

**SURREBUTTAL / TRUE-UP DIRECT TESTIMONY**

**FOR**

**UNION ELECTRIC COMPANY,  
D/B/A AMEREN MISSOURI**

**CASE NO. ER-2024-0319**

**APPENDIX 2**

**SCHEDULES**

**BY**

**Seoung Joun Won, PhD**

**Financial Analysis**

**MISSOURI PUBLIC SERVICE COMMISSION**

**February 14, 2025**

**\*\* Denotes Confidential Information \*\***

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

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**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Federal Reserve Discount Rate and Federal Reserve Funds Rate**

Federal Reserve			Reserve			Federal Reserve		
Date	Discount Rate	Funds Rate	Date	Discount Rate	Funds Rate	Date	Discount Rate	Funds Rate
Jan 2001	5.52	5.50	Jan 2006	5.50	4.50	Jan 2011	0.75	0.13
Feb	5.00	5.50	Feb	5.50	4.50	Feb	0.75	0.13
Mar	4.81	5.00	Mar	5.75	4.75	Mar	0.75	0.13
Apr	4.28	4.50	Apr	5.75	4.75	Apr	0.75	0.13
May	3.73	4.00	May	6.00	5.00	May	0.75	0.13
Jun	3.47	3.75	June	6.25	5.25	Jun	0.75	0.13
Jul	3.25	3.75	July	6.25	5.25	Jul	0.75	0.13
Aug	3.16	3.50	Aug	6.25	5.25	Aug	0.75	0.13
Sep	2.77	3.00	Sep	6.25	5.25	Sep	0.75	0.13
Oct	2.02	2.50	Oct	6.25	5.25	Oct	0.75	0.13
Nov	1.58	2.00	Nov	6.25	5.25	Nov	0.75	0.13
Dec	1.33	1.75	Dec	6.25	5.25	Dec	0.75	0.13
Jan 2002	1.25	1.75	Jan 2007	6.25	5.25	Jan 2012	0.75	0.13
Feb	1.25	1.75	Feb	6.25	5.25	Feb	0.75	0.13
Mar	1.25	1.75	Mar	6.25	5.25	Mar	0.75	0.13
Apr	1.25	1.75	Apr	6.25	5.25	Apr	0.75	0.13
May	1.25	1.75	May	6.25	5.25	May	0.75	0.13
Jun	1.25	1.75	Jun	6.25	5.25	Jun	0.75	0.13
Jul	1.25	1.75	Jul	6.25	5.25	Jul	0.75	0.13
Aug	1.25	1.75	Aug	5.75	5.25	Aug	0.75	0.13
Sep	1.25	1.75	Sep	5.25	4.75	Sep	0.75	0.13
Oct	1.25	1.75	Oct	5.00	4.75	Oct	0.75	0.13
Nov	0.83	1.25	Nov	5.00	4.50	Nov	0.75	0.13
Dec	0.75	1.25	Dec	4.75	4.25	Dec	0.75	0.13
Jan 2003	2.25	1.25	Jan 2008	3.50	3.50	Jan 2013	0.75	0.13
Feb	2.25	1.25	Feb	3.50	3.00	Feb	0.75	0.13
Mar	2.25	1.25	Mar	2.50	2.25	Mar	0.75	0.13
Apr	2.25	1.25	Apr	2.25	2.25	Apr	0.75	0.13
May	2.25	1.25	May	2.25	2.00	May	0.75	0.13
Jun	2.00	1.25	Jun	2.25	2.00	Jun	0.75	0.13
Jul	2.00	1.00	Jul	2.25	2.00	Jul	0.75	0.13
Aug	2.00	1.00	Aug	2.25	2.00	Aug	0.75	0.13
Sep	2.00	1.00	Sep	2.25	2.00	Sept	0.75	0.13
Oct	2.00	1.00	Oct	1.25	1.25	Oct	0.75	0.13
Nov	2.00	1.00	Nov	1.25	1.25	Nov	0.75	0.13
Dec	2.00	1.00	Dec	0.50	0.13	Dec	0.75	0.13
Jan 2004	2.00	1.00	Jan 2009	0.50	0.13	Jan 2014	0.75	0.13
Feb	2.00	1.00	Feb	0.50	0.13	Feb	0.75	0.13
Mar	2.00	1.00	Mar	0.50	0.13	Mar	0.75	0.13
Apr	2.00	1.00	Apr	0.50	0.13	Apr	0.75	0.13
May	2.00	1.00	May	0.50	0.13	May	0.75	0.13
Jun	2.25	1.00	Jun	0.50	0.13	Jun	0.75	0.13
Jul	2.25	1.25	Jul	0.50	0.13	Jul	0.75	0.13
Aug	2.50	1.50	Aug	0.50	0.13	Aug	0.75	0.13
Sep	2.75	1.50	Sep	0.50	0.13	Sep	0.75	0.13
Oct	2.75	1.75	Oct	0.50	0.13	Oct	0.75	0.13
Nov	3.00	2.00	Nov	0.50	0.13	Nov	0.75	0.13
Dec	3.25	2.25	Dec	0.50	0.13	Dec	0.75	0.13
Jan 2005	3.25	2.25	Jan 2010	0.50	0.13	Jan 2015	0.75	0.13
Feb	3.50	2.50	Feb	0.75	0.13	Feb	0.75	0.13
Mar	3.75	2.50	Mar	0.75	0.13	Mar	0.75	0.13
Apr	3.75	2.75	April	0.75	0.13	Apr	0.75	0.13
May	4.00	3.00	May	0.75	0.13	May	0.75	0.13
Jun	4.25	3.00	Jun	0.75	0.13	Jun	0.75	0.13
Jul	4.25	3.25	Jul	0.75	0.13	Jul	0.75	0.13
Aug	4.50	3.50	Aug	0.75	0.13	Aug	0.75	0.13
Sep	4.75	3.75	Sep	0.75	0.13	Sep	0.75	0.13
Oct	4.75	3.75	Oct	0.75	0.13	Oct	0.75	0.13
Nov	5.00	4.00	Nov	0.75	0.13	Nov	0.75	0.13
Dec	5.25	4.25	Dec	0.75	0.13	Dec	1.00	0.38

**Union Electric Company, d/b/a Ameren Missouri  
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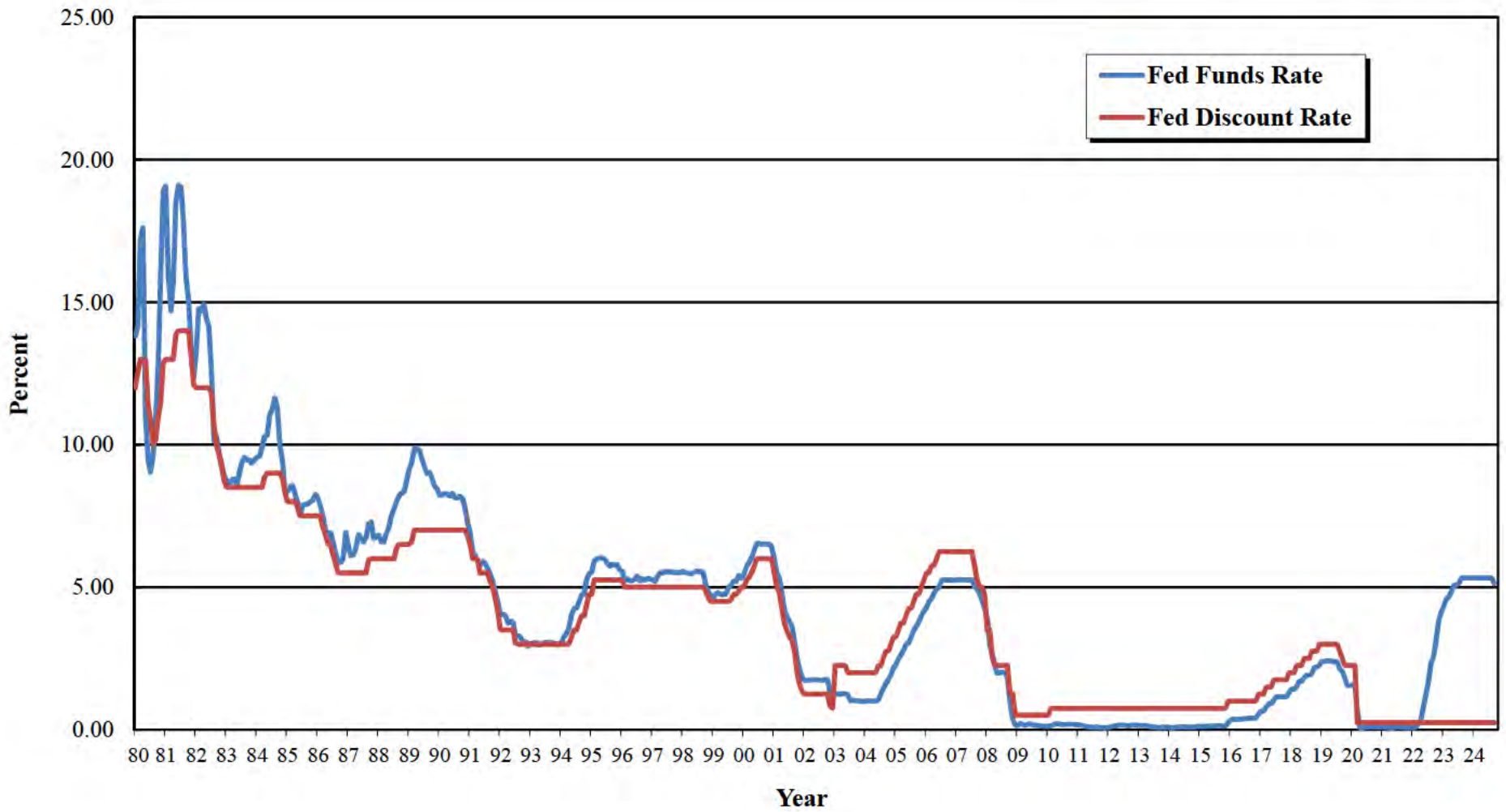
**Federal Reserve Discount Rate and Federal Reserve Funds Rate**

Federal Reserve			Reserve			Federal Reserve		
Date	Discount Rate	Funds Rate	Date	Discount Rate	Funds Rate	Date	Discount Rate	Funds Rate
Jan 2016	1.00	0.38	Jan 2021	0.25	0.09			
Feb	1.00	0.38	Feb	0.25	0.08			
Mar	1.00	0.38	Mar	0.25	0.07			
Apr	1.00	0.38	Apr	0.25	0.07			
May	1.00	0.38	May	0.25	0.06			
Jun	1.00	0.38	Jun	0.25	0.08			
Jul	1.00	0.39	Jul	0.25	0.10			
Aug	1.00	0.40	Aug	0.25	0.09			
Sep	1.00	0.40	Sep	0.25	0.08			
Oct	1.00	0.40	Oct	0.25	0.08			
Nov	1.00	0.41	Nov	0.25	0.08			
Dec	1.25	0.54	Dec	0.25	0.08			
Jan 2017	1.25	0.65	Jan 2022	0.25	0.08			
Feb	1.25	0.66	Feb	0.25	0.08			
Mar	1.50	0.79	Mar	0.25	0.20			
Apr	1.50	0.90	Apr	0.25	0.33			
May	1.50	0.91	May	0.25	0.77			
Jun	1.75	1.04	Jun	0.25	1.21			
July	1.75	1.15	Jul	0.25	1.68			
Aug	1.75	1.16	Aug	0.25	2.33			
Sep	1.75	1.15	Sep	0.25	2.56			
Oct	1.75	1.15	Oct	0.25	3.08			
Nov	1.75	1.16	Nov	0.25	3.78			
Dec	2.00	1.30	Dec	0.25	4.10			
Jan 2018	2.00	1.41	Jan 2023	0.25	4.33			
Feb	2.00	1.42	Feb	0.25	4.57			
Mar	2.25	1.51	Mar	0.25	4.65			
Apr	2.25	1.69	Apr	0.25	4.83			
May	2.25	1.70	May	0.25	5.06			
Jun	2.50	1.82	Jun	0.25	5.08			
Jul	2.50	1.91	Jul	0.25	5.12			
Aug	2.50	1.91	Aug	0.25	5.33			
Sep	2.75	1.95	Sep	0.25	5.33			
Oct	2.75	2.19	Oct	0.25	5.33			
Nov	2.75	2.20	Nov	0.25	5.33			
Dec	3.00	2.27	Dec	0.25	5.33			
Jan 2019	3.00	2.40	Jan 2024	0.25	5.33			
Feb	3.00	2.40	Feb	0.25	5.33			
Mar	3.00	2.41	Mar	0.25	5.33			
Apr	3.00	2.42	Apr	0.25	5.33			
May	3.00	2.39	May	0.25	5.33			
Jun	3.00	2.38	Jun	0.25	5.33			
Jul	3.00	2.40	Jul	0.25	5.33			
Aug	2.75	2.13	Aug	0.25	5.33			
Sept	2.50	2.04	Sep	0.25	5.13			
Oct	2.25	1.83						
Nov	2.25	1.55						
Dec	2.25	1.55						
Jan 2020	2.25	1.55						
Feb	2.25	1.58						
Mar	0.25	0.65						
Apr	0.25	0.05						
May	0.25	0.05						
Jun	0.25	0.08						
Jul	0.25	0.09						
Aug	0.25	0.10						
Sep	0.25	0.09						
Oct	0.25	0.09						
Nov	0.25	0.09						
Dec	0.25	0.09						

Source: Board of Governors of the Federal Reserve System (US), Federal Funds Effective Rate [FEDFUNDS], retrieved from FRED, Federal Reserve Bank of St. Louis  
<https://fred.stlouisfed.org/series/FEDFUNDS> January 25, 2025.

Union Electric Company, d/b/a Ameren Missouri  
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Federal Reserve Discount Rates and Federal Funds Rates  
1980 - 2024



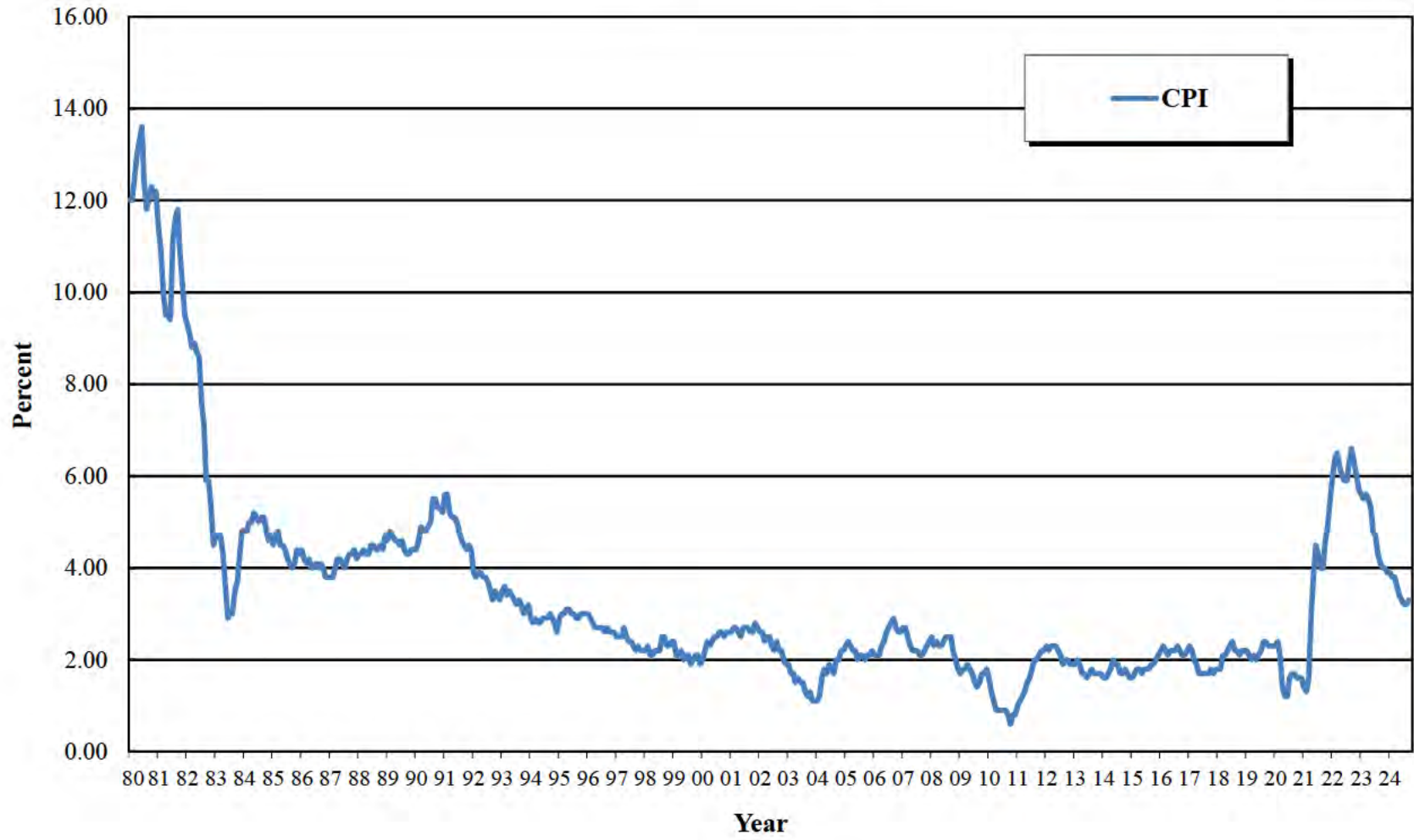
**UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI**  
**Case No. ER-2024-0319**  
**Rate of Inflation**

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.00	Jan 1987	3.80	Jan 1994	2.90	Jan 2001	2.60	Jan 2008	2.50	Jan 2015	1.60	Jan 2022	6.00
Feb	12.00	Feb	3.80	Feb	2.80	Feb	2.70	Feb	2.30	Feb	1.70	Feb	6.40
Mar	12.50	Mar	4.00	Mar	2.90	Mar	2.70	Mar	2.40	Mar	1.80	Mar	6.50
Apr	13.00	Apr	4.20	Apr	2.80	Apr	2.60	Apr	2.30	Apr	1.80	Apr	6.20
May	13.30	May	4.20	May	2.80	May	2.50	May	2.30	May	1.70	May	6.00
Jun	13.60	Jun	4.10	Jun	2.90	Jun	2.70	Jun	2.40	Jun	1.80	Jun	5.90
Jul	12.40	Jul	4.00	Jul	2.90	Jul	2.70	Jul	2.50	Jul	1.80	Jul	5.90
Aug	11.80	Aug	4.20	Aug	2.90	Aug	2.70	Aug	2.50	Aug	1.80	Aug	6.30
Sep	12.00	Sep	4.30	Sep	3.00	Sep	2.60	Sep	2.50	Sep	1.90	Sep	6.60
Oct	12.30	Oct	4.30	Oct	2.90	Oct	2.60	Oct	2.20	Oct	1.90	Oct	6.30
Nov	12.10	Nov	4.40	Nov	2.80	Nov	2.80	Nov	2.00	Nov	2.00	Nov	6.00
Dec	12.20	Dec	4.20	Dec	2.60	Dec	2.70	Dec	1.80	Dec	2.10	Dec	5.70
Jan 1981	11.40	Jan 1988	4.30	Jan 1995	2.90	Jan 2002	2.60	Jan 2009	1.70	Jan 2016	2.20	Jan 2023	5.60
Feb	10.90	Feb	4.30	Feb	3.00	Feb	2.60	Feb	1.80	Feb	2.30	Feb	5.50
Mar	10.00	Mar	4.40	Mar	3.00	Mar	2.40	Mar	1.80	Mar	2.20	Mar	5.60
Apr	9.50	Apr	4.30	Apr	3.10	Apr	2.50	Apr	1.90	Apr	2.10	Apr	5.50
May	9.50	May	4.30	May	3.10	May	2.50	May	1.80	May	2.20	May	5.30
Jun	9.40	Jun	4.50	Jun	3.00	Jun	2.30	Jun	1.70	Jun	2.20	Jun	4.80
Jul	11.10	Jul	4.50	Jul	3.00	Jul	2.20	Jul	1.50	Jul	2.20	Jul	4.70
Aug	11.60	Aug	4.40	Aug	2.90	Aug	2.40	Aug	1.40	Aug	2.30	Aug	4.30
Sep	11.80	Sep	4.40	Sep	2.90	Sep	2.20	Sep	1.50	Sep	2.20	Sep	4.10
Oct	10.90	Oct	4.50	Oct	3.00	Oct	2.20	Oct	1.70	Oct	2.10	Oct	4.00
Nov	10.20	Nov	4.40	Nov	3.00	Nov	2.00	Nov	1.70	Nov	2.10	Nov	4.00
Dec	9.50	Dec	4.70	Dec	3.00	Dec	1.90	Dec	1.80	Dec	2.20	Dec	3.90
Jan 1982	9.30	Jan 1989	4.60	Jan 1996	3.00	Jan 2003	1.90	Jan 2010	1.60	Jan 2017	2.30	Jan 2024	3.90
Feb	9.10	Feb	4.80	Feb	2.90	Feb	1.70	Feb	1.30	Feb	2.20	Feb	3.80
Mar	8.80	Mar	4.70	Mar	2.80	Mar	1.70	Mar	1.10	Mar	2.00	Mar	3.80
Apr	8.90	Apr	4.60	Apr	2.70	Apr	1.50	April	0.90	Apr	1.90	Apr	3.60
May	8.70	May	4.60	May	2.70	May	1.60	May	0.90	May	1.70	May	3.40
Jun	8.60	Jun	4.50	Jun	2.70	Jun	1.50	Jun	0.90	Jun	1.70	Jun	3.30
Jul	7.60	Jul	4.60	Jul	2.70	Jul	1.50	Jul	0.90	July	1.70	Jul	3.20
Aug	7.10	Aug	4.40	Aug	2.60	Aug	1.30	Aug	0.90	Aug	1.70	Aug	3.20
Sep	5.90	Sep	4.30	Sep	2.70	Sep	1.20	Sep	0.80	Sep	1.70	Sep	3.30
Oct	5.90	Oct	4.30	Oct	2.60	Oct	1.30	Oct	0.60	Oct	1.80		
Nov	5.30	Nov	4.40	Nov	2.60	Nov	1.10	Nov	0.80	Nov	1.70		
Dec	4.50	Dec	4.40	Dec	2.60	Dec	1.10	Dec	0.80	Dec	1.80		
Jan 1983	4.70	Jan 1990	4.40	Jan 1997	2.50	Jan 2004	1.10	Jan 2011	1.00	Jan 2018	1.80		
Feb	4.70	Feb	4.60	Feb	2.50	Feb	1.20	Feb	1.10	Feb	1.80		
Mar	4.70	Mar	4.90	Mar	2.50	Mar	1.60	Mar	1.20	Mar	2.10		
Apr	4.30	Apr	4.80	Apr	2.70	Apr	1.80	Apr	1.30	Apr	2.10		
May	3.60	May	4.80	May	2.50	May	1.70	May	1.50	May	2.20		
Jun	2.90	Jun	4.90	Jun	2.40	Jun	1.90	Jun	1.60	Jun	2.30		
Jul	3.00	Jul	5.00	Jul	2.40	Jul	1.80	Jul	1.80	Jul	2.40		
Aug	3.00	Aug	5.50	Aug	2.30	Aug	1.70	Aug	2.00	Aug	2.20		
Sep	3.50	Sep	5.50	Sep	2.20	Sep	2.00	Sep	2.00	Sep	2.20		
Oct	3.70	Oct	5.30	Oct	2.30	Oct	2.00	Oct	2.10	Oct	2.10		
Nov	4.30	Nov	5.30	Nov	2.20	Nov	2.20	Nov	2.20	Nov	2.20		
Dec	4.80	Dec	5.20	Dec	2.20	Dec	2.20	Dec	2.20	Dec	2.20		
Jan 1984	4.80	Jan 1991	5.60	Jan 1998	2.20	Jan 2005	2.30	Jan 2012	2.30	Jan 2019	2.20		
Feb	4.80	Feb	5.60	Feb	2.30	Feb	2.40	Feb	2.20	Feb	2.10		
Mar	5.00	Mar	5.20	Mar	2.10	Mar	2.30	Mar	2.30	Mar	2.00		
Apr	5.00	Apr	5.10	Apr	2.10	Apr	2.20	Apr	2.30	Apr	2.10		
May	5.20	May	5.10	May	2.20	May	2.20	May	2.30	May	2.00		
Jun	5.10	Jun	5.00	Jun	2.20	Jun	2.00	Jun	2.20	Jun	2.10		
Jul	5.00	Jul	4.80	Jul	2.20	Jul	2.10	Jul	2.10	Jul	2.20		
Aug	5.10	Aug	4.60	Aug	2.50	Aug	2.10	Aug	1.90	Aug	2.40		
Sep	5.10	Sep	4.50	Sep	2.50	Sep	2.00	Sep	2.00	Sept	2.40		
Oct	4.90	Oct	4.40	Oct	2.30	Oct	2.10	Oct	2.00	Oct	2.30		
Nov	4.60	Nov	4.50	Nov	2.30	Nov	2.10	Nov	1.90	Nov	2.30		
Dec	4.70	Dec	4.40	Dec	2.40	Dec	2.20	Dec	1.90	Dec	2.30		
Jan 1985	4.50	Jan 1992	3.90	Jan 1999	2.40	Jan 2006	2.10	Jan 2013	1.90	Jan 2020	2.30		
Feb	4.70	Feb	3.80	Feb	2.10	Feb	2.10	Feb	2.00	Feb	2.40		
Mar	4.80	Mar	3.90	Mar	2.10	Mar	2.10	Mar	1.90	Mar	2.10		
Apr	4.50	Apr	3.90	Apr	2.20	Apr	2.30	Apr	1.70	Apr	1.40		
May	4.50	May	3.80	May	2.00	May	2.40	May	1.70	May	1.20		
Jun	4.40	Jun	3.80	Jun	2.10	June	2.60	Jun	1.60	Jun	1.20		
Jul	4.20	Jul	3.70	Jul	2.10	July	2.70	Jul	1.70	Jul	1.60		
Aug	4.10	Aug	3.50	Aug	1.90	Aug	2.80	Aug	1.80	Aug	1.70		
Sep	4.00	Sep	3.30	Sep	2.00	Sep	2.90	Sept	1.70	Sep	1.70		
Oct	4.10	Oct	3.50	Oct	2.10	Oct	2.70	Oct	1.70	Oct	1.60		
Nov	4.40	Nov	3.40	Nov	2.10	Nov	2.60	Nov	1.70	Nov	1.60		
Dec	4.30	Dec	3.30	Dec	1.90	Dec	2.60	Dec	1.70	Dec	1.60		
Jan 1986	4.40	Jan 1993	3.50	Jan 2000	2.00	Jan 2007	2.70	Jan 2014	1.60	Jan 2021	1.40		
Feb	4.20	Feb	3.60	Feb	2.20	Feb	2.70	Feb	1.60	Feb	1.30		
Mar	4.10	Mar	3.40	Mar	2.40	Mar	2.50	Mar	1.70	Mar	1.60		
Apr	4.20	Apr	3.50	Apr	2.30	Apr	2.30	Apr	1.80	Apr	3.00		
May	4.00	May	3.40	May	2.40	May	2.20	May	2.00	May	3.80		
Jun	4.00	Jun	3.30	Jun	2.50	Jun	2.20	Jun	1.90	Jun	4.50		
Jul	4.10	Jul	3.20	Jul	2.50	Jul	2.20	Jul	1.90	Jul	4.30		
Aug	4.00	Aug	3.30	Aug	2.60	Aug	2.10	Aug	1.70	Aug	4.00		
Sep	4.10	Sep	3.20	Sep	2.60	Sep	2.10	Sep	1.70	Sep	4.00		
Oct	4.00	Oct	3.00	Oct	2.50	Oct	2.20	Oct	1.80	Oct	4.60		
Nov	3.80	Nov	3.10	Nov	2.60	Nov	2.30	Nov	1.70	Nov	4.90		
Dec	3.80	Dec	3.20	Dec	2.60	Dec	2.40	Dec	1.60	Dec	5.50		

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers less food and energy, Change for 12-Month Period, Bureau of Labor Statistics, <https://www.bls.gov/cpi/data.htm>

Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319

**Rate of Inflation  
1980 - 2024**



**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Average Yields on Moody's Public Utility Bonds**

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.12	Jan 1987	8.77	Jan 1994	7.31	Jan 2001	7.76	Jan 2008	6.08	Jan 2015	3.83	Jan 2022	3.46
Feb	13.48	Feb	8.81	Feb	7.44	Feb	7.69	Feb	6.28	Feb	3.91	Feb	3.73
Mar	14.33	Mar	8.75	Mar	7.83	Mar	7.59	Mar	6.29	Mar	3.97	Mar	4.02
Apr	13.50	Apr	9.30	Apr	8.20	Apr	7.81	Apr	6.36	Apr	3.96	Apr	4.34
May	12.17	May	9.82	May	8.32	May	7.88	May	6.38	May	4.38	May	4.79
Jun	11.87	Jun	9.87	Jun	8.31	Jun	7.75	Jun	6.50	Jun	4.60	Jun	4.91
Jul	12.12	Jul	10.01	Jul	8.47	Jul	7.71	Jul	6.50	Jul	4.63	Jul	4.84
Aug	12.82	Aug	10.33	Aug	8.41	Aug	7.57	Aug	6.48	Aug	4.54	Aug	4.80
Sep	13.29	Sep	11.00	Sep	8.65	Sep	7.73	Sep	6.59	Sep	4.68	Sep	5.33
Oct	13.53	Oct	11.32	Oct	8.88	Oct	7.64	Oct	7.70	Oct	4.63	Oct	5.91
Nov	14.07	Nov	10.82	Nov	9.00	Nov	7.61	Nov	7.80	Nov	4.73	Nov	5.78
Dec	14.48	Dec	10.99	Dec	8.79	Dec	7.86	Dec	6.87	Dec	4.69	Dec	5.30
Jan 1981	14.22	Jan 1988	10.75	Jan 1995	8.77	Jan 2002	7.69	Jan 2009	6.77	Jan 2016	4.62	Jan 2023	5.23
Feb	14.84	Feb	10.11	Feb	8.56	Feb	7.62	Feb	6.72	Feb	4.44	Feb	5.32
Mar	14.86	Mar	10.11	Mar	8.41	Mar	7.83	Mar	6.85	Mar	4.40	Mar	5.44
Apr	15.32	Apr	10.53	Apr	8.30	Apr	7.74	Apr	6.90	Apr	4.16	Apr	5.20
May	15.84	May	10.75	May	7.93	May	7.76	May	6.83	May	4.06	May	5.44
Jun	15.27	Jun	10.71	Jun	7.62	Jun	7.67	Jun	6.54	Jun	3.93	Jun	5.46
Jul	15.87	Jul	10.96	Jul	7.73	Jul	7.54	Jul	6.15	Jul	3.70	Jul	5.48
Aug	16.33	Aug	11.09	Aug	7.86	Aug	7.34	Aug	5.80	Aug	3.73	Aug	5.77
Sep	16.89	Sep	10.56	Sep	7.62	Sep	7.23	Sep	5.60	Sep	3.80	Sep	5.91
Oct	16.76	Oct	9.92	Oct	7.46	Oct	7.43	Oct	5.64	Oct	3.90	Oct	6.38
Nov	15.50	Nov	9.89	Nov	7.40	Nov	7.31	Nov	5.71	Nov	4.21	Nov	5.99
Dec	15.77	Dec	10.02	Dec	7.21	Dec	7.20	Dec	5.86	Dec	4.39	Dec	5.46
Jan 1982	16.73	Jan 1989	10.02	Jan 1996	7.20	Jan 2003	7.13	Jan 2010	5.83	Jan 2017	4.24	Jan 2024	5.51
Feb	16.72	Feb	10.02	Feb	7.37	Feb	6.92	Feb	5.94	Feb	4.25	Feb	5.09
Mar	16.07	Mar	10.16	Mar	7.72	Mar	6.80	Mar	5.90	Mar	4.30	Mar	5.59
Apr	15.82	Apr	10.14	Apr	7.88	Apr	6.68	Apr	5.87	Apr	4.19	Apr	5.83
May	15.60	May	9.92	May	7.99	May	6.35	May	5.59	May	4.19	May	5.78
Jun	16.18	Jun	9.49	Jun	8.07	Jun	6.21	Jun	5.62	Jun	4.01	Jun	5.65
Jul	16.04	Jul	9.34	Jul	8.02	Jul	6.54	Jul	5.41	Jul	4.06	Jul	5.68
Aug	15.22	Aug	9.37	Aug	7.84	Aug	6.78	Aug	5.10	Aug	3.92	Aug	5.42
Sep	14.56	Sep	9.43	Sep	8.01	Sep	6.58	Sep	5.10	Sep	3.93	Sep	5.23
Oct	13.88	Oct	9.37	Oct	7.76	Oct	6.50	Oct	5.20	Oct	3.97		
Nov	13.58	Nov	9.33	Nov	7.48	Nov	6.44	Nov	5.45	Nov	3.88		
Dec	13.55	Dec	9.31	Dec	7.58	Dec	6.35	Dec	5.64	Dec	3.85		
Jan 1983	13.46	Jan 1990	9.44	Jan 1997	7.79	Jan 2004	6.23	Jan 2011	5.64	Jan 2018	3.91		
Feb	13.60	Feb	9.66	Feb	7.68	Feb	6.17	Feb	5.73	Feb	4.15		
Mar	13.28	Mar	9.75	Mar	7.92	Mar	6.01	Mar	5.62	Mar	4.21		
Apr	13.03	Apr	9.87	Apr	8.08	Apr	6.38	Apr	5.62	Apr	4.24		
May	13.00	May	9.89	May	7.94	May	6.68	May	5.38	May	4.36		
Jun	13.17	Jun	9.69	Jun	7.77	Jun	6.53	Jun	5.32	Jun	4.37		
Jul	13.28	Jul	9.66	Jul	7.52	Jul	6.34	Jul	5.34	Jul	4.35		
Aug	13.50	Aug	9.84	Aug	7.57	Aug	6.18	Aug	4.78	Aug	4.33		
Sep	13.35	Sep	10.01	Sep	7.50	Sep	6.01	Sep	4.61	Sep	4.41		
Oct	13.19	Oct	9.94	Oct	7.37	Oct	5.95	Oct	4.66	Oct	4.56		
Nov	13.33	Nov	9.76	Nov	7.24	Nov	5.97	Nov	4.37	Nov	4.65		
Dec	13.48	Dec	9.57	Dec	7.16	Dec	5.93	Dec	4.47	Dec	4.51		
Jan 1984	13.40	Jan 1991	9.56	Jan 1998	7.03	Jan 2005	5.80	Jan 2012	4.48	Jan 2019	4.48		
Feb	13.50	Feb	9.31	Feb	7.09	Feb	5.64	Feb	4.47	Feb	4.35		
Mar	14.03	Mar	9.39	Mar	7.13	Mar	5.86	Mar	4.59	Mar	4.26		
Apr	14.30	Apr	9.30	Apr	7.12	Apr	5.72	Apr	4.54	Apr	4.18		
May	14.95	May	9.29	May	7.11	May	5.60	May	4.36	May	4.10		
Jun	15.16	Jun	9.44	Jun	6.99	Jun	5.39	Jun	4.26	Jun	3.93		
Jul	14.92	Jul	9.40	Jul	6.99	Jul	5.50	Jul	4.12	Jul	3.79		
Aug	14.29	Aug	9.16	Aug	6.96	Aug	5.51	Aug	4.18	Aug	3.36		
Sep	14.04	Sep	9.03	Sep	6.88	Sep	5.54	Sep	4.17	Sept	3.44		
Oct	13.68	Oct	8.99	Oct	6.88	Oct	5.79	Oct	4.04	Oct	3.45		
Nov	13.15	Nov	8.93	Nov	6.96	Nov	5.88	Nov	3.95	Nov	3.48		
Dec	12.96	Dec	8.76	Dec	6.84	Dec	5.83	Dec	4.10	Dec	3.45		
Jan 1985	12.88	Jan 1992	8.67	Jan 1999	6.87	Jan 2006	5.77	Jan 2013	4.24	Jan 2020	3.34		
Feb	13.00	Feb	8.77	Feb	7.00	Feb	5.83	Feb	4.29	Feb	3.16		
Mar	13.66	Mar	8.84	Mar	7.18	Mar	5.98	Mar	4.29	Mar	3.59		
Apr	13.42	Apr	8.79	Apr	7.16	Apr	6.28	Apr	4.08	Apr	3.31		
May	12.89	May	8.72	May	7.42	May	6.39	May	4.24	May	3.22		
Jun	11.91	Jun	8.64	Jun	7.70	June	6.39	Jun	4.63	Jun	3.10		
Jul	11.88	Jul	8.46	Jul	7.66	July	6.37	Jul	4.78	Jul	2.77		
Aug	11.93	Aug	8.34	Aug	7.86	Aug	6.20	Aug	4.85	Aug	2.76		
Sep	11.95	Sep	8.32	Sep	7.87	Sep	6.03	Sept	4.90	Sep	2.88		
Oct	11.84	Oct	8.44	Oct	8.02	Oct	6.01	Oct	4.78	Oct	2.98		
Nov	11.33	Nov	8.53	Nov	7.86	Nov	5.82	Nov	4.86	Nov	2.89		
Dec	10.82	Dec	8.36	Dec	8.04	Dec	5.83	Dec	4.88	Dec	2.80		
Jan 1986	10.66	Jan 1993	8.23	Jan 2000	8.22	Jan 2007	5.96	Jan 2014	4.72	Jan 2021	2.94		
Feb	10.16	Feb	8.00	Feb	8.10	Feb	5.91	Feb	4.64	Feb	3.13		
Mar	9.33	Mar	7.85	Mar	8.14	Mar	5.87	Mar	4.64	Mar	3.48		
Apr	9.02	Apr	7.76	Apr	8.14	Apr	6.01	Apr	4.52	Apr	3.33		
May	9.52	May	7.78	May	8.56	May	6.03	May	4.37	May	3.36		
Jun	9.51	Jun	7.68	Jun	8.22	Jun	6.34	Jun	4.42	Jun	3.19		
Jul	9.19	Jul	7.53	Jul	8.17	Jul	6.28	Jul	4.35	Jul	2.99		
Aug	9.15	Aug	7.21	Aug	8.06	Aug	6.28	Aug	4.28	Aug	2.99		
Sep	9.42	Sep	7.01	Sep	8.15	Sep	6.24	Sep	4.40	Sep	3.00		
Oct	9.39	Oct	6.99	Oct	8.08	Oct	6.17	Oct	4.24	Oct	3.13		
Nov	9.15	Nov	7.30	Nov	8.03	Nov	6.04	Nov	4.29	Nov	3.06		
Dec	8.96	Dec	7.33	Dec	7.79	Dec	6.23	Dec	4.18	Dec	3.17		

Source:  
<https://fred.stlouisfed.org/series/DBAA>



**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

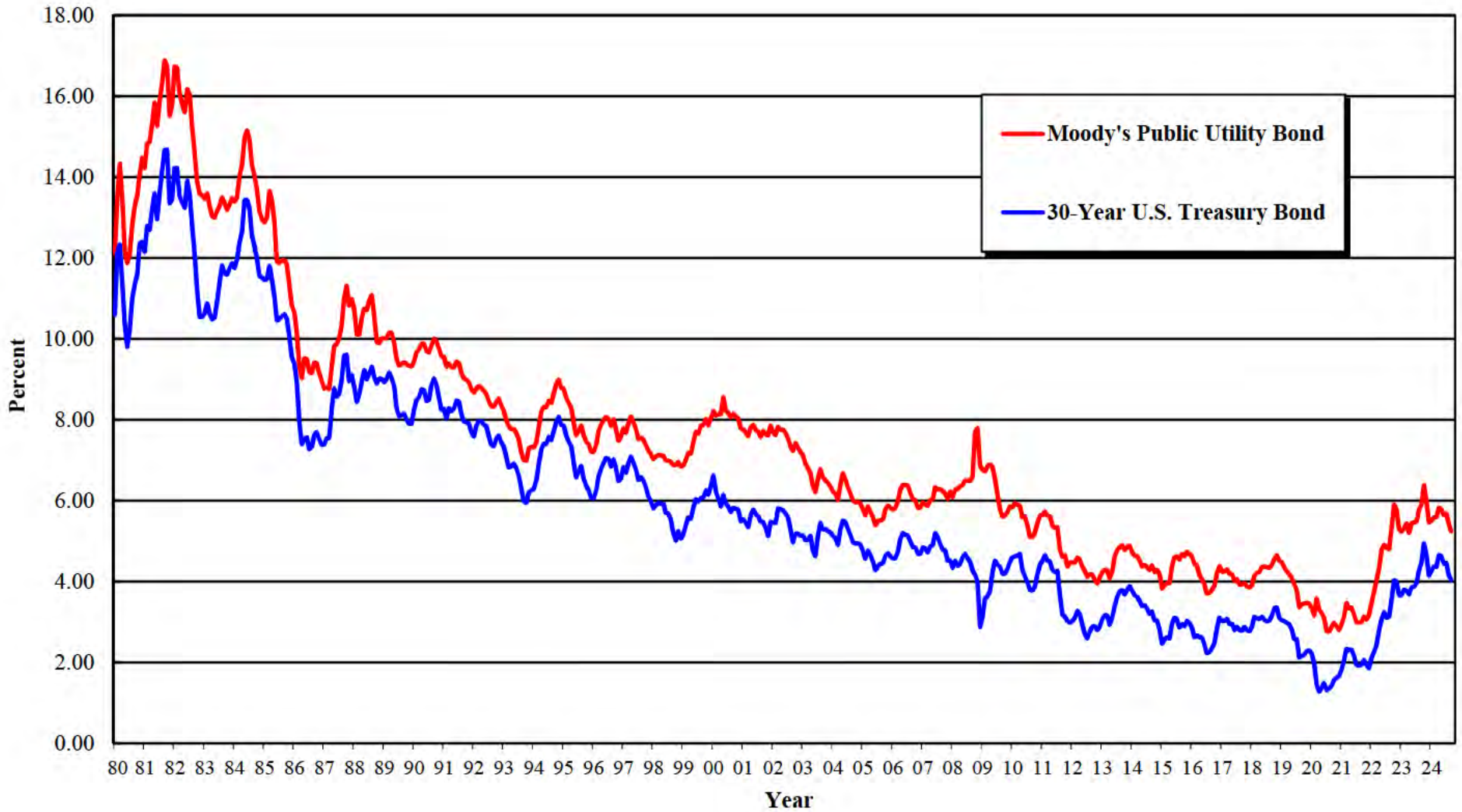
**Average Yields on Thirty-Year U.S. Treasury Bonds**

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	10.60	Jul	7.27	Jan 1993	7.34	Jul	5.98	Jan 2006	4.57	Jul	2.59	Jan 2019	3.04
Feb	12.13	Aug	7.33	Feb	7.09	Aug	6.07	Feb	4.57	Aug	2.77	Feb	3.02
Mar	12.34	Sep	7.62	Mar	6.82	Sep	6.07	Mar	4.73	Sep	2.88	Mar	2.98
Apr	11.40	Oct	7.70	Apr	6.85	Oct	6.26	Apr	5.06	Oct	2.90	Apr	2.94
May	10.36	Nov	7.52	May	6.92	Nov	6.15	May	5.20	Nov	2.80	May	2.82
Jun	9.81	Dec	7.37	Jun	6.81	Dec	6.35	June	5.15	Dec	2.88	Jun	2.57
Jul	10.24	Jan 1987	7.39	Jul	6.63	Jan 2000	6.63	July	5.13	Jan 2013	3.08	Jul	2.57
Aug	11.00	Feb	7.54	Aug	6.32	Feb	6.23	Aug	5.00	Feb	3.17	Aug	2.12
Sep	11.34	Mar	7.55	Sep	6.00	Mar	6.05	Sep	4.85	Mar	3.16	Sept	2.16
Oct	11.59	Apr	8.25	Oct	5.94	Apr	5.85	Oct	4.85	Apr	2.93	Oct	2.19
Nov	12.37	May	8.78	Nov	6.21	May	6.15	Nov	4.69	May	3.11	Nov	2.28
Dec	12.40	Jun	8.57	Dec	6.25	Jun	5.93	Dec	4.68	Jun	3.40	Dec	2.30
Jan 1981	12.14	Jul	8.64	Jan 1994	6.29	Jul	5.85	Jan 2007	4.85	Jul	3.61	Jan 2020	2.22
Feb	12.80	Aug	8.97	Feb	6.49	Aug	5.72	Feb	4.82	Aug	3.76	Feb	1.97
Mar	12.69	Sep	9.59	Mar	6.91	Sep	5.83	Mar	4.72	Sept	3.79	Mar	1.46
Apr	13.20	Oct	9.61	Apr	7.27	Oct	5.80	Apr	4.87	Oct	3.68	Apr	1.27
May	13.60	Nov	8.95	May	7.41	Nov	5.78	May	4.90	Nov	3.80	May	1.38
Jun	12.96	Dec	9.12	Jun	7.40	Dec	5.49	Jun	5.20	Dec	3.89	Jun	1.49
Jul	13.59	Jan 1988	8.83	Jul	7.58	Jan 2001	5.54	Jul	5.11	Jan 2014	3.77	Jul	1.31
Aug	14.17	Feb	8.43	Aug	7.49	Feb	5.45	Aug	4.93	Feb	3.66	Aug	1.36
Sep	14.67	Mar	8.63	Sep	7.71	Mar	5.34	Sep	4.79	Mar	3.62	Sep	1.42
Oct	14.68	Apr	8.95	Oct	7.94	Apr	5.65	Oct	4.77	Apr	3.52	Oct	1.57
Nov	13.35	May	9.23	Nov	8.08	May	5.78	Nov	4.52	May	3.39	Nov	1.62
Dec	13.45	Jun	9.00	Dec	7.87	Jun	5.67	Dec	4.53	Jun	3.42	Dec	1.67
Jan 1982	14.22	Jul	9.14	Jan 1995	7.85	Jul	5.61	Jan 2008	4.33	Jul	3.33	Jan 2021	1.82
Feb	14.22	Aug	9.32	Feb	7.61	Aug	5.48	Feb	4.52	Aug	3.20	Feb	2.04
Mar	13.53	Sep	9.06	Mar	7.45	Sep	5.48	Mar	4.39	Sep	3.26	Mar	2.34
Apr	13.37	Oct	8.89	Apr	7.36	Oct	5.32	Apr	4.44	Oct	3.04	Apr	2.30
May	13.24	Nov	9.02	May	6.95	Nov	5.12	May	4.60	Nov	3.04	May	2.32
Jun	13.92	Dec	9.01	Jun	6.57	Dec	5.48	Jun	4.69	Dec	2.83	Jun	2.16
Jul	13.55	Jan 1989	8.93	Jul	6.72	Jan 2002	5.45	Jul	4.57	Jan 2015	2.46	Jul	1.94
Aug	12.77	Feb	9.01	Aug	6.86	Feb	5.45	Aug	4.50	Feb	2.57	Aug	1.92
Sep	12.07	Mar	9.17	Sep	6.55	Mar	5.81	Sep	4.27	Mar	2.63	Sep	1.94
Oct	11.17	Apr	9.03	Oct	6.37	Apr	5.79	Oct	4.17	Apr	2.59	Oct	2.06
Nov	10.54	May	8.83	Nov	6.26	May	5.76	Nov	4.00	May	2.96	Nov	1.94
Dec	10.54	Jun	8.27	Dec	6.06	Jun	5.68	Dec	2.87	Jun	3.11	Dec	1.85
Jan 1983	10.63	Jul	8.08	Jan 1996	6.05	Jul	5.59	Jan 2009	3.13	Jul	3.07	Jan 2022	2.10
Feb	10.88	Aug	8.12	Feb	6.24	Aug	5.28	Feb	3.59	Aug	2.86	Feb	2.25
Mar	10.63	Sep	8.15	Mar	6.60	Sep	4.96	Mar	3.64	Sep	2.95	Mar	2.41
Apr	10.48	Oct	8.00	Apr	6.79	Oct	5.18	Apr	3.76	Oct	2.89	Apr	2.81
May	10.53	Nov	7.90	May	6.93	Nov	5.18	May	4.23	Nov	3.03	May	3.07
Jun	10.93	Dec	7.90	Jun	7.06	Dec	5.13	Jun	4.52	Dec	2.97	Jun	3.25
Jul	11.40	Jan 1990	8.26	Jul	7.03	Jan 2003	5.14	Jul	4.41	Jan 2016	2.86	Jul	3.10
Aug	11.82	Feb	8.50	Aug	6.84	Feb	5.02	Aug	4.37	Feb	2.62	Aug	3.13
Sep	11.63	Mar	8.56	Sep	7.03	Mar	5.03	Sep	4.19	Mar	2.68	Sep	3.56
Oct	11.58	Apr	8.76	Oct	6.81	Apr	5.13	Oct	4.19	Apr	2.62	Oct	4.04
Nov	11.75	May	8.73	Nov	6.48	May	4.76	Nov	4.31	May	2.63	Nov	4.00
Dec	11.88	Jun	8.46	Dec	6.55	Jun	4.62	Dec	4.49	Jun	2.45	Dec	3.66
Jan 1984	11.75	Jul	8.50	Jan 1997	6.83	Jul	5.13	Jan 2010	4.60	Jul	2.23	Jan 2023	3.66
Feb	11.95	Aug	8.86	Feb	6.69	Aug	5.45	Feb	4.62	Aug	2.26	Feb	3.80
Mar	12.38	Sep	9.03	Mar	6.93	Sep	5.28	Mar	4.64	Sep	2.35	Mar	3.77
Apr	12.65	Oct	8.86	Apr	7.09	Oct	5.30	April	4.69	Oct	2.50	Apr	3.68
May	13.43	Nov	8.54	May	6.94	Nov	5.25	May	4.29	Nov	2.86	May	3.86
Jun	13.44	Dec	8.24	Jun	6.77	Dec	5.21	Jun	4.13	Dec	3.11	Jun	3.87
Jul	13.21	Jan 1991	8.27	Jul	6.51	Jan 2004	5.13	Jul	3.99	Jan 2017	3.02	Jul	3.96
Aug	12.54	Feb	8.03	Aug	6.58	Feb	5.08	Aug	3.80	Feb	3.03	Aug	4.28
Sep	12.29	Mar	8.29	Sep	6.50	Mar	4.90	Sep	3.77	Mar	3.08	Sep	4.47
Oct	11.98	Apr	8.21	Oct	6.33	Apr	5.28	Oct	3.87	Apr	2.94	Oct	4.95
Nov	11.56	May	8.27	Nov	6.11	May	5.51	Nov	4.19	May	2.96	Nov	4.66
Dec	11.52	Jun	8.47	Dec	5.99	Jun	5.48	Dec	4.42	Jun	2.80	Dec	4.14
Jan 1985	11.45	Jul	8.45	Jan 1998	5.81	Jul	5.31	Jan 2011	4.52	July	2.88	Jan 2024	4.26
Feb	11.47	Aug	8.14	Feb	5.89	Aug	5.15	Feb	4.65	Aug	2.80	Feb	4.38
Mar	11.81	Sep	7.95	Mar	5.95	Sep	4.98	Mar	4.51	Sep	2.78	Mar	4.36
Apr	11.47	Oct	7.93	Apr	5.92	Oct	4.94	Apr	4.50	Oct	2.88	Apr	4.66
May	11.05	Nov	7.92	May	5.93	Nov	4.95	May	4.29	Nov	2.80	May	4.62
Jun	10.45	Dec	7.70	Jun	5.70	Dec	4.91	Jun	4.23	Dec	2.77	Jun	4.44
Jul	10.50	Jan 1992	7.58	Jul	5.68	Jan 2005	4.77	Jul	4.27	Jan 2018	2.88	Jul	4.46
Aug	10.56	Feb	7.85	Aug	5.54	Feb	4.56	Aug	3.65	Feb	3.13	Aug	4.15
Sep	10.61	Mar	7.97	Sep	5.20	Mar	4.77	Sep	3.18	Mar	3.09	Sep	4.04
Oct	10.50	Apr	7.96	Oct	5.01	Apr	4.65	Oct	3.13	Apr	3.07		
Nov	10.06	May	7.89	Nov	5.25	May	4.49	Nov	3.02	May	3.13		
Dec	9.54	Jun	7.84	Dec	5.06	Jun	4.28	Dec	2.98	Jun	3.05		
Jan 1986	9.40	Jul	7.60	Jan 1999	5.16	Jul	4.38	Jan 2012	3.03	Jul	3.01		
Feb	8.93	Aug	7.39	Feb	5.37	Aug	4.44	Feb	3.11	Aug	3.04		
Mar	7.96	Sep 1992	7.34	Mar	5.58	Sep	4.45	Mar	3.28	Sep	3.15		
Apr	7.39	Oct	7.53	Apr	5.55	Oct	4.64	Apr	3.18	Oct	3.34		
May 1986	7.52	Nov	7.61	May	5.81	Nov	4.70	May	2.93	Nov	3.36		
Jun	7.57	Dec	7.44	Jun	6.04	Dec	4.62	Jun	2.70	Dec	3.10		

Sources:  
<http://research.stlouisfed.org/fred2/data/GS30.txt>

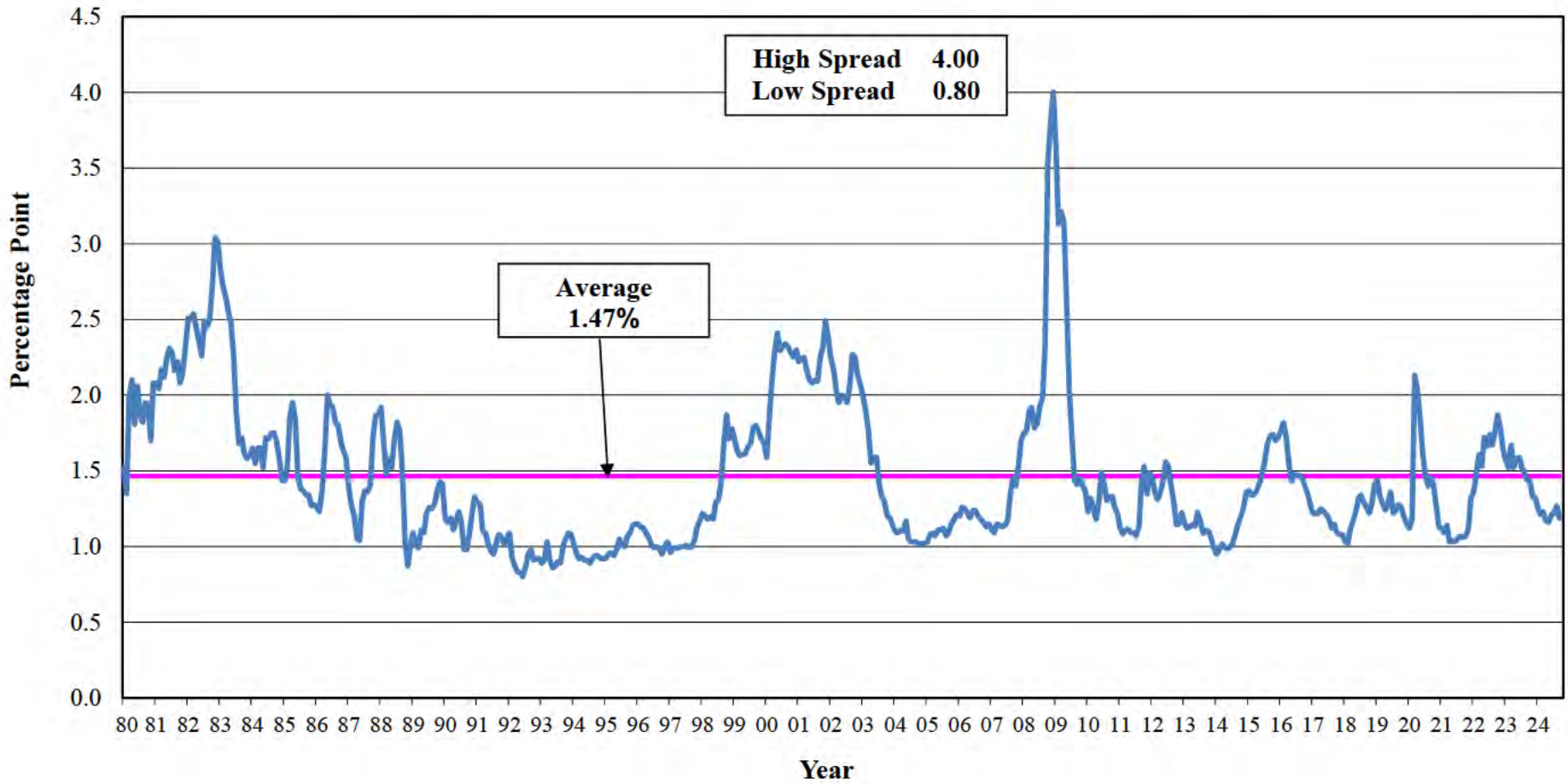
Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319

Average Yields on Mergent's Public Utility Bonds and  
Thirty-Year U.S. Treasury Bonds (1980 - 2024)



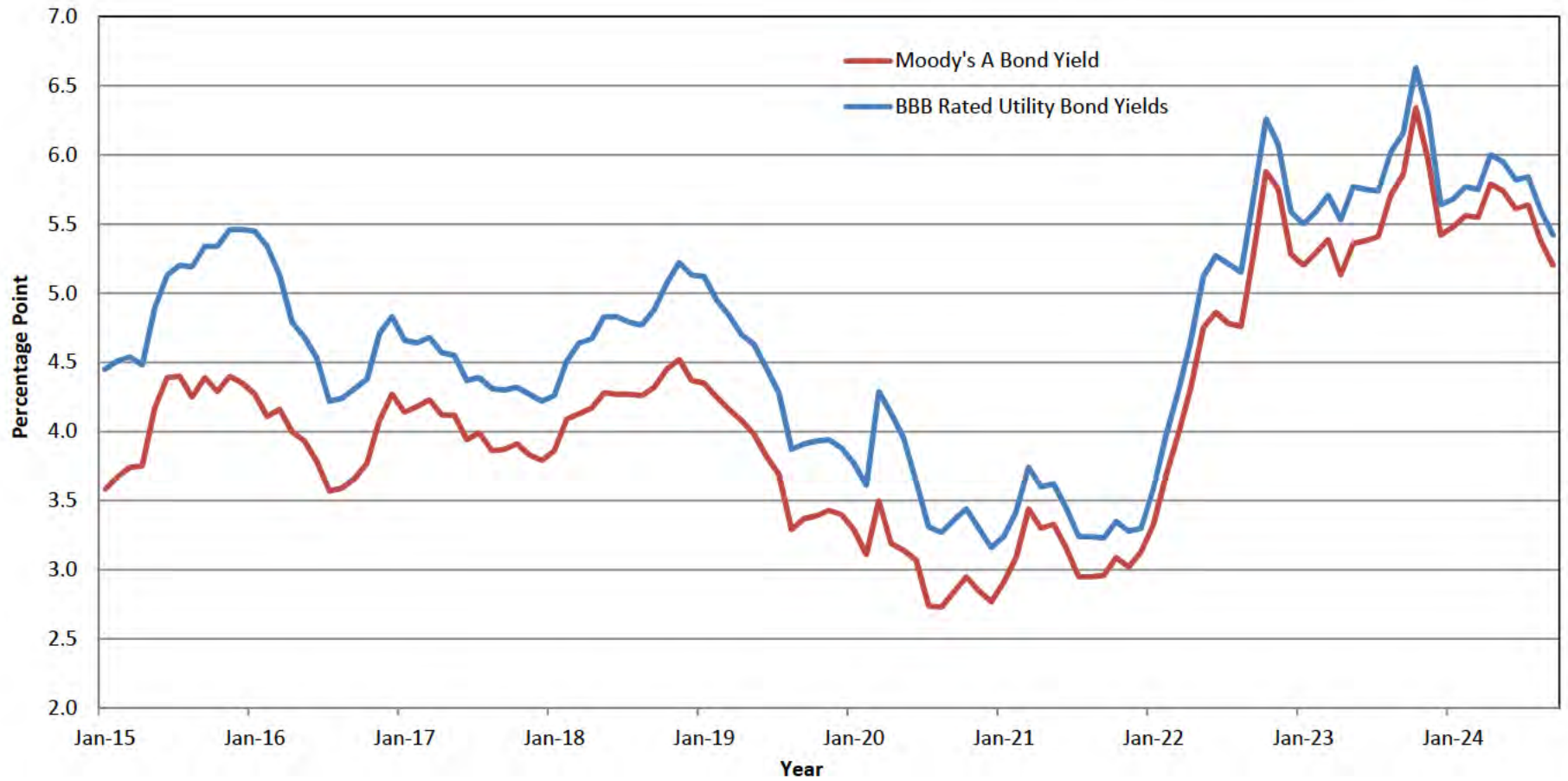
Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319

Monthly Spreads Between Yields on Moody's Public Utility Bonds and  
30-Year U.S. Treasury Bonds (1980 - 2024)



Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319

Average Yields on A and BBB rated Utility Bonds  
(2015- 2024)



**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Historical Consolidated Capital Structures for  
Ameren Corporation**  
(Dollars in Millions)

	<b>March 31, 2022</b>	<b>June 30, 2022</b>	<b>September 30, 2022</b>	<b>December 31, 2022</b>
Capital Components				
Common Equity	\$9,804.7	\$9,879.0	\$10,200.0	\$10,507.9
Preferred Stock	\$129.6	\$129.6	\$129.6	\$129.6
Long-Term Debt	\$12,820.4	\$13,341.7	\$13,484.1	\$13,784.4
<b>Total Capitalization</b>	<b>\$22,754.7</b>	<b>\$23,350.4</b>	<b>\$23,813.7</b>	<b>\$24,421.9</b>
	<b>March 31, 2023</b>	<b>June 30, 2023</b>	<b>September 30, 2023</b>	<b>December 31, 2023</b>
Capital Components				
Common Equity	\$10,507.9	\$10,606.2	\$10,696.6	\$11,349.0
Preferred Stock	\$129.6	\$129.6	\$129.6	\$129.6
Long-Term Debt	\$13,784.4	\$14,281.1	\$14,678.0	\$15,970.2
<b>Total Capitalization</b>	<b>\$24,421.9</b>	<b>\$25,016.9</b>	<b>\$25,504.3</b>	<b>\$27,448.8</b>
	<b>March 31, 2024</b>	<b>June 30, 2024</b>	<b>September 30, 2024</b>	<b>December 31, 2024</b>
Capital Components				
Common Equity	\$11,443.1	\$11,537.9	\$11,832.4	** [REDACTED] **
Preferred Stock	\$129.6	\$129.6	\$129.6	** [REDACTED] **
Long-Term Debt	\$16,315.9	\$17,079.4	\$16,723.1	** [REDACTED] **
<b>Total Capitalization</b>	<b>\$27,888.6</b>	<b>\$28,746.8</b>	<b>\$28,685.1</b>	** [REDACTED] **

**Historical Consolidated Capital Structures for  
Ameren Missouri**  
(Dollars in Millions)

	<b>March 31, 2022</b>	<b>June 30, 2022</b>	<b>September 30, 2022</b>	<b>December 31, 2022</b>
Capital Components				
Common Equity	\$5,880.1	\$5,980.9	\$6,377.9	\$6,347.1
Preferred Stock	\$81.8	\$81.8	\$81.8	\$81.8
Long-Term Debt	\$5,322.5	\$5,842.7	\$5,844.4	\$5,798.6
<b>Total Capitalization</b>	<b>\$11,284.5</b>	<b>\$11,905.5</b>	<b>\$12,304.1</b>	<b>\$12,227.6</b>
	<b>March 31, 2023</b>	<b>June 30, 2023</b>	<b>September 30, 2023</b>	<b>December 31, 2023</b>
Capital Components				
Common Equity	\$6,375.0	\$6,476.7	\$6,887.6	\$6,882.5
Preferred Stock	\$81.8	\$81.8	\$81.8	\$81.8
Long-Term Debt	\$6,294.4	\$6,295.5	\$6,297.2	\$6,298.9
<b>Total Capitalization</b>	<b>\$12,751.2</b>	<b>\$12,854.0</b>	<b>\$13,266.6</b>	<b>\$13,263.2</b>
	<b>March 31, 2024</b>	<b>June 30, 2024</b>	<b>September 30, 2024</b>	<b>December 31, 2024</b>
Capital Components				
Common Equity	\$6,907.5	\$7,385.5	\$7,766.8	** [REDACTED] **
Preferred Stock	\$81.8	\$81.8	\$81.8	** [REDACTED] **
Long-Term Debt	\$6,644.1	\$6,790.2	\$6,830.3	** [REDACTED] **
<b>Total Capitalization</b>	<b>\$13,633.5</b>	<b>\$14,257.5</b>	<b>\$14,678.9</b>	** [REDACTED] **

**Sources:**

Form 10-Q, 10-K.

Staff Data Request No. 0107.

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Historical Consolidated Capital Structures for  
Ameren Corporation**  
*(Dollars in Millions)*

	<b>March 31, 2022</b>	<b>June 30, 2022</b>	<b>September 30, 2022</b>	<b>December 31, 2022</b>
Capital Components				
Common Equity	43.09%	42.31%	42.83%	43.03%
Preferred Stock	0.57%	0.56%	0.54%	0.53%
Long-Term Debt	56.34%	57.14%	56.62%	56.44%
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
	<b>March 31, 2023</b>	<b>June 30, 2023</b>	<b>September 30, 2023</b>	<b>December 31, 2023</b>
Capital Components				
Common Equity	43.03%	42.40%	41.94%	41.35%
Preferred Stock	0.53%	0.52%	0.51%	0.47%
Long-Term Debt	56.44%	57.09%	57.55%	58.18%
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
	<b>March 31, 2024</b>	<b>June 30, 2024</b>	<b>September 30, 2024</b>	<b>December 31, 2024</b>
Capital Components				
Common Equity	41.03%	40.14%	41.25%	** [REDACTED] **
Preferred Stock	0.46%	0.45%	0.45%	** [REDACTED] **
Long-Term Debt	58.50%	59.41%	58.30%	** [REDACTED] **
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	** [REDACTED] **

**Historical Consolidated Capital Structures for  
Ameren Missouri**  
*(Dollars in Millions)*

	<b>March 31, 2022</b>	<b>June 30, 2022</b>	<b>September 30, 2022</b>	<b>December 31, 2022</b>
Capital Components				
Common Equity	52.11%	50.24%	51.84%	51.91%
Preferred Stock	0.73%	0.69%	0.67%	0.67%
Long-Term Debt	47.17%	49.08%	47.50%	47.42%
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
	<b>March 31, 2023</b>	<b>June 30, 2023</b>	<b>September 30, 2023</b>	<b>December 31, 2023</b>
Capital Components				
Common Equity	50.00%	50.39%	51.92%	51.89%
Preferred Stock	0.64%	0.64%	0.62%	0.62%
Long-Term Debt	49.36%	48.98%	47.47%	47.49%
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
	<b>March 31, 2024</b>	<b>June 30, 2024</b>	<b>September 30, 2024</b>	<b>December 31, 2024</b>
Capital Components				
Common Equity	50.67%	51.80%	52.91%	** [REDACTED] **
Preferred Stock	0.60%	0.57%	0.56%	** [REDACTED] **
Long-Term Debt	48.73%	47.63%	46.53%	** [REDACTED] **
<b>Total Capitalization</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	** [REDACTED] **

**Sources:**

Form 10-Q, 10-K.  
Staff Data Request No. 0107.

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Capital Structure as of December 31, 2024**  
**Ameren Corporation**  
*(Dollars in Millions)*

<u>Capital Component</u>	<u>Amount</u>	<u>Percentage of Capital</u>
Common Stock Equity	** [REDACTED] **	** [REDACTED] **
Preferred Stock	** [REDACTED] **	** [REDACTED] **
Long-Term Debt	** [REDACTED] **	** [REDACTED] **
<b>Total Capitalization</b>	<b><u><u>\$29,358</u></u></b>	<b><u><u>100.00%</u></u></b>

**Capital Structure as of December 31, 2024**  
**Ameren Missouri**  
*(Dollars in Millions)*

<u>Capital Component</u>	<u>Amount</u>	<u>Percentage of Capital</u>
Common Stock Equity	** [REDACTED] **	** [REDACTED] **
Preferred Stock	** [REDACTED] **	** [REDACTED] **
Long-Term Debt	** [REDACTED] **	** [REDACTED] **
<b>Total Capitalization</b>	<b><u><u>\$15,238</u></u></b>	<b><u><u>100.00%</u></u></b>

Sources:

SEC Form 10-Q and 10-K

Staff Data Request No. 0107.

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**  
**Cost of Long-Term Debt as of December 31, 2024**

**Ameren Corporation**  
(In millions)

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Total Annual Cost:	\$720.3
Total Carrying Value:	\$17,128.2
Embedded Cost = Total Annual Cost/Total Carrying Value	4.205%

**Ameren Missouri**  
(In millions)

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Total Annual Cost:	\$311.0
Total Carrying Value:	\$7,238.8
Embedded Cost = Total Annual Cost/Total Carrying Value	4.296%

Note:  
Source:  
Staff Data Requests No. 0108



**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Cost of Preferred Stock as of December 31, 2024**

**Ameren Corporation**

(In millions)

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Total Annual Cost:	\$5.3
Total Carrying Value:	\$130.2
Embedded Cost = Total Annual Cost/Total Carrying Value	4.094%

**Ameren Missouri**

(In millions)

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Total Annual Cost:	\$3.4
Total Carrying Value:	\$81.8
Embedded Cost = Total Annual Cost/Total Carrying Value	4.180%

Note:

Source:

Staff Data Requests No. 0108

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

CRITERIA FOR SELECTING COMPARABLE UTILITY COMPANIES											
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Edison Electric Institute (EEI) U.S. Investor-Owned Electric Utilities	Ticker	Stock Publicly Traded?	80% of Assets U.S. Regulated?	At Least Investment Grade Credit Rating? (S&P)	At Least Investment Grade Credit Rating? (Moody's)	Long-Term Growth Rates From at Least 2 Sources?	Positive Dividend Payout Since 2019?	At Least 60% of Income from Regulated Electric Utility Operations?	At least 50% of Plant from Electric Utility?	No Pending Merger or Acquisitions?	Comparable Company Met All Criteria?
ALLETE, Inc.	ALE	Yes	No								
Alliant Energy Corporation	LNT	Yes	Yes	Yes (A-)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Ameren Corporation	AEE	Yes	Yes	Yes (BBB+)	Yes (Baa1)	Yes	Yes	Yes	Yes	Yes	Yes
American Electric Power Company, Inc.	AEP	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Avangrid, Inc.	AGR	Yes	No								
Avista Corporation	AVA	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Black Hills Corporation	BKH	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
CenterPoint Energy, Inc.	CNP	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	No				
CMS Energy Corporation	CMS	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Consolidated Edison, Inc.	ED	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	Yes	Yes	No		
Dominion Resources, Inc.	D	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	No				
DTE Energy Company	DTE	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
Duke Energy Corporation	DUK	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Edison International	EIX	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	Yes	No		
Energy Corporation	ETR	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Energy, Inc.	EVRG	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Eversource Energy	ES	Yes	Yes	Yes (A-)	Yes (Baa2)	Yes	Yes	Yes	No		
Exelon Corporation	EXC	Yes	Yes	Yes (BBB+)	Yes (Baa2)	No					
FirstEnergy Corp.	FE	Yes	Yes	Yes (BBB)	Yes (Baa3)	Yes	No				
Hawaiian Electric Industries, Inc.	HE	Yes	No								
IDACORP, Inc.	IDA	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
MDU Resources Group, Inc.	MDU	Yes	No								
MGE Energy, Inc.	MGEE	Yes	Yes	No	No						
NextEra Energy, Inc.	NEE	Yes	No								
NiSource Inc.	NI	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
Northwestern Corporation	NWE	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
OGE Energy Corp.	OGE	Yes	Yes	Yes (BBB+)	Yes (Baa1)	Yes	Yes	Yes	Yes	Yes	Yes
Otter Tail Corporation	OTTR	Yes	Yes	Yes (BBB)	Yes (Baa2)	Yes	Yes	No			
PG&E Corporation	PCG	Yes	Yes	No (BB)	No (Ba1)						
Pinnacle West Capital Corporation	PNW	Yes	Yes	Yes (BBB+)	Yes (Baa1)	Yes	Yes	Yes	Yes	Yes	Yes
PNM Resources, Inc.	PNM	Yes	Yes	Yes (BBB)	Yes (Baa3)	Yes	No				
Portland General Electric Company	POR	Yes	Yes	Yes (BBB+)	Yes (A3)	Yes	Yes	Yes	Yes	Yes	Yes
PPL Corporation	PPL	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	No				
Public Service Enterprise Group Incorporated	PEG	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
Sempra Energy	SRE	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
The Southern Company	SO	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	Yes	Yes	Yes	Yes
Unitil Corporation	UTL	Yes	Yes	Yes (BBB+)	Yes (Baa2)	Yes	Yes	No			
WEC Energy Group, Inc.	WEC	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	Yes	No			
Xcel Energy Inc.	XEL	Yes	Yes	Yes (A-)	Yes (Baa1)	Yes	Yes	Yes	Yes	Yes	Yes

Source: Edison Electric Institute, <https://www.eei.org/issues-and-policy/finance-and-tax#financialreview>.  
Source: Edison Electric Institute, <https://www.eei.org/issues-and-policy/finance-and-tax#financialreview>.  
Source: Edison Electric Institute, <https://www.eei.org/issues-and-policy/finance-and-tax#financialreview>.  
Source: Edison Electric Institute, <https://www.eei.org/issues-and-policy/finance-and-tax#financialreview>.  
Source: S&P Capital IQ Pro.  
Source: S&P Capital IQ Pro.  
Source: Value Line Investment Survey, Yahoo! Finance, and Zacks.  
Source: SEC Form 10-K Filings.  
Source: SEC Form 10-K Filings.  
Source: Edison Electric Institute, <https://www.eei.org/issues-and-policy/finance-and-tax#financialreview>.  
Source: S&P Capital IQ Pro.

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**PROXY GROUP LIST**

Electric Utility Companies	Ticker
1 Alliant Energy Corporation	LNT
2 American Electric Power Company, Inc.	AEP
3 Avista Corporation	AVA
4 CMS Energy Corporation	CMS
5 Duke Energy Corporation	DUK
6 Entergy Corporation	ETR
7 Evergy, Inc.	EVRG
8 IDACORP, Inc.	IDA
9 Northwestern Corporation	NWE
10 OGE Energy Corp.	OGE
11 Pinnacle West Capital Corporation	PNW
12 Portland General Electric Company	POR
13 The Southern Company	SO
14 Xcel Energy Inc.	XEL

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Growth Rate Estimates**  
**Earning per Share (EPS), Based on Dividend per Share (DPS) and Book Value per Share**  
**for the Comparable Electric Utility Companies**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	
<b>2024 Q3</b>		Past 10-Years			Past 5-Year			Projected			Average			Projective	GDP	DCF	
Electric Utility Companies	Ticker	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS	Growth	Growth	Growth	
1	Alliant Energy Corporation	LNT	6.00%	6.50%	6.00%	7.00%	6.50%	6.50%	6.00%	6.00%	4.00%	6.33%	6.33%	5.50%	5.33%	3.90%	4.19%
2	American Electric Power Company, Inc.	AEP	5.00%	5.00%	3.50%	4.00%	5.00%	3.50%	6.50%	5.50%	6.00%	5.17%	5.17%	4.33%	6.00%	3.90%	4.32%
3	Avista Corporation	AVA	3.00%	4.50%	4.00%	1.00%	4.50%	3.50%	5.00%	4.00%	2.00%	3.00%	4.33%	3.17%	3.67%	3.90%	3.85%
4	CMS Energy Corporation	CMS	6.00%	7.00%	6.50%	5.50%	6.50%	8.00%	5.00%	5.00%	5.00%	5.50%	6.17%	6.50%	5.00%	3.90%	4.12%
5	Duke Energy Corporation	DUK	3.00%	3.00%	2.00%	4.50%	3.50%	1.00%	5.00%	2.00%	2.50%	4.17%	2.83%	1.83%	3.17%	3.90%	3.75%
6	Entergy Corporation	ETR	2.50%	2.00%	2.00%	5.50%	3.00%	6.50%	0.50%	3.50%	5.00%	2.83%	2.83%	4.50%	3.00%	3.90%	3.72%
7	Evergy, Inc.	EVRG							7.50%	7.00%	3.50%	7.50%	7.00%	3.50%	6.00%	3.90%	4.32%
8	IDACORP, Inc.	IDA	4.00%	8.00%	4.50%	3.50%	6.50%	4.50%	5.50%	5.50%	4.00%	4.33%	6.67%	4.33%	5.00%	3.90%	4.12%
9	Northwestern Corporation	NWE	3.50%	5.50%	6.00%		3.50%	4.00%	4.00%	2.00%	3.00%	3.75%	3.67%	4.33%	3.00%	3.90%	3.72%
10	OGE Energy Corp.	OGE	3.00%	7.50%	4.00%	4.50%	6.50%	1.50%	6.50%	3.00%	5.50%	4.67%	5.67%	3.67%	5.00%	3.90%	4.12%
11	Pinnacle West Capital Corporation	PNW	3.50%	4.00%	4.00%	2.00%	5.00%	3.50%	4.50%	1.50%	4.50%	3.33%	3.50%	4.00%	3.50%	3.90%	3.82%
12	Portland General Electric Company	POR	3.50%	5.00%	3.50%	3.00%	6.00%	3.00%	6.00%	5.50%	4.00%	4.17%	5.50%	3.50%	5.17%	3.90%	4.15%
13	The Southern Company	SO	3.00%	3.50%	3.00%	3.00%	3.50%	2.50%	6.50%	3.50%	3.50%	4.17%	3.50%	3.00%	4.50%	3.90%	4.02%
14	Xcel Energy Inc.	XEL	5.50%	6.00%	5.00%	6.50%	6.50%	6.00%	6.00%	6.50%	5.00%	6.00%	6.33%	5.33%	5.83%	3.90%	4.29%
<b>Average</b>			<b>3.96%</b>	<b>5.19%</b>	<b>4.15%</b>	<b>4.17%</b>	<b>5.12%</b>	<b>4.15%</b>	<b>5.32%</b>	<b>4.32%</b>	<b>4.11%</b>	<b>4.64%</b>	<b>4.96%</b>	<b>4.11%</b>	<b>4.58%</b>	<b>3.90%</b>	<b>4.04%</b>

Note:

- [1] Source: The Value Line Investment Survey
- [2] Source: The Value Line Investment Survey
- [3] Source: The Value Line Investment Survey
- [4] Source: The Value Line Investment Survey
- [5] Source: The Value Line Investment Survey
- [6] Source: The Value Line Investment Survey
- [7] Source: The Value Line Investment Survey
- [8] Source: The Value Line Investment Survey
- [9] Source: The Value Line Investment Survey
- [10]  $=([1]+[4]+[7])/3$
- [11]  $=([2]+[5]+[8])/3$
- [12]  $=([3]+[6]+[9])/3$
- [13]  $=([7]+[8]+[9])/3$
- [14] Source: Congress Budget Office (CBO), Budget Economic Outlook
- [15]  $= (4 \times [13] + [14]) / 5$

**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Average High / Low Stock Price  
for the Comparable Electric Utility Companies**

[1]            [2]            [3]            [4]            [5]            [6]            [7]

2024 Q3		July 2024		August 2024		September 2024		(7/01/24 - 9/30/24)	
Company Name	Ticker	Max High Stock Price	Min Low Stock Price	Max High Stock Price	Min Low Stock Price	Max High Stock Price	Min Low Stock Price	Average High/Low Stock Price	
1	Alliant Energy Corporation	LNT	56.79	50.53	58.69	55.17	61.04	58.24	56.74
2	American Electric Power Company, Inc	AEP	98.92	86.83	104.41	95.95	105.18	100.00	98.55
3	Avista Corporation	AVA	39.82	33.45	39.99	37.33	39.58	37.58	37.96
4	CMS Energy Corporation	CMS	65.17	58.50	68.08	64.21	71.02	67.63	65.77
5	Duke Energy Corporation	DUK	110.03	99.21	116.67	109.27	118.31	113.91	111.23
6	Energy Corporation	ETR	117.00	104.13	123.61	115.16	131.75	120.00	118.61
7	Evergy, Inc.	EVRG	58.05	52.32	61.14	57.28	61.13	59.07	58.17
8	IDACORP, Inc.	IDA	99.46	91.66	104.43	98.19	105.24	101.67	100.11
9	Northwestern Corporation	NWE	55.47	48.52	54.55	51.16	57.48	53.94	53.52
10	OGE Energy Corp.	OGE	38.94	34.94	40.36	38.42	41.48	39.38	38.92
11	Pinnacle West Capital Corporation	PNW	86.16	75.10	89.39	84.44	91.57	87.11	85.63
12	Portland General Electric Company	POR	48.58	42.23	48.62	45.88	49.45	47.14	46.98
13	The Southern Company	SO	83.70	76.96	89.68	83.33	90.85	86.36	85.15
14	Xcel Energy Inc.	XEL	58.73	51.97	61.90	56.69	65.42	61.08	59.30

Note:

- [1] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [2] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [3] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [4] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [5] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [6] Source: Wall Street Journal, <https://www.wsj.com/market-data>
- [7] = (([1]+[2]+[3]+[4]+[5]+[6]) / 6

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Discounted Cash Flow (DCF) Costs of Common Equity (COE) Estimates**  
**Based on Dividend per Share, Earning per Share, Stock Price, and Growth Rate**  
**for the Comparable Electric Utility Companies**

<u>2024 Q3 DCF COE estimate</u>		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
Electric Utility Companies	Ticker	2023			Expected		Projected			
		Dividend per Share	Stock Price	Dividend Yield	Dividend Yield	Projected Growth	GDP Growth	Sustainable Growth Rate	COE	
1	Alliant Energy Corporation	LNT	1.81	56.74	3.19%	3.27%	5.33%	3.90%	5.05%	8.32%
2	American Electric Power Company, Inc.	AEP	3.37	98.55	3.42%	3.52%	6.00%	3.90%	5.58%	9.10%
3	Avista Corporation	AVA	1.84	37.96	4.85%	4.94%	3.67%	3.90%	3.71%	8.65%
4	CMS Energy Corporation	CMS	1.95	65.77	2.96%	3.04%	5.00%	3.90%	4.78%	7.82%
5	Duke Energy Corporation	DUK	4.06	111.23	3.65%	3.71%	3.17%	3.90%	3.31%	7.02%
6	Entergy Corporation	ETR	4.34	118.61	3.66%	3.72%	3.00%	3.90%	3.18%	6.90%
7	Evergy, Inc.	EVRG	2.48	58.17	4.26%	4.38%	6.00%	3.90%	5.58%	9.96%
8	IDACORP, Inc.	IDA	3.20	100.11	3.20%	3.27%	5.00%	3.90%	4.78%	8.05%
9	Northwestern Corporation	NWE	2.52	53.52	4.71%	4.78%	3.00%	3.90%	3.18%	7.96%
10	OGE Energy Corp.	OGE	1.66	38.92	4.27%	4.37%	5.00%	3.90%	4.78%	9.15%
11	Pinnacle West Capital Corporation	PNW	3.49	85.63	4.08%	4.15%	3.50%	3.90%	3.58%	7.73%
12	Portland General Electric Company	POR	1.88	46.98	4.00%	4.10%	5.17%	3.90%	4.91%	9.01%
13	The Southern Company	SO	2.78	85.15	3.26%	3.34%	4.50%	3.90%	4.38%	7.72%
14	Xcel Energy Inc.	XEL	2.08	59.30	3.51%	3.60%	5.83%	3.90%	5.45%	9.05%
<b>Average</b>			<b>2.68</b>	<b>72.62</b>	<b>3.79%</b>	<b>3.87%</b>	<b>4.58%</b>	<b>3.90%</b>	<b>4.45%</b>	<b>8.32%</b>
									DCF Lower Bound	7.37%
									DCF Upper Bound	9.12%
									DCF COE	<u>8.25%</u>

Note:

- [1] Source: The Value Line Investment Survey: Ratings & Reports.
- [2] Source: The Wall Street Journal; Monthly Average.
- [3] = [1] / [2]
- [4] = [3] x (1 + .5 x [7])
- [5] Source: [12] of Growth Rate SJW-11
- [6] Source: Congress Budget Office (CBO), Budget Economic Outlook
- [7] = (4 x [5] + [6]) / 5
- [8] = [4] + [7]

**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Capital Asset Pricing Model (CAPM) Costs of Common Equity (COE) Estimates  
Based on Historical Return Differences Between Common Stocks and Long-Term U.S. Treasuries  
for the Comparable Electric Utility Companies**

2024 Q3 CAPM Estimate		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]					
		Kroll, LLC (1926-2023)				NYU Stern (1928-2023)				Market Risk Premium				CAPM Cost of Common Equity										
		Large Company Stocks		Long-term G-Bonds		S&P 500		US Treasury Bond		Kroll, LLC		NYU Stern		Kroll, LLC		NYU Stern								
Electric Utility Companies	Ticker	Risk-Free Rate	Beta	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return	Geometric Mean Return	Arithmetic Mean Return					
1	Alliant Energy Corporation	LNT	4.22%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.31%	9.56%	8.92%	10.34%				
2	American Electric Power Company, Inc.	AEP	4.22%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.08%	9.27%	8.66%	10.00%				
3	Avista Corporation	AVA	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
4	CMS Energy Corporation	CMS	4.22%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.08%	9.27%	8.66%	10.00%				
5	Duke Energy Corporation	DUK	4.22%	0.90	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.31%	9.56%	8.92%	10.34%				
6	Entergy Corporation	ETR	4.22%	1.00	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.76%	10.16%	9.44%	11.02%				
7	Eversource Energy, Inc.	EVERG	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
8	IDACORP, Inc.	IDA	4.22%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.08%	9.27%	8.66%	10.00%				
9	Northwestern Corporation	NWE	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
10	OGE Energy Corp.	OGE	4.22%	1.05	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.99%	10.45%	9.71%	11.36%				
11	Pinnacle West Capital Corporation	PNW	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
12	Portland General Electric Company	POR	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
13	The Southern Company	SO	4.22%	0.95	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.53%	9.86%	9.18%	10.68%				
14	Xcel Energy Inc.	XEL	4.22%	0.85	10.28%	12.16%	5.73%	6.22%	9.80%	11.66%	4.57%	4.86%	4.54%	5.94%	5.23%	6.80%	8.08%	9.27%	8.66%	10.00%				
<b>Average</b>		<b>4.22%</b>	<b>0.93</b>	<b>10.28%</b>	<b>12.16%</b>	<b>5.73%</b>	<b>6.22%</b>	<b>9.80%</b>	<b>11.66%</b>	<b>4.57%</b>	<b>4.86%</b>	<b>4.54%</b>	<b>5.94%</b>	<b>5.23%</b>	<b>6.80%</b>	<b>8.42%</b>	<b>9.71%</b>	<b>9.05%</b>	<b>10.51%</b>					
													Average Risk Premium		5.63%						CAPM Lower Bound		8.74%	
																	CAPM Upper Bound		10.11%					
																	CAPM COE		<u>9.42%</u>					

Note:

[1] Source: 3-Month Average of 30-Year Treasury Bond  
 [2] Source: Value Line, Investment Survey.  
 [3] Source: Kroll, LLC, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.  
 [4] Source: Kroll, LLC, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.  
 [5] Source: Kroll, LLC, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.  
 [6] Source: Kroll, LLC, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.  
 [7] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.  
 [8] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.  
 [9] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.  
 [10] Source: Risk Premium, Damodaran Online, Stern School of Business, NYU.  
 [11] = [3] - [5]  
 [12] = [4] - [6]  
 [13] = [7] - [9]  
 [14] = [8] - [10]  
 [15] = [1] + [2] x [11]  
 [16] = [1] + [2] x [12]  
 [17] = [1] + [2] x [13]  
 [18] = [1] + [2] x [14]

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**Bond Yield Plus Risk Premium (BYPRP) Return on Equity (ROE) Estimates**  
**Risk Premium Calculated by Authorized ROE and Utility Bond Yields**

<u>Month-Year</u>	<u>[1]</u>		<u>[2]</u>		<u>[3]</u>	
	<u>Bond Yield (%)</u>		<u>Risk Premium (%)</u>		<u>Estimated ROE (%)</u>	
	<u>A</u>	<u>Baa</u>	<u>A</u>	<u>Baa</u>	<u>A</u>	<u>Baa</u>
Apr-24	5.79	6.01	3.96	3.75	9.75	9.76
May-24	5.74	5.97	4.00	3.79	9.74	9.76
Jun-24	5.61	5.84	4.13	3.91	9.74	9.75
Jul-24	5.64	5.85	4.10	3.90	9.74	9.75
Aug-24	5.38	5.61	4.35	4.13	9.73	9.74
Sep-24	5.2	5.41	4.52	4.32	9.72	9.73

BYPRP Lower Bound	9.72
BYPRP Upper Bound	<u>9.76</u>
BYPRP ROE	<u><u>9.74</u></u>

Notes:

- [1] Mergent Bond Record, Moody's Utility Bonds Yields
- [2] = 9.47 - 0.9515 x [1]
- [3] = [1] + [2]



**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Risk Premium Estimation Using Regression Analysis  
Plus Risk Premium (BYPRP) Return on Equity (ROE) Estimates  
Risk Premium as Difference Between Authorized ROE and Utility Bond Yield**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9598
R Square	0.9212
Adjusted R Square	0.9209
Standard Error	0.2325
Observations	244

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	153.0035	153.0035	2830.6037	0.0000
Residual	242	13.0809	0.0541		
Total	243	166.0844			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	9.4665	0.0789	119.9612	0.0000	9.3110	9.6219	9.3110	9.6219
Bond Yield	-0.9515	0.0179	-53.2034	0.0000	-0.9867	-0.9163	-0.9867	-0.9163

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**RETURN ON EQUITY**

		<u>COE Analysis</u>			
		<u>Lower</u>	<u>Average</u>	<u>Upper</u>	
COE Estimation	DCF	7.37%	8.25%	9.12%	A
	CAPM	8.74%	9.42%	10.11%	B
		8.05%	8.83%	9.62%	C
		<u>ROE Analysis</u>			
		<u>Lower</u>	<u>Estimate</u>	<u>Upper</u>	
ROE Estimation	BYPRP	9.72%	9.74%	9.76%	D
ROE Recommendation		9.74%			

Note:

- 
- A Schedule SJW-s12
  - B Schedule SJW-s13
  - C = ([A] + [B]) / 2
  - D Schedule SJW-s14-1

**Union Electric Company, d/b/a Ameren Missouri**  
**Case No. ER-2024-0319**

**RATE OF RETURN**

Capital Component	Percentage of Capital	[1]	Embedded Cost	Lower	Allowed Rate of Return Common Equity Return of:	
					ROE [4]	Upper
				<b>9.49%</b>	<b>9.74%</b>	<b>9.99%</b>
Common Stock Equity	**	█	**	-	4.93%	5.19%
Preferred Stock	**	█	**	4.18% [2]	0.02%	0.02%
Long-Term Debt	**	█	**	4.30% [3]	2.04%	2.04%
<b>Total</b>				<b>6.99%</b>	<b>7.12%</b>	<b>7.25%</b>

Note:

- [1] Schedule SJW-s6
- [2] Schedule SJW-s7-2
- [3] Schedule SJW-s7-1
- [4] Schedule SJW-s15

**Union Electric Company, d/b/a Ameren Missouri  
Case No. ER-2024-0319**

**Authorized ROE and Equity Ratio of the U.S Utility by Sector  
2010-2024**

Year	<u>Fully Litigated</u>			<u>Electric Settled</u>			<u>Electric Total</u>		
	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)
2010	10.35	47.68	27	10.39	49.49	34	10.37	48.63	61
2011	10.39	48.17	26	10.12	48.01	16	10.29	48.11	42
2012	10.28	49.98	29	10.06	51.40	29	10.17	50.62	58
2013	9.85	48.25	17	10.12	49.70	32	10.03	49.14	49
2014	10.05	50.14	21	9.73	50.26	17	9.91	50.19	38
2015	9.66	48.98	16	10.04	49.28	15	9.84	49.12	31
2016	9.74	49.75	25	9.80	47.51	17	9.77	48.85	42
2017	9.73	49.23	24	9.75	49.30	29	9.74	49.26	53
2018	9.63	48.70	22	9.57	49.76	26	9.60	49.27	48
2019	9.58	51.07	27	9.76	49.66	20	9.66	50.62	47
2020	9.43	49.87	32	9.46	50.45	23	9.44	50.12	55
2021	9.23	50.71	30	9.57	49.79	25	9.38	50.31	55
2022	9.48	51.25	32	9.62	50.32	21	9.54	50.93	53
2023	9.64	52.10	39	9.52	50.57	24	9.60	51.59	63
2024	9.71	50.32	36	9.78	49.41	18	9.74	50.05	54

Year	<u>Fully Litigated</u>			<u>Vertically Integrated Electric Settled</u>			<u>Electric Total</u>		
	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)	ROE (%)	Equity (%)	Case (No.)
2010	10.32	47.37	16	10.49	49.63	25	10.42	48.65	41
2011	10.46	48.51	17	10.14	48.47	11	10.33	48.50	28
2012	10.10	49.69	16	10.10	52.34	23	10.10	51.09	39
2013	9.91	46.46	9	9.96	50.90	22	9.95	49.42	31
2014	10.03	51.39	9	9.86	51.03	10	9.94	51.24	19
2015	9.74	49.03	13	9.78	52.00	4	9.75	49.59	17
2016	9.62	49.47	9	9.88	47.21	11	9.77	48.28	20
2017	9.69	47.89	8	9.85	49.06	20	9.80	48.68	28
2018	9.62	46.44	9	9.72	48.76	14	9.68	47.89	23
2019	9.74	50.83	10	9.74	47.65	15	9.74	49.10	25
2020	9.52	48.71	15	9.57	49.78	12	9.55	49.25	27
2021	9.24	49.03	8	9.67	48.87	17	9.53	48.93	25
2022	9.82	50.85	12	9.68	48.76	13	9.75	49.80	25
2023	9.96	52.93	19	9.61	49.72	17	9.80	51.52	36
2024	9.84	48.69	17	9.83	48.08	14	9.84	48.40	31

Note:

Source: S&P Global Market Intelligence, Retrieved in October 2, 2024