

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

The Electronic Application of Duke Energy )  
Kentucky, Inc., for: 1) An Adjustment of the )  
Electric Rates; 2) Approval of New Tariffs; 3) ) Case No. 2019-00271  
Approval of Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) All )  
Other Required Approvals and Relief. )

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**NOTICE OF FILING**

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Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company), hereby gives notice of filing of corrected exhibits to the Rebuttal Testimony of Dr. Roger Morin. The Company just discovered that due to an inadvertent clerical error, the attachments to Dr. Roger Morin's Rebuttal Testimony filed on January 31, 2020 were incomplete and two were incorrect. Dr. Morin performed an update to his analysis as was requested through discovery and provided that analysis through his rebuttal testimony. As such, the Company is submitting the complete and corrected attachments. There are no changes to Dr. Morin's conclusions or recommendations. For clarity of the record, the Company is submitting a complete set of Dr. Morin's Attachments as follows:

Attachment RAM-Rebuttal-1	DCF Growth Rate Analysis
Corrected Attachment RAM-Rebuttal-2	Investment-Grade Dividend-Paying Combination Gas and Electric Utilities
Corrected Attachment RAM-Rebuttal-3	Peer Group for Duke Energy Kentucky

Corrected Attachment RAM-Rebuttal-4	Investment-Grade Combination Gas & Electric Utilities DCF Analysis: Value Line Growth Projections
Attachment RAM-Rebuttal-5	Investment-Grade Combination Gas & Electric Utilities DCF Analysis: Analysts' Growth Forecasts
Attachment RAM-Rebuttal-6	Combination Gas & Electric Utility Beta Estimates
Attachment RAM-Rebuttal-7	Utility Industry Historical Risk Premium Analysis
Attachment RAM-Rebuttal-8	Allowed Risk Premium Electric Utilities
Attachment RAM-Rebuttal-9	Risk Premium Analysis

In addition to attaching the documents here, the Company will also provide paper copies to all parties of record tomorrow during the hearing.

Respectfully submitted,



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**CERTIFICATE OF SERVICE**

This is to certify that the foregoing electronic filing is a true and accurate copy of the document being filed in paper medium; that the electronic filing was transmitted to the Commission on February 18, 2020; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that a copy of the filing in paper medium is being delivered via 2<sup>nd</sup> day delivery to the Commission on the 18th day of February 2020.



Rocco O. D'Ascenzo

**PROXY GROUP  
DCF Growth Rate Analysis**

<u>Company</u>	(1) Value Line <u>DPS</u>	(2) Value Line <u>EPS</u>	(3) <u>Zacks</u>	(4) Yahoo! <u>Finance</u>
1 Alliant Energy	5.50%	6.50%	5.49%	5.00%
2 Ameren Corp.	6.00%	6.50%	6.16%	4.70%
3 Avista	4.00%	3.50%	3.32%	3.40%
4 Black Hills	6.50%	5.00%	4.27%	3.66%
5 CenterPoint Energy	2.50%	12.50%	4.76%	4.10%
6 Chesapeake Utilities	9.00%	9.00%	7.00%	6.00%
7 CMS Energy Corp.	7.00%	7.00%	6.42%	7.50%
8 Consolidated Edison	3.50%	3.00%	2.00%	2.78%
9 Dominion Energy	5.00%	6.50%	4.81%	4.46%
10 DTE Energy Co.	6.00%	5.50%	6.00%	4.83%
11 Duke Energy Corp.	2.50%	6.00%	4.84%	4.65%
12 Eversource Energy	5.50%	5.50%	5.63%	5.60%
13 Exelon Corp.	5.50%	9.00%	4.50%	N/A
14 Fortis	6.00%	4.00%	5.68%	N/A
15 MGE Energy	5.00%	6.00%	N/A	4.00%
16 NorthWestern Corp.	4.50%	3.00%	2.73%	3.20%
17 Pub Sv Enterprise Grp	5.00%	6.00%	3.69%	3.70%
18 Sempra Energy	8.00%	11.00%	7.73%	9.75%
19 WEC Energy Group	6.00%	6.00%	6.14%	6.15%
20 Xcel Energy Inc.	6.00%	5.50%	5.42%	5.20%
<b>Averages</b>	<b>5.45%</b>	<b>6.35%</b>	<b>5.08%</b>	<b>4.93%</b>
<b>Median Values</b>	<b>5.50%</b>	<b>6.00%</b>	<b>5.42%</b>	<b>4.68%</b>

Sources: Exhibit RAB-4

**PROXY GROUP  
CORRECTED DCF RETURN ON EQUITY**

	(1) Value Line Earnings Gth.	(2) Zack's Earnings Gth.	(3) Yahoo! Earnings Gth.	(4) Averages			
<b>Method 1:</b>							
Dividend Yield	3.00%	3.00%	3.00%	3.00%			
Average Growth Rate	6.35%	5.08%	4.93%	5.45%			
Expected Div. Yield	<u>3.39%</u>	<u>3.35%</u>	<u>3.35%</u>	3.36%			
<b>DCF Return on Equity</b>	<b>9.74%</b>	<b>8.44%</b>	<b>8.27%</b>	<b>8.82%</b>	vs 8.53%	0.29%	0.59%
<b>Method 2:</b>							
Dividend Yield	3.11%	3.00%	3.00%	3.04%			
Median Growth Rate	6.00%	5.42%	4.68%	5.37%			
Expected Div. Yield	<u>3.50%</u>	<u>3.36%</u>	<u>3.34%</u>	3.40%			
<b>DCF Return on Equity</b>	<b>9.50%</b>	<b>8.78%</b>	<b>8.02%</b>	<b>8.76%</b>	vs 8.48%	0.28%	0.58%

Source: Baudino Exhibit RAB-4 Page 2 with corrected growth rates from Exhibit RAMREB-1

**Investment-Grade Dividend-Paying Combination Gas and  
Electric Utilities Covered in Value Line's Electric Utility**

Company	(1)	(2) Ticker	(3)	(4) Note
1 Alliant Energy		LNT		
2 Ameren Corp		AEE		
3 Avista Corp		AVA		Acquisition of Hydro One completed
4 Black Hills		BKH		Acquisition of SourceGas completed
5 CenterPoint Energy		CNP		Acquisition of Vectren completed
6 Chesapeake Utilities		CPK		Acquisition of WildHorse Resource Development completed
7 CMS Energy Corp.		CMS		
8 Consol. Edison		ED		
9 Dominion Resources		D		Merged with Questar, completed 9/16
10 DTE Energy		DTE		
11 Duke Energy		DUK		Acquisition of Piedmont Natual Gas completed
12 Empire Dist. Elec.		EDE	x	Merged with Liberty Utility, completed 1/17
13 Entergy Corp		ETR	x	Nuclear exposure, corporate reorganization
14 Eversource Energy		ES		
15 Fortis		FTS		Owns several US combination gas & elec utilities
16 Exelon Corp		EXC		
17 MDU Resource		MDU	x	Regulated Revenues < 50%
18 MGE Energy		MGEE		
19 NorthWestern Corp.		NWE		
20 Pepco Holdings		POM	x	Merged with Exelon
21 PG&E Corp		PCG	x	Declared bankruptcy
22 Public Serv. Enterprise		PEG		
23 SCANA Corp		SCG	x	nuclear exposure, writeoffs, dividend cut
24 Until Corp		UTL	x	Market cap < \$1B; not covered by VL
25 Sempra Energy		SRE		Acquisition of Oncor completed
26 TECO Energy		TE	x	Acquired by Emera
27 Vectren Corp.		VVC	x	Acquired by CenterPoint
28 WEC Energy Group		WEC		
29 Xcel Energy Inc		XEL		

Source: Value Line Investment Survey 2019

**Proxy Group for DUKE ENERGY KENTUCKY**

Company	Ticker
1 Alliant Energy	LNT
2 Ameren Corp.	AEE
3 Avista	AVA
4 Black Hills	BKH
5 CMS Energy Corp.	CMS
6 CenterPoint	CNP
7 Chesapeake Util	CPK
8 Consol. Edison	ED
9 Dominion Resources	D
10 DTE Energy	DTE
11 Duke Energy	DUK
12 Eversource Energy	ES
13 Exelon Corp	EXC
14 Fortis	FTS
15 MGE Energy	MGEE
16 NorthWestern Corp.	NWE
17 Public Serv. Enterprise	PEG
18 Sempra	SRE
19 WEC Energy Group	WEC
20 Xcel Energy Inc.	XEL

**Combination Elec & Gas Utilities  
DCF Analysis Value Line Growth Rates**

Line No.	(1) Company Name	(2) Current Dividend Yield	(3) Projected EPS Growth	(4) % Expected Divid Yield	(5) Cost of Equity	(6) Return on Equity
1	Alliant Energy	2.62	6.5	2.79	9.29	9.44
2	Ameren Corp.	2.62	6.5	2.79	9.29	9.44
3	Avista	3.25	3.5	3.36	6.86	7.04
4	Black Hills	2.75	5.0	2.89	7.89	8.04
5	CMS Energy Corp.	2.46	7.0	2.63	9.63	9.77
6	CenterPoint	4.27	10.5	4.72	15.22	15.47
7	Chesapeake Util	1.70	9.0	1.85	10.85	10.95
8	Consol. Edison	3.30	3.0	3.40	6.40	6.58
9	Dominion Resources	4.51	6.5	4.80	11.30	11.56
10	DTE Energy	3.15	4.5	3.29	7.79	7.97
11	Duke Energy	4.18	6.0	4.43	10.43	10.66
12	Eversource Energy	2.54	5.5	2.68	8.18	8.32
13	Exelon Corp	3.20	9.0	3.49	12.49	12.67
14	Fortis	3.53	2.5	3.62	6.12	6.31
15	MGE Energy	1.79	6.0	1.90	7.90	8.00
16	NorthWestern Corp.	3.21	3.0	3.31	6.31	6.48
17	Public Serv. Enterprise	3.21	6.0	3.40	9.40	9.58
18	Sempra	2.55	11.0	2.83	13.83	13.98
19	WEC Energy Group	2.76	6.0	2.93	8.93	9.08
20	Xcel Energy Inc.	2.58	5.5	2.72	8.22	8.37
22	<b>AVERAGE</b>	<b>3.01</b>	<b>6.13</b>	<b>3.19</b>	<b>9.32</b>	<b>9.48</b>

## Notes:

- 25 Column 2: Yahoo Finance 12/2019  
 26 Column 3: Value Line Investment Reports 12/2019  
 27 Column 4 = Column 2 times (1 + Column 3/100)  
 28 Column 5 = Column 4 + Column 3  
 28 Column 6 = Column 4/0.95 + Column 3



**Combination Elec & Gas Utilities  
DCF Analysis Analysts' Growth Forecasts**

Line No.	(1) Company Name	(2) Current Dividend Yield	(3) Analysts' Growth Forecast	(4) % Expected Divid Yield	(5) Cost of Equity	(6) Return on Equity
1	Alliant Energy	2.62	5.40	2.76	8.16	8.31
2	Ameren Corp.	2.62	4.30	2.73	7.03	7.18
3	Avista	3.25	3.50	3.36	6.86	7.04
4	Black Hills	2.75	3.66	2.85	6.51	6.66
5	CMS Energy Corp.	2.46	7.50	2.64	10.14	10.28
6	CenterPoint	4.27	3.63	4.43	8.06	8.29
7	Chesapeake Util	1.70	6.00	1.80	7.80	7.90
8	Consol. Edison	3.30	2.37	3.38	5.75	5.93
9	Dominion Resources	4.51	4.41	4.71	9.12	9.37
10	DTE Energy	3.15	4.83	3.30	8.13	8.31
11	Duke Energy	4.18	4.40	4.36	8.76	8.99
12	Eversource Energy	2.54	5.45	2.68	8.13	8.27
13	Exelon Corp	3.20	9.00	3.49	12.49	12.67
14	Fortis	3.53	4.32	3.68	8.00	8.20
15	MGE Energy	1.79	4.00	1.86	5.86	5.96
16	NorthWestern Corp.	3.21	3.23	3.31	6.54	6.72
17	Public Serv. Enterprise	3.21	3.70	3.33	7.03	7.20
18	Sempra	2.55	10.05	2.81	12.86	13.00
19	WEC Energy Group	2.76	6.05	2.93	8.98	9.13
20	Xcel Energy Inc.	2.58	5.20	2.71	7.91	8.06
22	<b>AVERAGE</b>	<b>3.01</b>	<b>5.05</b>	<b>3.16</b>	<b>8.21</b>	<b>8.37</b>

Notes:

- 25 Column 2, 3: Yahoo Finance 12/2019
- 26 Column 4 = Column 2 times (1 + Column 3/100)
- 27 Column 5 = Column 4 + Column 3
- 28 Column 6 = Column 4/0.95 + Column 3

**Combination Elec & Gas Utilities Beta Estimates**

	(1)	(2)
<u>Line No.</u>	<u>Company Name</u>	<u>Beta</u>
1	Alliant Energy	0.60
2	Ameren Corp.	0.55
3	Avista	0.60
4	Black Hills	0.70
5	CMS Energy Corp.	0.50
6	CenterPoint	0.80
7	Chesapeake Util	0.65
8	Consol. Edison	0.45
9	Dominion Resources	0.55
10	DTE Energy	0.50
11	Duke Energy	0.50
12	Eversource Energy	0.55
13	Exelon Corp	0.65
14	Fortis	0.60
15	MGE Energy	0.55
16	NorthWestern Corp.	0.60
17	Public Serv. Enterprise	0.65
18	Sempra	0.75
19	WEC Energy Group	0.50
20	Xcel Energy Inc.	0.50
22	<b>AVERAGE</b>	<b>0.59</b>
24	Source: Value Line Reports 12/2019	

	<b>Company Name</b>	<b>Ticker</b>	<b>Div'd Yield</b>	<b>Proj EPS Gth</b>
1	3M Company	MMM	3.3	6.0
2	Abbott Labs.	ABT	1.6	10.0
3	AbbVie Inc.	ABBV	5.3	10.5
4	Accenture Plc	ACN	1.5	9.0
5	Activision Blizzard	ATVI	0.7	10.0
6	Advance Auto Parts	AAP	0.2	14.0
7	AES Corp.	AES	2.9	
8	Affiliated Managers	AMG	1.6	10.0
9	Aflac Inc.	AFL	2.1	7.5
10	Agilent Technologies	A	0.9	11.0
11	Air Products & Chem.	APD	2.0	10.0
12	Alaska Air Group	ALK	2.0	6.0
13	Albemarle Corp.	ALB	2.1	5.5
14	Alexandria Real Estate	ARE	2.6	
15	Allegion plc	ALLE	0.9	9.5
16	Allergan plc	AGN	1.6	3.5
17	Alliance Data Sys.	ADS	2.3	9.0
18	Alliant Energy	LNT	2.6	6.5
19	Allstate Corp.	ALL	1.8	10.5
20	Altria Group	MO	6.6	8.5
21	Amcor plc	AMCR	4.4	
22	Amer. Airlines	AAL	1.4	7.0
23	Amer. Elec. Power	AEP	3.0	4.0
24	Amer. Express	AXP	1.4	10.0
25	Amer. Int'l Group	AIG	2.5	
26	Amer. Tower 'A'	AMT	2.0	7.5
27	Amer. Water Works	AWK	1.7	9.5
28	Ameren Corp.	AEE	2.7	6.5
29	Ameriprise Fin'l	AMP	2.3	12.5
30	AmerisourceBergen	ABC	2.0	8.0
31	AMETEK, Inc.	AME	0.6	15.5
32	Amgen	AMGN	2.7	7.5
33	Amphenol Corp.	APH	0.9	9.5
34	Analog Devices	ADI	1.8	9.0
35	Anthem, Inc.	ANTM	1.1	18.5
36	Aon plc	AON	0.8	11.0
37	Apache Corp.	APA	4.4	46.0
38	Apartment Investment	AIV	3.1	-3.0
39	Apple Inc.	AAPL	1.1	12.5
40	Applied Materials	AMAT	1.4	7.5
41	Aptiv PLC	APTIV	0.9	11.0
42	Archer Daniels Mid'l'd	ADM	3.2	9.5
43	Arconic Inc.	ARNC	0.3	
44	Assurant Inc.	AIZ	1.9	8.5
45	AT&T Inc.	T	5.3	5.5
46	Atmos Energy	ATO	2.1	7.5
47	Automatic Data Proc.	ADP	2.2	13.5
48	AvalonBay Communities	AVB	3.1	2.5

49	Avery Dennison	AVY	1.9	11.0
50	Baker Hughes	BKR	2.9	
51	Ball Corp.	BLL	0.9	25.0
52	Bank of America	BAC	2.2	10.5
53	Bank of New York Mellon	BK	2.4	7.0
54	Baxter Int'l Inc.	BAX	1.1	10.5
55	Becton, Dickinson	BDX	1.2	9.5
56	Best Buy Co.	BBY	2.4	8.5
57	BlackRock, Inc.	BLK	2.6	9.0
58	Block (H&R)	HRB	4.5	7.0
59	Boeing	BA	2.5	12.0
60	BorgWarner	BWA	1.5	4.5
61	Boston Properties	BXP	2.9	5.0
62	Bristol-Myers Squibb	BMJ	2.9	9.0
63	Broadcom Inc.	AVGO	4.0	33.5
64	Broadridge Fin'l	BR	1.8	11.0
65	Brown-Forman 'B'	BF/B	1.1	14.5
66	C.H. Robinson	CHRW	2.7	9.0
67	Cabot Oil & Gas 'A'	COG	2.3	46.5
68	Campbell Soup	CPB	2.9	0.5
69	Capital One Fin'l	COF	1.5	6.0
70	Cardinal Health	CAH	3.8	10.5
71	Carnival Corp.	CCL	4.3	10.0
72	Caterpillar Inc.	CAT	2.8	12.0
73	Cboe Global Markets	CBOE	1.2	14.5
74	CDW Corp.	CDW	1.1	10.5
75	Celanese Corp.	CE	2.2	8.5
76	CenterPoint Energy	CNP	4.4	10.5
77	CenturyLink Inc.	CTL	7.5	1.0
78	Cerner Corp.	CERN	1.0	9.0
79	CF Industries	CF	2.7	
80	Chevron Corp.	CVX	4.1	16.5
81	Chubb Ltd.	CB	1.9	10.0
82	Church & Dwight	CHD	1.3	9.0
83	Cimarex Energy	XEC	1.6	8.5
84	Cincinnati Financial	CINF	2.2	9.5
85	Cintas Corp.	CTAS	0.9	15.5
86	Cisco Systems	CSCO	2.9	7.5
87	Citigroup Inc.	C	2.7	10.0
88	Citizens Fin'l Group	CFG	3.6	9.5
89	Citrix Sys.	CTXS	1.3	7.0
90	Clorox Co.	CLX	2.8	3.5
91	CME Group	CME	1.5	3.0
92	CMS Energy Corp.	CMS	2.6	7.0
93	Coca-Cola	KO	3.0	6.5
94	Cognizant Technology	CTSH	1.3	6.0
95	Colgate-Palmolive	CL	2.5	5.5
96	Comcast Corp.	CMCSA	1.9	13.5
97	Comerica Inc.	CMA	3.7	9.5
98	Conagra Brands	CAG	2.5	5.5
99	Concho Resources	CXO	0.6	21.0

100	ConocoPhillips	COP	2.7	37.0
101	Consol. Edison	ED	3.4	3.0
102	Constellation Brands	STZ	1.7	8.5
103	Corning Inc.	GLW	2.8	14.5
104	Corteva, Inc.	CTVA	2.0	
105	Costco Wholesale	COST	0.9	9.0
106	Coty Inc.	COTY	4.4	5.0
107	Crown Castle Int'l	CCI	3.4	12.5
108	CSX Corp.	CSX	1.3	14.5
109	Cummins Inc.	CMI	2.9	8.0
110	CVS Health	CVS	2.7	6.5
111	Danaher Corp.	DHR	0.4	14.0
112	Darden Restaurants	DRI	3.3	11.0
113	Deere & Co.	DE	1.8	13.5
114	Delta Air Lines	DAL	2.9	10.0
115	Dentsply Sirona	XRAY	0.6	4.5
116	Devon Energy	DVN	1.4	18.0
117	Diamondback Energy	FANG	0.9	16.5
118	Digital Realty Trust	DLR	3.8	7.0
119	Discover Fin'l Svcs.	DFS	2.0	7.5
120	Disney (Walt)	DIS	1.2	6.5
121	Dollar General	DG	0.8	12.0
122	Dominion Energy	D	4.6	6.5
123	Dover Corp.	DOV	1.7	12.5
124	Dow Inc.	DOW	5.3	
125	DTE Energy	DTE	3.1	4.5
126	Duke Energy	DUK	4.3	6.0
127	Duke Realty Corp.	DRE	2.7	4.5
128	DuPont de Nemours	DD	2.0	
129	DXC Technology	DXC	2.2	10.0
130	E*Trade Fin'l	ETFC	1.2	17.5
131	Eastman Chemical	EMN	3.3	8.0
132	Eaton Corp. plc	ETN	3.0	7.0
133	eBay Inc.	EBAY	1.6	10.0
134	Ecolab Inc.	ECL	1.0	10.0
135	Edison Int'l	EIX	3.5	15.0
136	Emerson Electric	EMR	2.6	11.0
137	Entergy Corp.	ETR	3.1	2.0
138	EOG Resources	EOG	1.4	31.5
139	Equifax, Inc.	EFX	1.1	8.5
140	Equinix, Inc.	EQIX	1.8	23.5
141	Equity Residential	EQR	2.9	-13.5
142	Essex Property Trust	ESS	2.7	-0.5
143	Everest Re Group Ltd.	RE	2.3	18.5
144	Evergy, Inc.	EVRG	3.2	
145	Eversource Energy	ES	2.7	5.5
146	Exelon Corp.	EXC	3.4	9.0
147	Expedia Group	EXPE	1.3	24.0
148	Expeditors Int'l	EXPD	1.3	9.0
149	Extra Space Storage	EXR	3.5	4.0
150	Exxon Mobil Corp.	XOM	5.1	11.0

151	Fastenal Co.	FAST	2.4	8.5
152	Federal Rlty. Inv. Trust	FRT	3.3	3.5
153	FedEx Corp.	FDX	1.8	6.0
154	Fidelity Nat'l Info.	FIS	1.0	23.5
155	Fifth Third Bancorp	FITB	3.2	7.0
156	First Republic Bank	FRC	0.6	10.5
157	FirstEnergy Corp.	FE	3.3	6.5
158	FLIR Systems	FLIR	1.4	12.0
159	Flowserve Corp.	FLS	1.5	13.5
160	FMC Corp.	FMC	1.7	15.0
161	Ford Motor	F	6.4	3.5
162	Fortive Corp.	FTV	0.4	10.0
163	Fortune Brands Home	FBHS	1.5	8.5
164	Fox Corp. 'A'	FOXA	1.2	
165	Franklin Resources	BEN	4.4	7.5
166	Freep't-McMoRan Inc.	FCX	1.5	22.5
167	Gallagher (Arthur J.)	AJG	1.8	14.5
168	Gap (The), Inc.	GPS	5.4	4.5
169	Garmin Ltd.	GRMN	2.3	10.5
170	Gen'l Dynamics	GD	2.3	6.0
171	Gen'l Electric	GE	0.4	2.5
172	Gen'l Mills	GIS	3.7	4.0
173	Gen'l Motors	GM	4.2	2.0
174	Genuine Parts	GPC	2.9	8.0
175	Gilead Sciences	GILD	3.9	-1.5
176	Global Payments	GPN	0.4	20.5
177	Globe Life Inc.	GL	0.6	9.5
178	Goldman Sachs	GS	2.2	10.0
179	Grainger (W.W.)	GWW	1.7	8.5
180	Halliburton Co.	HAL	2.9	21.5
181	Hanesbrands, Inc.	HBI	4.1	3.0
182	Harley-Davidson	HOG	4.0	8.5
183	Hartford Fin'l Svcs.	HIG	2.0	12.5
184	Hasbro, Inc.	HAS	2.6	7.5
185	HCA Healthcare	HCA	1.1	12.5
186	Healthpeak Properties	PEAK	4.5	-3.5
187	Helmerich & Payne	HP	6.6	
188	Henry (Jack) & Assoc.	JKHY	1.1	12.0
189	Hershey Co.	HSY	2.2	7.0
190	Hess Corp.	HES	1.6	
191	Hewlett Packard Ent.	HPE	3.0	8.0
192	Hilton Worldwide Hldgs.	HLT	0.5	17.0
193	HollyFrontier Corp.	HFC	2.8	17.0
194	Home Depot	HD	2.9	9.0
195	Honeywell Int'l	HON	2.0	8.5
196	Hormel Foods	HRL	2.1	9.0
197	Horton D.R.	DHI	1.3	7.0
198	Host Hotels & Resorts	HST	4.4	-1.5
199	HP Inc.	HPQ	3.5	7.0
200	Humana Inc.	HUM	0.6	12.0
201	Hunt (J.B.)	JBHT	0.9	9.5

202	Huntington Bancshs.	HBAN	4.1	10.5
203	Huntington Ingalls	HII	1.6	7.0
204	IDEX Corp.	IEX	1.2	9.5
205	Illinois Tool Works	ITW	2.4	9.5
206	Ingersoll-Rand	IR	1.6	12.5
207	Int'l Business Mach.	IBM	4.9	1.5
208	Int'l Flavors & Frag.	IFF	2.5	8.0
209	Int'l Paper	IP	4.5	9.0
210	Intel Corp.	INTC	2.2	10.5
211	Intercontinental Exch.	ICE	1.2	10.5
212	Interpublic Group	IPG	4.5	11.0
213	Intuit Inc.	INTU	0.8	14.5
214	Invesco Ltd.	IVZ	6.7	3.5
215	Iron Mountain	IRM	7.8	8.5
216	Jacobs Engineering	J	0.8	14.5
217	Johnson & Johnson	JNJ	2.6	12.0
218	Johnson Ctrls. Int'l plc	JCI	2.5	4.5
219	JPMorgan Chase	JPM	2.7	8.5
220	Juniper Networks	JNPR	3.2	5.5
221	Kansas City South'n	KSU	1.0	12.0
222	Kellogg	K	3.4	4.0
223	KeyCorp	KEY	3.7	10.5
224	Kimberly-Clark	KMB	3.0	7.5
225	Kimco Realty	KIM	5.6	5.0
226	Kinder Morgan Inc.	KMI	4.8	35.5
227	KLA Corp.	KLAC	1.9	11.0
228	Kohl's Corp.	KSS	5.7	6.5
229	Kraft Heinz Co.	KHC	5.1	
230	Kroger Co.	KR	2.2	4.0
231	L Brands	LB	6.5	-2.5
232	L3Harris Technologies	LHX	1.5	16.5
233	Lam Research	LRCX	1.6	9.0
234	Lamb Weston Holdings	LW	0.9	11.0
235	Las Vegas Sands	LVS	4.5	7.5
236	Lauder (Estee)	EL	0.9	14.0
237	Leggett & Platt	LEG	3.1	9.0
238	Leidos Hldgs.	LDOS	1.4	9.0
239	Lennar Corp.	LEN	0.3	8.5
240	Lilly (Eli)	LLY	2.3	11.5
241	Lincoln Nat'l Corp.	LNC	2.7	9.0
242	Linde plc	LIN	1.8	
243	Lockheed Martin	LMT	2.5	12.5
244	Loews Corp.	L	0.5	14.0
245	Lowe's Cos.	LOW	2.0	11.5
246	LyondellBasell Inds.	LYB	4.4	5.5
247	M&T Bank Corp.	MTB	2.6	9.5
248	Macerich Comp. (The)	MAC	11.3	3.0
249	Macy's Inc.	M	9.4	2.5
250	Marathon Oil Corp.	MRO	2.0	
251	Marathon Petroleum	MPC	3.5	11.0
252	MarketAxess Holdings	MKTX	0.5	14.0

253	Marriott Int'l	MAR	1.3	11.5
254	Marsh & McLennan	MMC	1.6	9.0
255	Martin Marietta	MLM	0.8	9.5
256	Masco Corp.	MAS	1.1	9.5
257	MasterCard Inc.	MA	0.5	16.0
258	Maxim Integrated	MXIM	3.1	5.5
259	McCormick & Co.	MKC	1.5	8.0
260	McDonald's Corp.	MCD	2.5	8.5
261	McKesson Corp.	MCK	1.2	10.5
262	Medtronic plc	MDT	1.9	8.5
263	Merck & Co.	MRK	2.7	9.0
264	MetLife Inc.	MET	3.5	7.5
265	MGM Resorts Int'l	MGM	1.6	14.0
266	Microchip Technology	MCHP	1.4	9.5
267	Microsoft Corp.	MSFT	1.3	14.0
268	Mid-America Apartment	MAA	3.1	1.0
269	Molson Coors Brewing	TAP	4.3	5.5
270	Mondelez Int'l	MDLZ	2.1	8.5
271	Moody's Corp.	MCO	0.8	11.5
272	Morgan Stanley	MS	2.8	10.0
273	Mosaic Company	MOS	1.1	21.0
274	Motorola Solutions	MSI	1.6	10.5
275	MSCI Inc.	MSCI	1.1	18.5
276	Nasdaq, Inc.	NDAQ	1.8	8.0
277	National Oilwell Varco	NOV	0.8	
278	NetApp, Inc.	NTAP	3.0	10.0
279	Newell Brands	NWL	4.9	4.0
280	Newmont Goldcorp	NEM	1.4	2.5
281	News Corp. 'A'	NWSA	1.4	
282	News Corp. 'B'	NWS	1.4	
283	NextEra Energy	NEE	2.3	10.5
284	Nielsen Hldgs. plc	NLSN	1.2	45.5
285	NIKE, Inc. 'B'	NKE	1.0	16.5
286	NiSource Inc.	NI	2.9	12.5
287	Noble Energy	NBL	2.1	
288	Nordstrom, Inc.	JWN	3.6	5.0
289	Norfolk Southern	NSC	2.0	14.0
290	Northern Trust Corp.	NTRS	2.6	8.5
291	Northrop Grumman	NOC	1.5	9.5
292	NortonLifeLock Inc.	NLOK	1.9	7.0
293	NRG Energy	NRG	0.3	
294	Nucor Corp.	NUE	2.8	13.0
295	NVIDIA Corp.	NVDA	0.3	11.5
296	Occidental Petroleum	OXY	8.2	24.5
297	Omnicom Group	OMC	3.5	6.5
298	ONEOK Inc.	OKE	5.1	17.0
299	Oracle Corp.	ORCL	1.8	10.0
300	PACCAR Inc.	PCAR	4.5	7.5
301	Packaging Corp.	PKG	2.8	6.0
302	Parker-Hannifin	PH	1.7	9.0
303	Paychex, Inc.	PAYX	3.1	10.5



304	Pentair plc	PNR	1.7	6.0
305	People's United Fin'l	PBCT	4.2	9.0
306	PepsiCo, Inc.	PEP	2.9	6.5
307	PerkinElmer Inc.	PKI	0.3	11.0
308	Perrigo Co. plc	PRGO	1.6	2.0
309	Pfizer, Inc.	PFE	3.9	10.0
310	Philip Morris Int'l	PM	5.4	6.0
311	Phillips 66	PSX	3.5	10.0
312	Pinnacle West Capital	PNW	3.5	5.0
313	Pioneer Natural Res.	PXD	1.2	35.0
314	PNC Financial Serv.	PNC	2.9	8.0
315	PPG Inds.	PPG	1.5	6.0
316	PPL Corp.	PPL	4.7	1.5
317	Price (T. Rowe) Group	TROW	2.6	10.0
318	Principal Fin'l Group	PFG	4.0	5.5
319	Procter & Gamble	PG	2.4	9.0
320	Progressive Corp.	PGR	0.6	15.5
321	Prologis	PLD	2.6	6.5
322	Prudential Fin'l	PRU	4.2	6.5
323	Public Serv. Enterprise	PEG	3.3	6.0
324	Public Storage	PSA	4.0	4.5
325	PulteGroup, Inc.	PHM	1.2	9.5
326	PVH Corp.	PVH	0.1	9.0
327	Qualcomm Inc.	QCOM	2.8	10.5
328	Quanta Services	PWR	0.5	17.0
329	Quest Diagnostics	DGX	2.0	9.0
330	Ralph Lauren	RL	2.3	8.0
331	Raymond James Fin'l	RJF	1.5	10.0
332	Raytheon Co.	RTN	1.7	10.0
333	Realty Income Corp.	O	3.8	4.5
334	Regency Centers Corp.	REG	3.7	16.0
335	Regions Financial	RF	3.8	10.5
336	Republic Services	RSG	1.9	11.5
337	ResMed Inc.	RMD	1.0	18.0
338	Robert Half Int'l	RHI	2.1	9.0
339	Rockwell Automation	ROK	2.0	8.0
340	Rollins, Inc.	ROL	1.3	13.0
341	Roper Tech.	ROP	0.6	11.5
342	Ross Stores	ROST	0.9	9.5
343	Royal Caribbean	RCL	2.5	12.5
344	S&P Global	SPGI	0.9	11.0
345	SBA Communications	SBAC	0.6	29.5
346	Schlumberger Ltd.	SLB	5.1	16.5
347	Schwab (Charles)	SCHW	1.6	12.0
348	Seagate Technology	STX	4.4	4.0
349	Sealed Air	SEE	1.6	22.5
350	Sempra Energy	SRE	2.7	11.0
351	Sherwin-Williams	SHW	0.9	10.5
352	Simon Property Group	SPG	5.9	4.5
353	Skyworks Solutions	SWKS	1.5	8.0
354	SL Green Realty	SLG	3.9	5.5

355	Smith (A.O.)	AOS	2.0	7.5
356	Smucker (J.M.)	SJM	3.4	4.5
357	Snap-on Inc.	SNA	2.6	6.0
358	Southern Co.	SO	4.0	3.5
359	Southwest Airlines	LUV	1.3	10.5
360	Stanley Black & Decker	SWK	1.7	9.0
361	Starbucks Corp.	SBUX	1.9	13.5
362	State Street Corp.	STT	2.7	5.0
363	Stryker Corp.	SYK	1.1	13.0
364	Synchrony Financial	SYF	2.5	9.5
365	Sysco Corp.	SYY	2.1	10.5
366	Tapestry Inc.	TPR	5.1	11.0
367	Target Corp.	TGT	2.0	8.5
368	TE Connectivity	TEL	1.9	6.5
369	TechnipFMC	FTI	2.5	14.8
370	Teleflex Inc.	TFX	0.4	15.0
371	Texas Instruments	TXN	2.8	6.0
372	Textron, Inc.	TXT	0.2	13.0
373	Thermo Fisher Sci.	TMO	0.2	10.0
374	Tiffany & Co.	TIF	1.8	10.5
375	TJX Companies	TJX	1.5	13.5
376	Tractor Supply	TSCO	1.7	11.5
377	Travelers Cos.	TRV	2.4	9.0
378	Truist Fin'l	TFC	3.3	8.0
379	Tyson Foods 'A'	TSN	1.9	7.5
380	U.S. Bancorp	USB	2.9	6.0
381	UDR, Inc.	UDR	3.0	5.5
382	Union Pacific	UNP	2.2	13.0
383	United Parcel Serv.	UPS	3.3	8.0
384	United Technologies	UTX	2.0	9.0
385	UnitedHealth Group	UNH	1.5	13.5
386	Universal Health 'B'	UHS	0.6	11.0
387	Unum Group	UNM	3.9	8.5
388	V.F. Corp.	VFC	2.0	7.0
389	Valero Energy	VLO	4.0	11.5
390	Ventas, Inc.	VTR	5.6	4.0
391	Verisk Analytics	VRSK	0.7	10.0
392	Verizon Communic.	VZ	4.1	4.0
393	ViacomCBS Inc.	VIAC	1.9	9.5
394	Visa Inc.	V	0.6	18.0
395	Vornado R'lty Trust	VNO	3.9	-1.5
396	Vulcan Materials	VMC	0.9	14.5
397	Wabtec Corp.	WAB	0.6	13.5
398	Walgreens Boots	WBA	3.2	9.0
399	Walmart Inc.	WMT	1.8	7.5
400	Waste Management	WM	1.8	8.5
401	WEC Energy Group	WEC	2.7	6.0
402	Wells Fargo	WFC	3.8	5.5
403	Welltower Inc.	WELL	4.5	10.5
404	Western Digital	WDC	3.4	1.0
405	Western Union	WU	2.9	6.5

406	WestRock Co.	WRK	4.4	8.0
407	Weyerhaeuser Co.	WY	4.5	15.0
408	Whirlpool Corp.	WHR	3.3	6.5
409	Williams Cos.	WMB	6.5	20.0
410	Willis Towers Wat. plc	WLTW	1.3	17.5
411	Wynn Resorts	WYNN	2.9	14.5
412	Xcel Energy Inc.	XEL	2.7	5.5
413	Xerox Holdings	XRX	2.7	12.5
414	Xilinx Inc.	XLNX	1.5	8.0
415	Xylem Inc.	XYL	1.2	14.0
416	Yum! Brands	YUM	1.7	12.0
417	Zimmer Biomet Hldgs.	ZBH	0.7	4.5
418	Zions Bancorp.	ZION	2.6	9.5
419	Zoetis Inc.	ZTS	0.6	13.5
	<b>AVERAGE</b>		<b>2.5</b>	<b>10.0</b>

Source: Value Line Investment Analyzer 12/2019

### 2018 Utility Industry Historical Risk Premium

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Long-Term Government Bond Yield	Long-Term Government Income Component Bond Yield	20 year Maturity Bond Value	Gain/Loss	Interest	Bond Total Return	S&P Utility Index Return	Utility Equity Risk Premium Over Bond Returns	Utility Equity Risk Premium Over Bond Return Income Component
Line No	Year								
1	1931	4.07%	3.33%	1,000.00					
2	1932	3.15%	3.69%	1,135.75	135.75	40.70	17.64%	-0.54%	-18.18%
3	1933	3.36%	3.12%	969.60	-30.40	31.50	0.11%	-21.87%	-21.98%
4	1934	2.93%	3.18%	1,064.73	64.73	33.60	9.83%	-20.41%	-30.24%
5	1935	2.76%	2.81%	1,025.99	25.99	29.30	5.53%	76.63%	71.10%
6	1936	2.56%	2.77%	1,031.15	31.15	27.60	5.88%	20.69%	14.81%
7	1937	2.73%	2.66%	973.93	-26.07	25.60	-0.05%	-37.04%	-36.99%
8	1938	2.52%	2.64%	1,032.83	32.83	27.30	6.01%	22.45%	16.44%
9	1939	2.26%	2.40%	1,041.65	41.65	25.20	6.68%	11.26%	4.58%
10	1940	1.94%	2.23%	1,052.84	52.84	22.60	7.54%	-17.15%	-24.69%
11	1941	2.04%	1.94%	983.64	-16.36	19.40	0.30%	-31.57%	-31.87%
12	1942	2.46%	2.46%	933.97	-66.03	20.40	-4.56%	15.39%	19.95%
13	1943	2.48%	2.44%	996.86	-3.14	24.60	2.15%	46.07%	43.92%
14	1944	2.46%	2.46%	1,003.14	3.14	24.80	2.79%	18.03%	15.24%
15	1945	1.99%	2.34%	1,077.23	77.23	24.60	10.18%	53.33%	43.15%
16	1946	2.12%	2.04%	978.90	-21.10	19.90	-0.12%	1.26%	1.38%
17	1947	2.43%	2.13%	951.13	-48.87	21.20	-2.77%	-13.16%	-10.39%
18	1948	2.37%	2.40%	1,009.51	9.51	24.30	3.38%	4.01%	0.63%
19	1949	2.09%	2.25%	1,045.58	45.58	23.70	6.93%	31.39%	24.46%
20	1950	2.24%	2.12%	975.93	-24.07	20.90	-0.32%	3.25%	3.57%
21	1951	2.69%	2.38%	930.75	-69.25	22.40	-4.69%	18.63%	23.32%
22	1952	2.79%	2.66%	984.75	-15.25	26.90	1.17%	19.25%	18.08%
23	1953	2.74%	2.84%	1,007.66	7.66	27.90	3.56%	7.85%	4.29%
24	1954	2.72%	2.79%	1,003.07	3.07	27.40	3.05%	24.72%	21.67%
25	1955	2.95%	2.75%	965.44	-34.56	27.20	-0.74%	11.26%	12.00%
26	1956	3.45%	2.99%	928.19	-71.81	29.50	-4.23%	5.06%	9.29%
27	1957	3.23%	3.44%	1,032.23	32.23	34.50	6.67%	6.36%	-0.31%
28	1958	3.82%	3.27%	918.01	-81.99	32.30	-4.97%	40.70%	45.67%
29	1959	4.47%	4.01%	914.65	-85.35	38.20	-4.71%	7.49%	12.20%
30	1960	3.80%	4.26%	1,093.27	93.27	44.70	13.80%	20.26%	6.46%
31	1961	4.15%	3.83%	952.75	-47.25	38.00	-0.92%	29.33%	30.25%
32	1962	3.95%	4.00%	1,027.48	27.48	41.50	6.90%	-2.44%	-9.34%
33	1963	4.17%	3.89%	970.35	-29.65	39.50	0.99%	12.36%	11.37%
34	1964	4.23%	4.15%	991.96	-8.04	41.70	3.37%	15.91%	12.54%
35	1965	4.50%	4.19%	964.64	-35.36	42.30	0.69%	4.67%	3.98%
36	1966	4.55%	4.49%	993.48	-6.52	45.00	3.85%	-4.48%	-8.33%
37	1967	5.56%	4.59%	879.01	-120.99	45.50	-7.55%	-0.63%	6.92%
38	1968	5.98%	5.50%	951.38	-48.62	55.60	0.70%	10.32%	9.62%
39	1969	6.87%	5.96%	904.00	-96.00	59.80	-3.62%	-15.42%	-11.80%
40	1970	6.48%	6.74%	1,043.38	43.38	68.70	11.21%	16.56%	5.35%
41	1971	5.97%	6.32%	1,059.09	59.09	64.80	12.39%	2.41%	-9.98%
42	1972	5.99%	5.87%	997.69	-2.31	59.70	5.74%	8.15%	2.41%
43	1973	7.26%	6.51%	867.09	-132.91	59.90	-7.30%	-18.07%	-10.77%
44	1974	7.60%	7.27%	965.33	-34.67	72.60	3.79%	-21.55%	-25.34%
45	1975	8.05%	7.99%	955.63	-44.37	76.00	3.16%	44.49%	41.33%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Long-Term	Long-Term	20 year				S&P	Unity Equity	Unity Equity
46	1976	7.21%	7.89%	1,088.25	88.25	80.50	16.87%	31.81%	23.92%
47	1977	8.03%	7.14%	919.03	-80.97	72.10	-0.89%	8.64%	1.50%
48	1978	8.98%	7.90%	912.47	-87.53	80.30	-0.72%	-3.71%	-11.61%
49	1979	10.12%	8.86%	902.99	-97.01	89.80	-0.72%	13.58%	4.72%
50	1980	11.99%	9.97%	859.23	-140.77	101.20	-3.96%	15.08%	5.11%
51	1981	13.34%	11.55%	906.45	-93.55	119.90	2.63%	11.74%	0.19%
52	1982	10.95%	13.50%	1,192.38	192.38	133.40	32.58%	26.52%	13.02%
53	1983	11.97%	10.38%	923.12	-76.88	109.50	3.26%	20.01%	9.63%
54	1984	11.70%	11.74%	1,020.70	20.70	119.70	14.04%	26.04%	14.30%
55	1985	9.56%	11.25%	1,189.27	189.27	117.00	30.63%	33.05%	21.80%
56	1986	7.89%	8.98%	1,166.63	166.63	95.60	26.22%	28.53%	19.55%
57	1987	9.20%	7.92%	881.17	-118.83	78.90	-3.99%	-2.92%	-10.84%
58	1988	9.19%	8.97%	1,000.91	0.91	92.00	9.29%	18.27%	9.30%
59	1989	8.16%	8.81%	1,100.73	100.73	91.90	19.26%	47.80%	38.99%
60	1990	8.44%	8.19%	973.17	-26.83	81.60	5.48%	-2.57%	-10.76%
61	1991	7.30%	8.22%	1,118.94	118.94	84.40	20.33%	14.61%	6.39%
62	1992	7.26%	7.26%	1,004.19	4.19	73.00	7.72%	8.10%	0.84%
63	1993	6.54%	7.17%	1,079.70	79.70	72.60	15.23%	14.41%	7.24%
64	1994	7.99%	6.59%	856.40	-143.60	65.40	-7.82%	-7.94%	-14.53%
65	1995	6.03%	7.60%	1,225.98	225.98	79.90	30.59%	42.15%	34.55%
66	1996	6.73%	6.18%	923.67	-76.33	60.30	-1.60%	3.14%	-3.04%
67	1997	6.02%	6.64%	1,081.92	81.92	67.30	14.92%	24.69%	18.05%
68	1998	5.42%	5.83%	1,072.71	72.71	60.20	13.29%	14.82%	8.99%
69	1999	6.82%	5.57%	848.41	-151.59	54.20	-9.74%	-8.85%	-14.42%
70	2000	5.58%	6.50%	1,148.30	148.30	68.20	21.65%	59.70%	53.20%
71	2001	5.75%	5.53%	979.95	-20.05	55.80	3.57%	-30.41%	-35.94%
72	2002	4.84%	5.59%	1,115.77	115.77	57.50	17.33%	-30.04%	-35.63%
73	2003	5.11%	4.80%	966.42	-33.58	48.40	1.48%	26.11%	21.31%
74	2004	4.84%	5.02%	1,034.35	34.35	51.10	8.54%	24.22%	19.20%
75	2005	4.61%	4.69%	1,029.84	29.84	48.40	7.82%	16.79%	12.10%
76	2006	4.91%	4.68%	962.06	-37.94	46.10	-0.82%	20.95%	16.27%
77	2007	4.50%	4.86%	1,053.70	53.70	49.10	10.28%	19.36%	14.50%
78	2008	3.03%	4.45%	1,219.28	219.28	45.00	26.43%	-28.99%	-33.44%
79	2009	4.58%	3.47%	798.39	-201.61	30.20	-17.13%	11.94%	8.47%
80	2010	4.14%	4.25%	1,059.45	59.45	45.80	10.52%	5.49%	1.24%
81	2011	2.55%	3.82%	1,247.89	247.89	41.40	28.93%	19.88%	16.06%
82	2012	2.46%	2.46%	1,014.15	14.15	25.50	3.96%	1.29%	-1.17%
83	2013	3.78%	2.88%	815.92	-184.08	24.60	-15.95%	13.26%	10.38%
84	2014	2.46%	3.41%	1,207.53	207.53	37.80	24.53%	28.61%	25.20%
85	2015	2.68%	2.47%	966.11	-33.89	24.60	-0.93%	1.38%	-1.09%
86	2016	2.72%	2.30%	993.86	-6.14	26.80	2.07%	16.27%	13.97%
87	2017	2.54%	2.67%	972.83	-27.17	27.20	0.00%	12.11%	9.22%
88	2018	2.84%	2.82%	968.90	-31.10	29.00	-0.21%	-4.11%	1.11%
90	<b>Mean</b>							<b>5.6%</b>	<b>6.1%</b>

92 Source: Bloomberg Web site: Standard & Pools Utility Stock Index % Annual Change, Jan. to Dec.  
93 Bond yields from Duff & Phelps Classic 2019 Yearbooks Appendices A7 and A9 Long-Term Government Bonds Yields

**ALLOWED RISK PREMIUM ANALYSIS**

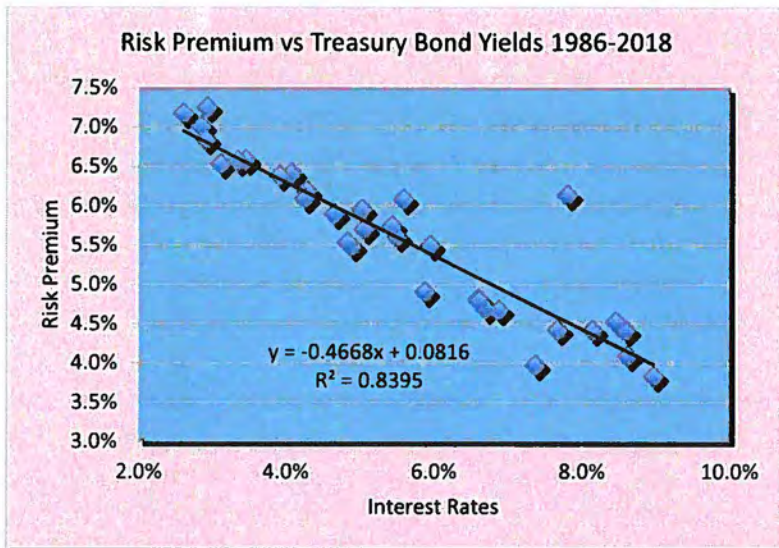
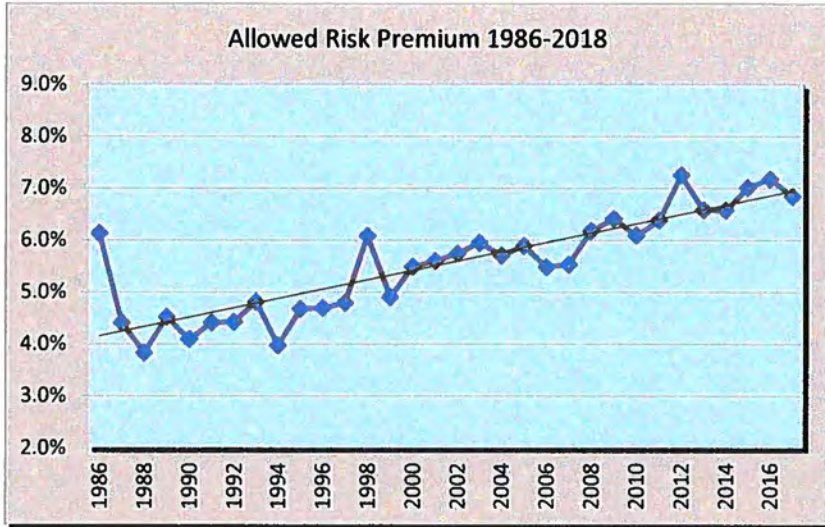
<u>Line</u>	<u>Date</u>	<u>Treasury Bond Yield<sup>1</sup></u>	<u>Authorized Electric Returns<sup>2</sup></u>	<u>Indicated Risk Premium</u>
		(1)	(2)	(3)
1	1986	7.80%	13.93%	6.1%
2	1987	8.58%	12.99%	4.4%
3	1988	8.96%	12.79%	3.8%
4	1989	8.45%	12.97%	4.5%
5	1990	8.61%	12.70%	4.1%
6	1991	8.14%	12.55%	4.4%
7	1992	7.67%	12.09%	4.4%
8	1993	6.60%	11.41%	4.8%
9	1994	7.37%	11.34%	4.0%
10	1995	6.88%	11.55%	4.7%
11	1996	6.70%	11.39%	4.7%
12	1997	6.61%	11.40%	4.8%
13	1998	5.58%	11.66%	6.1%
14	1999	5.87%	10.77%	4.9%
15	2000	5.94%	11.43%	5.5%
16	2001	5.49%	11.09%	5.6%
17	2002	5.42%	11.16%	5.7%
18	2003	5.02%	10.97%	6.0%
19	2004	5.05%	10.75%	5.7%
20	2005	4.65%	10.54%	5.9%
21	2006	4.88%	10.36%	5.5%
22	2007	4.83%	10.36%	5.5%
23	2008	4.28%	10.46%	6.2%
24	2009	4.07%	10.48%	6.4%
25	2010	4.25%	10.34%	6.1%
26	2011	3.91%	10.29%	6.4%
27	2012	2.92%	10.17%	7.3%
28	2013	3.45%	10.03%	6.6%
29	2014	3.34%	9.91%	6.6%
30	2015	2.84%	9.85%	7.0%
31	2016	2.60%	9.77%	7.2%
32	2017	2.90%	9.74%	6.8%
33	2018	3.11%	9.64%	6.5%
35	<b>Average</b>	<b>5.54%</b>	<b>11.12%</b>	<b>5.58%</b>

37 Sources:

38 1 Fed Reserve Board of Governors H.15 Release, 30-Yr Treasury rate

39 2 S&P Global Intelligence (Regulatory Research Associates)

40 *Major Rate Case Decisions 1986-2018*



IF YIELD = 3.90%  
 THEN RP = 6.34%  
 Ke = 10.24%