total
		75961	47151	10157		
		Cinergy	Piedmont			
	75960	Sol Hldng		PanEnergy		
		Co Inc		governance		

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-162

REQUEST:

Refer to the Company's Application, Volume 16, CAM at page 13, which includes the following statement:

By the terms of the Service Company Utility Service Agreement, compensation for any service rendered by the Service Company to its utility affiliates is the fully embedded cost thereof (i.e., the sum of: (i) direct costs; (ii) indirect costs; and (iii) costs of capital), except to the extent otherwise required by Section 482 of the Internal Revenue Code.

a. Describe how the "(iii) costs of capital" is determined by DEBS each period and provide that determination for each month applicable to 2021, 2022, and projected for the test year.

b. Describe the source of the return on equity percentage component utilized by DEBS for the "(iii) costs of capital" for each month applicable to 2021, 2022, and projected for the test year and cite all authorities, if any.

c. Indicate whether the "(iii) costs of capital" includes a gross up for income taxes.

RESPONSE:

a. The return on DEBS assets is based on a monthly calculation of DEBS assets. These assets include PP&E, prepaid pension assets and inventory. The PP&E is determined based on NET PP&E less CWIP less associated deferred taxes. Prepaid pension assets are determined by taking the prepaid qualified pension, less the non-qualified pension and OPEB liabilities and decreasing by a deferred tax amount. The inventory amount is the amount reflected on the inventory balance sheet for DEBS. The total

allocated amount of assets assigned to the Regulated Utility is multiplied by a revenue requirement percentage to achieve the allowed rate of return in the jurisdiction. The amount allocated to the utility is based on a 3-factor allocation for PP&E and inventory assets. The pension assets are allocated based on DEBS labor usage. This process is applicable to 2021, 2022 and for the projected test year.

b. The source of the return on DEBS assets as it relates to the projected years in Kentucky is the revenue requirement based on the pre-tax rate of return from the 2019 Kentucky electric base rate case, Case No. 2019-00271, order April 27, 2020. This is applicable for all actual and forecasted periods.

c. Yes, the cost of capital is grossed up for income taxes.

PERSON RESPONSIBLE: Jeffrey R. Setser

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-163

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, electronic workpapers and further to the Application, Volume 10, Schedule J-3, page 192 of 199, for the Forecast Period. Schedule J-3 for the Forecast Period shows a projected new long-term debt issuance forecast for September 2023 with a projected coupon rate of 5.990%. Provide the basis and all supporting documentation for the 5.990% cost, including all calculations, *e.g.*, 30-year Treasury yield plus 100 basis point risk premium.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Please refer to AG-DR-01-163 Confidential Attachment.

The confidential attachment to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Christopher R. Bauer

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-163
CONFIDENTIAL ATTACHMENT**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-164

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, the electronic workpapers and further to Schedule J-3 for the Forecast Period. The annual interest costs in column I includes only input values. Provide the schedule with all formulas completely intact and provide the breakdown of how the interest costs were computed for each issuance.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Please see AG-DR-01-164 Confidential Attachment.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Christopher R. Bauer

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-164
CONFIDENTIAL ATTACHMENT**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-165

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, the "Annual Interest Cost" column shown on SCH_J3-Base and SCH_J3-Forecast tabs in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook.

a. Indicate if the components of the interest cost calculation are recorded by the Company in this manner, i.e., interest expense, amortization of debt premium (discount), amortization of issuance expense, or if the Company utilizes a yield to maturity calculation. If the latter, then describe how the Company calculates and records interest expense and provide an actual example for a single debt issue for one of the actual months in the base period.

b. If the response to part (a) is the former, not the latter, then indicate whether the Company is able to record interest expense using the yield to maturity methodology for GAAP purposes with or without recording regulatory assets and/or liabilities. Cite the relevant GAAP.

c. If the response to part (a) is the former, not the latter, then indicate whether the Company is able to record interest expense using the yield to maturity methodology for USOA purposes with or without recording regulatory assets and/or liabilities. Cite the relevant USOA.

d. Has the Company considered using a yield to maturity methodology for

GAAP, USOA, and/or ratemaking purposes? If so, describe. If not, describe why not.

e. Do any state regulatory commissions that regulate the rates of Duke Kentucky affiliate utilities use a yield to maturity methodology to determine the cost of debt component of the return on rate base or capitalization for ratemaking purposes? If so, identify the state commission and the utility(ies) and provide the cost of capital schedule from the most recent rate proceeding for each such affiliate utility.

RESPONSE:

a. The Company records the components of the interest cost calculation individually, such as interest expense, amortization of debt premium (discount) and amortization of issuance expense and does not utilize a yield to maturity calculation. Please see AG-DR-01-164 Confidential Attachment for the computation.

b. - e. As it pertains to AG-DR-01-165(b) through (e), the company does not use a yield to maturity methodology for GAAP, USOA, or ratemaking purposes. A yield to maturity methodology does not represent the company's true cost of debt and could potentially lead to wide fluctuations in the cost of debt. Duke Energy Kentucky's regulated affiliates record interest expense in a consistent manner and none of the state commissions in which Duke operates use the yield to maturity methodology in determining the cost of debt component of the return on rate base or capitalization for ratemaking purposes. The company believes that the current methodology of recording interest expense and its components is appropriate and reflective of the true cost of debt to the utility.

PERSON RESPONSIBLE: Christopher R. Bauer

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-166

REQUEST:

Refer to Duke Kentucky's response to the Commission Staff's First Request, Item 56, the Amount and Percentage columns shown on the SCH_J1-Base tab in the Main Rev Req STAFF-DR-01-056_Attachment_-_KPSC_Elec_SFRs_-_2022 Excel workbook. Provide the same information as shown in these two columns for each month from January 2020 through the most recent month for which actual information is available.

RESPONSE:

Please see AG-DR-01-166 Attachment – Cap Structure by Month 2020-2022 (please note that December 2022 is not yet available).

PERSON RESPONSIBLE: Christopher R. Bauer

AG-DR-01-166

	Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Jul-20		Aug-20		Sep-20		Oct-20		Nov-20		Dec-20	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Short-Term Debt	\$ 90,921,463	6.5%	\$ 113,651,198	7.9%	\$ 127,128,033	8.8%	\$ 130,905,943	9.0%	\$ 131,582,047	9.0%	\$ 116,391,066	7.9%	\$ 136,075,084	9.1%	\$ 140,933,993	9.3%	\$ 74,422,010	4.9%	\$ 83,762,585	5.5%	\$ 103,715,984	6.7%	\$ 164,134,565	10.5%
Long-Term Debt	\$ 658,828,154	46.9%	\$ 658,852,382	46.0%	\$ 658,876,611	45.5%	\$ 658,900,840	45.3%	\$ 658,925,068	45.1%	\$ 658,949,297	44.7%	\$ 658,973,526	43.9%	\$ 658,966,688	43.7%	\$ 728,776,359	48.1%	\$ 728,788,878	47.8%	\$ 728,784,494	47.1%	\$ 678,796,137	43.5%
Common Equity	\$ 654,042,353	46.6%	\$ 660,740,900	46.1%	\$ 663,425,862	45.8%	\$ 666,196,880	45.8%	\$ 669,538,474	45.9%	\$ 698,334,042	47.4%	\$ 704,484,739	47.0%	\$ 709,493,741	47.0%	\$ 710,729,085	46.9%	\$ 711,530,058	46.7%	\$ 715,137,495	46.2%	\$ 718,236,890	46.0%
Total	\$ 1,403,791,970	100.0%	\$ 1,433,244,481	100.0%	\$ 1,449,430,506	100.0%	\$ 1,456,003,663	100.0%	\$ 1,460,045,589	100.0%	\$ 1,473,674,405	100.0%	\$ 1,499,533,349	100.0%	\$ 1,509,394,423	100.0%	\$ 1,513,927,454	100.0%	\$ 1,524,081,522	100.0%	\$ 1,547,637,973	100.0%	\$ 1,561,167,592	100.0%

	Jan-21		Feb-21		Mar-21		Apr-21		May-21		Jun-21		Jul-21		Aug-21		Sep-21		Oct-21		Nov-21		Dec-21	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Short-Term Debt	\$ 170,308,208	10.8%	\$ 170,360,719	10.8%	\$ 169,273,372	10.7%	\$ 170,041,870	10.7%	\$ 168,412,434	10.6%	\$ 115,387,438	7.2%	\$ 117,258,644	7.3%	\$ 118,887,254	7.4%	\$ 134,445,390	8.3%	\$ 101,476,017	6.2%	\$ 118,545,064	7.1%	\$ 148,122,801	8.7%
Long-Term Debt	\$ 678,975,045	43.0%	\$ 678,998,723	42.9%	\$ 679,022,401	42.7%	\$ 679,046,079	42.6%	\$ 679,069,757	42.6%	\$ 679,093,435	42.6%	\$ 679,117,113	42.4%	\$ 679,140,791	42.2%	\$ 679,164,469	41.8%	\$ 729,179,760	44.3%	\$ 729,200,534	43.8%	\$ 729,220,943	42.9%
Common Equity	\$ 728,524,520	46.2%	\$ 735,210,398	46.4%	\$ 740,303,668	46.6%	\$ 743,091,819	46.7%	\$ 746,406,332	46.8%	\$ 799,067,167	50.1%	\$ 804,579,831	50.3%	\$ 810,213,009	50.4%	\$ 812,600,482	50.0%	\$ 814,253,887	49.5%	\$ 818,949,975	49.1%	\$ 821,642,470	48.4%
Total	\$ 1,577,807,772	100.0%	\$ 1,584,569,840	100.0%	\$ 1,588,599,441	100.0%	\$ 1,592,179,768	100.0%	\$ 1,593,888,524	100.0%	\$ 1,593,548,041	100.0%	\$ 1,600,955,588	100.0%	\$ 1,608,241,054	100.0%	\$ 1,626,210,342	100.0%	\$ 1,644,909,664	100.0%	\$ 1,666,695,573	100.0%	\$ 1,698,986,215	100.0%

	Jan-22		Feb-22		Mar-22		Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22		Oct-22		Nov-22	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Short-Term Debt	\$ 151,126,497	8.8%	\$ 128,105,151	7.5%	\$ 91,258,298	5.5%	\$ 84,151,606	5.1%	\$ 89,070,637	5.3%	\$ 36,812,367	2.2%	\$ 56,957,443	3.4%	\$ 65,782,607	3.8%	\$ 104,924,683	6.0%	\$ 189,102,895	10.7%	\$ 187,303,927	10.6%
Long-Term Debt	\$ 729,242,183	42.5%	\$ 729,265,861	42.9%	\$ 729,298,211	43.8%	\$ 729,322,173	43.9%	\$ 729,347,123	43.6%	\$ 779,100,896	46.8%	\$ 779,039,859	46.0%	\$ 779,067,101	45.5%	\$ 779,095,224	44.4%	\$ 704,147,804	39.9%	\$ 704,173,801	39.8%
Common Equity	\$ 835,704,980	48.7%	\$ 841,778,129	49.5%	\$ 846,141,103	50.8%	\$ 849,627,954	51.1%	\$ 852,918,770	51.0%	\$ 850,462,845	51.0%	\$ 858,334,362	50.7%	\$ 866,098,998	50.6%	\$ 872,475,071	49.7%	\$ 872,495,832	49.4%	\$ 876,847,086	49.6%
Total	\$ 1,716,073,660	100.0%	\$ 1,699,149,141	100.0%	\$ 1,666,697,612	100.0%	\$ 1,663,101,733	100.0%	\$ 1,671,336,530	100.0%	\$ 1,666,376,109	100.0%	\$ 1,694,331,665	100.0%	\$ 1,710,948,706	100.0%	\$ 1,756,494,978	100.0%	\$ 1,765,746,531	100.0%	\$ 1,768,324,814	100.0%

OneStream
Actuals
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	2020M1	2020M2	2020M3	2020M4	2020M5	2020M6	2020M7	2020M8	2020M9	2020M10	2020M11	2020M12
LONG_TERM_DEBT	\$ 633,828,154	\$ 633,852,382	\$ 633,876,611	\$ 633,900,840	\$ 633,925,068	\$ 633,949,297	\$ 633,973,526	\$ 633,966,688	\$ 703,776,359	\$ 703,788,878	\$ 703,784,494	\$ 653,796,137
ST_NOTES_PAY_AFFIL	\$ 53,160,000	\$ 76,699,000	\$ 89,612,000	\$ 94,825,000	\$ 95,412,000	\$ 80,660,000	\$ 102,213,000	\$ 107,038,000	\$ 39,762,000	\$ 49,867,000	\$ 67,261,000	\$ 75,472,000
CURRENT_LTD	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ 49,999,999
2156_CLTD_CAP_Lease	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NOTES_PAY_AFFIL_CO	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000
2508_LTD_CAP_LSE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EQUITY	\$ 654,042,353	\$ 660,740,900	\$ 663,425,862	\$ 666,196,880	\$ 669,538,474	\$ 698,334,042	\$ 704,484,739	\$ 709,493,741	\$ 710,729,085	\$ 711,530,058	\$ 715,137,495	\$ 718,236,890
	2021M1	2021M2	2021M3	2021M4	2021M5	2021M6	2021M7	2021M8	2021M9	2021M10	2021M11	2021M12
LONG_TERM_DEBT	\$ 653,975,045	\$ 653,998,723	\$ 654,022,401	\$ 654,046,079	\$ 654,069,757	\$ 654,093,435	\$ 654,117,113	\$ 654,140,791	\$ 654,164,469	\$ 704,179,760	\$ 704,200,534	\$ 704,220,943
ST_NOTES_PAY_AFFIL	\$ 78,847,000	\$ 79,904,000	\$ 79,798,000	\$ 83,201,000	\$ 83,368,000	\$ 31,652,000	\$ 33,581,000	\$ 35,316,000	\$ 51,940,000	\$ 17,686,000	\$ 80,672,000	\$ 102,596,000
CURRENT_LTD	\$ 49,860,292	\$ 49,875,815	\$ 49,891,338	\$ 49,906,861	\$ 49,922,384	\$ 49,937,907	\$ 49,953,430	\$ 49,968,953	\$ 49,984,476	\$ 49,999,999	\$ (1)	\$ (1)
2156_CLTD_CAP_Lease	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NOTES_PAY_AFFIL_CO	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000
2508_LTD_CAP_LSE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EQUITY	\$ 728,524,520	\$ 735,210,398	\$ 740,303,668	\$ 743,091,819	\$ 746,406,332	\$ 799,067,167	\$ 804,579,831	\$ 810,213,009	\$ 812,600,482	\$ 814,253,887	\$ 818,949,975	\$ 821,642,470
	2022M1	2022M2	2022M3	2022M4	2022M5	2022M6	2022M7	2022M8	2022M9	2022M10	2022M11	2022M12
LONG_TERM_DEBT	\$ 704,242,183	\$ 704,265,861	\$ 704,298,211	\$ 704,322,173	\$ 704,347,123	\$ 754,100,896	\$ 754,039,859	\$ 754,067,101	\$ 754,095,224	\$ 679,147,804	\$ 679,173,801	\$ 679,176,671
ST_NOTES_PAY_AFFIL	\$ 101,489,000	\$ 81,313,000	\$ 52,361,000	\$ 47,066,000	\$ 53,307,000	\$ 7,278,000	\$ 26,640,000	\$ 38,332,000	\$ 74,494,000	\$ 81,309,000	\$ 76,917,000	\$ 81,232,000
CURRENT_LTD	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ (1)	\$ 74,975,608	\$ 74,977,734	\$ 74,979,870
2156_CLTD_CAP_Lease	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NOTES_PAY_AFFIL_CO	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000
2508_LTD_CAP_LSE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EQUITY	\$ 835,704,980	\$ 841,778,129	\$ 846,141,103	\$ 849,627,954	\$ 852,918,770	\$ 850,462,845	\$ 858,334,362	\$ 866,098,998	\$ 872,475,071	\$ 872,495,832	\$ 876,847,086	\$ 880,194,488

Sale of AR by Month

	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Balance	37,761,464	36,952,199	37,516,034	36,080,944	36,170,048	35,731,067	33,862,085	33,895,994	34,660,011	33,895,586	36,454,985	38,662,566
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Balance	41,600,916	40,580,904	39,584,034	36,934,009	35,122,050	33,797,531	33,724,214	33,602,301	32,520,914	33,790,018	37,873,065	45,526,802
	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Balance	49,637,498	46,792,152	38,897,299	37,085,607	35,763,638	29,534,368	30,317,444	27,450,608	30,430,684	32,818,287	35,409,193	not yet available

Duke Energy Kentucky
Case No. 2022-00372
Attorney General’s First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-167

REQUEST:

Refer to the Direct Testimony of Joshua Nowak (“Nowak Testimony”) generally. Provide all work papers and supporting documentation used and relied upon by Mr. Nowak in the preparation of his Direct Testimony and Exhibits. Provide all spreadsheets in Excel format with cell formulas intact.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET
(As to Attachments 8 thru 12 only)

Please see the following index of attachments containing workpapers and supporting documentation relied upon by Mr. Nowak in the preparation of his Direct Testimony and exhibits.

Attachment	Support For	Document
AG-DR-01-167 Attachment 1	Attachments JCN-2 to 10	Testimony Attachments in Native Excel format
AG-DR-01-167 Attachment 2	Attachment JCN-4	Yahoo! Finance EPS Growth Rates
AG-DR-01-167 Attachment 3	Attachment JCN-4	Zacks Growth EPS Growth Rates
AG-DR-01-167 Attachment 4	Figure 2	CPI, 12-Month Percentage Change
AG-DR-01-167 Attachment 5	Figure 3	CBOE VIX
AG-DR-01-167 Attachment 6	Figure 4	Beta Coefficients for Proxy Group and Duke Energy Corporation

AG-DR-01-167 Attachment 7	Attachment JCN-9	"Alternative Regulation for Emerging Utility Challenges," Prepared by Pacific Economics Group Research for Edison Electric Institute
AG-DR-01-167 Confidential Attachment 8	Attachments JCN-4, 6, 8	Value Line Reports
AG-DR-01-167 Confidential Attachment 9	Attachment JCN-9	S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated November 12, 2019
AG-DR-01-167 Confidential Attachment 10	Attachment JCN-9	Regulatory Focus: Alternative Ratemaking Plans in the U.S, dated April 2020
AG-DR-01-167 Confidential Attachment 11	Attachment JCN-7	Bond Yield Plus Risk Premium Analysis Data and Workpaper
AG-DR-01-167 Confidential Attachment 12	Attachment JCN-10	Proxy Group Capital Structure Analysis Data and Workpaper

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Joshua C. Nowak

**AG-DR-01-167
ATTACHMENT 1**

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 -15.88 (-0.41%)

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32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

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Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	11	10	16	16
Avg. Estimate	1.73	0.57	4.07	4.37
Low Estimate	1.65	0.51	4.03	4.32
High Estimate	1.77	0.67	4.15	4.47
Year Ago EPS	1.65	0.48	3.84	4.07

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	5	5	10	10
Avg. Estimate	1.89B	1.42B	6.87B	7.13B
Low Estimate	1.79B	1.13B	6.59B	6.85B
High Estimate	2.05B	1.67B	7.33B	7.69B
Year Ago Sales	1.81B	1.54B	6.39B	6.87B
Sales Growth (year/est)	4.30%	-8.30%	7.40%	3.80%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	1.61	0.49	0.98	0.83
EPS Actual	1.65	0.48	0.97	0.8
Difference	0.04	-0.01	-0.01	-0.03
Surprise %	2.50%	-2.00%	-1.00%	-3.60%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	1.73	0.57	4.07	4.37
7 Days Ago	1.73	0.57	4.07	4.37
30 Days Ago	1.73	0.58	4.08	4.36
60 Days Ago	1.71	0.54	4.07	4.37
90 Days Ago	1.71	0.54	4.07	4.37

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	N/A	N/A	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	3	1	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	1	N/A	N/A

Growth Estimates	AEE	Industry	Sector(s)	S&P 500
Current Qtr.	4.80%	N/A	N/A	N/A
Next Qtr.	18.70%	N/A	N/A	N/A
Current Year	6.00%	N/A	N/A	N/A
Next Year	7.40%	N/A	N/A	N/A
Next 5 Years (per annum)	6.26%	N/A	N/A	N/A
Past 5 Years (per annum)	3.36%	N/A	N/A	N/A



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3,856.10
 -15.88 (-0.41%)

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32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

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1,851.39
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American Electric Power Company, Inc. (AEP)

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Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	12	8	20	20
Avg. Estimate	0.99	1.41	5.01	5.29
Low Estimate	0.85	1.24	4.9	5.08
High Estimate	1.06	1.65	5.05	5.36
Year Ago EPS	0.98	1.22	4.74	5.01

Revenue Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	6	5	12	12
Avg. Estimate	3.91B	4.56B	17.92B	18.09B
Low Estimate	2.45B	4.31B	16.14B	16.16B
High Estimate	4.71B	5.15B	18.97B	20.21B
Year Ago Sales	4.06B	4.5B	16.79B	17.92B
Sales Growth (year/est)	-3.70%	1.40%	6.70%	1.00%

Earnings History	12/30/2021	3/30/2022	6/29/2022	9/29/2022
EPS Est.	0.93	1.2	1.19	1.56
EPS Actual	0.98	1.22	1.2	1.62
Difference	0.05	0.02	0.01	0.06
Surprise %	5.40%	1.70%	0.80%	3.80%

EPS Trend	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Current Estimate	0.99	1.41	5.01	5.29
7 Days Ago	0.99	1.41	5	5.29
30 Days Ago	1.01	1.42	4.99	5.28
60 Days Ago	1.02	1.43	4.99	5.28
90 Days Ago	1.01	1.38	5	5.28

EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	1	N/A	3	N/A

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EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	3	3	8	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	N/A	N/A

Growth Estimates	AEP	Industry	Sector(s)	S&P 500
Current Qtr.	1.00%	N/A	N/A	N/A
Next Qtr.	15.60%	N/A	N/A	N/A
Current Year	5.70%	N/A	N/A	N/A
Next Year	5.60%	N/A	N/A	N/A
Next 5 Years (per annum)	6.23%	N/A	N/A	N/A
Past 5 Years (per annum)	5.62%	N/A	N/A	N/A



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S&P 500
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Dow 30
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Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
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 +4.53 (+0.25%)



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NYSE - NYSE Delayed Price. Currency in USD

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Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	6	6	6	7
Avg. Estimate	0.74	1.12	3.76	3.93
Low Estimate	0.67	0.97	3.72	3.83
High Estimate	0.9	1.25	3.82	4.01
Year Ago EPS	0.53	1.18	3.23	3.76

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	3	3	5	5
Avg. Estimate	353.18M	406.45M	1.48B	1.5B
Low Estimate	323.2M	357.4M	1.35B	1.37B
High Estimate	375.34M	439.95M	1.57B	1.62B
Year Ago Sales	N/A	399M	1.42B	1.48B
Sales Growth (year/est)	N/A	1.90%	4.50%	1.00%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	0.71	1.06	1.31	0.63
EPS Actual	0.53	1.18	1.24	0.67
Difference	-0.18	0.12	-0.07	0.04
Surprise %	-25.40%	11.30%	-5.30%	6.30%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	0.74	1.12	3.76	3.93
7 Days Ago	0.74	1.12	3.76	3.93
30 Days Ago	0.74	1.12	3.76	3.93
60 Days Ago	0.74	1.14	3.76	3.94
90 Days Ago	0.74	1.14	3.74	3.93

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	N/A	N/A	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	ALE	Industry	Sector(s)	S&P 500
Current Qtr.	39.60%	N/A	N/A	N/A
Next Qtr.	-5.10%	N/A	N/A	N/A
Current Year	16.40%	N/A	N/A	N/A
Next Year	4.50%	N/A	N/A	N/A
Next 5 Years (per annum)	8.70%	N/A	N/A	N/A
Past 5 Years (per annum)	1.54%	N/A	N/A	N/A



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S&P 500
3,856.10
 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Edison International (EIX)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

60.51 +0.47 (+0.78%) **59.00** -1.51 (-2.50%)

At close: 04:00PM EDT

After hours: 04:30PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	11	9	16	17
Avg. Estimate	1.52	0.98	4.53	4.85
Low Estimate	1.29	0.73	4.34	4.57
High Estimate	1.91	1.18	4.67	5.16
Year Ago EPS	1.69	1.16	4.59	4.53

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	4	4	12	13
Avg. Estimate	5.02B	3.42B	15.75B	16.45B
Low Estimate	4.71B	3.38B	14.74B	15.16B
High Estimate	5.19B	3.49B	17.04B	18.96B
Year Ago Sales	N/A	3.33B	14.9B	15.75B
Sales Growth (year/est)	N/A	2.80%	5.70%	4.50%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	1.75	1.04	0.79	0.92
EPS Actual	1.69	1.16	1.07	0.94
Difference	-0.06	0.12	0.28	0.02
Surprise %	-3.40%	11.50%	35.40%	2.20%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	1.52	0.98	4.53	4.85
7 Days Ago	1.54	0.98	4.53	4.85
30 Days Ago	1.7	0.81	4.5	4.85
60 Days Ago	1.64	0.91	4.5	4.85
90 Days Ago	1.64	0.91	4.5	4.85

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	1	1	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	N/A	5	2	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	2	N/A	1	2

Growth Estimates	EIX	Industry	Sector(s)	S&P 500
Current Qtr.	-10.10%	N/A	N/A	N/A
Next Qtr.	-15.50%	N/A	N/A	N/A
Current Year	-1.30%	N/A	N/A	N/A
Next Year	7.10%	N/A	N/A	N/A
Next 5 Years (per annum)	4.35%	N/A	N/A	N/A
Past 5 Years (per annum)	0.88%	N/A	N/A	N/A



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 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Entergy Corporation (ETR)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

108.32 +1.18 (+1.10%) **108.32** 0.00 (0.00%)

At close: 04:00PM EDT

After hours: 05:02PM EDT

Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	13	10	19	18
Avg. Estimate	2.66	0.67	6.38	6.77
Low Estimate	2.52	0.49	6.3	6.69
High Estimate	2.81	0.96	6.53	6.9
Year Ago EPS	2.45	0.76	6.02	6.38

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	6	4	14	13
Avg. Estimate	3.38B	2.85B	11.86B	12.13B
Low Estimate	3.13B	2.67B	10.73B	11.15B
High Estimate	3.66B	3.02B	12.94B	13.11B
Year Ago Sales	N/A	2.72B	11.74B	11.86B
Sales Growth (year/est)	N/A	4.60%	1.00%	2.30%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	2.45	0.7	1.34	1.4
EPS Actual	2.45	0.76	1.32	1.78
Difference	0	0.06	-0.02	0.38
Surprise %	0.00%	8.60%	-1.50%	27.10%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	2.66	0.67	6.38	6.77
7 Days Ago	2.66	0.68	6.38	6.77
30 Days Ago	2.66	0.7	6.37	6.76
60 Days Ago	2.64	0.77	6.37	6.76
90 Days Ago	2.7	1	6.34	6.75

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	2	1	2	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	4	2	3	2
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	2

Growth Estimates	ETR	Industry	Sector(s)	S&P 500
Current Qtr.	8.60%	N/A	N/A	N/A
Next Qtr.	-11.80%	N/A	N/A	N/A
Current Year	6.00%	N/A	N/A	N/A
Next Year	6.10%	N/A	N/A	N/A
Next 5 Years (per annum)	6.19%	N/A	N/A	N/A
Past 5 Years (per annum)	-4.47%	N/A	N/A	N/A



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S&P 500
3,856.10
 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Evergy, Inc. (EVRG)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

61.16 +0.03 (+0.05%) **61.16** 0.00 (0.00%)

At close: 04:03PM EDT

After hours: 04:11PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	8	5	9	10
Avg. Estimate	1.88	0.29	3.56	3.77
Low Estimate	1.8	0.11	3.46	3.59
High Estimate	1.95	0.36	3.6	3.86
Year Ago EPS	1.98	0.16	3.54	3.56

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	3	3	7	7
Avg. Estimate	1.6B	1.22B	5.37B	5.49B
Low Estimate	1.57B	1.17B	5.11B	5.18B
High Estimate	1.62B	1.31B	5.62B	5.79B
Year Ago Sales	1.62B	1.12B	5.59B	5.37B
Sales Growth (year/est)	-0.90%	8.90%	-3.80%	2.20%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	1.76	0.16	0.55	0.83
EPS Actual	1.98	0.16	0.58	0.86
Difference	0.22	0	0.03	0.03
Surprise %	12.50%	0.00%	5.50%	3.60%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	1.88	0.29	3.56	3.77
7 Days Ago	1.85	0.3	3.56	3.77
30 Days Ago	1.86	0.29	3.56	3.77
60 Days Ago	1.87	0.29	3.56	3.76
90 Days Ago	1.84	0.3	3.55	3.78

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	1	N/A	N/A

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EPS Revisions				
Up Last 30 Days				
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	N/A	N/A



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Growth Estimates	EVRG	Industry	Sector(s)	S&P 500
Current Qtr.	-5.10%	N/A	N/A	N/A
Next Qtr.	81.20%	N/A	N/A	N/A
Current Year	0.60%	N/A	N/A	N/A
Next Year	5.90%	N/A	N/A	N/A
Next 5 Years (per annum)	3.60%	N/A	N/A	N/A
Past 5 Years (per annum)	6.98%	N/A	N/A	N/A



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 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Hawaiian Electric Industries, Inc. (HE)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

37.81 -0.23 (-0.60%) **37.81** +0.01 (+0.03%)

At close: 04:00PM EDT

After hours: 04:01PM EDT

Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	3	3	4	5
Avg. Estimate	0.55	0.52	2.12	2.3
Low Estimate	0.53	0.49	2.1	2.25
High Estimate	0.58	0.54	2.13	2.43
Year Ago EPS	0.58	0.5	2.25	2.12

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	1	1	3	3
Avg. Estimate	745.51M	380.71M	3B	3.13B
Low Estimate	745.51M	380.71M	2.8B	2.87B
High Estimate	745.51M	380.71M	3.32B	3.56B
Year Ago Sales	756.9M	770.27M	2.85B	3B
Sales Growth (year/est)	-1.50%	-50.60%	5.40%	4.10%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	0.59	0.42	0.44	0.51
EPS Actual	0.58	0.5	0.57	0.48
Difference	-0.01	0.08	0.13	-0.03
Surprise %	-1.70%	19.00%	29.50%	-5.90%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	0.55	0.52	2.12	2.3
7 Days Ago	0.52	0.53	2.12	2.3
30 Days Ago	0.52	0.53	2.12	2.3
60 Days Ago	0.52	0.53	2.11	2.3
90 Days Ago	0.58	0.49	2.14	2.29

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	1	N/A	N/A	1
Up Last 30 Days	1	N/A	N/A	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	N/A

Growth Estimates	HE	Industry	Sector(s)	S&P 500
Current Qtr.	-5.20%	N/A	N/A	N/A
Next Qtr.	4.00%	N/A	N/A	N/A
Current Year	-5.80%	N/A	N/A	N/A
Next Year	8.50%	N/A	N/A	N/A
Next 5 Years (per annum)	1.30%	N/A	N/A	N/A
Past 5 Years (per annum)	7.05%	N/A	N/A	N/A



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Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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IDACORP, Inc. (IDA)

NYSE - NYSE Delayed Price. Currency in USD

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102.93 -0.98 (-0.94%) **104.24** +1.31 (+1.27%)

At close: 04:00PM EDT

After hours: 04:22PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	3	3	5	4
Avg. Estimate	2	0.81	5	5.23
Low Estimate	1.95	0.75	4.9	5.13
High Estimate	2.08	0.87	5.06	5.35
Year Ago EPS	1.93	0.65	4.85	5

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	2	2	3	3
Avg. Estimate	423.27M	307.93M	1.44B	1.46B
Low Estimate	393.3M	287.7M	1.37B	1.35B
High Estimate	453.25M	328.17M	1.48B	1.52B
Year Ago Sales	446.94M	335.01M	1.46B	1.44B
Sales Growth (year/est)	-5.30%	-8.10%	-1.10%	1.00%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	1.99	0.53	0.92	1.31
EPS Actual	1.93	0.65	0.91	1.27
Difference	-0.06	0.12	-0.01	-0.04
Surprise %	-3.00%	22.60%	-1.10%	-3.10%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	2	0.81	5	5.23
7 Days Ago	2	0.81	5	5.23
30 Days Ago	2	0.81	5	5.23
60 Days Ago	1.97	0.75	4.98	5.21
90 Days Ago	2.01	0.75	4.98	5.22

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	N/A	N/A	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	IDA	Industry	Sector(s)	S&P 500
Current Qtr.	3.60%	N/A	N/A	N/A
Next Qtr.	24.60%	N/A	N/A	N/A
Current Year	3.10%	N/A	N/A	N/A
Next Year	4.60%	N/A	N/A	N/A
Next 5 Years (per annum)	2.70%	N/A	N/A	N/A
Past 5 Years (per annum)	3.22%	N/A	N/A	N/A



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32,653.20
-79.75 (-0.24%)

Nasdaq
10,890.85
-97.30 (-0.89%)

Russell 2000
1,851.39
+4.53 (+0.25%)



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Alliant Energy Corporation (LNT)

NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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52.63 +0.46 (+0.88%) **52.03 -0.60 (-1.14%)**

At close: 04:00PM EDT

After hours: 04:23PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	5	5	9	10
Avg. Estimate	1.01	0.36	2.78	2.9
Low Estimate	0.92	0.29	2.75	2.84
High Estimate	1.07	0.47	2.81	2.94
Year Ago EPS	1.02	0.35	2.63	2.78

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	3	3	5	6
Avg. Estimate	1.13B	628.72M	3.77B	3.85B
Low Estimate	997.13M	501.65M	3.51B	3.49B
High Estimate	1.31B	803.07M	3.91B	4.24B
Year Ago Sales	N/A	927M	3.67B	3.77B
Sales Growth (year/est)	N/A	-32.20%	2.70%	2.10%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	0.96	0.36	0.72	0.58
EPS Actual	1.02	0.35	0.77	0.63
Difference	0.06	-0.01	0.05	0.05
Surprise %	6.30%	-2.80%	6.90%	8.60%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	1.01	0.36	2.78	2.9
7 Days Ago	1.01	0.36	2.78	2.9
30 Days Ago	1.02	0.36	2.78	2.91
60 Days Ago	0.98	0.46	2.75	2.89
90 Days Ago	0.98	0.46	2.75	2.89

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	N/A	N/A	N/A

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	N/A	1	N/A	N/A
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A

Growth Estimates	LNT	Industry	Sector(s)	S&P 500
Current Qtr.	-1.00%	N/A	N/A	N/A
Next Qtr.	2.90%	N/A	N/A	N/A
Current Year	5.70%	N/A	N/A	N/A
Next Year	4.30%	N/A	N/A	N/A
Next 5 Years (per annum)	5.80%	N/A	N/A	N/A
Past 5 Years (per annum)	6.07%	N/A	N/A	N/A



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U.S. markets closed

S&P 500
3,856.10
-15.88 (-0.41%)

Dow 30
32,653.20
-79.75 (-0.24%)

Nasdaq
10,890.85
-97.30 (-0.89%)

Russell 2000
1,851.39
+4.53 (+0.25%)



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NextEra Energy, Inc. (NEE)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

77.71 +0.21 (+0.27%) **77.50 -0.21 (-0.27%)**

At close: 04:00PM EDT

After hours: 05:01PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	12	6	18	18
Avg. Estimate	0.52	0.64	2.88	3.09
Low Estimate	0.47	0.38	2.83	3.01
High Estimate	0.6	0.81	2.92	3.21
Year Ago EPS	0.41	0.74	2.55	2.88

Revenue Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	8	3	12	12
Avg. Estimate	6.63B	4.37B	20.99B	24B
Low Estimate	5.51B	3.33B	18.27B	21.04B
High Estimate	8.59B	5.67B	23.14B	26.95B
Year Ago Sales	5.05B	5.19B	17.07B	20.99B
Sales Growth (year/est)	31.40%	-15.80%	22.90%	14.40%

Earnings History	12/30/2021	3/30/2022	6/29/2022	9/29/2022
EPS Est.	0.4	0.71	0.73	0.8
EPS Actual	0.41	0.74	0.81	0.85
Difference	0.01	0.03	0.08	0.05
Surprise %	2.50%	4.20%	11.00%	6.20%

EPS Trend	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Current Estimate	0.52	0.64	2.88	3.09
7 Days Ago	0.54	0.64	2.87	3.09
30 Days Ago	0.55	0.68	2.87	3.09
60 Days Ago	0.55	0.66	2.86	3.08
90 Days Ago	0.55	0.66	2.86	3.08

EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	N/A	2	1

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EPS Revisions				
Up Last 30 Days	 <p>The market doesn't wait for your desktop Get the Yahoo Finance app for powerful features that are easy to use on the go.</p>			
Down Last 7 Days				
Down Last 30 Days	5	1	N/A	1

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Growth Estimates	NEE	Industry	Sector(s)	S&P 500
Current Qtr.	26.80%	N/A	N/A	N/A
Next Qtr.	-13.50%	N/A	N/A	N/A
Current Year	12.90%	N/A	N/A	N/A
Next Year	7.30%	N/A	N/A	N/A
Next 5 Years (per annum)	9.35%	N/A	N/A	N/A
Past 5 Years (per annum)	10.28%	N/A	N/A	N/A



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U.S. markets closed

S&P 500
3,856.10
 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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OGE Energy Corp. (OGE)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

36.92 +0.29 (+0.79%) **36.92 -0.02 (-0.05%)**

At close: 04:00PM EDT

After hours: 04:11PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	7	5	8	11
Avg. Estimate	1.18	-0.06	2.18	2.06
Low Estimate	1.11	-0.92	1.94	1.99
High Estimate	1.25	0.23	3.07	2.18
Year Ago EPS	1.26	0.27	2.27	2.18

Revenue Estimate	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
No. of Analysts	2	2	5	5
Avg. Estimate	734.7M	523.23M	3.13B	3.18B
Low Estimate	553.26M	462.89M	2.41B	2.39B
High Estimate	916.13M	583.57M	3.85B	3.92B
Year Ago Sales	N/A	581.3M	3.65B	3.13B
Sales Growth (year/est)	N/A	-10.00%	-14.20%	1.40%

Earnings History	9/29/2021	12/30/2021	3/30/2022	6/29/2022
EPS Est.	1.19	0.26	0.24	0.41
EPS Actual	1.26	0.27	1.39	0.36
Difference	0.07	0.01	1.15	-0.05
Surprise %	5.90%	3.80%	479.20%	-12.20%

EPS Trend	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Current Estimate	1.18	-0.06	2.18	2.06
7 Days Ago	1.16	-0.03	2.18	2.06
30 Days Ago	1.09	0.04	2.18	2.06
60 Days Ago	1.11	0.21	2.2	2.09
90 Days Ago	1.11	0.21	2.2	2.09

EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	3	N/A	1	1

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EPS Revisions	Current Qtr. (Sep 2022)	Next Qtr. (Dec 2022)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	4	N/A	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	2	1	N/A

Growth Estimates	OGE	Industry	Sector(s)	S&P 500
Current Qtr.	-6.30%	N/A	N/A	N/A
Next Qtr.	-122.20%	N/A	N/A	N/A
Current Year	-4.00%	N/A	N/A	N/A
Next Year	-5.50%	N/A	N/A	N/A
Next 5 Years (per annum)	1.90%	N/A	N/A	N/A
Past 5 Years (per annum)	4.55%	N/A	N/A	N/A



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U.S. markets closed

S&P 500
3,856.10
 -15.88 (-0.41%)

Dow 30
32,653.20
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Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Portland General Electric Company (POR)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

45.06 +0.12 (+0.27%) **44.45** -0.61 (-1.35%)

At close: 04:00PM EDT

After hours: 04:25PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	7	7	8	11
Avg. Estimate	0.68	0.85	2.77	2.77
Low Estimate	0.62	0.65	2.66	2.62
High Estimate	0.78	1.02	2.85	2.99
Year Ago EPS	0.74	0.67	2.72	2.77

Revenue Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	5	5	8	8
Avg. Estimate	597.44M	620.68M	2.49B	2.49B
Low Estimate	440.23M	560.29M	2.33B	2.26B
High Estimate	693.5M	653.12M	2.65B	2.65B
Year Ago Sales	608M	626M	2.4B	2.49B
Sales Growth (year/est)	-1.70%	-0.80%	3.80%	0.10%

Earnings History	12/30/2021	3/30/2022	6/29/2022	9/29/2022
EPS Est.	0.76	0.87	0.57	0.62
EPS Actual	0.74	0.67	0.72	0.65
Difference	-0.02	-0.2	0.15	0.03
Surprise %	-2.60%	-23.00%	26.30%	4.80%

EPS Trend	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Current Estimate	0.68	0.85	2.77	2.77
7 Days Ago	0.7	0.85	2.79	2.78
30 Days Ago	0.7	0.86	2.79	2.8
60 Days Ago	0.74	0.87	2.59	2.84
90 Days Ago	0.74	0.87	2.59	2.84

EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	1	1	N/A

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EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	N/A	2	2	3
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	N/A	1	N/A

Growth Estimates	POR	Industry	Sector(s)	S&P 500
Current Qtr.	-8.10%	N/A	N/A	N/A
Next Qtr.	26.90%	N/A	N/A	N/A
Current Year	1.80%	N/A	N/A	N/A
Next Year	N/A	N/A	N/A	N/A
Next 5 Years (per annum)	1.39%	N/A	N/A	N/A
Past 5 Years (per annum)	5.69%	N/A	N/A	N/A



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U.S. markets closed

S&P 500
3,856.10
 -15.88 (-0.41%)

Dow 30
32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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The Southern Company (SO)

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup

65.53 +0.05 (+0.08%) **65.73** +0.20 (+0.31%)

At close: 04:03PM EDT

After hours: 04:40PM EDT

Summary Company Outlook Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	11	8	19	19
Avg. Estimate	0.25	0.84	3.59	3.79
Low Estimate	0.19	0.25	3.53	3.58
High Estimate	0.34	0.97	3.64	3.9
Year Ago EPS	0.36	0.97	3.41	3.59

Revenue Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	7	5	12	12
Avg. Estimate	5.21B	6.57B	25.57B	25.66B
Low Estimate	3.73B	6.01B	23.73B	22.89B
High Estimate	6.23B	7.16B	27.76B	28.35B
Year Ago Sales	5.77B	6.65B	23.11B	25.57B
Sales Growth (year/est)	-9.60%	-1.20%	10.60%	0.30%

Earnings History	12/30/2021	3/30/2022	6/29/2022	9/29/2022
EPS Est.	0.35	0.9	0.84	1.33
EPS Actual	0.36	0.97	1.07	1.31
Difference	0.01	0.07	0.23	-0.02
Surprise %	2.90%	7.80%	27.40%	-1.50%

EPS Trend	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Current Estimate	0.25	0.84	3.59	3.79
7 Days Ago	0.23	0.84	3.58	3.79
30 Days Ago	0.3	0.84	3.59	3.8
60 Days Ago	0.45	0.93	3.56	3.79
90 Days Ago	0.45	0.93	3.56	3.79

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Up Last 7 Days						
Up Last 30 Days						
Down Last 7 Days	N/A	N/A	N/A	N/A		
Down Last 30 Days	N/A	N/A	1	1		

Growth Estimates	SO	Industry	Sector(s)	S&P 500
Current Qtr.	-30.60%	N/A	N/A	N/A
Next Qtr.	-13.40%	N/A	N/A	N/A
Current Year	5.30%	N/A	N/A	N/A
Next Year	5.60%	N/A	N/A	N/A
Next 5 Years (per annum)	6.48%	N/A	N/A	N/A
Past 5 Years (per annum)	3.00%	N/A	N/A	N/A



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3,856.10
 -15.88 (-0.41%)

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32,653.20
 -79.75 (-0.24%)

Nasdaq
10,890.85
 -97.30 (-0.89%)

Russell 2000
1,851.39
 +4.53 (+0.25%)



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Xcel Energy Inc. (XEL)

NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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Quote Lookup

65.90 +0.79 (+1.21%) 65.90 0.00 (0.00%)

At close: 04:00PM EDT

After hours: 04:17PM EDT

Summary Company Insights Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Currency in USD

Earnings Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	11	6	16	16
Avg. Estimate	0.67	0.71	3.16	3.37
Low Estimate	0.57	0.67	3.14	3.28
High Estimate	0.84	0.75	3.19	3.4
Year Ago EPS	0.58	0.7	2.96	3.16

Revenue Estimate	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
No. of Analysts	5	4	11	11
Avg. Estimate	3.37B	3.89B	14.05B	14.36B
Low Estimate	3.05B	3.81B	12.53B	13.1B
High Estimate	3.67B	4.06B	14.73B	15.46B
Year Ago Sales	3.35B	N/A	13.43B	14.05B
Sales Growth (year/est)	0.50%	N/A	4.60%	2.20%

Earnings History	12/30/2021	3/30/2022	6/29/2022	9/29/2022
EPS Est.	0.58	0.68	0.6	1.22
EPS Actual	0.58	0.7	0.6	1.18
Difference	0	0.02	0	-0.04
Surprise %	0.00%	2.90%	0.00%	-3.30%

EPS Trend	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Current Estimate	0.67	0.71	3.16	3.37
7 Days Ago	0.67	0.71	3.17	3.37
30 Days Ago	0.63	0.73	3.17	3.39
60 Days Ago	0.62	0.73	3.17	3.4
90 Days Ago	0.62	0.73	3.17	3.4

EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 7 Days	N/A	1	N/A	1

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EPS Revisions	Current Qtr. (Dec 2022)	Next Qtr. (Mar 2023)	Current Year (2022)	Next Year (2023)
Up Last 30 Days	5	1	1	1
Down Last 7 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	1	1	1	1

Growth Estimates	XEL	Industry	Sector(s)	S&P 500
Current Qtr.	15.50%	N/A	N/A	N/A
Next Qtr.	1.40%	N/A	N/A	N/A
Current Year	6.80%	N/A	N/A	N/A
Next Year	6.60%	N/A	N/A	N/A
Next 5 Years (per annum)	6.72%	N/A	N/A	N/A
Past 5 Years (per annum)	5.53%	N/A	N/A	N/A



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Ameren (AEE)

(Delayed Data from NYSE)

\$82.12 USD

+0.60 (0.74%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$82.09 -0.03 (-0.04%) 5:16 PMET

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Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Ameren (AEE) Quote Overview » Estimates » Ameren (AEE) Detailed Earnings Estimates

Detailed Estimates

Enter Symbol

Estimates

Earnings Date

*AMC 11/3/22

Current Quarter	1.72
EPS Last Quarter	0.80
Last EPS Surprise	-1.23%
ABR	1.91

Earnings ESP

1.41%

Current Year	4.08
Next Year	4.37
EPS (TTM)	3.90
P/E (F1)	19.96

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates

	AEE	IND	S&P
Current Qtr (09/2022)	4.24	-1.70	-1.96
Next Qtr (12/2022)	29.17	10.64	-8.34
Current Year (12/2022)	6.25	9.70	7.10
Next Year (12/2023)	7.11	4.50	5.38

Past 5 Years	7.20	4.79	13.40
Growth Estimates	AEE		
Next 5 Years	7.20	6.70	NA
PE	19.96	-6.30	17.36
PEG Ratio	2.77	-0.94	NA

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Trades from \$1

Research for AEE

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.90B	1.63B	7.06B	7.27B
# of Estimates	3	3	3	3
High Estimate	2.05B	1.67B	7.33B	7.69B
Low Estimate	1.79B	1.57B	6.89B	7.03B
Year ago Sales	1.81B	1.55B	6.39B	7.06B
Year over Year Growth Est.	4.96%	5.34%	10.43%	3.02%

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.72	0.62	4.08	4.37
# of Estimates	4	3	5	5
Most Recent Consensus	1.71	NA	4.05	NA
High Estimate	1.77	0.67	4.15	4.47
Low Estimate	1.65	0.57	4.05	4.33
Year ago EPS	1.65	0.48	3.84	4.08
Year over Year Growth Est.	4.24%	29.17%	6.25%	7.06%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	0	1

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.72	0.62	4.08	4.37
7 Days Ago	1.71	0.62	4.08	4.37
30 Days Ago	1.69	0.64	4.09	4.36
60 Days Ago	1.69	0.64	4.09	4.36

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)	Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days					90				
Down Last 7 Days	0	0	0	0	Days Ago	1.68	0.62	4.08	4.36
Down Last 30 Days	1	1	2	1					
Down Last 60 Days	1	1	2	1					

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.75	0.61	4.06	4.41
Zacks Consensus Estimate	1.72	0.62	4.08	4.37
Earnings ESP	1.41%	-1.08%	-0.59%	0.76%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.80	0.97	0.48	1.65	NA
Estimate	0.81	0.96	0.50	1.62	NA
Difference	-0.01	0.01	-0.02	0.03	0.00
Surprise	-1.23%	1.04%	-4.00%	1.85%	-0.59%

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American Electric Power (AEP)

(Delayed Data from NSDQ)

\$88.53 USD

+0.61 (0.69%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$88.53 0.00 (0.00%) 5:14 PMET

Add to portfolio

Zacks Rank:

2-Buy ■ 2 ■ ■

Style Scores:

B Value | B Growth | D Momentum | E VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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American Electric Power (AEP) Quote Overview » Estimates » American Electric Power (AEP) Detailed Earnings Estimates

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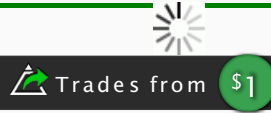
Exp Earnings Date	2/23/23
Current Quarter	1.05
EPS Last Quarter	1.62
Last EPS Surprise	3.18%
ABR	1.50

Earnings ESP	0.00%
Current Year	5.03
Next Year	5.31
EPS (TTM)	5.02
P/E (F1)	17.49

Growth Estimates	AEP	IND	S&P
Current Qtr (12/2022)	7.14	-1.70	-1.96
Next Qtr (03/2023)	16.39	10.64	-8.34
Current Year (12/2022)	6.12	9.70	7.10
Next Year (12/2023)	5.57	4.50	5.38
Past 5 Years	4.70	4.70	13.40

Key Ratios	QTD	QND	YTD
PE	17.49	-6.30	17.36
PEG Ratio	2.82	-0.94	NA

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Research for AEP

Analyst Snapshot

Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	4.46B	5.17B	18.59B	19.08B
# of Estimates	3	1	3	3
High Estimate	4.71B	5.17B	18.97B	20.21B
Low Estimate	4.20B	5.17B	18.12B	17.67B
Year ago Sales	4.10B	4.60B	16.81B	18.59B
Year over Year Growth Est.	8.87%	12.32%	10.63%	2.59%

Earnings Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.05	1.42	5.03	5.31
# of Estimates	3	1	6	6
Most Recent Consensus	1.05	NA	5.00	5.30
High Estimate	1.06	1.42	5.05	5.36
Low Estimate	1.03	1.42	5.00	5.29
Year ago EPS	0.98	1.22	4.74	5.03
Year over Year Growth Est.	7.14%	16.39%	6.12%	5.63%

Agreement - Estimate Revisions

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	1	1
Up Last 30 Days	1	1	6	3
Up Last 90 Days	1	1	6	4

Magnitude - Consensus Estimate Trend

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Current	1.05	1.42	5.03	5.31
7 Days Ago	1.05	1.42	5.02	5.30
30 Days Ago	1.12	1.37	4.99	5.30
60 Days Ago	1.12	1.37	5.00	5.30

60 Days	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	0	0	0
Down Last 30 Days	2	0	0	1
Down Last 60 Days	2	0	0	1

90 Days Ago	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
	1.11	1.23	5.04	5.32

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.05	1.42	5.03	5.32
Zacks Consensus Estimate	1.05	1.42	5.03	5.31
Earnings ESP	0.00%	0.00%	0.00%	0.14%

Surprise - Reported Earnings History

	Quarter Ending (9/2022)	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Average Surprise
Reported	1.62	1.20	1.22	0.98	NA
Estimate	1.57	1.18	1.19	0.94	NA
Difference	0.05	0.02	0.03	0.04	0.04
Surprise	3.18%	1.69%	2.52%	4.26%	2.91%

Quarterly Estimates By Analyst

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Allete (ALE)

(Delayed Data from NYSE)

\$56.15 USD

-0.12 (-0.21%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$56.15 0.00 (0.00%) 5:16 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Estimates

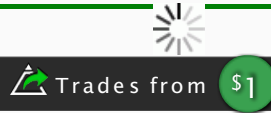
Earnings Date	*BMO	11/9/22
Current Quarter		0.70
EPS Last Quarter		0.67
Last EPS Surprise		6.35%
ABR		3.50
Earnings ESP		0.00%
Current Year		3.74
Next Year		3.98
EPS (TTM)		3.62
P/E (F1)		15.07

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates	ALE	IND	S&P
Current Qtr (09/2022)	32.08	-1.70	-1.96
Next Qtr (12/2022)	-2.54	10.64	-8.34
Current Year (12/2022)	15.79	9.70	7.10
Next Year (12/2023)	6.42	4.50	5.38

Period	Estimate	Actual	Surprise
Past 5 Years Growth Estimates	-0.70	4.79	13.49
Next 5 Years	8.10	6.70	NA
PE	15.07	-6.30	17.36
PEG Ratio	1.85	-0.94	NA

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Research for ALE



Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	361.20M	422.03M	1.54B	1.56B
# of Estimates	1	1	1	1
High Estimate	361.20M	422.03M	1.54B	1.56B
Low Estimate	361.20M	422.03M	1.54B	1.56B
Year ago Sales	345.40M	399.00M	1.42B	1.54B
Year over Year Growth Est.	4.57%	5.77%	8.50%	1.35%

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.70	1.15	3.74	3.98
# of Estimates	2	1	2	2
Most Recent Consensus	NA	NA	NA	NA
High Estimate	0.71	1.15	3.75	4.01
Low Estimate	0.68	1.15	3.72	3.95
Year ago EPS	0.53	1.18	3.23	3.74
Year over Year Growth Est.	32.08%	-2.54%	15.79%	6.55%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	0.70	1.15	3.74	3.98
7 Days Ago	0.70	1.15	3.74	3.98
30 Days Ago	0.70	1.15	3.74	3.98
60 Days Ago	0.68	1.15	3.73	4.01

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days				
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 60 Days	0	0	0	1

Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
90 Days Ago	0.69	1.15	3.73	4.00

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.70	1.15	3.74	3.98
Zacks Consensus Estimate	0.70	1.15	3.74	3.98
Earnings ESP	0.00%	0.00%	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.67	1.24	1.18	0.53	NA
Estimate	0.63	1.29	1.10	0.81	NA
Difference	0.04	-0.05	0.08	-0.28	-0.05
Surprise	6.35%	-3.88%	7.27%	-34.57%	-6.21%

Annual Estimates By Analyst

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Edison International (EIX)

(Delayed Data from NYSE)

\$60.51 USD

+0.47 (0.78%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$60.44 -0.07 (-0.12%) 5:16 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

C Value | **F** Growth | **B** Momentum | **D** VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Detailed Estimates

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Estimates

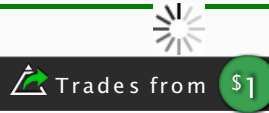
Exp Earnings Date			*AMC 11/1/22
Current Quarter			1.48
EPS Last Quarter			0.94
Last EPS Surprise			4.44%
ABR			2.63
Earnings ESP			0.00%
Current Year			4.49
Next Year			4.76
EPS (TTM)			4.86
P/E (F1)			13.38

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates	EIX	IND	S&P
Current Qtr (09/2022)	-12.43	-1.70	-1.96
Next Qtr (12/2022)	-15.52	10.64	-8.34
Current Year (12/2022)	-2.18	9.70	7.10
Next Year (12/2023)	6.01	4.50	5.38

Period	EPS	479	13.40
Past 5 Years Growth Estimates			
Next 5 Years	2.60	6.70	NA
PE	13.38	-6.30	17.36
PEG Ratio	5.11	-0.94	NA

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Research for EIX

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	4.99B	3.48B	16.45B	17.20B
# of Estimates	3	3	3	3
High Estimate	5.17B	3.51B	16.65B	17.51B
Low Estimate	4.71B	3.45B	16.17B	16.93B
Year ago Sales	5.30B	3.33B	14.91B	16.45B
Year over Year Growth Est.	-5.87%	4.50%	10.33%	4.56%

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.48	0.98	4.49	4.76
# of Estimates	4	3	5	5
Most Recent Consensus	1.33	0.88	4.43	4.78
High Estimate	1.67	1.18	4.54	4.85
Low Estimate	1.29	0.88	4.43	4.57
Year ago EPS	1.69	1.16	4.59	4.49
Year over Year Growth Est.	-12.43%	-15.52%	-2.18%	6.15%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	1	0	0
Up Last 30 Days	0	3	2	1

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.48	0.98	4.49	4.76
7 Days Ago	1.49	0.97	4.49	4.76
30 Days Ago	1.65	0.89	4.43	4.79
60 Days Ago	1.72	0.85	4.42	4.79

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days				
Down Last 7 Days	1	0	0	1
Down Last 30 Days	3	0	2	4
Down Last 60 Days	3	0	1	4

Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
90 Days Ago	1.71	0.81	4.42	4.79

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.48	0.98	4.49	4.76
Zacks Consensus Estimate	1.48	0.98	4.49	4.76
Earnings ESP	0.00%	0.00%	0.03%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.94	1.07	1.16	1.69	NA
Estimate	0.90	0.74	1.05	1.76	NA
Difference	0.04	0.33	0.11	-0.07	0.10
Surprise	4.44%	44.59%	10.48%	-3.98%	13.88%

Quarterly Estimates By Analyst

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Entergy (ETR)

(Delayed Data from NYSE)

\$108.32 USD

+1.18 (1.10%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$108.21 -0.11 (-0.10%) 5:16 PMET

Add to portfolio

Zacks Rank:

2-Buy ■ 2 ■ ■

Style Scores:

B Value | D Growth | F Momentum | D VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Detailed Estimates

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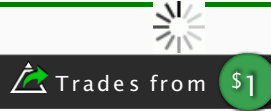
Earnings Date	*BMO11/2/22
Current Quarter	2.67
EPS Last Quarter	1.78
Last EPS Surprise	25.35%
ABR	1.93
Earnings ESP	0.00%
Current Year	6.40
Next Year	6.77
EPS (TTM)	6.31
P/E (F1)	16.75

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates	ETR	IND	S&P
Current Qtr (09/2022)	8.98	-1.70	-1.96
Next Qtr (12/2022)	-19.74	10.64	-8.34
Current Year (12/2022)	6.31	9.70	7.10
Next Year (12/2023)	5.78	4.50	5.38

Period	ETR	479	13.40
Past 5 Years	-2.30		
Next 5 Years	6.80	6.70	NA
PE	16.75	-6.30	17.36
PEG Ratio	2.48	-0.94	NA

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Research for ETR

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	3.35B	2.69B	12.21B	12.38B
# of Estimates	3	3	3	3
High Estimate	3.41B	2.70B	12.36B	12.49B
Low Estimate	3.27B	2.67B	12.06B	12.31B
Year ago Sales	3.35B	2.72B	11.74B	12.21B
Year over Year Growth Est.	-0.11%	-1.37%	4.01%	1.38%

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	2.67	0.61	6.40	6.77
# of Estimates	4	3	5	5
Most Recent Consensus	2.65	0.65	6.43	6.77
High Estimate	2.74	0.67	6.43	6.90
Low Estimate	2.64	0.52	6.36	6.70
Year ago EPS	2.45	0.76	6.02	6.40
Year over Year Growth Est.	8.98%	-19.74%	6.31%	5.91%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	2	0	2	1

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	2.67	0.61	6.40	6.77
7 Days Ago	2.67	0.61	6.40	6.77
30 Days Ago	2.65	0.75	6.38	6.98
60 Days Ago	2.65	0.75	6.38	6.74

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)	Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days					90	2.72	0.87	6.36	6.74
Down Last 7 Days	0	0	0	0					
Down Last 30 Days	1	3	2	2					
Down Last 60 Days	1	3	3	1					

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	2.67	0.61	6.39	6.79
Zacks Consensus Estimate	2.67	0.61	6.40	6.77
Earnings ESP	0.00%	0.00%	-0.06%	0.24%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	1.78	1.32	0.76	2.45	NA
Estimate	1.42	1.38	0.70	2.50	NA
Difference	0.36	-0.06	0.06	-0.05	0.08
Surprise	25.35%	-4.35%	8.57%	-2.00%	6.89%

Quarterly Estimates By Analyst

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Energy (EVRG)

(Delayed Data from NYSE)

\$61.16 USD

+0.03 (0.05%)

Updated Nov 1, 2022 04:03 PMET

After-Market: \$61.16 0.00 (0.00%) 5:16 PMET

Add to portfolio

Zacks Rank:

2-Buy ■ 2 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 18% (44 out of 250)

Industry: Oil and Gas - Production and Pipelines

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Energy (EVRG) Quote Overview » Estimates » Energy (EVRG) Detailed Earnings Estimates

Detailed Estimates

Enter Symbol

Estimates

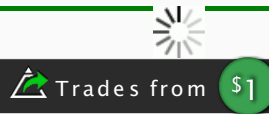
Earnings Date			*BMO 11/4/22
Current Quarter			1.89
EPS Last Quarter			0.86
Last EPS Surprise			NA
ABR			2.33
Earnings ESP			0.00%
Current Year			3.58
Next Year			3.77
EPS (TTM)			3.58
P/E (F1)			17.09

*BMO = Before Market Open *AMC = After Market Close

Growth Estimates	EVRG	IND	S&P
Current Qtr (09/2022)	-4.55	2,324.86	-1.96
Next Qtr (12/2022)	NA	2,680.74	-8.34
Current Year (12/2022)	1.13	15.20	7.10
Next Year (12/2023)	5.31	9.70	5.38

Period	EVRG	IND	ESB
Past 5 Years	9.28	7.99	13.49
Next 5 Years	5.20	6.30	NA
PE	17.09	18.50	17.36
PEG Ratio	3.26	2.94	NA

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[See Brokerage Recommendations](#)



Research for EVRG

Analyst PDF Snapshot PDF

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	NA	NA	5.11B	5.18B
# of Estimates	NA	NA	1	1
High Estimate	NA	NA	5.11B	5.18B
Low Estimate	NA	NA	5.11B	5.18B
Year ago Sales	1.62B	1.12B	5.59B	5.11B
Year over Year Growth Est.	NA	NA	-8.62%	1.43%

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.89	NA	3.58	3.77
# of Estimates	2	NA	3	3
Most Recent Consensus	1.88	NA	NA	NA
High Estimate	1.90	NA	3.60	3.78
Low Estimate	1.88	NA	3.55	3.75
Year ago EPS	1.98	0.16	3.54	3.58
Year over Year Growth Est.	-4.55%	NA	1.13%	5.31%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	1	NA	0	0
Up Last 30 Days	1	NA	0	0
Up Last 90 Days	0	NA	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.89	NA	3.58	3.77
7 Days Ago	1.88	NA	3.58	3.77
30 Days Ago	1.88	NA	3.58	3.77
60 Days Ago	NA	NA	3.55	3.76

90 Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	NA	0	0
Down Last 30 Days	0	NA	0	0
Down Last 60 Days	0	NA	0	0

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.89	NA	3.58	3.77
Zacks Consensus Estimate	1.89	NA	3.58	3.77
Earnings ESP	0.00%	NA	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.86	0.58	0.16	1.98	NA
Estimate	NA	0.55	0.04	1.68	NA
Difference	NA	0.03	0.12	0.30	0.15
Surprise	NA	5.45%	300.00%	17.86%	107.77%

Annual Estimates By Analyst

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Hawaiian Electric Industries (HE)

(Delayed Data from NYSE)

\$37.81 USD

-0.23 (-0.60%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$37.81 0.00 (0.00%) 5:16 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Hawaiian Electric Industries (HE) Quote Overview » Estimates » Hawaiian Electric Industries (HE) Detailed Earnings Estimates

Detailed Estimates

Enter Symbol

Estimates

Earnings Date

*AMC 11/7/22

Current Quarter

0.54

EPS Last Quarter

0.48

Last EPS Surprise

-7.69%

[ABR](#)

4.00

Earnings ESP

0.00%

Current Year

2.13

Next Year

2.25

[EPS \(TTM\)](#)

2.19

P/E (F1)

17.86

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates

Current Qtr (09/2022)

HE: -6.90 IND: -1.70 S&P: -1.96

Next Qtr (12/2022)

HE: NA IND: 10.64 S&P: -8.34

Current Year (12/2022)

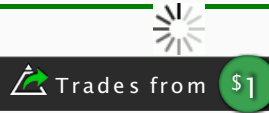
HE: -5.33 IND: 9.70 S&P: 7.10

Next Year (12/2023)

HE: 5.63 IND: 4.50 S&P: 5.38

Past 5 Years	6.00	4.79	13.40
Next 5 Years	2.60	6.70	NA
PE	17.86	-6.30	17.36
PEG Ratio	6.95	-0.94	NA

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Research for HE

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	756.90M	770.27M	2.85B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.54	NA	2.13	2.25
# of Estimates	1	NA	1	1
Most Recent Consensus	NA	NA	NA	NA
High Estimate	0.54	NA	2.13	2.25
Low Estimate	0.54	NA	2.13	2.25
Year ago EPS	0.58	0.50	2.25	2.13
Year over Year Growth Est.	-6.90%	NA	-5.33%	5.63%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	1	NA	0	0
Up Last 30 Days	1	NA	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	0.54	NA	2.13	2.25
7 Days Ago	0.43	NA	2.13	2.25
30 Days Ago	0.43	NA	2.13	2.25
60 Days Ago	0.43	NA	2.13	2.25

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)	Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days		NA			90	NA	NA	2.19	2.29
Down Last 7 Days	0	NA	0	0					
Down Last 30 Days	0	NA	0	0					
Down Last 60 Days	0	NA	0	0					

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.54	NA	2.13	2.25
Zacks Consensus Estimate	0.54	NA	2.13	2.25
Earnings ESP	0.00%	NA	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.48	0.63	0.50	0.58	NA
Estimate	0.52	0.42	0.45	0.53	NA
Difference	-0.04	0.21	0.05	0.05	0.07
Surprise	-7.69%	50.00%	11.11%	9.43%	15.71%

Annual Estimates By Analyst

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IDACORP (IDA)

(Delayed Data from NYSE)

\$102.93 USD

-1.77 (-1.69%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$102.85 -0.08 (-0.08%) 5:16 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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IDACORP (IDA) Quote Overview » Estimates » IDACORP (IDA) Detailed Earnings Estimates

Detailed Estimates

Enter Symbol

Estimates

Earnings Date

*BMO11/3/22

Current Quarter

1.95

EPS Last Quarter

1.27

Last EPS Surprise

-9.93%

[ABR](#)

1.67

Earnings ESP

0.00%

Current Year

5.00

Next Year

5.18

[EPS \(TTM\)](#)

4.76

P/E (F1)

20.94

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates

Current Qtr (09/2022)

IDA

IND

S&P

Next Qtr (12/2022)

1.04

-1.70

-1.96

Current Year (12/2022)

NA

10.64

-8.34

Next Year (12/2023)

3.09

9.70

7.10

Next Year (12/2023)

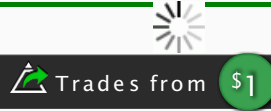
3.60

4.50

5.38

Past 5 Years	3.90	4.79	13.40
Growth Estimates	1.5A	1.7B	1.8C
Next 5 Years	2.70	6.70	NA
PE	20.94	-6.30	17.36
PEG Ratio	7.84	-0.94	NA

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Research for IDA

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	446.94M	335.01M	1.46B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.95	NA	5.00	5.18
# of Estimates	1	NA	1	1
Most Recent Consensus	NA	NA	NA	NA
High Estimate	1.95	NA	5.00	5.18
Low Estimate	1.95	NA	5.00	5.18
Year ago EPS	1.93	0.65	4.85	5.00
Year over Year Growth Est.	1.04%	NA	3.09%	3.60%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	NA	0	0
Up Last 30 Days	0	NA	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.95	NA	5.00	5.18
7 Days Ago	1.95	NA	5.00	5.18
30 Days Ago	1.95	NA	5.00	5.18
60 Days Ago	NA	NA	5.00	5.18

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days				
Down Last 7 Days	0	NA	0	0
Down Last 30 Days	0	NA	0	0
Down Last 60 Days	0	NA	0	0

Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
90 Days Ago	NA	NA	5.00	5.18

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.95	NA	5.00	5.18
Zacks Consensus Estimate	1.95	NA	5.00	5.18
Earnings ESP	0.00%	NA	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	1.27	0.91	0.65	1.93	NA
Estimate	1.41	NA	0.67	2.00	NA
Difference	-0.14	NA	-0.02	-0.07	-0.08
Surprise	-9.93%	NA	-2.99%	-3.50%	-5.47%

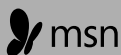
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Alliant Energy (LNT)

(Delayed Data from NSDQ)

\$52.63 USD

+0.46 (0.88%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$52.58 -0.05 (-0.10%) 5:16 PMET

Add to portfolio

Zacks Rank:

4-Sell ■ ■ ■ ■ 4 ■

Style Scores:

D Value | F Growth | A Momentum | F VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Alliant Energy (LNT) Quote Overview » Estimates » Alliant Energy (LNT) Detailed Earnings Estimates

Detailed Estimates

Enter Symbol

Estimates

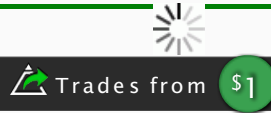
Earnings Date	*AMC 11/7/22
Current Quarter	1.04
EPS Last Quarter	0.63
Last EPS Surprise	8.62%
ABR	1.80
Earnings ESP	0.00%
Current Year	2.80
Next Year	2.91
EPS (TTM)	2.77
P/E (F1)	18.67

*BMO= Before Market Open *AMC=After Market Close

Growth Estimates	LNT	IND	S&P
Current Qtr (09/2022)	1.96	-1.70	-1.96
Next Qtr (12/2022)	NA	10.64	-8.34
Current Year (12/2022)	6.46	9.70	7.10
Next Year (12/2023)	3.93	4.50	5.38

Past 5 Years	7.29	4.79	13.49
Growth Estimates	LNT	LNT	LNT
Next 5 Years	5.90	6.70	NA
PE	18.67	-6.30	17.36
PEG Ratio	3.15	-0.94	NA

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Research for LNT

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	1.02B	927.00M	3.67B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.04	NA	2.80	2.91
# of Estimates	1	NA	2	2
Most Recent Consensus	NA	NA	NA	NA
High Estimate	1.04	NA	2.81	2.93
Low Estimate	1.04	NA	2.78	2.88
Year ago EPS	1.02	0.35	2.63	2.80
Year over Year Growth Est.	1.96%	NA	6.46%	3.93%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	NA	0	0
Up Last 30 Days	0	NA	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.04	NA	2.80	2.91
7 Days Ago	1.04	NA	2.80	2.91
30 Days Ago	1.05	NA	2.80	2.94
60 Days Ago	1.05	NA	2.80	2.94

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)	Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days		NA			90	NA	NA	2.75	2.90
Down Last 7 Days	0	NA	0	0					
Down Last 30 Days	1	NA	0	1					
Down Last 60 Days	1	NA	0	1					

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.04	NA	2.80	2.88
Zacks Consensus Estimate	1.04	NA	2.80	2.91
Earnings ESP	0.00%	NA	0.00%	-0.86%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.63	0.77	0.35	1.02	NA
Estimate	0.58	0.71	0.35	0.96	NA
Difference	0.05	0.06	0.00	0.06	0.04
Surprise	8.62%	8.45%	0.00%	6.25%	5.83%

Annual Estimates By Analyst

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NextEra Energy (NEE)

(Delayed Data from NYSE)

\$77.71 USD

+0.21 (0.27%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$78.45 +0.74 (0.95%) 5:16 PMET

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Zacks Rank:

2-Buy ■ 2 ■ ■

Style Scores:

D Value | C Growth | D Momentum | D VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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NextEra Energy (NEE) Quote Overview » Estimates » NextEra Energy (NEE) Detailed Earnings Estimates

Detailed Estimates

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Estimates

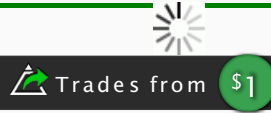
Exp Earnings Date	1/24/23
Current Quarter	0.56
EPS Last Quarter	0.85
Last EPS Surprise	7.59%
ABR	1.40

Earnings ESP	-1.48%
Current Year	2.90
Next Year	3.13
EPS (TTM)	2.81
P/E (F1)	26.77

Growth Estimates	NEE	IND	S&P
Current Qtr (12/2022)	36.59	-1.70	-1.96
Next Qtr (03/2023)	-5.41	10.64	-8.34
Current Year (12/2022)	13.73	9.70	7.10
Next Year (12/2023)	7.93	4.50	5.38
Past 5 Years	10.40	4.70	13.40

Key Ratios	Q1/22	QND	Q1/21
PE	26.77	-6.30	17.36
PEG Ratio	2.77	-0.94	NA

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Research for NEE

Analyst Snapshot

Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	5.78B	6.07B	20.21B	26.33B
# of Estimates	3	1	3	3
High Estimate	5.83B	6.07B	20.38B	26.95B
Low Estimate	5.73B	6.07B	19.98B	26.00B
Year ago Sales	5.05B	2.89B	17.07B	20.21B
Year over Year Growth Est.	14.61%	109.87%	18.40%	30.27%

Earnings Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.56	0.70	2.90	3.13
# of Estimates	3	1	6	6
Most Recent Consensus	NA	NA	2.86	3.10
High Estimate	0.58	0.70	2.92	3.21
Low Estimate	0.55	0.70	2.86	3.08
Year ago EPS	0.41	0.74	2.55	2.90
Year over Year Growth Est.	36.59%	-5.41%	13.73%	8.04%

Agreement - Estimate Revisions

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	1	0
Up Last 30 Days	0	0	1	0
Up Last 60 Days	0	1	2	3

Magnitude - Consensus Estimate Trend

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Current	0.56	0.70	2.90	3.13
7 Days Ago	0.56	0.70	2.89	3.13
30 Days Ago	0.59	0.71	2.89	3.13
60 Days Ago	0.59	0.66	2.88	3.11

60 Days	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	0	0	0
Down Last 30 Days	2	1	1	2
Down Last 60 Days	2	0	0	1

90 Days Ago	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
	0.60	0.68	2.87	3.10

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.56	0.70	2.90	3.14
Zacks Consensus Estimate	0.56	0.70	2.90	3.13
Earnings ESP	-1.48%	0.00%	0.00%	0.37%

Surprise - Reported Earnings History

	Quarter Ending (9/2022)	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Average Surprise
Reported	0.85	0.81	0.74	0.41	NA
Estimate	0.79	0.75	0.69	0.40	NA
Difference	0.06	0.06	0.05	0.01	0.05
Surprise	7.59%	8.00%	7.25%	2.50%	6.34%

Quarterly Estimates By Analyst

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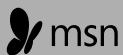
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OGE Energy (OGE)

(Delayed Data from NYSE)

\$36.92 USD

+0.29 (0.79%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$36.94 +0.02 (0.05%) 5:16 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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OGE Energy (OGE) Quote Overview » Estimates » OGE Energy (OGE) Detailed Earnings Estimates

Detailed Estimates

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Estimates

Earnings Date	*BMO11/3/22
Current Quarter	1.12
EPS Last Quarter	0.36
Last EPS Surprise	16.13%
ABR	2.43
Earnings ESP	0.00%
Current Year	2.15
Next Year	2.07
EPS (TTM)	3.28
P/E (F1)	17.04

*BMO= Before Market Open *AMC=After Market Close

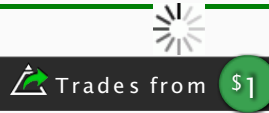
Growth Estimates	OGE	IND	S&P
Current Qtr (09/2022)	-11.11	-1.70	-1.96
Next Qtr (12/2022)	NA	10.64	-8.34
Current Year (12/2022)	-8.90	9.70	7.10
Next Year (12/2023)	-3.72	4.50	5.38

Period	5.90	4.79	13.40
Past 5 Years Growth Estimates			
Next 5 Years	3.50	6.70	NA
PE	17.04	-6.30	17.36
PEG Ratio	4.91	-0.94	NA

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Research for OGE

Analyst Snapshot

Price and EPS Surprise Chart

1 Month 3 Months YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	NA	NA	NA	NA
# of Estimates	NA	NA	NA	NA
High Estimate	NA	NA	NA	NA
Low Estimate	NA	NA	NA	NA
Year ago Sales	864.40M	581.30M	3.65B	NA
Year over Year Growth Est.	NA	NA	NA	NA

Earnings Estimates

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	1.12	NA	2.15	2.07
# of Estimates	1	NA	1	2
Most Recent Consensus	NA	NA	NA	NA
High Estimate	1.12	NA	2.15	2.08
Low Estimate	1.12	NA	2.15	2.05
Year ago EPS	1.26	0.27	2.36	2.15
Year over Year Growth Est.	-11.11%	NA	-8.90%	-3.95%

Agreement - Estimate Revisions

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	NA	0	0
Up Last 30 Days	0	NA	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Current	1.12	NA	2.15	2.07
7 Days Ago	1.12	NA	2.15	2.07
30 Days Ago	1.12	NA	2.15	2.07
60 Days Ago	1.12	NA	2.15	2.07

Days	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)	Days Ago	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Down Last 60 Days					90				
Down Last 7 Days	0	NA	0	0	Days Ago	NA	NA	2.15	2.07
Down Last 30 Days	0	NA	0	0					
Down Last 60 Days	0	NA	0	0					

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (9/2022)	Next Qtr (12/2022)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	1.12	NA	2.15	2.07
Zacks Consensus Estimate	1.12	NA	2.15	2.07
Earnings ESP	0.00%	NA	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Quarter Ending (9/2021)	Average Surprise
Reported	0.36	1.39	0.27	1.26	NA
Estimate	0.31	NA	NA	NA	NA
Difference	0.05	NA	NA	NA	0.05
Surprise	16.13%	NA	NA	NA	16.13%

Annual Estimates By Analyst

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Portland General Electric (POR)

(Delayed Data from NYSE)

\$45.06 USD

+0.12 (0.27%)

Updated Nov 1, 2022 04:00 PMET

After-Market: \$45.06 0.00 (0.00%) 5:20 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

B Value | A Growth | D Momentum | A VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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Detailed Estimates

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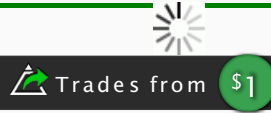
Estimates

Exp Earnings Date				2/16/23
Current Quarter				0.68
EPS Last Quarter				0.65
Last EPS Surprise				3.17%
ABR				2.67
Earnings ESP				0.00%
Current Year				2.81
Next Year				2.89
EPS (TTM)				2.77
P/E (F1)				15.99

Growth Estimates	POR	IND	S&P
Current Qtr (12/2022)	-6.85	-1.70	-1.96
Next Qtr (03/2023)	NA	10.64	-8.34
Current Year (12/2022)	3.31	9.70	7.10
Next Year (12/2023)	2.85	4.50	5.38
Past 5 Years	4.70	4.70	13.40

Key Metrics	POR	QND	ESR
PE	15.99	-6.30	17.36
PEG Ratio	NA	-0.94	NA

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Research for POR

Snapshot

Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	647.10M	NA	2.56B	2.64B
# of Estimates	1	NA	1	1
High Estimate	647.10M	NA	2.56B	2.64B
Low Estimate	647.10M	NA	2.56B	2.64B
Year ago Sales	608.00M	626.00M	2.40B	2.56B
Year over Year Growth Est.	6.43%	NA	6.82%	3.31%

Earnings Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.68	NA	2.81	2.89
# of Estimates	2	NA	1	1
Most Recent Consensus	0.69	NA	NA	2.89
High Estimate	0.69	NA	2.81	2.89
Low Estimate	0.66	NA	2.81	2.89
Year ago EPS	0.73	0.67	2.72	2.81
Year over Year Growth Est.	-6.85%	NA	3.31%	2.85%

Agreement - Estimate Revisions

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	NA	0	0
Up Last 30 Days	1	NA	0	0
Up Last 60 Days	1	NA	0	0

Magnitude - Consensus Estimate Trend

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Current	0.68	NA	2.81	2.89
7 Days Ago	0.69	NA	2.82	2.85
30 Days Ago	0.66	NA	2.82	2.87
60 Days Ago	0.66	NA	2.82	2.94

60 Days	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	NA	0	0
Down Last 30 Days	0	NA	0	1
Down Last 60 Days	0	NA	0	1

90 Days Ago	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
	0.68	NA	2.81	2.89

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.68	NA	2.81	2.89
Zacks Consensus Estimate	0.68	NA	2.81	2.89
Earnings ESP	0.00%	NA	0.00%	0.00%

Surprise - Reported Earnings History

	Quarter Ending (9/2022)	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Average Surprise
Reported	0.65	0.72	0.67	0.73	NA
Estimate	0.63	0.61	0.85	0.74	NA
Difference	0.02	0.11	-0.18	-0.01	-0.02
Surprise	3.17%	18.03%	-21.18%	-1.35%	-0.33%

Quarterly Estimates By Analyst

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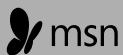
Annual Estimates By Analyst

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The Southern Company (SO)

(Delayed Data from NYSE)

\$65.53 USD

+0.05 (0.08%)

Updated Nov 1, 2022 04:03 PMET

After-Market: \$65.52 -0.01 (-0.02%) 5:20 PMET

Add to portfolio

Zacks Rank:

3-Hold ■ ■ 3 ■ ■

Style Scores:

Value | Growth | Momentum | VGM

Industry Rank:

Top 28% (69 out of 250)

Industry: Utility - Electric Power

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The Southern Company (SO) Quote Overview » Estimates » The Southern Company (SO) Detailed Earnings Estimates

Detailed Estimates

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Estimates

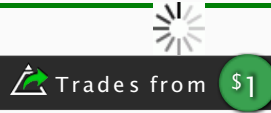
Exp Earnings Date	2/16/23
Current Quarter	0.23
EPS Last Quarter	1.31
Last EPS Surprise	-1.50%
ABR	2.75

Earnings ESP	-5.71%
Current Year	3.60
Next Year	3.78
EPS (TTM)	3.71
P/E (F1)	18.18

Growth Estimates	SO	IND	S&P
Current Qtr (12/2022)	-36.11	-1.70	-1.96
Next Qtr (03/2023)	-6.19	10.64	-8.34
Current Year (12/2022)	5.57	9.70	7.10
Next Year (12/2023)	5.00	4.50	5.38
Past 5 Years	3.10	4.70	13.40

Next Year Estimates	450	6ND	Page 50 of 56
PE	18.18	-6.30	17.36
PEG Ratio	4.55	-0.94	NA

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Research for SO

Analyst Snapshot

Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	6.06B	6.93B	26.66B	28.09B
# of Estimates	3	1	3	3
High Estimate	6.14B	6.93B	26.89B	29.35B
Low Estimate	5.99B	6.93B	26.37B	27.01B
Year ago Sales	5.77B	6.65B	23.11B	26.66B
Year over Year Growth Est.	5.00%	4.17%	15.35%	5.34%

Earnings Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.23	0.91	3.60	3.78
# of Estimates	3	1	6	6
Most Recent Consensus	NA	NA	3.58	3.80
High Estimate	0.24	0.91	3.64	3.81
Low Estimate	0.22	0.91	3.58	3.75
Year ago EPS	0.36	0.97	3.41	3.60
Year over Year Growth Est.	-36.11%	-6.19%	5.57%	5.04%

Agreement - Estimate Revisions

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	1	0
Up Last 30 Days	0	0	1	0
Up Last 60 Days	0	1	1	0

Magnitude - Consensus Estimate Trend

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Current	0.23	0.91	3.60	3.78
7 Days Ago	0.23	0.91	3.60	3.79
30 Days Ago	0.24	0.91	3.61	3.80
60 Days Ago	0.29	0.88	3.64	3.80

60 Days	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	0	0	1
Down Last 30 Days	1	0	1	3
Down Last 60 Days	2	0	2	4

90 Days Ago	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
	0.43	0.88	3.60	3.78

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.22	0.91	3.61	3.79
Zacks Consensus Estimate	0.23	0.91	3.60	3.78
Earnings ESP	-5.71%	0.00%	0.23%	0.18%

Surprise - Reported Earnings History

	Quarter Ending (9/2022)	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Average Surprise
Reported	1.31	1.07	0.97	0.36	NA
Estimate	1.33	0.84	0.91	0.35	NA
Difference	-0.02	0.23	0.06	0.01	0.07
Surprise	-1.50%	27.38%	6.59%	2.86%	8.83%

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(Delayed Data from NSDQ)

\$65.90 USD

+0.79 (1.21%)

Updated Nov 1, 2022 04:00 PMET

After-Market: **\$65.88** -0.02 (-0.03%) 5:20 PMET

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Detailed Estimates

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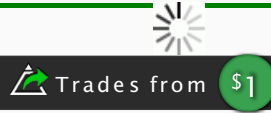
Estimates

Exp Earnings Date		1/26/23
Current Quarter		0.67
EPS Last Quarter		1.18
Last EPS Surprise		-1.67%
ABR		1.73
Earnings ESP		0.00%
Current Year		3.16
Next Year		3.36
EPS (TTM)		3.06
P/E (F1)		20.59

Growth Estimates	XEL	IND	S&P
Current Qtr (12/2022)	15.52	-1.70	-1.96
Next Qtr (03/2023)	-4.29	10.64	-8.34
Current Year (12/2022)	6.76	9.70	7.10
Next Year (12/2023)	6.33	4.50	5.38
Past 5 Years	6.10	4.70	13.40

Key Metrics	Q1	Q2	Q3
PE	20.59	-6.30	17.36
PEG Ratio	3.18	-0.94	NA

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Research for XEL

Analyst Snapshot

Price and EPS Surprise Chart

1 Month | 3 Months | YTD

Interactive Chart | Fundamental Chart

Sales Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	3.53B	3.98B	14.30B	14.67B
# of Estimates	3	1	3	3
High Estimate	3.61B	3.98B	14.41B	15.40B
Low Estimate	3.44B	3.98B	14.12B	13.90B
Year ago Sales	3.36B	3.75B	13.43B	14.30B
Year over Year Growth Est.	5.31%	6.12%	6.50%	2.54%

Earnings Estimates

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Zacks Consensus Estimate	0.67	0.67	3.16	3.36
# of Estimates	4	1	5	5
Most Recent Consensus	0.69	NA	3.14	3.33
High Estimate	0.70	0.67	3.18	3.39
Low Estimate	0.61	0.67	3.14	3.33
Year ago EPS	0.58	0.70	2.96	3.16
Year over Year Growth Est.	15.52%	-4.29%	6.76%	6.33%

Agreement - Estimate Revisions

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Up Last 7 Days	0	0	0	0
Up Last 30 Days	3	1	1	1
Up Last 60 Days	3	1	1	1

Magnitude - Consensus Estimate Trend

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Current	0.67	0.67	3.16	3.36
7 Days Ago	0.66	0.67	3.16	3.36
30 Days Ago	0.58	0.66	3.17	3.40
60 Days Ago	0.58	0.65	3.17	3.40

60 Days	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Down Last 7 Days	0	0	0	0
Down Last 30 Days	0	0	1	3
Down Last 60 Days	0	0	1	3

90 Days Ago	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
	0.59	0.68	3.17	3.40

Upside - Most Accurate Estimate Versus Zacks Consensus

	Current Qtr (12/2022)	Next Qtr (3/2023)	Current Year (12/2022)	Next Year (12/2023)
Most Accurate Estimate	0.67	0.67	3.16	3.37
Zacks Consensus Estimate	0.67	0.67	3.16	3.36
Earnings ESP	0.00%	0.00%	-0.22%	0.09%

Surprise - Reported Earnings History

	Quarter Ending (9/2022)	Quarter Ending (6/2022)	Quarter Ending (3/2022)	Quarter Ending (12/2021)	Average Surprise
Reported	1.18	0.60	0.70	0.58	NA
Estimate	1.20	0.60	0.68	0.58	NA
Difference	-0.02	0.00	0.02	0.00	0.00
Surprise	-1.67%	0.00%	2.94%	0.00%	0.32%

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Alternative Regulation for Emerging Utility Challenges: 2015 Update

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Edison Electric Institute

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I. Introduction

Investor-owned electric utilities in the United States are buffeted today by varied and rapid changes in the business conditions they face. For vertically integrated electric utilities (“VIEUs”) and utility distribution companies (“UDCs”) alike, the traditional cost of service approach to rate regulation is often not ideal for helping utilities cope with these changes. Alternative approaches to regulation (“Altreg”) can often help utilities secure better outcomes for their customers and shareholders.

The changing business climate stems primarily from three root causes. One is pressure, from policymakers and many customers, for the power industry to lighten its environmental footprint. In addition to evolving renewable portfolio standards at the state level, utilities must comply with an array of federal initiatives such as the Environmental Protection Agency’s Clean Power Plan. Demand-side management (“DSM”) programs and tightening building codes and appliance standards encourage energy efficiency. Some customers seek power from greener sources than the increasingly clean portfolios of utilities. Self generation from rooftop solar is one means to this end, and its cost is falling. Customer-sited distributed generation (“DG”) must be accommodated, and utilities must purchase power surpluses that these facilities generate at regulated rates.

A second force for change is technological progress in metering and distribution. Advanced metering infrastructure and other smart grid technologies can improve reliability and facilitate integration of intermittent renewables. Time-sensitive pricing can encourage customers to use the grid in less costly ways. New value-added optional products and services can be offered which benefit customers.

A third force for change is increased concern about the reliability and resiliency of grid service. Some facilities are approaching advanced age, and some need more protection from severe weather. Many customers seek better quality service.

These forces are having important practical effects on utilities. Growth in the demand for their traditional services has slowed, and utilities face competition from distributed energy resources (“DERs”). Nevertheless, some utilities need capital expenditures (“capex”) for cleaner generating capacity, smart grid facilities, increased resiliency, and replacement of aging assets. Many new facilities don’t automatically trigger revenue growth. Increased marketing flexibility is needed to meet competitive challenges and complex, changing customer needs.

Under traditional regulation, the base rates that compensate utilities for costs of non-energy inputs are reset only in general rate cases with historical test years. These lengthy proceedings require a detailed review of all costs and their allocation amongst the utility’s retail services. Revenue from secondary sources (e.g., off-system sales) is imputed against the revenue requirement.

Most base rate revenue is drawn from volumetric and other usage charges. Since the cost of base rate inputs is driven more by capacity than system use in the short run, a utility’s finances are sensitive between rate

cases to the gap between growth in system use and capacity. A convenient proxy for this gap is the growth in use per customer (aka “average use”). The need for rate cases increases when average use declines.

Traditional regulation is ill-suited for addressing many of today’s challenges. Growth in average use was once positive, and the resulting incremental revenues helped utilities finance rising cost without rate cases. Today, growth in the average use of residential and commercial customers is typically static and often negative. Utilities needing normal or high capital expenditures are then compelled to file rate cases more frequently. These involve high regulatory cost and are nonetheless frequently uncompensatory when they involve historical test years. Frequent rate cases also reduce utility opportunities to increase earnings from improved cost containment and marketing. Traditional regulation also does not allow for many value-added or optional rates and services. Improved utility performance is thus discouraged at a time when it is increasingly needed to respond to competitive pressures.

Increased financial attrition has been a factor in the long-term decline of average credit ratings among investor-owned electric utilities. This is illustrated in Figure 1. Higher risk raises financing costs and can discourage needed investments.

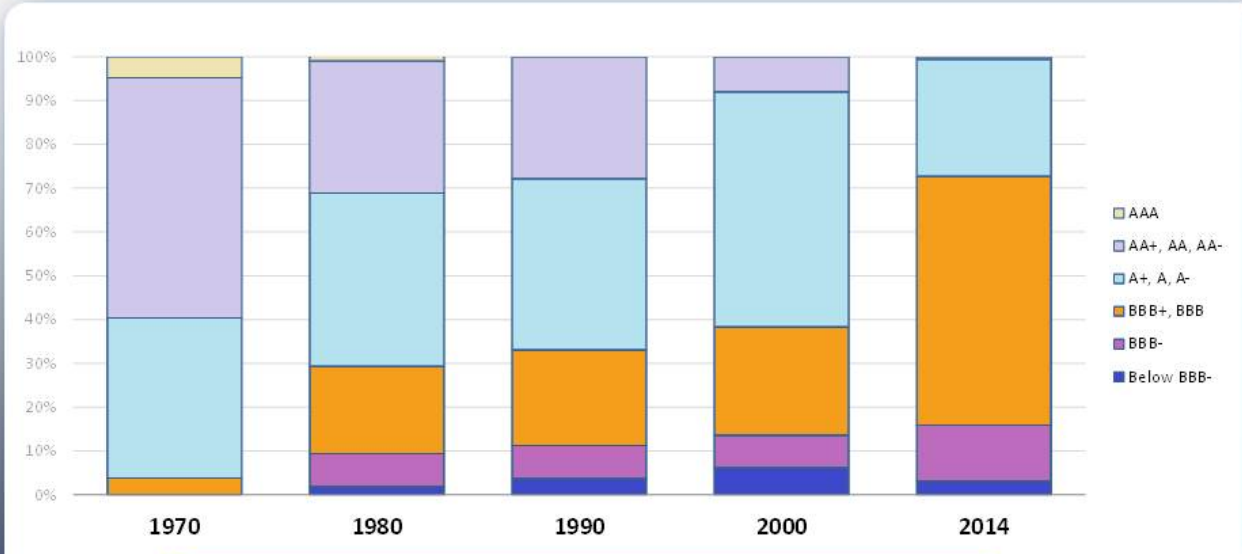
Alternative approaches to regulation have been developed which handle today’s business conditions better. Some, such as multiyear rate plans, formula rates, and fully-forecasted test years, can involve sweeping regulatory change. Others, like revenue decoupling and cost trackers, target specific challenges.

This survey, now updated to include precedents through mid-2015, explains Altreg options and details precedents in the regulation of retail electric utility rates. A summary of states that currently use these approaches is featured in Table 1. Information is also provided on precedents for gas and water distributors and for energy utilities in Australia, Canada, and Britain. This year’s survey also discusses marketing flexibility, a new Altreg area of growing interest to EEI members.

Figure 1

U.S. Electric IOUs Rating History

1970 – 2014



The current average company rating is BBB+, improved from the BBB average rating in 2000



Source: EEI Finance Department, Standard & Poor's, Macquarie Capital, SNL Financial

Table 1

Alternative Regulation Tools: An Overview of Current Precedents

State	Capital Cost Trackers	Measures that Relax the Use/Revenue Link			Multiyear Rate Plans ¹	Retail Formula Rate Plans	Forward Test Years
		Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing			
Alabama	Electric & Gas					Electric & Gas	Yes
Alaska							
Arizona	Electric, Gas, & Water	Gas only	Electric & Gas		Electric only		
Arkansas	Electric & Gas	Gas only	Electric & Gas				
California	Electric & Gas	Electric & Gas			Electric & Gas		Yes
Colorado	Electric & Gas				Electric only		
Connecticut	Electric, Gas, & Water	Electric & Gas	Gas only	Electric & Gas			Yes
Delaware	Electric, Gas, & Water						
District of Columbia	Electric & Gas	Electric only					
Florida	Electric & Gas			Gas only	Electric only		Yes
Georgia	Electric & Gas	Gas only		Gas only	Electric only	Gas only	Yes
Hawaii	Electric only	Electric only			Electric only		Yes
Idaho	Electric only	Electric only					
Illinois	Gas & Water	Gas only		Electric & Gas		Electric only	Yes
Indiana	Electric, Gas, & Water	Gas only	Electric only		Gas only		
Iowa	Gas only			Gas only	Electric only		
Kansas	Gas only		Electric only	Gas only			
Kentucky	Electric & Gas		Electric & Gas	Gas only			Yes
Louisiana	Electric only		Electric only		Electric only	Electric & Gas	Yes
Maine	Electric, Gas, & Water	Electric only		Gas only	Gas only		Yes
Maryland	Electric & Gas	Electric & Gas					
Massachusetts	Electric & Gas	Electric & Gas	Electric & Gas		Gas only		
Michigan	Gas only	Gas only					Yes

Table 1 continued

State	Capital Cost Trackers	Measures that Relax the Use/Revenue Link			Multiyear Rate Plans ¹	Retail Formula Rate Plans	Forward Test Years
		Decoupling True Up Plans	Lost Revenue Adjustment Mechanisms	Fixed Variable Retail Pricing			
Minnesota	Electric & Gas	Electric & Gas					Yes
Mississippi	Electric & Gas		Electric & Gas	Electric only		Electric & Gas	Yes
Missouri	Gas & Water			Gas only			
Montana	Electric & Gas		Gas only				
Nebraska	Gas only			Gas only			
Nevada	Gas only	Gas only	Electric only				
New Hampshire	Electric, Gas, & Water			Gas only	Electric & Gas		
New Jersey	Electric, Gas, & Water	Gas only					
New Mexico							Yes
New York	Gas & Water	Electric & Gas	Gas only	Electric & Gas	Electric & Gas		Yes
North Carolina	Gas & Water	Gas only	Electric only				
North Dakota	Electric only			Gas only	Electric only		Yes
Ohio	Electric, Gas, & Water	Electric only	Electric only	Gas only	Electric only		
Oklahoma	Electric only		Electric only	Electric & Gas		Gas only	
Oregon	Electric & Gas	Electric & Gas	Electric & Gas				Yes
Pennsylvania	Electric, Gas, & Water			Gas only			Yes
Rhode Island	Electric & Gas	Electric & Gas					Yes
South Carolina	Electric only		Electric only			Gas only	
South Dakota	Electric only						
Tennessee	Gas only	Gas only		Gas only		Gas only	Yes
Texas	Electric & Gas			Gas only		Gas only	
Utah	Gas only	Gas only					Yes
Vermont				Gas only			
Virginia	Electric & Gas	Gas only		Gas only	Electric only		
Washington	Gas only	Electric & Gas			Electric & Gas		
West Virginia	Electric only						
Wisconsin				Gas only			Yes
Wyoming	Electric only	Gas only	Electric & Gas	Electric & Gas			Yes

¹ This column excludes plans involving rate freezes without extensive supplemental funding from trackers.

II. Cost Trackers

A cost tracker is a mechanism for expedited recovery of specific utility cost (e.g., outside of a rate case). Balancing accounts are typically used to track unrecovered costs. Cost recovery is often implemented using tariff sheet provisions called riders.

Trackers are used in various situations where they are more practical than rate cases for addressing particular costs. Utilities usually recover fuel and purchased power costs via trackers because the volatility and substantial size of these costs would otherwise lead to frequent rate cases and materially impact utility risk. Other volatile expenses that are sometimes addressed with trackers include those for pensions, severe storms, and uncollectible bills.

A second use of trackers is for costs incurred due to policies of government agencies. Examples here include franchise fees and certain taxes. Tracking costs like these is fair to utilities and encourages government agencies to consider the impact of their policies on customer bills.

Trackers are also used to compensate utilities for costs that are rapidly rising and don't otherwise trigger new revenue, whether or not they are volatile or mandated. This encourages needed expenditures and reduces risk and the frequency of rate cases. Examples of operation and maintenance ("O&M") expenses that are sometimes tracked due in large measure to their rapid growth include those for health care.

Trackers for some costs have multiple rationales. DSM expenses, for example, are often sizable and sometimes grow rapidly.¹ Utility DSM programs are often mandated. Additionally, DSM can slow growth in the average use of power and reduce the need for plant additions, important sources of earnings growth for utilities. Tracking DSM expenses helps to balance utility incentives to embrace DSM.

Capital cost trackers typically address the accumulating depreciation, return on asset value, and taxes that result from the capex.² Capital costs can qualify for tracker treatment on several grounds. Major plant additions are volatile. Capex might be necessitated by highway construction or changes in government safety, reliability, or environmental standards. Capex is sometimes large enough to cause brisk cost growth that would otherwise occasion frequent rate cases.

An early use of capital cost trackers in the electric utility industry was to address construction costs of large power plants. These plants can take years to construct. An allowance in rates for a return on funds used during construction was traditionally not permitted until assets were used and useful and a rate case was filed. Deferred recovery of the allowance strains utility cash flow, increases financing expenses, and induces more rate "shock" when the value of the plant and construction financing is finally added to the rate base.

¹ This survey only documents capital cost trackers. Trackers for DSM expenses are ubiquitous so that there is less need for documentation.

² Recovery is sometimes achieved by keeping a rate case open beyond the date of a final decision for the limited purpose of adding assets to the revenue requirement.

Many commissions have addressed these problems by making a return on construction work in progress (“CWIP”) eligible for immediate recovery. Capital cost trackers have often been used in lieu of frequent rate cases to obtain CWIP recovery.

Capital costs of distribution system modernization are sometimes recovered using trackers for somewhat different reasons. The annual expenditure may not be as large as that for large generation units, and construction of specific assets usually takes less than a year. However, the capex can still be sizable and doesn’t automatically trigger new revenue when completed. A tracker for accelerated modernization costs can help a company modernize its grid and improve its services without frequent rate cases.

Capital costs of generation emissions controls are often accorded tracker treatment. These controls are occasioned by the emissions policies of state and federal agencies. Additionally, the facilities do not produce revenue and some facilities typically become used and useful each year over a series of years.

There are varied treatments of costs in approved capital trackers. Regulators often approve tracked capex budgets in advance, usually after considerable deliberation. Procedures for reviewing the need for generation plant additions are especially well established. Once a budget is set, the treatment of variances between actual and budgeted cost becomes an issue. Some trackers permit conventional prudence review treatment of cost overruns. In other cases, no adjustments are subsequently made if cost exceeds the budget. In between these extremes are mechanisms in which deviations, of prescribed magnitude, from budgeted amounts are shared formulaically (e.g., 50-50) between the utility and its customers. Utilities are also permitted sometimes to share in the benefits of capex underspends. The prudence of tracked capex is often subject to a final review when the cost is added to rate base, a step that usually occurs in the next rate case.

Recent precedents for capital cost trackers are listed in Table 2 and Figures 2 and 3. It can be seen that the precedents are numerous and continue to grow. This is the most widely used Altreg tool in the United States. For electric utilities, trackers for emissions controls, generation capacity, advanced metering infrastructure, and general system modernization have been especially common in recent years. Trackers for gas distributors typically address the cost of replacing old cast iron and bare steel mains. Trackers for water utilities, sometimes called distribution system improvement charges, are also common for accelerated modernization.

Figure 2: Recent Capital Cost Tracker Precedents by State: Energy Utilities

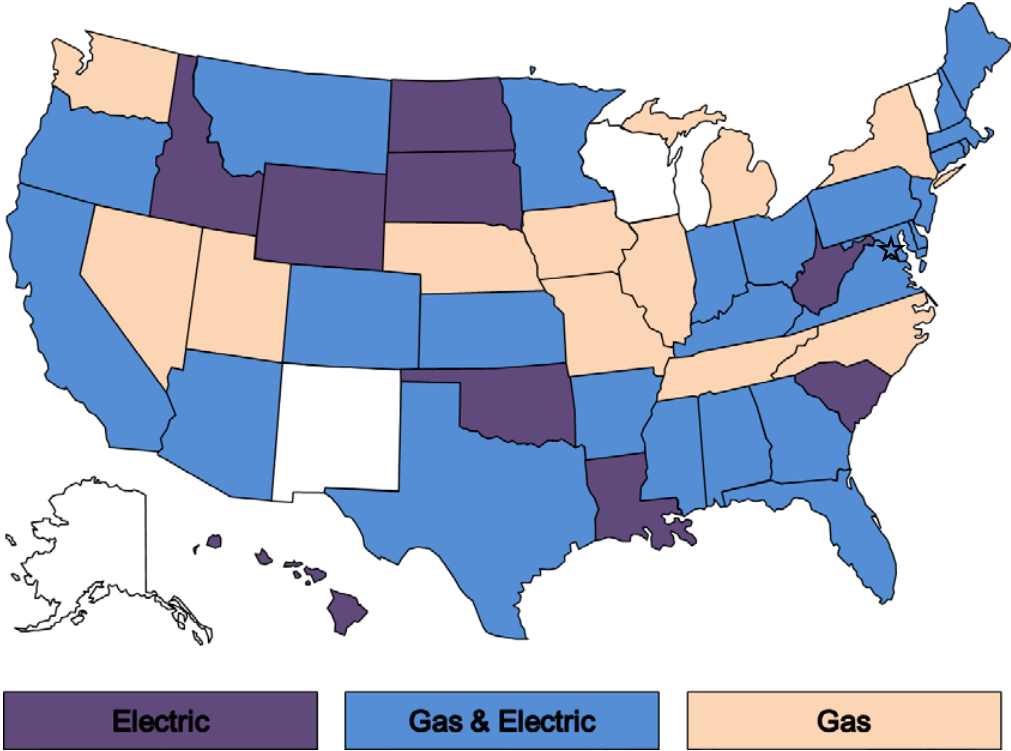


Figure 3: Recent Capital Cost Tracker Precedents by State: Water Utilities

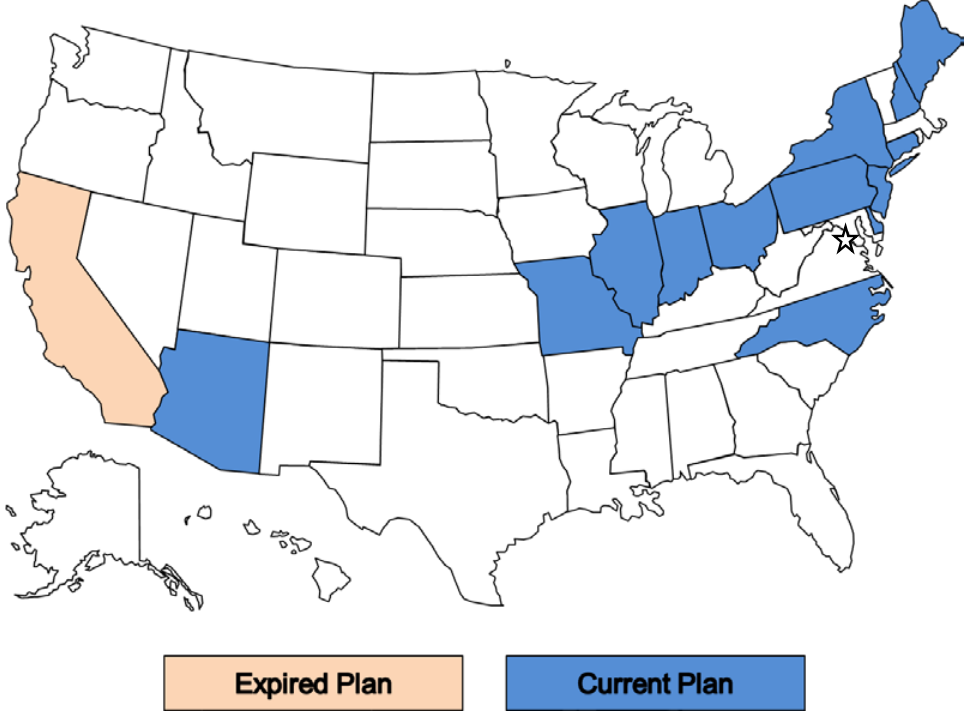


Table 2

Recent Capital Cost Tracker Precedents

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
AL	Alabama Power	Electric	Rate Certificated New Plant	Any approved by Commission through CPCN	Dockets 18117 and 18416 (November 1982)
AL	Mobile Gas Service	Gas	Cast Iron Replacement Factor	Replacement of cast iron mains	Docket 24794 (November 1995)
AR	Arkansas Oklahoma Gas	Gas	Act 310 Surcharge	Relocations of pipelines mandated by government agencies	Docket 12-088-U (July 2013)
AR	Arkansas Oklahoma Gas	Gas	System Safety Enhancement Rider	Replacement of bare steel mains, mains on low pressure systems, mains that are subject of an advisory notice by government that company deems to be unsatisfactory	Docket 13-078-U (July 2014)
AR	CenterPoint Energy Arkla	Gas	Main Replacement Rider	Replacement of cast iron and bare steel mains and services	Docket 06-161-U (October 2007)
AR	CenterPoint Energy Arkla	Gas	Government Mandated Expenditure Surcharge Rider	Replacements resulting from highway and street rebuilding	Docket 10-108-U (March 2011)
AR	Empire District Electric	Electric	Alternative Generation Environmental Recovery Rider	Environmental	Docket 15-010-U (August 2015)
AR	Oklahoma Gas & Electric	Electric	Smart Grid Rider	Systemwide smart grid implementation	Docket 10-109-U (August 2011)
AR	SourceGas Arkansas	Gas	At-Risk Meter Relocation Program Rider	Installation of new services for meters relocated due to motor vehicle collision risk	Docket 13-079-U (July 2014)
AR	SourceGas Arkansas	Gas	Main Replacement Program Rider	Replacement of bare steel and coated steel mains, mains that are subject of an advisory notice by government that company deems to be unsatisfactory, and associated services	Docket 13-079-U (July 2014)
AR	SourceGas Arkansas	Gas	Act 310 Surcharge	Bare steel and cast iron pipeline replacement, in-line inspection project, emissions controlling catalysts for compressor station engines, greenhouse gas monitoring of some regulator stations, highway relocation projects	Docket 13-072-U (April 2014)
AR	SWEPCO	Electric	Alternative Generation Recovery Rider	New generation	Docket 09-008-U (November 2009)
AR	SWEPCO	Electric	Rider Environmental Compliance Surcharge	Environmental	Docket 15-021-U (October 2015)
AZ	Arizona Public Service	Electric	Renewable Energy Standard Adjustment Schedule	Renewables not recovered in base rates	Docket E-01345A-08-0172
AZ	Arizona Public Service	Electric	Environmental Improvement Surcharge	Environmental improvement projects	Docket E-01345A-11-0224 (May 2012)
AZ	Arizona Public Service	Electric	Four Corners Rate Rider Surcharge	Generation	Docket E-01345A-11-0224 (December 2014)
AZ	Arizona Water Company	Water	Arsenic Cost Recovery Mechanism	Investments to reduce arsenic in water supply	Various (operating regions have separate decisions approving ACRMs)
AZ	Arizona Water Company - Eastern Group	Water	System Improvement Benefits Mechanism	Replacement of leak prone mains and related services, meters, and hydrants, replace meters that do not have lead free brass, other replacements for mains, services, meters, and hydrants that are at the end of their useful life	Decision 73938 (June 2013)
AZ	Southwest Gas	Gas	Customer Owned Yard Line Cost Recovery Mechanism	Replacement and ownership of customer-owned yard lines that have been shown to be leaking	Docket G-01551A-10-0458 (January 2012)
AZ	Tucson Electric Power	Electric	Environmental Compliance Adjustor	Miscellaneous environmental projects	Decision 73912 (June 2013)
CA	Pacific Gas & Electric	Electric	Smart Grid Memorandum Account	Smart grid projects that received DOE matching funds	Decision 09-09-029 (September 2009)
CA	Pacific Gas & Electric	Gas Transmission	Pipeline Safety Implementation Plan	Pipeline replacement, automated valve installation, and upgrades to pipeline	Decision 12-12-030 (December 2012)
CA	Pacific Gas & Electric	Electric	Smart Grid Pilot Deployment Project Balancing Account	Pilot programs for smart grid line sensors, volt/VAR optimization, detection and location of distribution line outages and faulted circuits, and information technology investments to improve short term demand forecasting for power procurement	Decision 13-03-032 (March 2013)
CA	San Diego Gas & Electric	Electric & Gas	Advanced Metering Infrastructure Balancing Account	AMI	Decision 07-04-043 (April 2007)
CA	San Diego Gas & Electric	Electric	Energy Storage Balancing Account	Projects to store solar energy	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas	Post-2011 Distribution Integrity Management Program Balancing Account	DIMP related costs	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas	Transmission Integrity Management Program Balancing Account	TIMP related costs	Decision 13-05-010 (May 2013)
CA	San Diego Gas & Electric	Gas Transmission	Safety Enhancement Capital Cost Balancing Account	Replacement of mains that fail pressure tests or that cannot be pressure tested	Decision 14-06-007 (June 2014)
CA	Southern California Edison	Electric	SmartConnect Balancing Account	Advanced metering infrastructure project	Decision 08-09-039 (September 2008)
CA	Southern California Edison	Electric	Solar PV Balancing Account	Solar generation	Decision 09-06-049 (June 2009)
CA	Southern California Gas	Gas	Advanced Metering Infrastructure Balancing Account	AMI	Decision 10-04-027 (April 2010)
CA	Southern California Gas	Gas	Post-2011 Distribution Integrity Management Program Balancing Account	DIMP related costs	Decision 13-05-010 (May 2013)
CA	Southern California Gas	Gas	Transmission Integrity Management Program Balancing Account	TIMP related costs	Decision 13-05-010 (May 2013)
CA	Southern California Gas	Gas Transmission	Safety Enhancement Capital Cost Balancing Account	Replacement of mains that fail pressure tests or that cannot be pressure tested	Decision 14-06-007 (June 2014)
CO	Black Hills Colorado Electric	Electric	Transmission Cost Adjustment Rider	Transmission projects	Docket 09-014E, Decision C09-0271 (March 2009)
CO	Black Hills Colorado Electric	Electric	Clean Air Clean Jobs Act Rider	Gas-fired generation	Docket 14AL-0393E, Decision C14-1504 (December 2014)
CO	Public Service Company of Colorado	Electric	Transmission Cost Adjustment	Transmission projects	Docket 07A-339E, Decision C07-1085 (December 2007)
CO	Public Service Company of Colorado	Gas	Pipeline Safety Integrity Adjustment	Gas distribution and transmission integrity management programs, main replacement, partial recovery of two large pipeline replacements	Docket 10-AL-963G (August 2011)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
CO	Public Service Company of Colorado	Electric	Clean Air Clean Jobs Act Rider	Miscellaneous environmental projects including gas-fired generation, scrubbers	Proceeding 14A-680E, Decision C15-0292 (March 2015)
CO	Rocky Mountain Gas	Gas Transmission	System Safety and Integrity Rider	TIMP, DIMP, and other safety regulatory compliance projects	Docket 13AL-0046G, Decision R14-0114 (February 2014)
CT	Aquarion Water Company of Connecticut	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 08-06-21W101 (December 2008)
CT	Connecticut Light & Power	Electric	System Resiliency Plan	Structural hardening	Docket 12-07-06 (January 2013)
CT	Connecticut Natural Gas	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
CT	Connecticut Natural Gas	Gas	DIMP True-Up Mechanism	Cast iron and bare steel main replacement	Docket 13-06-08; (January 2014)
CT	Connecticut Water	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 08-10-15W101 (March 2009)
CT	Southern Connecticut Gas	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
CT	Torrington Water	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 09-06-17W101 (December 2009)
CT	United Water Connecticut	Water	Water Infrastructure and Conservation Adjustment	Replacement of infrastructure including mains, valves, services, meters, and hydrants that have reached the end of their useful life or are no longer able to function as intended	Docket 09-06-17W101 (December 2009)
CT	Yankee Gas Services	Gas	System Expansion Reconciliation Mechanism	System expansion	Docket 13-06-02 (November 2013)
DC	Potomac Electric Power	Electric	Underground Project Charge	Undergrounding of specific feeders	Formal Case 1116 (November 2014)
DC	Washington Gas Light	Gas	Plant Recovery Adjustment	Remediation/replacement of mechanical couplings	Formal Case 1027 (December 2009)
DC	Washington Gas Light	Gas	Accelerated Pipe Replacement Plan Adjustment	Replacement of cast iron mains, bare steel mains and services and "black plastic" services	Formal Case 1115 (January 2015)
DE	Artesian Water	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-474 (December 2001)
DE	Delmarva Power & Light	Gas	Utility Facility Relocation Charge	Replacements due to mandated relocations that are not otherwise reimbursed	Docket 12-546 (October 2013)
DE	Delmarva Power & Light	Electric	Utility Facility Relocation Charge	Replacements due to mandated relocations that are not otherwise reimbursed	Docket 13-115 (August 2014)
DE	Sussex Shores Water	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-470 (December 2001)
DE	Tidewater Utilities	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 03-210 (May 2003)
DE	United Water Delaware	Water	Distribution System Improvement Charge	Replacement of infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-481 (December 2001)
FL	Chesapeake Utilities	Gas	Gas Reliability Infrastructure Program Tariff	Replacement of bare steel mains and services	Docket 120036-GU (September 2012)
FL	Florida City Gas	Gas	Safety and Access Verification Expedited Program	Replacement of unprotected steel mains, relocation of certain gas mains in rear lot easements	Docket 150116-GU (September 2015)
FL	Florida Power and Light	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 080281-EI (August 2008)
FL	Florida Power and Light	Electric	Capacity Cost Recovery Clause	Nuclear power	Docket 090009-EI (November 2009)
FL	Florida Power and Light	Electric	Generation Base Rate Adjustment	Generation	Docket 120015-EI (December 2012)
FL	Florida Public Utilities	Gas	Gas Reliability Infrastructure Program Tariff	Replacement of bare steel mains and services	Docket 120036-GU (September 2012)
FL	Gulf Power	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 930613-EI (January 1994)
FL	Peoples Gas System	Gas	Cast Iron/Bare Steel Replacement Rider	Replacement of bare steel and cast iron pipes	Docket 110320-GU (September 2012)
FL	Progress Energy Florida	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 050078-EI (September 2005)
FL	Progress Energy Florida	Electric	Capacity Cost Recovery Clause	Nuclear power	Docket 090009-EI (November 2009)
FL	Progress Energy Florida	Electric	Generation Base Rate Adjustment	Generation	Docket 130208 (November 2013)
FL	Tampa Electric	Electric	Environmental Cost Recovery Clause	Miscellaneous environmental projects	Docket 960688-EI (August 1996)
GA	Atlanta Gas Light	Gas	Pipeline Replacement Program Cost Recovery Rider	Replacement of cast iron and bare steel pipe	Docket 29950 as STRIDE tracker in 2009
GA	Atlanta Gas Light	Gas	Strategic Infrastructure Development and Enhancement Surcharge	Pre-1985 plastic mains and services replacement, planned customer expansions, and infrastructure improvements that sustain reliability and operational flexibility	Docket 8516-U and 29950 (October 2009 and August 2013)
GA	Atmos Energy (now Liberty Utilities)	Gas	Pipe Replacement Surcharge	Replace cast iron and bare steel pipe	Docket 12509-U (December 2000)
GA	Georgia Power Company	Electric	Environmental Compliance Cost Recovery	Miscellaneous environmental projects	Docket 25060-U (December 2007)
GA	Georgia Power Company	Electric	Nuclear Construction Cost Recovery	Nuclear generation	Docket 27800, Senate Bill 31
HI	Hawaii Electric Light	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
HI	Hawaiian Electric Company	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
HI	Maui Electric	Electric	Renewable Energy Infrastructure Program Surcharge	Renewable energy infrastructure	Docket 2007-0416 (December 2009)
IA	Black Hills Energy	Gas	System Safety Maintenance Adjustment	Replacement of steel and pvc pipe, relocations mandated by local governments	Docket RPU-2012-0004 (March 2013)
ID	PacifiCorp	Electric	Energy Cost Adjustment Mechanism	Lake Side II generation facility	Case PAC-E-13-04 (October 2013)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
IL	Ameren Illinois	Gas	Rider Qualifying Infrastructure Plant	Replacement of prone to leak distribution and transmission pipe, installation of AMI and communications infrastructure, replacing or installing transmission or distribution facilities to establish over-pressure protection, replacement of difficult to locate mains and services, replacement of high pressure transmission pipelines without a recorded maximum allowable operating pressure, replacements to facilitate an upgrade from a low pressure system to a high pressure system	Docket 14-0573 (January 2015)
IL	Consumers Illinois Water Company (Kankakee, Vermilion, Woodhaven Districts)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 01-0561 (December 2001)
IL	Illinois-American Water (Chicago Metro Division)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 09-0251 (March 2010)
IL	Illinois-American Water (Single Tariff Pricing Zone)	Water	Qualifying Infrastructure Plant Surcharge Rider	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 04-0336 (December 2004)
IL	Northern Illinois Gas	Gas	Rider Qualifying Infrastructure Plant	Replacement of cast iron pipe, non-cast iron pipe, and copper services; relocation of meters from inside customers' premises; upgrading of system from low pressure to medium pressure; replacement or installation of regulator stations, regulators, valves and associated facilities to establish over-pressure protection	Docket 14-0292 (July 2014)
IL	Peoples Gas Light & Coke	Gas	Rider Qualifying Infrastructure Plant	Replacement of cast and ductile iron, relocation of meters from inside customers' premises, upgrading of system from low pressure to medium pressure, replacement of high pressure transmission pipelines at higher risk of failure or lacking records, installation of regulator stations to establish over-pressure protection	Docket 13-0534 (January 2014)
IN	Duke Energy Indiana	Electric	Qualified Pollution Control Property	Miscellaneous environmental projects	Cause 41744 (February 2001)
IN	Duke Energy Indiana	Electric	Integrated Coal Gasification Combined Cycle Generating Facility Revenue Recovery Adjustment	Integrated gasification combined cycle generating plant	Docket 43114 (November 2007)
IN	Indiana Michigan Power	Electric	Clean Coal Technology Rider	Miscellaneous environmental projects	Cause 43636 (June 2009)
IN	Indiana Water Service	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Cause 42743 DSIC-1 (December 2004)
IN	Indiana-American Water	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Cause 42351 DSIC-1 (February 2003)
IN	Indianapolis Power & Light	Electric	Environmental Compliance Cost Recovery	Miscellaneous environmental projects	Cause 42170 (November 2002)
IN	Northern Indiana Public Service	Electric	Environmental Cost Recovery Mechanism	Miscellaneous environmental projects	Cause 42150 (November 2002)
IN	Northern Indiana Public Service	Electric	Transmission, Distribution & Storage System Improvement Charge	Investments to maintain the capacity deliverability of system and replacement of aging infrastructure, economic development	Cause 44370 and 44371 (February 2014)
IN	Northern Indiana Public Service	Gas	Distribution System Improvement Charge	Gas system deliverability and system integrity projects, rural main extensions	Cause 44403 TDSIC 1 (January 2015)
IN	Utility Center Inc.	Water	Distribution System Improvement Charge	Replacement of non-revenue producing infrastructure (e.g., existing mains, services, meters, and hydrants)	Docket 42416 DSIC-1 (June 2003)
IN	Vectren Energy Delivery (Indiana Gas and Southern Indiana Gas & Electric)	Gas	Compliance and System Improvement Adjustment	System and pressure improvements, storage operations, instrumentation and communications equipment, public improvement projects, service replacements, and economic development	Cause 44429 (August 2014)
KS	Atmos Energy	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 10-ATMG-133-TAR (December 2009)
KS	Black Hills Energy (Aquila)	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 08-AQLG-852-TAR (July 2008)
KS	Kansas Gas Service	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 10-KGSG-155-TAR (December 2009)
KS	Midwest Energy	Gas	Gas System Reliability Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket 09-MDWE-722-TAR (May 2009)
KY	Atmos Energy	Gas	Pipe Replacement Program Rider	Replacement of bare steel service lines, curb valves, meter loops, and mandated relocations	Docket 2009-00354 (May 2010)
KY	Columbia Gas	Gas	Advanced Main Replacement Rider	Replacement of cast iron and bare steel mains and services	Docket 2009-00141 (September 2009)
KY	Delta Natural Gas	Gas	Pipe Replacement Program Surcharge	Replacement of bare steel pipe, service lines, curb valves, meter loops, and mandated pipe relocations	Case 2010-00116 (October 2010)
KY	Kentucky Power	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Docket 2002-00169 (March 2003)
KY	Kentucky Utilities	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Case 93-465 (July 1994)
KY	Louisville Gas & Electric	Electric	Environmental Cost Recovery Surcharge	Miscellaneous environmental projects	Case 94-332 (April 1995)
KY	Louisville Gas & Electric	Gas	Gas Line Tracker	Replacement and transfer of ownership of customer owned service risers	Case 2012-00222 (December 2012)
LA	Cleco Power	Electric	Infrastructure and Incremental Costs Recovery	Projects to be determined in subsequent filings to Commission	Docket U-30689 and U-32779 (October 2010 and June 2014)
LA	Entergy Gulf States Louisiana	Electric	Formula Rate Plan-3	Acquisition of generating facility, new generating facility or refurbishment of existing generating facility if the revenue requirement related to the project exceeds \$10 million	Docket U-32707 (December 2013)
LA	Entergy Louisiana	Electric	Formula Rate Plan 7	Cost of Ninemile 6 natural gas generating facility; New generating facility, acquisition of a generating facility, or refurbishment of existing generating facility if the revenue requirement related to the project exceeds \$10 million	Docket U-32708 and 31971 (January 2014 and April 2012)
MA	Bay State Gas	Gas	Targeted Infrastructure Recovery Factor	Replacement of bare steel mains and services	DPU 09-30
MA	Bay State Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, service tie-ins, encroached pipe, and meters	DPU 14-134
MA	Berkshire Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron mains and associated services, encroached pipe, and meter sets composed of non-cathodically protected steel, cast iron or copper	DPU 14-131
MA	Fitchburg Gas & Electric Light	Gas	Gas System Enhancement Adjustment Factor	Replacement of cast main and unprotected steel mains and services and encroached pipe	DPU 14-130

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
MA	Massachusetts Electric	Electric	Net CapEx Factor	Potentially all distribution investments	DPU 09-39
MA	Massachusetts Electric	Electric	Solar Cost Adjustment Provision	Solar generation	DPU 09-38
MA	Massachusetts Electric	Electric	Smart Grid Adjustment Provision	Pilot smart grid investments including AMI, high speed communications network, in-home energy management devices, distribution automation, advanced capacitor control, advanced grid monitoring, remote fault indicators	DPU 11-129
MA	Nantucket Electric	Electric	Solar Cost Adjustment Provision	Solar generation	DPU 09-38
MA	Nantucket Electric	Electric	Smart Grid Adjustment Provision	Pilot smart grid investments including AMI, high speed communications network, in-home energy management devices, distribution automation, advanced capacitor control, advanced grid monitoring, remote fault indicators	DPU 11-129
MA	National Grid (Boston-Essex Gas and Colonial Gas)	Gas	Targeted Infrastructure Recovery Factor	Replacement of bare steel, cast iron, and wrought iron mains, services, meters, meter installations, and house regulators	DPU 10-55
MA	National Grid (Boston-Essex Gas and Colonial Gas)	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, inside services, service tie-ins, encroached pipe, and meters	DPU 14-132
MA	New England Gas	Gas	Targeted Infrastructure Recovery Factor	Replacement of non-cathodically protected steel mains and services and small diameter cast-iron and wrought iron	DPU 10-114
MA	New England Gas	Gas	Gas System Enhancement Adjustment Factor	Replacement of non-cathodically protected steel, cast iron, and wrought iron mains and associated services, inside services, service tie-ins, encroached pipe, and meters	DPU 14-133
MA	NSTAR Electric	Electric	Capital Projects Scheduling List	Stray voltage inspection survey and remediation program; double pole inspections, replacements, and restorations; and manhole inspection, repair, and upgrade	DTE 05-85 and DPU 10-70-B
MA	NSTAR Electric	Electric	Smart Grid Adjustment Factor	Smart grid pilot	DPU-09-33
MA	Western Massachusetts Electric	Electric	Solar Program Cost Adjustment	Solar generation	DPU 09-05
MD	Baltimore Gas & Electric	Electric	Electric Reliability Investment Surcharge	Upgrades to improve poorest performing feeders, selective undergrounding, expanded recloser development on 13kV and 34 kV lines, diverse routing of 34 kV supply circuits	Case 9326 (December 2013)
MD	Baltimore Gas & Electric	Gas	Strategic Infrastructure Development and Enhancement Program	Replacement of bare steel mains and services, cast iron mains, copper services, and pre-1982 plastic "Ski Bar" risers	Case 9331 (January 2014)
MD	Columbia Gas of Maryland	Gas	Strategic Infrastructure Development and Enhancement Program	Replacement of bare steel and cast iron mains and bare steel services	Case 9332 (August 2014)
MD	Delmarva Power & Light	Electric	Grid Resiliency Charge	Feeder hardening	Case 9317 (September 2013)
MD	Potomac Electric Power	Electric	Grid Resiliency Charge	Feeder hardening	Case 9311 (July 2013)
MD	Washington Gas Light	Gas	Strategic Infrastructure Development and Enhancement Program Rider	Replacement of bare and unprotected steel mains and services, targeted copper and pre-1975 plastic services, mechanically coupled pipe main and services, and cast iron mains	Case 9335 (May 2014)
ME	Central Maine Power	Electric	Customer Relationship Management & Billing Rate Adjustment	Customer relationship management & billing system replacement	Docket 2015-00040 (October 2015)
ME	Maine Water Company	Water	Water Infrastructure Charge	Replacement of stationary physical plant assets needed to operate a water system	Various orders separately issued for operating divisions
ME	Northern Utilities	Gas	Targeted Infrastructure Recovery Adjustment	Cast iron, bare steel, and unprotected coated steel mains and services replacements, replacement of farm tap regulators	Docket 2013-00133 (December 2013)
MI	Consumers Energy	Gas	Enhanced Infrastructure Replacement Program	Cast iron replacements	Case U-17643 (January 2015)
MI	Michigan Consolidated Gas (now DTE Gas)	Gas	Infrastructure Recovery Mechanism	Replacement of cast iron mains, replacement of indoor meters with outdoor meters, pipeline integrity projects designed to comply with federal and state safety standards	Case U-16999 (April 2013)
MI	SEMCO Gas	Gas	Main Replacement Rider	Replacement of cast iron and unprotected steel mains and service lines	Case U-16169 and U-17824 (January 2011 and June 2015)
MN	Interstate Power & Light	Electric	Renewable Energy Recovery Adjustment	Renewable generation	Docket M-10-312 (December 2013)
MN	Minnesota Power	Electric	Arrowhead Regional Emission Abatement Rider	Miscellaneous environmental projects	Docket M-05-1678 (June 2006)
MN	Minnesota Power	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-07-965 (December 2007)
MN	Minnesota Power	Electric	Renewable Resource Rider	Renewable generation	Docket M-10-273 (July 2010)
MN	Minnesota Power	Electric	Rider for Boswell Unit 4 Emission Reduction	Miscellaneous environmental projects	Docket M-12-920 (November 2013)
MN	Northern States Power (Xcel Energy)	Electric	Metropolitan Emissions Reduction Project (later called Environmental Improvement Rider)	Miscellaneous environmental projects	Docket M-02-633 (March 2004)
MN	Northern States Power (Xcel Energy)	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-06-1103 (November 2006)
MN	Northern States Power (Xcel Energy)	Electric	Renewable Energy Standard Cost Recovery Rider	Renewable generation	M-07-872 (March 2008)
MN	Northern States Power (Xcel Energy)	Gas	State Energy Policy Rider	Cast iron replacements	Docket M-08-261 (November 2008)
MN	Northern States Power (Xcel Energy)	Electric	Mercury Cost Recovery Rider	Miscellaneous environmental projects	Docket M-09-847 (November 2009)
MN	Otter Tail Power	Electric	Renewable Resource Cost Recovery Rider	Renewable generation	Docket M-08-119 (August 2008)
MN	Otter Tail Power	Electric	Transmission Cost Recovery Rider	Incremental transmission investment	Docket M-09-881 (January 2010)
MO	AmerenUE	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Case GT-2008-0184 (February 2008)
MO	Atmos Energy	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GO-2009-0046 (October 2008)
MO	Laclede Gas	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GR-2007-0208 (July 2007)
MO	Missouri American Water	Water	Infrastructure System Replacement Surcharge	Replacement of mains, associated valves and hydrants, main cleaning and relining projects	Case WO-2004-0116 (December 2003)
MO	Missouri Gas Energy	Gas	Infrastructure System Replacement Surcharge	Replacement of mains, valves, service lines, regulator stations, vaults, other pipeline components or relocations	Docket GR-2009-0355 (February 2010)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
MS	Atmos Energy	Gas	Supplemental Growth Rider	Extraordinary service expansions to new industrial customers for economic development	Docket 2013-UN-23 (July 2013)
MS	Centerpoint Energy	Gas	Supplemental Growth Rider	Extraordinary service expansions to new commercial and industrial customers for economic development	Docket 13-UN-214 (October 2013)
MS	Mississippi Power	Electric	Environmental Compliance Overview Plan Rate	Miscellaneous environmental projects	Docket 92-UA-0058 and 92-UN-0059 (July 1992)
MT	Northwestern Energy	Electric	NA - Amounts recovered through electric supply service rates	Generation	Docket D.2008.6.69 (November 2008)
MT	Northwestern Energy	Gas	Natural Gas Supply Tracker	Battle Creek natural gas production resources	Docket D2012.3.25 (November 2012)
NC	Aqua North Carolina	Water	Water System Improvement Charge	Replacement of distribution system mains, valves, services, meters, and hydrants, main extensions, projects to comply with primary drinking water standards, unreimbursed facility relocation costs due to highways	Docket W-218, Sub 363 (May 2014)
NC	Aqua North Carolina	Water	Sewer System Improvement Charge	Replacement of pumps, motors, blowers, and other mechanical equipment, collection main extensions designed to implement solutions to wastewater problems, improvements necessary to reduce inflow and infiltration to the collection systems as required by state and federal law and regulations, unreimbursed costs of highway relocations	Docket W-218, Sub 363 (May 2014)
NC	Carolina Water Service	Water	Water System Improvement Charge	Replacement of distribution system mains, valves, services, meters, and hydrants, main extensions, projects to comply with primary drinking water standards, unreimbursed facility relocation costs due to highways	Docket W-354, Sub 336 (March 2014)
NC	Carolina Water Service	Water	Sewer System Improvement Charge	Replacement of pumps, motors, blowers, and other mechanical equipment, collection main extensions designed to implement solutions to wastewater problems, improvements necessary to reduce inflow and infiltration to the collection systems as required by state and federal law and regulations, unreimbursed costs of highway relocations	Docket W-354, Sub 336 (March 2014)
NC	Piedmont Natural Gas	Gas	Integrity Management Rider	Investments driven by federal pipeline safety and integrity requirements	Docket G-9, Sub 631 (December 2013)
ND	Montana-Dakota Utilities	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Case PU-13-85 (December 2013)
ND	Montana-Dakota Utilities	Electric	Generation Resource Recovery Rider Tariff	New Generation	Case PU-14-108 (August 2014)
ND	Northern States Power- MN	Electric	Transmission Cost Rider	Transmission projects	Case PU-12-813 (February 2014)
ND	Northern States Power- MN	Electric	Renewable Energy Rider	North Dakota based renewable generation	Case PU-12-813 (February 2014)
ND	Otter Tail Power	Electric	Renewable Resource Rider	Renewables	Case PU-06-466 (May 2008)
ND	Otter Tail Power	Electric	Transmission Facility Cost Recovery Tariff	Transmission investments required to serve retail customers	Case PU-11-682 (April 2012)
ND	Otter Tail Power	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Case PU-13-84 (December 2013)
NE	Black Hills Nebraska Gas Utility	Gas	Infrastructure System Replacement Recovery Charge	Non-revenue increasing projects to replace existing assets	Application NG-0074
NE	SourceGas Distribution	Gas	Pipeline Replacement Charge	Projects entering service before May 2014 that are installed to comply with safety requirements as replacements for existing facilities, projects that will extend the useful life of existing assets or enhance pipeline integrity, facility relocations	Application NG-0072 (June 2013)
NE	SourceGas Distribution	Gas	System Safety and Integrity Rider	Projects entering service after April 2014 that comply with federal regulations including transmission and distribution integrity management plans or are facility relocations costing \$20,000 or more	Application NG-0078 (October 2014)
NH	Aquarion Water of New Hampshire	Water	Water Infrastructure and Conservation Adjustment Charge	Projects to upgrade or replace non-revenue producing assets including main, valve, and hydrant replacement, main cleaning and refining, and non-reimbursable relocations	Docket DW 08-098 (September 2009)
NH	Energy North	Gas	Cast Iron/Bare Steel Replacement Program	Replacement of cast iron and bare steel pipe	Docket DG-107 (June 2007)
NH	Granite State Electric	Electric	Reliability Enhancement Plan Capital Investment Allowance	Feeder hardening and asset replacement	Docket DG-107 (June 2007)
NH	Public Service Company of New Hampshire	Electric	Energy Service	Miscellaneous environmental projects	DE 11-250 (April 2012)
NH	Public Service Company of New Hampshire	Electric	Reliability Enhancement Plan	Reliability improvements	DE 09-035, DE 11-250, and DE 14-238 (June 2015)
NJ	Elizabethtown Gas	Gas	Elizabethtown Natural Gas Distribution Utility Reinforcement Effort	System hardening	Docket GO13090826 (July 2014)
NJ	New Jersey American Water	Water	Distribution System Improvement Charge	Incremental non-revenue water main replacement, rehabilitation, or mandated relocation projects, service line replacements, valve and hydrant replacement	Docket WR12070669 (October 2012)
NJ	New Jersey Natural Gas	Gas	New Jersey Reinvestment in System Enhancement	Storm hardening projects	Docket GR13090828 (July 2014)
NJ	Public Service Electric and Gas	Electric	Solar Generation Investment Program	Solar generation	Docket EO09020125 (August 2009)
NJ	Public Service Electric and Gas	Electric & Gas	Capital Infrastructure Investment Program	Electric: reliability upgrades & feeder replacement, Gas: replacement of cast iron & bare steel mains and services	Dockets GO09010050, EO11020088, GO10110862 (April 2009 and July 2011)
NJ	Public Service Electric and Gas	Electric & Gas	Energy Strong Adjustment Mechanism	Electric: substation flood mitigation, grid reconfiguration strategies, and smart grid; Gas: Metering and regulating station flood mitigation, replacement of utilization pressure cast iron in flood prone areas	Docket EO13020155, GO13020156 (May 2014)
NJ	South Jersey Gas	Gas	Storm Hardening and Reliability Program	Replacement of low pressure mains and services with high pressure mains and services, removal of regulator stations, installation of excess flow valves in coastal areas	Docket GO13090814 (August 2014)
NJ	United Water New Jersey	Water	Distribution System Improvement Charge	Repair, replace, and/or clean mains, replace valves, hydrants, and service lines	Docket WR12080724 (October 2012)
NV	Southwest Gas	Gas	Gas Infrastructure Replacement Mechanism	Early vintage pipe replacements, conversion of master metered customers to individual meters	Docket 14-10002 (December 2014)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
NY	Corning Natural Gas	Gas	Safety and Reliability Charge	Replacement of leak prone pipe and ancillary costs to maintain a safe and reliable system	Case 11-G-0280 (October 2015)
NY	Keyspan Energy Long Island	Gas	Leak Prone Pipe Surcharge	Accelerated leak prone pipe removal program	Case 12-G-0214 (December 2014 and March 2015)
NY	Long Island American Water	Water	System Improvement Charge	Iron removal, storage tank rehabilitation, suction well rehabilitation at selected plants, customer information system	Case 11-W-0200 (March 2012)
NY	United Water New Rochelle	Water	Long Term Main Renewal Project	Cleaning and relining of mains	Case 99-W-0948 (August 2000)
NY	United Water New York	Water	Underground Infrastructure Renewal Program	Replacement of infrastructure including mains, valves, services, meters, and hydrants	Case 06-W-0131 (December 2006)
NY	United Water New York	Water	New Water Supply Source Surcharge	Projects to provide new sources of water in the short and long term	Case 06-W-0131 (December 2006)
OH	Aqua Ohio	Water	System Infrastructure Improvement Surcharge	Replacement of service lines, mains, hydrants, valves, main extensions to resolve documented water supply problems	Case 04-1824-WW-SIC (March 2005)
OH	Cleveland Electric Illuminating	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Cleveland Electric Illuminating	Electric	Delivery Capital Recovery Rider	Distribution, subtransmission, general, and intangible plant not included in most recent rate case	Case 10-388-EL-SSO (August 2010)
OH	Columbia Gas	Gas	Infrastructure Replacement Program Rider	Replacement of cast iron and bare steel mains & services, AMI	Cases 08-0072-GA-AIR, 08-0073-GA-ALT, 08-0074-GA-AAM, and 08-0075-GA-AAM (December 2008); Case 09-1036-GA-RDR (April 2010)
OH	Duke Energy Ohio	Gas	Accelerated Main Replacement Program Rider	Replacement of bare steel and cast iron mains and services and faulty risers	1478-GA-ALT, and 01-1539-GA-AAM (May 2002); 07-0589-GA-AIR 07-0590-GA-ALT 07-0591-GA-AAM (May 2008)
OH	Duke Energy Ohio	Gas	Advanced Utility Rider	Gas AMI	Cases 07-0589-GA-AIR, 07-0590-GA-ALT, and 07-0591-GA-AAM (May 2008)
OH	Duke Energy Ohio	Electric	Infrastructure Modernization Distribution Rider	Electric AMI	Cases 08-920-EL-SSO and 08-921-EL-AAM and 08-922-EL-UNC and 08-923-EL-ATA (December 2008)
OH	Duke Energy Ohio	Electric	Distribution Capital Investment Rider	Distribution capital investments not recovered through other trackers	Case 14-841-EL-SSO (April 2015)
OH	East Ohio Gas d/b/a Dominion East Ohio	Gas	Pipeline Infrastructure Replacement Rider	Bare steel and cast iron pipelines & faulty riser replacements	Case 08-169-GA-ALT (October 2008)
OH	East Ohio Gas d/b/a Dominion East Ohio	Gas	Automated Meter Reading Charge	AMR	Cases 07-0829-GA-AIR and 06-1453-GA-UNC (October 2008); Case 09-38-GA-UNC (May 2009); Case 09-1875-GA-RDR (May 2010)
OH	Ohio American Water	Water	System Improvement Charge	Non-revenue producing service lines, hydrants, mains, valves, main extensions that improve supply problems, main cleaning	Case 05-577-WW-SIC (August 2005)
OH	Ohio Edison	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Ohio Edison	Electric	Delivery Capital Recovery Rider	Distribution, subtransmission, general, and intangible plant not included in most recent rate case (filed in 2007)	Case 10-388-EL-SSO (August 2010)
OH	Ohio Power	Electric	Distribution Investment Rider	Net distribution capital additions since the date certain of most recent rate case not recovered through other riders	Case 11-346-EL-SSO
OH	Ohio Power	Electric	GridSMART Rider (Phase I)	Smart grid	Case 08-917-EL-SSO and 08-918-EL-SSO (March 2009)
OH	Toledo Edison	Electric	Rider AMI	Ohio Site Deployment	Cases 09-1820-EL-ATA and 12-1230-EL-SSO
OH	Toledo Edison	Electric	Delivery Capital Recovery Rider	Power distribution, subtransmission, general, and intangible plant not included in most recent rate case (filed in 2007)	Case 10-388-EL-SSO (August 2010)
OH	Vectren Energy Delivery	Gas	Distribution Replacement Rider	Replacement of cast iron and bare steel mains and services	Cases 07-1081-GA-ALT, 07-1080-GA-AIR and 08-0632-GA-AAM (January 2009)
OK	Oklahoma Gas & Electric	Electric	System Hardening Recovery Rider	Undergrounding and other circuit hardening	Cause PUD 20080387, Order 567670 (May 2009)
OK	Oklahoma Gas & Electric	Electric	Smart Grid Rider	Smart grid	Cause PUD 201000029 (July 2010)
OK	Oklahoma Gas & Electric	Electric	Crossroads Rider	Crossroads Wind Farm	Cause PUD 201000037 (July 2010)
OK	Public Service Company of Oklahoma	Electric	System Reliability Rider	Grid resiliency projects	Cause PUD 201300202 (January 2014)
OK	Public Service Company of Oklahoma	Electric	Advanced Metering Infrastructure Tariff	Advanced metering infrastructure deployment	Cause PUD 201300217 (April 2015)
OR	Northwest Natural Gas	Gas	System Integrity Program	Bare steel replacement, transmission integrity management program, distribution integrity management program	Docket UM 1406, Order 09-067 (March 2009)
OR	PacifiCorp	Electric	Renewable Adjustment Clause	Renewable generation	Docket UM 1330 (December 2007)
OR	PacifiCorp	Electric	Lake Side 2 Tariff Rider	Generation	Docket UE 263, Order 13-474 (December 2013)
OR	PacifiCorp	Electric	M2O Transmission Rider	Mona to Oquirrh transmission line only if line is placed into service within 6 months of May 31, 2013	Docket UE 246, Orders 12-493 and 13-195 (December 2012 and May 2013)
OR	Portland General Electric	Electric	Renewable Adjustment Clause	Renewable generation	Docket UM 1330 (December 2007)
PA	Columbia Gas	Gas	Distribution System Improvement Charge	Replacement of cast iron, bare steel, and first generation plastic mains and services, install excess flow valves, install or relocate automated meters, and replace risers, meter bars, and service regulators	P-2012-2338282 (March 2013)
PA	Columbia Water Company	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-00021979
PA	Duquesne Light	Electric	Smart Meter Charge Rider	AMI	Docket M-2009-2123948 (April 2010)
PA	Equitable Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2342745 (July 2013)
PA	Metropolitan Edison	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
PA	PECO	Electric	Smart Meter Cost Recovery Rider	AMI	Docket M-2009-2123944 (April 2010)
PA	PECO	Electric	Distribution System Improvement Charge	Storm hardening and resiliency measures, underground cable replacement, substation retirements, and facility relocations	Docket P-2015-2471423 (October 2015)
PA	PECO	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2347340 (September 2015)
PA	Pennsylvania Electric	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)
PA	Pennsylvania Power	Electric	Smart Meters Technologies Charge	AMI	Docket M-2009-2123950 (April 2010)
PA	Pennsylvania-American Water	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-000961031 (August 1996)
PA	Peoples Natural Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2344596 (May 2013)
PA	Peoples TWP	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2344595 (May 2013)
PA	Philadelphia Gas Works	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2012-2337737 (April 2013)
PA	Philadelphia Surburban Water	Water	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-00961035 (August 1996)
PA	PPL Electric Utilities	Electric	Act 129 Compliance Rider	AMI	Docket M-2009-2123945 (January 2010)
PA	PPL Electric Utilities	Electric	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., poles, wires)	Docket P-2012-2325034 (May 2013)
PA	UGI Central Penn Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2398835 (September 2014)
PA	UGI Penn Natural Gas	Gas	Distribution System Improvement Charge	Non-expense reducing, non-revenue producing infrastructure replacement projects (e.g., mains, meters, services)	Docket P-2013-2397056 (September 2014)
PA	West Penn Power	Electric	Smart Meter Surcharge	AMI	Docket M-2009-2123951 (June 2011)
RI	Narragansett Electric (electric operations)	Electric	Electric Infrastructure, Safety, and Reliability Plan Factor	Replacements and load growth	Docket 4218 (December 2011)
RI	Narragansett Electric (gas operations)	Gas	Gas Infrastructure, Safety, and Reliability Plan Factor	Previous accelerated capital replacement program investments plus main and service replacements and reliability investments	Docket 4219 (September 2011)
SC	South Carolina Electric & Gas	Electric	NA	Nuclear generation	Docket 2008-196-E (March 2009)
SD	Black Hills Power	Electric	Environmental Improvement Adjustment tariff	Miscellaneous environmental projects	Docket EL11-001
SD	Black Hills Power	Electric	Phase in plan rate	Gas-fired generation	Docket EL12-062 (September 2013)
SD	Northern States Power- MN	Electric	Environmental Cost Recovery Tariff	Miscellaneous environmental projects	Docket EL07-026 (January 2009)
SD	Northern States Power- MN	Electric	Transmission Cost Recovery Tariff	Transmission	Docket EL07-007 (January 2009)
SD	Northern States Power- MN	Electric	Infrastructure Rider	Generation	Docket EL 12-046 (April 2013)
SD	Otter Tail Power	Electric	Transmission Cost Recovery Tariff	Retail sales portion of specific transmission projects	Docket EL 10-015 (November 2011)
SD	Otter Tail Power	Electric	Environmental Quality Cost Recovery Tariff	Miscellaneous environmental projects	Docket EL 14-082 (December 2014)
TN	Piedmont Natural Gas	Gas	Integrity Management Rider	Distribution and transmission integrity management planning as required by the US Department of Transportation	Docket 13-00118 (May 2014)
TX	AEP Texas Central	Electric	Advanced Metering System Surcharge	AMI	Docket 36928
TX	AEP Texas North	Electric	Advanced Metering System Surcharge	AMI	Docket 36928
TX	Atmos Energy Mid Tex	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 9615
TX	Atmos Energy Pipelines	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Gas Utilities Dockets 9615 and 10640
TX	Atmos Energy West Texas Division	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 9608
TX	Centerpoint Energy Entex - Houston Division	Gas	Gas Reliability Infrastructure Program	Incremental investment in new and replacement pipe, pipeline integrity including mains replacement	Texas Utilities Code 104.301 and Gas Utilities Docket 10067
TX	Centerpoint Energy Houston Electric	Electric	Advanced Metering System Surcharge	AMI	Docket 35620 (August 2008)
TX	Centerpoint Energy Houston Electric	Electric	Distribution Cost Recovery Factor	Change in net distribution rate base since last rate case	Docket 44572 (August 2015)
TX	Oncor Electric Delivery	Electric	Advanced Metering System Surcharge	AMI	Docket 35718 (August 2008)
TX	Texas-New Mexico Power	Electric	Advanced Metering System Surcharge	AMI	Docket 38306 (July 2011)
UT	Questar Gas	Gas	Infrastructure Rate Adjustment Tracker	Replacement of aging high-pressure feeder lines	Docket 09-057-16 (June 2010)
VA	Appalachian Power	Electric	Environmental & Reliability Cost Recovery Surcharge	Miscellaneous environmental & reliability projects	Docket PUE-2007-00069 (December 2007)
VA	Appalachian Power	Electric	Environmental Rate Adjustment Clause	Miscellaneous environmental projects	Case PUE-2011-00035 (November 2011)
VA	Appalachian Power	Electric	Generation Rate Adjustment Clause	Dresden plant	Docket PUE-2011-00036 (January 2012)
VA	Atmos Energy	Gas	Infrastructure Reliability and Replacement Adjustment	Replacement of first generation plastic pipe and service lines and bare steel mains and services	Case PUE-2012-00049 (August 2012)
VA	Columbia Gas of Virginia	Gas	SAVE Rider	Replacement of bare steel and cast iron mains, some early plastic pipe, isolated bare steel services, and risers prone to failure	Case PUE-2011-00049 (November 2011)
VA	Roanoke Gas Company	Gas	SAVE Rider	Replacement of cast iron mains, bare steel mains and services and pre-1973 plastic pipe	Case PUE-2012-00030 (August 2012)
VA	Virginia Electric Power	Electric	Rider S	Virginia City Hybrid Energy Center	Case PUE-2007-00066 (March 2008)
VA	Virginia Electric Power	Electric	Rider R	Bear Garden Generating Station	Case PUE-2009-00017 (March 2010)
VA	Virginia Electric Power	Electric	Rider W	Warren County Power Station	Case PUE-2011-00042 (February 2012)
VA	Virginia Electric Power	Electric	Rider B	Biomass conversions	Case PUE-2011-00073 (March 2012)
VA	Virginia Electric Power	Electric	Rider BW	Brunswick County Power Station (natural gas combined cycle generating station)	Case PUE-2012-00128 (August 2013)

Table 2 continued

Jurisdiction	Company Name	Services Included	Tracker Name	Eligible Investments	Case Reference
VA	Virginia Natural Gas	Gas	SAVE Rider	Replacement of first generation plastic mains, cast and wrought iron mains, bare and ineffectively coated steel mains, and service lines installed prior to 1971	Case PUE-2012-00012 (June 2012)
VA	Washington Gas Light	Gas	SAVE Rider	Replacement of bare and unprotected steel services and mains, mechanically coupled pipe, copper services, cast iron main, and pre-1975 plastic services	Cases PUE-2010-00087 and PUE-2012-00096 (April 2011 and November 2012)
WA	Cascade Natural Gas	Gas	Pipeline Replacement Program Cost Recovery Mechanism	Replacement of bare steel and poorly coated pipelines and distribution systems	Docket PG-131838 (October 2013)
WV	Appalachian Power	Electric	Construction/765kW Surcharge	Generation, environmental	Case 11-0274-E-GI (June 2011)
WV	Monongahela Power	Electric	Vegetation Management Surcharge	Capitalized distribution vegetation management expenses	Case 14-0702-E-42T (February 2015)
WV	Potomac Edison	Electric	Vegetation Management Surcharge	Capitalized distribution vegetation management expenses	Case 14-0702-E-42T (February 2015)
WV	Wheeling Power	Electric	Construction/765kW Surcharge	Generation, environmental	Case 11-0274-E-GI (June 2011)
WY	Black Hills Power	Electric	Cheyenne Prairie Generating Station rate rider tariff	Construction of Cheyenne Prairie Generating Station	Docket 20002-84-ET-12 (November 2012)
WY	Cheyenne Light, Fuel, & Power	Electric	Cheyenne Prairie Generating Station rate rider tariff	Construction of Cheyenne Prairie Generating Station	Docket 20003-123-ET-12 (November 2012)

III. Relaxing the Link Between Revenue and System Use

Policymakers are increasingly interested in relaxing the link between the revenues utilities realize, and the kWh and kW of system use by customers. This reduces the financial attrition that results from slowing growth in system use (given legacy rate designs) more efficiently than frequent rate cases. In addition, utilities have more incentive to embrace DSM. Three approaches to relaxing the revenue/usage link are well established: lost revenue adjustment mechanisms (“LRAMs”), revenue decoupling, and fixed/variable pricing.

A. Lost Revenue Adjustment Mechanisms

LRAMs keep utilities whole for short-term losses in base rate revenues that are due to their DSM programs (and potentially also DG). Recovery usually is effected through a special rate rider. Estimates of load losses are needed.

LRAMs encourage utilities to embrace DSM that is eligible for LRAM treatment. They do not provide recovery for the revenue impact of external forces, like DSM programs managed by independent agencies, which slow load growth. Estimates of load savings from utility DSM can be complex and are sometimes controversial. The scope of DSM initiatives addressed by LRAMs is therefore frequently limited to those for which load impacts are easier to measure. When usage charges are high, the utility remains at risk for revenue fluctuations in volumes and peak load due to weather, local economic activity, and other volatile demand drivers.

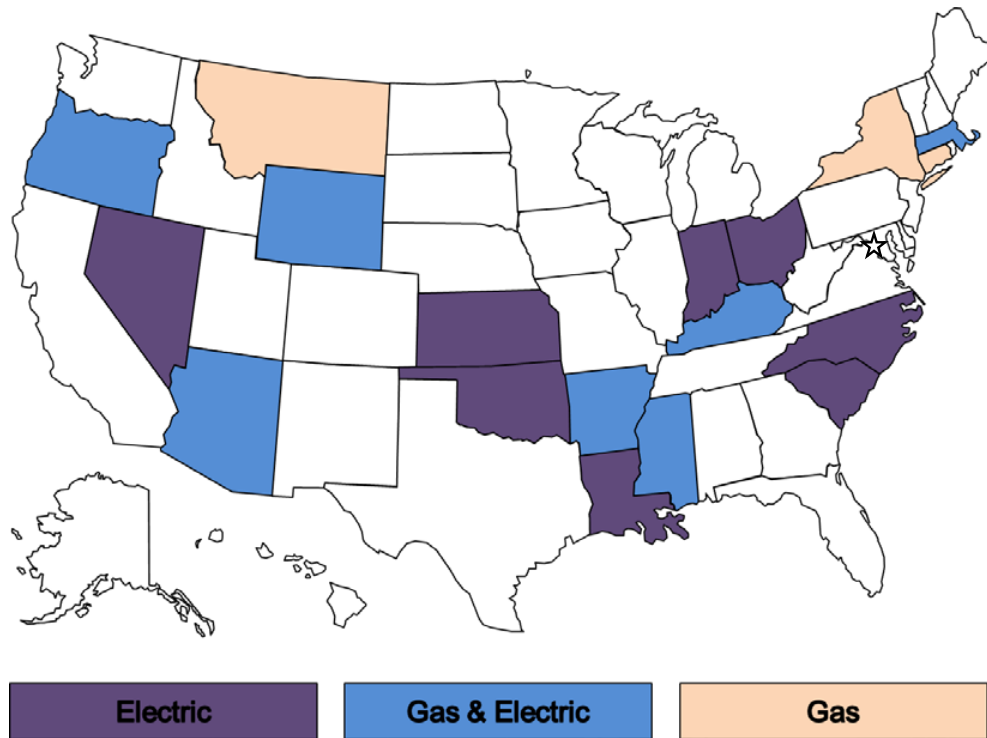
Precedents for LRAMs are detailed in Table 3 and Figure 4 below.³ LRAMs are currently the most popular means of relaxing the link between revenue and system use in the US electric utility industry. Since our 2013 survey, LRAMs have been adopted for electric utilities in Arizona, Louisiana, and Mississippi. A few utilities have LRAMs that address DG. LRAMs are less popular for gas distributors since the declining average use they have typically experienced for many years is due chiefly to external forces that LRAMs don’t address. Some utilities have LRAMs for some services and revenue decoupling for others. In New York, for example, some natural gas distributors have decoupling for residential and commercial customers and LRAMs for some large load customers.

B. Revenue Decoupling

Revenue decoupling adjusts a utility’s rates periodically to help its actual revenue track its allowed revenue more closely. Most decoupling systems have two basic components: a revenue decoupling mechanism (“RDM”) and a revenue adjustment mechanism (“RAM”). The RDM tracks variances between actual and allowed revenue and adjusts rates to reduce them. The RAM escalates allowed revenue to provide relief for growing cost pressures.

³ Some mechanisms similar to LRAMs are excluded from this survey.

Figure 4: Current LRAMs by State



RDMs can make true ups annually or more frequently. More frequent adjustments cause actual revenue to track allowed revenue more closely so that rate adjustments are smaller. The size of the rate adjustment that is permitted in a given year is sometimes capped. A “soft” cap permits utilities to defer for later recovery account balances that cannot be drawn down immediately. A “hard” cap does not.

RDMs vary in the scope of services to which they apply. Quite commonly, only revenues from residential and commercial business customers are decoupled. These customers account for a high share of a distributor’s base rate revenue and are often the primary focus of DSM programs. RDMs also vary in terms of the services for which revenues are pooled for true up purposes. In some plans all services are placed in the same “basket.” Other plans have multiple baskets, and these insulate customers of services in each basket from changes in revenue for services in other baskets.

Some RDMs are “partial” in the sense that they exclude from decoupling the revenue impact of certain kinds of demand fluctuations. For example, true ups are sometimes allowed only for the difference between allowed revenue and weather normalized actuals. An RDM that instead accounts for *all* sources of demand variance is called a “full” decoupling mechanism.

Table 3

Current LRAM Precedents¹

State	Company	Services	Approval Date	Case Reference
AR	Arkansas Oklahoma Gas	Gas	June 2011	Docket 07-077-TF, Order Number 30
AR	Centerpoint Energy Arkla	Gas	June 2011	Docket 07-081-TF, Order Number 31
AR	Entergy Arkansas	Electric	June 2011	Docket 07-085-TF, Order Number 40
AR	Oklahoma Gas & Electric	Electric	June 2011	Docket 07-075-TF, Order 26
AR	SourceGas Arkansas	Gas	June 2011	Docket 07-078-TF, Order 26
AR	Southwestern Electric Power	Electric	June 2011	Docket 07-082-TF, Orders 35 and 36
AZ	Arizona Public Service	Electric	May 2012	Docket E-01345A-11-0224, Decision 73183
AZ	Tucson Electric Power	Electric	June 2013	Docket E-01933A-12-0291; Decision 73912
AZ	UNS Electric	Electric	September 2013	Docket E-04204A-12-0504; Decision 74235
AZ	UNS Gas	Gas	May 2012	Docket G-04204A-11-0158 Decision 73142
CT	Southern Connecticut Gas	Gas	August 1995	Docket 93-03-09
CT	Yankee Gas Service	Gas	January 2012	Docket 11-10-03
IN	Duke Energy Indiana (PSI)	Electric	February 2010	Cause 43374
IN	Indiana-Michigan Power	Electric	September 2010	Cause 43827
IN	Northern Indiana Public Service	Electric	May 2011	Cause 43618
IN	Southern Indiana Gas & Electric	Electric	August 2011 (large commercial and industrials), June 2012 (residential and small commercial)	Causes 43938 and 43405 DSMA 9 S1
KS	Kansas Gas & Electric	Electric	January 2011	Docket 10-WSEE-775-TAR
KS	Westar Energy	Electric	January 2011	Docket 10-WSEE-775-TAR
KY	Atmos Energy	Gas	September 2009	Case 2008-00499
KY	Columbia Gas of Kentucky	Gas	October 2009	Case 2009-00141
KY	Delta Natural Gas	Gas	July 2008	Docket 2008-00062
KY	Duke Energy Kentucky	Electric	December 1995 and February 2005	Cases 95-321 and 2004-00389
KY	Duke Energy Kentucky	Gas	February 2005	Case 2004-00389
KY	Kentucky Power	Electric	December 1995	Case 95-427
KY	Kentucky Utilities	Electric	May 2001	Case 2000-0459
KY	Louisville Gas & Electric	Electric & Gas	November 1993	Case 93-150
LA	Cleco Power	Electric	October 2014	Docket R-31106
LA	Entergy Gulf States Louisiana	Electric	October 2014	Docket R-31106
LA	Entergy Louisiana	Electric	October 2014	Docket R-31106
LA	Southwestern Electric Power	Electric	October 2014	Docket R-31106
MA	All Electric distributors	Electric	July 2012	D.P.U. 12-01A
MA	Berkshire Gas	Gas	October 1992	D.P.U. 91-154
MA	Commonwealth Gas d/b/a NSTAR Gas	Gas	November 1994	D.P.U. 94-128

Table 3 (cont'd)

State	Company	Services	Approval Date	Case Reference
MA	NSTAR Electric	Electric	April 1992, June 1994, and June 2010	D.P.U. 90-335, D.P.U. 94-2/3-CC, and D.P.U. 10-06
MS	Atmos Energy	Gas	August 2014	Docket 2014-UA-017
MS	Centerpoint Energy	Gas	August 2014	Docket 2014-UA-007
MS	Entergy Mississippi	Electric	September 2014	Docket 2009-UN-064
MS	Mississippi Power	Electric	March 2015	Docket 2014-UN-10
MT	Montana-Dakota Utilities	Gas	October 2006	Docket D2005.10.156; Order 6697c
NC	Duke Energy Carolinas	Electric	February 2010	Docket E-7, Sub 831
NC	Progress Energy Carolinas (Carolina Power & Light)	Electric	November 2009	Docket E-2, Sub 931
NC	Virginia Electric Power	Electric	October 2011	Docket E-22, Sub 464
NV	Nevada Energy	Electric	May 2011	Docket 10-10024
NV	Sierra Pacific Power	Electric	May 2011	Docket 10-10025
NY	Keyspan Long Island	Gas	December 2009	Case 06-G-1186; Currently effective for all customers not in RDM
NY	Keyspan New York	Gas	December 2009	Case 06-G-1185; Currently effective for all customers not in RDM
OH	American Electric Power (Ohio Power, Columbus Southern Power)	Electric	May 2010	Docket 09-1089-EL-POR; Effective for classes not included in RDM
OH	Dayton Power & Light	Electric	June 2009	Docket 08-1094-EL-SSO
OH	Duke Energy Ohio (Cincinnati Gas & Electric)	Electric	July 2007 and August 2012	Dockets 06-0091-EL-UNC and 11-4393-EL-RDR; Effective for classes not included in RDM
OH	First Energy Ohio (Cleveland Electric Illuminating, Toledo Edison, Ohio Edison)	Electric	March 2009	Docket 08-935-EL-SSO
OK	Empire District Electric	Electric	November 2009	Cause 200900146 Order 571326
OK	Oklahoma Gas & Electric	Electric	July 2008	Cause 200800059 Order 556179
OK	Public Service of Oklahoma	Electric	January 2010	Cause PUD 200900196; Order 572836
OR	Cascade Natural Gas	Gas	April 2006	Order 06-191; UG 167 Effective for classes not included in RDM
OR	Portland General Electric	Electric	September 2001	Order 01-836; UE 79 Effective for classes not included in RDM
OR	Avista Utilities	Gas	December 1993	Order 93-1881
SC	Duke Energy Carolinas	Electric	January 2010	Docket 2009-226-E Order 2010-79
SC	Progress Energy Carolinas	Electric	June 2009	Docket 2008-251-E Order 2009-373
SC	South Carolina Electric & Gas	Electric	July 2010	Docket 2009-261-E, Order 2010-472
WY	Cheyenne Light, Fuel, and Power	Electric & Gas	September 2011	Dockets 20003-108-EA-10 and 30005-140-GA-10
WY	Montana-Dakota Utilities	Electric	January 2007	Docket 20004-65-ET-06

¹ LRAMs listed here include only those mechanisms that compensate utilities for actual revenues lost due to DSM and DG.

The great majority of decoupling systems have a RAM since, if allowed revenue is static, the utility will experience financial attrition as its costs inevitably rise. Utilities that do not have RAMs in their decoupling systems often file frequent rate cases or are allowed to use capital cost trackers to address attrition. The more important issue in a proceeding to consider decoupling is therefore the design of the RAM rather than the need for one.

Most RAMs escalate allowed revenue only for customer growth. Escalation for customer growth is sensible because it is an important driver of cost and also highly correlated with other drivers such as peak demand. The need for rate cases is thereby reduced but is rarely eliminated since cost has other drivers such as input price inflation. When RAMs are escalated only for customer growth, utilities usually retain the freedom to file rate cases to address other cost factors and often do. Some RAMs are “broad-based” in the sense that they provide enough revenue growth to compensate the utility for several kinds of cost pressures. This can materially reduce the need for rate cases and provide a foundation for a multiyear rate plan.

Revenue decoupling compensates utilities for declining average use even if it is driven in part by external forces such as independently administered DSM programs. The lost revenue disincentive is removed for a wide array of utility initiatives to encourage DSM without requiring load impact calculations or rate designs that discourage DSM. To the extent that recovery of allowed revenue is ensured, utilities can use rate designs with usage charges more aggressively to foster DSM. This makes environmental intervenors strong supporters of decoupling. Controversy over billing determinants in rate cases with future test years is reduced.

Revenue decoupling is a popular means of relaxing the link between a utility’s revenue and customers’ kWh consumption. States that have tried gas and electric revenue decoupling are indicated on the maps below in Figures 5a and 5b, respectively. Revenue decoupling precedents in the United States and Canada are detailed in Table 4. In the electric utility industry, decoupling has been favored in states that strongly support DSM. Since our 2013 survey, decoupling has been adopted for electric utilities in Connecticut, Maine, Minnesota, and Washington state. Decoupling is the most widespread means of relaxing the revenue/usage link for gas distributors. This reflects the fact that gas distributors often experience declining average use and that this has been driven chiefly by external forces. Table 4 indicates the kinds of RAMs chosen in approved decoupling systems. Note that RAMs for electric utilities are frequently broad-based.

C. Fixed/Variable Pricing

Fixed/variable pricing is an approach to rate design that uses fixed charges (charges that do not vary with the actual sales volume or peak demand) to compensate utilities for fixed costs of service. For residential and small commercial services, customer charges (a flat monthly fee per customer) are the most common fixed charge used. Base revenue thus tends to grow at the gradual pace of customer growth. A *straight* fixed/variable (“SFV”) rate design recovers *all* base revenue through fixed charges. A rate design that recovers a substantial but smaller share of fixed costs through fixed charges is sometimes called *modified* fixed/variable pricing.

Figure 5a: Electric Revenue Decoupling by State

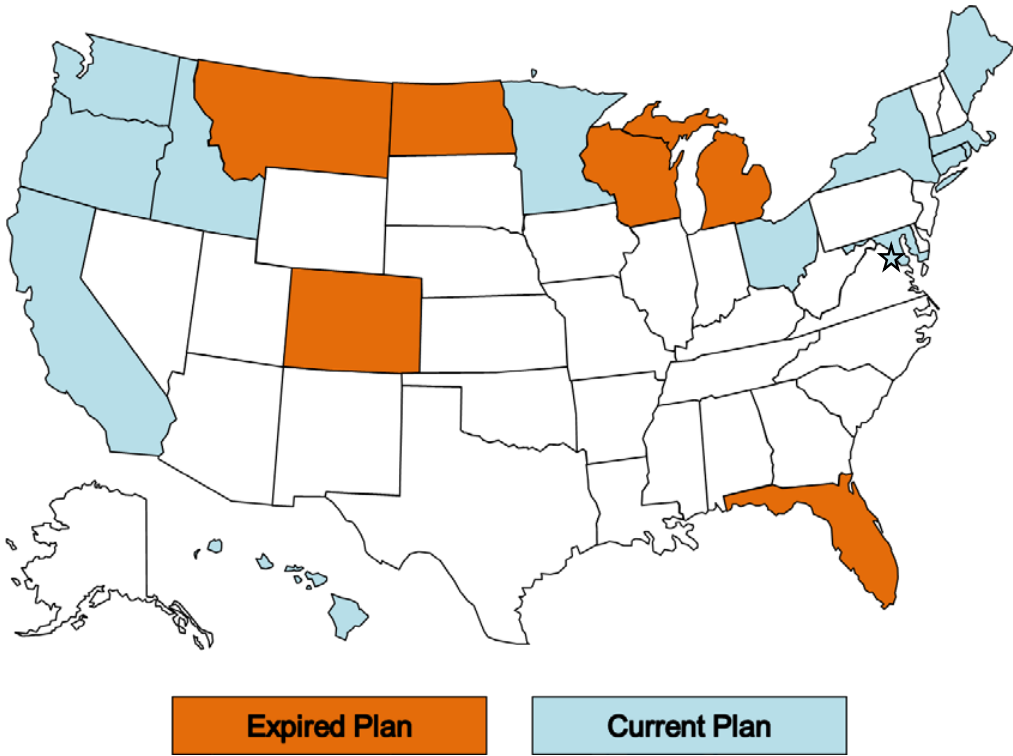


Figure 5b: Gas Revenue Decoupling by State

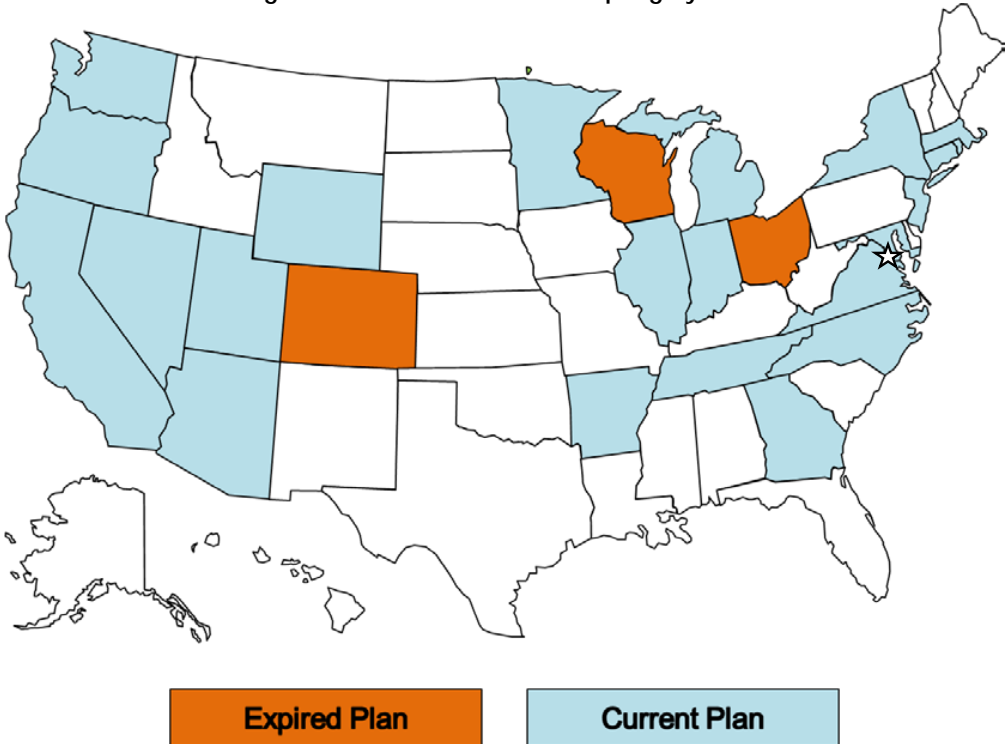


Table 4
Revenue Decoupling Precedents

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current					
United States					
AR	Arkansas Oklahoma Gas	Gas	2014-open	No RAM but multiple capital cost trackers	Docket 13-078-U
AR	CenterPoint Energy	Gas	2008-2016	No RAM but multiple capital cost trackers	Dockets 06-161-U, 11-088-U, 12-057-TF, and 13-114-TF
AR	SourceGas Arkansas (Arkansas Western)	Gas	2014-open	No RAM but multiple capital cost trackers	Docket 13-079-U
AZ	Southwest Gas	Gas	2012-open	Customers	Docket G-01551A-10-0458
CA	Bear Valley Electric Service	Electric	2013-2016	Stairstep	Decision 14-11-002
CA	California Pacific Electric	Electric	2013-2015	Indexing	Decision 12-11-030
CA	Pacific Gas & Electric	Gas & Electric	2014-2016	Stairstep	Decision 14-08-032
CA	San Diego Gas & Electric	Gas & Electric	2012-2015	Stairstep	Decision 13-05-010
CA	Southern California Edison	Electric	2012-2014	Hybrid	Decision 12-11-051
CA	Southern California Gas	Gas	2012-2015	Stairstep	Decision 13-05-010
CA	Southwest Gas	Gas	2014-2018	Stairstep	Decision 14-06-028
CT	Connecticut Light & Power	Electric	2014-open	No RAM	Docket 14-05-06
CT	Connecticut Natural Gas	Gas	2014-open	No RAM	Docket 13-06-08
CT	United Illuminating	Electric	2013-open	Stairstep until July 2015, No RAM thereafter	Docket 13-01-19
DC	Potomac Electric Power	Electric	2010-open	Customers	Order 15556
GA	Atmos Energy	Gas	2012-open	No RAM but FRP type mechanism also in effect	Docket 34734
HI	Hawaiian Electric Company	Electric	2011-open	Hybrid	Dockets 2008-0274, 2008-0083, 2013-0141
HI	Hawaiian Electric Light Company	Electric	2012-open	Hybrid	Dockets 2008-0274, 2009-0164, 2013-0141
HI	Maui Electric	Electric	2012-open	Hybrid	Dockets 2008-0274, 2009-0163, 2013-0141
ID	Idaho Power	Electric	2012-open	Customers	Cases IPC-E-11-19, IPC-E-14-17
IL	North Shore Gas	Gas	2012-open	No RAM	Case 11-0280
IL	Peoples Gas Light & Coke	Gas	2012-open	No RAM but broad-based capital cost tracker	Case 11-0281
IN	Citizens Gas	Gas	2007-open	Customers	Cause 42767
IN	Indiana Gas	Gas	2011-2015	Customers	Cause 44019
IN	Indiana Gas	Gas	2016-2019	Customers	Cause 44598
IN	Indiana Natural Gas	Gas	2014-open	Customers	Cause 44453
IN	Vectren Southern Indiana	Gas	2011-2015	Customers	Cause 44019
IN	Vectren Southern Indiana	Gas	2016-2019	Customers	Cause 44598
MA	Bay State Gas	Gas	2015-2018	Revenue per Customer Stairstep	DPU 15-50
MA	Boston-Essex Gas	Gas	2010-open	Customers	DPU 10-55
MA	Colonial Gas	Gas	2010-open	Customers	DPU 10-55
MA	Fitchburg Gas & Electric	Gas	2011-open	Customers	DPU 11-02
MA	Fitchburg Gas & Electric	Electric	2011-open	No RAM	DPU 11-01
MA	Massachusetts Electric	Electric	2010-open	No RAM but broad-based capital cost tracker	DPU 09-39
MA	New England Gas	Gas	2011-open	Customers	DPU 10-114
MA	Western Massachusetts Electric	Electric	2011-open	No RAM	DPU 10-70
MD	Baltimore Gas & Electric	Electric	2008-open	Customers	Letter Orders ML 108069, 108061
MD	Baltimore Gas & Electric	Gas	1998-open	Customers	Case 8780
MD	Chesapeake Utilities	Gas	2006-open	Customers	Order 81054
MD	Columbia Gas of Maryland	Gas	2013-open	Customers	Order 85858
MD	Delmarva Power & Light	Electric	2007-open	Customers	Order 81518
MD	Potomac Electric Power	Electric	2007-open	Customers	Order 81517
MD	Washington Gas Light	Gas	2005-open	Customers	Order 80130
ME	Central Maine Power	Electric	2014-open	Customers	Docket 2013-00168

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current (cont'd)					
United States (cont'd)					
MI	Consumers Energy	Gas	2015-open	No RAM	Case U-17643
MI	Michigan Consolidated Gas	Gas	2013-open	No RAM	Case U-16999
MI	Michigan Gas Utilities	Gas	2015-open	No RAM	Case U-17273
MN	CenterPoint Energy	Gas	2015-2018	Customers	GR-13-316
MN	Minnesota Energy Resources	Gas	2013-2016	Customers	GR-10-977
MN	Northern States Power - MN	Electric	2016-2018	Customers	GR-13-868
NC	Piedmont Natural Gas	Gas	2008-open	Customers	Docket G-9, Sub 550
NC	Public Service Co of NC	Gas	2008-open	Customers	Docket G-5, Sub 495
NJ	New Jersey Natural Gas	Gas	2014-open	Customers	Docket GR13030185
NJ	South Jersey Gas	Gas	2014-open	Customers	Docket GR13030185
NV	Southwest Gas	Gas	2009-open	Customers	D-09-04003
NY	Central Hudson G&E	Gas & Electric	2015-2018	Revenue per Customer Stairstep for Gas, Stairstep for Electric	Cases 14-E-0318, 14-G-0319
NY	Consolidated Edison	Gas	2014-2016	Revenue per Customer Stairstep	Case 13-G-0031
NY	Consolidated Edison	Electric	2014-2016	Stairstep	Case 13-E-0030
NY	Corning Natural Gas	Gas	2015-2017	Customers	Case 11-G-0280
NY	Keyspan Energy Delivery - Long Island	Gas	2010-open	Revenue per Customer Stairstep through 2012, Customers After 2012	Case 06-G-1186
NY	Keyspan Energy Delivery New York	Gas	2013-2014	Revenue per Customer Stairstep through 2014, Customers After 2014	Case 12-G-0544
NY	National Fuel Gas	Gas	2013-2015	Customers	Case 13-G-0136
NY	New York State Electric & Gas	Gas	2010-2013	Revenue per Customer Stairstep through 2013, Customers thereafter	Case 09-E-0715
NY	New York State Electric & Gas	Electric	2010-2013	Stairstep through 2013, No RAM thereafter	Case 09-G-0716
NY	Niagara Mohawk	Gas	2013-2016	Optional Revenue per Customer Stairstep	Case 12-G-0202
NY	Niagara Mohawk	Electric	2013-2016	Optional Stairstep	Case 12-E-0201
NY	Orange & Rockland Utilities	Gas	2015-2018	Revenue per Customer Stairstep	Case 14-G-0494
NY	Orange & Rockland Utilities	Electric	2015-2017	Stairstep	Case 14-E-0493
NY	Rochester Gas & Electric	Gas	2010-2013	Revenue per Customer Stairstep through 2013, Customers thereafter	Case 09-E-0717
NY	Rochester Gas & Electric	Electric	2010-2013	Stairstep through 2013, No RAM thereafter	Case 09-G-0718
NY	St. Lawrence Gas	Gas	2010-open	Revenue per Customer Stairstep through 2012, Customers thereafter	Case 08-G-1392
OH	AEP Ohio	Electric	2012-2018	Customers	Cases 11-351-EL-AIR, 13-2385-EL-SSO
OH	Duke Energy Ohio	Electric	2015-open	Customers	Case 14-841-EL-SSO
OR	Cascade Natural Gas	Gas	2013-2015	Customers	Order 13-079
OR	Northwest Natural Gas	Gas	2012-open	Customers	Order 12-408
OR	Portland General Electric	Electric	2014-2016	Customers	Order 13-459
RI	Narragansett Electric	Electric	2012-open	No RAM but broad-based capital cost tracker	Docket 4206
RI	Narragansett Electric	Gas	2012-open	Customers	Docket 4206
TN	Chattanooga Gas	Gas	2013-open	Customers	Docket 09-0183
UT	Questar Gas	Gas	2010-open	Customers	Docket 09-057-16
VA	Columbia Gas of Virginia	Gas	2013-2015	Customers	Case PUE-2012-00013
VA	Virginia Natural Gas	Gas	2013-2016	Customers	Case PUE-2012-00118
VA	Washington Gas Light	Gas	2013-2016	Customers	Case PUE-2012-00138
WA	Avista	Gas & Electric	2015-2019	Customers	Dockets UE-140188 and UG-140189
WA	Puget Sound Energy	Gas & Electric	2013-2016	Revenue per Customer Stairstep	Dockets UE-121697 and UG-121705
WY	Questar Gas	Gas	2012-open	Customers	Docket 30010-113-GR-11
WY	SourceGas Distribution	Gas	2011-open	Customers	Docket 30022-148-GR-10

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Current (cont'd)					
Canada					
BC	BC Hydro	Electric	2015-2016	Stairstep	Order G-48-14
BC	FortisBC	Electric	2014-2019	Indexing	Order G-139-14
BC	FortisBC Energy	Gas	2014-2019	Indexing	Order G-138-14
BC	Pacific Northern Gas	Gas	2003-open	Customers	N/A
ON	Enbridge Gas Distribution	Gas	2014-2018	Stairstep	EB-2012-0459
ON	Union Gas	Gas	2014-2018	Indexing	EB-2013-0202
Historic					
United States					
AR	Arkansas Oklahoma Gas	Gas	2007-2013	No RAM	Dockets 07-026-U, 07-077-TF
AR	Arkansas Western	Gas	2008-2013	No RAM	Docket 07-078-TF
CA	Bear Valley Electric Service	Electric	2009-2012	Stairstep	Decision 09-10-028
CA	Pacific Gas & Electric	Gas & Electric	1982-1983	Hybrid	Decision 93887
CA	Pacific Gas & Electric	Electric	1984-1985	Hybrid	Decision 83-12-068
CA	Pacific Gas & Electric	Electric	1986-1989	Hybrid	Decision 85-12-076
CA	Pacific Gas & Electric	Electric	1990-1992	Hybrid	Decision 89-12-057
CA	Pacific Gas & Electric	Gas & Electric	1993-1995	Hybrid	Decision 92-12-057
CA	Pacific Gas & Electric	Gas & Electric	2004-2006	Indexing	Decision 04-05-055
CA	Pacific Gas & Electric	Gas & Electric	2007-2010	Stairstep	Decision 07-03-044
CA	Pacific Gas & Electric	Gas & Electric	2011-2013	Stairstep	Decision 11-05-018
CA	Pacific Gas & Electric	Gas	1978-1981	No RAM	Decisions 89316, 91107
CA	PacifiCorp	Electric	1984-1985	Stairstep	Decision 89-09-034
CA	San Diego Gas & Electric	Gas & Electric	1982-1983	Hybrid	Decision 93892
CA	San Diego Gas & Electric	Gas & Electric	1986-1988	Hybrid	Decision 85-12-108
CA	San Diego Gas & Electric	Electric	1989-1993	Hybrid	Decision 89-11-068
CA	San Diego Gas & Electric	Gas & Electric	1994-1999	Hybrid	Decision 94-08-023
CA	San Diego Gas & Electric	Gas & Electric	2005-2007	Indexing	Decision 05-03-025
CA	San Diego Gas & Electric	Gas & Electric	2008-2011	Stairstep	Decision 08-07-046
CA	Southern California Edison	Electric	1983-1984	Hybrid	Decision 82-12-055
CA	Southern California Edison	Electric	1986-1991	Hybrid	Decision 85-12-076
CA	Southern California Edison	Electric	2001-2003	Indexing	Decision 02-04-055
CA	Southern California Edison	Electric	2004-2006	Hybrid	Decision 04-07-022
CA	Southern California Edison	Electric	2006-2008	Hybrid	Decision 06-05-016
CA	Southern California Edison	Electric	2009-2011	Stairstep	Decision 09-03-025
CA	Southern California Gas	Gas	1979-1980	No RAM	Decision 89710
CA	Southern California Gas	Gas	1981-1982	Stairstep	Decision 92497
CA	Southern California Gas	Gas	1983-1984	Hybrid	Decision dated December 8, 1982
CA	Southern California Gas	Gas	1986-1989	Hybrid	Decision 85-12-076
CA	Southern California Gas	Gas	1990-1993	Hybrid	Decision 90-01-016
CA	Southern California Gas	Gas	1998-2002	Indexing	Decision 97-07-054
CA	Southern California Gas	Gas	2005-2007	Indexing	Decision 05-03-025
CA	Southern California Gas	Gas	2008-2011	Stairstep	Decision 08-07-046
CA	Southwest Gas	Gas	2009-2013	Stairstep	Decision 08-11-048
CO	Public Service Company of Colorado	Gas	2008-2011	Customers	Decision C07-0568
CO	Public Service Company of Colorado	Electric	2012-2014	Stairstep	Decision C12-0494
CT	United Illuminating	Electric	2009-2013	Stairstep until 2011/No RAM for 2011 onwards	Docket 08-07-04
FL	Florida Power Corporation	Electric	1995-1997	Customers	Docket 930444
ID	Idaho Power	Electric	2007-2009	Customers	Case IPC-E-04-15
ID	Idaho Power	Electric	2010-2012	Customers	Case IPC-E-09-28
IL	North Shore Gas	Gas	2008-2012	Customers	Case 07-0241
IL	Peoples Gas Light & Coke	Gas	2008-2012	Customers	Case 07-0242
IN	Citizens Gas	Gas	2007-2011	Customers	Cause 42767
IN	Vectren Energy	Gas	2007-2011	Customers	Cause 43046
IN	Vectren Southern Indiana	Gas	2007-2011	Customers	Cause 43046
MA	Bay State Gas	Gas	2009-open	Customers	DPU 09-30
ME	Central Maine Power	Electric	1991-1993	Customers	Docket 90-085
MI	Consumers Energy	Electric	2009-2011	Customers	Case U-15645
MI	Consumers Energy	Gas	2010-2012	Customers	Case U-15986
MI	Detroit Edison	Electric	2010-2011	Customers	Case U-15768
MI	Michigan Consolidated Gas	Gas	2010-2012	Customers	Case U-15985
MI	Michigan Gas Utilities	Gas	2010-2013	Customers	Case U-15990
MI	Upper Peninsula Power	Electric	2010-2011	Customers	Case U-15988
MN	CenterPoint Energy	Gas	2010-2013	Customers	Docket GR-08-1075
MT	Montana Power Company	Electric	1994-1998	Customers	Docket 93.6.24

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Historic (cont'd)					
United States (cont'd)					
NC	Piedmont Natural Gas	Gas	2005-2008	Customers	Docket G-44 Sub 15
ND	Northern States Power - MN	Electric	2012	Not Applicable, plan only 1 year in duration	Case PU-11-55
NJ	New Jersey Natural Gas	Gas	2007-2010	Customers	Docket GR05121020
NJ	New Jersey Natural Gas	Gas	2010-2013	Customers	Docket GR05121020
NJ	South Jersey Gas	Gas	2007-2010	Customers	Docket GR05121019
NJ	South Jersey Gas	Gas	2010-2013	Customers	Docket GR05121019
NY	Central Hudson G&E	Gas	2009-open	Customers	Case 08-E-0888
NY	Central Hudson G&E	Electric	2009	No RAM	Case 08-E-0887
NY	Central Hudson G&E	Gas & Electric	2010-2013	Revenue per Customer Stairstep for Gas, Stairstep for Electric	Case 09-E-0588
NY	Central Hudson G&E	Gas & Electric	2013-open	Customers for Gas, No RAM for Electric	Case 12-M-0192
NY	Consolidated Edison	Electric	1992-1995	Stairstep	Opinion 92-8
NY	Consolidated Edison	Gas	2007-2010	Stairstep	Case 06-G-1332
NY	Consolidated Edison	Electric	2008-open	No RAM	Case 07-E-0523
NY	Consolidated Edison	Gas	2010-2013	Revenue per Customer Stairstep	Case 09-G-0795
NY	Consolidated Edison	Electric	2010-2013	Stairstep	Case 09-E-0428
NY	Corning Natural Gas	Gas	2012-2015	Revenue per Customer Stairstep	Case 11-G-0280
NY	Keyspan Energy Delivery - New York	Gas	2010-open	Revenue per Customer Stairstep	Case 06-G-1185
NY	Long Island Lighting Company	Electric	1992-1994	Stairstep	Opinion 92-8
NY	National Fuel Gas	Gas	2008-open	Customers	Case 07-G-0141
NY	New York State Electric & Gas	Electric	1993-1995	Stairstep	Opinion 93-22
NY	Niagara Mohawk	Electric	1990-1992	Stairstep	Case 94-E-0098
NY	Niagara Mohawk	Gas	2009-open	Customers	Case 08-G-0609
NY	Niagara Mohawk	Electric	2011-open	No RAM	Case 10-E-0050
NY	Orange & Rockland Utilities	Electric	2012-2015	Stairstep	Case 11-E-0408
NY	Orange & Rockland Utilities	Electric	2011-2012	No RAM	Case 10-E-0362
NY	Orange & Rockland Utilities	Electric	2008-2011	Stairstep	Case 07-E-0949
NY	Orange & Rockland Utilities	Electric	1991-1993	Stairstep	Case 89-E-175
NY	Orange & Rockland Utilities	Gas	2012-2015	Customers	Case 08-G-1398
NY	Orange & Rockland Utilities	Gas	2009-2012	Revenue per Customer Stairstep	Case 08-G-1398
NY	Rochester Gas & Electric	Electric	1993-1996	Stairstep	Opinion 93-19
OH	Duke Energy Ohio	Electric	2012-2014	Customers	Case 11-5905-EL-RDR
OH	Vectren Energy	Gas	2007-2009	Customers	Case 05-1444-GA-UNC
OR	Cascade Natural Gas	Gas	2007-2012	Customers	Order 06-191
OR	Northwest Natural Gas	Gas	2002-2005	Customers	Order 02-634
OR	Northwest Natural Gas	Gas	2005-2009	Customers	Order 05-934
OR	Northwest Natural Gas	Gas	2009-2012	Customers	Order 07-426
OR	PacifiCorp	Electric	1998-2001	Indexing	Order 98-191
OR	Portland General Electric	Electric	1995-1996	Stairstep	Order 95-0322
OR	Portland General Electric	Electric	2009-2010	Customers	Order 09-020
OR	Portland General Electric	Electric	2011-2013	Customers	Order 10-478
TN	Chattanooga Gas	Gas	2010-2013	Customers	Docket 09-0183
UT	Questar Gas	Gas	2006-2010	Customers	Docket 05-057-T01
VA	Virginia Natural Gas	Gas	2009-2012	Customers	Case PUE-2008-00060
VA	Washington Gas Light	Gas	2010-2013	Customers	Case PUE-2009-00064
WA	Avista	Gas	2007-2009	Customers	Docket UG-060518
WA	Avista	Gas	2009-2012	Customers	Docket UG-060518
WA	Avista	Gas	2013-2014	Revenue per Customer Stairstep	Docket UG-120437
WA	Cascade Natural Gas	Gas	2005-2010	Customers	Docket UG-060256
WA	Puget Sound & Power	Electric	1991-1995	Customers	Docket UE-901184-P
WI	Wisconsin Public Service	Gas & Electric	2009-2012	Customers	D-6690-UR-119
WI	Wisconsin Public Service	Gas & Electric	2013	Not Applicable, plan only 1 year in duration	Docket 6690-UR-121
WY	Questar Gas	Gas	2009-2012	Customers	Docket 30010-94-GR-08

Table 4 (cont'd)

Jurisdiction	Company Name	Services	Plan Years	Revenue Adjustment Mechanism	Case Reference
Historic (cont'd)					
Canada					
BC	BC Gas	Gas	1994-1995	Hybrid	Order G-59-94
BC	BC Gas	Gas	1996-1997	Hybrid	N/A
BC	BC Gas	Gas	1998-2000	Hybrid	Order G-85-97
BC	BC Gas	Gas	2000-2001	Hybrid	Order G-48-00
BC	BC Hydro	Electric	2009-2010	Hybrid	Order G-16-09
BC	BC Hydro	Electric	2011	Not Applicable, plan only 1 year in duration	Order G-180-10
BC	BC Hydro	Electric	2012-2014	Stairstep	Order G-77-12A
BC	FortisBC	Electric	2012-2013	Stairstep	Order G 110-12
BC	Terasen Gas	Gas	2008-2009	Hybrid	Order G-33-07
BC	Terasen Gas	Gas	2004-2007	Hybrid	Order G-51-03
BC	Terasen Gas	Gas	2010-2011	Hybrid	Order G-141-09
BC	Terasen Gas	Gas	2012-2013	Stairstep	Order G-44-12
ON	Enbridge Gas Distribution	Gas	2008-2012	Revenue per Customer Indexing	Docket EB-2007-0615
ON	Union Gas	Gas	2008-2012	Indexing	Docket EB-2007-0606

Fixed/variable pricing relaxes the revenue/usage link with low administrative cost since it requires neither decoupling true ups nor load impact calculations. When average use is declining, base revenue will grow more rapidly with fixed/variable pricing so that rate cases tend to be less frequent even if the decline is largely driven by external forces. Base revenue grows more slowly than under conventional rate designs if average use is rising. The short term disincentive is removed to embrace various DSM initiatives. However, fixed/variable pricing reduces a utility's ability to use usage charges as a tool for promoting DSM. For example, it does not encourage customers with electric vehicles to charge these vehicles at night. Note also that the principle of rate design gradualism often discourages regulators from immediately adopting SFV pricing.

SFV pricing has been used on a large scale by interstate gas transmission companies since the early 1990s. Precedents for fixed/variable pricing in retail ratemaking are listed below on Table 5 and Figure 6. It can be seen that fixed/variable pricing has to date been considerably more common for gas distributors than electric utilities. This again reflects the greater problem of declining average use that gas distributors have faced, and the fact that the decline has been driven largely by external forces. Since our 2013 survey, fixed/variable pricing has been implemented for an electric utility in Oklahoma.

In addition to the precedents listed here, utilities in Wisconsin and several other states have in recent years made sizable steps in the direction of fixed/variable pricing by redesigning rates for small volume customers to raise customer charges and lower volumetric charges substantially. Investor-owned utilities in Canada are typically permitted to raise a much higher portion of their revenue through fixed charges than are utilities in the United States. Most fixed/variable rate designs feature uniform fixed charges within service classes, but gas utilities in Florida, Georgia, and Oklahoma have fixed charges that vary in some fashion with long term consumption patterns.

Figure 6: Fixed/Variable Pricing Precedents by State

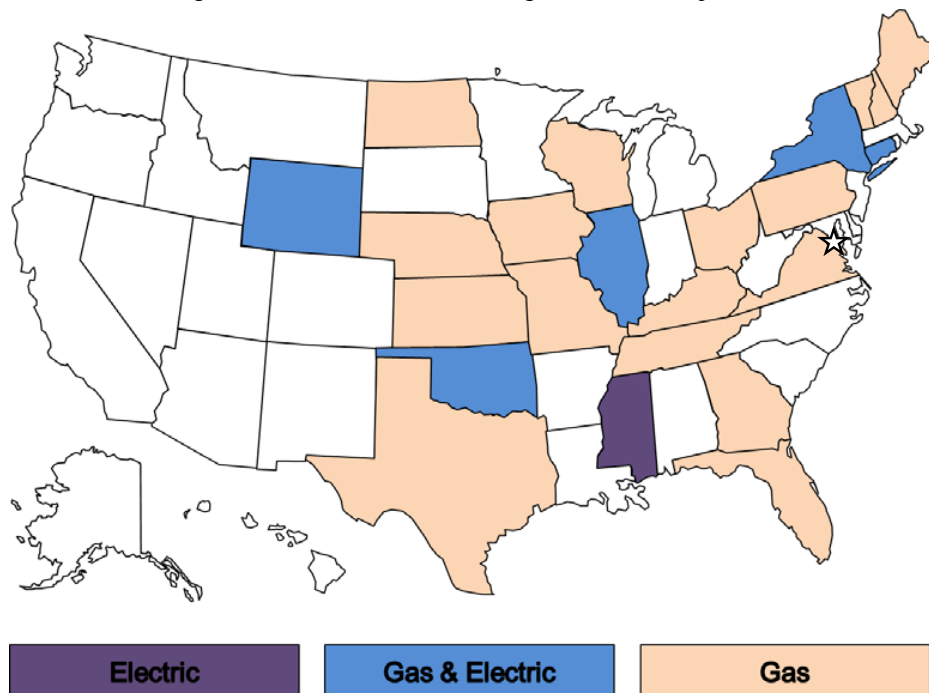


Table 5

Fixed Variable Residential Pricing Precedents¹

Jurisdiction	Company Name	Services	Years in Place	Case Reference
CT	Connecticut Light & Power	Electric	2007-open	Docket 07-07-01
CT	Connecticut Natural Gas	Gas	2014-open	Docket 13-06-08
CT	United Illuminating	Electric	Occurred over period of years	No specific case
CT	Yankee Gas System	Gas	2011-open	Docket 10-12-02
FL	Peoples Gas System	Gas	2009-open	Docket 080318-GU
GA	Liberty Utilities	Gas	2015-open	Docket 34734
IA	Black Hills Energy	Gas	2009-open	Docket RPU-08-3
IL	Ameren CILCO	Gas	2008-2012	Case 07-0588
IL	Ameren CIPS	Gas	2008-2012	Case 07-0589
IL	Ameren IP	Gas	2008-2012	Case 07-0590
IL	Ameren Illinois	Gas	2012-open	Case 11-0282
IL	Ameren Illinois	Electric	Occurred over period of years	No specific case
IL	Commonwealth Edison	Electric	2011-2013	Case 10-0467
IL	Mt. Carmel Public Utilities	Gas	2013-open	Case 13-0079
IL	North Shore Gas	Gas	2008-open	Case 07-0241
IL	Peoples Gas Light & Coke	Gas	2008-open	Case 07-0242
KS	Atmos Energy	Gas	2010-open	Docket 10-ATMG-495-RTS
KS	Black Hills Energy (formerly Aquila)	Gas	2007-open	Docket 07-AQLG-431-RTS
KS	Kansas Gas Service	Gas	2012-open	Docket 12-KGSG-835-RTS
KY	Atmos Energy	Gas	2014-open	Case 2013-00148
KY	Columbia Gas	Gas	2013-open	Case 2013-00167
KY	Delta Natural Gas	Gas	2007-open	Case 2007-00089
KY	Duke Energy Kentucky	Gas	2010-open	Case 2009-00202
ME	Maine Natural Gas	Gas	Occurred over period of years	Docket 2009-00067
ME	Northern Utilities	Gas	2014-open	Docket 2013-00133
MO	AmerenUE	Gas	2007-open	Case GR-2007-0003
MO	Atmos Energy	Gas	2007-2010	Case GR-2006-0387
MO	Atmos Energy	Gas	2010-open	Case GR-2010-0192
MO	Empire District Gas	Gas	2010-open	Case GR-2009-0434
MO	Laclede Gas	Gas	2002-open	Case GR-2002-356
MO	Missouri Gas Energy	Gas	2007-open	Case GR-2006-0422
MS	Mississippi Power	Electric	Occurred over period of years	No specific case
ND	Xcel Energy	Gas	2005-open	Case PU-04-578
NE	SourceGas Distribution	Gas	2012-open	Docket NG-0067
NH	Liberty Utilities (EnergyNorth Natural Gas)	Gas	Occurred over period of years	No specific case
NH	Northern Utilities	Gas	2014-open	DG 13-086
NY	Central Hudson Gas & Electric	Electric & Gas	Occurred over period of years	No specific case
NY	Consolidated Edison	Electric & Gas	Occurred over period of years	No specific case
NY	Corning Gas	Gas	Occurred over period of years	No specific case
NY	Keyspan Energy Delivery - Long Island	Gas	Occurred over period of years	No specific case
NY	Keyspan Energy Delivery - New York	Gas	Occurred over period of years	No specific case
NY	National Fuel Gas	Gas	Occurred over period of years	No specific case

Table 5 (cont'd)

Jurisdiction	Company Name	Services	Years in Place	Case Reference
NY	New York State Electric & Gas	Electric	Occurred over period of years	No specific case
NY	Niagara Mohawk	Electric & Gas	Occurred over period of years	No specific case
NY	Orange & Rockland	Electric & Gas	Occurred over period of years	No specific case
NY	Rochester Gas & Electric	Electric & Gas	Occurred over period of years	No specific case
OH	Columbia Gas	Gas	2008-open	Case 08-0072-GA-AIR
OH	Dominion East Ohio	Gas	2008-2010	Case 07-830-GA-ALT
OH	Duke Energy Ohio (CG&E)	Gas	2008-open	Case 07-590-GA-ALT
OH	Vectren Energy Delivery of Ohio	Gas	2009-open	Case 07-1080-GA-AIR
OK	Arkansas Oklahoma Gas	Gas	2013-open	Cause PUD 201200236
OK	Centerpoint Energy	Gas	2010-open	Cause PUD 201000030
OK	Oklahoma Natural Gas	Gas	2004-open	Causes PUD 200400610, PUD 201000048, PUD 200900110
OK	Public Service Company of Oklahoma	Electric	2015-open	Cause PUD 201300217
PA	Columbia Gas	Gas	2013-open	Docket R-2012-2321748
TN	Atmos Energy	Gas	2012-open	Docket 12-00064
TN	Piedmont Natural Gas	Gas	2012-open	Docket 11-00144
TX	Atmos Energy - Mid-Tex Division	Gas	Occurred over period of years	No specific case
TX	Atmos Energy - West Texas Division	Gas	Occurred over period of years	No specific case
TX	Centerpoint Energy Houston Division	Gas	Occurred over period of years	No specific case
TX	Centerpoint Energy Beaumont/East Texas Division	Gas	Occurred over period of years	No specific case
VA	Columbia Gas of Virginia	Gas	Occurred over period of years	No specific case
VT	Vermont Gas Systems	Gas	Occurred over period of years	No specific case
WI	Madison Gas & Electric	Gas	2015-open	Docket 3270-UR-120
WI	Wisconsin Public Service	Gas	2015-open	Docket 6690-UR-123
WY	SourceGas Distribution	Gas	2011-open	Docket 30022-148-GR-10
WY	PacifiCorp (d/b/a Rocky Mountain Power)	Electric	2009-open	Docket 20000-333-ER-08

¹ Fixed variable pricing precedents include power and gas distributors that have a customer charge equal to or in excess of \$15 (or \$20 for vertically integrated electric utilities).

IV. Forward Test Years

General rate cases involve “test years” in which revenue requirements and billing determinants (e.g., the residential delivery volume) are jointly considered in ratesetting. A historical test year ends before the rate case is filed. A forward (a/k/a “fully forecasted”) test year (“FTY”) begins after the rate case is filed. An FTY typically begins about the time the rate case is expected to end and new rates take effect. Two-year forecasts may be required in this event which span both the year of the rate case and the rate effective year.⁴ In between forward and historical test years is the option of a “partially forecasted” test year in which some months of historical data on utility operations are combined with some months of forecasted data. Under this approach, actual data for all months usually become available during the course of the rate case.

Historical test years tend to be uncompensatory when cost is growing faster than billing determinants. Annual rate cases with historical test years can alleviate but not eliminate underearning under these conditions. The effect on credit metrics can be material.⁵ Where historical test years are used, there are thus added advantages to implementing other Altreg innovations discussed in this survey.

Forward test years can fully compensate utilities when cost growth exceeds growth in billing determinants. If this imbalance is chronic, however, FTYs do not eliminate the problem of frequent rate cases. It is therefore not unusual for regulators to combine FTYs with other Altreg remedies, such as cost trackers or multiyear rate plans.

Many approaches are used to forecast costs in FTY rate cases. Some companies rely on their budgeting process to make cost projections. Others normalize data for an historical reference period, adjusted for known and measurable changes, and then use indexing and other statistical methods to extend projections. A mixture of forecasting methods is common. For example, index-based forecasting may be used only for O&M expenses.

FTYs were adopted in many jurisdictions during the 1970s and 1980s, when rapid inflation and major plant additions coincided with oil shock-induced slowdowns in the growth of average use. Several additional states have recently moved in the direction of FTYs. Some of these states are in the West, where comparatively rapid economic growth has required more rapid buildout of utility infrastructure.

Current state policies concerning test years are summarized below in Figure 7 and Table 6. In many jurisdictions the use of partially or fully-forecasted test years is not standardized. For example, in some jurisdictions, including Illinois and North Dakota, utilities are allowed to select their type of rate case test year. Test year selection may also be made part of the rate case (e.g., Utah). A few jurisdictions allow forward test years to be used in rate cases or formula rate plans, but not both (e.g., Illinois and Arkansas).

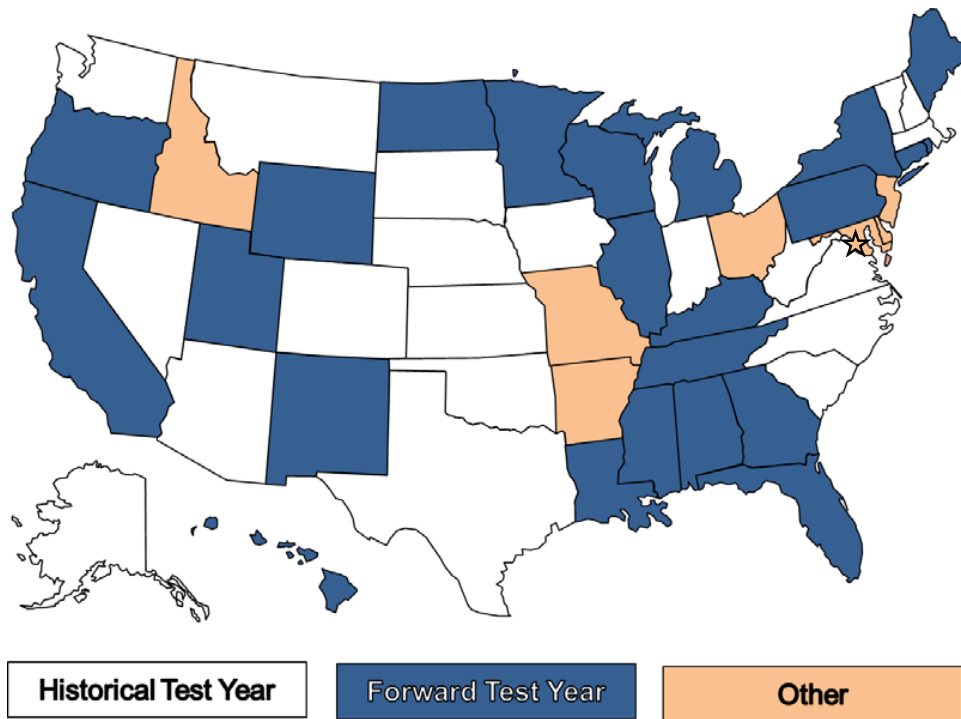
⁴ A forward test year can in principle be the rate case year, and thereby not require two-year forecasts. Proposed rates can be established on an interim basis shortly after the filing.

⁵ For evidence see “Forward Test Years for US Electric Utilities” by Mark Newton Lowry, David Hovde, Lullit Getachew, and Matt Makos, Edison Electric Institute, 2010.

Because of these complications, we have separated Table 6 into separate sections, specifying where FTYs are commonly used or occasionally used. Figure 7 shows jurisdictions where FTYs are commonly or occasionally used. Jurisdictions where partially-forecasted test years are commonly or occasionally used are in the category titled Other, with the remaining jurisdictions counted as historical test years.

The ranks of US jurisdictions that allow the use of forward test years have swollen and now encompass about half of the total. Since our 2013 survey, electric utilities in Pennsylvania have successfully used FTYs and utilities in Arkansas and Indiana have received legislative authorization for their use.⁶⁷ Forward test years are the norm in Canadian regulation.

Figure 7: Test Year Policy by State



⁶ In addition, another electric utility in Mississippi was recently permitted to use a forward-looking formula rate plan.

⁷ FTYs in Arkansas can only be used in formula rate plans.

Table 6

Test Year Approaches of US Jurisdictions

Jurisdiction	Notes
Fully-Forecasted Test Years Commonly Used (15)	
Alabama	Utilities operate under forward-looking formula rate plans
California	
Connecticut	
FERC	
Florida	
Georgia	
Hawaii	
Maine	
Michigan	
Minnesota	
New York	
Oregon	
Rhode Island	
Tennessee	
Wisconsin	
Fully-Forecasted Test Years Occasionally Used (9)	
Illinois	Utilities use various test years including forward test years ("FTYs")
Kentucky	
Louisiana	
Mississippi	
New Mexico	
North Dakota	
Pennsylvania	
Utah	
Wyoming	
Partially-Forecasted Test Years Commonly or Occasionally Used (8)	
Arkansas	Utilities have typically used partially forecasted test years in rate cases. However, a recent bill authorized the use of formula rates with either historical or forecasted test periods.
Delaware	
District of Columbia	
Idaho	
Maryland	
Missouri	
New Jersey	
Ohio	
Historical Test Years Commonly Used (20)	
Alaska	Utilities have filed FTY evidence. However, no FTY rates have yet been approved but a recent case made extraordinary HTY adjustments.
Arizona	
Colorado	
Indiana	
Iowa	
Kansas	
Massachusetts	
Montana	
Nebraska	
Nevada	
New Hampshire	
North Carolina	
Oklahoma	
South Carolina	
South Dakota	
Texas	
Vermont	
Virginia	
Washington	
West Virginia	

V. Multiyear Rate Plans

Multiyear rate plans (“MRPs”) are designed to reduce regulatory cost, while increasing the utility incentive for efficient operation. Rate cases are held infrequently, most often at three to five year intervals. Between rate cases, rate escalations are based on a combination of automatic attrition relief mechanisms (“ARMs”) and cost trackers. The rate adjustments provided by ARMs are largely “external” in the sense that they give a utility an *allowance* for cost growth rather than reimbursement for its *actual* growth.

The “externalization” of ratemaking that ARMs and rate case moratoria achieve gives utilities more opportunity to profit from improved performance. Benefits of better performance can be shared between the utility and its customers. Performance incentives are strengthened despite streamlined regulation. Lower regulatory cost has special appeal in jurisdictions where numerous utilities must be regulated.

ARMs can cap growth in rates (e.g., customer charges and cents per kWh) or allowed revenue. Rate caps are favored when and where utilities are encouraged to bolster customer use of the grid. Revenue caps are usually combined with revenue decoupling mechanisms, and are often favored where utilities must cope with declining average use and/or policymakers strongly encourage DSM.

Several approaches to ARM design are well-established. These include multiyear cost forecasts, indexing, and hybrids. Indexing escalates rates (or revenue) automatically for inflation and sometimes also for growth in other cost drivers like the number of customers served. A hybrid approach to ARM design was developed in the US that involves indexing of revenue for O&M expenses and forecasts for capital cost revenue.

The indexing approach to ARM design has been more common for UDCs because their cost growth is relatively gradual and predictable. Hybrid and forecasted ARMs have historically been more common for vertically integrated electric utilities because occasional major plant additions have given their cost trajectories more of a “stairstep” pattern. However, this pattern is becoming less common in an era when demand growth is slower and fewer large power plants are under construction. Some VIEUs operating under MRPs have separate ARMs for generation and distribution.

Cost trackers are often used in MRPs to address changes in business conditions that are difficult to address using ARMs. A tracker that recovers a large portion of a utility’s capex cost can sometimes permit the company to operate under a multiyear freeze on rates for other non-energy costs. MRPs with “tracker/freeze” provisions for vertically integrated utilities often accord tracker treatment to costs of new or refurbished generating plants.⁸ Trackers also address *force majeure* events like severe storms and changes in tax rates that affect costs.

Many MRPs feature earnings sharing mechanisms (“ESMs”) that automatically share earnings surpluses and/or deficits that result when the rate of return on equity (“ROE”) deviates from its regulated target. Some MRPs feature “off-ramps” that permit plan suspension when earnings are unusually high or low.

⁸ A good example is the Generation Base Rate Adjustment in the current MRP of Florida Power & Light.

Plans often feature performance incentive mechanisms that are linked to the utility's service quality. With stronger cost containment incentives, there is a greater need for a link between revenue and service quality. Many MRPs combine revenue decoupling, the tracking of DSM expenses, and performance incentives for DSM. The stronger incentive to contain cost that MRPs provide then becomes a "fourth leg" for the DSM stool.

MRPs have long been used to regulate utilities where market-responsive rates and services are a priority. Infrequent rate cases reduce the regulatory cost of allocating the revenue requirement between a complex and changing mix of market offerings and lessen concerns about cross-subsidization. These benefits of MRPs can be enhanced by designing other plan provisions in ways that insulate core customers from potentially adverse consequences of marketing flexibility.

For example, in the early 1990s, Maine's electric utilities were still vertically integrated and needed flexibility in marketing power to paper and pulp customers, some of whom had cogeneration options. The commission, under the chairmanship of Thomas Welch (a former telecom industry lawyer) approved a succession of price cap plans for Central Maine Power which facilitated marketing flexibility. As a result, the company had more freedom to enter into special contracts. The stronger incentives the company had to offer the right discounts to customers at risk of bypass was acknowledged by the commission when costs were allocated in later rate cases.

MRPs were first widely used in the United States to regulate railroad, oil pipeline, and telecommunications companies. A major attraction was the ability of MRPs to afford utilities flexibility in serving markets with diverse competitive pressures and complex, changing customer needs. US and Canadian precedents for MRPs in the electricity and gas utility industries are indicated in Table 7 and Figures 8a and 8b.⁹ In the US, MRPs have traditionally been most common in California and the Northeast. MRPs have been adopted by well-known VIEUs in Florida, North Dakota, and Virginia since our 2012 survey. A number of states have, additionally, experimented with "mini-MRPs" with terms of only two years. The forecast and tracker/freeze approaches to ARM design are most common currently in the US. The Federal Energy Regulatory Commission ("FERC") uses MRPs with index-based ARMs to regulate oil pipelines.

Canada is moving towards MRPs with index-based ARMs for gas and electric power distribution in all four populous provinces. In advanced economies overseas, MRPs are more the rule than the exception for utility regulation. Australia, Britain, and New Zealand are long time practitioners.

⁹ Rate freezes without extensive supplemental funding from capital cost trackers are excluded from Table 7 and Figures 8a and 8b.

Figure 8a: Recent US Multiyear Rate Plan Precedents by State

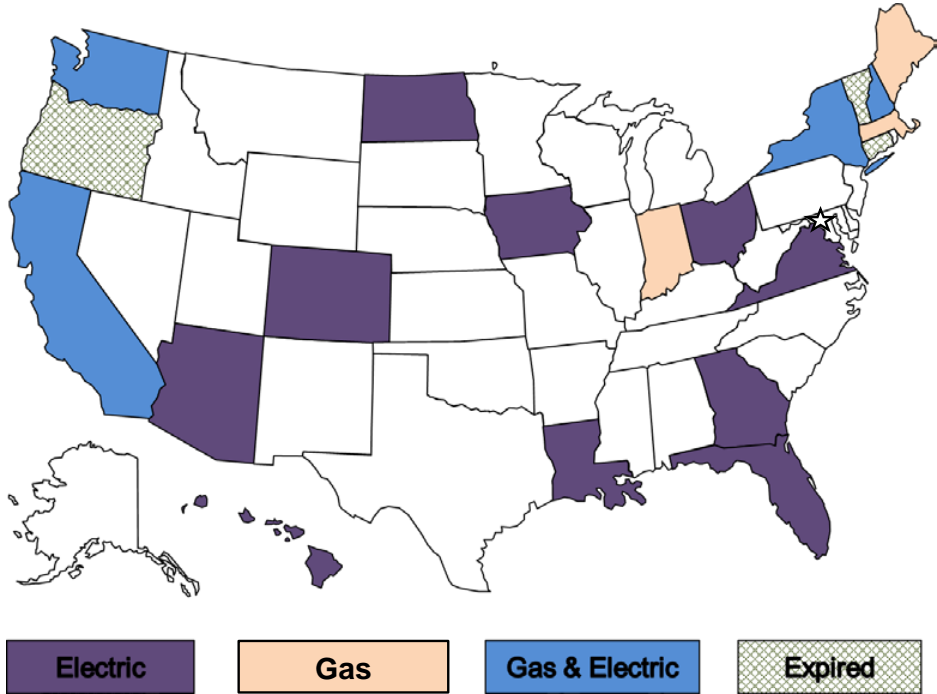


Figure 8b: Recent Canadian Multiyear Rate Plan Precedents by Province

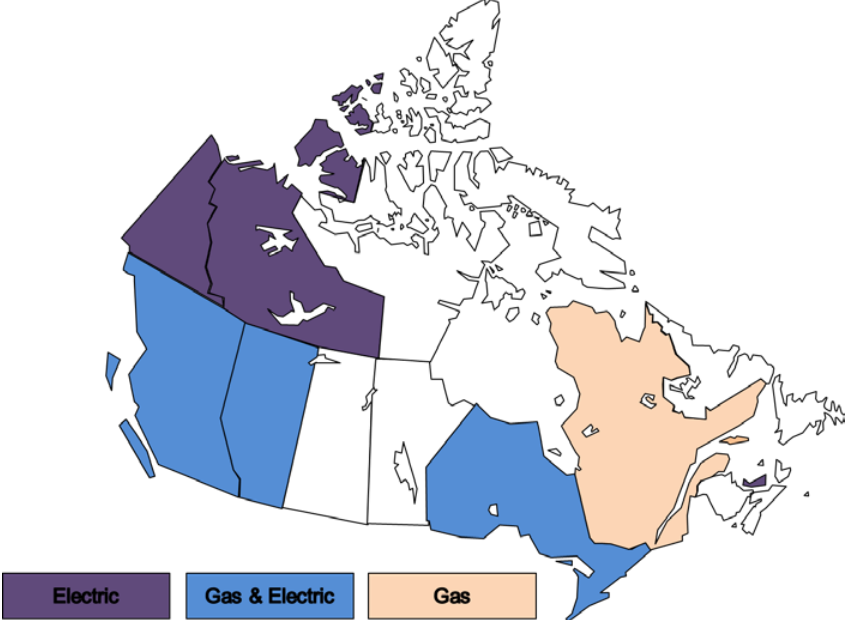


Table 7

Multiyear Rate Plan Precedents ¹

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current						
United States						
AZ	Arizona Public Service	2012-2016	Bundled power service	Rate Freeze with an adjustment to account for purchase of SCE's share of Four Corners generating facility, additional capital and other cost trackers, LRAM	None	Decision 73183; May 2012
CA	Bear Valley Electric Service	2013-2016	Power distribution	Revenue Cap Stairstep	None	Decision 14-11-002; November 2014
CA	California Pacific Electric	2013-2015	Power distribution	Revenue Cap Index	None	Decision 12-11-030; November 2012
CA	Pacific Gas & Electric	2014-2016	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 14-08-032; August 2014
CA	PacifiCorp	2011-2013, extended through 2016	Bundled power service	Price Cap Index: Rates escalated by Global Insight forecast of CPI, less 0.5% productivity factor; supplemental funding for major plant additions can be requested in annual filings	None	Decision 10-09-010; September 2010
CA	San Diego Gas & Electric	2012-2015	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 13-05-010; May 2013
CA	Southern California Gas	2012-2015	Gas	Revenue Cap Stairstep	None	Decision 13-05-010; May 2013
CA	Southwest Gas	2014-2018	Gas	Revenue Cap Stairstep	None	Decision 14-06-028; June 2014
CO	Public Service of Colorado	2015-2017	Bundled power service	Rate Freeze with multiple capital cost trackers	Sharing of overearnings only up to earnings cap	Decision C15-0292; March 2014
FL	Florida Power & Light	2013-2016	Bundled power service	Rate Freeze with multiple capital and other cost trackers	None	Docket 120015-EI; December 2012
FL	Gulf Power	2014-June 2017	Bundled power service	Price Cap Stairstep through 2015, Rate Freeze beyond	None	Docket 130140-EI; December 2013
FL	Duke Energy Florida (formerly Progress Energy Florida)	2012-2016, extended through 2018	Bundled power service	Rate Freeze with one step plus capital and other cost trackers	None	Dockets 120022-EI and 130208-EI; 2012 and November 2013
FL	Tampa Electric	2013-2017	Bundled power service	Revenue Cap Stairstep	None	Docket 130040-EI
GA	Georgia Power	2014-2016	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only with deadband	Docket 36989; December 2013
HI	Hawaiian Electric Company	2012-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2008-0083
HI	Hawaiian Electric Light Company	2013-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2009-0164
HI	Maui Electric	2013-open	Bundled power service	Revenue Cap Hybrid	Sharing of overearnings only without deadband, multiple sharing levels	Dockets 2008-0274 & 2009-0163
IA	MidAmerican Energy	2014-2017	Bundled power service	Revenue Cap Stairstep for 2014-2016, Rate Freeze for 2017	Sharing of overearnings only with deadband up to earnings cap	RPU-2013-0004
IN	Northern Indiana Public Service Company	2015-2020	Gas	Rate Freeze with capital and other cost trackers, possible reopening in 2017	Earnings cap implemented if company overearns since last rate case or prior 59 months, whichever is less	Cause 43894 and 44403 TDSIC 1 (August 2013 and January 2015)
LA	Cleco Power	2014-2017	Bundled power service	Rate Freeze with capital and other cost trackers	Sharing of overearnings only with deadband up to earnings cap	Docket U-32779; June 2014
MA	Bay State Gas	2015-2018	Gas	Revenue Cap Stairstep for 2015, 2016, Revenue Freeze through October 2018	None	DPU 15-150; October 2015
ME	Summit Natural Gas of Maine	2013-2022	Gas	Price Cap Indexing: 75% of change in GDPP1	None until company has 1,000 or more customers, then sharing of under/overearnings evenly with deadband	Docket 2012-258; January 2013
NH	Northern Utilities	May 2014 - April 2017	Gas	Revenue Cap Stairstep for 2014-2015, Rate Freeze in 2016	Sharing of overearnings only with deadband up to earning cap	DG 13-086; April 2014
NH	Public Service Company of New Hampshire	2010-2015	Power distribution (generation regulated separately)	Revenue Cap Stairstep: Rate increases allowed to account for distribution capital additions in 2010-2013	Sharing of overearnings only with deadband	DE 09-035
NH	Unitil Energy Systems	2011-2016	Power distribution	Revenue Cap Stairstep: Rate increases allowed to account for distribution capital additions in 2011-2013	Sharing of overearnings only with deadband	DE 10-055

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
United States (cont'd)						
NY	Central Hudson Gas & Electric	2015-2018	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings with deadband and multiple sharing bands	Cases 14-E-0318, 14-G-0319
NY	Consolidated Edison	2014-2016	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 13-G-0031
NY	Coning Natural Gas	2012-2015	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 11-G-0280
NY	Orange & Rockland Utilities	November 2015-October 2018	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple sharing bands	Case 14-G-0494
ND	Northern States Power - Minnesota	2013-2016	Bundled power service	Revenue Cap Stairstep for 2013-2015, Rate Freeze in 2016	Sharing of overearnings only without deadband, earnings adjusted for effects of weather	Case PU-12-813
OH	First Energy Ohio	2011-2014, later extended to 2016	Power distribution	Rate Freeze supplemented by capital and other cost trackers	Company subject to Significantly Excessive Earnings Test conducted annually	Cases 11-388-EL-SSO, 12-1230-EL-SSO
US	All	2011-2016	Oil pipelines	Price Cap Index: PPI-Finished Goods + 2.65%	None	Docket RM10-25-000; December 2010
VA	Appalachian Power	2014-2017	Bundled power service	Rate Freeze supplemented by capital and other cost trackers	None	Senate Bill 1349
VA	Virginia Electric Power	2015-2019	Bundled power service	Rate Freeze supplemented by capital and other cost trackers	None	Senate Bill 1349
WA	Puget Sound Energy	2013-2016	Gas & bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband, equal sharing between company and customers	Dockets UE-121697 and UG-121705
Canada						
Alberta	Altgas Utilities and ATCO Gas	2013-2017	Gas	Revenue per Customer Indexing: Input price index - 1.16%, + capital cost trackers	None	Decision 2012-237
Alberta	ATCO Electric, EPCOR, Fortis Alberta	2013-2017	Power distribution	Price Cap Index: Input Price Index - 1.16%, + capital cost trackers	None	Decision 2012-237
British Columbia	FortisBC	2014-2018	Bundled power service	Revenue Cap Index: I-Factor - 1.03%, + capital cost tracker for CPCN projects	Symmetric without deadband	Project #3698719, Decision; September 2014
British Columbia	FortisBC Energy	2014-2018	Gas	Revenue Cap Index: I-Factor - 1.1%, + capital cost tracker for CPCN projects	Symmetric without deadband	Project #3698715, Decision; September 2014
Ontario	All unless company opts out	2014-2018	Power distribution	Price Cap Index: Input price index - (0%+stretch); stretch factor reassigned annually, + capital cost tracker option available	None	EB-2010-0379 Report of the Board; November 2013
Ontario	Horizon Utilities	2015-2019	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only without deadband	EB-2014-0002; December 2014
Ontario	Hydro One Networks	2015-2017	Power distribution	Revenue Cap Stairstep	None	EB-2014-0247; March 2015
Ontario	Enbridge Gas Distribution	2014-2018	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband	EB-2012-0459, Decision with Reasons; July 2014
Ontario	Union Gas Limited	2014-2018	Gas	Revenue Cap Index: 40% of growth in GDP-IPI	Sharing of overearnings only with deadband, multiple sharing ranges	EB 2013-0202 Decision; October 2013
Prince Edward Island	Maritime Electric	2013-2016	Bundled power service	Price Cap Stairstep: Bill defines rates for each year.	Earnings cap set at allowed ROE, no floor	Bill 26 (2012) Electric Power (Energy Accord Continuation) Amendment Act
Quebec	Gazifere	2011-2015	Gas distribution	Price Cap Index	Sharing of overearnings only without deadband and multiple sharing bands up to earnings cap	D-2010-112; August 2010
Yukon Territory	Yukon Electrical Company, Limited	2013-2015	Bundled power service	Revenue Cap Stairstep	None	Board Order 2014-06; April 2014

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
Great Britain						
Great Britain	All	2013-2021	Gas and power transmission	British-Style Hybrid	Not reviewed	RIIO-T1 Final Proposals, April and December 2012
Great Britain	All	2013-2021	Gas distribution	British-Style Hybrid	Not reviewed	RIIO-GD1 Final Proposals, December 2013
Great Britain	All	2015-2023	Power distribution	British-Style Hybrid	Variances of cost from budgets shared through Information Quality Incentive Mechanism	RIIO-ED1 Final Proposals, December 2014
Australia/New Zealand						
Australia	ActewAGL	2015-2019	Power transmission & distribution	Australian-Style Hybrid	Not reviewed	Final Decision ActewAGL distribution determination 2015-16 to 2018-19; April 2015
Australia	Ausgrid	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Ausgrid distribution determination 2015-16 to 2018-19; April 2015
Australia	Directlink	2015-2020	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision Directlink transmission determination 2015-16 to 2019-20; April 2015
Australia	Endeavour Energy	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Endeavour Energy distribution determination 2015-16 to 2018-19; April 2015
Australia	Energex	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Energex determination 2015-16 to 2019-20
Australia	Ergon Energy	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Ergon Energy determination 2015-16 to 2019-20
Australia	Essential Energy	2015-2019	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision Essential Energy distribution determination 2015-16 to 2018-19; April 2015
Australia	Jemena Gas Networks	2015-2020	Gas distribution	Australian-Style Hybrid	Not reviewed	Final Decision Jemena Gas Networks (NSW) Ltd Access Arrangement 2015-20; June 2015
Australia	SA Power Networks	2015-2020	Power distribution	Australian-Style Hybrid	Not reviewed	Final Decision SA Power Networks determination 2015-16 to 2019-20
Australia	TasNetworks	2015-2019	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision TasNetworks transmission determination 2015-16 to 2018-19; April 2015
Australia	TransGrid	2015-2018	Power transmission	Australian-Style Hybrid	Not reviewed	Final Decision TransGrid transmission determination 2015-16 to 2017-18; July 2015
Australia	Power & Water	2014-2019	Power transmission & distribution	Australian-Style Hybrid	Not reviewed	2014 Networks Price Determination Final Determination Part-A Statement of Reasons; April 2014
Australia	All Queensland Distributors	2011-2016	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Proposal for Qld Gas Network, Final Decision; June 2011
Australia	Energex and Ergon Energy	2010-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Queensland Distribution Determination 2011-11 to 2014-15 (Final Decision)
Australia	Envestra	2011-2016	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Proposal for the SA Gas Network, Final Decision; June 2011
Australia	All Victorian Distributors	2013-2017	Gas distribution	Australian-Style Hybrid	Not reviewed	Access Arrangement Final Decision; March 2013

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Current (cont'd)						
Australia/New Zealand (cont'd)						
Australia	CitiPower	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	CitiPower Pty Distribution Determination 2011-2015; September 2012
Australia	Powercor	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Powercor Australia Ltd Distribution Determination 2011-2015; October 2012
Australia	Jemena Electricity Networks	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	Jemena Electricity Networks (Victoria) Ltd Distribution Determination 2011-2015; September 2012
Australia	SP AusNet	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	SPI Electricity Pty Ltd Distribution Determination 2011-2015; August 2013
Australia	United Energy Distribution	2011-2015	Power distribution	Australian-Style Hybrid	Not reviewed	United Energy Distribution Distribution Determination 2011-2015; September 2012
New Zealand	All but Orion Electric	2015-2020	Power distribution	Revenue Cap Index: CPI-0% for most companies	None	Project no. 14.07/14118; November 2014
New Zealand	All	2013-2017	Gas distribution	New Zealand-Style Hybrid	Not reviewed	Project no. 15.01/13199
New Zealand	All	2013-2017	Gas transmission	New Zealand-Style Hybrid	Not reviewed	Project no. 15.01/13199
Historic						
United States						
CA	Bear Valley Electric Service	2009-2012	Power distribution	Revenue Cap Stairstep	None	Decision 09-10-028; October 2009
CA	Pacific Gas & Electric	2011-2013	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 11-05-018; May 2011
CA	Pacific Gas & Electric	2007-2010	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 07-03-044; March 2007
CA	Pacific Gas & Electric	2004-2006	Gas & bundled power service	Revenue Cap Index	None	Decision 04-05-055; May 2004
CA	Pacific Gas & Electric	1993-1995	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 92-12-057; December 1992
CA	Pacific Gas & Electric	1990-1992	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 89-12-057; December 1989
CA	Pacific Gas & Electric	1987-1989	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 86-12-092; December 1986
CA	Pacific Gas & Electric	1984-1986	Gas & bundled power service	Revenue Cap Hybrid	None	Decisions 83-12-068; December 1983 and 85-12-076; December 1985
CA	PacifiCorp	2007-2009, extended to 2010	Bundled power service	Price Cap Index	None	Decisions 06-12-011; December 2006 and 09-04-017; April 2009
CA	PacifiCorp	1994-1996	Bundled power service	Price Cap Index	None	Decision 93-12-106; December 1993
CA	PacifiCorp	1984-1987	Bundled power service	Revenue Cap Hybrid	None	Decisions 84-07-150; July 1984 and 85-12-076; December 1985
CA	San Diego Gas & Electric	2008-2011	Gas & bundled power service	Revenue Cap Stairstep	None	Decision 08-07-046; July 2008
CA	San Diego Gas & Electric	2005-2007	Gas & bundled power service	Revenue Cap Index	Sharing of overearnings only with deadband and multiple sharing bands	Decision 05-03-025; March 2005
CA	San Diego Gas and Electric	1999-2002	Gas & power distribution	Price Cap Index	Sharing of overearnings only above deadband with multiple sharing bands	Decision 99-05-030; May 1999

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
CA	San Diego Gas & Electric	1994-1999	Gas & bundled power service	Revenue Cap Hybrid	Sharing of overearnings only with deadband and multiple sharing bands up to an earnings cap	Decision 94-08-023; August 1984
CA	San Diego Gas & Electric	1989-1993	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 88-12-085; December 1988
CA	San Diego Gas & Electric	1986-1988	Gas & bundled power service	Revenue Cap Hybrid	None	Decision 85-12-108; December 1985
CA	Sierra Pacific Power	2009-2011, extended to 2012	Bundled power service	Price Cap Index	None	Decision 09-10-041; October 2009
CA	Sierra Pacific Power	1990-1992	Bundled power service	Revenue Cap Hybrid	None	Decision 90-07-060; July 1990
CA	Southern California Edison	2012-2014	Bundled power service	Revenue Cap Hybrid	None	Decision 12-11-051; November 2012
CA	Southern California Edison	2009-2011	Bundled power service	Revenue Cap Stairstep	None	Decision 09-03-025; March 2009
CA	Southern California Edison	2006-2008	Bundled power service	Revenue Cap Hybrid	None	Decision 06-05-016; May 2006
CA	Southern California Edison	2004-2006	Bundled power service	Revenue Cap Hybrid	None	Decision 04-07-022; July 2004
CA	Southern California Edison	1997-2001	Power distribution	Price Cap Index	Sharing of over/underearnings outside deadband with multiple sharing bands	Decision 96-09-092; September 1996
CA	Southern California Edison	1986-1991	Bundled power service	Revenue Cap Hybrid	None	Decision 85-12-076; December 1985
CA	Southern California Gas	2008-2011	Gas	Revenue Cap Stairstep	None	Decision 08-07-046; July 2008
CA	Southern California Gas	2005-2007	Gas	Revenue Cap Index	Sharing of overearnings only with deadband and multiple sharing bands	Decision 05-03-025; March 2005
CA	Southern California Gas	1998-2003	Gas	Revenue Cap Index	Sharing of over/underearnings outside deadband with multiple sharing bands	Decision 97-07-054; July 1997
CA	Southern California Gas	1990-1993	Gas	Revenue Cap Hybrid	None	Decision 90-01-016; January 1990
CA	Southern California Gas	1985-1989	Gas	Revenue Cap Hybrid	None	1984, 85-12-076; December 1985, and 87-05-027; May 1987
CA	Southwest Gas	2009-2013	Gas	Revenue Cap Stairstep	None	Decision 08-11-048; November 2008
CO	Public Service Company of Colorado	2012-2014	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband, multiple sharing bands up to earnings cap	Decision C12-0494
CT	Connecticut Light & Power	2004-2007	Power distribution	Revenue Cap Stairstep	Even sharing of overearning without deadband	Docket 03-07-02
CT	United Illuminating	2006-2008	Power distribution	Revenue Cap Stairstep	Even sharing of overearning without deadband	Docket 05-06-04
FL	Florida Power & Light	2006-2009	Bundled power service	Rate Freeze with exception for new generating facilities after they are in service and multiple capital and other cost trackers	None	Docket 050045-EI
FL	Progress Energy Florida	2006-2009	Bundled power service	Rate Freeze with 1 step to reflect generation brought in-service and multiple capital and other cost trackers	None	Docket 050078-EI
GA	Georgia Power	2011-2013	Bundled power service	Revenue Cap Stairstep; Rate increases permitted for DSM and major generation plant additions	Sharing of overearnings only with deadband	Docket 31958
IA	MidAmerican Energy	2001-2005, extended to 2013	Bundled power service	Rate Freeze with nuclear capital and other cost trackers	Sharing of overearnings only in multiple sharing bands, deadband not applicable due to no allowed ROE	Dockets RPU-01-3 and RPU-2012-0001
LA	Cleco Power	2009-2014	Bundled power service	Rate Freeze with capital cost tracker	Sharing of overearnings only with deadband up to earnings cap	Order U-30689
MA	Bay State Gas	2006-2015, terminated in 2009	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket DTE 05-27
MA	Berkshire Gas	February 2002-January 2012	Gas distribution	No adjustment until September 2004, then Price Cap Index	None	Docket D.T.E. 01-56

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Attrition Relief Mechanism	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
MA	Boston Gas (I)	1997-2001	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket D.P.U. 96-50-C (Phase I); May 1997
MA	Boston Gas (II)	2004-2013, Terminated in 2010	Gas distribution	Price Cap Index	75-25 shareholders-ratepayers sharing around deadband	Docket DTE 03-40
MA	Blackstone Gas	November 1, 2004 - October 31, 2009	Gas distribution	Price Cap Index	Even sharing of earnings above/below deadband	Docket D.T.E. 04-79
MA	Nstar	2006-2012	Power distribution	Price Cap Index	Deadband with 50-50 sharing of over and underearnings	Docket D.T.E. 05-85
ME	Bangor Gas	2000-2009, extended to 2012	Gas distribution	Price Cap Index	Even sharing of overearnings only. No allowed ROE established for company and no determination of a deadband.	Docket 970795; June 1998
ME	Bangor Hydro Electric (I)	1998-2000	Power distribution	Price Cap Index	50/50 sharing around deadband	Docket 97-116; March 1998
ME	Central Maine Power (I)	1995-1999	Bundled power service	Price Cap Index	Even sharing of earnings above/below deadband	Docket 92-345 Phase II; January 1995
ME	Central Maine Power (II)	2001-2007	Power distribution	Price Cap Index	50-50 sharing below deadband	Docket 99-666; November 2000
ME	Central Maine Power (III)	2009-2013	Power distribution	Price Cap Index: GDPPI - 1%, separate capital cost tracker for AMI	50-50 sharing above 11% ROE	Docket 2007-215
ME	Maine Natural Gas	2010-2012	Gas	Revenue Cap Stairstep with steps conditioned on company earnings	None	Docket 2009-67
NY	Brooklyn Union Gas	October 1, 1991 - September 30, 1994	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband	Case 90-G-0981, Opinion 91-21; October 1991
NY	Brooklyn Union Gas	October 1, 1994 - September 30, 1997	Gas	Revenue Cap Stairstep	Sharing of overearnings only without deadband and multiple sharing bands	Case 93-G-0941, Opinion 94-22; October 1994
NY	Central Hudson Gas & Electric	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings with deadband and multiple sharing bands	Case 09-E-0588
NY	Central Hudson Gas & Electric	July 1, 2006 - June 30, 2009	Gas & power distribution	Price Cap Stairstep	Sharing of overearnings only with deadband, multiple sharing bands up to earnings cap	Case 05-E-0934 & Case 05-G-0935; July 2006
NY	Consolidated Edison	2010-2013	Gas	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-G-0795
NY	Consolidated Edison	2007-2010	Gas	Revenue Cap Stairstep	Even sharing of overearnings only above deadband, sharing threshold adjustable depending on work with DSM program administrator for first year only	Case 06-G-1332
NY	Consolidated Edison	October 1, 1994 - September 30, 1997	Gas	Revenue Cap Stairstep	Even sharing of overearnings only above deadband	Case 93-G-0996, Opinion 94-2; October 1994
NY	Consolidated Edison	2010-2013	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands	Case 09-E-0428
NY	Consolidated Edison	April 1, 2005 - March 31, 2008	Power distribution	Price Cap Stairstep	Sharing of overearnings only with multiple bands. No allowed ROE approved.	Case 04-E-0572; March 2005
NY	Consolidated Edison	1992-1995	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings with varying allowed ROE and no deadband	Opinion 92-8
NY	Keyspan Energy Delivery - Long Island	2010-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands, sharing threshold adjustable for good DSM performance	Case 06-G-1185
NY	Keyspan Energy Delivery - New York	2010-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands, sharing threshold adjustable for good DSM performance	Case 06-G-1186
NY	Long Island Lighting Company	December 1, 1993- November 30, 1996	Gas	Revenue Cap Stairstep	Even sharing of overearnings only with deadband	Case 93-G-002, Opinion 93-23; December 1993
NY	Long Island Lighting Company	1992-1994	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings only without deadband	Opinion 92-8

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Attrition Relief Mechanism	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
United States (cont'd)						
NY	New York State Electric & Gas	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-E-0715
NY	New York State Electric & Gas	August 1, 1995 - July 31, 1998, Years 2 and 3 not implemented due to restructuring	Bundled power service	Revenue Cap Stairstep	Sharing of overearnings only with annually varying deadbands	Case 94-M-0349, Opinion 95-27; September 1995
NY	New York State Electric & Gas	December 1, 1993 - August 31, 1995	Gas & bundled power service	Revenue Cap Stairstep	Even sharing of overearnings only above deadband	Case 92-G-1086, Opinion 93-22; November 1993
NY	Niagara Mohawk	July 1, 1990 - December 31, 1992	Gas & bundled power service	Revenue Cap Stairstep	Sharing of overearnings only without deadband up to earnings cap	Case 29327, Opinion 89-37; June 1991
NY	Orange & Rockland Utilities	2009-2012	Gas	Revenue Cap Stairstep	Sharing of overearnings only beyond deadband and multiple sharing bands	Case 08-G-1398
NY	Orange & Rockland Utilities	November 1, 2006 - October 31, 2009	Gas	Price Cap Stairstep	Sharing of overearnings only beyond deadband and multiple sharing bands	Case 05-G-1494; October 2006
NY	Orange & Rockland Utilities	November 1, 2003 - October 31, 2006	Gas	Price Cap Stairstep	Even sharing of overearnings only without deadband	Case 02-G-1553; October 2003
NY	Orange & Rockland Utilities	2012-2015	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband and multiple bands	Case 11-E-0408
NY	Orange & Rockland Utilities	2008-2011	Power distribution	Revenue Cap Stairstep	Sharing of overearnings only above deadband with multiple sharing bands	Case 07-E-0949
NY	Orange & Rockland Utilities	1991-1993	Bundled power service	Revenue Cap Stairstep	Even sharing of overearnings above deadband	Case 89-E-175
NY	Rochester Gas & Electric	2010-2013	Gas & power distribution	Revenue Cap Stairstep	Sharing of overearnings only with deadband that varies annually and multiple sharing bands	Case 09-E-0717
NY	Rochester Gas & Electric	July 1, 1993 - June 30, 1996	Gas & bundled power service	Revenue Cap Stairstep	Earnings cap only	Case 92-G-0741, Opinion No. 93-19; August 1993
OH	AEP-Ohio	2012-2015	Power distribution	Rate Freeze supplemented by capital and other cost trackers	Company subject to Significantly Excessive Earnings Test conducted annually	Case No. 11-346-EL-SSO; August 2012
OH	Cincinnati Gas & Electric	2009-2011	Power generation	Price Cap Stairstep	Company subject to Significantly Excessive Earnings Test conducted annually	Case 08-920-EL-SSO
OR	PacifiCorp	1998-2001	Power distribution	Revenue Cap Index	Sharing of over/underearning outside deadband in multiple sharing bands	Order No. 98-191
US	All	2006-2011	Oil pipelines	Price Cap Index: PPI-Finished Goods + 1.3%	None	RM05-22-000
US	All	2001-2006	Oil pipelines	Price Cap Index: PPI-Finished Goods + 0%	None	RM00-11-000
US	All	1995-2001	Oil pipelines	Price Cap Index: PPI-Finished Goods - 1%	None	RM93-11-000
VT	Green Mountain Power	2007-2010	Bundled power service	Revenue Cap Stairstep	Earnings cap for overearnings above deadband; Multiple sharing bands for earnings apply if actual ROE below deadband (earnings floor of the deadband also applies)	Docket No. 7176
WA	Puget Sound Energy	1997-2001	Bundled power service	Price Cap Stairstep	None	Docket UE-960195
Australia/New Zealand						
Australia	Jemena Gas Networks	2010-2015	Gas distribution	Australia-Style Hybrid	Not reviewed	Access Arrangement Proposal for NSW Gas Networks, Final Decision; June 2010
Australia	All New South Wales distributors	2009-2014	Power distribution	Australia-Style Hybrid	Not reviewed	New South Wales Distribution Determination 2009-10 to 2013-14 Final Decision
Australia	ElectraNet	2008-2013	Power transmission	Australia-Style Hybrid	Not reviewed	Final Decision; April 2008
Australia	ElectraNet	2003-2008	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1094
Australia	Powerlink	2007-2012	Power transmission	Australia-Style Hybrid	Not reviewed	Final Decision; June 2007

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Australia/New Zealand (cont'd)						
Australia	Powerlink	2002-2007	Power transmission	Australia-Style Hybrid	Not reviewed	File No: 2000/659
Australia	Snowy Mountains	1999-2004 (terminated in 2002 due to merger with Transgrid)	Electric transmission	Australia-Style Hybrid	Not reviewed	File No: C1999/62
Australia	SPI PowerNet	2003-2008	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1093
Australia	Transend	2009-2014	Power transmission	Australia-Style Hybrid	Not reviewed	Transend Transmission Determination 2009/10-2013/14 (Final Decision)
Australia	Transend	2004-2009	Power transmission	Australia-Style Hybrid	Not reviewed	File No: C2001/1100
Australia	Transgrid	2009-2014	Electric transmission	Australia-Style Hybrid	Not reviewed	Transgrid Transmission Determination 2009/10-2013/14 (Final Decision)
Australia	Transgrid	2004-2009	Power transmission	Australia-Style Hybrid	Not reviewed	File No. M2003/287
Australia	Transgrid	1999-2004	Power transmission	Australia-Style Hybrid	Not reviewed	File No: CG98/118
Australia - New South Wales	Country Energy Gas	2006-2010	Gas distribution	Australia-Style Hybrid	Not reviewed	Revised Access Arrangement for Country Energy Gas Network, Final Decision; November 2005
Australia - New South Wales	AGL Gas Networks	1999-2004	Gas transmission & distribution	Australia-Style Hybrid	Not reviewed	Access Arrangement for AGL Gas Networks Limited, Final Decision; July 2000
Australia - New South Wales	All	2004-2009	Power distribution	Australia-Style Hybrid	Not reviewed	File No: S2004/138
Australia - New South Wales	All	1999-2004	Power distribution	Australia-Style Hybrid	Not reviewed	NEC Determination 99-1
Australia - Northern Territory	Power & Water	2000-2003	Power transmission & distribution	Australia-Style Hybrid	Not reviewed	Revenue Determinations document; June 2000
Australia - Northern Territory	Power & Water	2009-2014	Power transmission & distribution	Price Cap Index: CPI + 0.85%	Not reviewed	Final Determination Networks Pricing; 2009 Regulatory Reset; March 2009
Australia - Northern Territory	Power & Water	2004-2009	Power transmission & distribution	Price Cap Index: CPI - 2%	Not reviewed	Final Determination Networks Pricing; 2004 Regulatory Reset; February 2004
Australia -Victoria	All	2008-2012	Gas distribution	Australia-Style Hybrid	Not reviewed	Gas Access Arrangement Review 2008 2012, Final Decision; March 2008
Australia -Victoria	All	2003-2007	Gas distribution	Australia-Style Hybrid	Not reviewed	Review of Gas Access Arrangements, Final Decision; October 2002
Australia -Victoria	All	2006-2010	Power distribution	Australia-Style Hybrid	Not reviewed	Electricity Distribution Price Review 2006-2010 (Final Decision Volume 1)
Australia -Victoria	All	2001-2005	Power distribution	Australia-Style Hybrid	Not reviewed	Electricity Distribution Price Determination 2001-2005 (Final Decision Volume 1)
New Zealand	All	2010-2015	Power distribution	Revenue Cap Index: CPI - 0%	None	Commerce Commission Initial Reset of the Default Price-Quality Path for Electricity Distribution Businesses Decisions Paper; November 2009

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Australia/New Zealand (cont'd)						
New Zealand	All	2004-2009	Power distribution	Revenue Cap Index: CPI - 0.86% (Average across firms)	None	Commerce Commission Regulation of Electricity Lines Businesses, Targeted Control Regime, Threshold Decisions; December 2003
Canada						
Alberta	Enmax	2007-2013	Power distribution	Price Cap Index: Input Price Index -1.2%	50-50 for excess earnings above deadband	Decision 2009-035
Alberta	Northwestern Utilities	1999-2002, reopened for 2001-2002	Gas distribution	Revenue Cap Stairstep; at reopener replaced with rate freeze	Sharing of earnings above/below deadband with multiple bands for overearnings; at reopener simplified to 50/50 sharing of overearnings with deadband	Decision U98060; March 1998 and Decision 2000-85; December 2000
Alberta	EPCOR	2002-2005, Terminated 12/31/2003	Power distribution	Price Cap Index	None	City of Edmonton Distribution Tariff Bylaw 12367; August 2000
Northwest Territory	Northland Utilities	2011-2013	Bundled power service	Revenue Cap Stairstep	None	Decision 17-2011; November 2011
Northwest Territory	Northland Utilities (Yellowknife)	2011-2013	Bundled power service	Revenue Cap Stairstep	None	Decision 13-2011; August 2011
Ontario	All Ontario Distributors	2010-2013	Power distribution	Price Cap Index: GDP IPI for Final Domestic Demand - (0.92% to 1.32% depending on company's annual performance in benchmarking studies)	None	EB-2007-0673; July 2008, September 2008, and January 2009
Ontario	All Ontario Distributors	2006-2009	Power distribution	Price Cap Index	None	EB-2006-0089; December 2006
Ontario	All Ontario Distributors	2000-2003	Power distribution	Price Cap Index	50-50 sharing of excess earnings without deadband	RP-1999-0034; January 2000
Ontario	Enbridge Gas Distribution	2008-2012	Gas distribution	Revenue Cap Index: GDP-IPI * 53%	50-50 sharing of excess earnings above deadband	EB-2007-0615; February 2008
Ontario	Union Gas	2008-2012	Gas distribution	Revenue Cap Index: GDP-IPI -1.82%	Sharing of overearnings only with deadband and multiple sharing bands	EB-2007-0606; January 2008
Ontario	Union Gas	2001-2003	Gas distribution	Price Cap Index	50-50 sharing around deadband	RP-1999-0017; July 2001
Great Britain						
Great Britain	All	2008-2013	Gas distribution	British-Style Hybrid	Not reviewed	Review - Final Proposals; Published December 2007
Great Britain	All	2002-2007, extended to 2008	Gas distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	2007-2012	Gas transmission	British-Style Hybrid	Not reviewed	Transmission Price Control Review; Published December 2006
Great Britain	All	2002-2007	Gas transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	1998-2002	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
Great Britain	All	1994-1997	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
Great Britain	All	1992-1994	Gas transmission & distribution	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.444
England & Wales	All	1995-2000	Power distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Great Britain	All	2010-2015	Power distribution	British-Style Hybrid	Variances of cost from budgets shared though Information Quality Incentive Mechanism	Ofgem Distribution Price Control Review 5
Great Britain	All	2005-2010	Power distribution	British-Style Hybrid	Not reviewed	Ofgem Distribution Price Control Review 4

Table 7 (cont'd)

Jurisdiction	Company	Plan Term	Services Covered	Rate Escalation Provisions	Earnings Sharing Provisions	Case Reference
Historic (cont'd)						
Great Britain (cont'd)						
Great Britain	All	2000-2005	Power distribution	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
England & Wales	National Grid	2001-2006, extended to 2007	Power transmission	British-Style Hybrid	Not reviewed	OECD Reviews of Regulatory Reform
England & Wales	National Grid	1997-2001	Power transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
England & Wales	National Grid	1993-1997	Power transmission	British-Style Hybrid	Not reviewed	Energy Law Journal Volume 23 No. 2 p.452
Great Britain	All	2007-2012	Power transmission	British-Style Hybrid	Not reviewed	Transmission Price Control Review; Published December 2006
Scotland	All	2000-2005, extended to 2007	Power transmission	British-Style Hybrid	Not reviewed	"RPI - X @ 20." Ofgem Publication
Scotland	All	1995-2000	Power transmission	British-Style Hybrid	Not reviewed	1995 Report by Monopolies and Mergers Commission

¹ Rate freezes without extensive supplemental funding from capital cost trackers are excluded from this table.

VI. Formula Rates

A cost of service formula rate plan (“FRP”) is essentially a wide-scope cost tracker designed to help a utility’s revenue track its cost of service. Earnings surpluses or deficits occur when revenue and cost are not balanced. FRPs have earnings true up mechanisms that adjust rates so that earnings variances are reduced or eliminated. Regulatory cost is contained by limiting review of costs and revenues.

The earnings true up mechanism plays a key role in an FRP. Some mechanisms compare the earned ROE to the target ROE and then calculate the rate adjustment needed to reduce the ROE variance. Others adjust rates for the difference between revenue and a pro forma cost of service calculated using a rate of return target. Both approaches can keep the utility whole for the time value of money.

Earning true up mechanisms often include a deadband in which variances don’t trigger a rate adjustment. Once the variance exceeds the deadband, however, earnings true up mechanisms in FRPs commonly move the ROE all, or almost all, of the way to its regulated target without sharing earnings variances. This is an important distinction between the earnings true up mechanism of an FRP and the earnings *sharing* mechanisms found in some multiyear rate plans.

Formula rates do not always address major plant additions. In state-regulated FRPs for retail electric services, for instance, major investment programs are generally approved separately through such means as hearings on certificates of public convenience and necessity. The resultant cost is often recovered through a separate tracker.

Mechanisms are sometimes added to an FRP to encourage better operating performance. For example, escalation of revenue that compensates the utility for its O&M expenses may be limited by a formula tied to an inflation index. FRPs in several states that include Illinois and Mississippi contain a number of targeted performance incentive mechanisms.

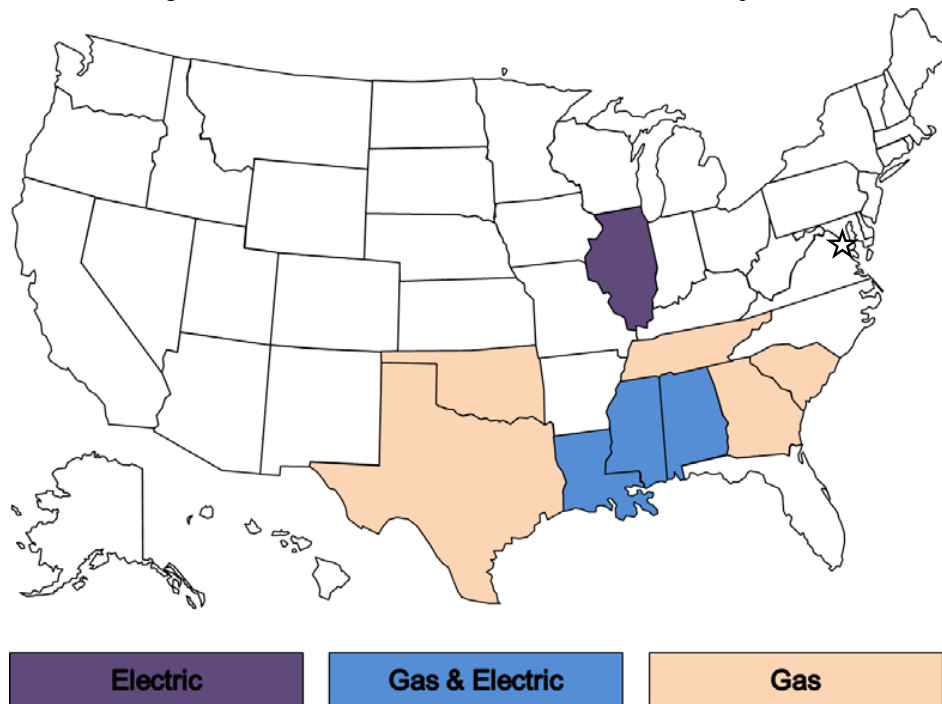
Formula rates have been used at the FERC and its predecessor agency to regulate interstate services of energy utilities for decades. Use of FRPs by the FERC was encouraged in the 1970s and early 1980s by rapid price inflation. Despite slower inflation in recent years, the FERC has made extensive use of formula rates for power transmission in an effort to simplify its daunting regulatory task and facilitate urgently needed investments.

Precedents for retail formula rates, which recover costs of generation and/or distribution, are listed in Table 8 and Figure 9.¹⁰ It can be seen that FRPs for retail utility services are most common in the Southeast and South Central states. Alabama was an early innovator, approving “Rate Stabilization and Equalization”

¹⁰ Some plans labeled as formula rates do not qualify for inclusion in this table and figure based on our definition. These usually take the form of ESMs that may or may not protect the utility from underearning.

plans for Alabama Power and Alabama Gas in the early 1980s.¹¹ Formula rates are now used to regulate electric utilities in Illinois, some gas and electric utilities in Louisiana and Mississippi, and some gas utilities in Georgia, Oklahoma, South Carolina, Tennessee, and Texas. Most of the recent approvals of formula rates have been for gas distribution, as this is one means to avoid the frequent rate cases that declining average use can trigger. However, formula rates were recently authorized legislatively for electric utilities in Arkansas.

Figure 9: Current Retail Formula Rate Precedents by State



¹¹ For further discussion of the Alabama FRP experience see Edison Electric Institute, *Case Study of Alabama Rate Stabilization and Equalization Mechanism*, June 2011.

Table 8

Retail Formula Rate Plan Precedents¹

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Current					
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2013-open	Dockets 18117 and 18416 (August 2013)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2014-2018	Dockets 18406 and 18328 (December 2013)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2013-2017	Docket 28101 (August 2013)
GA	Atmos Energy	Gas	Georgia Rate Adjustment Mechanism (GRAM)	2012-open	Docket 34764 (December 2011)
IL	Ameren Illinois	Power Distribution	Rate Modernization Action Plan - Pricing (Rate MAP-P)	2011-2017, extended through 2019	Case 12-0001 (September 2012) and Public Act 098-1175
IL	Commonwealth Edison	Power Distribution	Rate Delivery Service Pricing and Performance (Rate DSPP)	2011-2017, extended through 2019	Case 11-0721 (May 2012) and Public Act 098-1175
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Clause	2014-open	Docket U-32987 (June 2014)
LA	Atmos Energy - Trans Louisiana Gas	Gas	Rate Stabilization Clause	2014-open	Docket U-32987 (June 2014)
LA	Southwestern Electric Power	Electric	Formula Rate Plan	2013-2016	Docket U-32220 (July 2014)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2011-present	Docket 05-UN-0503 (April 2011)
MS	Centerpoint Energy	Gas	Rate Regulation Adjustment Rider	2014-open	Docket 2014-UN-060 (May 2014)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 6 (FRP-6)	2015-open	Docket 2014-UN-132 (December 2014)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 5 (PEP-5)	2010-open	Docket 2003-UN-0898 (November 2009)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2010-open	Cause PUD 201000030 (July 2010)
OK	Arkansas Oklahoma Gas	Gas	Performance Based Rate of Change Plan	2013-open	Cause PUD 201200236 (July 2013)
SC	Piedmont Gas	Gas	NA	2005-open	Docket 2005-125-G (September 2005)
SC	South Carolina Electric and Gas	Gas	NA	2005-open	Docket 2005-113-G (October 2005)
TN	Atmos Energy	Gas	Annual Review Mechanism	2015-open	Docket 14-00146 (May 2015)
TX	Centerpoint Energy-Texas Coast Division	Gas	Cost of Service Adjustment Clause	2008-open	Gas Utility Docket 9791 (October 2008)
TX	Atmos Energy-Mid Texas Division	Gas	Rate Review Mechanism	2013-2017	Various Resolutions/Ordinances across cities in service territory, including City of Fort Worth Ordinance 17989-02-2007
TX	Atmos Energy West Texas Division	Gas	Rate Review Mechanism	2014-open	Various Resolutions/Ordinances across cities in service territory including City of Tulia Ordinance 2014-03
TX	Texas Gas Service - Rio Grande Service Area	Gas	Cost of Service Adjustment	2012-open	Various Resolutions/Ordinances across cities in service territory
TX	Texas Gas Service - North Service Area	Gas	Cost of Service Adjustment Tariff	2009-open	Various Resolutions/Ordinances in service territory and Gas Utility Docket 9839 (April 2009)

Table 8 (cont'd)

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Historic					
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2006-2013	Dockets 18117 and 18416 (October 2005)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	2002-2006	Dockets 18117 and 18416 (March 2002)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1998-2002	Dockets 18117 and 18416 (March 1998)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1990-1998	Dockets 18117 and 18416 (March 1990)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1985-1990	Dockets 18117 and 18416 (June 1985)
AL	Alabama Power	Bundled Power Service	Rate Stabilization & Equalization Factor (Rate RSE)	1982-1985	Dockets 18117 and 18416 (November 1982)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2008-2014, later changed to 2013	Dockets 18406 and 18328 (December 2007)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2002-2007	Dockets 18046 and 18328 (June 2002)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1996-2001	Dockets 18046 and 18328 (October 1996)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1991-1995	Dockets 18046 and 18328 (December 1990)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1987-1990	Dockets 18046 and 18328 (September 1987)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1985-1987	Dockets 18046 and 18328 (May 1985)
AL	Alabama Gas	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	1983-1985	Dockets 18046 and 18328 (January 1983)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2009-2013	Docket 28101 (December 2009)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2005-2009	Docket 28101 (June 2005)
AL	Mobile Gas Service	Gas	Rate Stabilization & Equalization Factor (Rate RSE)	2001-2005	Docket 28101 (June 2002)
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Plan	2006-2014	Docket U-21484 (May 2006)
LA	Atmos Energy - Louisiana Gas Service	Gas	Rate Stabilization Plan	2001-2003	Docket U-21484 (January 2001)
LA	Atmos Energy - Trans Louisiana Gas	Gas	Rate Stabilization Plan	2006-2014	Dockets U-28814 and U-28588 and U-28587 (May 2006)
LA	Entergy New Orleans	Electric and Gas	Formula Rate Plan	2010-2012	Docket UD-08-03 (April 2009)
LA	Entergy New Orleans	Electric only	Formula Rate Plan	2004-2006	Docket UD-01-04 (May 2003)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2009-2011	Docket 05-UN-0503 (December 2009)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	2006-2009	Docket 05-UN-0503 (October 2005)
MS	Atmos Energy Corp	Gas	Stable/Rate Rider	1992-2006	Docket 92-UA-0230 (September 1992)
MS	Centerpoint Energy	Gas	Rate Regulation Adjustment Rider	2012-2014	Docket 12-UN-139 (May 2012)

Table 8 (cont'd)

Jurisdiction	Company Name	Services	Plan Name	Plan Term	Case Reference
Historic (cont'd)					
MS	Centerpoint Energy Entex	Gas	Rate Regulation Adjustment Rider	2008-2012	Docket 07-UN-548 (December 2007)
MS	Centerpoint Energy Entex	Gas	Rate Regulation Adjustment Rider	1996-2007	Docket 96-UN-0202 (September 1996)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 5 (FRP-5)	2010-2014	Docket 2009-UN-388 (March 2010)
MS	Entergy Mississippi	Bundled Power Service	Formula Rate Plan 1 (FRP-1)	1995	Docket 93-UA-0301 (March 1994)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 4A (PEP- 4A)	2009	Docket 06-UN-0511 (January 2009)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 4 (PEP-4)	2004-2009	Docket 03-UN-0898 (May 2004)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 3 (PEP-3)	2002-2004	Docket 01-UN-0826 (October 2002)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 2A (PEP-2A)	2001-2002	Docket 01-UN-0548 (December 2001)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 1A (PEP-1A)	1992-1993	Docket 92-UN-0059 (July 1992)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan - 1 (PEP-1)	1991-1992	Docket 90-UN-0287 (December 1990)
MS	Mississippi Power	Bundled Power Service	Performance Evaluation Plan	1986-1990	Cause PUD U-4761 (August 1986)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2008-2010	Cause PUD 200800062 (July 2008)
OK	Centerpoint Energy Arkla	Gas	Performance Based Rate of Change Plan	2004-2008	Cause PUD 200400187 (November 2004)
OK	Oklahoma Natural Gas	Gas	Performance Based Rate of Change Plan	2010-2014	Docket 200800348 (April 2009)
TX	Atmos Energy-Mid Texas Division	Gas	Rate Review Mechanism	2008 - varying end dates	Various Resolutions/Ordinances across cities in service territory, including City of Fort Worth Ordinance 17989-02-2008
TX	Atmos Energy West Texas Division	Gas	Rate Review Mechanism	2009 - conclusion of rate case to be filed on or before June 1, 2013	Various Resolutions/Ordinances across cities in service territory
TX	Centerpoint Energy - Beaumont East Texas Gas Division	Gas	Cost of Service Adjustment	2009-2011	Various Resolutions/Ordinances across cities in service territory
TX	Texas Gas Service - Rio Grande Service Area	Gas	Cost of Service Adjustment	2009-2011	Various Resolutions/Ordinances across cities in service territory

¹ Table excludes some mechanisms that do not conform to our FRP definition. Some of these are called formula rate plans.

VII. Marketing Flexibility

This is a new section, added since the last survey. We've added it because we (and EEI) believe that marketing flexibility is a growing, strategic issue for EEI members. Several trends in business conditions are driving the need for more flexibility. The growth of distributed energy resources, for example, is a competitive challenge but also brings new service opportunities related to the development of distributed energy assets (e.g., designing, financing, procuring, building, fueling, and maintaining). Grid modernization is providing new functional capabilities to the grid which also create new service opportunities.¹² Examples include new reliability, network management, and transaction management services. Residential and commercial customers also have a growing interest in plug-in electric vehicles, and all retail customers have shown an interest in green power packages that can be supplied from grid-accessed resources.

New services will tend to be optional services that all customers will not want. Customers must be able to decline them; and if they do, not to incur associated costs. Competitive alternatives will be available for many of these services, and customers may have special needs that are difficult to address with standard tariffs. Thus, utilities will need to be able to respond quickly to the market. They will often be price "takers," as opposed to price "makers."

To date, regulatory precedent allowing investor-owned electric utilities to offer many of these services has been limited. This chapter is, in effect, a place holder for expected future electricity precedent.

Why Electric Utilities Need Marketing Flexibility

Of course, electric utilities have always needed flexibility in some of the markets they serve:

- Utility assets have uses in markets other than those for retail electric services. Most notably, surplus generating capacity of VIEUs can be used for sales in bulk power markets. These markets are competitive and price-volatile. Land in transmission corridors can be well-suited for nurseries. Prices utilities charge in competitive markets like these are largely decontrolled. Margins earned in these markets are shared with customers of retail electric services.
- The demand of large-load retail customers is often sensitive to the rates and other terms of service utilities offer because these customers have power-intensive technologies and/or options to cost-competitively cogenerate or operate at alternative locations, or are economically marginal. Customers of this kind are especially important to vertically integrated utilities. Discounts or special contracts for such customers are traditionally allowed but often require specific approval. Commission reviews of special contracts can take months.

¹² For an overview of modernization, see: EPRI, *The Integrated Grid: Realizing the Full Value of Central and Distributed Energy Resources*, 2014.

Marketing Flexibility Remedies

Marketing flexibility runs the gamut from greater commission effort to approve new rates and services by traditional means to “light handed” regulation and outright decontrol. Light handed regulation typically takes the form of expedited approval of market offerings. These offerings may be subject to further scrutiny at a later date (e.g., in the next rate case).

Flexibility is most commonly granted for rates and services with certain characteristics. Light handed regulation of optional rates and services, for example, is based on the grounds that customers are protected by their freedom not to take the service, their continued access to service under standard tariffs, and the availability of alternatives in unregulated markets. Optional offerings include tariffs open to all qualifying customers, special contracts, and discretionary value-added services. Decontrol is typically permitted only for offerings to markets where vigorous competition reigns.

Marketing Flexibility Examples: Electric Utilities

Marketing flexibility is not extensive in the electric utility industry today but there are nonetheless notable examples such as the following.

- Four Florida electric utilities have “Commercial/Industrial Service Rider” (“CISR”) tariffs that allow them to negotiate contract service agreements (“CSAs”) that outline discounts on the base energy and/or demand charges for large load customers who can show that they have viable alternatives to utility-provided electric service.¹³ The discounted rate must cover the incremental cost of service provision and provide a contribution to fixed costs. CSAs do not need commission approval but the commission has the option to conduct a prudence review of any signed contract.
- Duke Energy offers large North Carolina customers an optional Green Source Rider service. The program allows customers that have added at least 1 MW of new load since June 2012 to apply for an annual amount of renewable energy (and the associated renewable energy certificates) over a specific term (between 3-15 years). Customers may request a particular renewable resource in their application. Duke would then negotiate a purchased power agreement on behalf of the customer or attempt to source the energy from its own assets.

¹³ Florida Public Service Commission (2014), Order Approving Commercial/Industrial Service Rider Tariff, Order No. PSC-14-0110-TRF-EI.

Marketing Flexibility in Other Regulated Industries

Regulators and electric utilities considering new forms of marketing flexibility can learn from other utility industries that have experienced technological change, increased competition, and/or complex and changing customer needs. We provide here brief overviews of experience in the telecommunications, gas distribution, gas transmission, and railroad industries.

Telecommunications

Local telephone companies (aka incumbent local exchange carriers or "ILECs") control the traditional distribution networks connecting residences and businesses. The "last mile" services they provide include the interconnection needed for long-distance, data, security, paging, and mobile telephone services as well as local telephone calling. ILECs have in the last 30 years confronted extensive competition, rapid technological change, and new marketing opportunities. Challenges they have faced have many parallels to those emerging for electric utilities.

The Federal Communications Commission ("FCC") regulates interstate access services of ILECs. Other ILEC services are regulated by state commissions. In the 1980s, ILECs were still regulated using cost-of-service regulation with complex reporting and compensation schemes. This was succeeded by multiyear rate plans, often called "price cap" plans since they capped rate escalation but permitted some discounts to encourage greater system use. Price caps were often escalated using inflation – X formulas where the X factor reflected an estimate of the telecommunication industry productivity trend. Prices were separately capped for several baskets of services. This insulated customers in each service basket from discounts offered to other baskets. Insulation was heightened by the infrequency (or elimination) of rate cases and the common lack of earnings sharing. The FCC instituted price caps for interstate access services of ILECs in the early 1990s. Price caps also became commonplace in state ILEC regulation.

Marketing flexibility for ILECs has been most relevant in the following two areas.

Competition in Traditional Service Markets Some services ILECs offered became subject to mounting competitive pressure that varied with the location where service was offered. For example, by the late 1990s, competitive access providers like MFS were constructing high-speed fiber optic networks connecting office buildings in metropolitan areas. These networks allowed businesses and long-distance carriers to connect to customers while bypassing ILEC data facilities. They could also be used to transmit voice traffic, avoiding ILEC voice access charges. High regulated prices were uncompetitive in high-traffic locations where facilities-based competitors entered the market. For services subject to competitive challenges, price cap plans in many states permitted discounts to standard tariffs within certain bands (e.g., rates could rise by 5% less than the price cap index) and/or subject to pricing floors that discouraged predation and cross-subsidization. In markets where pronounced competition could be demonstrated, ILEC rates were sometimes effectively decontrolled.

Innovative Services Technological change gave rise to innovative new services [e.g., Voicemail, Centrex and high-speed data (e.g., digital subscriber loop or "DSL")] which utilize essential network assets of ILECs

and cannot not practically be performed by affiliates.¹⁴ Many of these services were deemed “information” services and were regulated by the FCC. Regulators ultimately permitted ILECs to provide a host of these services and allowed considerable pricing flexibility.

Gas Distribution

Natural gas distributors also need flexibility to address some markets that they serve. Like VIEUs, many large-load customers of gas distributors have price sensitive demands and special needs. Distributors have frequently obtained light handed regulation to respond to these challenges. Nicor Gas, for example, offers a contract service for customers taking delivery near interstate gas pipelines. Contracts are submitted to state regulators for informational purposes and are treated on a proprietary basis. Nicor has similar flexibility to enter into custom contracts with electric power generators. The Company must document to the regulator that revenues from such service exceed the incremental cost of service, thereby ensuring a positive contribution to fixed cost recovery.

Interstate Gas Transmission

Interstate pipeline companies need marketing flexibility for many reasons. Demand for a pipeline’s services can be sensitive to the terms it offers due to competition from other pipelines, dual-fuel capabilities of large volume customers, the extreme variability of need for service, and other special needs. It is difficult to design standard tariffs that meet the needs of all customers. Pipelines also have their own needs, such as an interest in signing anchor shippers to long-term contracts before constructing new facilities. Since 1996, the FERC has engaged in light handed regulation of negotiated pipeline rates to individual customers who have recourse to service under a standard tariff. The FERC gives a quick turnaround to most requests for negotiated contracts. A sizable share of pipeline service is conducted under negotiated rates. A remarkable variety of rate designs have been employed.¹⁵

Railroads

In the railroad industry, MRPs were permitted under the terms of the Staggers Railroad Act of 1980. Railroads were given a freer hand to respond to competition from truckers, waterborne carriers, and other railroads. The railroads also used marketing flexibility to offer discounts to customers that reduced their cost by assembling their own unit trains and not requesting pickups or deliveries in remote locations.

MRPs are less common today in the railroad and telecom industries. However, marketing flexibility continues under new regulatory systems that share with MRPs the attribute of protecting core customers without linking a carrier’s rates closely to its own cost. Railroads have recently used this flexibility to compete for traffic from new oil field developments.

¹⁴ Centrex service, which provided businesses features like call-waiting, auto attendant, voicemail, 4-digit extension dialing and conference calling, could also be sourced by purchasing or leasing a private branch exchange (“PBX”), a private network platform that enabled these features.

¹⁵ See, for example, Comments of the Interstate Natural Gas Association of America in FERC Docket PLO2-6-000, September 2002.

VIII. Conclusions

Regulation of North American energy utilities is evolving to better meet the needs of utilities and their customers in a rapidly changing world. Innovation continues, while some older forms of Altreg such as multiyear rate plans are having a renaissance.

The variety of Altreg approaches that have been established reflects the varied circumstances of utilities. Some are vertically integrated, while others are more specialized wire companies. Capex needs and trends in average use vary greatly. Regulatory traditions also vary across the US and other advanced industrial countries.

No single Altreg approach is right for every situation. The availability of multiple remedies for the underlying challenges increases the chance that an approach has already been tried that would work well, with some adjustments, in new situations. Numerous precedents for an approach should raise confidence that it makes good sense under fairly common circumstances.

Taken together, the many innovations described in this survey can encourage utilities to achieve compensatory rates of return while making needed investments, improving efficiency, and developing more market-responsive rates and services. Regulation can be streamlined, and utilities can be encouraged to embrace cost-effective DERs. Regulators and stakeholders to regulation across the US should give priority attention to these options and consider which kinds of Altreg might work best in their situation.

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**AG-DR-01-167
CONFIDENTIAL ATTACHMENTS
8-12**

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Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-168

REQUEST:

Provide all bond rating agency reports (Standard and Poor's, Moody's, Fitch) on Duke Energy and Duke Kentucky from 2020 through the most recent month in 2023.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachments only)

Please see AG-DR-01-168 Confidential Attachments 1 through 16 for the attached rating agency reports.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Christopher R. Bauer

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**AG-DR-01-168
CONFIDENTIAL ATTACHMENTS
1-16**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General’s First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-169

REQUEST:

Provide copies of all articles, reports, and publications cited by Mr. Nowak in his Direct Testimony.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET
(As to Attachments 26 thru 29 only)

Please see the following index of attachments containing all material cited by Mr. Nowak in his Direct Testimony.

Attachment	Footnote Number	Document
AG-DR-01-169 Attachment 1	1	Federal Reserve, “The Fed - What is the purpose of the Federal Reserve System?” available at https://www.federalreserve.gov/faqs/about_12594.htm .
AG-DR-01-169 Attachment 2	2	CNBC, “Fed will aggressively dial back its bond buying, sees three rate hikes next year,” December 15, 2021, available at https://www.cnbc.com/2021/12/15/fed-will-aggressively-dial-back-its-monthly-bond-buying-sees-three-rate-hikes-next-year.html .
AG-DR-01-169 Attachment 3	3	Federal Reserve Board Press Release, “Federal Reserve announces extensive new measures to support the economy,” March 23, 2020.
AG-DR-01-169 Attachment 4	4	FRED, Economic Data, available at https://fred.stlouisfed.org/series/DGS10 .
AG-DR-01-169 Attachment 5	5	U.S. Department of the Treasury, available at https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2020 .
AG-DR-01-169 Attachment 6	6	U.S. Department of the Treasury, available at https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2021 .

AG-DR-01-169 Attachment 7	7	Federal Reserve, Press Release, (Mar. 16, 2022).
AG-DR-01-169 Attachment 8	9, 16	Jerome H. Powell’s speech “Reassessing Constraints on the Economy and Policy,” an economic policy symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 26, 2022, available at https://www.federalreserve.gov/newsevents/speech/powell20220826a.htm .
AG-DR-01-169 Attachment 9	10	Federal Reserve Board and FOMC Summary of Economic Projections, Figure 2 (June 15, 2022).
AG-DR-01-169 Attachment 10	11	Federal Reserve Board and FOMC Summary of Economic Projections, Table 1 (September 21, 2022).
AG-DR-01-169 Attachment 11	12	Federal Reserve, Press Release, (Dec. 15, 2021).
AG-DR-01-169 Attachment 12	13	Federal Reserve, Press Release, (Nov. 3, 2021).
AG-DR-01-169 Attachment 13	14, 15	Federal Reserve, Plans for Reducing the Size of the Federal Reserve’s Balance Sheet (May 4, 2022).
AG-DR-01-169 Attachment 14	17	CNBC, “The Dow Jones Industrial Average rose 246.76 points, or 0.6%, to close at 36,585.06. The S&P 500 also rose 0.6%, to close at 4,796.56,” January 2, 2022, available at https://www.cnbc.com/2022/01/02/futures-stock-market-news-open-to-close.html .
AG-DR-01-169 Attachment 15	18	CNBC, “The S&P 500 is now in an official bear market, according to S&P Dow Jones Indices,” June 13, 2022, available at https://www.cnbc.com/2022/06/13/sp-500-is-in-official-bear-market-according-to-sp-dow-jones-indices.html .
AG-DR-01-169 Attachment 16	19	AllianceBernstein, “Capital Markets Outlook: 3Q 2022,” July 18, 2022, available at https://www.alliancebernstein.com/corporate/en/insights/investment-insights/capital-markets-outlook-3q-2022.html .
AG-DR-01-169 Attachment 17	21	Curran, Edna. “Goldman Sachs Sees Fed Hiking More Times in 2023 Amid Inflation.” Bloomberg.com, Bloomberg, 28 Feb. 2022.
AG-DR-01-169 Attachment 18	24	S&P Global Ratings, Utility Sector’s credit ratings weakened sharply in 2020, January 21, 2021.
AG-DR-01-169 Attachment 19	25	S&P Global Ratings, For the First Time Ever, The Median Investor-Owned Utility Ratings Falls to The ‘BBB’ Category, January 20, 2022.
AG-DR-01-169 Attachment 20	26	S&P Global Market Intelligence, “Moody’s revises US regulated utilities outlook to negative,” November 11, 2022.
AG-DR-01-169 Attachment 21	27	S&P Global Market Intelligence, “Fitch sees various cost pressures behind ‘deteriorating’ US utilities outlook,” November 14, 2022.

AG-DR-01-169 Attachment 22	28	S&P Capital IQ Pro.
AG-DR-01-169 Attachment 23	30	Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management (Concise Fourth Edition, Thomson South-Western), at 317
AG-DR-01-169 Attachment 24	31	Harris and Marston, Estimating Shareholder Risk Premia Using Analysts Growth Forecasts, Financial Management, Summer 1992, at 65
AG-DR-01-169 Attachment 25	31	Vander Weide and Carleton, Investor Growth Expectations: Analysts vs. History, The Journal of Portfolio Management, Spring 1988, at 81
AG-DR-01-169 Confidential Attachment 26	34, 37	Blue Chip Financial Forecasts, Vol. 41, No. 11, November 1, 2022, at 2.
AG-DR-01-169 Confidential Attachment 27	35, 38	Blue Chip Financial Forecasts, Vol. 41, No. 6, June 1, 2022, at 14.
AG-DR-01-169 Confidential Attachment 28	39, 40	S&P Global Ratings, Duke Energy Kentucky Inc., June 16, 2022, at 1.
AG-DR-01-169 Confidential Attachment 29	41	Moody's Investors Service. "Duke Energy Kentucky Inc.," January 19, 2022, at 4.

The confidential attachments to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Joshua C. Nowak

FAQs

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What is the purpose of the Federal Reserve System?

The Federal Reserve System, often referred to as the Federal Reserve or simply "the Fed," is the central bank of the United States. It was created by the Congress to provide the nation with a safer, more flexible, and more stable monetary and financial system. The Federal Reserve was created on December 23, 1913, when President Woodrow Wilson signed the [Federal Reserve Act](#) into law. Today, the Federal Reserve's responsibilities fall into four general areas.



- Conducting the nation's monetary policy by influencing money and credit conditions in the economy in pursuit of full employment and stable prices.
- Supervising and regulating banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers.

11/22/22, 9:09 PM

The Fed - What is the purpose of the Federal Reserve System?

- Maintaining the stability of the financial system and containing systemic risk that may arise in financial markets.
- Providing certain financial services to the U.S. government, U.S. financial institutions, and foreign official institutions, and playing a major role in operating and overseeing the nation's payments systems.

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[Federal Reserve Act](#)

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Last Update: November 03, 2016

1/14/22, 7:58 PM

Fed will aggressively dial back its bond buying, sees three rate hikes next year



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FEDERAL RESERVE

Fed will aggressively dial back its bond buying, sees three rate hikes next year

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KEY POINTS

The Federal Reserve provided multiple indications that its run of ultra-easy policy since the beginning of the pandemic is coming to a close, making aggressive policy moves in response to rising inflation.

For one, the central bank said it will accelerate the reduction of its monthly bond purchases.



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VIDEO 07:51

Fed Chairman Jerome Powell's opening statement

The Federal Reserve provided multiple indications Wednesday that its run of ultra-easy policy since the beginning of the Covid pandemic is coming to a close, making aggressive policy moves in response to rising inflation.

For one, the central bank said it will accelerate the reduction of its monthly bond purchases.

The Fed will be buying \$60 billion of bonds each month starting in January, half the level prior to the November taper and \$30 billion less than it had been buying in December. The Fed was tapering by \$15 billion a month in November, doubled that in December, then will accelerate the reduction further come 2022.

After that wraps up, in late winter or early spring, the central bank expects to start raising interest rates, which were held steady at this week's meeting.

Projections released Wednesday indicate that Fed officials see as many as three rate hikes coming in 2022, with two in the following year and two more in 2024.



1/14/22, 7:58 PM

Fed will aggressively dial back its bond buying, sees three rate hikes next year



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VIDEO 01:27

Fed raises taper amount to \$30 billion, leaves rates unchanged

“Economic developments and changes in the outlook warrant this evolution of monetary policy, which will continue to provide appropriate support for the economy,” Chairman Jerome Powell said at his post-meeting news conference.

The Federal Open Market Committee’s moves, approved unanimously, represent a substantial adjustment to policy that has been the loosest in its 108-year history. The post-meeting statement noted the impact from inflation.

“Supply and demand imbalances related to the pandemic and the reopening of the economy have continued to contribute to elevated levels of inflation,” the statement said.

The committee sharply ratcheted up its inflation outlook for 2021, pushing it to 5.3% from 4.2% for all items and to 4.4% from 3.7% excluding food and energy. For 2022, the expectation is now 2.6% for headline and 2.7% for core, both up from September.

At the same time, the unemployment rate projection for 2021 came down to 4.3% from 4.8% in September.

The statement noted that “job gains have been solid in recent months, and the unemployment rate has declined substantially.”

However, members came out on the hawkish side of policy moves, with members solidly leaning toward rate hikes. The “dot plot” of individual members rate



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That vote came even as the statement reaffirmed that the Fed's benchmark overnight borrowing rate would stay near zero "until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment."

The committee reduced its forecast for economic growth this year, seeing GDP rising 5.5% for 2021, compared with the 5.9% indicated in September. Officials also revised their forecasts in subsequent year, raising 2022 growth to 4% from 3.8% and lowering 2023 to 2.2% from 2.5%.

The statement again noted that developments with the [Covid pandemic](#), in particular with variants, pose risks to the outlook.

Inflation hotter than expected

Both policy moves came in response to escalating inflation, which is running at its highest level in 39 years for consumer prices. Wholesale prices in November jumped 9.6%, the fastest on record in a sign that inflation pressures are becoming more ingrained and broad based.

Fed officials long have stressed that inflation is "transitory," which Powell has defined as unlikely to leave a lasting imprint on the economy. He and other central bank leaders, as well as Treasury Secretary Janet Yellen, have stressed that prices are booming due to pandemic-related factors such as extraordinary demand that has outstripped supply but ultimately will fade.

However, the term had become a pejorative and the post-meeting statement eliminated it. Powell telegraphed the move during congressional testimony last month, saying "it's probably a good time to retire that word and try to explain more clearly what we mean."

For the Powell Fed, tightening policy now marks a dramatic pivot off a policy enacted just over a year ago. Known as "flexible average inflation targeting," which meant it



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not in the interest of completely healing the labor market from the hit it took during the pandemic. The Fed's new policy sought employment that was both full and inclusive across racial, gender and economic lines. Officials agreed not to raise interest rates in anticipation of increasing inflation, as the central bank had done in the past.

However, as the "transitory" narrative came into question and inflation began to look stronger and more durable, the Fed has had to rethink its intentions and shift gears.

The asset purchase taper began in November, with a reduction of \$10 billion in Treasury purchases and \$5 billion in mortgage-backed securities. That still left the month buys at \$70 billion and \$35 billion, respectively.

However, the Fed's \$8.7 trillion balance sheet increased by just \$2 billion over the past four weeks, with Treasury holdings up \$52 billion and MBS actually reduced by \$23 billion. Over the past 12 months, Treasury holdings have expanded by \$978 billion while MBS has risen by \$567 billion.

Under the new terms of a program also known as quantitative easing, the Fed would accelerate the decline of its holdings until it is no longer adding to its portfolio. That would bring QE to an end in the spring and allow the central bank to raise rates anytime after. The Fed has said it likely would not hike rates and continue buying bonds simultaneously, as the two moves would work at cross purposes.

From there, the Fed at anytime could start reducing its balance sheet either by selling securities outright, or, in the more likely scenario, begin allowing the proceeds of its current bond holdings to run off each month at a controlled pace.

Correction: The Fed's \$8.7 trillion balance sheet increased by just \$2 billion over the past four weeks, with Treasury holdings up \$52 billion and MBS actually reduced by \$23 billion. An earlier version misstated one of the figures.



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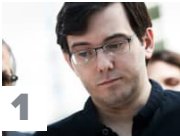
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11/10/2020

Federal Reserve Board - Federal Reserve announces extensive new measures to support the economy

Press Release

March 23, 2020

Federal Reserve announces extensive new measures to support the economy

For release at 8:00 a.m. EDT

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The Federal Reserve is committed to using its full range of tools to support households, businesses, and the U.S. economy overall in this challenging time. The coronavirus pandemic is causing tremendous hardship across the United States and around the world. Our nation's first priority is to care for those afflicted and to limit the further spread of the virus. While great uncertainty remains, it has become clear that our economy will face severe disruptions. Aggressive efforts must be taken across the public and private sectors to limit the losses to jobs and incomes and to promote a swift recovery once the disruptions abate.

The Federal Reserve's role is guided by its mandate from Congress to promote maximum employment and stable prices, along with its responsibilities to promote the stability of the financial system. In support of these goals, the Federal Reserve is using its full range of authorities to provide powerful support for the flow of credit to American families and businesses. These actions include:

- Support for critical market functioning. The Federal Open Market Committee (FOMC) will purchase Treasury securities and agency mortgage-backed securities in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy. The FOMC had previously announced it would purchase at least \$500 billion of Treasury securities and at least \$200 billion of mortgage-backed securities. In addition, the [FOMC will include purchases of agency commercial mortgage-backed securities in its agency mortgage-backed security purchases](#).
- Supporting the flow of credit to employers, consumers, and businesses by establishing new programs that, taken together, will provide up to \$300 billion in new financing. The Department of the Treasury, using the Exchange Stabilization Fund (ESF), will provide \$30 billion in equity to these facilities.
- Establishment of two facilities to support credit to large employers – the Primary Market Corporate Credit Facility (PMCCF) for new bond and loan issuance and the Secondary Market Corporate Credit Facility (SMCCF) to provide liquidity for outstanding corporate bonds.
- Establishment of a third facility, the Term Asset-Backed Securities Loan Facility (TALF), to support the flow of credit to consumers and businesses. The TALF will enable the issuance of asset-backed securities (ABS) backed by student loans, auto loans, credit card loans, loans guaranteed by the Small Business Administration (SBA), and certain other assets.
- Facilitating the flow of credit to municipalities by expanding the Money Market Mutual Fund Liquidity Facility (MMLF) to include a wider range of securities, including municipal variable rate demand notes (VRDNs) and bank certificates of deposit.
- Facilitating the flow of credit to municipalities by expanding the Commercial Paper Funding Facility (CPFF) to include high-quality, tax-exempt commercial paper as eligible securities. In addition, the pricing of the facility has been reduced.

In addition to the steps above, the Federal Reserve expects to announce soon the establishment of a Main Street Business Lending Program to support lending to eligible small-and-medium sized businesses, complementing efforts by the SBA.

11/10/2020

Federal Reserve Board - Federal Reserve announces extensive new measures to support the economy

The PMCCF will allow companies access to credit so that they are better able to maintain business operations and capacity during the period of dislocations related to the pandemic. This facility is open to investment grade companies and will provide bridge financing of four years. Borrowers may elect to defer interest and principal payments during the first six months of the loan, extendable at the Federal Reserve's discretion, in order to have additional cash on hand that can be used to pay employees and suppliers. The Federal Reserve will finance a special purpose vehicle (SPV) to make loans from the PMCCF to companies. The Treasury, using the ESF, will make an equity investment in the SPV.

The SMCCF will purchase in the secondary market corporate bonds issued by investment grade U.S. companies and U.S.-listed exchange-traded funds whose investment objective is to provide broad exposure to the market for U.S. investment grade corporate bonds. Treasury, using the ESF, will make an equity investment in the SPV established by the Federal Reserve for this facility.

Under the TALF, the Federal Reserve will lend on a non-recourse basis to holders of certain AAA-rated ABS backed by newly and recently originated consumer and small business loans. The Federal Reserve will lend an amount equal to the market value of the ABS less a haircut and will be secured at all times by the ABS. Treasury, using the ESF, will also make an equity investment in the SPV established by the Federal Reserve for this facility. The TALF, PMCCF and SMCCF are established by the Federal Reserve under the authority of Section 13(3) of the Federal Reserve Act, with approval of the Treasury Secretary.

These actions augment the measures taken by the Federal Reserve over the past week to support the flow of credit to households and businesses. These include:

- The establishment of the CPFF, the MMLF, and the Primary Dealer Credit Facility;
- The expansion of central bank liquidity swap lines;
- Steps to enhance the availability and ease terms for borrowing at the discount window;
- The elimination of reserve requirements;
- Guidance encouraging banks to be flexible with customers experiencing financial challenges related to the coronavirus and to utilize their liquidity and capital buffers in doing so;
- Statements encouraging the use of daylight credit at the Federal Reserve.

Taken together, these actions will provide support to a wide range of markets and institutions, thereby supporting the flow of credit in the economy.

The Federal Reserve will continue to use its full range of tools to support the flow of credit to households and businesses and thereby promote its maximum employment and price stability goals.

For media inquiries, call 202-452-2955

[Federal Reserve issues FOMC statement](#)

[Term Sheet - Primary Market Corporate Credit Facility \(PDF\)](#)

Updated term sheet: [Primary Market Corporate Credit Facility](#)

[Term Sheet - Secondary Market Corporate Credit Facility \(PDF\)](#)

Updated term sheet: [Secondary Market Corporate Credit Facility](#)

[Term Sheet - Term Asset-Backed Securities Loan Facility \(PDF\)](#)

Updated term sheet: [Term Asset-Backed Securities Loan Facility](#)

[Term Sheet - Money Market Mutual Fund Liquidity Facility \(PDF\)](#)

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11/10/2020

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Updated term sheet: [Commercial Paper Funding Facility](#)

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Last Update: July 28, 2020

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FEDERAL RESERVE press release



For release at 2 p.m. EDT

March 16, 2022

Indicators of economic activity and employment have continued to strengthen. Job gains have been strong in recent months, and the unemployment rate has declined substantially. Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher energy prices, and broader price pressures.

The invasion of Ukraine by Russia is causing tremendous human and economic hardship. The implications for the U.S. economy are highly uncertain, but in the near term the invasion and related events are likely to create additional upward pressure on inflation and weigh on economic activity.

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With appropriate firming in the stance of monetary policy, the Committee expects inflation to return to its 2 percent objective and the labor market to remain strong. In support of these goals, the Committee decided to raise the target range for the federal funds rate to 1/4 to 1/2 percent and anticipates that ongoing increases in the target range will be appropriate. In addition, the Committee expects to begin reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities at a coming meeting.

In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including readings on public health, labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

(more)

For release at 2 p.m. EDT

March 16, 2022

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Voting for the monetary policy action were Jerome H. Powell, Chair; John C. Williams, Vice Chair; Michelle W. Bowman; Lael Brainard; Esther L. George; Patrick Harker; Loretta J. Mester; and Christopher J. Waller. Voting against this action was James Bullard, who preferred at this meeting to raise the target range for the federal funds rate by 0.5 percentage point to 1/2 to 3/4 percent. Patrick Harker voted as an alternate member at this meeting.

-0-

For release at 2 p.m. EDT

March 16, 2022

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its [statement](#) on March 16, 2022:

- The Board of Governors of the Federal Reserve System voted unanimously to raise the interest rate paid on reserve balances to 0.4 percent, effective March 17, 2022.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

“Effective March 17, 2022, the Federal Open Market Committee directs the Desk to:

- Undertake open market operations as necessary to maintain the federal funds rate in a target range of 1/4 to 1/2 percent.
 - Conduct overnight repurchase agreement operations with a minimum bid rate of 0.5 percent and with an aggregate operation limit of \$500 billion; the aggregate operation limit can be temporarily increased at the discretion of the Chair.
 - Conduct overnight reverse repurchase agreement operations at an offering rate of 0.3 percent and with a per-counterparty limit of \$160 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.
 - Roll over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities (MBS) in agency MBS.
 - Allow modest deviations from stated amounts for reinvestments, if needed for operational reasons.
 - Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.”
- In a related action, the Board of Governors of the Federal Reserve System voted unanimously to approve a 1/4 percentage point increase in the primary credit rate to 0.5 percent, effective March 17, 2022. In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of Boston, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, and San Francisco.

(more)

For release at 2 p.m. EDT

March 16, 2022

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This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's [website](#).

For release on delivery
10:00 a.m. EDT (8:00 a.m. MDT)
August 26, 2022

Monetary Policy and Price Stability

Remarks by

Jerome H. Powell

Chair

Board of Governors of the Federal Reserve System

at

“Reassessing Constraints on the Economy and Policy,” an economic policy symposium
sponsored by the Federal Reserve Bank of Kansas City

Jackson Hole, Wyoming

August 26, 2022

Thank you for the opportunity to speak here today.

At past Jackson Hole conferences, I have discussed broad topics such as the ever-changing structure of the economy and the challenges of conducting monetary policy under high uncertainty. Today, my remarks will be shorter, my focus narrower, and my message more direct.

The Federal Open Market Committee's (FOMC) overarching focus right now is to bring inflation back down to our 2 percent goal. Price stability is the responsibility of the Federal Reserve and serves as the bedrock of our economy. Without price stability, the economy does not work for anyone. In particular, without price stability, we will not achieve a sustained period of strong labor market conditions that benefit all. The burdens of high inflation fall heaviest on those who are least able to bear them.

Restoring price stability will take some time and requires using our tools forcefully to bring demand and supply into better balance. Reducing inflation is likely to require a sustained period of below-trend growth. Moreover, there will very likely be some softening of labor market conditions. While higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation. But a failure to restore price stability would mean far greater pain.

The U.S. economy is clearly slowing from the historically high growth rates of 2021, which reflected the reopening of the economy following the pandemic recession. While the latest economic data have been mixed, in my view our economy continues to show strong underlying momentum. The labor market is particularly strong, but it is clearly out of balance, with demand for workers substantially exceeding the supply of

available workers. Inflation is running well above 2 percent, and high inflation has continued to spread through the economy. While the lower inflation readings for July are welcome, a single month's improvement falls far short of what the Committee will need to see before we are confident that inflation is moving down.

We are moving our policy stance purposefully to a level that will be sufficiently restrictive to return inflation to 2 percent. At our most recent meeting in July, the FOMC raised the target range for the federal funds rate to 2.25 to 2.5 percent, which is in the Summary of Economic Projection's (SEP) range of estimates of where the federal funds rate is projected to settle in the longer run. In current circumstances, with inflation running far above 2 percent and the labor market extremely tight, estimates of longer-run neutral are not a place to stop or pause.

July's increase in the target range was the second 75 basis point increase in as many meetings, and I said then that another unusually large increase could be appropriate at our next meeting. We are now about halfway through the intermeeting period. Our decision at the September meeting will depend on the totality of the incoming data and the evolving outlook. At some point, as the stance of monetary policy tightens further, it likely will become appropriate to slow the pace of increases.

Restoring price stability will likely require maintaining a restrictive policy stance for some time. The historical record cautions strongly against prematurely loosening policy. Committee participants' most recent individual projections from the June SEP showed the median federal funds rate running slightly below 4 percent through the end of 2023. Participants will update their projections at the September meeting.

Our monetary policy deliberations and decisions build on what we have learned about inflation dynamics both from the high and volatile inflation of the 1970s and 1980s, and from the low and stable inflation of the past quarter-century. In particular, we are drawing on three important lessons.

The first lesson is that central banks *can* and *should* take responsibility for delivering low and stable inflation. It may seem strange now that central bankers and others once needed convincing on these two fronts, but as former Chairman Ben Bernanke has shown, both propositions were widely questioned during the Great Inflation period.¹ Today, we regard these questions as settled. Our responsibility to deliver price stability is unconditional. It is true that the current high inflation is a global phenomenon, and that many economies around the world face inflation as high or higher than seen here in the United States. It is also true, in my view, that the current high inflation in the United States is the product of strong demand and constrained supply, and that the Fed's tools work principally on aggregate demand. None of this diminishes the Federal Reserve's responsibility to carry out our assigned task of achieving price stability. There is clearly a job to do in moderating demand to better align with supply. We are committed to doing that job.

The second lesson is that the public's expectations about future inflation can play an important role in setting the path of inflation over time. Today, by many measures, longer-term inflation expectations appear to remain well anchored. That is broadly true of surveys of households, businesses, and forecasters, and of market-based measures as

¹ See Ben Bernanke (2004), "The Great Moderation," speech delivered at the meetings of the Eastern Economic Association, Washington, February 20, <https://www.federalreserve.gov/boarddocs/speeches/2004/20040220>; Ben Bernanke (2022), "Inflation Isn't Going to Bring Back the 1970s," *New York Times*, June 14.

well. But that is not grounds for complacency, with inflation having run well above our goal for some time.

If the public expects that inflation will remain low and stable over time, then, absent major shocks, it likely will. Unfortunately, the same is true of expectations of high and volatile inflation. During the 1970s, as inflation climbed, the anticipation of high inflation became entrenched in the economic decisionmaking of households and businesses. The more inflation rose, the more people came to expect it to remain high, and they built that belief into wage and pricing decisions. As former Chairman Paul Volcker put it at the height of the Great Inflation in 1979, “Inflation feeds in part on itself, so part of the job of returning to a more stable and more productive economy must be to break the grip of inflationary expectations.”²

One useful insight into how actual inflation may affect expectations about its future path is based in the concept of “rational inattention.”³ When inflation is persistently high, households and businesses must pay close attention and incorporate inflation into their economic decisions. When inflation is low and stable, they are freer to focus their attention elsewhere. Former Chairman Alan Greenspan put it this way: “For all practical purposes, price stability means that expected changes in the average price level are small enough and gradual enough that they do not materially enter business and household financial decisions.”⁴

² See Paul A. Volcker (1979), “Statement before the Joint Economic Committee of the U.S. Congress, October 17, 1979,” *Federal Reserve Bulletin*, vol. 65 (November), p. 888, <https://fraser.stlouisfed.org/title/federal-reserve-bulletin-62/november-1979-20459>.

³ A review of the applications of rational inattention in monetary economics appears in Christopher A. Sims (2010), “Rational Inattention and Monetary Economics,” in Benjamin M. Friedman and Michael Woodford, eds., *Handbook of Monetary Economics*, vol. 3 (Amsterdam: North-Holland), pp. 155–81.

⁴ See Alan Greenspan (1989), “Statement before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, February 21, 1989,” *Federal Reserve Bulletin*, vol. 75 (April), pp. 274–75, <https://fraser.stlouisfed.org/title/federal-reserve-bulletin-62/april-1989-20803>.

Of course, inflation has just about everyone's attention right now, which highlights a particular risk today: The longer the current bout of high inflation continues, the greater the chance that expectations of higher inflation will become entrenched.

That brings me to the third lesson, which is that we must keep at it until the job is done. History shows that the employment costs of bringing down inflation are likely to increase with delay, as high inflation becomes more entrenched in wage and price setting. The successful Volcker disinflation in the early 1980s followed multiple failed attempts to lower inflation over the previous 15 years. A lengthy period of very restrictive monetary policy was ultimately needed to stem the high inflation and start the process of getting inflation down to the low and stable levels that were the norm until the spring of last year. Our aim is to avoid that outcome by acting with resolve now.

These lessons are guiding us as we use our tools to bring inflation down. We are taking forceful and rapid steps to moderate demand so that it comes into better alignment with supply, and to keep inflation expectations anchored. We will keep at it until we are confident the job is done.

For release at 2:00 p.m., EDT, June 15, 2022

Summary of Economic Projections

In conjunction with the Federal Open Market Committee (FOMC) meeting held on June 14–15, 2022, meeting participants submitted their projections of the most likely outcomes for real gross domestic product (GDP) growth, the unemployment rate, and inflation for each year from 2022 to 2024 and over the longer run. Each participant’s projections were based on information available at the time of the meeting, together with her or his assessment of appropriate monetary policy—including a path for the federal funds rate and its longer-run value—and assumptions about other factors likely to affect economic outcomes. The longer-run projections represent each participant’s assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy. “Appropriate monetary policy” is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the statutory mandate to promote maximum employment and price stability.

For release at 2:00 p.m., EDT, June 15, 2022

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy, June 2022

Percent

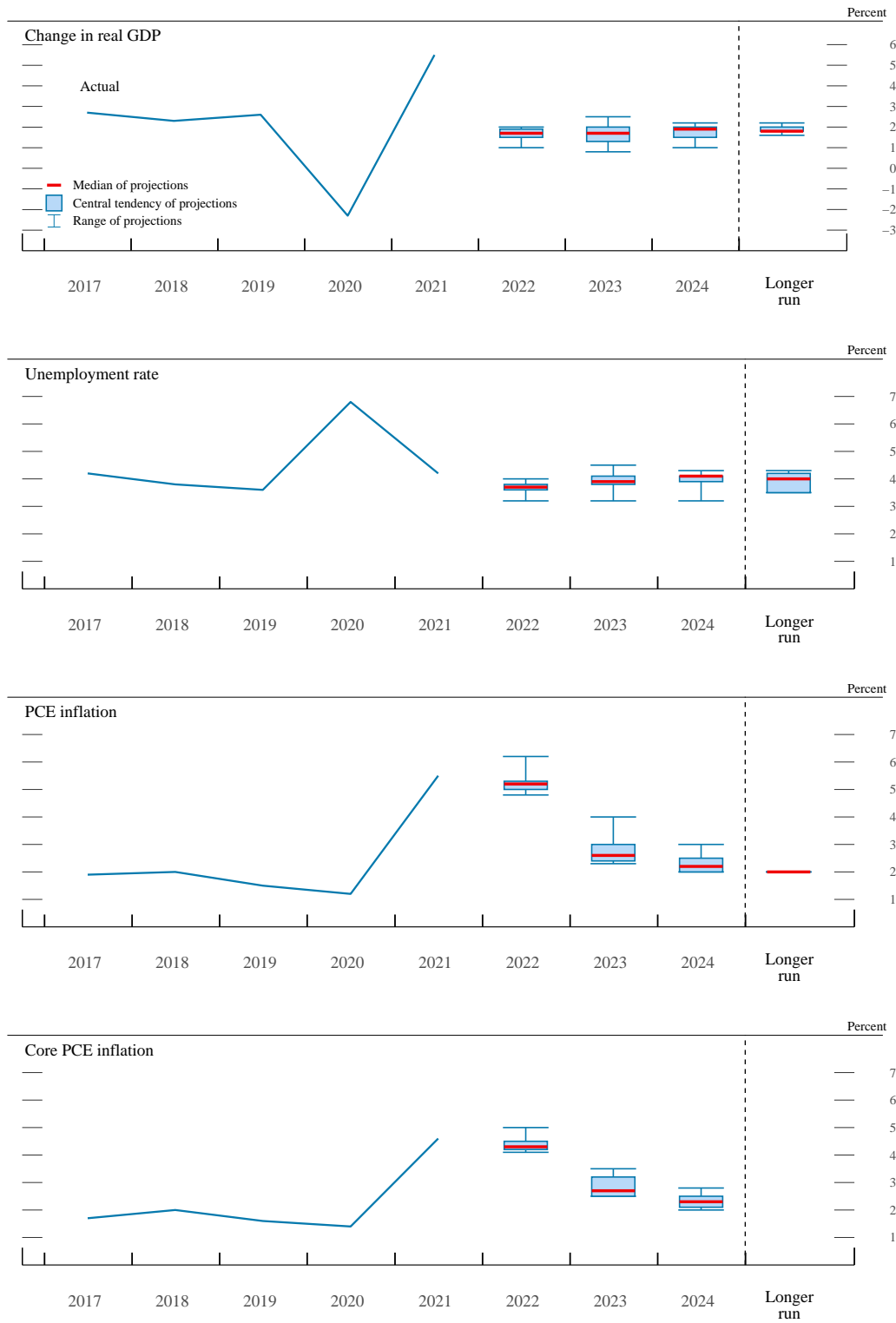
Variable	Median ¹				Central Tendency ²				Range ³			
	2022	2023	2024	Longer run	2022	2023	2024	Longer run	2022	2023	2024	Longer run
Change in real GDP	1.7	1.7	1.9	1.8	1.5–1.9	1.3–2.0	1.5–2.0	1.8–2.0	1.0–2.0	0.8–2.5	1.0–2.2	1.6–2.2
March projection	2.8	2.2	2.0	1.8	2.5–3.0	2.1–2.5	1.8–2.0	1.8–2.0	2.1–3.3	2.0–2.9	1.5–2.5	1.6–2.2
Unemployment rate	3.7	3.9	4.1	4.0	3.6–3.8	3.8–4.1	3.9–4.1	3.5–4.2	3.2–4.0	3.2–4.5	3.2–4.3	3.5–4.3
March projection	3.5	3.5	3.6	4.0	3.4–3.6	3.3–3.6	3.2–3.7	3.5–4.2	3.1–4.0	3.1–4.0	3.1–4.0	3.5–4.3
PCE inflation	5.2	2.6	2.2	2.0	5.0–5.3	2.4–3.0	2.0–2.5	2.0	4.8–6.2	2.3–4.0	2.0–3.0	2.0
March projection	4.3	2.7	2.3	2.0	4.1–4.7	2.3–3.0	2.1–2.4	2.0	3.7–5.5	2.2–3.5	2.0–3.0	2.0
Core PCE inflation ⁴	4.3	2.7	2.3		4.2–4.5	2.5–3.2	2.1–2.5		4.1–5.0	2.5–3.5	2.0–2.8	
March projection	4.1	2.6	2.3		3.9–4.4	2.4–3.0	2.1–2.4		3.6–4.5	2.1–3.5	2.0–3.0	
Memo: Projected appropriate policy path												
Federal funds rate	3.4	3.8	3.4	2.5	3.1–3.6	3.6–4.1	2.9–3.6	2.3–2.5	3.1–3.9	2.9–4.4	2.1–4.1	2.0–3.0
March projection	1.9	2.8	2.8	2.4	1.6–2.4	2.4–3.1	2.4–3.4	2.3–2.5	1.4–3.1	2.1–3.6	2.1–3.6	2.0–3.0

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The March projections were made in conjunction with the meeting of the Federal Open Market Committee on March 15–16, 2022. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the March 15–16, 2022, meeting, and one participant did not submit such projections in conjunction with the June 14–15, 2022, meeting.

1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.
2. The central tendency excludes the three highest and three lowest projections for each variable in each year.
3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
4. Longer-run projections for core PCE inflation are not collected.

For release at 2:00 p.m., EDT, June 15, 2022

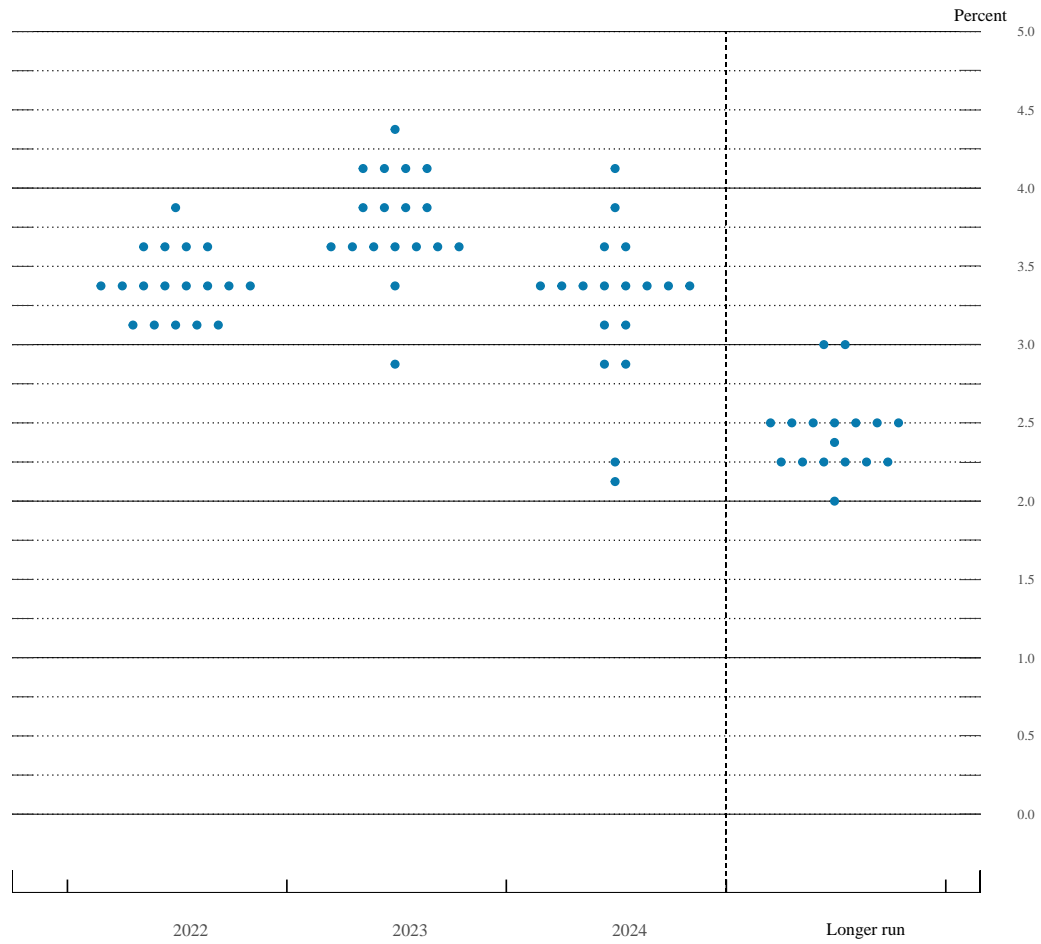
Figure 1. Medians, central tendencies, and ranges of economic projections, 2022–24 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

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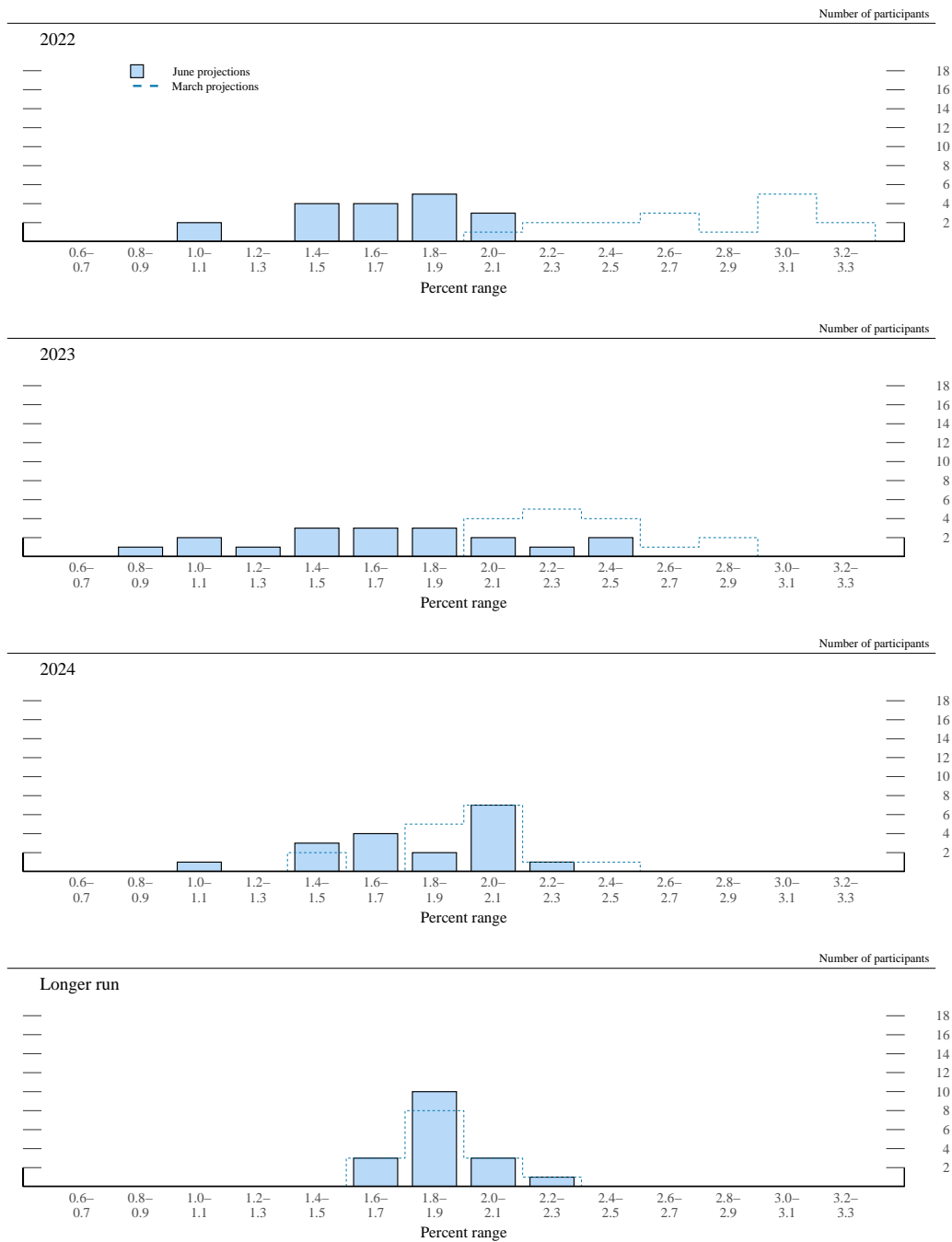
Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



NOTE: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. One participant did not submit longer-run projections for the federal funds rate.

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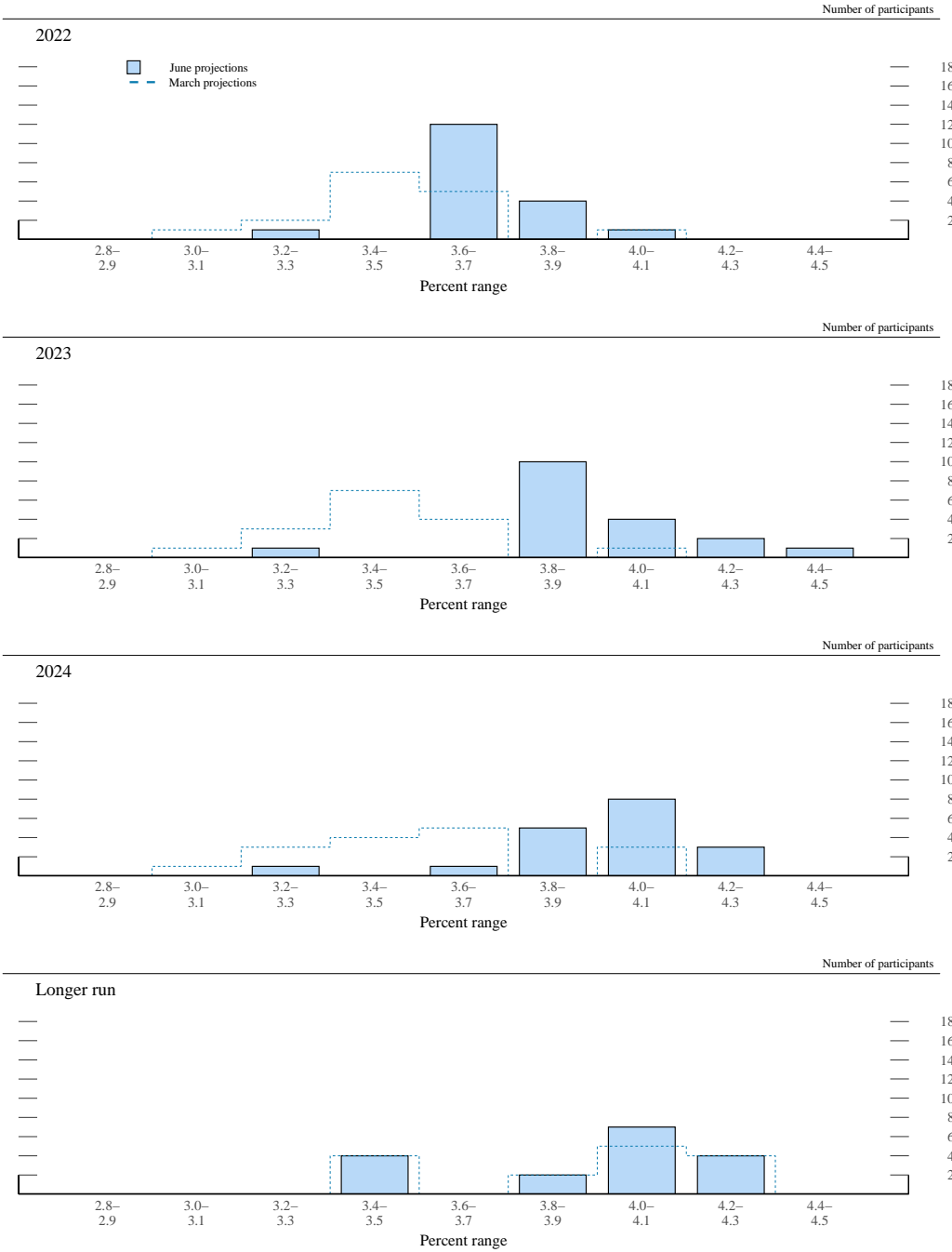
Figure 3.A. Distribution of participants' projections for the change in real GDP, 2022-24 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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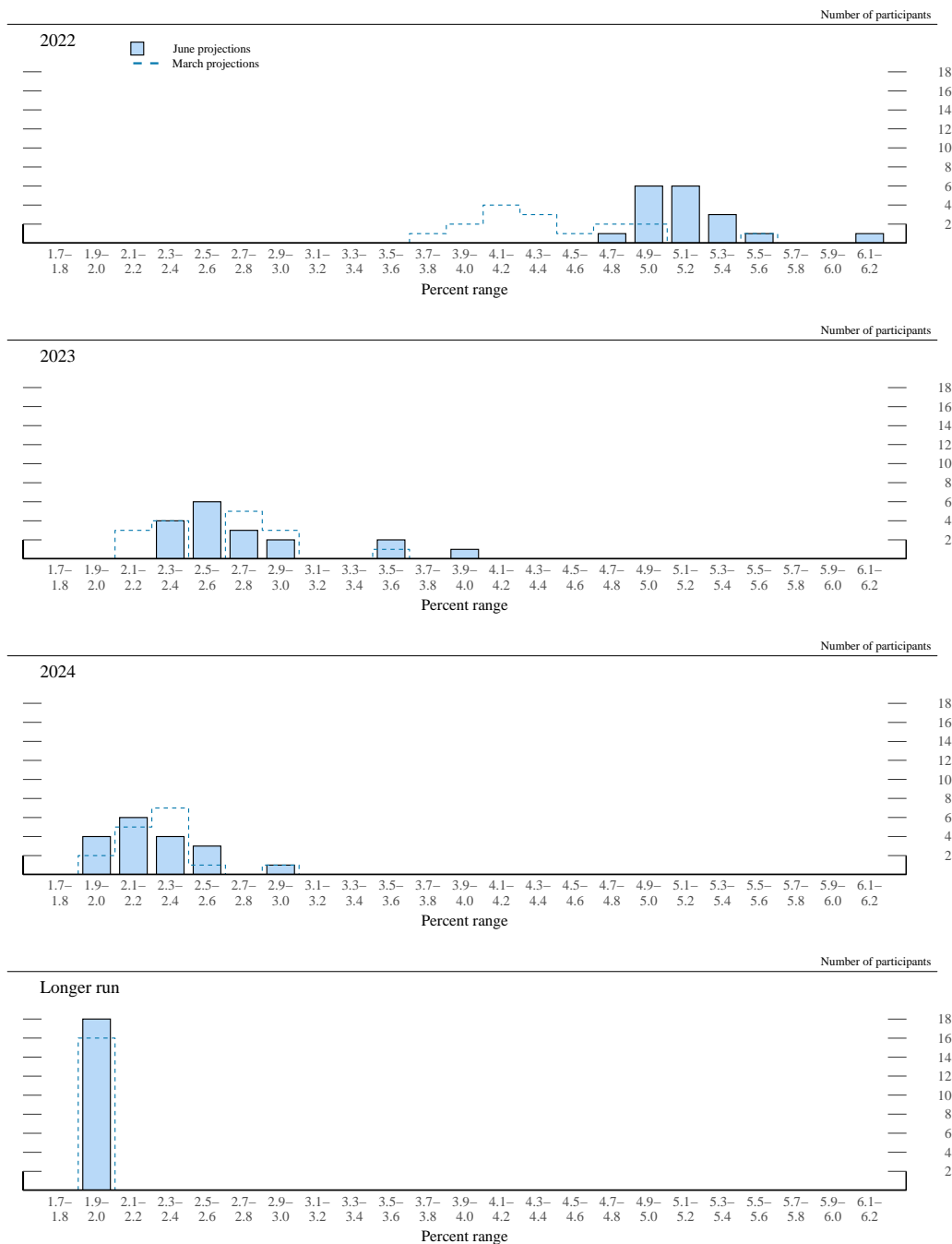
Figure 3.B. Distribution of participants' projections for the unemployment rate, 2022–24 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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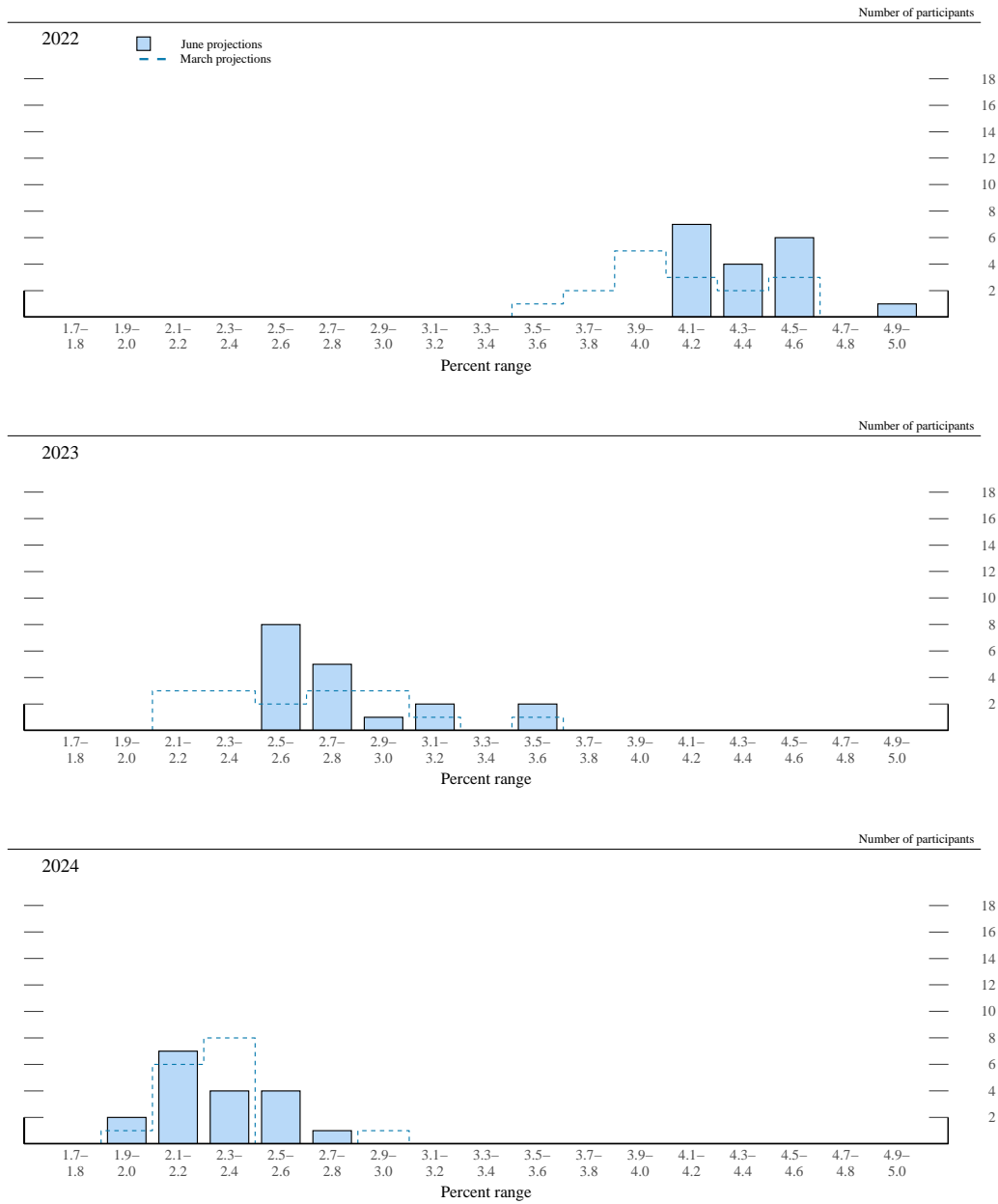
Figure 3.C. Distribution of participants' projections for PCE inflation, 2022-24 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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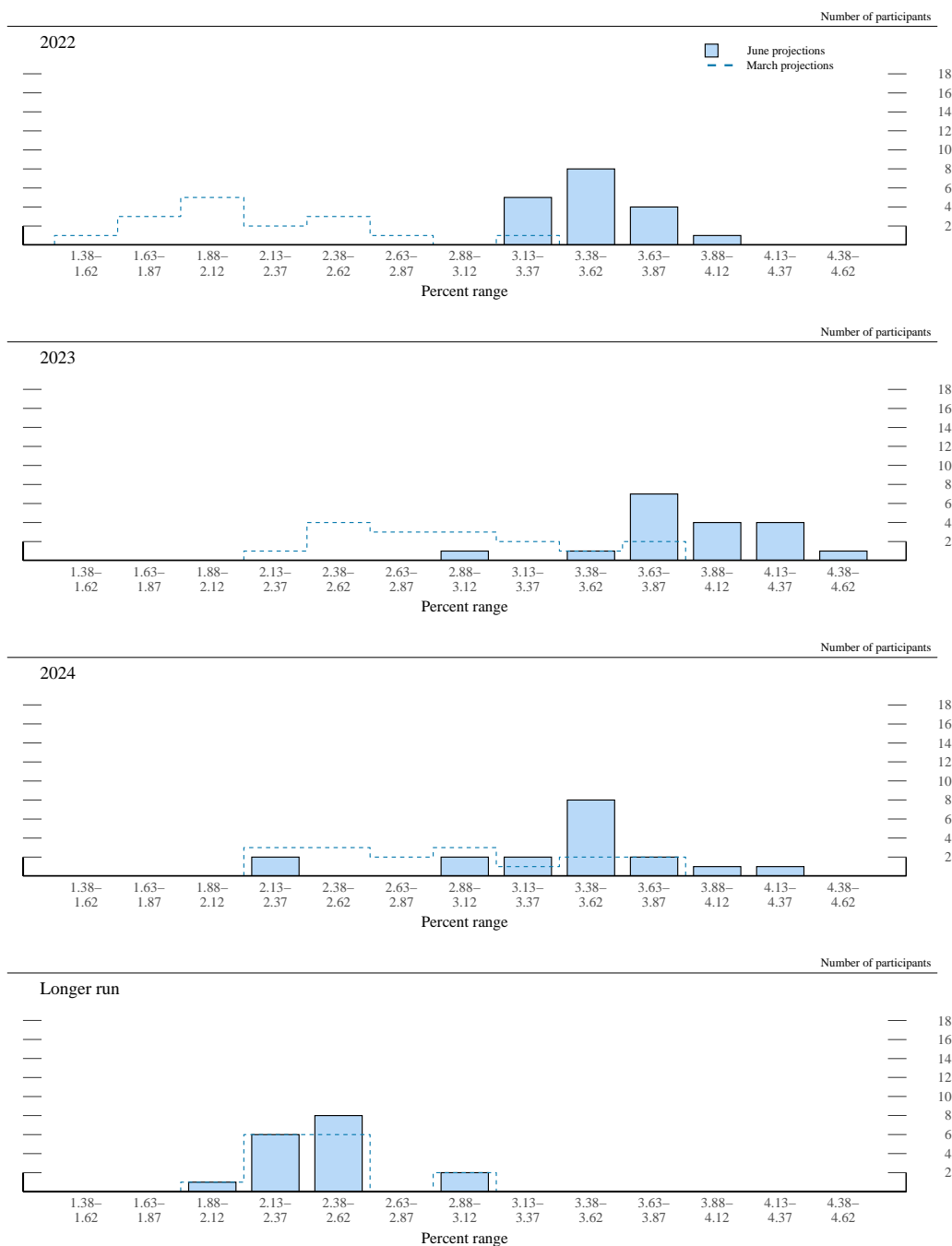
Figure 3.D. Distribution of participants' projections for core PCE inflation, 2022-24



NOTE: Definitions of variables and other explanations are in the notes to table 1.

For release at 2:00 p.m., EDT, June 15, 2022

Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2022-24 and over the longer run

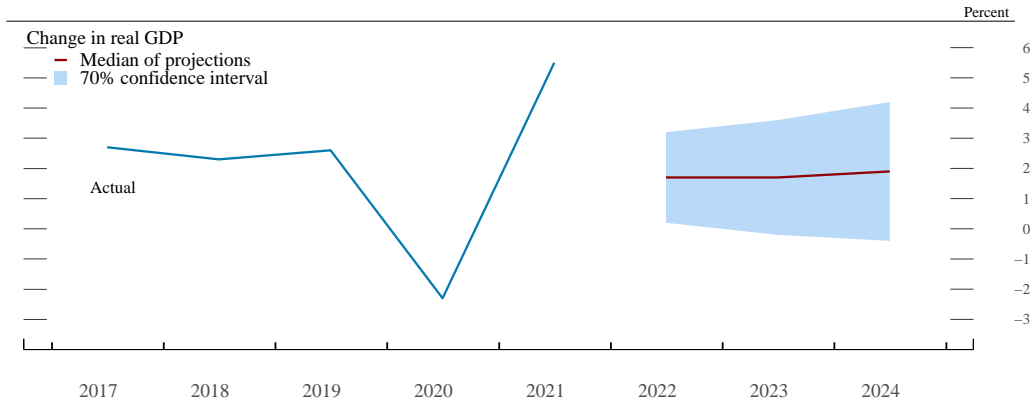


NOTE: Definitions of variables and other explanations are in the notes to table 1.

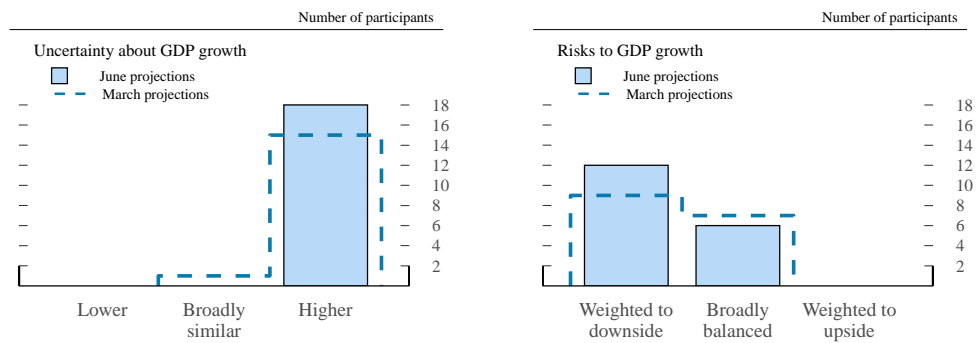
For release at 2:00 p.m., EDT, June 15, 2022

Figure 4.A. Uncertainty and risks in projections of GDP growth

Median projection and confidence interval based on historical forecast errors



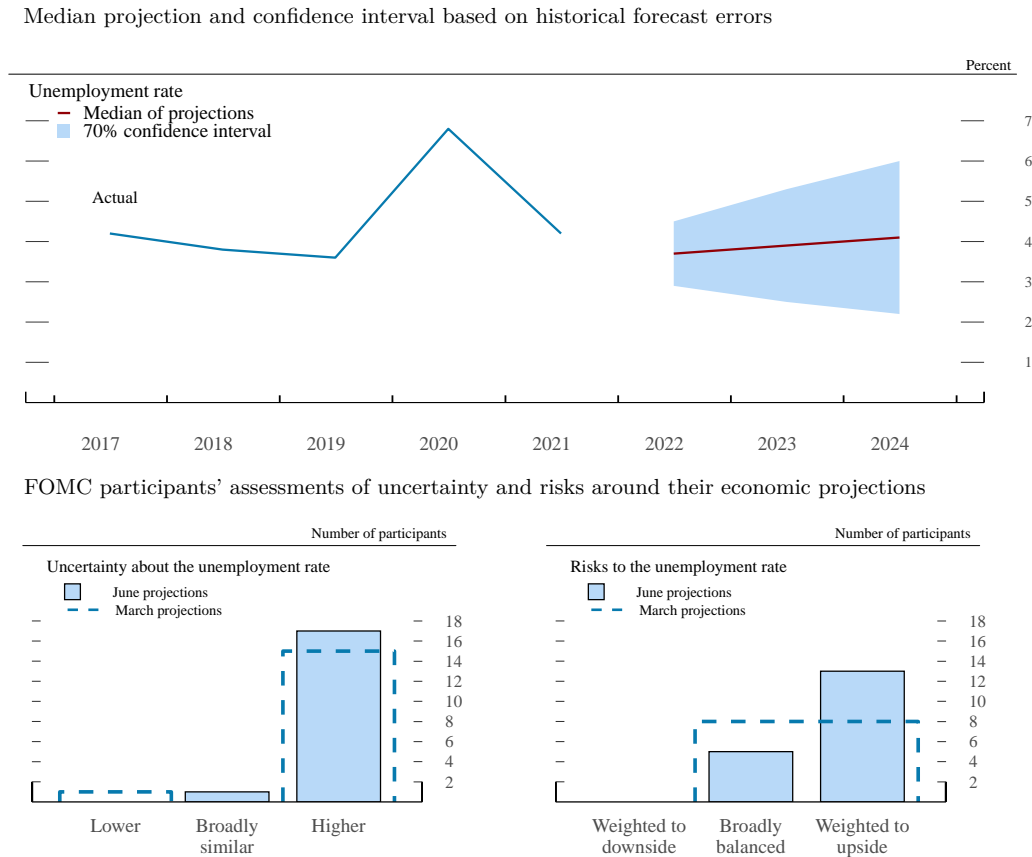
FOMC participants' assessments of uncertainty and risks around their economic projections



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

For release at 2:00 p.m., EDT, June 15, 2022

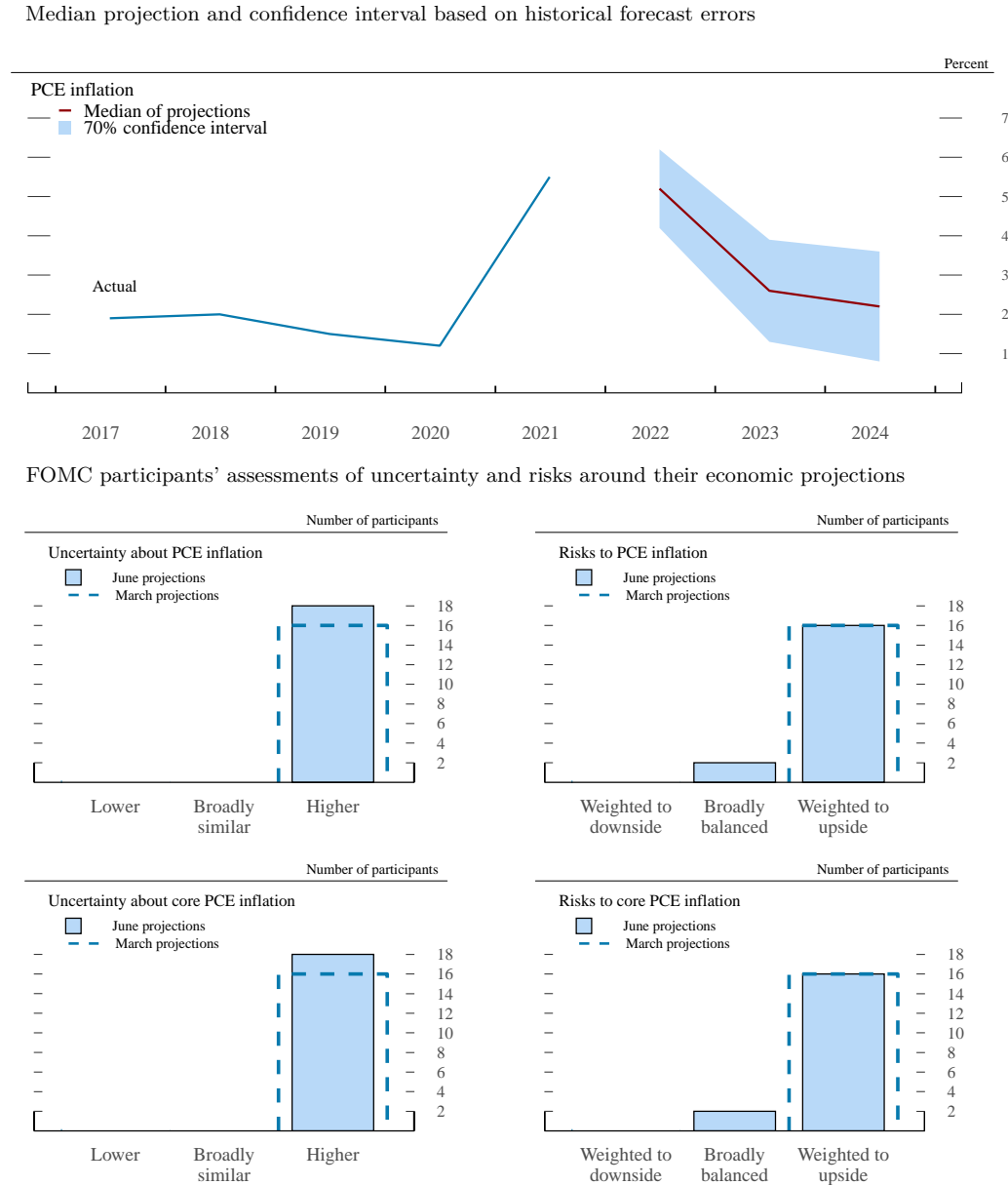
Figure 4.B. Uncertainty and risks in projections of the unemployment rate



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

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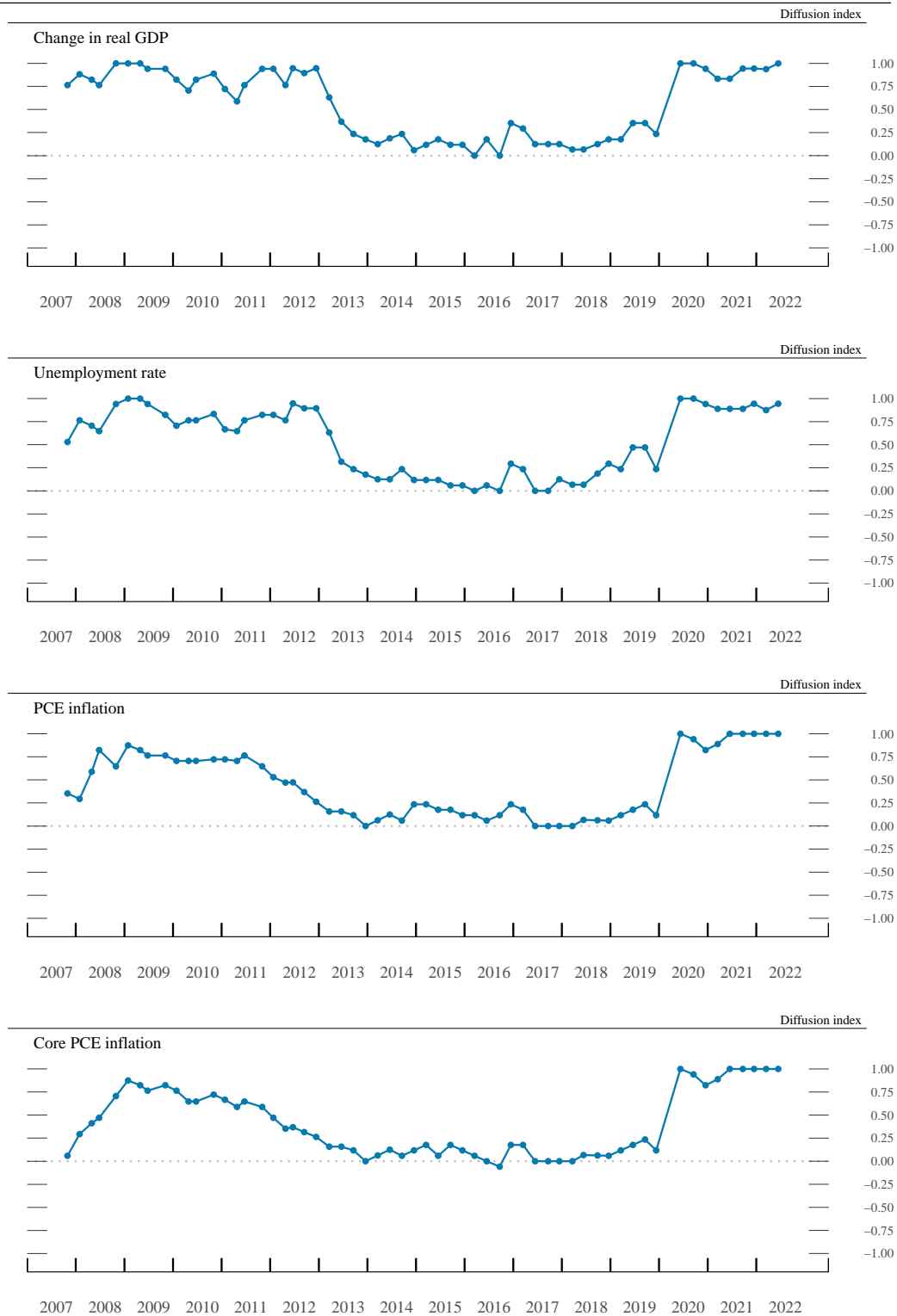
Figure 4.C. Uncertainty and risks in projections of PCE inflation



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as “broadly similar” to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as “broadly balanced” would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box “Forecast Uncertainty.”

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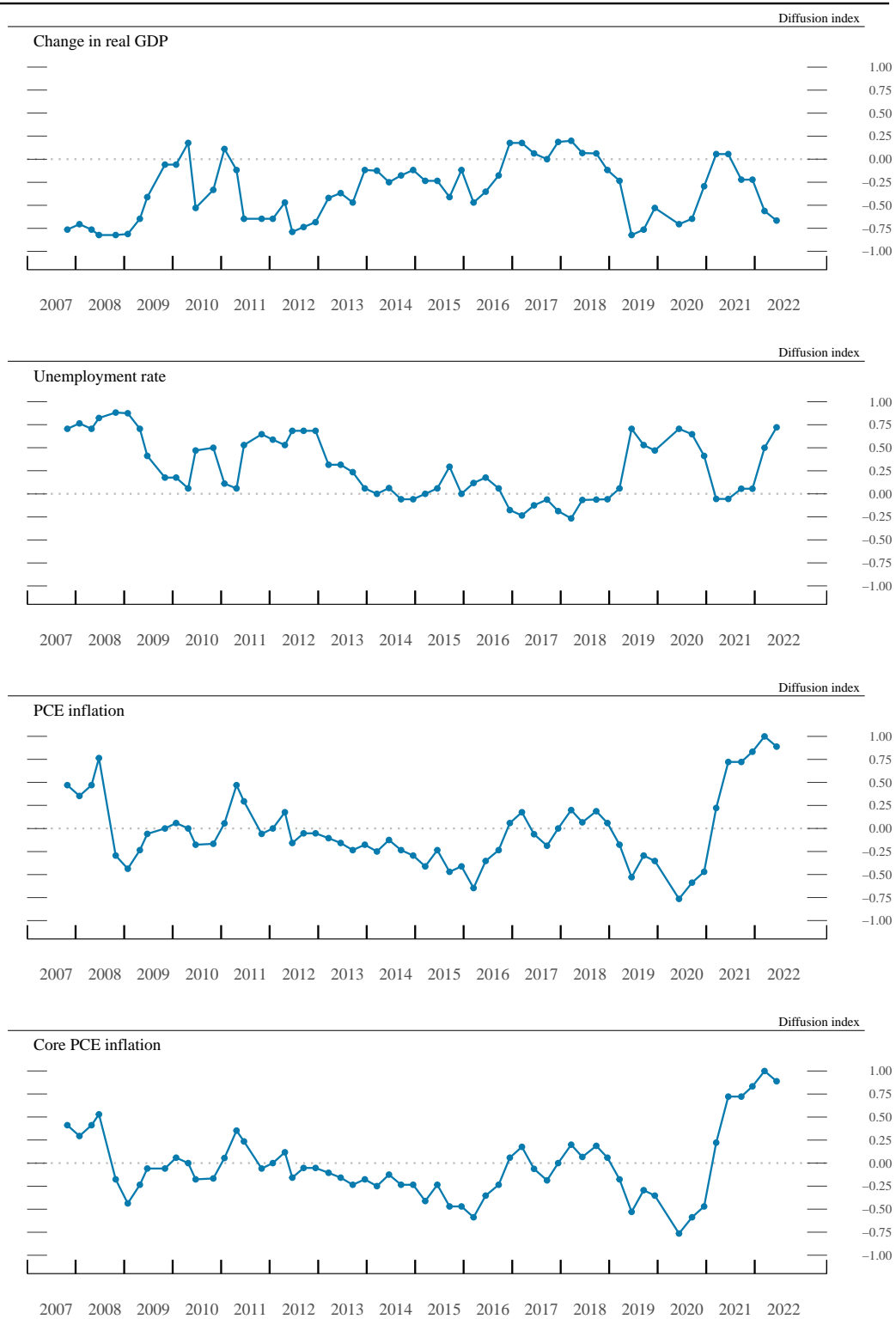
Figure 4.D. Diffusion indexes of participants' uncertainty assessments



NOTE: For each SEP, participants provided responses to the question “Please indicate your judgment of the uncertainty attached to your projections relative to the levels of uncertainty over the past 20 years.” Each point in the diffusion indexes represents the number of participants who responded “Higher” minus the number who responded “Lower,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

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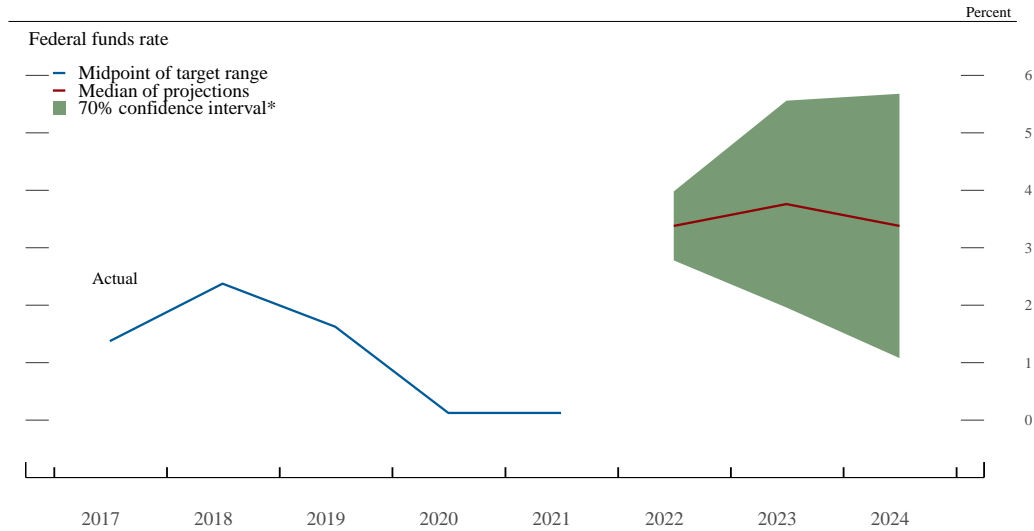
Figure 4.E. Diffusion indexes of participants' risk weightings



NOTE: For each SEP, participants provided responses to the question “Please indicate your judgment of the risk weighting around your projections.” Each point in the diffusion indexes represents the number of participants who responded “Weighted to the Upside” minus the number who responded “Weighted to the Downside,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

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Figure 5. Uncertainty and risks in projections of the federal funds rate



NOTE: The blue and red lines are based on actual values and median projected values, respectively, of the Committee's target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the projections for the federal funds rate, primarily because these projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants' individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric except when it is truncated at zero - the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee. This truncation would not be intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections.

* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in table 2. The shaded area encompasses less than a 70 percent confidence interval if the confidence interval has been truncated at zero.

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**Table 2. Average Historical Projection Error Ranges
 (Percentage points)**

Variable	2022	2023	2024
Change in real GDP ¹	± 1.5	± 1.9	± 2.3
Unemployment rate ¹	± 0.8	± 1.4	± 1.9
Total consumer prices ²	± 1.0	± 1.3	± 1.4
Short-term interest rates ³	± 0.6	± 1.8	± 2.3

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections for 2002 through 2021 that were released in the summer by various private and government forecasters. As described in the box “Forecast Uncertainty,” under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, consumer prices, and the federal funds rate will be in ranges implied by the average size of projection errors made in the past. For more information, see David Reifschneider and Peter Tulip (2017), “Gauging the Uncertainty of the Economic Outlook Using Historical Forecasting Errors: The Federal Reserve’s Approach,” Finance and Economics Discussion Series 2017-020 (Washington: Board of Governors of the Federal Reserve System, February), <https://dx.doi.org/10.17016/FEDS.2017.020>.

1. Definitions of variables are in the general note to table 1.
2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projections are percent changes on a fourth quarter to fourth quarter basis.
3. For Federal Reserve staff forecasts, measure is the federal funds rate. For other forecasts, measure is the rate on 3-month Treasury bills. Projection errors are calculated using average levels, in percent, in the fourth quarter.

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee (FOMC). The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 1.5 to 4.5 percent in the current year, 1.1 to 4.9 percent in the second year, and 0.7 to 5.3 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.0 to 3.0 percent in the current year, 0.7 to 3.3 percent in the second year, and 0.6 to 3.4 percent in the third year. Figures 4.A through 4.C illustrate these confidence bounds in "fan charts" that are symmetric and centered on the medians of FOMC participants' projections for GDP growth, the unemployment rate, and inflation. However, in some instances, the risks around the projections may not be symmetric. In particular, the unemployment rate cannot be negative; furthermore, the risks around a particular projection might be tilted to either the upside or the downside, in which case the corresponding fan chart would be asymmetrically positioned around the median projection.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each economic variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty seen in the past 20 years, as presented in table 2 and reflected in the widths of the confidence intervals shown in the top panels of figures 4.A through 4.C. Participants' current assessments of the uncertainty surrounding their projec-

tions are summarized in the bottom-left panels of those figures. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, while the symmetric historical fan charts shown in the top panels of figures 4.A through 4.C imply that the risks to participants' projections are balanced, participants may judge that there is a greater risk that a given variable will be above rather than below their projections. These judgments are summarized in the lower-right panels of figures 4.A through 4.C.

As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward. The final line in table 2 shows the error ranges for forecasts of short-term interest rates. They suggest that the historical confidence intervals associated with projections of the federal funds rate are quite wide. It should be noted, however, that these confidence intervals are not strictly consistent with the projections for the federal funds rate, as these projections are not forecasts of the most likely quarterly outcomes but rather are projections of participants' individual assessments of appropriate monetary policy and are on an end-of-year basis. However, the forecast errors should provide a sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that would be appropriate to offset the effects of shocks to the economy.

If at some point in the future the confidence interval around the federal funds rate were to extend below zero, it would be truncated at zero for purposes of the fan chart shown in figure 5; zero is the bottom of the lowest target range for the federal funds rate that has been adopted by the Committee in the past. This approach to the construction of the federal funds rate fan chart would be merely a convention; it would not have any implications for possible future policy decisions regarding the use of negative interest rates to provide additional monetary policy accommodation if doing so were appropriate. In such situations, the Committee could also employ other tools, including forward guidance and asset purchases, to provide additional accommodation.

While figures 4.A through 4.C provide information on the uncertainty around the economic projections, figure 1 provides information on the range of views across FOMC participants. A comparison of figure 1 with figures 4.A through 4.C shows that the dispersion of the projections across participants is much smaller than the average forecast errors over the past 20 years.

For release at 2:00 p.m., EDT, September 21, 2022

Summary of Economic Projections

In conjunction with the Federal Open Market Committee (FOMC) meeting held on September 20–21, 2022, meeting participants submitted their projections of the most likely outcomes for real gross domestic product (GDP) growth, the unemployment rate, and inflation for each year from 2022 to 2025 and over the longer run. Each participant’s projections were based on information available at the time of the meeting, together with her or his assessment of appropriate monetary policy—including a path for the federal funds rate and its longer-run value—and assumptions about other factors likely to affect economic outcomes. The longer-run projections represent each participant’s assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy. “Appropriate monetary policy” is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the statutory mandate to promote maximum employment and price stability.

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy, September 2022

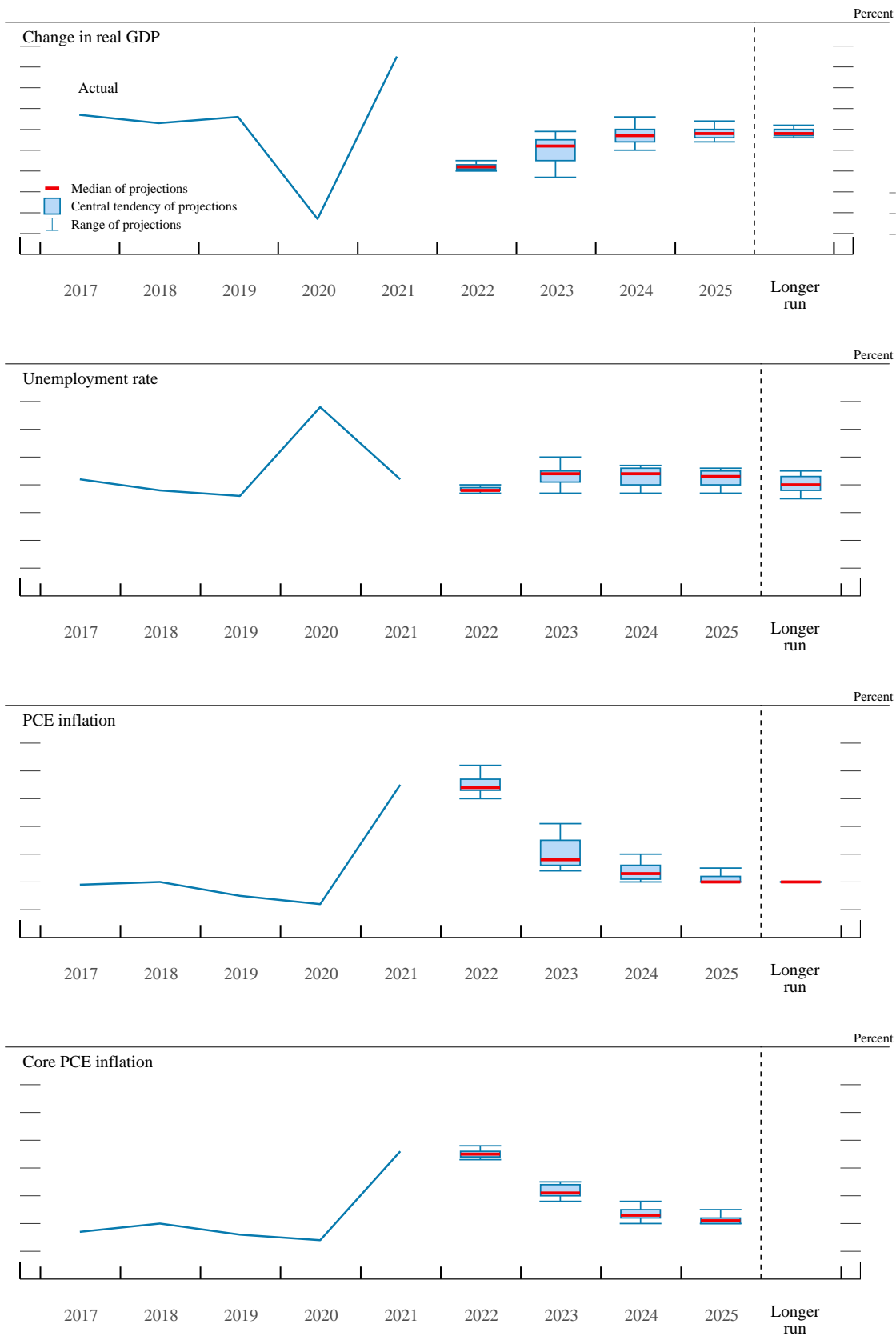
Percent

Variable	Median ¹					Central Tendency ²					Range ³				
	2022	2023	2024	2025	Longer run	2022	2023	2024	2025	Longer run	2022	2023	2024	2025	Longer run
Change in real GDP	0.2	1.2	1.7	1.8	1.8	0.1–0.3	0.5–1.5	1.4–2.0	1.6–2.0	1.7–2.0	0.0–0.5	-0.3–1.9	1.0–2.6	1.4–2.4	1.6–2.2
June projection	1.7	1.7	1.9		1.8	1.5–1.9	1.3–2.0	1.5–2.0		1.8–2.0	1.0–2.0	0.8–2.5	1.0–2.2		1.6–2.2
Unemployment rate	3.8	4.4	4.4	4.3	4.0	3.8–3.9	4.1–4.5	4.0–4.6	4.0–4.5	3.8–4.3	3.7–4.0	3.7–5.0	3.7–4.7	3.7–4.6	3.5–4.5
June projection	3.7	3.9	4.1		4.0	3.6–3.8	3.8–4.1	3.9–4.1		3.5–4.2	3.2–4.0	3.2–4.5	3.2–4.3		3.5–4.3
PCE inflation	5.4	2.8	2.3	2.0	2.0	5.3–5.7	2.6–3.5	2.1–2.6	2.0–2.2	2.0	5.0–6.2	2.4–4.1	2.0–3.0	2.0–2.5	2.0
June projection	5.2	2.6	2.2		2.0	5.0–5.3	2.4–3.0	2.0–2.5		2.0	4.8–6.2	2.3–4.0	2.0–3.0		2.0
Core PCE inflation ⁴	4.5	3.1	2.3	2.1		4.4–4.6	3.0–3.4	2.2–2.5	2.0–2.2		4.3–4.8	2.8–3.5	2.0–2.8	2.0–2.5	
June projection	4.3	2.7	2.3			4.2–4.5	2.5–3.2	2.1–2.5			4.1–5.0	2.5–3.5	2.0–2.8		
Memo: Projected appropriate policy path															
Federal funds rate	4.4	4.6	3.9	2.9	2.5	4.1–4.4	4.4–4.9	3.4–4.4	2.4–3.4	2.3–2.5	3.9–4.6	3.9–4.9	2.6–4.6	2.4–4.6	2.3–3.0
June projection	3.4	3.8	3.4		2.5	3.1–3.6	3.6–4.1	2.9–3.6		2.3–2.5	3.1–3.9	2.9–4.4	2.1–4.1		2.0–3.0

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The June projections were made in conjunction with the meeting of the Federal Open Market Committee on June 14–15, 2022. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the June 14–15, 2022, meeting, and one participant did not submit such projections in conjunction with the September 20–21, 2022, meeting.

1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.
2. The central tendency excludes the three highest and three lowest projections for each variable in each year.
3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
4. Longer-run projections for core PCE inflation are not collected.

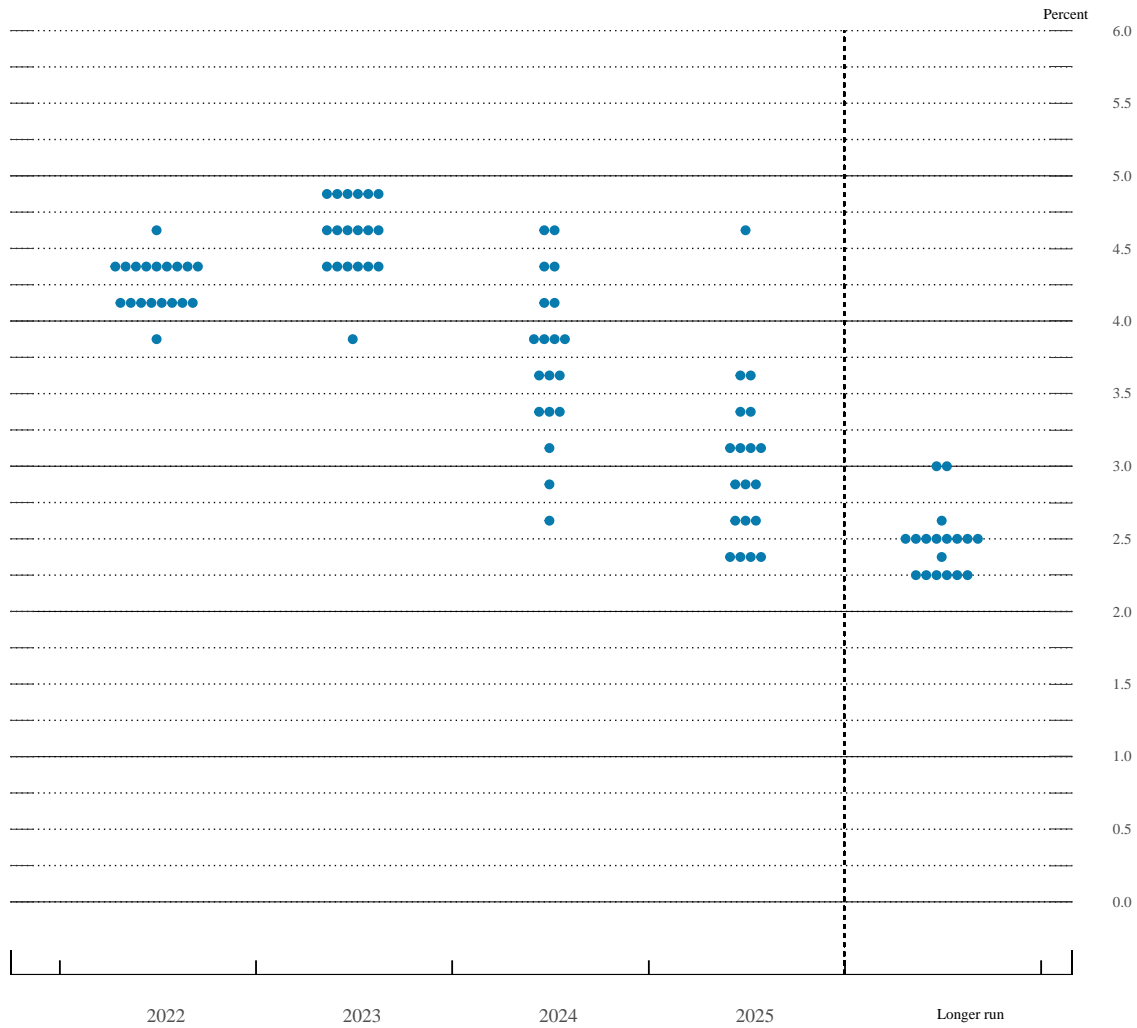
Figure 1. Medians, central tendencies, and ranges of economic projections, 2022–25 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

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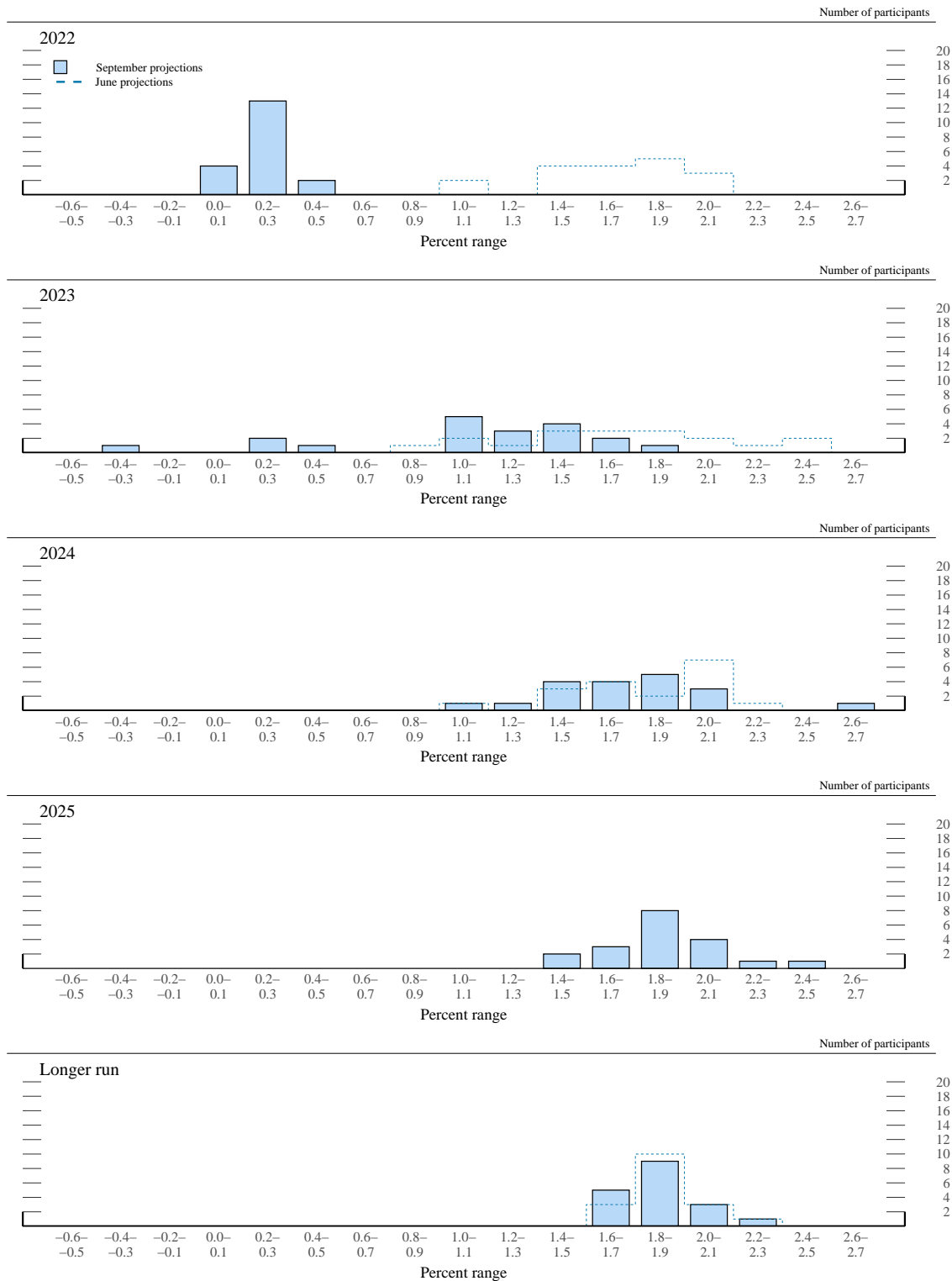
Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



NOTE: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. One participant did not submit longer-run projections for the federal funds rate.

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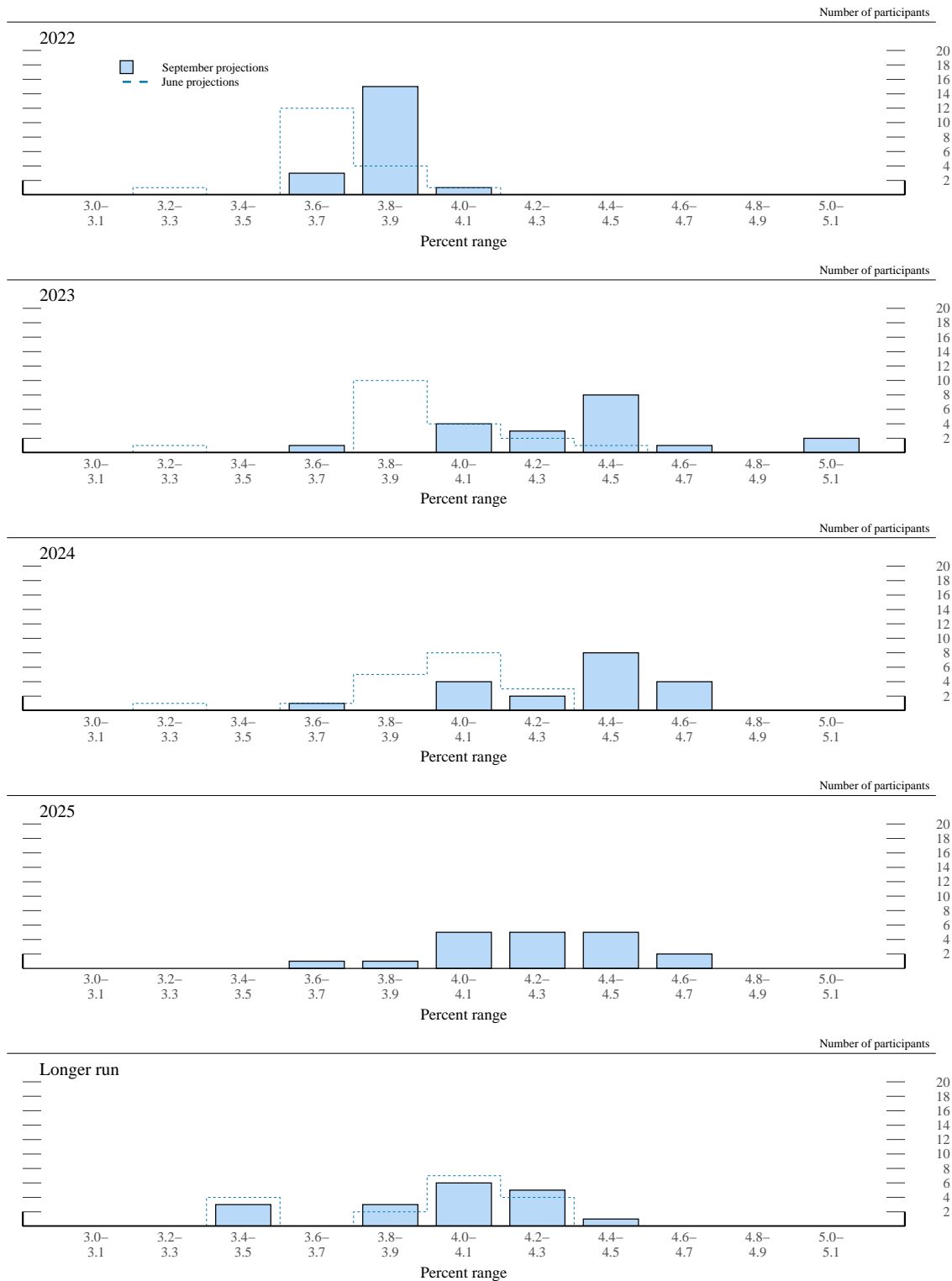
Figure 3.A. Distribution of participants' projections for the change in real GDP, 2022–25 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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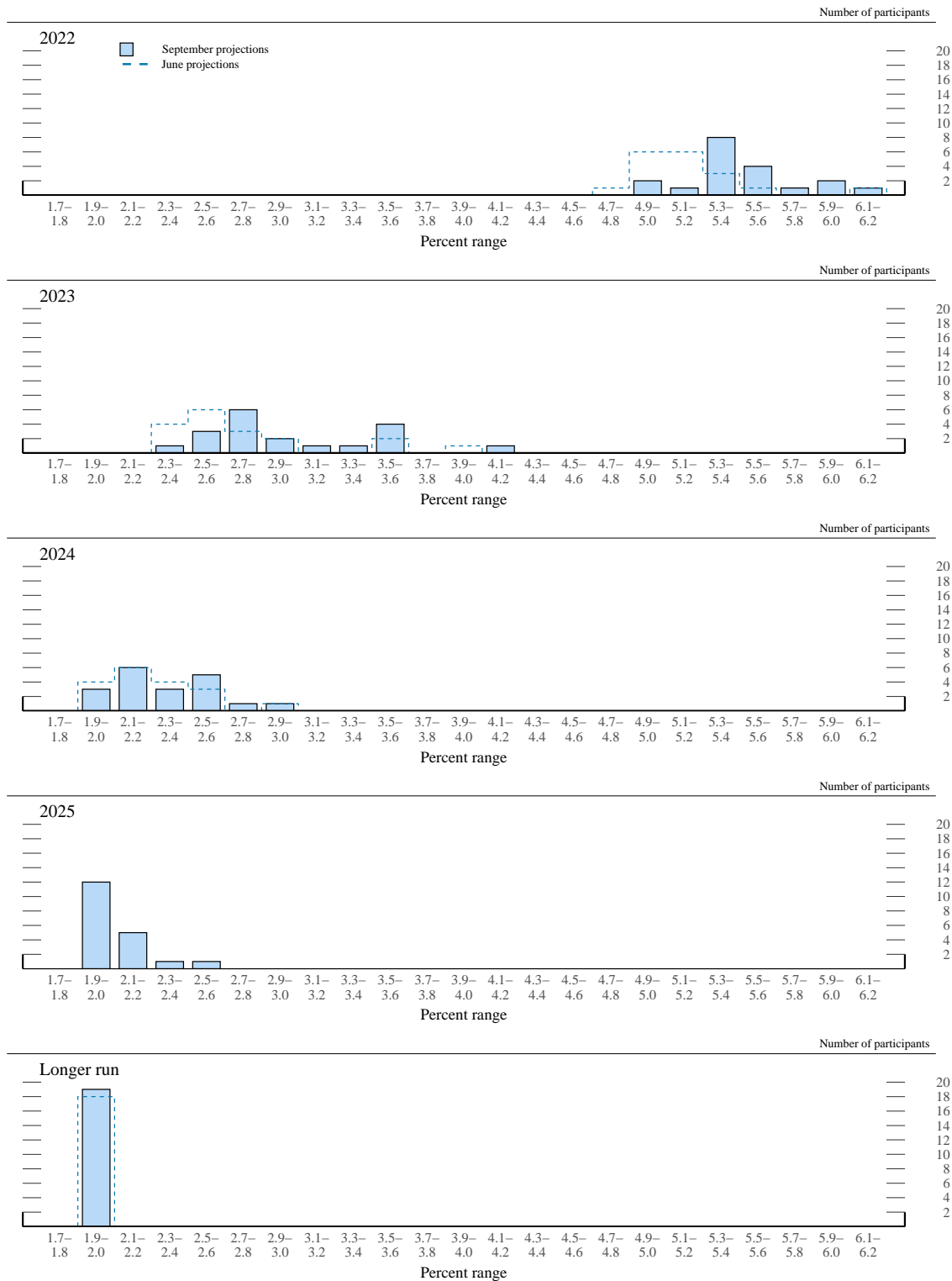
Figure 3.B. Distribution of participants' projections for the unemployment rate, 2022–25 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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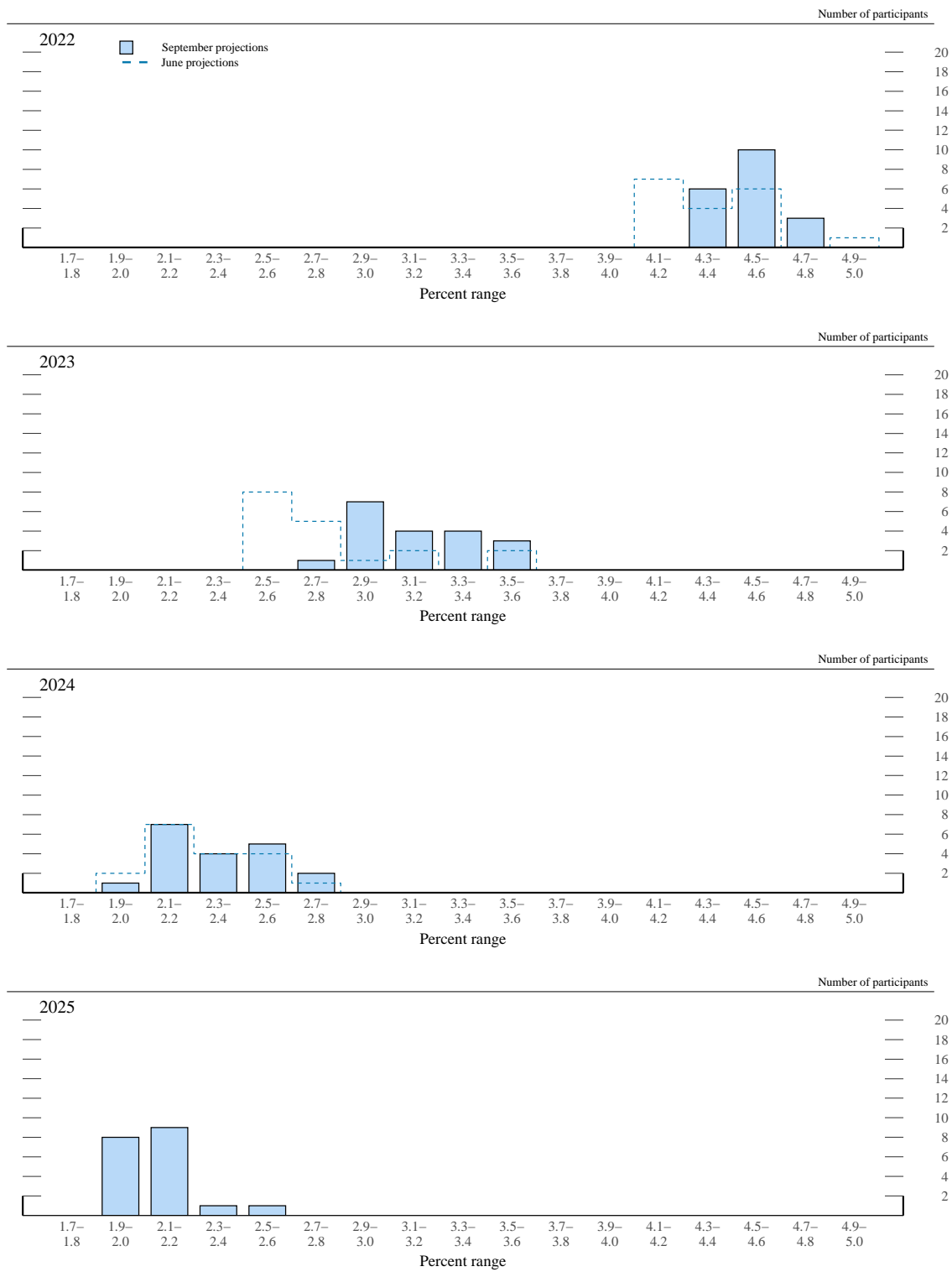
Figure 3.C. Distribution of participants' projections for PCE inflation, 2022–25 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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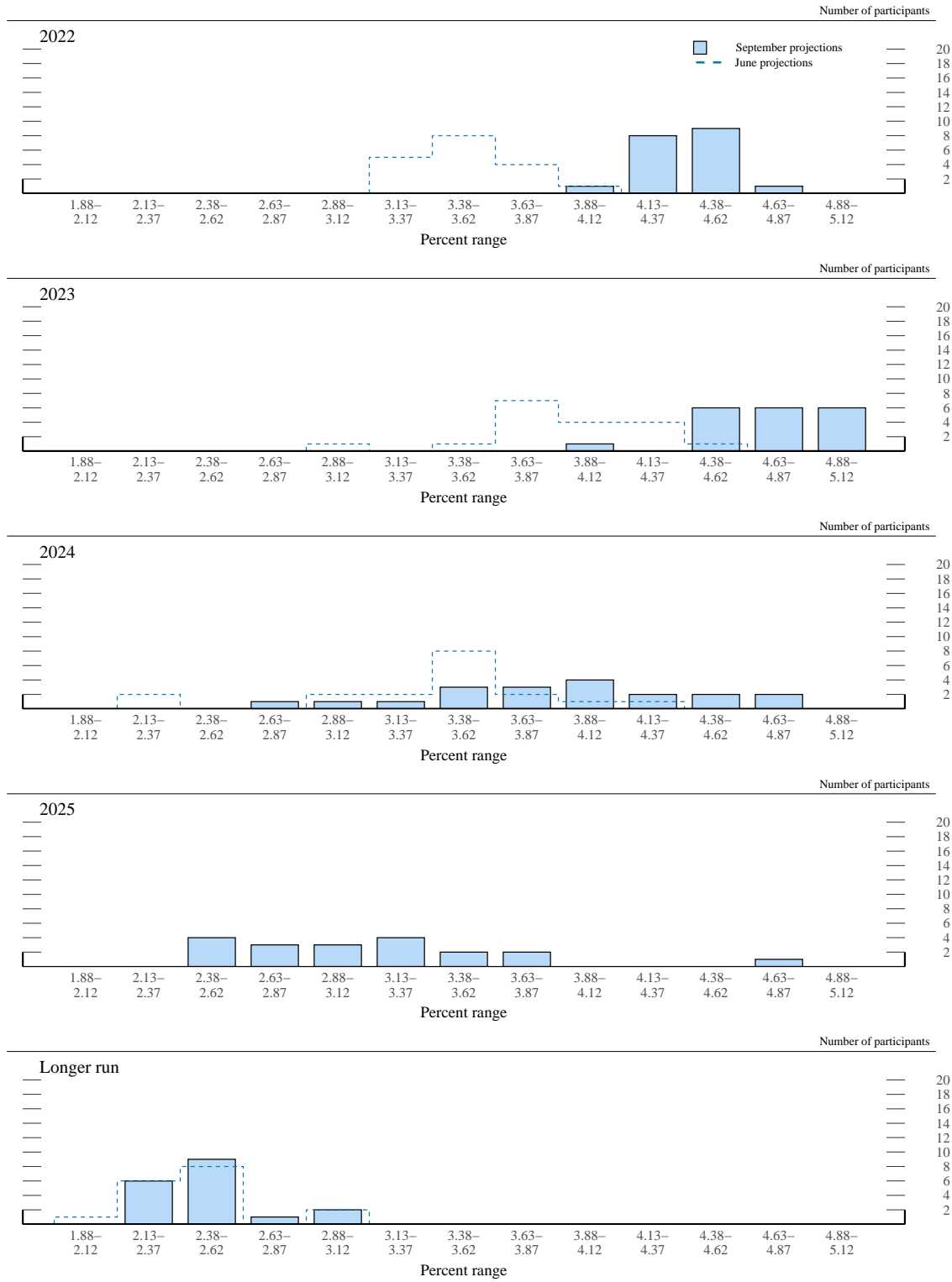
Figure 3.D. Distribution of participants' projections for core PCE inflation, 2022–25



NOTE: Definitions of variables and other explanations are in the notes to table 1.

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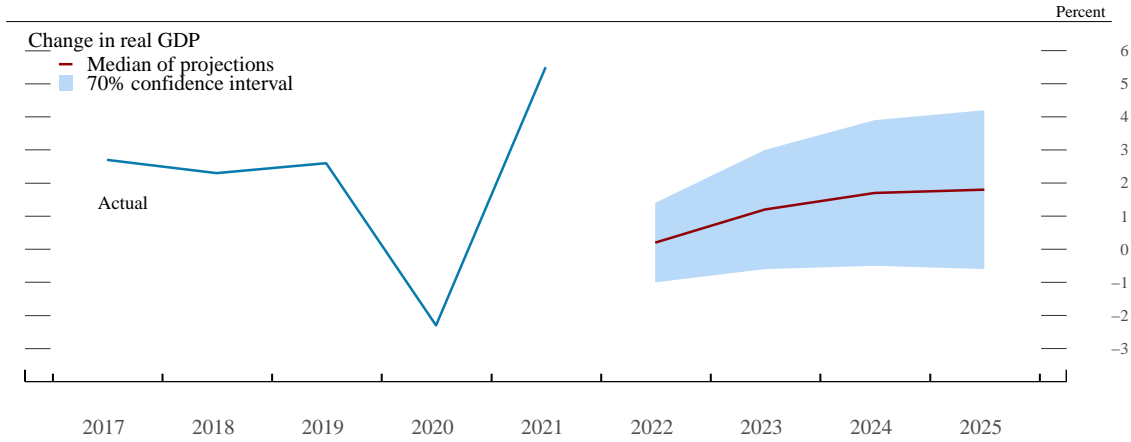
Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2022–25 and over the longer run



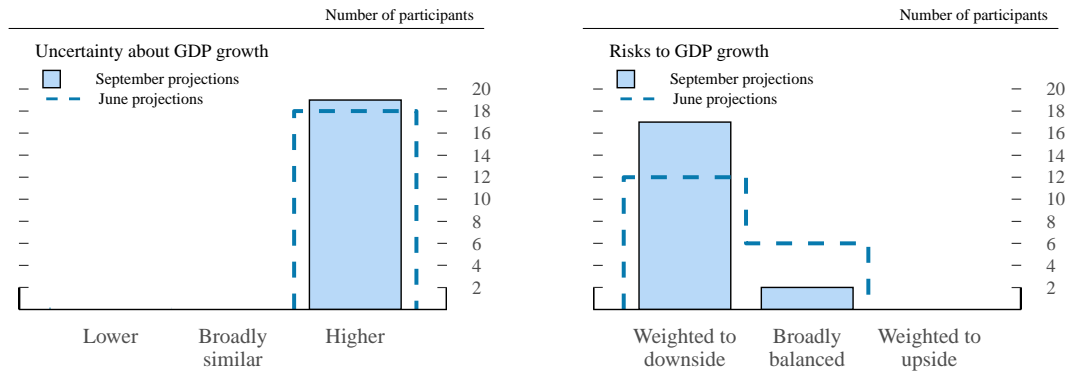
NOTE: Definitions of variables and other explanations are in the notes to table 1.

Figure 4.A. Uncertainty and risks in projections of GDP growth

Median projection and confidence interval based on historical forecast errors



FOMC participants' assessments of uncertainty and risks around their economic projections

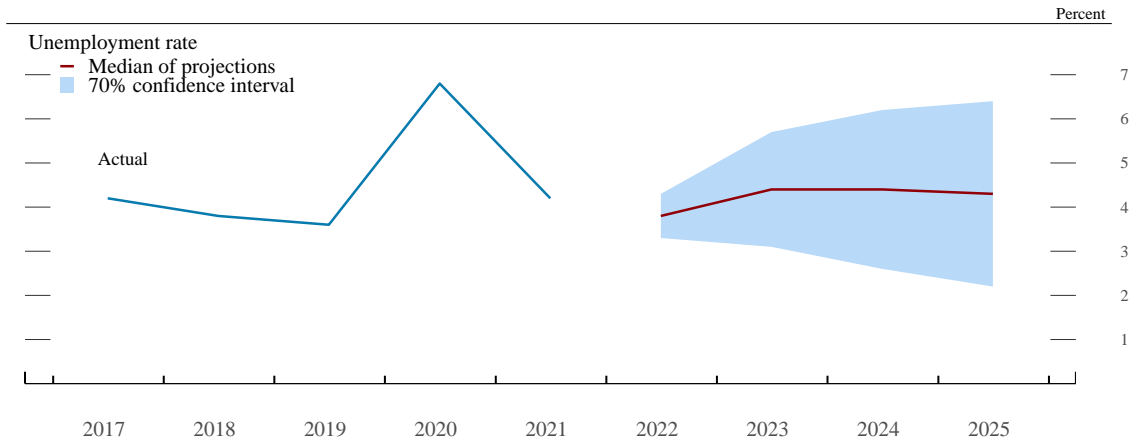


NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

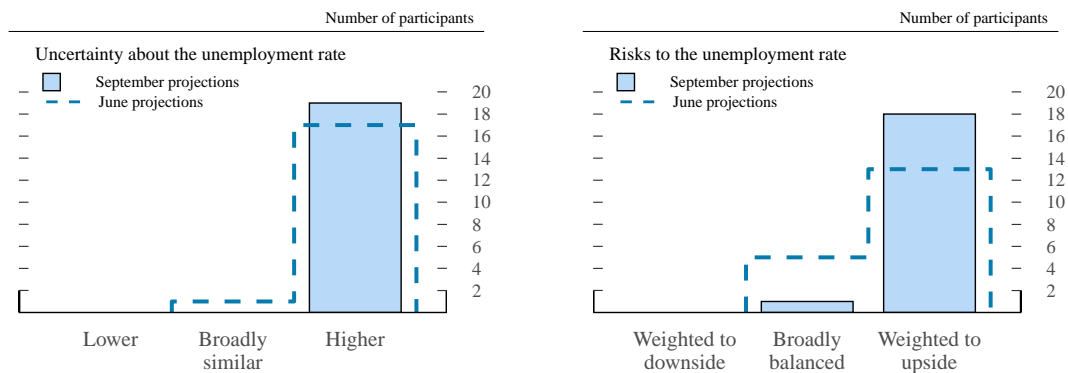
For release at 2:00 p.m., EDT, September 21, 2022

Figure 4.B. Uncertainty and risks in projections of the unemployment rate

Median projection and confidence interval based on historical forecast errors



FOMC participants' assessments of uncertainty and risks around their economic projections

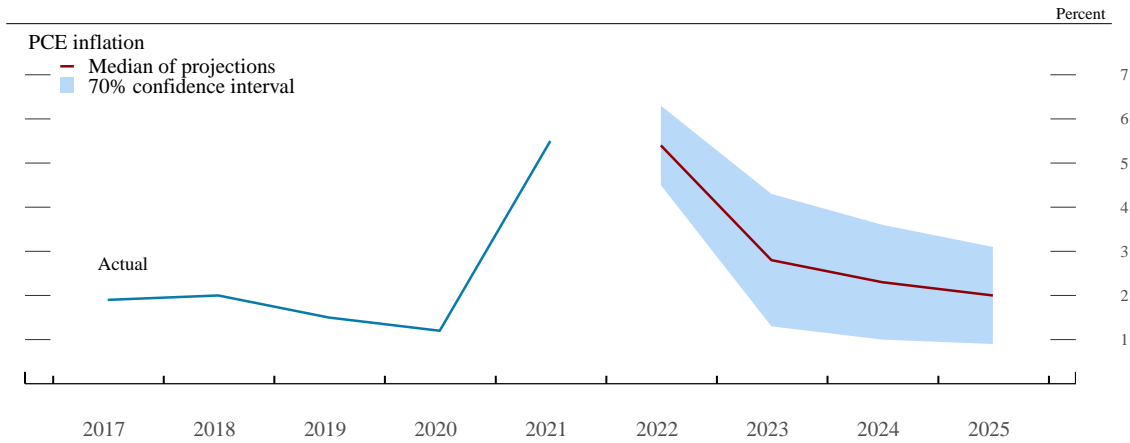


NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

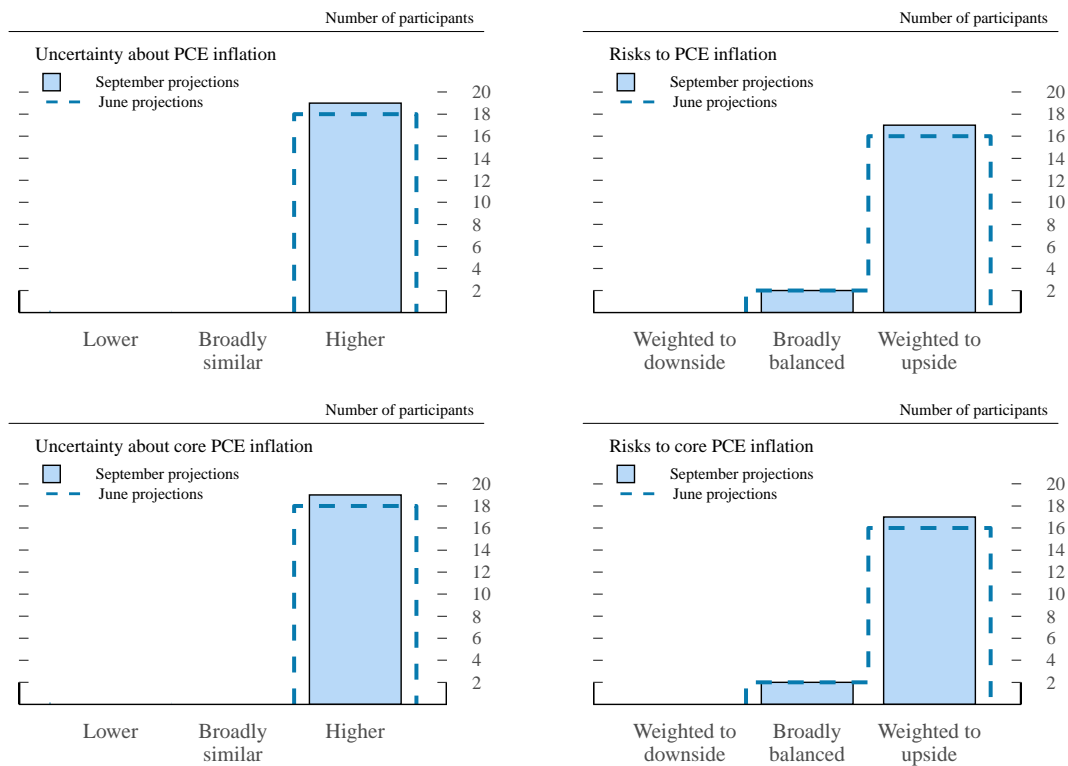
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Figure 4.C. Uncertainty and risks in projections of PCE inflation

Median projection and confidence interval based on historical forecast errors

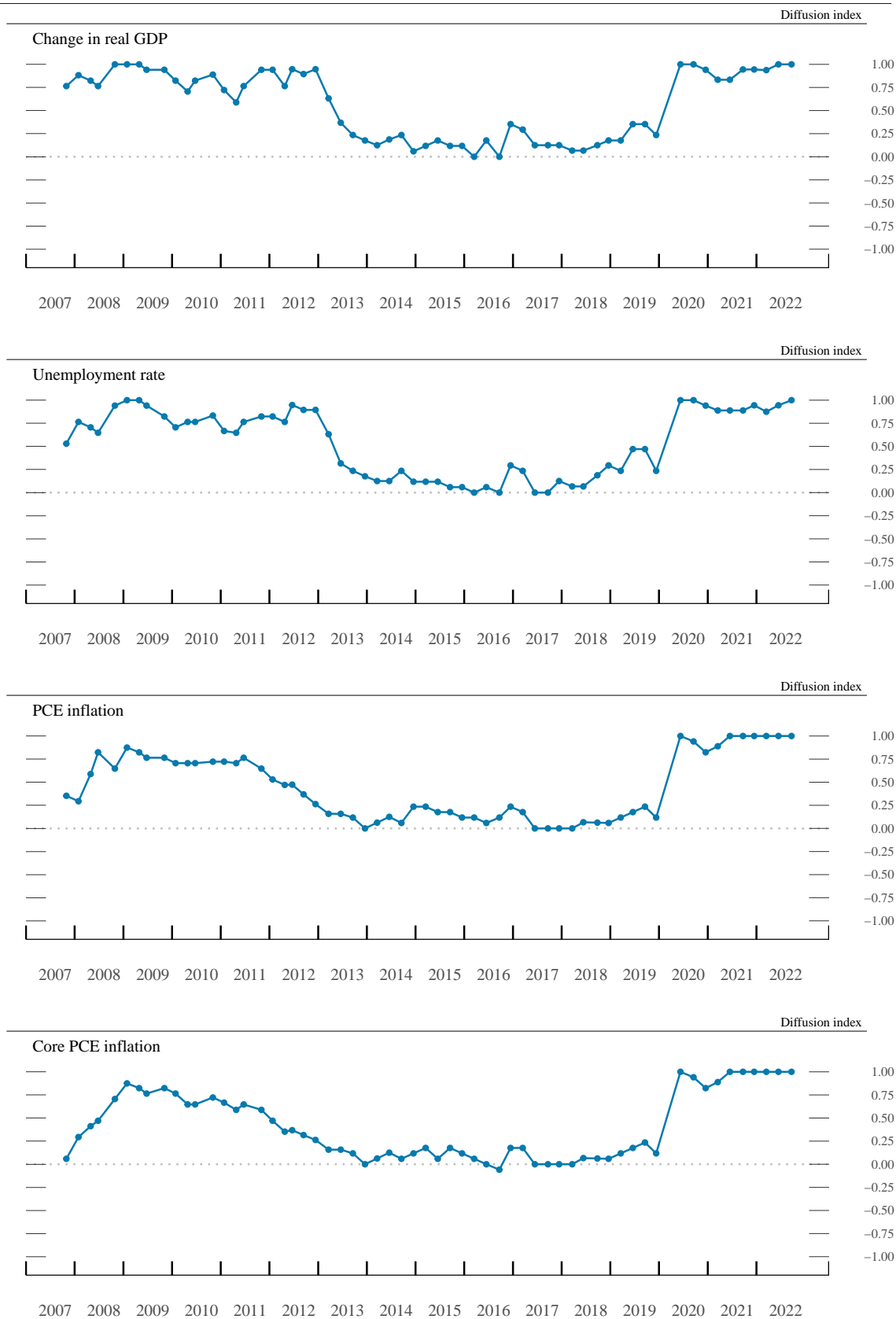


FOMC participants' assessments of uncertainty and risks around their economic projections



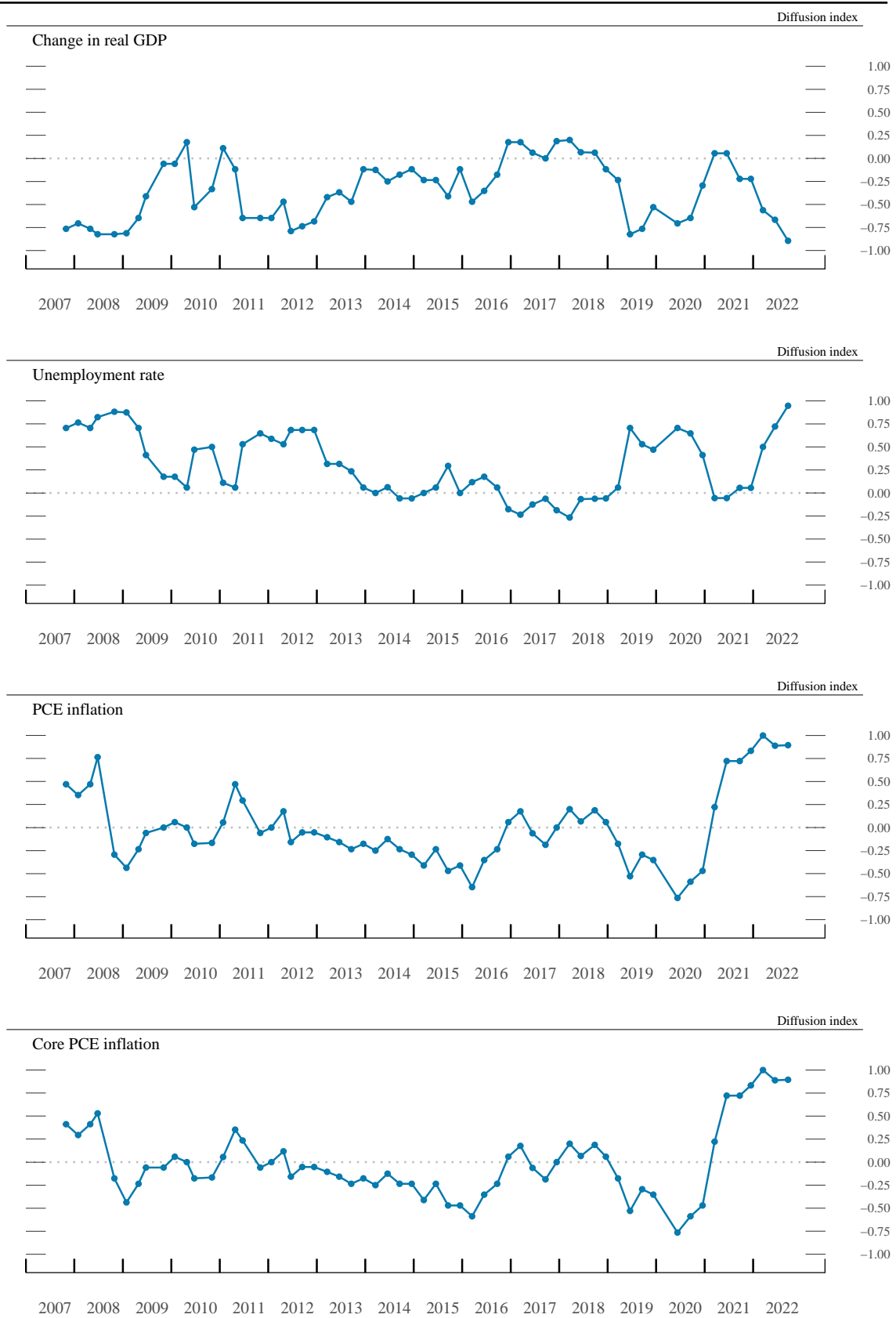
NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as “broadly similar” to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as “broadly balanced” would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box “Forecast Uncertainty.”

Figure 4.D. Diffusion indexes of participants' uncertainty assessments



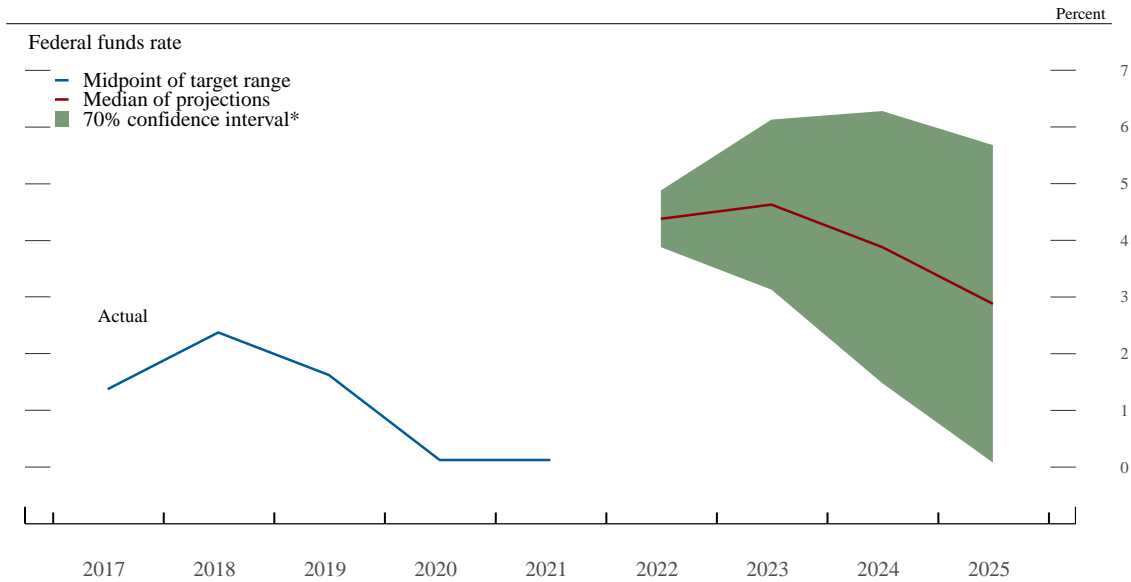
NOTE: For each SEP, participants provided responses to the question “Please indicate your judgment of the uncertainty attached to your projections relative to the levels of uncertainty over the past 20 years.” Each point in the diffusion indexes represents the number of participants who responded “Higher” minus the number who responded “Lower,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

Figure 4.E. Diffusion indexes of participants' risk weightings



NOTE: For each SEP, participants provided responses to the question “Please indicate your judgment of the risk weighting around your projections.” Each point in the diffusion indexes represents the number of participants who responded “Weighted to the Upside” minus the number who responded “Weighted to the Downside,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

Figure 5. Uncertainty and risks in projections of the federal funds rate



NOTE: The blue and red lines are based on actual values and median projected values, respectively, of the Committee's target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the projections for the federal funds rate, primarily because these projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants' individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric except when it is truncated at zero - the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee. This truncation would not be intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections.

* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in table 2. The shaded area encompasses less than a 70 percent confidence interval if the confidence interval has been truncated at zero.

**Table 2. Average Historical Projection Error Ranges
(Percentage points)**

Variable	2022	2023	2024	2025
Change in real GDP ¹	± 1.2	± 1.8	± 2.2	± 2.4
Unemployment rate ¹	± 0.5	± 1.3	± 1.8	± 2.1
Total consumer prices ²	± 0.9	± 1.5	± 1.3	± 1.1
Short-term interest rates ³	± 0.5	± 1.5	± 2.4	± 2.8

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections for 2002 through 2021 that were released in the fall by various private and government forecasters. As described in the box “Forecast Uncertainty,” under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, consumer prices, and the federal funds rate will be in ranges implied by the average size of projection errors made in the past. For more information, see David Reifschneider and Peter Tulip (2017), “Gauging the Uncertainty of the Economic Outlook Using Historical Forecasting Errors: The Federal Reserve’s Approach,” Finance and Economics Discussion Series 2017-020 (Washington: Board of Governors of the Federal Reserve System, February), <https://dx.doi.org/10.17016/FEDS.2017.020>.

1. Definitions of variables are in the general note to table 1.

2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projections are percent changes on a fourth quarter to fourth quarter basis.

3. For Federal Reserve staff forecasts, measure is the federal funds rate. For other forecasts, measure is the rate on 3-month Treasury bills. Projection errors are calculated using average levels, in percent, in the fourth quarter.

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee (FOMC). The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 1.8 to 4.2 percent in the current year, 1.2 to 4.8 percent in the second year, 0.8 to 5.2 percent in the third year, and 0.6 to 5.4 percent in the fourth year. The corresponding 70 percent confidence intervals for overall inflation would be 1.1 to 2.9 percent in the current year, 0.5 to 3.5 percent in the second year, 0.7 to 3.3 percent in the third year, and 0.9 to 3.1 percent in the fourth year. Figures 4.A through 4.C illustrate these confidence bounds in "fan charts" that are symmetric and centered on the medians of FOMC participants' projections for GDP growth, the unemployment rate, and inflation. However, in some instances, the risks around the projections may not be symmetric. In particular, the unemployment rate cannot be negative; furthermore, the risks around a particular projection might be tilted to either the upside or the downside, in which case the corresponding fan chart would be asymmetrically positioned around the median projection.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each economic variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty seen in the past 20 years, as presented in table 2 and reflected in the widths of the confidence intervals shown in the top panels of figures 4.A through 4.C. Participants' cur-

rent assessments of the uncertainty surrounding their projections are summarized in the bottom-left panels of those figures. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, while the symmetric historical fan charts shown in the top panels of figures 4.A through 4.C imply that the risks to participants' projections are balanced, participants may judge that there is a greater risk that a given variable will be above rather than below their projections. These judgments are summarized in the lower-right panels of figures 4.A through 4.C.

As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward. The final line in table 2 shows the error ranges for forecasts of short-term interest rates. They suggest that the historical confidence intervals associated with projections of the federal funds rate are quite wide. It should be noted, however, that these confidence intervals are not strictly consistent with the projections for the federal funds rate, as these projections are not forecasts of the most likely quarterly outcomes but rather are projections of participants' individual assessments of appropriate monetary policy and are on an end-of-year basis. However, the forecast errors should provide a sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that would be appropriate to offset the effects of shocks to the economy.

If at some point in the future the confidence interval around the federal funds rate were to extend below zero, it would be truncated at zero for purposes of the fan chart shown in figure 5; zero is the bottom of the lowest target range for the federal funds rate that has been adopted by the Committee in the past. This approach to the construction of the federal funds rate fan chart would be merely a convention; it would not have any implications for possible future policy decisions regarding the use of negative interest rates to provide additional monetary policy accommodation if doing so were appropriate. In such situations, the Committee could also employ other tools, including forward guidance and asset purchases, to provide additional accommodation.

While figures 4.A through 4.C provide information on the uncertainty around the economic projections, figure 1 provides information on the range of views across FOMC participants. A comparison of figure 1 with figures 4.A through 4.C shows that the dispersion of the projections across participants is much smaller than the average forecast errors over the past 20 years.

FEDERAL RESERVE press release



For release at 2 p.m. EST

December 15, 2021

The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.

With progress on vaccinations and strong policy support, indicators of economic activity and employment have continued to strengthen. The sectors most adversely affected by the pandemic have improved in recent months but continue to be affected by COVID-19. Job gains have been solid in recent months, and the unemployment rate has declined substantially. Supply and demand imbalances related to the pandemic and the reopening of the economy have continued to contribute to elevated levels of inflation. Overall financial conditions remain accommodative, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.

The path of the economy continues to depend on the course of the virus. Progress on vaccinations and an easing of supply constraints are expected to support continued gains in economic activity and employment as well as a reduction in inflation. Risks to the economic outlook remain, including from new variants of the virus.

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. In support of these goals, the Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent. With inflation having exceeded 2 percent for some time, the Committee expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment. In light of inflation developments and the further improvement in the labor market, the

(more)

For release at 2 p.m. EST

December 15, 2021

-2-

Committee decided to reduce the monthly pace of its net asset purchases by \$20 billion for Treasury securities and \$10 billion for agency mortgage-backed securities. Beginning in January, the Committee will increase its holdings of Treasury securities by at least \$40 billion per month and of agency mortgage-backed securities by at least \$20 billion per month. The Committee judges that similar reductions in the pace of net asset purchases will likely be appropriate each month, but it is prepared to adjust the pace of purchases if warranted by changes in the economic outlook. The Federal Reserve's ongoing purchases and holdings of securities will continue to foster smooth market functioning and accommodative financial conditions, thereby supporting the flow of credit to households and businesses.

In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including readings on public health, labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

Voting for the monetary policy action were Jerome H. Powell, Chair; John C. Williams, Vice Chair; Thomas I. Barkin; Raphael W. Bostic; Michelle W. Bowman; Lael Brainard; Richard H. Clarida; Mary C. Daly; Charles L. Evans; Randal K. Quarles; and Christopher J. Waller.

-0-

For release at 2 p.m. EST

December 15, 2021

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its [statement](#) on December 15, 2021:

- The Board of Governors of the Federal Reserve System voted unanimously to maintain the interest rate paid on reserve balances at 0.15 percent, effective December 16, 2021.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

“Effective December 16, 2021, the Federal Open Market Committee directs the Desk to:

- Undertake open market operations as necessary to maintain the federal funds rate in a target range of 0 to 1/4 percent.
- Complete the increase in System Open Market Account (SOMA) holdings of Treasury securities by \$60 billion and of agency mortgage-backed securities (MBS) by \$30 billion, as indicated in the monthly purchase plans released in mid- December.
- Increase the SOMA holdings of Treasury securities by \$40 billion and of agency MBS by \$20 billion, during the monthly purchase period beginning in mid-January.
- Increase holdings of Treasury securities and agency MBS by additional amounts as needed to sustain smooth functioning of markets for these securities.
- Conduct overnight repurchase agreement operations with a minimum bid rate of 0.25 percent and with an aggregate operation limit of \$500 billion; the aggregate operation limit can be temporarily increased at the discretion of the Chair.
- Conduct overnight reverse repurchase agreement operations at an offering rate of 0.05 percent and with a per-counterparty limit of \$160 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.
- Roll over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency MBS in agency MBS.
- Allow modest deviations from stated amounts for purchases and reinvestments, if needed for operational reasons.

(more)

For release at 2 p.m. EST

December 15, 2021

-2-

- Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.”
- In a related action, the Board of Governors of the Federal Reserve System voted unanimously to approve the establishment of the primary credit rate at the existing level of 0.25 percent.

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's [website](#).

FEDERAL RESERVE press release



For release at 2 p.m. EDT

November 3, 2021

The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.

With progress on vaccinations and strong policy support, indicators of economic activity and employment have continued to strengthen. The sectors most adversely affected by the pandemic have improved in recent months, but the summer's rise in COVID-19 cases has slowed their recovery. Inflation is elevated, largely reflecting factors that are expected to be transitory. Supply and demand imbalances related to the pandemic and the reopening of the economy have contributed to sizable price increases in some sectors. Overall financial conditions remain accommodative, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.

The path of the economy continues to depend on the course of the virus. Progress on vaccinations and an easing of supply constraints are expected to support continued gains in economic activity and employment as well as a reduction in inflation. Risks to the economic outlook remain.

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation having run persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved. The Committee decided to keep the target range for the federal funds rate

(more)

For release at 2 p.m. EDT

November 3, 2021

-2-

at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time. In light of the substantial further progress the economy has made toward the Committee's goals since last December, the Committee decided to begin reducing the monthly pace of its net asset purchases by \$10 billion for Treasury securities and \$5 billion for agency mortgage-backed securities. Beginning later this month, the Committee will increase its holdings of Treasury securities by at least \$70 billion per month and of agency mortgage-backed securities by at least \$35 billion per month. Beginning in December, the Committee will increase its holdings of Treasury securities by at least \$60 billion per month and of agency mortgage-backed securities by at least \$30 billion per month. The Committee judges that similar reductions in the pace of net asset purchases will likely be appropriate each month, but it is prepared to adjust the pace of purchases if warranted by changes in the economic outlook. The Federal Reserve's ongoing purchases and holdings of securities will continue to foster smooth market functioning and accommodative financial conditions, thereby supporting the flow of credit to households and businesses.

In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including readings on public health, labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

(more)

For release at 2 p.m. EDT

November 3, 2021

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Voting for the monetary policy action were Jerome H. Powell, Chair; John C. Williams, Vice Chair; Thomas I. Barkin; Raphael W. Bostic; Michelle W. Bowman; Lael Brainard; Richard H. Clarida; Mary C. Daly; Charles L. Evans; Randal K. Quarles; and Christopher J. Waller.

-0-

For release at 2 p.m. EDT

November 3, 2021

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its [statement](#) on November 3, 2021:

- The Board of Governors of the Federal Reserve System voted unanimously to maintain the interest rate paid on reserve balances at 0.15 percent, effective November 4, 2021.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

“Effective November 4, 2021, the Federal Open Market Committee directs the Desk to:

- Undertake open market operations as necessary to maintain the federal funds rate in a target range of 0 to 1/4 percent.
- Complete the increase in System Open Market Account (SOMA) holdings of Treasury securities by \$80 billion and of agency mortgage-backed securities (MBS) by \$40 billion, as indicated in the monthly purchase plans released in mid-October.
- Increase the SOMA holdings of Treasury securities by \$70 billion and of agency MBS by \$35 billion, during the monthly purchase period beginning in mid-November.
- Increase the SOMA holdings of Treasury securities by \$60 billion and of agency MBS by \$30 billion, during the monthly purchase period beginning in mid-December.
- Increase holdings of Treasury securities and agency MBS by additional amounts as needed to sustain smooth functioning of markets for these securities.
- Conduct overnight repurchase agreement operations with a minimum bid rate of 0.25 percent and with an aggregate operation limit of \$500 billion; the aggregate operation limit can be temporarily increased at the discretion of the Chair.
- Conduct overnight reverse repurchase agreement operations at an offering rate of 0.05 percent and with a per-counterparty limit of \$160 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.

(more)

For release at 2 p.m. EDT

November 3, 2021

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- Roll over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency MBS in agency MBS.
 - Allow modest deviations from stated amounts for purchases and reinvestments, if needed for operational reasons.
 - Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.”
- In a related action, the Board of Governors of the Federal Reserve System voted unanimously to approve the establishment of the primary credit rate at the existing level of 0.25 percent.

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve’s operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York’s [website](#).

Press Release

May 04, 2022

Plans for Reducing the Size of the Federal Reserve's Balance Sheet

For release at 2:00 p.m. EDT

Share

Consistent with the Principles for Reducing the Size of the Federal Reserve's Balance Sheet that were issued in January 2022, all Committee participants agreed to the following plans for significantly reducing the Federal Reserve's securities holdings.

- The Committee intends to reduce the Federal Reserve's securities holdings over time in a predictable manner primarily by adjusting the amounts reinvested of principal payments received from securities held in the System Open Market Account (SOMA). Beginning on June 1, principal payments from securities held in the SOMA will be reinvested to the extent that they exceed monthly caps.
 - For Treasury securities, the cap will initially be set at \$30 billion per month and after three months will increase to \$60 billion per month. The decline in holdings of Treasury securities under this monthly cap will include Treasury coupon securities and, to the extent that coupon maturities are less than the monthly cap, Treasury bills.
 - For agency debt and agency mortgage-backed securities, the cap will initially be set at \$17.5 billion per month and after three months will increase to \$35 billion per month.
- Over time, the Committee intends to maintain securities holdings in amounts needed to implement monetary policy efficiently and effectively in its ample reserves regime.
 - To ensure a smooth transition, the Committee intends to slow and then stop the decline in the size of the balance sheet when reserve balances are somewhat above the level it judges to be consistent with ample reserves.
 - Once balance sheet runoff has ceased, reserve balances will likely continue to decline for a time, reflecting growth in other Federal Reserve liabilities, until the Committee judges that reserve balances are at an ample level.
 - Thereafter, the Committee will manage securities holdings as needed to maintain ample reserves over time.
- The Committee is prepared to adjust any of the details of its approach to reducing the size of the balance sheet in light of economic and financial developments.

For media inquiries, e-mail media@frb.gov or call 202-452-2955

Related Information

[Federal Reserve issues FOMC statement](#)

Last Update: May 04, 2022

11/22/22, 9:09 PM

MARKETS

Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%

PUBLISHED SUN, JAN 2 2022•6:01 PM EST UPDATED MON, JAN 3 2022•8:07 PM EST



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11/22/22, 9:09 PM

Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%

Apple shares gained to become the first company ever with a \$3 trillion market valuation, and Tesla shares jumped 13.5% in a single day.

The Dow Jones Industrial Average rose 246.76 points, or 0.6%, to hit a record close of 36,585.06. The S&P 500 also notched a record close, as it gained 0.6% to reach 4,796.56. The Nasdaq led the gains, advancing 1.2% to hit 15,832.80.

Bond yields jumped to start the year with the 10-year Treasury yield topping 1.6%. That gave a lift to bank stocks, with Bank of America jumping 3.8%. Wells Fargo gained 5.7% [after an upgrade from Barclays](#).

Apple share price



Source: FactSet. As of market close on 1/3/2022.



“It’s a glass-half-full start to the year and that’s been our perspective throughout 2021 and heading into 2022,” said Tom Hainlin, global investment strategist at U.S. Bank Wealth Management. “We’re still in that modestly optimistic outlook for the year ahead and think the economy and corporate profits are set up to support rising equity prices, at least in the first part of the year.”

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11/22/22, 9:09 PM

Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%

Tesla, big automakers also saw their shares climb. Ford Motor and General Motors rose about 4.8% and 4.3%, respectively.

Tesla share price



Source: FactSet. As of market close on 1/3/2022.



Reopening stocks broadly pushed higher on Monday. Airlines rose [as investors shrugged off concerns](#) about holiday flight cancelations that have extended into Monday. American added 4.4%, and United gained nearly 3.9%. Norwegian Cruise Line and Carnival Corp were among the top gainers in the S&P 500, adding about 6.9% and 6.4%, respectively. Casino stocks were higher too, with Las Vegas Sands and Wynn Resorts were each up more than 3%.

Stocks have a tendency to gain in the start of a new year as investors look to put new money to work, Bank of America noted on Monday. The S&P 500 was up in the first week of the calendar year in 11 of the last 13 years, with an average gain of about 1.6%, the firm found.

Monday's moves come after markets closed out a strong 2021 last week. The [S&P 500 rose nearly 27% for the year](#), with the Nasdaq Composite and Dow also posting large returns. Stocks fell slightly on Friday, but the S&P 500 and Dow were positive for the final week of the year.

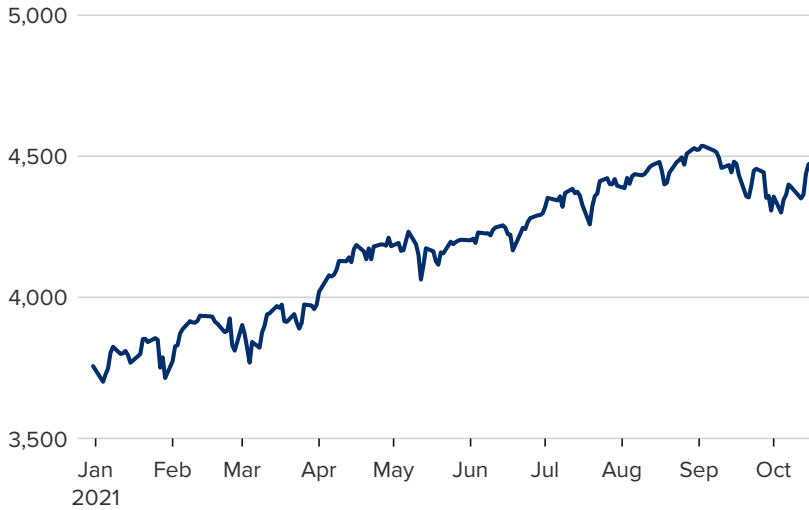
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11/22/22, 9:09 PM

Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%

S&P 500 Index



Source: FactSet. As of market close on 1/3/2022.



Still, uncertainty around the Covid-19 pandemic remains for the start of the year. The rise of the omicron variant helped lead to [thousands of flight cancellations during the holiday season](#) and has led some [businesses and schools to consider temporary closures](#). Also, several [major Wall Street banks](#) have asked employees to work from home for the first few weeks of January.

While the fast spread of the omicron variant has been reflected in case numbers, data shows it hasn't led to a major increase in hospitalizations, and investor appetite for vaccine makers has been subdued. They were among the biggest decliners Monday, with Moderna and BioNTech down about 7.4% and 10%, respectively. Pfizer fell 4%.

“Every single wave that we have of a new variant, we get over faster, and I think that will continue to happen,” Liz Young, SoFi’s head of investment strategy, told CNBC’s “Halftime Report” Monday.

Infectious disease expert Dr. Anthony Fauci told ABC’s “This Week” on Sunday that U.S. health officials may soon update guidelines to include a [testing recommendation](#) to signal when a person who previously tested positive for Covid can leave isolation.

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11/22/22, 9:09 PM

Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%

Morgan Stanley's Wilson says inflation is set to slide; warns of 'new era' ahead

Goldman Sachs says the 'bear market is not over' for global stocks and predicts the bottom

However, "what we saw with this last wave is it impacted supply and not demand, which tells me that inflation is still here to stay for the first half of 2022," Young added.

Inflation and monetary policy are key themes for 2022, as investors expect the Federal Reserve to hike rates multiple times in the coming year to help cool the rise in prices for consumers. Those higher rates wouldn't necessarily be a bad thing as they would indicate strength in the economy, but it's something stocks have to "trudge through in order to get to the other side in positive territory," Young said.

— *CNBC's Michael Bloom contributed to this report.*

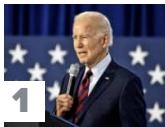
Correction: This story has been updated to reflect that the Dow and the S&P 500 finished at record closing levels, not intraday levels.

Shark Tank

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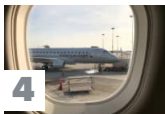
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Dow jumps more than 200 points to record close to start 2022, Tesla boosts Nasdaq by 1%



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1/22/23, 8:51 AM



MARKETS

The S&P 500 is now in an official bear market, according to S&P Dow Jones Indices

PUBLISHED MON, JUN 13 2022 4:06 PM EDT UPDATED MON, JUN 13 2022 4:31 PM EDT

Scott Schnipper

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Traders on the floor of the NYSE, June 13, 2022.

Source: NYSE

It's official, according to the folks who decide which markets are bulls and which are bears, not to mention which stocks go into the Dow Jones Industrial Average and the S&P 500.

U.S. stocks on Monday [entered a bear market](#) because the S&P 500 closed more than 21% below its all-time record close reached as recently as last January, S&P Global Dow Jones Indices senior



1/22/23, 8:51 AM

S&P 500 is in official bear market, according to S&P Dow Jones Indices



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had never actually closed below 3857, the level S&P Global needed to see in order to officially declare one.

S&P Global says a 20% decline in the S&P 500 on a closing basis from its previous peak is all it takes to define a bear market. Which means that this bear market is already more than five months old, since the S&P 500 all-time high came on January 3.

PRIOR BEAR MARKETS FOR THE S&P 500

START DATE ↓	END DATE ↓	START PRICE ↓	END PRICE ↓	MONTHS ↓	S&P 500 % CHANGE ↓	PRIOR BULL MKT % GAIN ↓
9/7/1929	6/1/1932	31.92	4.40	32.8	-86.2	
3/6/1937	4/29/1942	18.68	7.47	61.8	-60	325
5/29/1946	6/14/1949	19.25	13.55	36.5	-29.6	158
8/2/1956	10/22/1957	49.64	38.98	14.7	-21.5	266
12/12/1961	6/27/1962	72.64	52.32	6.5	-28	86
2/9/1966	10/7/1966	94.06	73.20	7.9	-22.2	80
11/29/1968	5/26/1970	108.37	69.29	17.8	-36.1	48
1/11/1973	10/3/1974	120.24	62.28	20.7	-48.2	74
11/28/1980	8/12/1982	140.52	102.42	20.4	-27.1	126
8/25/1987	12/4/1987	336.77	223.92	3.3	-33.5	229
7/16/1990	10/11/1990	368.95	295.46	2.9	-19.9	65
3/24/2000	10/9/2002	1527.46	776.76	30.5	-49.1	417
10/9/2007	3/9/2009	1565.15	676.53	17	-56.8	101
2/19/2020	3/23/2020	3386.15	2237.40	1.1	-33.9	401
1/3/2022	6/13/2022	4796.56	3749.63	5.3	-21.8	114
AVERAGE				18.6	-38.2	177.8



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S&P 500 is in official bear market, according to S&P Dow Jones Indices



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translated into a 38% price decline lasting an average of almost 19 months.

But that's only the average. The longest bear market lasted 62 months, between 1937 and 1946, while the worst decline came as the Great Depression got underway and stocks plunged 86%.

The causes of every bear market are different, of course. This one is defined by the Fed tightening interest rates in reply to galloping inflation that's running at the fastest clip in 40 years, and the first European land war since World War 2.

S&P 500 - 5 years



cnbc.com



The last bear market in early 2020 was caused by the onset of Covid-19, a global pandemic, and the economic contraction that followed. The Global Financial Crisis created the 2007-2009 bear market as the housing market imploded. The bursting of the Tech Bubble led directly to the 2000-2002 bear market.

So, how does S&P Global define the end of a bear market? When the index reaches its low and later rises by 20%. Unfortunately for investors, that can only be known in hindsight.



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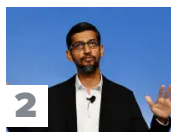


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New weight loss drugs trending with billionaires, celebs are about to enter more American homes

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Man Who Predicted Lehman Collapse Warns of New Market Surprise From Weakening U.S. Dollar

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JULY 18, 2022

Capital Markets Outlook: 3Q 2022

2 Minute Read

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What You Need to Know

The second quarter added to the capital-market woes that began in 2022, resulting in the worst first half since 1970. All areas of the markets turned in negative performances. Inflation remained persistently high as the Russian invasion of Ukraine dragged on, with commodity prices rising sharply, new COVID variants spreading globally and supply-chain bottlenecks remaining. A more hawkish Fed raised rates twice in the second quarter, to bring the year-to-date rate hike total to 1.50%.

As we enter the second half of 2022, predictions of a possible recession range widely as the key drivers of inflation shift from goods to commodities and services, notably housing. Some leading indicators, such as Institute for Supply Management (ISM) new orders and consumer sentiment, are flashing red. But US households seem quite strong—with high total liquid assets, low debt and robust employment. Recession or not, US and global growth will likely see a meaningful slowdown. We've lowered our US forecast to 2.5% for 2022 and dropped our 2023 forecast to 1.0%. We see 2022 global growth (ex Russia) at roughly 3.1%, slowing to 2.4% for 2023.

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+9.1% YoY Headline Inflation

-20.0%

US Large-Cap YTD Returns

+15.7 One-Year Return

+2.4%

Global (ex-Russia) GDP 23F

Down from 3.1% 22F

Equity valuations have come down significantly, prompting investors to turn their attention to earnings guidance, which we expect will face headwinds as consumption moderates and inflation pains persist. Despite an economic slowdown, there are potential areas of relative value during times of uncertainty. A quality bias—companies with favorable attributes such as high profits, strong free cash flow and pricing power—has often worked in times of uncertainty and slower growth. And with valuations for growth stocks coming down closer to their long-term averages, investors may consider this an improved entry point. There are also compelling indications for investors to consider small-cap stocks, especially growth.

For bond investors, the sharp rise in the rate landscape has had an outsize impact across the board, with yields continuing their ascent during the second quarter. The Fed will almost certainly continue raising rates, which may cause more pain in the short term. But long-term investors should welcome rising yields if their time horizon is longer than the duration of their bond portfolio. One area in the credit markets that appears quite compelling now is US high yield. Currently, the yield-to-worst is approximately 9.0%. Historically, yield-to-worst has been a strong indicator of

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driving yields up. However, muni credit fundamentals are strong, with 49 states reporting revenue collections above budget projections in fiscal 2022. Munis present an appealing opportunity on a tax-equivalent basis. And in times of economic slowdowns and recession concerns, munis can be viewed as a flight to quality second only to Treasuries.

As with all parts of the capital markets, investors need to be selective. In these volatile and uncertain markets, it's important to be active as you position your portfolio to participate and defend.

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5/3/22, 4:58 PM

Markets

Goldman Sachs Sees Fed Hiking More Times in 2023 Amid Inflation

By Enda Curran

February 28, 2022, 3:43 AM EST

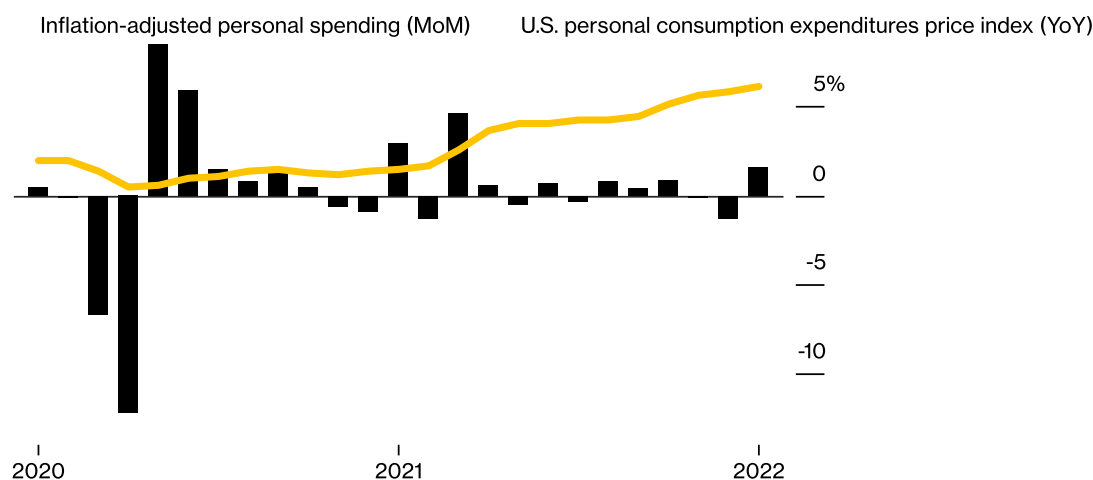
Goldman Sachs Group Inc. has lifted its U.S. inflation forecast and now sees the Federal Reserve lifting rates more than expected in 2023.

The U.S. bank now forecasts the Fed's preferred inflation measure to reach 3.7% by the end of 2022 compared with its previous forecast of 3.1%, economists led by Jan Hatzius wrote in a report to clients. They then see price growth slowing to 2.4% by the end of 2023 compared with an earlier view of 2.2%.

"A very high inflation path in 2022 should make an easy case for steady rate hikes at all seven remaining FOMC meetings," the economists wrote. "In light of our higher inflation forecast for 2023, we now expect four additional quarterly hikes next year (versus. three previously), resulting in a slightly higher terminal funds rate of 2.75-3%."

Resilient Consumers

U.S. goods spending fueled monthly advance despite accelerating inflation



Source: Bureau of Economic Analysis

5/3/22, 4:58 PM

Goldman Raises U.S. Inflation Forecasts, Sees More Hikes in 2023 - Bloomberg

Data on Friday showed the personal consumption expenditures price index, the gauge most closely watched by the Fed, increasing 0.6% from a month earlier and 6.1% from January 2021, the most since 1982. Spending, unadjusted for inflation, rose 2.1% from December, while incomes were little changed.

Officials will get another important piece of evidence on the state of the economy on March 4 with the February jobs report. U.S. employers probably added another 400,000 jobs, while average hourly earnings growth accelerated to 5.8% from a year earlier, based on median projections in a Bloomberg survey of economists.

The Goldman analysts say it's an open question how much inflation will stabilize by year-end.



“While the inflation surge in 2021 was dominated by pandemic-driven supply-demand imbalances for durable goods, inflationary pressures have broadened and intensified in recent months,” they wrote.

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9/14/21, 10:59 AM

ELECTRIC POWER — 21 Jan 2021 | 21:51 UTC — Houston

Utility sector's credit ratings weakened sharply in 2020: S&P Global Ratings

Author [Mark Watson](#) 
Editor [Rocco Canonica](#) 
Commodity [Electric Power](#)
Topic [COVID 19: Coronavirus Outbreak](#)

HIGHLIGHTS

Downgrades exceed upgrades

ESG risks, regulatory issues were major factors

Vaccine may help recovery

Houston — The percentage of North American regulated utilities with a negative outlook or on CreditWatch with negative implications surged from 18% in 2019 to 36% in 2020, a Jan. 21 S&P Global Ratings report states, which may cause power utilities to more strictly avoid risk in trading.

9/14/21, 10:59 AM

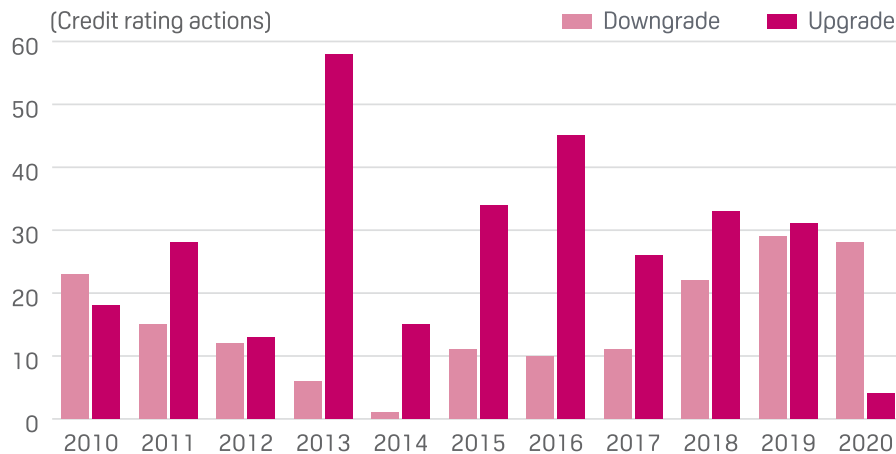
Utility sector's credit ratings weakened sharply in 2020: S&P Global Ratings | S&P Global Platts

The report, entitled, "North American Regulated Utilities' Negative Outlook Could See Modest Improvement," also indicated that the number of downgrades exceeded the number of upgrades by a wide margin in 2020 for the first time since 2010.

"The main causes of weakening credit quality reflected environment, social, and governance (ESG) risks, regulatory issues, and companies' practice of strategically managing financial measures close to their downgrade threshold with little or no cushion," the report states.

The novel coronavirus pandemic "was not the culprit for weaker credit quality," the report states.

NORTH AMERICAN REGULATED UTILITIES UPGRADES AND DOWNGRADES



Source: S&P Global Ratings

"Lower electric and gas deliveries to [commercial and industrial] customers were mostly offset by higher residential deliveries, the industry generally worked well with regulators to defer COVID-19-related costs for future recovery, market returns improved, and the industry generally had consistent access to the capital markets," the report states.

9/14/21, 10:59 AM

Utility sector's credit ratings weakened sharply in 2020: S&P Global Ratings | S&P Global Platts

Rudy Tolentino, a Houston-based independent electric utility and power market analyst, speculated that the downgrades are likely more related to delayed rate filings and dispositions, "since fuel and purchased power costs are typically passed through to the customer."

"As far as the delayed rate filings, it's hard to ask for a rate increase when so many customers are struggling," Tolentino said in a Jan. 21 email. "The optics don't look good."

COVID-19 vaccine

S&P Global Ratings said, "We expect that as vaccines take hold and the pandemic dissipates, the economy will gradually recover, as will the industry's rate case performance."

Another factor that may enhance regulated utilities' may be an increase in corporate income tax that may result from the change in the makeup of the federal executive and legislative branches, the report states.

"While details of such a plan are limited, a key element of the proposal would likely call for an increase in the corporate tax rate to 28% from 21%," the report states. "We estimate that this higher tax rate would improve the industry's [ratio of] funds from operations to debt by about 100 basis points. The improving financial measures would likely boost credit quality, enhancing utilities' financial cushions from their downgrade thresholds."

In the interim, Jim Carson, CEO of RisQuant Energy, a St. Paul, Minnesota-based energy market consultancy, said electric utilities are likely to be more risk averse in their trading.

"They will be more inclined to fully hedge than before, and speculate less," Carson said in a Jan. 21 email. "Trading will be driven more by the need to hedge and less on value analysis and perception. I don't believe that price levels will be much affected. However, the day ahead to real time differentials should widen and the forward curve [should become] less efficient."

1/27/2022

COMMENTS — 20 Jan, 2022 | 23:24 —

APAC, United States of America, Latin America, Canada, EMEA, APAC

For The First Time Ever, The Median Investor- Owned Utility Ratings Falls To The 'BBB' Category



Primary Credit	Gabe Grosberg
Analyst:	
Secondary Contact:	Minni Zhang
Sector	<u>Utilities & Power, Oil & Gas, Infrastructure & Utilities, Utilities & Power, Midstream</u>
Tags	<u>Americas, Latin America, APAC, EMEA</u>

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Key Takeaways

1/27/2022

For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category | S&P Global Ratings

- For the second consecutive year rating downgrades outpaced upgrades for the investor-owned North American regulated utility industry, causing the median rating on the industry to fall to the 'BBB' category.
- During 2021, credit quality was primarily pressured by weak financial measures and Environmental, Social, and Governance (ESG) credit risks. We expect that these risks will continue to pressure the credit quality of the industry in 2022.
- Our outlook on the investor-owned North American regulated utility industry remains negative. We believe that 2022 could be the third consecutive year that downgrades outpace upgrades.
- Recently, several new credit risks have emerged, including inflation, higher interest rates, and rising commodity prices. Persistent pressure from any of these risks would likely lead to a further weakening of the industry's credit quality in 2022.

Credit quality again weakened in 2021 and represented the second consecutive year that downgrades outpaced upgrades. Prior to 2020, the last time downgrades outpaced upgrades was 2010, reflecting a near decade of consistent improvement to credit quality.

During 2021 downgrades were primarily the result of weak financial measures and ESG-related credit risks. We downgraded Atmos Energy Corp. (A-/Negative/A-2), Duke Energy Corp. (BBB+/Stable/A-2), One Gas Inc. (BBB+/Negative/A-2), Entergy Louisiana (BBB+/Stable), and Entergy New Orleans LLC (BB/Developing/--) primarily because of rising environmental or physical risks. Conversely, downgrades to National Grid North America Inc. (BBB+/Stable/A-2), Southwest Gas Holdings Inc. (BBB-/Negative/--), Southern Co. (BBB+/Stable/A-2), and Pinnacle West Capital Corp. (BBB+/Negative/A-2) primarily reflected weak financial measures.

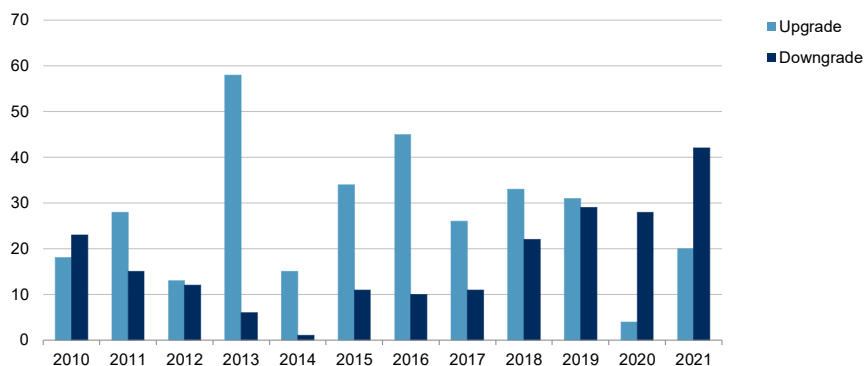
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ESG credit risks and weak financial measures similarly affected the outlooks on several utilities. We revised the outlook on OGE Energy Corp. (BBB+/Negative/A-2) to negative from stable reflecting physical risks while the outlooks for Algonquin Power & Utilities Corp. (BBB/Negative/-), American Electric Power Co. Inc. (A-/Negative/A-2), Cleco Corporate Holdings LLC (BBB-/Negative/--), and Evergy Inc. (A-/Negative/A-2) were all revised to negative from stable because of relatively weak financial measures for their current rating.

Chart 1

North American Regulated Utilities Rating Actions--Upgrades And Downgrades



Source: S&P Global Ratings and company data.
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Because the industry has experienced such a significant weakening of credit quality over the past two years, the median and modal ratings for the industry fell for the first time ever to the 'BBB' category from the 'A' category. In 2021 the percentage of companies in the 'A' category dropped to 45% from 58% in 2020 and the percentage of companies in the 'BBB' category increased to 51% in 2021 from 34% in 2020. Despite the overall weakening of credit quality in 2021, there were some areas of improvement, specifically, the number of high-yield companies decreased in 2021 to about 2% from about 7% in 2020. However, this is mostly attributable to the multiple notch upgrades related to FirstEnergy Corp. (BBB-/Stable/--), which reflected the significant steps the company

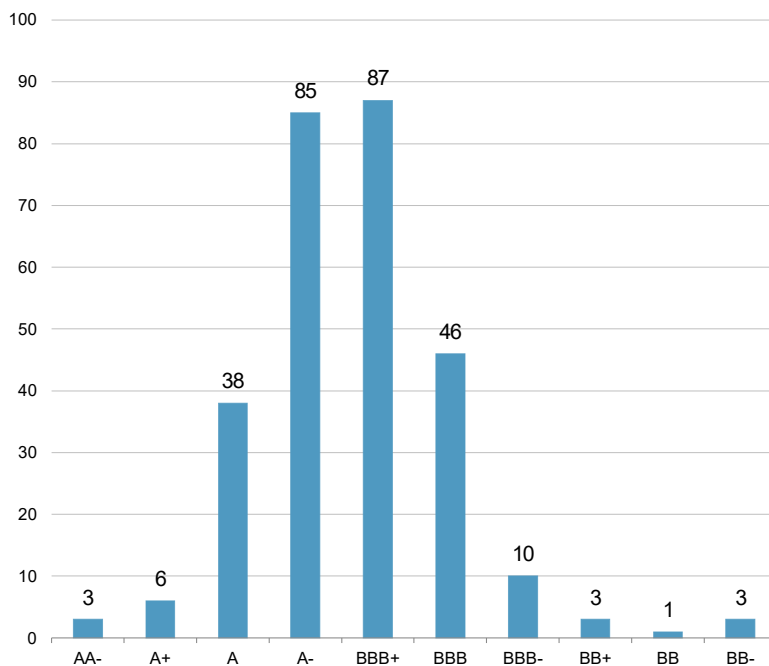
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took to remediate the material weakness identified within its internal controls. We believe that this strengthening in credit quality is limited to FirstEnergy and is not reflective of the broader industry risks.

Chart 2

North American Regulated Utilities Year-End 2021 Ratings Distribution



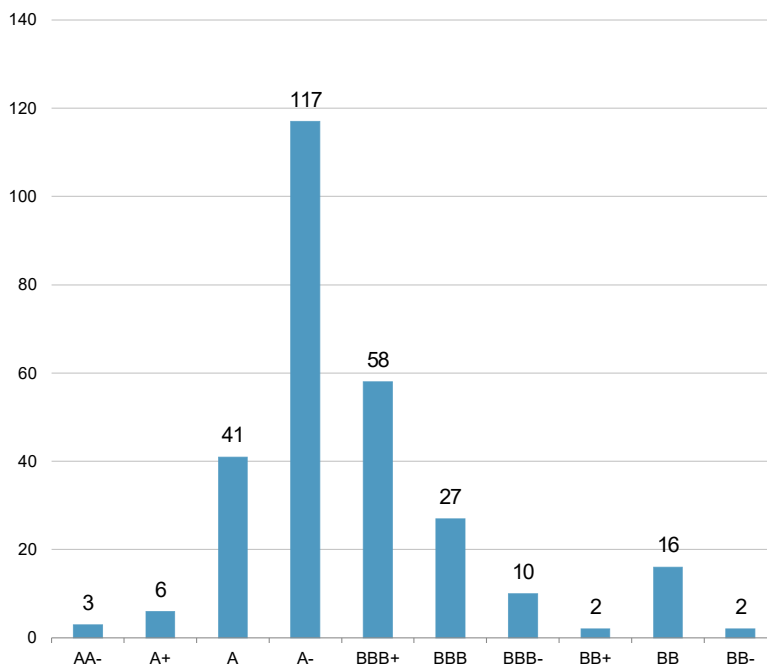
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Chart 3

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North American Regulated Utilities 2020 Year-End Ratings Distribution



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Industry Credit Quality Will Likely Continue To Weaken in 2022

A relatively high percentage of the industry (about 20%) continues to have a negative outlook. While this is materially lower than the approximate 35% of the industry with negative outlooks at year-end 2020, it remains elevated compared to historical averages (approximately 10%).

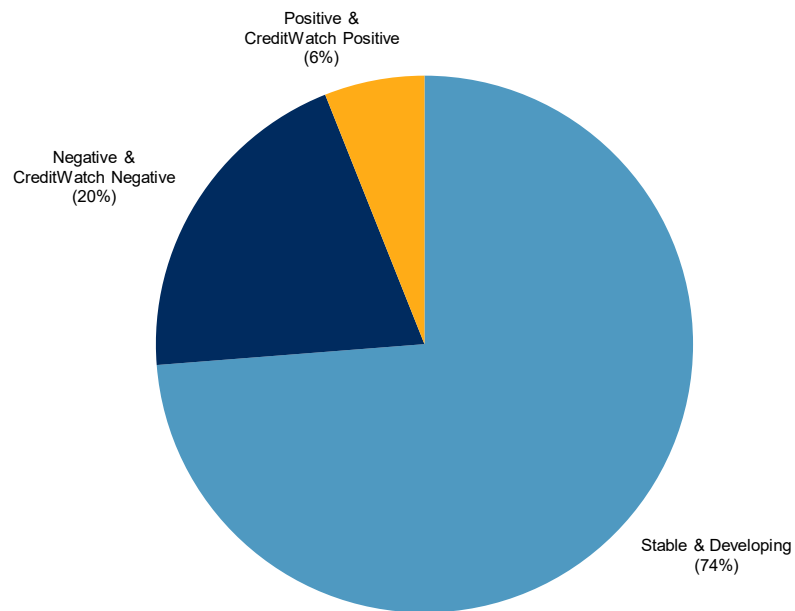
Conversely, the positive outlooks are at just about 5%. As such, we believe it is more likely that downgrades will continue to outpace upgrades in 2022.

Chart 4

1/27/2022

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North American Regulated Utilities Industry Year-End 2021 Outlooks



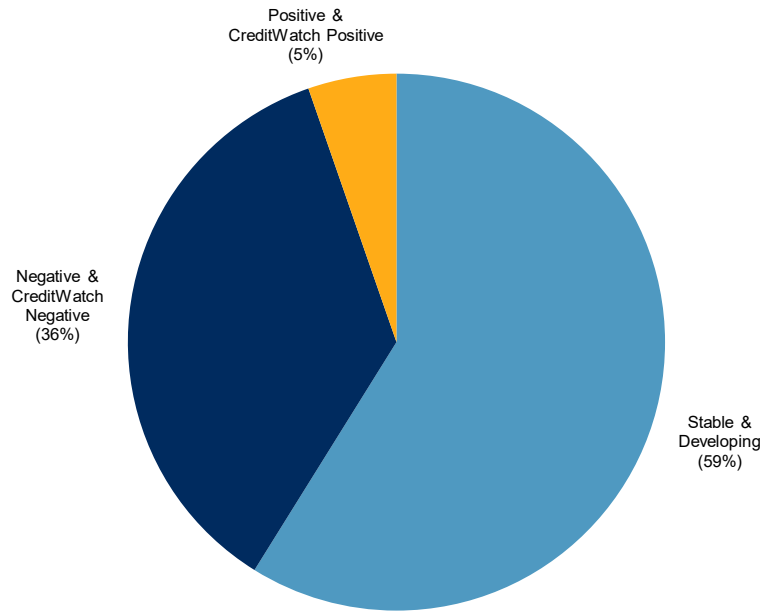
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Chart 5

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North American Regulated Utilities Industry Year-End 2020 Outlooks



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What's Behind This Fundamental Weakening Of Credit Quality?

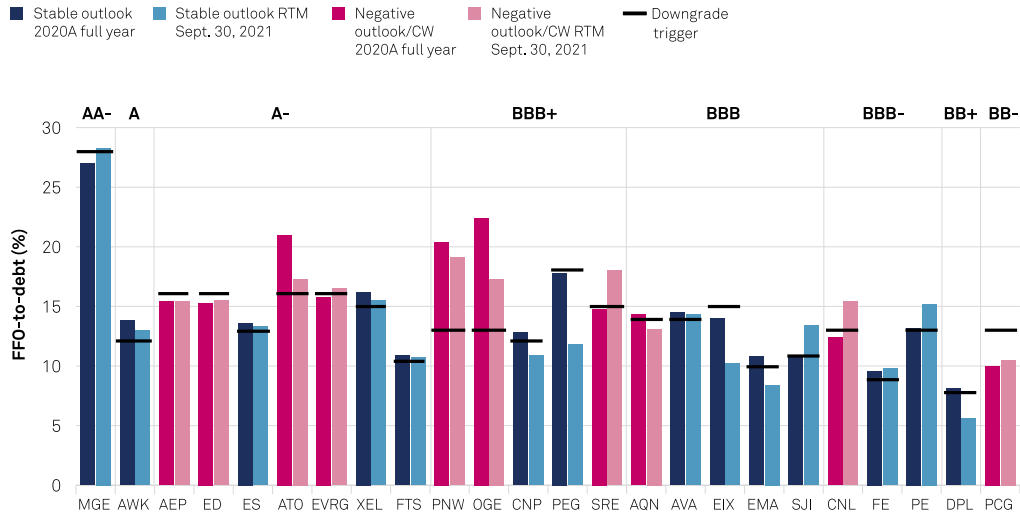
Utility cash flows tend to be more stable and predictable than most other industries. Strategically, an increasing percentage of the industry has been managing their financial measures with only minimal financial cushion from their downgrade threshold. While this strategy of limiting excess credit capacity works well under ordinary conditions, when unexpected risks occur or base case assumptions deviate from expectations, the utility can become susceptible to a weakening of credit quality. This has been one of the primary drivers of the industry's weakening of credit quality over the past two years.

Chart 6

1/27/2022

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Minimal Financial Cushion



Source: S&P Global Ratings.
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Dealing With Energy Transformation

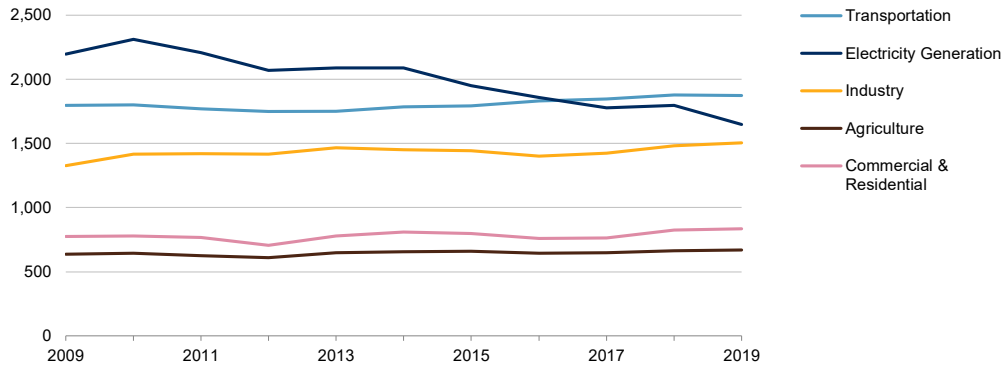
The utility industry has already made significant progress towards reducing its greenhouse gas (GHG) emissions. Over the past decade, the industry reduced its reliance on coal-fired generation by more than 50% and more than doubled capacity from renewable energy. Because of these transformative trends, the industry's GHG emissions have decreased by more than 25%. Despite these milestones, the industry continues to invest heavily in renewable energy, which will further reduce its GHG emissions by about 40% over the next decade.

Chart 7

1/27/2022

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Total U.S. Greenhouse Gas Emissions By Economic Sector From 2009–2019
 Million metric tons of CO2 equivalent



Source: U.S. Energy Information Administration.
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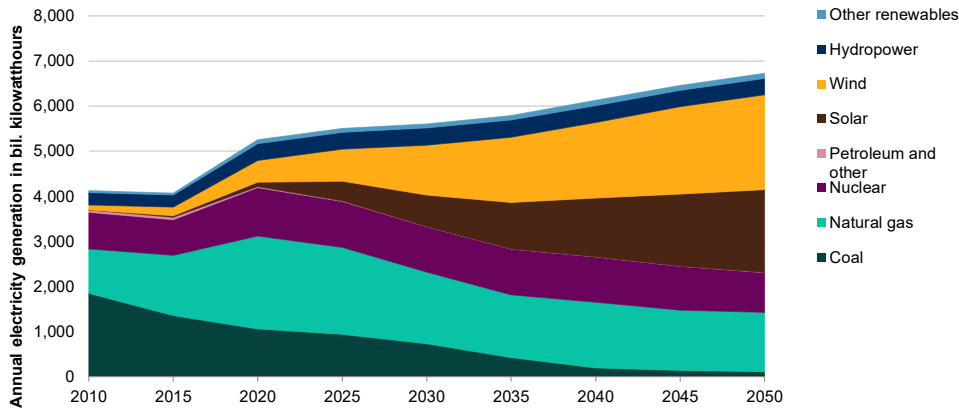
We anticipate that it could take longer than a decade to transform the U.S. generation portfolio, increasing our reliance on renewable energy for more than 50% of total generation. As such, we expect that capital spending will remain robust for the foreseeable future, continuing to pressure the industry's financial measures. Because of the robust capital opportunities available to many companies within the industry, utilities will continue operate with only minimal financial cushion from their downgrade threshold.

Chart 8

1/27/2022

For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category | S&P Global Ratings

U.S. Electricity Generation 2010-2050



Source: S&P Global Platts.
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Capital Spending

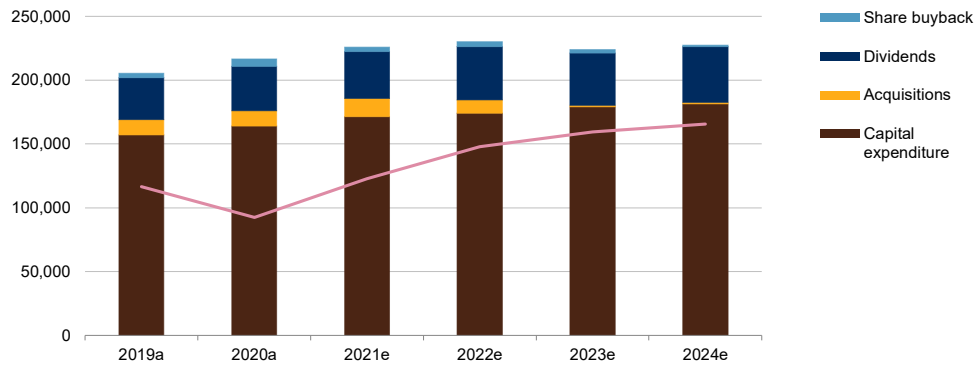
We expect 2021 capital spending to approximate \$170 billion setting a new record for the sector. This is about 5% higher than the \$164 billion spent in 2020 and about 9% higher than the \$157 billion spent in 2019. Over the past fifteen years, the industry's capital spending has been growing at a compounded annual growth rate of about 9%. While we expect the growth rate will somewhat slow, we still expect that the industry will continue to grow its capital spending. Under our base case, we expect that by 2024 the industry's capital spending will exceed \$180 billion. Because of the industry's continued robust capital spending, we expect that industry will continue to generate negative discretionary cash flow. This requires that the industry has consistent access to the capital markets to finance capital spending and dividends requirements.

Chart 9

1/27/2022

For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category | S&P Global Ratings

North American Regulated Utilities Cash Flows And Primary Uses



Source: S&P Global Ratings and company data.
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ESG Credit Risks

During 2020 and 2021 the industry credit quality was constrained by many ESG-related credit risks. Unexpectedly, the industry faced several governance-related credit risks in 2020. We view these governance events as isolated incidents and do not believe that they will have broader implications for the larger utility industry. However, we do expect that physical and environmental risks will continue to constrain the industry's credit quality. Wildfires, severe winter storms, hurricanes, and tornadoes lead to higher costs that are either partially disallowed by regulators or are deferred for future recovery. Similarly, higher environmental costs can also result in higher costs that are either partially disallowed by regulators or are deferred for future recovery. Either outcome for physical and environmental risks typically results in weaker financial measures until the utility fully recovers such costs from customers. Because of climate change, we believe that these risks will continue to negatively affect credit quality in 2022.

Other Developing Risks That May Affect Credit Quality

1/27/2022

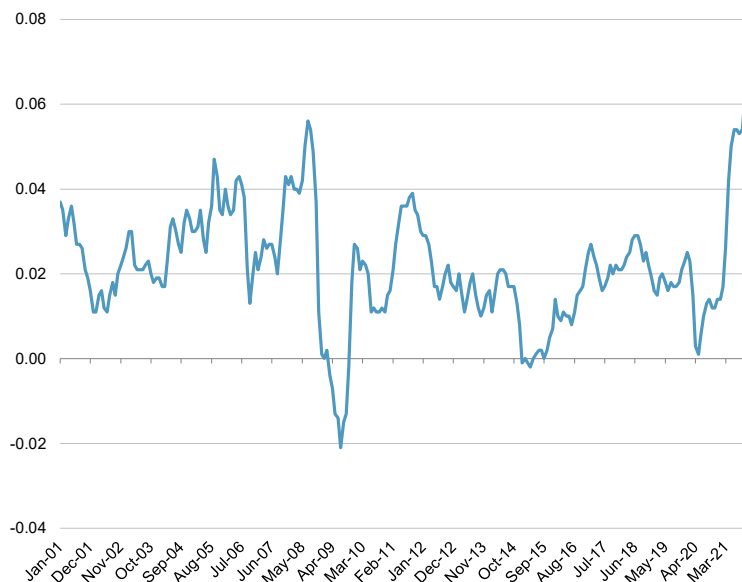
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Inflation, higher interest rates, and rising commodity prices could all lead to higher customer bills, pressuring the industry's ability to effectively manage regulatory risk and its credit quality. Inflation recently spiked to its highest level in decades after rising for several consecutive months in 2021. Given the sustained increase to the U.S. consumer price index in 2021, inflation no longer appears to be just transitory and may have financial implications for the investor-owned North American regulated utility industry. Because of the regulatory lag within the industry, inflation, which causes prices to rise, typically leads to a weakening of financial performance. The regulatory lag is the timing difference between when costs are incurred and when regulators allow those costs to be fully recovered from ratepayers.

Chart 10

Inflation Risk

Consumer Price Index, 12-month percentage change (not seasonally adjusted)



Source: U.S. Bureau of Labor Statistics, December 2021.

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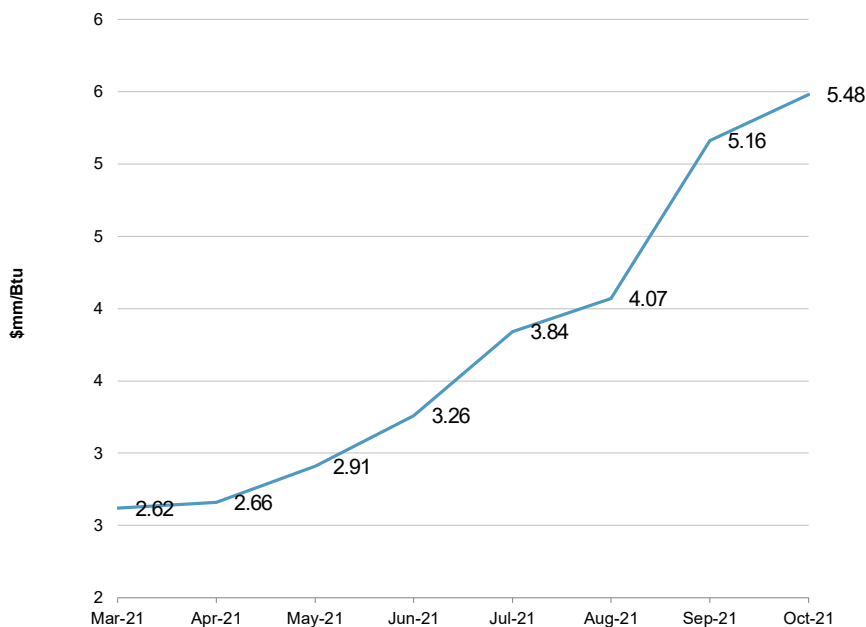
1/27/2022

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Similarly, when interest rates rise, the industry's finance measures also typically weaken because of regulatory lag. Commodity prices have also materially increased over the last several months, which could cause credit quality to weaken. While commodity costs are typically directly and fully collected from customers, high commodity costs increases the customer bill, which would likely make it more difficult for the industry to effectively manage regulatory risk. We believe persistently higher natural gas prices would pressure credit quality and the customer bill for natural gas distribution utilities. Furthermore, about 40% of the U.S. generation portfolio is from natural gas fired generation and therefore persistently higher natural gas prices would likely also pressure the credit quality of electric utilities.

Chart 11

Henry Hub Natural Gas Prices



Source: S&P Global Ratings and company data.
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1/27/2022

For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category | S&P Global Ratings

The Industry Outlook Remains Negative

Credit quality for the investor-owned North America regulated utility industry weakened during 2020 and 2021 with the median rating falling for the first time ever to the 'BBB' category. Given the relative high percentage of the industry with a negative outlook (about 20%), the strategic management of financial measures with only minimal cushion from the downgrade threshold, the industry's high capital spending, ESG credit risks, inflation, rising interest rates, and higher commodity prices, we expect that it is more likely that downgrades will again outpace upgrades in 2022. Should this occur, it would be the first time in more than 30 years that downgrades outpaced upgrades for three consecutive years.

This report does not constitute a rating action.

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Moody's revises US regulated utilities outlook to negative

Friday, November 11, 2022 9:15 AM HAT

By Abbie Bennett
Market Intelligence

Moody's revised its 2023 outlook for the U.S. regulated utilities sector to negative, citing the ongoing challenges of inflation, rising interest rates and higher natural gas prices.

Those challenges raise residential customer affordability issues and increase the level of uncertainty for the timely recovery of fuel and purchased power costs, as well as for utilities' rate cases more broadly, the rating agency's analysts wrote in a Nov. 10 report.

Regulated utilities' financial metrics are already under pressure with "little cushion," and high natural gas prices and inflation may continue in 2023, "which could hurt cash flow recovery should regulators seek to limit the impact on customer bills by delaying recovery or approving lower rate increases," the report said.

While analysts said they believe most state regulators will remain supportive, utilities and commissions are expected to face "heightened public scrutiny amid affordability concerns."

Regulated utilities' capital spending and dividends will likely be sustained at a steady rate, weighing on financial performance, analysts wrote. Businesses are likely to maintain elevated capital spending focused on emissions reduction to make progress toward their net-zero goals and overall grid reliability while maintaining dividends, according to the report.

Following passage of the Inflation Reduction Act in August, capital expenditures could increase even further with new incentives helping reduce the cost of developing clean energy projects and making nuclear generation more attractive. But while analysts consider the legislation credit positive, its provisions are not "sufficient to offset the combined adverse effects of high natural gas prices, inflation and rising interest rates," according to the report.

The 2023 outlook could return to stable if the regulated utilities sector's regulatory support remains intact, if natural gas prices settle at a level where most utilities can fully recover fuel and purchased power costs without delays beyond 12 months, if inflation eases, if interest rates stabilize or if the sector's aggregate funds from operation-to-debt ratio remains between 14% and 15%, according to the report.

The outlook could even change to positive if utility regulation becomes more broadly credit-supportive, leading to quicker cash flow recovery, or if the rating agency expects the sector's aggregate funds from operation-to-debt ratio to rise above a sustained 17%.

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Fitch sees various cost pressures behind 'deteriorating' US utilities outlook

Monday, November 14, 2022 12:34 PM HAT

By Darren Sweeney
Market Intelligence

Fitch Ratings sees high natural gas prices, record capital spending and rising interest rates among the cost pressures weighing on the U.S. utilities sector in 2023. The rating agency has a "deteriorating" outlook on the sector after years of a stable view.

"One of the main things driving the outlook is our expectation for a recession," Fitch Ratings analyst and Director Manish Consul said Nov. 14 at the Edison Electric Institute Financial Conference in Hollywood, Fla.

The rating agency's outlook assumes the U.S. will enter a mild recession in 2023 as the Federal Reserve continues to hike interest rates to tame record inflation.

Moody's on Nov. 10 revised its 2023 outlook for the U.S. regulated utilities sector to negative, citing the ongoing challenges of inflation, rising interest rates and higher natural gas prices.

Other factors behind Fitch's outlook include the Edison Electric Institute predicting elevated levels of capital expenditures for U.S. electric utilities. EEI forecasts \$154.7 billion of capital expenditures in 2022, \$159.2 billion in 2023 and \$155.2 billion in 2024, a sharp increase from \$134.1 billion in 2021.

Flat retail sales and Henry Hub natural gas prices around \$5/MMBtu in 2023 also will "pressure the metrics," Consul said.

Fitch is also mindful of how a "sharp escalation" in retail rates, which have increased 14% in 2022, and bill affordability will impact credit metrics. Higher natural gas prices are a key driver of this spike in retail rates.

The rating agency's "stress case" assumes average natural gas prices remain at \$7/MMBtu in 2022 and 2023, a \$2 increase from the base case.

While Fitch's base case calls for a 15.8% increase in retail rates from 2022 to 2023, the rating agency's stress case sees natural gas prices contributing to a 38% increase in retail rates over the same time period.

"We think higher natural gas prices and, more importantly, volatile natural gas prices are here to stay," Fitch analyst and Managing Director Shalini Mahajan said.

Analysts see energy assistance programs and securitization as helping offset customer bill impacts, while portfolio management and the potential for higher returns on equity support credit metrics.

The Inflation Reduction Act also is "mostly positive" for credit metrics, according to the rating agency.

When it comes to portfolio management, analysts said, the rating agency prefers utilities issue equity over selling slices of their business to address their balance sheet. However, recent valuations have been advantageous for utility sales.

NiSource Inc. is the latest utility to announce it will sell at least part of a subsidiary to strengthen its balance sheet. The Indiana multi-utility on Nov. 7 said it would pursue the sale of a 19.9% stake in electric and gas utility subsidiary Northern Indiana Public Service Co. based on the results of a business review.

"Managements are not committing to these [asset sales] being earnings-accretive, but they are committing to these

being credit-accretive," Mahajan said.

The NiSource move comes as Dominion Energy Inc., Eversource Energy, Duke Energy Corp. and PG&E Corp. are each pursuing opportunities to strengthen their business mix and improve financial flexibility.

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Duke Energy Kentucky, Inc. | Credit Ratings

(MI KEY: 4057103; SPCIQ KEY: 3029957)

Agency All

BBB+

S&P Global Ratings

Issuer Credit Rating (Foreign Currency LT)
 1/26/2021

Downgrade | CreditWatch/Outlook: Stable
 1/26/2021

Baa1

Moody's

Long Term Rating (Senior Unsecured Domestic)
 8/1/2018

Outlook:

Current Ratings

S&P GLOBAL RATINGS (S&P Entity Name:Duke Energy Kentucky Inc.)

RATING TYPE	RATING	RATING DATE	LAST REVIEW DATE	PREVIOUS RATING	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating							
Foreign Currency LT	BBB+	1/26/2021	4/15/2022	A-	Downgrade CreditWatch/Outlook	Stable	1/26/2021
Local Currency LT	BBB+	1/26/2021	4/15/2022	A-	Downgrade CreditWatch/Outlook	Stable	1/26/2021
Foreign Currency ST	A-2	1/29/2019	4/15/2022	New	New Rating		
Local Currency ST	A-2	1/29/2019	4/15/2022	New	New Rating		

MOODY'S

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
Ratings Summary				
Long Term Rating (Senior Unsecured Domestic)	Baa1	8/1/2018	Rating Affirmation	
Outlook		8/1/2018		Stable

Ratings Detail

Duke Energy Kentucky, Inc. | Credit Ratings

RATING TYPE	RATING	DATE	ACTION	OUTLOOK
LT IRB/PC (Domestic)	Baa1	6/24/2022	New	
Senior Unsecured (Domestic)	Baa1	8/1/2018	Rating Affirmation	
Underlying LT IRB/PC (Domestic)	Baa1	8/1/2018	Rating Affirmation	
Senior Secured Shelf (Domestic)	WR	7/3/2012	Withdrawn	
Senior Unsec. Shelf (Domestic)	WR	7/3/2012	Withdrawn	
Junior Subord. Shelf (Domestic)	WR	7/3/2012	Withdrawn	
First Mortgage Bonds (Domestic)	WR	9/7/1999	Withdrawn	

Ratings History

S&P GLOBAL RATINGS (S&P Entity Name:Duke Energy Kentucky Inc.)

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Foreign Currency LT					
Issuer Credit Rating	BBB+	1/26/2021	Downgrade CreditWatch/Outlook	Stable	1/26/2021
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	12/15/2020
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Stable	11/20/2019
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	5/20/2019
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Stable	1/12/2017
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	10/27/2015
Issuer Credit Rating	A-	4/2/2015	Upgrade CreditWatch/Outlook	Stable	4/2/2015
Issuer Credit Rating	BBB+	7/25/2012	CreditWatch/Outlook	Positive	11/5/2014
Issuer Credit Rating	BBB+	7/25/2012	CreditWatch/Outlook	Stable	5/13/2013
Issuer Credit Rating	BBB+	7/25/2012	Downgrade CreditWatch/Outlook	Negative	7/25/2012
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Watch Neg	7/3/2012
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Stable	7/23/2010
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Positive	9/26/2008
Issuer Credit Rating	A-	5/21/2007	Upgrade CreditWatch/Outlook	Stable	5/21/2007
Issuer Credit Rating	BBB	4/4/2006	CreditWatch/Outlook	Positive	5/25/2006
Issuer Credit Rating	BBB	4/4/2006	Downgrade CreditWatch/Outlook	Stable	4/4/2006
Issuer Credit Rating	BBB+	6/19/2002	CreditWatch/Outlook	Watch Neg	5/10/2005
Issuer Credit Rating	BBB+	6/19/2002	Downgrade CreditWatch/Outlook	Stable	6/19/2002
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Watch Neg	12/11/2000
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Negative	9/16/1999

Duke Energy Kentucky, Inc. | Credit Ratings

RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Watch Neg	8/6/1999
Issuer Credit Rating	A-	7/24/1995	Upgrade CreditWatch/Outlook	Stable	7/24/1995
Issuer Credit Rating	BBB+	11/26/1985	Upgrade CreditWatch/Outlook	Watch Pos	11/26/1985
Issuer Credit Rating	BBB	12/20/1983	Downgrade		
Issuer Credit Rating	A	4/28/1983	Downgrade		
Issuer Credit Rating	AA-	9/25/1979	Downgrade		
Issuer Credit Rating	AA	1/12/1949	New Rating		
Local Currency LT					
Issuer Credit Rating	BBB+	1/26/2021	Downgrade CreditWatch/Outlook	Stable	1/26/2021
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	12/15/2020
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Stable	11/20/2019
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	5/20/2019
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Stable	1/12/2017
Issuer Credit Rating	A-	4/2/2015	CreditWatch/Outlook	Negative	10/27/2015
Issuer Credit Rating	A-	4/2/2015	Upgrade CreditWatch/Outlook	Stable	4/2/2015
Issuer Credit Rating	BBB+	7/25/2012	CreditWatch/Outlook	Positive	11/5/2014
Issuer Credit Rating	BBB+	7/25/2012	CreditWatch/Outlook	Stable	5/13/2013
Issuer Credit Rating	BBB+	7/25/2012	Downgrade CreditWatch/Outlook	Negative	7/25/2012
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Watch Neg	7/3/2012
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Stable	7/23/2010
Issuer Credit Rating	A-	5/21/2007	CreditWatch/Outlook	Positive	9/26/2008
Issuer Credit Rating	A-	5/21/2007	Upgrade CreditWatch/Outlook	Stable	5/21/2007
Issuer Credit Rating	BBB	4/4/2006	CreditWatch/Outlook	Positive	5/25/2006
Issuer Credit Rating	BBB	4/4/2006	Downgrade CreditWatch/Outlook	Stable	4/4/2006
Issuer Credit Rating	BBB+	6/19/2002	CreditWatch/Outlook	Watch Neg	5/10/2005
Issuer Credit Rating	BBB+	6/19/2002	Downgrade CreditWatch/Outlook	Stable	6/19/2002
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Watch Neg	12/11/2000
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Negative	9/16/1999
Issuer Credit Rating	A-	7/24/1995	CreditWatch/Outlook	Watch Neg	8/6/1999
Issuer Credit Rating	A-	7/24/1995	Upgrade CreditWatch/Outlook	Stable	7/24/1995
Issuer Credit Rating	BBB+	11/26/1985	Upgrade CreditWatch/Outlook	Watch Pos	11/26/1985

Duke Energy Kentucky, Inc. | Credit Ratings


RATING TYPE	RATING	RATING DATE	ACTION	CREDITWATCH/ CREDITWATCH/ OUTLOOK	CREDITWATCH/ OUTLOOK DATE
Issuer Credit Rating	BBB	12/20/1983	Downgrade		
Issuer Credit Rating	A	4/28/1983	Downgrade		
Issuer Credit Rating	AA-	9/25/1979	Downgrade		
Issuer Credit Rating	AA	1/12/1949	New Rating		
Foreign Currency ST					
Issuer Credit Rating	A-2	1/29/2019	New Rating		
Local Currency ST					
Issuer Credit Rating	A-2	1/29/2019	New Rating		

MOODY'S					
RATING TYPE	RATING	DATE	ACTION	OUTLOOK	
Outlook		8/1/2018		Stable	
Outlook		8/10/2017		Stable	
Outlook		1/13/2016		Stable	
Outlook		10/27/2015		Stable	
Outlook		6/5/2015		Stable	
Outlook		1/31/2014		Stable	
Outlook		11/8/2013		Ratings Under Review	
Outlook		7/9/2013		Stable	
Outlook		1/18/2008		Stable	
Outlook		4/6/2006		Positive	
Outlook		11/15/2003		Stable	

Market Intelligence News	
HEADLINE	DATE
Activist investor Elliott Management has made public a letter sent to Duke Energy's board of directors calling for the company's separation into three regions with separate headquarters. Update: Duke Energy says 'no strategic logic' to Elliott separation plan	5/17/2021 7:42:00 AM HAT
S&P affirms Duke Energy ratings on sale of utility stake to Singapore fund S&P Global Ratings affirmed the issuer credit ratings of Duke Energy and its subsidiaries at BBB+ following the company's announced sale of a nearly 20% stake in Duke Energy Indiana.	2/3/2021 1:52:00 AM HAT

Duke Energy Kentucky, Inc. | Credit Ratings

HEADLINE	DATE
S&P downgrades Duke, utilities following coal ash settlement S&P Global Ratings on Jan. 26 downgraded the credit ratings of Duke Energy and its rated subsidiaries after North Carolina utilities Duke Energy Carolinas and Duke Energy Progress reached a rate settlement agreement.	1/26/2021 10:57:00 AM HAT

S&P Credit Ratings and Research provided by 

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**Constant Growth
(Gordon) Model**
Used to find the value of a
constant growth stock.

The last term of Equation 8-2 is called the **constant growth model**, or the **Gordon model** after Myron J. Gordon, who did much to develop and popularize it.

ILLUSTRATION OF A CONSTANT GROWTH STOCK

Assume that Allied Food Products just paid a dividend of \$1.15 (that is, $D_0 = \$1.15$). Its stock has a required rate of return, k_s , of 13.4 percent, and investors expect the dividend to grow at a constant 8 percent rate in the future. The estimated dividend one year hence would be $D_1 = \$1.15(1.08) = \1.24 ; D_2 would be \$1.34; and the estimated dividend five years hence would be \$1.69:

$$D_5 = D_0(1 + g)^5 = \$1.15(1.08)^5 = \$1.69.$$

We could use this procedure to estimate all future dividends, then use Equation 8-1 to determine the current stock value, \hat{P}_0 . In other words, we could find each expected future dividend, calculate its present value, and then sum all the present values to find the intrinsic value of the stock.

Such a process would be time consuming, but we can take a short cut—just insert the illustrative data into Equation 8-2 to find the stock's intrinsic value, \$23:

$$\hat{P}_0 = \frac{\$1.15(1.08)}{0.134 - 0.08} = \frac{\$1.242}{0.054} = \$23.00.$$

Note that a necessary condition for the derivation of Equation 8-2 is that $k_s > g$. If the equation is used in situations where k_s is not greater than g , the results will be both wrong and meaningless.

The concept underlying the valuation process for a constant growth stock is graphed in Figure 8-1. Dividends are growing at the rate $g = 8\%$, but because $k_s > g$, the present value of each future dividend is declining. For example, the dividend in Year 1 is $D_1 = D_0(1 + g)^1 = \$1.15(1.08) = \1.242 . However, the present value of this dividend, discounted at 13.4 percent, is $PV(D_1) = \$1.242/(1.134)^1 = \1.095 . The dividend expected in Year 2 grows to $\$1.242(1.08) = \1.341 , but the present value of this dividend falls to \$1.043. Continuing, $D_3 = \$1.449$ and $PV(D_3) = \$0.993$, and so on. Thus, the expected dividends are growing, but the present value of each successive dividend is declining, because the dividend growth rate (8%) is less than the rate used for discounting the dividends to the present (13.4%).

If we summed the present values of each future dividend, this summation would be the value of the stock, \hat{P}_0 . When g is a constant, this summation is equal to $D_1/(k_s - g)$, as shown in Equation 8-2. Therefore, if we extended the lower step function curve in Figure 8-1 on out to infinity and added up the present values of each future dividend, the summation would be identical to the value given by Equation 8-2, \$23.00.

DIVIDEND AND EARNINGS GROWTH

Growth in dividends occurs primarily as a result of growth in *earnings per share (EPS)*. Earnings growth, in turn, results from a number of factors, including (1) inflation, (2) the amount of earnings the company retains and reinvests, and (3) the rate of return the company earns on its equity (ROE). Regarding inflation, if output (in

Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts

Robert S. Harris and Felicia C. Marston

Robert S. Harris is the C. Stewart Sheppard Professor of Business at the Darden Graduate School of Business at the University of Virginia, Charlottesville, Virginia. Felicia C. Marston is an Assistant Professor of Commerce at the McIntire School of Commerce, University of Virginia, Charlottesville, Virginia.

■ One of the most widely used concepts in finance is that shareholders require a risk premium over bond yields to bear the additional risks of equity investments. While models such as the two-parameter capital asset pricing model (CAPM) or arbitrage pricing theory offer explicit methods for varying risk premia across securities, the models are invariably linked to some underlying market (or factor-specific) risk premium. Unfortunately, the theoretical models provide limited practical advice on establishing empirical estimates of such a benchmark market risk premium. As a result, the typical advice to practitioners is to estimate the market risk premium based on historical realizations of share and bond returns (see Brealey and Myers [3]).

In this paper, we present estimates of shareholder required rates of return and risk premia which are derived

using forward-looking analysts' growth forecasts. We update, through 1991, earlier work which, due to data availability, was restricted to the period 1982-1984 (Harris [12]). Using stronger tests, we also reexamine the efficacy of using such an expectational approach as an alternative to the use of historical averages. Using the S&P 500 as a proxy for the market portfolio, we find an average market risk premium (1982-1991) of 6.47% above yields on long-term U.S. government bonds and 5.13% above yields on corporate bonds. We also find that required returns for individual stocks vary directly with their risk (as proxied by beta) and that the market risk premium varies over time. In particular, the equity market premium over government bond yields is higher in low interest rate environments and when there is a larger spread between corporate and government bond yields. These findings show that, in addition to fitting the theoretical requirement of being forward-looking, the utilization of analysts' forecasts in estimating return requirements provides reasonable empirical results that can be useful in practical applications.

Section I provides background on the estimation of equity required returns and a brief discussion of related

Thanks go to Ed Bachmann, Bill Carleton, Pete Crawford, and Steve Osborn for their assistance on earlier research in this area. We thank Bell Atlantic for supplying data for this project. Financial support from the Darden Sponsors and from the Associates Program at the McIntire School of Commerce is gratefully acknowledged.

literature on financial analysts' forecasts (FAF). In Section II, models and data are discussed. Following a comparison of the results to historical risk premia, the estimates are subjected to economic tests of both their time-series and cross-sectional characteristics in Section III. Finally, conclusions are offered in Section IV.

I. Background and Literature Review

In establishing economic criteria for resource allocation, it is often convenient to use the notion of a shareholder's required rate of return. Such a rate (k) is the minimum level of expected return necessary to compensate the investor for bearing risks and receiving dollars in the future rather than in the present. In general, k will depend on returns available on alternative investments (e.g., bonds or other equities) and the riskiness of the stock. To isolate the effects of risk, it is useful to work in terms of a risk premium (rp), defined as

$$rp = k - i, \quad (1)$$

where i = required return for a zero risk investment.¹

Lacking a superior alternative, investigators often use averages of historical realizations to estimate a benchmark "market" risk premium which then may be adjusted for the relative risk of individual stocks (e.g., using the CAPM or a variant). The historical studies of Ibbotson Associates [13] have been used frequently to implement this approach.² This historical approach requires the assumptions that past realizations are a good surrogate for future expectations and, as typically applied, that risk premia are constant over time. Carleton and Lakonishok [5] demonstrate empirically some of the problems with such historical premia when they are disaggregated for different time periods or groups of firms.

As an alternative to historical estimates, the current paper derives estimates of k , and hence, implied values of rp , using publicly available expectational data. This expectational approach employs the dividend growth model (hereafter referred to as the discounted cash flow or DCF model) in which a consensus measure of financial analysts' forecasts (FAF) of earnings is used as a proxy for investor expectations. Earlier works by Malkiel [17], Brigham,

Vinson, and Shome [4], and Harris [12] have used FAF in DCF models, and this approach has been employed in regulatory settings (see Harris [12]) and suggested by consultants as an alternative to use of historical data (e.g., Ibbotson Associates [13, pp. 127, 128]). Unfortunately, the published studies use data extending to 1984 at the latest. Our paper draws on this earlier work but extends it through 1991.³ Our work is closest to that done by Harris [12], who reviews literature showing a strong link between equity prices and FAF and supporting the use of FAF as a proxy for investor expectations. Using data from 1982 to 1984, Harris' results suggest that this expectational approach to estimating equity risk premia is an encouraging alternative to the use of historical averages. He also demonstrates that such risk premia vary both cross-sectionally with the riskiness of individual stocks and over time with financial market conditions.

II. Models and Data

A. Model for Estimation

The simplest and most commonly used version of the DCF model to estimate shareholders' required rate of return, k , is shown in Equation (2):

$$k = \left(\frac{D_1}{P_0} \right) + g, \quad (2)$$

where D_1 = dividend per share expected to be received at time one, P_0 = current price per share (time 0), and g = expected growth rate in dividends per share. The limitations of this model are well known, and it is straightforward to derive expressions for k based on more general specifications of the DCF model.⁴ The primary difficulty in using the DCF model is obtaining an estimate of g , since it should reflect market expectations of future perfor-

³See Harris [12] for a discussion of the earlier work and a detailed discussion of the approach employed here.

⁴As stated, Equation (2) requires expectations of either an infinite horizon of dividend growth at a rate g or a finite horizon of dividend growth at rate g and special assumptions about the price of the stock at the end of that horizon. Essentially, the assumption must ensure that the stock price grows at a compound rate of g over the finite horizon. One could alternatively estimate a nonconstant growth model, although the proxies for multistage growth rates are even more difficult to obtain than single stage growth estimates. Marston, Harris, and Crawford [19] examine publicly available data from 1982-1985 and find that plausible measures of risk are more closely related to expected returns derived from a constant growth model than to those derived from multistage growth models. These findings illustrate empirical difficulties in finding empirical proxies for multistage growth models for large samples.

¹Theoretically, i is a risk-free rate, though empirically its proxy (e.g., yield to maturity on a government bond) is only a "least risk" alternative that is itself subject to risk. In this development, the effects of tax codes on required returns are ignored.

²Many leading texts in financial management use such historical risk premia to estimate a market return. See, for example, Brealey and Myers [3]. Often a market risk premium is adjusted for the observed relative risk of a stock.

For return

mance. Without a ready source for measuring such expectations, application of the DCF model is fraught with difficulties. This paper uses published FAF of long-run growth in earnings as a proxy for g .

B. Data

FAF for this research come from IBES (Institutional Broker's Estimate System), which is a product of Lynch, Jones, and Ryan, a major brokerage firm.⁵ Representative of industry practice, IBES contains estimates of (i) EPS for the upcoming fiscal years (up to five separate years), and (ii) a five-year growth rate in EPS. Each item is available at monthly intervals.

The mean value of individual analysts' forecasts of five-year growth rate in EPS will be used as a proxy for g in the DCF model.⁶ The five-year horizon is the longest horizon over which such forecasts are available from IBES and often is the longest horizon used by analysts. IBES requests "normalized" five-year growth rates from analysts in order to remove short-term distortions that might stem from using an unusually high or low earnings year as a base.

Dividend and other firm-specific information come from COMPUSTAT. Interest rates (both government and corporate) are gathered from Federal Reserve Bulletins and *Moody's Bond Record*. Exhibit 1 describes key variables used in the study. Data collected cover all dividend paying stocks in the Standard & Poor's 500 stock (S&P 500) index, plus approximately 100 additional stocks of regulated companies. Since five-year growth rates are first available from IBES beginning in 1982, the analysis covers the 113-month period from January 1982 to May 1991.

III. Risk Premia and Required Rates of Return

A. Construction of Risk Premia

For each month, a "market" required rate of return is calculated using each dividend paying stock in the S&P 500 index for which data are available. The DCF model in

Exhibit 1. Variable Definitions

k	=	Equity required rate of return.
P_0	=	Average daily price per share.
D_1	=	Expected dividend per share measured as current indicated annual dividend from COMPUSTAT multiplied by $(1 + g)$. ^a
g	=	Average financial analysts' forecast of five-year growth rate in earnings per share (from IBES).
i_t	=	Yield to maturity on long-term U.S. government obligations (source: Federal Reserve Bulletin, constant maturity series).
i_c	=	Yield to maturity on long-term corporate bonds: Moody's average. ^b
rp	=	Equity risk premium calculated as $rp = k - i$.
β	=	beta, calculated from CRSP monthly data over 60 months.

Notes:

^aSee footnote 7 for a discussion of the $(1 + g)$ adjustment.

^bThe average corporate bond yield across bond rating categories as reported by Moody's. See *Moody's Bond Survey* for a brief description and the latest published list of bonds included in the bond rating categories.

Equation (2) is applied to each stock and the results weighted by market value of equity to produce the market required return.⁷ The return is converted to a risk premium

⁷The construction of D_1 is controversial since dividends are paid quarterly and may be expected to change during the year; whereas, Equation (2), as is typical, is being applied to annual data. Both the quarterly payment of dividends (due to investors' reinvestment income before year's end, see Linke and Zumwalt [15]) and any growth during the year require an upward adjustment of the current annual rate of dividends to construct D_1 . If quarterly dividends grow at a constant rate, both factors could be accommodated straightforwardly by applying Equation (2) to quarterly data with a quarterly growth rate and then annualizing the estimated quarterly required return. Unfortunately, with lumpy changes in dividends, the precise nature of the adjustment depends on both an individual company's pattern of growth during the calendar year and an individual company's required return (and hence reinvestment income in the risk class).

In this work, D_1 is calculated as $D_0(1 + g)$. The full g adjustment is a crude approximation to adjust for both growth and reinvestment income. For example, if one expected dividends to have been raised, on average, six months ago, a "1/2 g " adjustment would allow for growth, and the remaining "1/2 g " would be justified on the basis of reinvestment income. Any precise accounting for both reinvestment income and growth would require tracking each company's dividend change history and making explicit judgments about the quarter of the next change. Since no organized "market" forecast of such a detailed nature exists, such a procedure is not possible. To get a feel for the magnitudes involved, during the sample period the dividend yield (D_1/P_0) and growth (market value weighted) for the S&P 500 were typically 4% to 6% and 11% to 13%, respectively. As a result, a "full g " adjustment on average increases the required return by 60 to 70 basis points (relative to no g adjustment).

⁵Harris [12] provides a discussion of IBES data and its limitations. In more recent years, IBES has begun collecting forecasts for each of the next five years. Since this work was completed, the FAF used here have become available from IBES Inc., now a subsidiary of CitiBank.

⁶While the model calls for expected growth in dividends, no source of data on such projections is readily available. In addition, in the long run, dividend growth is sustainable only via growth in earnings. As long as payout ratios are not expected to change, the two growth rates will be the same.

Exhibit 2. Bond Market Yields, Equity Required Return, and Equity Risk Premium,^a 1982-1991

Year	Bond Market Yields ^b		Equity Market Required Return ^c	Equity Risk Premium	
	(1) U.S. Gov't	(2) Moody's Corporates	(3) S&P 500	U.S. Gov't (3) - (1)	Moody's Corporates (3) - (2)
1982	12.92	14.94	20.08	7.16	5.14
1983	11.34	12.78	17.89	6.55	5.11
1984	12.48	13.49	17.26	4.78	3.77
1985	10.97	12.05	16.32	5.37	4.28
1986	7.85	9.71	15.09	7.24	5.38
1987	8.58	9.84	14.71	6.13	4.86
1988	8.96	10.18	15.37	6.41	5.19
1989	8.46	9.66	15.06	6.60	5.40
1990	8.61	9.77	15.69	7.08	5.92
1991 ^d	8.21	9.41	15.61	7.40	6.20
Average ^e	9.84	11.18	16.31	6.47	5.13

Notes:

^aValues are averages of monthly figures in percent.

^bYields to maturity.

^cRequired return on value weighted S&P 500 index using Equation (1).

^dFigures for 1991 are through May.

^eMonths weighted equally.

over government bonds by subtracting i_{lt} , the yield to maturity on long-term government bonds. A risk premium over corporate bond yields is also constructed by subtracting i_c , the yield on long-term corporate bonds. Exhibit 2 reports the results by year (averages of monthly data).

The results are quite consistent with the patterns reported earlier (i.e., Harris [12]). The estimated risk premia in Exhibit 2 are positive, consistent with equity owners demanding additional rewards over and above returns on debt securities. The average expectational risk premium (1982 to 1991) over government bonds is 6.47%, only slightly higher than the 6.16% average for 1982 to 1984 reported earlier (Harris [12]). Furthermore, Exhibit 2 shows the estimated risk premia change over time, suggesting changes in the market's perception of the incremental risk of investing in equity rather than debt securities.

For comparison purposes, Exhibit 3 contains historical returns and risk premia. The average expectational risk premium reported in Exhibit 2 falls roughly midway between the arithmetic (7.5%) and geometric (5.7%) long-term differentials between returns on stocks and long-term government bonds. Note, however, that the expectational risk premia appear to change over time. In the following

sections, we examine the estimated risk premia to see if they vary cross-sectionally with the risk of individual stocks and over time with financial market conditions.

B. Cross-Sectional Tests

Earlier, Harris [12] conducted crude tests of whether expectational equity risk premia varied with risk proxied by bond ratings and the dispersion of analysts' forecasts and found that required returns increased with higher risk. Here we examine the link between these premia and beta, perhaps the most commonly used measure of risk for equities.⁸ In keeping with traditional work in this area, we adopt the methodology introduced by Fama and Macbeth [9] but replace realized returns with expected returns from Equation (2) as the variable to be explained. For this portion of our tests, we restrict our sample to 1982-1987

⁸For other efforts using expectational data in the context of the two-parameter CAPM, see Friend, Westerfield, and Granito [10], Cragg and Malkiel [7], Marston, Crawford, and Harris [19], Marston and Harris [20], and Linke, Kannan, Whitford, and Zumwalt [16]. For a more complete treatment of the subject, see Marston and Harris [20] from which we draw some of these results. Marston and Harris also investigate the role of unsystematic risk and the difference in estimates found when using expected versus realized returns.

Exhibit 3. Average Historical Returns on Bonds, Stocks, Bills, and Inflation in the U.S., 1926-1989

Historical Return Realizations	Geometric	Arithmetic
Common stock	10.3%	12.4%
Long-term government bonds	4.6%	4.9%
Long-term corporate bonds	5.2%	5.5%
Treasury bills	3.6%	3.7%
Inflation rate	3.1%	3.2%

Source: Ibbotson Associates, Inc., *1990 Stocks, Bonds, Bills and Inflation*, 1990 Yearbook.

and in any month include firms that have at least three forecasts of earnings growth to reduce measurement error associated with individual forecasts.⁹ This restricted sample still consists of, on average, 399 firms for each of the 72 months (or 28,744 company months).

For a given company in a given month, beta is estimated via the market model (using ordinary least squares) on the prior 60 months of return data taken from CRSP. Beta estimates are updated monthly and are calculated against an equally weighted index of all NYSE securities. For each month, we aggregate firms into 20 portfolios (consisting of approximately 20 securities each). The advantage of grouped data is the reduction in potential measurement error inherent in independent variables at the company level. Portfolios are formed based on a ranking of beta estimated from a prior time period ($t = -61$ to $t = -120$). Portfolio expected returns and beta are calculated as the simple averages for the individual securities.

Using these data, we estimate the following model for each of the 72 months:

$$R_p = \alpha_0 + \alpha_1 \beta_p + u_p, \quad p = 1 \dots 20, \quad (3)$$

where:

R_p = Expected return for portfolio p in the given month,

β_p = Portfolio beta, estimated over 60 prior months, and

u_p = A random error term with mean zero.

As a result of estimating regression (3) for each month, 72 estimates of each coefficient (α_0 and α_1) are obtained.

Using realized returns as the dependent variable, the traditional approach (e.g., Fama and Macbeth [9]) is to assume that realized returns are a fair game. Given this assumption, the mean of the 72 values of each coefficient is an unbiased estimate of the mean over that same time period if one could have actually used expected returns as the dependent variable. Note that if expected returns are used as the dependent variable the fair-game assumption is not required. Making the additional assumption that the true value of the coefficient is constant over the 72 months, a test of whether the mean coefficient is different from zero is performed using a t -statistic where the denominator is the standard error of the 72 values of the coefficient. This is the technique employed by Fama and Macbeth [9]. If one assumes the CAPM is correct, the coefficient α_1 is an empirical estimate of the market risk premium, which should be positive.

To test the sensitivity of the results, we also repeat our procedures using individual security returns rather than portfolios. To account, at least in part, for differences in precision of coefficient estimates in different months we also report results in which monthly parameter estimates are weighted inversely by the standard error of the coefficient estimate rather than being weighted equally (following Chan, Hamao, and Lakonishok [6]).

Exhibit 4 shows that there is a significant positive link between expectational required returns and beta. For instance, in Panel A, the mean coefficient of 2.78 on beta is significantly different from zero at better than the 0.001 level ($t = 35.31$), and each of the 72 monthly coefficients going into this average is positive (as shown by that 100% positive figure). Using individual stock returns, the significant positive link between beta and expected return remains, though it is smaller in magnitude than for portfolios.¹⁰ Comparison of Panels A and B shows that the results are not sensitive to the weighting of monthly coefficients.

While the findings in Exhibit 4 suggest a strong positive link between beta and risk premia (a result often not supported when realized returns are used as a proxy for expectations; e.g., see Tinic and West [22]), the results do not support the predictions of a simple CAPM. In particular, the intercept is higher than a proxy for the risk-free rate over the sample period and the coefficient of beta is well below estimates of a market risk premium obtained from either expectational (Exhibit 2) or historical data (Exhibit

⁹Firms for which the standard deviation of individual FAF exceeded 20 in any month were excluded since we suspect some of these involve errors in data entry. This screen eliminated very few companies in any month. The 1982-1987 period was chosen due to the availability of data on betas.

¹⁰The smaller coefficients on beta using individual stock portfolio returns are likely due in part to the higher measurement error in measuring individual stock versus portfolio betas.

Exhibit 4. Mean Values of Monthly Parameter Estimates for the Relationship Between Required Returns and Beta for Both Portfolios and Individual Securities (Figures in Parentheses are *t* Values and Percent Positive), 1982-1987

<i>Panel A. Equal Weighting^a</i>				
	Intercept	B	Adjusted R^2 ^c	F ^c
Portfolio returns	14.06 (54.02, 100)	2.78 (35.31, 100)	0.503	25.4
Security returns	14.77 (58.10, 100)	1.91 (16.50, 99)	0.080	39.0
<i>Panel B. Weighted by Standard Errors^b</i>				
Portfolio returns	13.86 (215.6, 100)	2.67 (35.80, 100)	0.503	25.4
Security returns	14.63 (398.9, 100)	1.92 (47.3, 99)	0.080	39.0

^aEqually weighted average of monthly parameters estimated using cross-sectional data for each of the 72 months, January 1982 - December 1987.

^bIn obtaining the reported means, estimates of the monthly intercept and slope coefficients are weighted inversely by the standard error of the estimate from the cross-sectional regression for that month.

^cValues are averages for the 72 monthly regressions.

3).¹¹ Nonetheless, the results show that the estimated risk premia conform to the general theoretical relationship between risk and required return that is expected when investors are risk-averse.

C. Time Series Tests — Changes in Market Risk Premia

A potential benefit of using ex ante risk premia is the estimation of changes in market risk premia over time. With changes in the economy and financial markets, equity investments may be perceived to change in risk. For instance, investor sentiment about future business conditions likely affects attitudes about the riskiness of equity investments compared to investments in the bond markets. Moreover, since bonds are risky investments themselves, equity risk premia (relative to bonds) could change due to changes in perceived riskiness of bonds, even if equities displayed no shifts in risk. For example, during the high interest rate period of the early 1980s, the high level of interest rate volatility made fixed income investments more risky holdings than they were in a world of relatively stable rates.

Studying changes in risk premia for utility stocks, Brigham, et al [4] conclude that, prior to 1980, utility risk premia increased with the level of interest rates, but that this pattern reversed thereafter, resulting in an inverse correlation between risk premia and interest rates. Studying risk premia for both utilities and the equity market generally, Harris [12] also reports that risk premia appear to change over time. Specifically, he finds that equity risk premia decreased with the level of government interest rates, increased with the increases in the spread between corporate and government bond yields, and increased with increases in the dispersion of analysts' forecasts. Harris' study is, however, restricted to the 36-month period, 1982 to 1984.

Exhibit 5 reports results of analyzing the relationship between equity risk premia, interest rates, and yield spreads between corporate and government bonds. Following Harris [12], these bond yield spreads are used as a time series proxy for equity risk. As the perceived riskiness of corporate activity increases, the difference between yields on corporate bonds and government bonds should increase. One would expect the sources of increased riskiness to corporate bonds to also increase risks to shareholders. All regressions in Exhibit 5 are corrected for serial correlation.¹²

¹¹Estimation difficulties confound precise interpretation of the intercept as the risk-free rate and the coefficient on beta as the market risk premium (see Miller and Scholes [21], and Black, Jensen, and Scholes [2]). The higher than expected intercept and lower than expected slope coefficient on beta are consistent with the prior studies of Black, Jensen, and Scholes [2], and Fama and MacBeth [9] using historical returns. Such results are consistent with Black's [1] zero beta model, although alternative explanations for these findings exist as well (as noted by Black, Jensen, and Scholes [2]).

¹²Ordinary least squares regressions showed severe positive autocorrelation in many cases, with Durbin Watson statistics typically below one. Estimation used the Prais-Winsten method. See Johnston [14, pp. 321-325].

Exhibit 5. Changes in Equity Risk Premia Over Time — Entries are Coefficient (*t*-value); Dependent Variable is Equity Risk Premium

Time period	Intercept	i_{it}	$i_c - i_{it}$	R^2
A. May 1991-1992	0.131 (19.82)	-0.651 (-11.16)		0.53
	0.092 (14.26)	-0.363 (-6.74)	0.666 (5.48)	0.54
B. 1982-1984	0.140 (8.15)	-0.637 (-5.00)		0.43
	0.064 (3.25)	-0.203 (-1.63)	1.549 (4.84)	0.60
C. 1985-1987	0.131 (7.73)	-0.739 (-9.67)		0.74
	0.110 (12.53)	-0.561 (-7.30)	0.317 (1.87)	0.77
D. 1988-1991	0.136 (16.23)	-0.793 (-8.29)		0.68
	0.130 (8.71)	-0.738 (-4.96)	0.098 (0.40)	0.68

Note: All variables are defined in Exhibit 1. Regressions were estimated using monthly data and were corrected for serial correlation using the Prais-Winsten method. For purposes of this regression, variables are expressed in decimal form, e.g., 14% = 0.14.

For the entire sample period, Panel A shows that risk premia are negatively related to the level of interest rates — as proxied by yields on government bonds, i_{it} . This negative relationship is also true for each of the subperiods displayed in Panels B through D. Such a negative relationship may result from increases in the perceived riskiness of investment in government debt at high levels of interest rates. A direct measure of uncertainty about investments in government bonds would be necessary to test this hypothesis directly.

For the entire 1982 to 1991 period, the addition of the yield spread risk proxy to the regressions dramatically lowers the magnitude of the coefficient on government bond yields, as can be seen by comparing Equations 1 and 2 of Panel A. Furthermore, the coefficient of the yield spread (0.666) is itself significantly positive. This pattern suggests that a reduction in the risk differential between investment in government bonds and in corporate activity is translated into a lower equity market risk premium. Further examination of Panels B through D, however, suggests that the yield spread variable is much more important in explaining changes in equity risk premia in the early portion of the 1980s than in the 1988 to 1991 period.

In summary, market equity risk premia change over time and appear inversely related to the level of government interest rates but positively related to the bond yield spread, which proxies for the incremental risk of investing in equities as opposed to government bonds.

IV. Conclusions

Shareholder required rates of return and risk premia are based on theories about investors' expectations for the future. In practice, however, risk premia are often estimated using averages of historical returns. This paper applies an alternate approach to estimating risk premia that employs publicly available expectational data. At least for the decade studied (1982 to 1991), the resultant average market equity risk premium over government bonds is comparable in magnitude to long-term differences (1926 to 1989) in historical returns between stocks and bonds. There is strong evidence, however, that market risk premia change over time and, as a result, use of a constant historical average risk premium is not likely to mirror changes in investor return requirements. The results also show that the expectational risk premia vary cross-sectionally with the relative risk (beta) of individual stocks.

The approach offers a straightforward and powerful aid in establishing required rates of return either for corporate investment decisions or in the regulatory arena. Since data are readily available on a wide range of equities, an investigator can analyze various proxy groups (e.g., portfolios of utility stocks) appropriate for a particular decision as well as analyze changes in equity return requirements over time.

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Investor growth expectations: Analysts vs. history

Analysts' growth forecasts dominate past trends in predicting stock prices.

James H. Vander Weide and Willard T. Carleton

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For the purposes of implementing the Discounted Cash Flow (DCF) cost of equity model, the analyst must know which growth estimate is embodied in the firm's stock price. A study by Cragg and Malkiel (1982) suggests that the stock valuation process embodies analysts' forecasts rather than historically based growth figures such as the ten-year historical growth in dividends per share or the five-year growth in book value per share. The Cragg and Malkiel study is based on data for the 1960s, however, a decade that was considerably more stable than the recent past.

As the issue of which growth rate to use in implementing the DCF model is so important to applications of the model, we decided to investigate whether the Cragg and Malkiel conclusions continue to hold in more recent periods. This paper describes the results of our study.

STATISTICAL MODEL

The DCF model suggests that the firm's stock price is equal to the present value of the stream of dividends that investors expect to receive from owning the firm's shares. Under the assumption that investors expect dividends to grow at a constant rate, g , in perpetuity, the stock price is given by the following simple expression:

$$P_s = \frac{D(1+g)}{k-g} \quad (1)$$

where:

- P_s = current price per share of the firm's stock;
- D = current annual dividend per share;
- g = expected constant dividend growth rate; and
- k = required return on the firm's stock.

Dividing both sides of Equation (1) by the firm's current earnings, E , we obtain:

$$\frac{P_s}{E} = \frac{D}{E} \cdot \frac{(1+g)}{k-g} \quad (2)$$

Thus, the firm's price/earnings (P/E) ratio is a non-linear function of the firm's dividend payout ratio (D/E), the expected growth in dividends (g), and the required rate of return.

To investigate what growth expectation is embodied in the firm's current stock price, it is more convenient to work with a linear approximation to Equation (2). Thus, we will assume that:

$$P/E = a_0(D/E) + a_1g + a_2k. \quad (3)$$

(Cragg and Malkiel found this assumption to be reasonable throughout their investigation.)

Furthermore, we will assume that the required

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rate of return, k , in Equation (3) depends on the values of the risk variables B , Cov , Rsq , and Sa , where B is the firm's Value Line beta; Cov is the firm's pretax interest coverage ratio; Rsq is a measure of the stability of the firm's five-year historical EPS; and Sa is the standard deviation of the consensus analysts' five-year EPS growth forecast for the firm. Finally, as the linear form of the P/E equation is only an approximation to the true P/E equation, and B , Cov , Rsq , and Sa are only proxies for k , we will add an error term, e , that represents the degree of approximation to the true relationship.

With these assumptions, the final form of our P/E equation is as follows:

$$P/E = a_0(D/E) + a_1g + a_2B + a_3Cov + a_4Rsq + a_5Sa + e. \quad (4)$$

The purpose of our study is to use more recent data to determine which of the popular approaches for estimating future growth in the Discounted Cash Flow model is embodied in the market price of the firm's shares.

We estimated Equation (4) to determine which estimate of future growth, g , when combined with the payout ratio, D/E , and risk variables B , Cov , Rsq , and Sa , provides the best predictor of the firm's P/E ratio. To paraphrase Cragg and Malkiel, we would expect that growth estimates found in the best-fitting equation more closely approximate the expectation used by investors than those found in poorer-fitting equations.

DESCRIPTION OF DATA

Our data sets include both historically based measures of future growth and the consensus analysts' forecasts of five-year earnings growth supplied by the Institutional Brokers Estimate System of Lynch, Jones & Ryan (IBES). The data also include the firm's dividend payout ratio and various measures of the firm's risk. We include the latter items in the regression, along with earnings growth, to account for other variables that may affect the firm's stock price.

The data include:

Earnings Per Share. Because our goal is to determine which earnings variable is embodied in the firm's market price, we need to define this variable with care. Financial analysts who study a firm's financial results in detail generally prefer to "normalize" the firm's reported earnings for the effect of extraordinary items, such as write-offs of discontinued operations, or mergers and acquisitions. They also attempt, to the extent possible, to state earnings for different firms using a common set of accounting conventions.

We have defined "earnings" as the consensus analyst estimate (as reported by IBES) of the firm's earnings for the forthcoming year.¹ This definition approximates the normalized earnings that investors most likely have in mind when they make stock purchase and sell decisions. It implicitly incorporates the analysts' adjustments for differences in accounting treatment among firms and the effects of the business cycle on each firm's results of operations. Although we thought at first that this earnings estimate might be highly correlated with the analysts' five-year earnings growth forecasts, that was not the case. Thus, we avoided a potential spurious correlation problem. **Price/Earnings Ratio.** Corresponding to our definition of "earnings," the price/earnings ratio (P/E) is calculated as the closing stock price for the year divided by the consensus analyst earnings forecast for the forthcoming fiscal year.

Dividends. Dividends per share represent the common dividends declared per share during the calendar year, after adjustment for all stock splits and stock dividends). The firm's dividend payout ratio is then defined as common dividends per share divided by the consensus analyst estimate of the earnings per share for the forthcoming calendar year (D/E). Although this definition has the deficiency that it is obviously biased downward — it divides this year's dividend by next year's earnings — it has the advantage that it implicitly uses a "normalized" figure for earnings. We believe that this advantage outweighs the deficiency, especially when one considers the flaws of the apparent alternatives. Furthermore, we have verified that the results are insensitive to reasonable alternative definitions (see footnote 1).

Growth. In comparing historically based and consensus analysts' forecasts, we calculated forty-one different historical growth measures. These included the following: 1) the past growth rate in EPS as determined by a log-linear least squares regression for the latest year,² two years, three years, . . . , and ten years; 2) the past growth rate in DPS for the latest year, two years, three years, . . . , and ten years; 3) the past growth rate in book value per share (computed as the ratio of common equity to the outstanding common equity shares) for the latest year, two years, three years, . . . , and ten years; 4) the past growth rate in cash flow per share (computed as the ratio of pretax income, depreciation, and deferred taxes to the outstanding common equity shares) for the latest year, two years, three years, . . . , and ten years; and 5) plowback growth (computed as the firm's retention ratio for the current year times the firm's latest annual return on common equity).

We also used the five-year forecast of earnings

per share growth compiled by IBES and reported in mid-January of each year. This number represents the consensus (i.e., mean) forecast produced by analysts from the research departments of leading Wall Street and regional brokerage firms over the preceding three months. IBES selects the contributing brokers "because of the superior quality of their research, professional reputation, and client demand" (IBES *Monthly Summary Book*).

Risk Variables. Although many risk factors could potentially affect the firm's stock price, most of these factors are highly correlated with one another. As shown above in Equation (4), we decided to restrict our attention to four risk measures that have intuitive appeal and are followed by many financial analysts: 1) B , the firm's beta as published by Value Line; 2) Cov , the firm's pretax interest coverage ratio (obtained from Standard & Poor's Compustat); 3) Rsq , the stability of the firm's five-year historical EPS (measured by the R^2 from a log-linear least squares regression); and 4) Sa , the standard deviation of the consensus analysts' five-year EPS growth forecast (mean forecast) as computed by IBES.

After careful analysis of the data used in our study, we felt that we could obtain more meaningful results by imposing six restrictions on the companies included in our study:

1. Because of the need to calculate ten-year historical growth rates, and because we studied three different time periods, 1981, 1982, and 1983, our study requires data for the thirteen-year period 1971-1983. We included only companies with at least a thirteen-year operating history in our study.
2. As our historical growth rate calculations were based on log-linear regressions, and the logarithm of a negative number is not defined, we excluded all companies that experienced negative EPS during any of the years 1971-1983.
3. For similar reasons, we also eliminated companies that did not pay a dividend during any one of the years 1971-1983.
4. To insure comparability of time periods covered by each consensus earnings figure in the P/E ratios, we eliminated all companies that did not have a December 31 fiscal year-end.
5. To eliminate distortions caused by highly unusual events that distort current earnings but not expected future earnings, and thus the firm's price/earnings ratio, we eliminated any firm with a price/earnings ratio greater than 50.
6. As the evaluation of analysts' forecasts is a major part of this study, we eliminated all firms that IBES did not follow.

Our final sample consisted of approximately

sixty-five utility firms.³

RESULTS

To keep the number of calculations in our study to a reasonable level, we performed the study in two stages. In Stage 1, all forty-one historically oriented approaches for estimating future growth were correlated with each firm's P/E ratio. In Stage 2, the historical growth rate with the highest correlation to the P/E ratio was compared to the consensus analyst growth rate in the multiple regression model described by Equation (4) above. We performed our regressions for each of three recent time periods, because we felt the results of our study might vary over time.

First-Stage Correlation Study

Table 1 gives the results of our first-stage correlation study for each group of companies in each of the years 1981, 1982, and 1983. The values in this table measure the correlation between the historically oriented growth rates for the various time periods and the firm's end-of-year P/E ratio.

The four variables for which historical growth rates were calculated are shown in the left-hand column: EPS indicates historical earnings per share growth, DPS indicates historical dividend per share growth, BVPS indicates historical book value per share growth, and CFPS indicates historical cash flow per share growth. The term "plowback" refers to the product of the firm's retention ratio in the current year and its return on book equity for that year. In all, we calculated *forty-one historically oriented growth rates* for each group of firms in each study period.

The goal of the first-stage correlation analysis was to determine which historically oriented growth rate is most highly correlated with each group's year-end P/E ratio. Eight-year growth in CFPS has the highest correlation with P/E in 1981 and 1982, and ten-year growth in CFPS has the highest correlation with year-end P/E in 1983. In all cases, the plowback estimate of future growth performed poorly, indicating that — contrary to generally held views — plowback is not a factor in investor expectations of future growth.

Second-Stage Regression Study

In the second stage of our regression study, we ran the regression in Equation (4) using two different measures of future growth, g : 1) the best historically oriented growth rate (g_n) from the first-stage correlation study, and 2) the consensus analysts' forecast (g_a) of five-year EPS growth. The regression results, which are shown in Table 2, support at least

TABLE 1
 Correlation Coefficients of All Historically Based Growth Estimates by Group and by Year with P/E

Current Year	Historical Growth Rate Period in Years									
	1	2	3	4	5	6	7	8	9	10
1981										
EPS	-0.02	0.07	0.03	0.01	0.03	0.12	0.08	0.09	0.09	0.09
DPS	0.05	0.18	0.14	0.15	0.14	0.15	0.19	0.23	0.23	0.23
BVPS	0.01	0.11	0.13	0.13	0.16	0.18	0.15	0.15	0.15	0.15
CFPS	-0.05	0.04	0.13	0.22	0.28	0.31	0.30	0.31	-0.57	-0.54
Plowback	0.19									
1982										
EPS	-0.10	-0.13	-0.06	-0.02	-0.02	-0.01	-0.03	-0.03	0.00	0.00
DPS	-0.19	-0.10	0.03	0.05	0.07	0.08	0.09	0.11	0.13	0.13
BVPS	0.07	0.08	0.11	0.11	0.09	0.10	0.11	0.11	0.09	0.09
CFPS	-0.02	-0.08	0.00	0.10	0.16	0.19	0.23	0.25	0.24	0.07
Plowback	0.04									
1983										
EPS	-0.06	-0.25	-0.25	-0.24	-0.16	-0.11	-0.05	0.00	0.02	0.02
DPS	0.03	-0.10	-0.03	0.08	0.15	0.21	0.21	0.21	0.22	0.24
BVPS	0.03	0.10	0.04	0.09	0.15	0.16	0.19	0.21	0.22	0.21
CFPS	-0.08	0.01	0.02	0.08	0.20	0.29	0.35	0.38	0.40	0.42
Plowback	-0.08									

two general conclusions regarding the pricing of equity securities.

First, we found overwhelming evidence that the consensus analysts' forecast of future growth is superior to historically oriented growth measures in predicting the firm's stock price. In every case, the R² in the regression containing the consensus analysts' forecast is higher than the R² in the regression containing the historical growth measure. The regression

coefficients in the equation containing the consensus analysts' forecast also are considerably more significant than they are in the alternative regression. These results are consistent with those found by Cragg and Malkiel for data covering the period 1961-1968. Our results also are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions.

TABLE 2
 Regression Results
 Model I

Part A: Historical

$$P/E = a_0 + a_1D/E + a_2g_h + a_3B + a_4Cov + a_5Rs_q + a_6Sa$$

Year	\hat{a}_0	\hat{a}_1	\hat{a}_2	\hat{a}_3	\hat{a}_4	\hat{a}_5	\hat{a}_6	R ²	F Ratio
1981	-6.42* (5.50)	10.31* (14.79)	7.67* (2.20)	3.24 (2.86)	0.54* (2.50)	1.42* (2.85)	57.43 (4.07)	0.83	46.49
1982	-2.90* (2.75)	9.32* (18.52)	8.49* (4.18)	2.85 (2.83)	0.45* (2.60)	-0.42 (0.05)	3.63 (0.26)	0.86	65.53
1983	-5.96* (3.70)	10.20* (12.20)	19.78* (4.83)	4.85 (2.95)	0.44* (1.89)	0.33 (0.50)	32.49 (1.29)	0.82	45.26

Part B: Analysis

$$P/E = a_0 + a_1D/E + a_2g_a + a_3B + a_4Cov + a_5Rs_q + a_6Sa$$

Year	\hat{a}_0	\hat{a}_1	\hat{a}_2	\hat{a}_3	\hat{a}_4	\hat{a}_5	\hat{a}_6	R ²	F Ratio
1981	-4.97* (6.23)	10.62* (21.57)	54.85* (8.56)	-0.61 (0.68)	0.33* (2.28)	0.63* (1.74)	4.34 (0.37)	0.91	103.10
1982	-2.16* (2.59)	9.47* (22.46)	50.71* (9.31)	-1.07 (1.14)	0.36* (2.53)	-0.31 (1.09)	119.05* (1.60)	0.90	97.62
1983	-8.47* (7.07)	11.96* (16.48)	79.05* (7.84)	2.16 (1.55)	0.56* (3.08)	0.20 (0.38)	-34.43 (1.44)	0.87	69.81

Notes:

* Coefficient is significant at the 5% level (using a one-tailed test) and has the correct sign. T-statistic in parentheses.

Second, there is some evidence that investors tend to view risk in traditional terms. The interest coverage variable is statistically significant in all but one of our samples, and the stability of the operating income variable is statistically significant in six of the twelve samples we studied. On the other hand, the beta is never statistically significant, and the standard deviation of the analysts' five-year growth forecasts is statistically significant in only two of our twelve samples. This evidence is far from conclusive, however, because, as we demonstrate later, a significant degree of cross-correlation among our four risk variables makes any general inference about risk extremely hazardous.

Possible Misspecification of Risk

The stock valuation theory says nothing about which risk variables are most important to investors. Therefore, we need to consider the possibility that the risk variables of our study are only proxies for the "true" risk variables used by investors. The inclusion of proxy variables may increase the variance of the parameters of most concern, which in this case are the coefficients of the growth variables.⁴

To allow for the possibility that the use of risk proxies has caused us to draw incorrect conclusions concerning the relative importance of analysts' growth forecasts and historical growth extrapolations, we have also estimated Equation (4) with the risk variables excluded. The results of these regressions are shown in Table 3.

Again, there is overwhelming evidence that the consensus analysts' growth forecast is superior to the historically oriented growth measures in predicting the firm's stock price. The R² and t-statistics are higher in every case.

CONCLUSION

The relationship between growth expectations and share prices is important in several major areas of finance. The data base of analysts' growth forecasts collected by Lynch, Jones & Ryan provides a unique opportunity to test the hypothesis that investors rely more heavily on analysts' growth forecasts than on historical growth extrapolations in making security buy-and-sell decisions. With the help of this data base, our studies affirm the superiority of analysts' forecasts over simple historical growth extrapolations in the stock price formation process. Indirectly, this finding lends support to the use of valuation models whose input includes expected growth rates.

¹ We also tried several other definitions of "earnings," including the firm's most recent primary earnings per share prior to any extraordinary items or discontinued operations. As our results were insensitive to reasonable alternative

TABLE 3
 Regression Results
 Model II

Part A: Historical

$P/E = a_0 + a_1 D/E + a_2 g_s$

Year	\hat{a}_0	\hat{a}_1	\hat{a}_2	R ²	F Ratio
1981	-1.05 (1.61)	9.59 (12.13)	21.20 (7.05)	0.73	82.95
1982	0.54 (1.38)	8.92 (17.73)	12.18 (6.95)	0.83	167.97
1983	-0.75 (1.13)	8.92 (12.38)	12.18 (7.94)	0.77	107.82

Part B: Analysis

$P/E + a_0 + a_1 D/E + a_2 g_s$

Year	\hat{a}_0	\hat{a}_1	\hat{a}_2	R ²	F Ratio
1981	3.96 (8.31)	10.07 (8.31)	60.53 (20.91)	0.90 (15.79)	274.16
1982	-1.75 (4.00)	9.19 (4.00)	44.92 (21.35)	0.88 (11.06)	246.36
1983	-4.97 (6.93)	10.95 (6.93)	82.02 (15.93)	0.83 (11.02)	168.28

Notes:

* Coefficient is significant at the 5% level (using a one-tailed test) and has the correct sign. T-statistic in parentheses.

definitions of "earnings" we report only the results for the IBES consensus.

² For the latest year, we actually employed a point-to-point growth calculation because there were only two available observations.

³ We use the word "approximately," because the set of available firms varied each year. In any case, the number varied only from zero to three firms on either side of the figures cited here.

⁴ See Maddala (1977).

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**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-169
CONFIDENTIAL ATTACHMENTS
26-29**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

AG-DR-01-170

REQUEST:

Provide any analyses performed by Mr. Nowak or other persons at Duke Energy or Duke Kentucky that quantify the credit metrics used by Standard and Poor's and/or Moody's showing that Mr. Nowak's recommended ROE is necessary to maintain Duke Kentucky's financial integrity. Provide all supporting work papers and documents used in these analyses. If no such analyses were performed, please so state.

RESPONSE:

As a preliminary matter, the question is unclear what the threshold as to determine what is "necessary to maintain Duke Kentucky's financial integrity" in the context of Standard and Poor's (S&P) or Moody's Investors Service (Moody's) credit metrics.

Mr. Nowak has not performed an analysis of the credit metrics used by S&P or Moody's because an analysis of credit metrics alone is insufficient to determine the effect of any single input on financial integrity. As shown in AG-DR-01-170 Attachment, credit metrics account for 40 percent of Moody's ratings factors. Two other factors (i.e., regulatory framework and the ability to recover costs and earn returns) are based on the regulatory environment such that half of Moody's overall assessment of business and financial risk for regulated utilities is based upon the regulatory environment. It is unclear what effect the ROE established in this proceeding will have on Moody's assessment of the regulatory environment. As discussed in Mr. Nowak's Direct Testimony, there are additional factors, such as the Company's reliance on coal generation, that Moody's has

pointed to as a credit risk relative to other vertically integrated utilities. As such, it is difficult to view the effect of the Company's ROE in isolation as the credit rating process is complex. While maintaining a sufficient ROE and capital structure are necessary for the company to maintain its financial integrity, assessing the effect of a specific ROE on *pro forma* credit metrics is a partial analysis that may lead to incorrect conclusions.

PERSON RESPONSIBLE: Joshua C. Nowak



RATING METHODOLOGY

Regulated Electric and Gas Utilities

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This rating methodology replaces "Regulated Electric and Gas Utilities" last revised on December 23, 2013. We have updated some outdated links and removed certain issuer-specific information.

Summary

This rating methodology explains our approach to assessing credit risk for regulated electric and gas utilities globally. This document does not include an exhaustive treatment of all factors that are reflected in our ratings but should enable the reader to understand the qualitative considerations and financial information and ratios that are usually most important for ratings in this sector.¹

This report includes a detailed scorecard which is a reference tool that can be used to approximate credit profiles within the regulated electric and gas utility sector in most cases. The scorecard provides summarized guidance for the factors that are generally most important in assigning ratings to companies in the regulated electric and gas utility industry. However, the scorecard is a summary that does not include every rating consideration. The weights shown for each factor in the scorecard represent an approximation of their importance for rating decisions but actual importance may vary substantially. In addition, the scorecard uses historical results while ratings are based on our forward-looking expectations. As a result, the scorecard-indicated outcome is not expected to match the actual rating of each company.

! THIS METHODOLOGY WAS UPDATED ON THE DATES LISTED AS NOTED: ON SEPTEMBER 10, 2020, WE REMOVED POINT-IN-TIME REFERENCES AND ALSO MADE MINOR FORMATTING CHANGES; ON NOVEMBER 4, 2019, WE UPDATED SOME OUTDATED REFERENCES AND ALSO MADE MINOR FORMATTING CHANGES; ON FEBRUARY 22, 2019, WE AMENDED A REFERENCE TO A METHODOLOGY IN APPENDIX E AND REMOVED OUTDATED TEXT; ON AUGUST 2, 2018, WE MADE MINOR FORMATTING CHANGES THROUGHOUT THE METHODOLOGY; ON FEBRUARY 15, 2018, WE CORRECTED THE FORMATTING OF THE FACTOR 4: FINANCIAL STRENGTH TABLE ON PAGE 34; AND ON SEPTEMBER 27, 2017, WE REMOVED A DUPLICATE FOOTNOTE THAT WAS PLACED IN THE MIDDLE OF THE TEXT ON PAGE 7.

¹ This update may not be effective in some jurisdictions until certain requirements are met.

The scorecard contains four key factors that are important in our assessment for ratings in the regulated electric and gas utility sector:

1. Regulatory Framework
2. Ability to Recover Costs and Earn Returns
3. Diversification
4. Financial Strength

Some of these factors also encompass a number of sub-factors. There is also a notching factor for holding company structural subordination.

This rating methodology is not intended to be an exhaustive discussion of all factors that our analysts consider in assigning ratings in this sector. We note that our analysis for ratings in this sector covers factors that are common across all industries such as ownership, management, liquidity, corporate legal structure, governance and country related risks which are not explained in detail in this document, as well as factors that can be meaningful on a company-specific basis. Our ratings consider these and other qualitative considerations that do not lend themselves to a transparent presentation in a scorecard format. The scorecard used for this methodology reflects a decision to favor a relatively simple and transparent presentation rather than a more complex scorecard that might map scorecard-indicated outcomes more closely to actual ratings.

Highlights of this report include:

- » An overview of the rated universe
- » A summary of the rating methodology
- » A discussion of the scorecard factors
- » Comments on the rating methodology assumptions and limitations, including a discussion of rating considerations that are not included in the scorecard

The Appendices show the full scorecard (Appendix A), our approach to ratings within a utility family (Appendix B), a description of the various types of companies rated under this methodology (Appendix C), regional and other considerations (Appendix D), and treatment of power purchase agreements (Appendix E).

This methodology describes the analytical framework used in determining credit ratings. In some instances, our analysis is also guided by additional publications which describe our approach for analytical considerations that are not specific to any single sector. Examples of such considerations include but are not limited to: the assignment of short-term ratings, the relative ranking of different classes of debt and hybrid securities, how sovereign credit quality affects non-sovereign issuers, and the assessment of credit support from other entities.²

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

² A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

About the Rated Universe

This methodology applies to rate-regulated³ electric and gas utilities that are not Networks⁴. Regulated electric and gas utilities are companies whose predominant⁵ business is the sale of electricity and/or gas or related services under a rate-regulated framework, in most cases to retail customers. Also included under this methodology are rate-regulated utilities that own generating assets as any material part of their business, utilities whose charges or bills to customers include a meaningful component related to the electric or gas commodity, utilities whose rates are regulated at a sub-sovereign level (e.g. by provinces, states or municipalities), and companies providing an independent system operator function to an electric grid. Companies rated under this methodology are primarily rate-regulated monopolies or, in certain circumstances, companies that may not be outright monopolies but where government regulation effectively sets prices and limits competition.

This rating methodology covers regulated electric and gas utilities worldwide. These companies are engaged in the production, transmission, coordination, distribution and/or sale of electricity and/or natural gas, and they are either investor owned companies, commercially oriented government owned companies or, in the case of independent system operators, not-for-profit or similar entities. As detailed in Appendix C, this methodology covers a wide variety of companies active in the sector, including vertically integrated utilities, transmission and distribution utilities with retail customers and/or sub-sovereign regulation, local gas distribution utility companies (LDCs), independent system operators, and regulated generation companies. These companies may be operating companies or holding companies.

An over-arching consideration for regulated utilities is the regulatory environment in which they operate. The nature of regulation can vary significantly from jurisdiction to jurisdiction. While regulation is also a key consideration for networks, a utility's regulatory environment is in comparison often more dynamic and more subject to political intervention. The direct relationship that a regulated utility has with the retail customer, including billing for electric or gas supply that has substantial price volatility, can lead to a more politically charged rate-setting environment. Similarly, regulation at the sub-sovereign level is often more accessible for participation by interveners, including disaffected customers and the politicians who want their votes. Our views of regulatory environments evolve over time in accordance with our observations of regulatory, political, and judicial events that affect issuers in the sector.

This methodology pertains to regulated electric and gas utilities and excludes the following types of issuers, which are covered by separate rating methodologies: regulated networks, unregulated utilities and power companies, public power utilities, municipal joint action agencies, electric cooperatives, regulated water companies and natural gas pipelines.⁶

³ Companies in many industries are regulated. We use the term rate-regulated to distinguish companies whose rates (by which we also mean tariffs or revenues in general) are set by regulators.

⁴ Regulated Electric and Gas Networks are companies whose predominant business is purely the transmission and/or distribution of electricity and/or natural gas without involvement in the procurement or sale of electricity and/or gas; whose charges to customers thus do not include a meaningful commodity cost component; which sell mainly (or in many cases exclusively) to non-retail customers; and which are rate-regulated under a national framework.

⁵ We generally consider a company to be predominantly a regulated electric and gas utility when a majority of its cash flows, prospectively and on a sustained basis, are derived from regulated electric and gas utility businesses. Since cash flows can be volatile (such that a company might have a majority of utility cash flows simply due to a cyclical downturn in its non-utility businesses), we may also consider the breakdown of assets and/or debt of a company to determine which business is predominant.

⁶ A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

About this Rating Methodology

This report explains the rating methodology for regulated electric and gas utilities in six sections, which are summarized as follows:

1. Identification and Discussion of the Scorecard Factors

The scorecard in this rating methodology focuses on four factors. The four factors are comprised of sub-factors that provide further detail:

Factor / Sub-Factor Weighting - Regulated Utilities

Broad Scorecard Factors	Factor Weighting	Sub-Factor	Sub-Factor Weighting
Regulatory Framework	25%	Legislative and Judicial Underpinnings of the Regulatory Framework	12.5%
		Consistency and Predictability of Regulation	12.5%
Ability to Recover Costs and Earn Returns	25%	Timeliness of Recovery of Operating and Capital Costs	12.5%
		Sufficiency of Rates and Returns	12.5%
Diversification	10%	Market Position	5%*
		Generation and Fuel Diversity	5%**
Financial Strength, Key Financial Metrics	40%	CFO pre-WC + Interest / Interest	7.5%
		CFO pre-WC / Debt	15.0%
		CFO pre-WC – Dividends / Debt	10.0%
		Debt/Capitalization	7.5%
Total	100%		100%
Notching Adjustment			
Holding Company Structural Subordination			0 to -3

*10% weight for issuers that lack generation; **0% weight for issuers that lack generation

2. Measurement or Estimation of Factors in the Scorecard

We explain our general approach for scoring each factor and show the weights used in the scorecard. We also provide a rationale for why each of these scorecard components is meaningful as a credit indicator. The information used in assessing the sub-factors is generally found in or calculated from information in company financial statements, derived from other observations or estimated by our analysts. All of the quantitative credit metrics incorporate Moody's standard adjustments to income statement, cash flow statement and balance sheet amounts for restructuring, impairment, off-balance sheet accounts, receivable securitization programs, under-funded pension obligations, and recurring operating leases.⁷

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of a company's performance as well as for peer comparisons. We utilize historical data (in most cases, an average of the last three years of reported results) in the scorecard. However, the factors in the scorecard can be assessed using various time

⁷ For more information, see our cross-sector methodology that describes our standard adjustments in the analysis of non-financial corporations. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

periods. For example, rating committees may find it analytically useful to examine both historic and expected future performance for periods of several years or more, or for individual twelve-month periods.

3. Mapping Scorecard Factors to the Rating Categories

After estimating or calculating each sub-factor, the outcomes for each of the sub-factors are mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, or Caa, also called alpha categories).

4. Assumptions Limitations and Rating Considerations Not Included in the Scorecard

This section discusses limitations in the use of the scorecard to map against actual ratings, some of the additional factors that are not included in the scorecard but can be important in determining ratings, and limitations and assumptions that pertain to the overall rating methodology.

5. Determining the Overall Scorecard-Indicated Outcome⁸

To determine the overall scorecard-indicated outcome, we convert each of the sub-factor ratings into a numeric value based upon the scale below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

The numerical score for each sub-factor is multiplied by the weight for that sub-factor with the results then summed to produce a composite weighted-factor score. The composite weighted factor score is then mapped back to an alphanumeric rating based on the ranges in the table below.

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Weighted Total Factor Score
Aaa	$x < 1.5$
Aa1	$1.5 \leq x < 2.5$
Aa2	$2.5 \leq x < 3.5$
Aa3	$3.5 \leq x < 4.5$
A1	$4.5 \leq x < 5.5$
A2	$5.5 \leq x < 6.5$
A3	$6.5 \leq x < 7.5$
Baa1	$7.5 \leq x < 8.5$
Baa2	$8.5 \leq x < 9.5$
Baa3	$9.5 \leq x < 10.5$
Ba1	$10.5 \leq x < 11.5$
Ba2	$11.5 \leq x < 12.5$
Ba3	$12.5 \leq x < 13.5$

⁸ In general, the scorecard-indicated outcome is oriented to the Corporate Family Rating (CFR) for speculative-grade issuers and the senior unsecured rating for investment-grade issuers. For issuers that benefit from ratings uplift due to parental support, government ownership or other institutional support, the scorecard-indicated outcome is oriented to the baseline credit assessment. For more information, see our cross-sector methodology that describes our general approach for assessing government-related issuers. Individual debt instrument ratings also factor in decisions on notching for seniority level and collateral. For more information, see our cross-sector methodology that describes principles related to loss given default for speculative grade non-financial companies and also our cross-sector methodology that describes the alignment of corporate instrument ratings based on differences in security and priority of claim. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Weighted Total Factor Score
B1	$13.5 \leq x < 14.5$
B2	$14.5 \leq x < 15.5$
B3	$15.5 \leq x < 16.5$
Caa1	$16.5 \leq x < 17.5$
Caa2	$17.5 \leq x < 18.5$
Caa3	$18.5 \leq x < 19.5$
Ca	$x \geq 19.5$

For example, an issuer with a composite weighted factor score of 11.7 would have a Ba2 scorecard-indicated outcome.

6. Appendices

The Appendices present a full scorecard and provide additional commentary and insights on our view of credit risks in this industry.

Discussion of the Scorecard Factors

Our analysis of electric and gas utilities focuses on four broad factors:

- » Regulatory Framework
- » Ability to Recover Costs and Earn Returns
- » Diversification
- » Financial Strength

There is also a notching factor for holding company structural subordination.

Factor 1: Regulatory Framework (25%)

Why It Matters

For rate-regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations. The regulatory environment is comprised of two factors - the Regulatory Framework and its corollary factor, the Ability to Recover Costs and Earn Returns. Broadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation. The Ability to Recover Costs and Earn Returns relates more directly to the actual decisions, including their timeliness and the rate-setting outcomes.

Utility rates⁹ are set in a political/regulatory process rather than a competitive or free-market process; thus, the Regulatory Framework is a key determinant of the success of utility. The Regulatory Framework has many components: the governing body and the utility legislation or decrees it enacts, the manner in which regulators are appointed or elected, the rules and procedures promulgated by those regulators, the judiciary

⁹ In jurisdictions where utility revenues include material government subsidy payments, we consider utility rates to be inclusive of these payments, and we thus evaluate sub-factors 1a, 1b, 2a and 2b in light of both rates and material subsidy payments. For example, we would consider the legal and judicial underpinnings and consistency and predictability of subsidies as well as rates.

that interprets the laws and rules and that arbitrates disagreements, and the manner in which the utility manages the political and regulatory process. In many cases, utilities have experienced credit stress or default primarily or at least secondarily because of a break-down or obstacle in the Regulatory Framework – for instance, laws that prohibited regulators from including investments in uncompleted power plants or plants not deemed “used and useful” in rates, or a disagreement about rate-making that could not be resolved until after the utility had defaulted on its debts.

How We Assess Legislative and Judicial Underpinnings of the Regulatory Framework for the Scorecard

For this sub-factor, we consider the scope, clarity, transparency, supportiveness and granularity of utility legislation, decrees, and rules as they apply to the issuer. We also consider the strength of the regulator’s authority over rate-making and other regulatory issues affecting the utility, the effectiveness of the judiciary or other independent body in arbitrating disputes in a disinterested manner, and whether the utility’s monopoly has meaningful or growing carve-outs. In addition, we look at how well developed the framework is – both how fully fleshed out the rules and regulations are and how well tested it is – the extent to which regulatory or judicial decisions have created a body of precedent that will help determine future rate-making. Since the focus of our scoring is on each issuer, we consider how effective the utility is in navigating the regulatory framework – both the utility’s ability to shape the framework and adapt to it.

A utility operating in a regulatory framework that is characterized by legislation that is credit supportive of utilities and eliminates doubt by prescribing many of the procedures that the regulators will use in determining fair rates (which legislation may show evidence of being responsive to the needs of the utility in general or specific ways), a long history of transparent rate-setting, and a judiciary that has provided ample precedent by impartially adjudicating disagreements in a manner that addresses ambiguities in the laws and rules will receive higher scores in the Legislative and Judicial Underpinnings sub-factor. A utility operating in a regulatory framework that, by statute or practice, allows the regulator to arbitrarily prevent the utility from recovering its costs or earning a reasonable return on prudently incurred investments, or where regulatory decisions may be reversed by politicians seeking to enhance their populist appeal will receive a much lower score.

In general, we view national utility regulation as being less liable to political intervention than regulation by state, provincial or municipal entities, so the very highest scoring in this sub-factor is reserved for this category. However, we acknowledge that states and provinces in some countries may be larger than small nations, such that their regulators may be equally “above-the-fray” in terms of impartial and technically-oriented rate setting, and very high scoring may be appropriate.

The relevant judicial system can be a major factor in the regulatory framework. This is particularly true in litigious societies like the United States, where disagreements between the utility and its state or municipal regulator may eventually be adjudicated in federal district courts or even by the US Supreme Court. In addition, bankruptcy proceedings in the US take place in federal courts, which have at times been able to impose rate settlement agreements on state or municipal regulators. As a result, the range of decisions available to state regulators may be effectively circumscribed by court precedent at the state or federal level, which we generally view as favorable for the credit- supportiveness of the regulatory framework.

Electric and gas utilities are generally presumed to have a strong monopoly that will continue into the foreseeable future, and this expectation has allowed these companies to have greater leverage than companies in other sectors with similar ratings. Thus, the existence of a monopoly in itself is unlikely to be a driver of strong scoring in this sub-factor. On the other hand, a strong challenge to the monopoly could cause lower scoring, because the utility can only recover its costs and investments and service its debt if customers purchase its services. There have been some instances of incursions into utilities’ monopoly, including municipalization, self-generation, distributed generation with net metering, or unauthorized use

(beyond the level for which the utility receives compensation in rates). Incursions that are growing significantly or having a meaningful impact on rates for customers that remain with the utility could have a negative impact on scoring of this sub-factor and on factor 2 - Ability to Recover Costs and Earn Returns.

The scoring of this sub-factor may not be the same for every utility in a particular jurisdiction. We have observed that some utilities appear to have greater sway over the relevant utility legislation and promulgation of rules than other utilities – even those in the same jurisdiction. The content and tone of publicly filed documents and regulatory decisions sometimes indicates that the management team at one utility has better responsiveness to and credibility with its regulators or legislators than the management at another utility.

While the underpinnings to the regulatory framework tend to change relatively slowly, they do evolve, and our factor scoring will seek to reflect that evolution. For instance, a new framework will typically become tested over time as regulatory decisions are issued, or perhaps litigated, thereby setting a body of precedent. Utilities may seek changes to laws in order to permit them to securitize certain costs or collect interim rates, or a jurisdiction in which rates were previously recovered primarily in base rate proceedings may institute riders and trackers. These changes would likely impact scoring of sub-factor 2b - Timeliness of Recovery of Operating and Capital Costs, but they may also be sufficiently significant to indicate a change in the regulatory underpinnings. On the negative side, a judiciary that had formerly been independent may start to issue decisions that indicate it is conforming its decisions to the expectations of an executive branch that wants to mandate lower rates.

Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

Aaa	Aa	A	Baa
<p>Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs under a well-developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudence requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudence requirements that are mostly reasonable, rates will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well-developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue.</p>
Ba	B	Caa	
<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudence requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudence requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redressing more uncertainty to the regulatory framework. There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor-unfriendly nationalization or other significant intervention in utility markets or rate-setting.</p>	

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

How We Assess Consistency and Predictability of Regulation for the Scorecard

For the Consistency and Predictability sub-factor, we consider the track record of regulatory decisions in terms of consistency, predictability and supportiveness. We evaluate the utility's interactions in the regulatory process as well as the overall stance of the regulator toward the utility.

In most jurisdictions, the laws and rules seek to make rate-setting a primarily technical process that examines costs the utility incurs and the returns on investments the utility needs to earn so it can make investments that are required to build and maintain the utility infrastructure - power plants, electric transmission and distribution systems, and/or natural gas distribution systems. When the process remains technical and transparent such that regulators can support the financial health of the utility while balancing their public duty to assure that reliable service is provided at a reasonable cost, and when the utility is able to align itself with the policy initiatives of the governing jurisdiction, the utility will receive higher scores in this sub-factor. When the process includes substantial political intervention, which could take the form of legislators or other government officials publicly second-guessing regulators, dismissing regulators who have approved unpopular rate increases, or preventing the implementation of rate increases, or when regulators ignore the laws/rules to deliver an outcome that appears more politically motivated, the utility will receive lower scores in this sub-factor.

As with the prior sub-factor, we may score different utilities in the same jurisdiction differently, based on outcomes that are more or less supportive of credit quality over a period of time. We have observed that some utilities are better able to meet the expectations of their customers and regulators, whether through better service, greater reliability, more stable rates or simply more effective regulatory outreach and communication. These utilities typically receive more consistent and credit supportive outcomes, so they will score higher in this sub-factor. Conversely, if a utility has multiple rapid rate increases, chooses to submit major rate increase requests during a sensitive election cycle or a severe economic downturn, has chronic customer service issues, is viewed as frequently providing incomplete information to regulators, or is tone deaf to the priorities of regulators and politicians, it may receive less consistent and supportive outcomes and thus score lower in this sub-factor.

In scoring this sub-factor, we will primarily evaluate the actions of regulators, politicians and jurists rather than their words. Nonetheless, words matter when they are an indication of future action. We seek to differentiate between political rhetoric that is perhaps oriented toward gaining attention for the viewpoint of the speaker and rhetoric that is indicative of future actions and trends in decision-making.

Factor 1b: Consistency and Predictability of Regulation (12.5%)

Aaa	Aa	A	Baa
<p>The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may be some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue.</p>
Ba	B	Caa	
<p>We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions.</p>	<p>We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays. Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer.</p>	<p>We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer.</p>	

Factor 2: Ability to Recover Costs and Earn Returns (25%)

Why It Matters

This scorecard factor examines the ability of a utility to recover its costs and earn a return over a period of time, including during differing market and economic conditions. While the Regulatory Framework looks at the transparency and predictability of the rules that govern the decision-making process with respect to utilities, the Ability to Recover Costs and Earn Returns evaluates the regulatory elements that directly impact the ability of the utility to generate cash flow and service its debt over time. The ability to recover prudently incurred costs on a timely basis and to attract debt and equity capital are crucial credit considerations. The inability to recover costs, for instance if fuel or purchased power costs ballooned during a rate freeze period, has been one of the greatest drivers of financial stress in this sector, as well as the cause of some utility defaults. In a sector that is typically free cash flow negative (due to large capital expenditures and dividends) and that routinely needs to refinance very large maturities of long-term debt, investor concerns about a lack of timely cost recovery or the sufficiency of rates can, in an extreme scenario, strain access to capital markets and potentially lead to insolvency of the utility. While our scoring for the Ability to Recover Costs and Earn Returns may primarily be influenced by our assessment of the regulatory relationship, it can also be highly impacted by the management and business decisions of the utility.

How We Assess Ability to Recover Costs and Earn Returns

The timeliness and sufficiency of rates are scored as separate sub-factors; however, they are interrelated. Timeliness can have an impact on our view of what constitutes sufficient returns, because a strong assurance of timely cost recovery reduces risk. Conversely, utilities may have a strong assurance that they will earn a full return on certain deferred costs until they are able to collect them, or their generally strong returns may allow them to weather some rate lag on recovery of construction-related capital expenditures. The timeliness of cost recovery is particularly important in a period of rapidly rising costs. Utilities have benefitted from low interest rates and generally decreasing fuel costs and purchased power costs, but these market conditions could easily reverse. For example, fuel is a large component of total costs for vertically integrated utilities and for natural gas utilities, and fuel prices are highly volatile, so the timeliness of fuel and purchased power cost recovery is especially important.

While Factors 1 and 2 are closely inter-related, scoring of these factors will not necessarily be the same. We have observed jurisdictions where the Regulatory Framework caused considerable credit concerns – perhaps it was untested or going through a transition to de-regulation, but where the track record of rate case outcomes was quite positive, leading to a higher score in the Ability to Recover Costs and Earn Returns. Conversely, there have been instances of strong Legislative and Judicial Underpinnings of the Regulatory Framework where the commission has ignored the framework (which would affect Consistency and Predictability of Regulation as well as Ability to Recover Costs and Earn Returns) or has used extraordinary measures to prevent or defer an increase that might have been justifiable from a cost perspective but would have caused rate shock.

One might surmise that Factors 2 and 4 should be strongly correlated, since a good Ability to Recover Costs and Earn Returns would normally lead to good financial metrics. However, the scoring for the Ability to Recover Costs and Earn Returns sub-factor places more emphasis on our expectation of timeliness and sufficiency of rates over time; whereas financial metrics may be impacted by one-time events, market conditions or construction cycles - trends that we believe could normalize or even reverse.

How We Assess Timeliness of Recovery of Operating and Capital Costs for the Scorecard

The criteria we consider include provisions and cost recovery mechanisms for operating costs, mechanisms that allow actual operating and/or capital expenditures to be trued-up periodically into rates without having to file a rate case (this may include formula rates, rider and trackers, or the ability to periodically adjust rates

for construction work in progress) as well as the process and timeframe of general tariff/base rate cases – those that are fully reviewed by the regulator, generally in a public format that includes testimony of the utility and other stakeholders and interest groups. We also look at the track record of the utility and regulator for timeliness. For instance, having a formula rate plan is positive, but if the actual process has included reviews that are delayed for long periods, it may dampen the benefit to the utility. In addition, we seek to estimate the lag between the time that a utility incurs a major construction expenditures and the time that the utility will start to recover and/or earn a return on that expenditure.

How We Assess Sufficiency of Rates and Returns for the Scorecard

The criteria we consider include statutory protections that assure full cost recovery and a reasonable return for the utility on its investments, the regulatory mechanisms used to determine what a reasonable return should be, and the track record of the utility in actually recovering costs and earning returns. We examine outcomes of rate cases/tariff reviews and compare them to the request submitted by the utility, to prior rate cases/tariff reviews for the same utility and to recent rate/tariff decisions for a peer group of comparable utilities. In this context, comparable utilities are typically utilities in the same or similar jurisdiction. In cases where the utility is unique or nearly unique in its jurisdiction, comparison will be made to other peers with an adjustment for local differences, including prevailing rates of interest and returns on capital, as well as the timeliness of rate-setting. We look at regulatory disallowances of costs or investments, with a focus on their financial severity and also on the reasons given by the regulator, in order to assess the likelihood that such disallowances will be repeated in the future.

Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)

Aaa	Aa	A	Baa
<p>Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward-looking costs.</p>	<p>Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs.</p>	<p>Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward-looking costs.</p>	<p>Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs.</p>
Ba	B	Caa	
<p>There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments.</p>	<p>The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment.</p>	<p>The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention.</p> <p>Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment.</p>	

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

Factor 2b: Sufficiency of Rates and Returns (12.5%)

Aaa	Aa	A	Baa
Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned.	Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers.	Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average.	Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average.
Ba	B	Caa	
Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable.	We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudence reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable.	We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable.	

Factor 3: Diversification (10%)

Why It Matters

Diversification of overall business operations helps to mitigate the risk that economic cycles, material changes in a single regulatory regime or commodity price movements will have a severe impact on cash flow and credit quality of a utility. While utilities' sales volumes have lower exposure to economic recessions than many non-financial corporate issuers, some sales components, including industrial sales, are directly affected by economic trends that cause lower production and/or plant closures. In addition, economic activity plays a role in the rate of customer growth in the service territory and (absent energy efficiency and conservation) can often impact usage per customer. The economic strength or weakness of the service territory can affect the political and regulatory environment for rate increase requests by the utility. For utilities in areas prone to severe storms and other natural disasters, the utility's geographic diversity or concentration can be a key determinant for creditworthiness.

Diversity among regulatory regimes can mitigate the impact of a single unfavorable decision affecting one part of the utility's footprint.

For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or other regulations affecting plant operations and economics. We have observed that utilities' regulatory environments are most likely to become unfavorable during periods of rapid rate increases (which are more important than absolute rate levels) and that fuel diversity leads to more stable rates over time.

For that reason, fuel diversity can be important even if fuel and purchased power expenses are an automatic pass-through to the utility's ratepayers. Changes in environmental, safety and other regulations have caused vulnerabilities for certain technologies and fuel sources. These vulnerabilities have varied widely in different countries and have changed over time.

How We Assess Market Position for the Scorecard

Market position is comprised primarily of the economic diversity of the utility's service territory and the diversity of its regulatory regimes. We also consider the diversity of utility operations (e.g., regulated electric, gas, water, steam) when there are material operations in more than one area.

Economic diversity is typically a function of the population, size and breadth of the territory and the businesses that drive its GDP and employment. For the size of the territory, we typically consider the number of customers and the volumes of generation and/or throughput. For breadth, we consider the number of sizeable metropolitan areas served, the economic diversity and vitality in those metropolitan areas, and any concentration in a particular area or industry. In our assessment, we may consider various information sources.¹⁰ We also look at the mix of the utility's sales volumes among customer types, as well as the track record of volume sales and any notable payment patterns during economic cycles. For diversity of regulatory regimes, we typically look at the number of regulators and the percentages of revenues and utility assets that are under the purview of each. While the highest scores in the Market Position sub-factor are reserved for issuers regulated in multiple jurisdictions, when there is only one regulator, we make a differentiation of regimes perceived as having lower or higher volatility.

Issuers with multiple supportive regulatory jurisdictions, a balanced sales mix among residential, commercial, industrial and governmental customers in a large service territory with a robust and diverse economy will generally score higher in this sub-factor. An issuer with a small service territory economy that

¹⁰ For example, in the US, information sources on the diversity and vitality of economies of individual states and metropolitan areas may include Moody's Economy.com.

has a high dependence on one or two sectors, especially highly cyclical industries, will generally score lower in this sub-factor, as will issuers with meaningful exposure to economic dislocations caused by natural disasters.

For issuers that are vertically integrated utilities having a meaningful amount of generation, this sub-factor has a weighting of 5%. For electric transmission and distribution utilities without meaningful generation and for natural gas local distribution companies, this sub-factor has a weighting of 10%.

How We Assess Generation and Fuel Diversity for the Scorecard

Criteria include the fuel type of the issuer's generation and important power purchase agreements, the ability of the issuer economically to shift its generation and power purchases when there are changes in fuel prices, the degree to which the utility and its rate-payers are exposed to or insulated from changes in commodity prices, and exposure to Challenged Source and Threatened Sources (see the explanations for how we generally characterize these generation sources in the table below). A regulated utility's capacity mix may not in itself be an indication of fuel diversity or the ability to shift fuels, since utilities may keep old and inefficient plants (e.g., natural gas boilers) to serve peak load. For this reason, we do not incorporate set percentages reflecting an "ideal" or "sub-par" mix for capacity or even generation. In addition to looking at a utility's generation mix to evaluate fuel diversity, we consider the efficiency of the utility's plants, their placement on the regional dispatch curve, and the demonstrated ability/inability of the utility to shift its generation mix in accordance with changing commodity prices.

Issuers having a balanced mix of hydro, coal, natural gas, nuclear and renewable energy as well as low exposure to challenged and threatened sources of generation will score more highly in this sub-factor. Issuers that have concentration in one or two sources of generation, especially if they are threatened or challenged sources, will incur lower scores.

In evaluating an issuer's degree of exposure to challenged and threatened sources, we will consider not only the existence of those plants in the utility's portfolio, but also the relevant factors that will determine the impact on the utility and on its rate-payers. For instance, an issuer that has a fairly high percentage of its generation from challenged sources could be evaluated very differently if its peer utilities face the same magnitude of those issues than if its peers have no exposure to challenged or threatened sources. In evaluating threatened sources, we consider the utility's progress in its plan to replace those sources, its reserve margin, the availability of purchased power capacity in the region, and the overall impact of the replacement plan on the issuer's rates relative to its peer group. Especially if there are no peers in the same jurisdiction, we also examine the extent to which the utility's generation resources plan is aligned with the relevant government's fuel/energy policy.

Factor 3: Diversification (10%)

Weighting 10%	Sub-Factor Weighting	Aaa	Aa	A	Baa
Market Position	5.00% *	A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies.	Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies.	Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles.	May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates.
Generation and Fuel Diversity	5.00% **	A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below).	Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources.	Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern.	Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable.
	Sub-Factor Weighting	Ba	B	Caa	Definitions
Market Position	5.00% *	Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s).	Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s).	Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters.	Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure.

Generation and Fuel Diversity	5.00% **	Modest diversification in generation and/or fuel sources such that the utility or rate-payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress.	Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible.	Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain.	Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges.
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* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 4: Financial Strength (40%)

Why It Matters

Electric and gas utilities are regulated, asset-based businesses characterized by large investments in long-lived property, plant and equipment. Financial strength, including the ability to service debt and provide a return to shareholders, is necessary for a utility to attract capital at a reasonable cost in order to invest in its generation, transmission and distribution assets, so that the utility can fulfill its service obligations at a reasonable cost to rate-payers.

How We Assess It for the Scorecard

In comparison to companies in other non-financial corporate sectors, the financial statements of regulated electric and gas utilities have certain unique aspects that impact financial analysis, which is further complicated by disparate treatment of certain elements under US Generally Accepted Accounting Principles (GAAP) versus International Financial Reporting Standards (IFRS). Regulatory accounting may permit utilities to defer certain costs (thereby creating regulatory assets) that a non-utility corporate entity would have to expense. For instance, a regulated utility may be able to defer a substantial portion of costs related to recovery from a storm based on the general regulatory framework for those expenses, even if the utility does not have a specific order to collect the expenses from ratepayers over a set period of time. A regulated utility may be able to accrue and defer a return on equity (in addition to capitalizing interest) for construction-work-in-progress for an approved project based on the assumption that it will be able to collect that deferred equity return once the asset comes into service. For this reason, we focus more on a utility's cash flow than on its reported net income.

Conversely, utilities may collect certain costs in rates well ahead of the time they must be paid (for instance, pension costs), thereby creating regulatory liabilities. Many of our metrics focus on Cash Flow from Operations Before Changes in Working Capital (CFO Pre-WC) because, unlike Funds from Operations (FFO), it captures the changes in long-term regulatory assets and liabilities.

However, under IFRS the two measures are essentially the same. In general, we view changes in working capital as less important in utility financial analysis because they are often either seasonal (for example, power demand is generally greatest in the summer) or caused by changes in fuel prices that are typically a relatively automatic pass-through to the customer. We will nonetheless examine the impact of working capital changes in analyzing a utility's liquidity (see "Other Rating Considerations" – Liquidity).

Given the long-term nature of utility assets and the often lumpy nature of their capital expenditures, it is important to analyze both a utility's historical financial performance as well as its prospective future performance, which may be different from backward-looking measures. Scores under this factor may be higher or lower than what might be expected from historical results, depending on our view of expected future performance. Multi-year periods are usually more representative of credit quality because utilities can experience swings in cash flows from one-time events, including such items as rate refunds, storm cost deferrals that create a regulatory asset, or securitization proceeds that reduce a regulatory asset. Nonetheless, we also look at trends in metrics for individual periods, which may influence our view of future performance and ratings.

For this scoring grid, we have identified four key ratios that we consider the most consistently useful in the analysis of regulated electric and gas utilities. However, no single financial ratio can adequately convey the relative credit strength of these highly diverse companies. Our ratings consider the overall financial strength of a company, and in individual cases other financial indicators may also play an important role.

CFO Pre-Working Capital Plus Interest/Interest or Cash Flow Interest Coverage

The cash flow interest coverage ratio is an indicator for a utility's ability to cover the cost of its borrowed capital. The numerator in the ratio calculation is the sum of CFO Pre-WC and interest expense, and the denominator is interest expense.

CFO Pre-Working Capital / Debt

This important metric is an indicator for the cash generating ability of a utility compared to its total debt. The numerator in the ratio calculation is CFO Pre-WC, and the denominator is total debt.

CFO Pre-Working Capital Minus Dividends / Debt

This ratio is an indicator for financial leverage as well as an indicator of the strength of a utility's cash flow after dividend payments are made. Dividend obligations of utilities are often substantial, quasi- permanent outflows that can affect the ability of a utility to cover its debt obligations, and this ratio can also provide insight into the financial policies of a utility or utility holding company. The higher the level of retained cash flow relative to a utility's debt, the more cash the utility has to support its capital expenditure program. The numerator of this ratio is CFO Pre-WC minus dividends, and the denominator is total debt.

Debt/Capitalization

This ratio is a traditional measure of balance sheet leverage. The numerator is total debt and the denominator is total capitalization. All of our ratios are calculated in accordance with our standard adjustments¹¹, but we note that our definition of total capitalization includes deferred taxes in addition to total debt, preferred stock, other hybrid securities, and common equity. Since the presence or absence of deferred taxes is a function of national tax policy, comparing utilities using this ratio may be more meaningful among utilities in the same country or in countries with similar tax policies. High debt levels in comparison to capitalization can indicate higher interest obligations, can limit the ability of a utility to raise additional financing if needed, and can lead to leverage covenant violations in bank credit facilities or other financing agreements¹². A high ratio may result from a regulatory framework that does not permit a robust cushion of equity in the capital structure, or from a material write-off of an asset, which may not have impacted current period cash flows but could affect future period cash flows relative to debt.

There are two sets of thresholds for three of these ratios based on the level of the issuer's business risk – the Standard Grid and the Lower Business Risk (LBR) Grid. In our view, the different types of utility entities covered under this methodology (as described in Appendix C) have different levels of business risk.

Generation utilities and vertically integrated utilities generally have a higher level of business risk because they are engaged in power generation, so we apply the Standard Grid. We view power generation as the highest-risk component of the electric utility business, as generation plants are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays.

Other types of utilities may have lower business risk, such that we believe that they are most appropriately assessed using the LBR Grid, due to factors that could include a generally greater transfer of risk to customers, very strong insulation from exposure to commodity price movements, good protection from volumetric risks, fairly limited capex needs and low exposure to storms, major accidents and natural

¹¹ In certain circumstances, analysts may also apply specific adjustments.

¹² We also examine debt/capitalization ratios as defined in applicable covenants (which typically exclude deferred taxes from capitalization) relative to the covenant threshold level.

disasters. For instance, we tend to view many US natural gas local distribution companies (LDCs) and certain US electric transmission and distribution companies (T&Ds, which lack generation but generally retain some procurement responsibilities for customers), as typically having a lower business risk profile than their vertically integrated peers. In cases of T&Ds that we do not view as having materially lower risk than their vertically integrated peers, we will apply the Standard grid. This could result from a regulatory framework that exposes them to energy supply risk, large capital expenditures for required maintenance or upgrades, a heightened degree of exposure to catastrophic storm damage, or increased regulatory scrutiny due to poor reliability, or other considerations. The Standard Grid will also apply to LDCs that in our view do not have materially lower risk; for instance, due to their ownership of high pressure pipes or older systems requiring extensive gas main replacements, where gas commodity costs are not fully recovered in a reasonably contemporaneous manner, or where the LDC is not well insulated from declining volumes.

The four key ratios, their weighting in the grid, and the Standard and LBR scoring thresholds are detailed in the following table.

Factor 4: Financial Strength

Weighting 40%	Sub-Factor Weighting		Aaa	Aa	A	Baa	Ba	B	Caa
CFO pre-WC + Interest / Interest	7.50%		≥ 8.0x	6.0x - 8.0x	4.5x - 6.0x	3.0x - 4.5x	2.0x - 3.0x	1.0x - 2.0x	< 1.0x
CFO pre-WC / Debt	15.00%	Standard Grid	≥ 40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	1% - 5%	< 1%
		Low Business Risk Grid	≥ 38%	27% - 38%	19% - 27%	11% - 19%	5% - 11%	1% - 5%	< 1%
CFO pre-WC - Dividends / Debt	10.00%	Standard Grid	≥ 35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	(5%) - 0%	< (5%)
		Low Business Risk Grid	≥ 34%	23% - 34%	15% - 23%	7% - 15%	0% - 7%	(5%) - 0%	< (5%)
Debt / Capitalization	7.50%	Standard Grid	< 25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	65% - 75%	≥ 75%
		Low Business Risk Grid	< 29%	29% - 40%	40% - 50%	50% - 59%	59% - 67%	67% - 75%	≥ 75%

Notching for Structural Subordination of Holding Companies

Why It Matters

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries that are structured as advances, debt, or even hybrid securities.

Most HoldCos present their financial statements on a consolidated basis that blurs legal considerations about priority of creditors based on the legal structure of the family, and scorecard scoring is thus based on consolidated ratios. However, HoldCo creditors typically have a secondary claim on the group's cash flows and assets after OpCo creditors. We refer to this as structural subordination, because it is the corporate legal structure, rather than specific subordination provisions, that causes creditors at each of the utility and non-utility subsidiaries to have a more direct claim on the cash flows and assets of their respective OpCo obligors. By contrast, the debt of the HoldCo is typically serviced primarily by dividends that are up-

streamed by the OpCos¹³. Under normal circumstances, these dividends are made from net income, after payment of the OpCo's interest and preferred dividends. In most non-financial corporate sectors where cash often moves freely between the entities in a single issuer family, this distinction may have less of an impact. However, in the regulated utility sector, barriers to movement of cash among companies in the corporate family can be much more restrictive, depending on the regulatory framework. These barriers can lead to significantly different probabilities of default for HoldCos and OpCos. Structural subordination also affects loss given default. Under most default¹⁴ scenarios, an OpCo's creditors will be satisfied from the value residing at that OpCo before any of the OpCo's assets can be used to satisfy claims of the HoldCo's creditors. The prevalence of debt issuance at the OpCo level is another reason that structural subordination is usually a more serious concern in the utility sector than for investment grade issuers in other non-financial corporate sectors.

The grids for factors 1-4 are primarily oriented to OpCos (and to some degree for HoldCos with minimal current structural subordination; for example, there is no current structural subordination to debt at the operating company if all of the utility family's debt and preferred stock is issued at the HoldCo level, although there is structural subordination to other liabilities at the OpCo level). The additional risk from structural subordination is addressed via a notching adjustment to bring scorecard-indicated outcomes (on average) closer to the actual ratings of HoldCos.

How We Assess It

Scorecard-indicated outcomes of holding companies may be notched down based on structural subordination. The risk factors and mitigants that impact structural subordination are varied and can be present in different combinations, such that a formulaic approach is not practical and case-by-case analyst judgment of the interaction of all pertinent factors that may increase or decrease its importance to the credit risk of an issuer are essential.

Some of the potentially pertinent factors that could increase the degree and/or impact of structural subordination include the following:

- » Regulatory or other barriers to cash movement from OpCos to HoldCo
- » Specific ring-fencing provisions
- » Strict financial covenants at the OpCo level
- » Higher leverage at the OpCo level
- » Higher leverage at the HoldCo level¹⁵
- » Significant dividend limitations or potential limitations at an important OpCo
- » HoldCo exposure to subsidiaries with high business risk or volatile cash flows
- » Strained liquidity at the HoldCo level
- » The group's investment program is primarily in businesses that are higher risk or new to the group

Some of the potentially mitigating factors that could decrease the degree and/or impact of structural subordination include the following:

¹³ The HoldCo and OpCo may also have intercompany agreements, including tax sharing agreements, that can be another source of cash to the HoldCo.

¹⁴ Actual priority in a default scenario will be determined by many factors, including the corporate and bankruptcy laws of the jurisdiction, the asset value of each OpCo, specific financing terms, inter-relationships among members of the family, etc.

¹⁵ While higher leverage at the HoldCo does not increase structural subordination per se, it exacerbates the impact of any structural subordination that exists.

- » Substantial diversity in cash flows from a variety of utility OpCos
- » Meaningful dividends to HoldCo from unlevered utility OpCos
- » Dependable, meaningful dividends to HoldCo from non-utility OpCos
- » The group's investment program is primarily in strong utility businesses
- » Inter-company guarantees - however, in many jurisdictions the value of an upstream guarantee may be limited by certain factors, including by the value that the OpCo received in exchange for granting the guarantee

Notching for structural subordination within the scorecard may range from 0 to negative 3 notches. Instances of extreme structural subordination are relatively rare, so the scorecard convention does not accommodate wider differences, although in the instances where we believe it is present, actual ratings do reflect the full impact of structural subordination.

A related issue is the relationship of ratings within a utility family with multiple operating companies, and sometimes intermediate holding companies. Some of the key issues are the same, such as the relative amounts of debt at the holding company level compared to the operating company level (or at one OpCo relative to another), and the degree to which operating companies have credit insulation due to regulation or other protective factors. Appendix B has additional insights on ratings within a utility family.

Assumptions, Limitations and Other Rating Considerations

The scorecard in this rating methodology represents a decision to favor simplicity that enhances transparency and to avoid greater complexity that might enable the scorecard to map more closely to actual ratings. Accordingly, the four factors and the notching factor in the scorecard do not constitute an exhaustive treatment of all of the considerations that are important for ratings of companies in the regulated electric and gas utility sector. In addition, our ratings incorporate expectations for future performance, while the financial information that is used in the scorecard is mainly historical. In some cases, our expectations for future performance may be informed by confidential information that we cannot disclose. In other cases, we estimate future results based upon past performance, industry trends, competitor actions or other factors. In either case, predicting the future is subject to the risk of substantial inaccuracy.

Assumptions that may cause our forward-looking expectations to be incorrect include unanticipated changes in any of the following factors: the macroeconomic environment and general financial market conditions, industry competition, disruptive technology, regulatory and legal actions.

Key rating assumptions that apply in this sector include our view that sovereign credit risk is strongly correlated with that of other domestic issuers, that legal priority of claim affects average recovery on different classes of debt, sufficiently to generally warrant differences in ratings for different debt classes of the same issuer, and the assumption that lack of access to liquidity is a strong driver of credit risk.

In choosing metrics for this rating methodology scorecard, we did not explicitly include certain important factors that are common to all companies in any industry such as the quality and experience of management, assessments of corporate governance and the quality of financial reporting and information disclosure. Therefore, ranking these factors by rating category in a scorecard would in some cases suggest too much precision in the relative ranking of particular issuers against all other issuers that are rated in various industry sectors.

Ratings may include additional factors that are difficult to quantify or that have a meaningful effect in differentiating credit quality only in some cases, but not all. Such factors include financial controls, exposure to uncertain licensing regimes and possible government interference in some countries.

Regulatory, litigation, liquidity, technology and reputational risk as well as changes to consumer and business spending patterns, competitor strategies and macroeconomic trends also affect ratings. While these are important considerations, it is not possible precisely to express these in the rating methodology scorecard without making the scorecard excessively complex and significantly less transparent.

Ratings may also reflect circumstances in which the weighting of a particular factor will be substantially different from the weighting suggested by the scorecard.

This variation in weighting rating considerations can also apply to factors that we choose not to represent in the scorecard. For example, liquidity is a consideration frequently critical to ratings and which may not, in other circumstances, have a substantial impact in discriminating between two issuers with a similar credit profile. As an example of the limitations, ratings can be heavily affected by extremely weak liquidity that magnifies default risk. However, two identical companies might be rated the same if their only differentiating feature is that one has a good liquidity position while the other has an extremely good liquidity position.

Other Rating Considerations

We consider other factors in addition to those discussed in this report, but in most cases understanding the considerations discussed herein should enable a good approximation of our view on the credit quality of companies in the regulated electric and gas utilities sector. Ratings consider our assessment of the quality of management, corporate governance, financial controls, liquidity management, event risk and seasonality. The analysis of these factors remains an integral part of our rating process.

Liquidity and Access to Capital Markets

Liquidity analysis is a key element in the financial analysis of electric and gas utilities, and it encompasses a company's ability to generate cash from internal sources as well as the availability of external sources of financing to supplement these internal sources. Liquidity and access to financing are of particular importance in this sector. Utility assets can often have a very long useful life- 30, 40 or even 60 years is not uncommon, as well as high price tags. Partly as a result of construction cycles, the utility sector has experienced prolonged periods of negative free cash flow – essentially, the sum of its dividends and its capital expenditures for maintenance and growth of its infrastructure frequently exceeds cash from operations, such that a portion of capital expenditures must routinely be debt financed. Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to the capital markets to assure adequate sources of funding and to maintain financial flexibility. Substantial portions of capex are non-discretionary (for example, maintenance, adding customers to the network, or meeting environmental mandates); however, utilities have been swift to cut or defer discretionary spending during recessions. Dividends represent a quasi-permanent outlay, since utilities typically only rarely will cut their dividend. Liquidity is also important to meet maturing obligations, which often occur in large chunks, and to meet collateral calls under any hedging agreements.

Due to the importance of liquidity, incorporating it as a factor with a fixed weighting in the scorecard would suggest an importance level that is often far different from the actual weight in the rating. In normal circumstances, most companies in the sector have good access to liquidity. The industry generally requires, and for the most part has, large, syndicated, multi-year committed credit facilities. In addition, utilities have

demonstrated strong access to capital markets, even under difficult conditions. As a result, liquidity generally has not been an issue for most utilities and a utility with very strong liquidity may not warrant a rating distinction compared to a utility with strong liquidity. However, when there is weakness in liquidity or liquidity management, it can be the dominant consideration for ratings.

Our assessment of liquidity for regulated utilities involves an analysis of total sources and uses of cash over the next 12 months or more, as is done for all corporates. Using our financial projections of the utility and our analysis of its available sources of liquidity (including an assessment of the quality and reliability of alternate liquidity such as committed credit facilities), we evaluate how its projected sources of cash (cash from operations, cash on hand and existing committed multi-year credit facilities) compare to its projected uses (including all or most capital expenditures, dividends, maturities of short and long-term debt, our projection of potential liquidity calls on financial hedges, and important issuer-specific items such as special tax payments). We assume no access to capital markets or additional liquidity sources, no renewal of existing credit facilities, and no cut to dividends. We examine a company's liquidity profile under this scenario, its ability to make adjustments to improve its liquidity position, and any dependence on liquidity sources with lower quality and reliability.

Management Quality and Financial Policy

The quality of management is an important factor supporting the credit strength of a regulated utility or utility holding company. Assessing the execution of business plans over time can be helpful in assessing management's business strategies, policies, and philosophies and in evaluating management performance relative to performance of competitors and our projections. A record of consistency provides us with insight into management's likely future performance in stressed situations and can be an indicator of management's tendency to depart significantly from its stated plans and guidelines.

We also assess financial policy (including dividend policy and planned capital expenditures) and how management balances the potentially competing interests of shareholders, fixed income investors and other stakeholders. Dividends and discretionary capital expenditures are the two primary components over which management has the greatest control in the short term. For holding companies, we consider the extent to which management is willing to stretch its payout ratio (through aggressive increases or delays in needed decreases) in order to satisfy common shareholders. For a utility that is a subsidiary of a parent company with several utility subsidiaries, dividends to the parent may be more volatile depending on the cash generation and cash needs of that utility, because parents typically want to assure that each utility maintains the regulatory debt/equity ratio on which its rates have been set. The effect we have observed is that utility subsidiaries often pay higher dividends when they have lower capital needs and lower dividends when they have higher capital expenditures or other cash needs. Any dividend policy that cuts into the regulatory debt/equity ratio is a material credit negative.

Size – Natural Disasters, Customer Concentration and Construction Risks

The size and scale of a regulated utility has generally not been a major determinant of its credit strength in the same way that it has been for most other industrial sectors. While size brings certain economies of scale that can somewhat affect the utility's cost structure and competitiveness, rates are more heavily impacted by costs related to fuel and fixed assets. Smaller utilities have sometimes been better able to focus their attention on meeting the expectations of a single regulator than their multi-state peers.

However, size can be a very important factor in our assessment of certain risks that impact ratings, including exposure to natural disasters, customer concentration (primarily to industrial customers in a single sector) and construction risks associated with large projects. While the scorecard attempts to incorporate the first

two of these into Factor 3, for some issuers these considerations may be sufficiently important that the rating reflects a greater weight for these risks. While construction projects always carry the risk of cost overruns and delays, these risks are materially heightened for projects that are very large relative to the size of the utility.

Interaction of Utility Ratings with Government Policies and Sovereign Ratings

Compared to most industrial sectors, regulated utilities are more likely to be impacted by government actions. Credit impacts can occur directly through rate regulation, and indirectly through energy, environmental and tax policies. Government actions affect fuel prices, the mix of generating plants, the certainty and timing of revenues and costs, and the likelihood that regulated utilities will experience financial stress. While our evolving view of the impact of such policies and the general economic and financial climate is reflected in ratings for each utility, some considerations do not lend themselves to incorporation in a simple scorecard.¹⁶

Diversified Operations at the Utility

A small number of regulated utilities have diversified operations that are segments within the utility company, as opposed to the more common practice of housing such operations in one or more separate affiliates. In general, we will seek to evaluate the other businesses that are material in accordance with the appropriate methodology and the rating will reflect considerations from such methodologies. There may be analytical limitations in evaluating the utility and non-utility businesses when segment financial results are not fully broken out and these may be addressed through estimation based on available information. Since regulated utilities are a relatively low risk business compared to other corporate sectors, in most cases diversified non-utility operations increase the business risk profile of a utility. Reflecting this tendency, we note that assigned ratings are typically lower than scorecard-indicated outcomes for such companies.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness. Typical special events include mergers and acquisitions, asset sales, spin-offs, capital restructuring programs, litigation and shareholder distributions.

Corporate Governance

Among the areas of focus in corporate governance are audit committee financial expertise, the incentives created by executive compensation packages, related party transactions, interactions with outside auditors, and ownership structure.

Investment and Acquisition Strategy

In our credit assessment, we take into consideration management's investment strategy. Investment strategy is benchmarked with that of the other companies in the rated universe to further verify its consistency. Acquisitions can strengthen a company's business. Our assessment of a company's tolerance for acquisitions at a given rating level takes into consideration (1) management's risk appetite, including the likelihood of further acquisitions over the medium term; (2) share buy-back activity; (3) the company's commitment to specific leverage targets; and (4) the volatility of the underlying businesses, as well as that of the business acquired. Ratings can often hold after acquisitions even if leverage temporarily climbs above normally acceptable ranges. However, this depends on (1) the strategic fit; (2) pro-forma

¹⁶ For more information, see our cross-sector methodology that discusses general principles related to how sovereign credit quality can impact other ratings. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

capitalization/leverage following an acquisition; and (3) our confidence that credit metrics will be restored in a relatively short timeframe.

Financial Controls

We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. Such accuracy is only possible when companies have sufficient internal controls, including centralized operations, the proper tone at the top and consistency in accounting policies and procedures.

Weaknesses in the overall financial reporting processes, financial statement restatements or delays in regulatory filings can be indications of a potential breakdown in internal controls.

Appendix A: Regulated Electric and Gas Utilities Methodology Factor Scorecard

Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

Aaa	Aa	A	Baa
<p>Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs under a well-developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudence requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudence requirements that are mostly reasonable, rates will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well-developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue.</p>
Ba	B	Caa	
<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudence requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudence requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework.</p> <p>There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting.</p>	<p>Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor-unfriendly nationalization or other significant intervention in utility markets or rate-setting.</p>	

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 1b: Consistency and Predictability of Regulation (12.5%)

Aaa	Aa	A	Baa
<p>The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue.</p>	<p>The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may be some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue.</p>
Ba	B	Caa	
<p>We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions.</p>	<p>We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays.</p> <p>Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer.</p>	<p>We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction.</p> <p>Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer.</p>	

Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)

Aaa	Aa	A	Baa
<p>Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward-looking costs.</p>	<p>Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs.</p>	<p>Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward-looking costs.</p>	<p>Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs.</p>
Ba	B	Caa	
<p>There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments.</p>	<p>The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment.</p>	<p>The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment.</p>	

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

Factor 2b: Sufficiency of Rates and Returns (12.5%)

Aaa	Aa	A	Baa
<p>Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned.</p>	<p>Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers.</p>	<p>Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average.</p>	<p>Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average.</p>
Ba	B	Caa	
<p>Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn.</p> <p>Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable.</p>	<p>We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudence reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital.</p> <p>Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable.</p>	<p>We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable.</p>	

Factor 3: Diversification (10%)

Weighting 10%	Sub-Factor Weighting	Aaa	Aa	A	Baa
Market Position	5% *	A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies.	Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies.	Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles.	May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclical, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates.
Generation and Fuel Diversity	5% **	A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below).	Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources.	Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern.	Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable.
	Sub-Factor Weighting	Ba	B	Caa	Definitions
Market Position	5% *	Operates in a market area with somewhat greater concentration and cyclical in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s).	Operates in a limited market area with material concentration and more severe cyclical in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s).	Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters.	Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure.
Generation and Fuel Diversity	5% **	Modest diversification in generation and/or fuel sources such that the utility or rate-payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress.	Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible.	Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain.	Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 4: Financial Strength

Weighting 40%	Sub-Factor Weighting		Aaa	Aa	A	Baa	Ba	B	Caa
CFO pre-WC + Interest / Interest	7.5%		≥ 8x	6x - 8x	4.5x - 6x	3x - 4.5x	2x - 3x	1x - 2x	< 1x
CFO pre-WC / Debt	15%	Standard Grid	≥ 40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	1% - 5%	< 1%
		Low Business Risk Grid	≥ 38%	27% - 38%	19% - 27%	11% - 19%	5% - 11%	1% - 5%	< 1%
CFO pre-WC - Dividends / Debt	10%	Standard Grid	≥ 35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	(5%) - 0%	< (5%)
		Low Business Risk Grid	≥ 34%	23% - 34%	15% - 23%	7% - 15%	0% - 7%	(5%) - 0%	< (5%)
Debt / Capitalization	7.5%	Standard Grid	< 25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	65% - 75%	≥ 75%
		Low Business Risk Grid	< 29%	29% - 40%	40% - 50%	50% - 59%	59% - 67%	67% - 75%	≥ 75%

Appendix B: Approach to Ratings within a Utility Family

Typical Composition of a Utility Family

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. Financing of these entities varies by region, in part due to the regulatory framework. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries or minority interests in other companies. However, in certain cases there may be material operations at the HoldCo level. Financing can occur primarily at the OpCo level, primarily at the HoldCo level, or at both HoldCo and OpCos in varying proportions. When a HoldCo has multiple utility OpCos, they will often be located in different regulatory jurisdictions. A HoldCo may have both levered and unlevered OpCos.

General Approach to a Utility Family

In our analysis, we generally consider the stand-alone credit profile of an OpCo and the credit profile of its ultimate parent HoldCo (and any intermediate HoldCos), as well as the profile of the family as a whole, while acknowledging that these elements can have cross-family credit implications in varying degrees, principally based on the regulatory framework of the OpCos and the financing model (which has often developed in response to the regulatory framework).

In addition to considering individual OpCos under this (or another applicable) methodology, we typically¹⁷ approach a HoldCo rating by assessing the qualitative and quantitative factors in this methodology for the consolidated entity and each of its utility subsidiaries. Ratings of individual entities in the issuer family may be pulled up or down based on the interrelationships among the companies in the family and their relative credit strength.

In considering how closely aligned or how differentiated ratings should be among members of a utility family, we assess a variety of factors, including:

- » Regulatory or other barriers to cash movement among OpCos and from OpCos to HoldCo
- » Differentiation of the regulatory frameworks of the various OpCos
- » Specific ring-fencing provisions at particular OpCos
- » Financing arrangements – for instance, each OpCo may have its own financing arrangements, or the sole liquidity facility may be at the parent; there may be a liquidity pool among certain but not all members of the family; certain members of the family may better be able to withstand a temporary hiatus of external liquidity or access to capital markets
- » Financial covenants and the extent to which an Event of Default by one OpCo limits availability of liquidity to another member of the family
- » The extent to which higher leverage at one entity increases default risk for other members of the family
- » An entity's exposure to or insulation from an affiliate with high business risk
- » Structural features or other limitations in financing agreements that restrict movements of funds, investments, provision of guarantees or collateral, etc.
- » The relative size and financial significance of any particular OpCo to the HoldCo and the family

¹⁷ See paragraph at the end of this section for approaches to Hybrid HoldCos.

See also those factors noted in "Notching for Structural Subordination of Holding Companies".

Our approach to a Hybrid HoldCo (see definition in Appendix C) depends in part on the importance of its non-utility operations and the availability of information on individual businesses. If the businesses are material and their individual results are fully broken out in financial disclosures, we may be able to assess each material business individually by reference to the relevant Moody's methodologies to arrive at a composite assessment for the combined businesses.¹⁸ If non-utility operations are material but are not broken out in financial disclosures, we may look at the consolidated entity under more than one methodology. When non-utility operations are less material but could still impact the overall credit profile, the difference in business risks and our estimation of their impact on financial performance will be qualitatively incorporated in the rating.

Higher Barriers to Cash Movement with Financing Predominantly at the OpCos

Where higher barriers to cash movement exist on an OpCo or OpCos due to the regulatory framework or debt structural features, ratings among family members are likely to be more differentiated. The degree of separateness may be greater or smaller and is assessed on a case-by-case basis, because situational considerations are important.

One area we consider is financing arrangements. For instance, there will tend to be greater differentiation if each member of a family has its own bank credit facilities and difficulties experienced by one entity would not trigger events of default for other entities. While the existence of a money pool might appear to reduce separateness between the participants, there may be regulatory barriers within money pools that preserve separateness. For instance, non-utility entities may have access to the pool only as a borrower, only as a lender, and even the utility entities may have regulatory limits on their borrowings from the pool or their credit exposures to other pool members. If the only source of external liquidity for a money pool is borrowings by the HoldCo under its bank credit facilities, there would be less separateness, especially if the utilities were expected to depend on that liquidity source. However, the ability of an OpCo to finance itself by accessing capital markets must also be considered. Inter-company tax agreements can also have an impact on our view of how separate the risks of default are.

For a HoldCo, the greater the regulatory, economic, and geographic diversity of its OpCos, the greater its potential separation from the default probability of any individual subsidiary. Conversely, if a HoldCo's actions have made it clear that the HoldCo will provide support for an OpCo encountering some financial stress (for instance, due to delays and/or cost over-runs on a major construction project), we would be likely to perceive less separateness.

Even where high barriers to cash movement exist, onerous leverage at a parent company may not only give rise to greater notching for structural subordination at the parent, it may also pressure an OpCo's rating, especially when there is a clear dependence on an OpCo's cash flow to service parent debt.

While most of the regulatory barriers to cash movement are very real, they are not absolute. Furthermore, while it is not usually in the interest of an insolvent parent or its creditors to bring an operating utility into a bankruptcy proceeding, such an occurrence is not impossible.

The greatest separateness occurs where strong regulatory insulation is supplemented by effective ring-fencing provisions that fully separate the management and operations of the OpCo from the rest of the family and limit the parent's ability to cause the OpCo to commence bankruptcy proceedings as well as limiting dividends and cash transfers. Typically, most entities in US utility families (including HoldCos and

¹⁸ A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

OpCos) are rated within 3 notches of each other. However, it is possible for the HoldCo and OpCos in a family to have much wider notching due to the combination of regulatory imperatives and strong ring-fencing that includes a significant minority shareholder who must agree to important corporate decisions, including a voluntary bankruptcy filing.

Lower Barriers to Cash Movement with Financing Predominantly at the OpCos

Our approach to rating issuers within a family where there are lower regulatory barriers to movement of cash from OpCos to HoldCos places greater emphasis on the credit profile of the consolidated group. Individual OpCos are considered based on their individual characteristics and their importance to the family, and their assigned ratings are typically banded closely around the consolidated credit profile of the group due to the expectation that cash will transit relatively freely among family entities.

Some utilities may have OpCos in jurisdictions where cash movement among certain family members is more restricted by the regulatory framework, while cash movement from and/or among OpCos in other jurisdictions is less restricted. In these situations, OpCos with more restrictions may vary more widely from the consolidated credit profile while those with fewer restrictions may be more tightly banded around the other entities in the corporate family group.

Appendix C: Brief Descriptions of the Types of Companies Rated Under This Methodology

The following describes the principal categories of companies rated under this methodology:

Vertically Integrated Utility: Vertically integrated utilities are regulated electric or combination utilities (see below) that own generation, distribution and (in most cases) electric transmission assets. Vertically integrated utilities are generally engaged in all aspects of the electricity business. They build power plants, procure fuel, generate power, build and maintain the electric grid that delivers power from a group of power plants to end-users (including high and low voltage lines, transformers and substations), and generally meet all of the electric needs of the customers in a specific geographic area (also called a service territory). The rates or tariffs for all of these monopolistic activities are set by the relevant regulatory authority.

Transmission & Distribution Utility: Transmission & Distribution utilities (T&Ds) typically operate in deregulated markets where generation is provided under a competitive framework. T&Ds own and operate the electric grid that transmits and/or distributes electricity within a specific state or region.

T&Ds provide electrical transportation and distribution services to carry electricity from power plants and transmission lines to retail, commercial, and industrial customers. T&Ds are typically responsible for billing customers for electric delivery and/or supply, and most have an obligation to provide a standard supply or provider-of-last-resort (POLR) service to customers that have not switched to a competitive supplier. These factors distinguish T&Ds from Networks, whose customers are retail electric suppliers and/or other electricity companies. In a smaller number of cases, T&Ds rated under this methodology may not have an obligation to provide POLR services, but are regulated in sub-sovereign jurisdictions. The rates or tariffs for these monopolistic T&D activities are set by the relevant regulatory authority.

Local Gas Distribution Company: Distribution is the final step in delivering natural gas to customers. While some large industrial, commercial, and electric generation customers receive natural gas directly from high capacity pipelines that carry gas from gas producing basins to areas where gas is consumed, most other users receive natural gas from their local gas utility, also called a local distribution company (LDC). LDCs are regulated utilities involved in the delivery of natural gas to consumers within a specific geographic area. Specifically, LDCs typically transport natural gas from delivery points located on large-diameter pipelines (that usually operate at fairly high pressure) to households and businesses through thousands of miles of small-diameter distribution pipe (that usually operate at fairly low pressure). LDCs are typically responsible for billing customers for gas delivery and/or supply, and most also have the responsibility to procure gas for at least some of their customers, although in some markets gas supply to all customers is on a competitive basis. These factors distinguish LDCs from gas networks, whose customers are retail gas suppliers and/or other natural gas companies. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

Integrated Gas Utility: Integrated gas regulated utilities are regulated utilities that deliver gas to all end users in a particular service territory by sourcing the commodity; operating transport infrastructure that often combines high pressure pipelines with low pressure distribution systems and, in some cases, gas storage, re-gasification or other related facilities; and performing other supply-related activities, such as customer billing and metering. The rates or tariffs for the totality of these activities are set by the relevant regulatory authority. Many integrated gas utilities are national in scope.

Combination Utility: Combination utilities are those that combine an LDC or Integrated Gas Utility with either a vertically integrated utility or a T&D utility. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

Regulated Generation Utility: Regulated generation utilities (Regulated Gencos) are utilities that almost exclusively have generation assets, but their activities are generally regulated like those of vertically integrated utilities. This typically means that the purchasers of their output (typically other investor-owned, municipal or cooperative utilities) pay a regulated rate based on the total allowed costs of the Regulated Genco, including a return on equity based on a capital structure designated by the regulator. Companies that have been included in this group include certain generation companies that are not rate regulated in the usual sense of recovering costs plus a regulated rate of return on either equity or asset value. Instead, we have looked at a combination of governmental action with respect to setting feed-in tariffs and directives on how much generation will be built (or not built) in combination with a generally high degree of government ownership, and we have concluded that these companies are currently best rated under this methodology. Future evolution in our view of the operating and/or regulatory environment of these companies could lead us to conclude that they may be more appropriately rated under a related methodology.¹⁹

Independent System Operator: An Independent System Operator (ISO) is an organization formed in certain regional electricity markets to act as the sole chief coordinator of an electric grid. In the areas where an ISO is established, it coordinates, controls and monitors the operation of the electrical power system to assure that electric supply and demand are balanced at all times, and, to the extent possible, that electric demand is met with the lowest-cost sources. ISOs seek to assure adequate transmission and generation resources, usually by identifying new transmission needs and planning for a generation reserve margin above expected peak demand. In regions where generation is competitive, they also seek to establish rules that foster a fair and open marketplace, and they may conduct price-setting auctions for energy and/or capacity. The generation resources that an ISO coordinates may belong to vertically integrated utilities or to independent power producers. ISOs may not be rate-regulated in the traditional sense, but fall under governmental oversight. All participants in the regional grid are required to pay a fee or tariff (often volumetric) to the ISO that is designed to recover its costs, including costs of investment in systems and equipment needed to fulfill their function. ISOs may be for profit or not-for-profit entities.

Transmission-Only Utility: Transmission-only utilities are solely focused on owning and operating transmission assets. The transmission lines these utilities own are typically high-voltage and allow energy producers to transport electric power over long distances from where it is generated (or received) to the transmission or distribution system of a T&D or vertically integrated utility. Unlike most of the other utilities rated under this methodology, transmission-only utilities primarily provide services to other utilities and ISOs. Transmission-only utilities in most parts of the world other than the US have typically been rated under a different methodology.²⁰

Utility Holding Company (Utility HoldCo): As detailed in Appendix B, regulated electric and gas utilities are often part of corporate families under a parent holding company. The operating subsidiaries of Utility HoldCos are overwhelmingly regulated electric and gas utilities.

Hybrid Holding Company (Hybrid HoldCo): Some utility families contain a mix of regulated electric and gas utilities and other types of companies, but the regulated electric and gas utilities represent the majority of the consolidated cash flows, assets and debt. The parent company is thus a Hybrid HoldCo.

¹⁹ For more information, see our methodology that describes our general approach for assessing unregulated utilities and unregulated power companies. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

²⁰ For more information, see our methodology that describes our general approach for assessing regulated electric and gas networks. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Appendix D: Regional and Other Considerations

Notching Considerations for US First Mortgage Bonds

In most regions, our approach to notching between different debt classes of the same regulated utility issuer follows the guidance on notching corporate instrument ratings based on differences in security and priority of claim, including a one notch differential between senior secured and senior unsecured debt.²¹ However, in most cases we have two notches between the first mortgage bonds and senior unsecured debt of regulated electric and gas utilities in the US. Wider notching differentials between debt classes may also be appropriate in speculative-grade issuers.²²

First mortgage bond holders in the US generally benefit from a first lien on most of the fixed assets used to provide utility service, including such assets as generating stations, transmission lines, distribution lines, switching stations and substations, and gas distribution facilities, as well as a lien on franchise agreements. In our view, the critical nature of these assets to the issuers and to the communities they serve has been a major factor that has led to very high recovery rates for this class of debt in situations of default, thereby justifying a two-notch uplift. The combination of the breadth of assets pledged and the bankruptcy-tested recovery experience has been unique to the US.

In some cases, there is only a one-notch differential between US first mortgage bonds and the senior unsecured rating. For instance, this is likely when the pledged property is not considered critical infrastructure for the region, or if the mortgage is materially weakened by carve-outs, lien releases or similar creditor-unfriendly terms.

Securitization

The use of securitization, a financing technique utilizing a discrete revenue stream (typically related to recovery of specifically defined expenses) that is dedicated to servicing specific securitization debt, has primarily been used in the US, where it has been pervasive in the past. The first generation of securitization bonds were primarily related to recovery of the negative difference between the market value of utilities' generation assets and their book value when certain states switched to competitive electric supply markets and utilities sold their generation (so-called stranded costs). This technique was then used for significant storm costs (especially hurricanes) and was eventually broadened to include environmental related expenditures, deferred fuel costs, or even deferred miscellaneous expenses. In its simplest form, a securitization isolates and dedicates a stream of cash flow into a separate special purpose entity (SPE). The SPE uses that stream of revenue and cash flow to provide annual debt service for the securitized debt instrument. Securitization is typically underpinned by specific legislation to segregate the securitization revenues from the utility's revenues to assure their continued collection, and the details of the enabling legislation may vary from state to state. The utility benefits from the securitization because it receives an immediate source of cash (although it gives up the opportunity to earn a return on the corresponding asset), and ratepayers benefit because the cost of the securitized debt is lower than the utility's cost of debt and much lower than its all-in cost of capital, which reduces the revenue requirement associated with the cost recovery.

In the presentation of US securitization debt in published financial ratios, we make our own assessment of the appropriate credit representation but in most cases follow the accounting in audited statements under US Generally Accepted Accounting Principles (GAAP), which in turn considers the terms of enabling

²¹ A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

²² For more information, see our cross-sector methodology that describes general principles related to loss given default for speculative-grade companies. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

legislation. As a result, accounting treatment may vary. In most states, utilities have been required to consolidate securitization debt under GAAP, even though it is technically non-recourse.

In general, we view securitization debt of utilities as being on-credit debt, in part because the rates associated with it reduce the utility's headroom to increase rates for other purposes while keeping all-in rates affordable to customers. Thus, where accounting treatment is off balance sheet, we seek to adjust the company's ratios by including the securitization debt and related revenues for our analysis. Where the securitized debt is on balance sheet, our credit analysis also considers the significance of ratios that exclude securitization debt and related revenues. Since securitization debt amortizes mortgage-style, including it makes ratios look worse in early years (when most of the revenue collected goes to pay interest) and better in later years (when most of the revenue collected goes to pay principal).

Appendix E: Treatment of Power Purchase Agreements ("PPAs")

Although many utilities own and operate power stations, some have entered into PPAs to source electricity from third parties to satisfy retail demand. The motivation for these PPAs may be one or more of the following: to outsource operating risks to parties more skilled in power station operation, to provide certainty of supply, to reduce balance sheet debt, to fix the cost of power, or to comply with regulatory mandates regarding power sourcing, including renewable portfolio standards. While we regard PPAs that reduce operating or financial risk as a credit positive, some aspects of PPAs may negatively affect the credit of utilities. The most conservative treatment would be to treat a PPA as a debt obligation of the utility as, by paying the capacity charge, the utility is effectively providing the funds to service the debt associated with the power station. At the other end of the continuum, the financial obligations of the utility could also be regarded as an ongoing operating cost, with no long-term capital component recognized.

Under most PPAs, a utility is obliged to pay a capacity charge to the power station owner (which may be another utility or an Independent Power Producer – IPP); this charge typically covers a portion of the IPP's fixed costs in relation to the power available to the utility. These fixed payments usually help to cover the IPP's debt service and are made irrespective of whether the utility calls on the IPP to generate and deliver power. When the utility requires generation, a further energy charge, to cover the variable costs of the IPP, will also typically be paid by the utility. Some other similar arrangements are characterized as tolling agreements, or long-term supply contracts, but most have similar features to PPAs and thus we analyze them as PPAs.

PPAs are recognized qualitatively to be a future use of cash whether or not they are treated as debt-like obligations in financial ratios

The starting point of our analysis is the issuer's audited financial statements – we consider whether the utility's accountants determine that the PPA should be treated as a debt equivalent, a capitalized lease, an operating lease, or in some other manner. PPAs have a wide variety of operational and financial terms, and it is our understanding that accountants are required to have a very granular view into the particular contractual arrangements in order to account for these PPAs in compliance with applicable accounting rules and standards. However, accounting treatment for PPAs may not be entirely consistent across US GAAP, IFRS or other accounting frameworks. In addition, we may consider that factors not incorporated into the accounting treatment may be relevant (which may include the scale of PPA payments, their regulatory treatment including cost recovery mechanisms, or other factors that create financial or operational risk for the utility that is greater, in our estimation, than the benefits received). When the accounting treatment of a PPA is a debt or lease equivalent (such that it is reported on the balance sheet, or disclosed as an operating lease and thus included in our adjusted debt calculation), we generally do not make adjustments to remove the PPA from the balance sheet.

However, in relevant circumstances we consider making adjustments that impute a debt equivalent to PPAs that are off-balance sheet for accounting purposes.

Regardless of whether we consider that a PPA warrants or does not warrant treatment as a debt obligation, we assess the totality of the impact of the PPA on the issuer's probability of default. Costs of a PPA that cannot be recovered in retail rates creates material risk, especially if they also cannot be recovered through market sales of power.

Additional considerations for PPAs

PPAs have a wide variety of financial and regulatory characteristics, and we may treat each particular circumstance differently. Factors which determine where on the continuum we treat a particular PPA include the following:

- » Risk management: An overarching principle is that PPAs have normally been used by utilities as a risk management tool and we recognize that this is the fundamental reason for their existence. Thus, we will not automatically penalize utilities for entering into contracts for the purpose of reducing risk associated with power price and availability. Rather, we will look at the aggregate commercial position, evaluating the risk to a utility's purchase and supply obligations. In addition, PPAs are similar to other long-term supply contracts used by other industries and their treatment should not therefore be fundamentally different from that of other contracts of a similar nature.
- » Pass-through capability: Some utilities have the ability to pass through the cost of purchasing power under PPAs to their customers. As a result, the utility takes no risk that the cost of power is greater than the retail price it will receive. Accordingly we regard these PPA obligations as operating costs with no long-term debt-like attributes. PPAs with no pass-through ability have a greater risk profile for utilities. In some markets, the ability to pass through costs of a PPA is enshrined in the regulatory framework, and in others can be dictated by market dynamics. As a market becomes more competitive or if regulatory support for cost recovery deteriorates, the ability to pass through costs may decrease and, as circumstances change, our treatment of PPA obligations will alter accordingly.
- » Price considerations: The price of power paid by a utility under a PPA can be substantially above or below the market price of electricity. A below-market price will motivate the utility to purchase power from the IPP in excess of its retail requirements, and to sell excess electricity in the spot market. This can be a significant source of cash flow for some utilities. On the other hand, utilities that are compelled to pay capacity payments to IPPs when they have no demand for the power or at an above-market price may suffer a financial burden if they do not get full recovery in retail rates. We will focus particularly on PPAs that have mark-to-market losses, which typically indicates that they have a material impact on the utility's cash flow.
- » Excess Reserve Capacity: In some jurisdictions, there is substantial reserve capacity and thus a significant probability that the electricity available to a utility under PPAs will not be required by the market. This increases the risk to the utility that capacity payments will need to be made when there is no demand for the power. We may determine that all of a utility's PPAs represent excess capacity, or that a portion of PPAs are needed for the utility's supply obligations plus a normal reserve margin, while the remaining portion represents excess capacity. In the latter case, we may impute debt to specific PPAs that are excess or take a proportional approach to all of the utility's PPAs.
- » Risk-sharing: Utilities that own power plants bear the associated operational, fuel procurement and other risks. These must be balanced against the financial and liquidity risk of contracting for the purchase of power under a PPA. We will examine on a case-by case basis the relative credit risk associated with PPAs in comparison to plant ownership.
- » Purchase requirements: Some PPAs are structured with either options or requirements to purchase the asset at the end of the PPA term. If the utility has an economically meaningful requirement to purchase, we would most likely consider it to be a debt obligation. In most such cases, the obligation would already receive on-balance sheet treatment under relevant accounting standards.
- » Default provisions: In most cases, the remedies for default under a PPA do not include acceleration of amounts due, and in many cases PPAs would not be considered as debt in a bankruptcy scenario and could potentially be cancelled. Thus, PPAs may not materially increase Loss Given Default for the

utility. In addition, PPAs are not typically considered debt for cross-default provisions under a utility's debt and liquidity arrangements. However, the existence of non-standard default provisions that are debt-like would have a large impact on our treatment of a PPA. In addition, payments due under PPAs are senior unsecured obligations, and any inability of the utility to make them materially increases default risk.

Each of these factors will be considered by our analysts and a decision will be made as to the importance of the PPA to the risk analysis of the utility.

Methods for estimating a liability amount for PPAs

According to the weighting and importance of the PPA to each utility and the level of disclosure, we may approximate a debt obligation equivalent for PPAs using one or more of the methods discussed below. In each case, we look holistically at the PPA's credit impact on the utility, including the ability to pass through costs and curtail payments, the materiality of the PPA obligation to the overall business risk and cash flows of the utility, operational constraints that the PPA imposes, the maturity of the PPA obligation, the impact of purchased power on market-based power sales (if any) that the utility will engage in, and our view of future market conditions and volatility.

- » Operating Cost: If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, we may view the PPA as being most akin to an operating cost. Provided that the accounting treatment for the PPA is, in this circumstance, off-balance sheet, we will most likely make no adjustment to bring the obligation onto the utility's balance sheet.
- » Annual Obligation x 6: In some situations, the PPA obligation may be estimated by multiplying the annual payments by a factor of six (in most cases). This method is sometimes used in the capitalization of operating leases. This method may be used as an approximation where the analyst determines that the obligation is significant but cannot otherwise be quantified due to limited information.
- » Net Present Value: Where the analyst has sufficient information, we may add the NPV of the stream of PPA payments to the debt obligations of the utility. The discount rate used will be our estimate of the cost of capital of the utility.
- » Debt Look-Through: In some circumstances, where the debt incurred by the IPP is directly related to the off-taking utility, there may be reason to allocate the entire debt (or a proportional part related to share of power dedicated to the utility) of the IPP to that of the utility.
- » Mark-to-Market: In situations in which we believe that the PPA prices exceed the market price and thus will create an ongoing liability for the utility, we may use a net mark-to-market method, in which the NPV of the utility's future out-of-the-money net payments will be added to its total debt obligations.
- » Consolidation: In some instances where the IPP is wholly dedicated to the utility, it may be appropriate to consolidate the debt and cash flows of the IPP with that of the utility. If the utility purchases only a portion of the power from the IPP, then that proportion of debt might be consolidated with the utility.

If we have determined to impute debt to a PPA for which the accounting treatment is not on-balance sheet, we will in some circumstances use more than one method to estimate the debt equivalent obligations imposed by the PPA, and compare results. If circumstances (including regulatory treatment or market conditions) change over time, the approach that is used may also vary.

Moody's Related Publications

Credit ratings are primarily determined by sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. An index of sector and cross-sector credit rating methodologies can be found [here](#).

For data summarizing the historical robustness and predictive power of credit ratings, please click [here](#).

For further information, please refer to *Rating Symbols and Definitions*, which is available [here](#).

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Duke Energy Kentucky
Case No. 2022-00372
Attorney General's First Set Data Requests
Date Received: January 11, 2023

PUBLIC AG-DR-01-171

REQUEST:

Provide the following:

- a. The current authorized ROE for each Duke Energy operating company and the date that each ROE was authorized.
- b. Provide the Commission Order authorizing each ROE listed in part (a) above.
- c. State whether each ROE was authorized pursuant to a fully litigated rate case or if it was based on a settlement.
- d. The current S&P and Moody's credit ratings for each Duke Energy operating company.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment 2 Only)

- a.-c. Please see AG-DR-01-171 Attachment 1.
- d. Please see AG-DR-01-171 Confidential Attachment 2 for current S&P and Moody's ratings.

The confidential attachment to this response will be provided upon the execution of a mutually acceptable confidentiality agreement.

PERSON RESPONSIBLE: Sarah E. Lawler – a., b., c.
Christopher R. Bauer – d.

Current Authorized				
Company	ROE	Order/Docket No.	Date	Settled/Litigated
Duke Energy Ohio, Inc. (electric)	9.5 percent	21-887-EL-AIR	12/14/2022	Settled
Duke Energy Ohio, Inc. (gas)	9.84 percent	12-1685-GA-AIR	11/13/2013	Settled
Duke Energy Indiana, LLC	9.7 percent	IURC Cause No 45253	6/29/2020	Litigated
Duke Energy Carolinas (NC)	9.6 percent	E-7 Sub 1214	3/31/2021	Partial Settlement including ROE
Duke Energy Progress (NC)	9.6 percent	E-2 Sub 1219	4/16/2021	Partial Settlement including ROE
Duke Energy Florida	10.1 percent	PSC-2021-0202-AS-EI	8/1/2022	Settled
Duke Energy Carolinas (SC)	9.5 percent	2019-323	5/21/2019	Litigated
Duke Energy Progress (SC)	9.5 percent	2019-341	5/21/2019	Litigated
Piedmont (NC)	9.6 percent	G-9, Sub 781	1/6/2022	Settled
Piedmont (SC)	9.3 percent	2022-89-G	10/6/2022	Partial Settlement/ROE litigated
Piedmont (TN)	9.8 percent	20-00086	5/6/2021	Settled

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**AG-DR-01-171
CONFIDENTIAL ATTACHMENT 2**

FILED UNDER SEAL