

Northern States Power Company, a Minnesota Corporation
Summary of Risk Premium Models for the
Proxy Group of Twelve Electric Companies

	<u>Proxy Group of Twelve Electric Companies</u>
Predictive Risk Premium Model (PRPM) (1)	12.03 %
Risk Premium Using an Adjusted Total Market Approach (2)	<u>10.83</u>
Average	<u><u>11.43 %</u></u>

Notes:

- (1) From page 2 of this Schedule.
- (2) From page 3 of this Schedule.

Northern States Power Company, a Minnesota Corporation
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
<u>Proxy Group of Twelve Electric Companies</u>	<u>LT Average Predicted Variance</u>	<u>Spot Predicted Variance</u>	<u>Recommended Variance (2)</u>	<u>GARCH Coefficient</u>	<u>Predicted Risk Premium (3)</u>	<u>Risk-Free Rate (4)</u>	<u>Indicated ROE (5)</u>
Alliant Energy Corporation	0.27%	0.33%	0.30%	2.68	10.05%	3.35%	13.40%
Ameren Corporation	0.23%	0.32%	0.28%	2.06	7.08%	3.35%	10.43%
American Electric Power Company, Inc.	0.29%	0.34%	0.31%	2.39	9.29%	3.35%	12.64%
Duke Energy Corporation	0.31%	0.37%	0.34%	1.88	7.98%	3.35%	11.33%
Edison International	0.43%	0.52%	0.48%	1.50	8.97%	3.35%	12.32%
Entergy Corporation	0.40%	0.53%	0.47%	2.24	13.32%	3.35%	NMF
Evergy, Inc.	0.60%	1.95%	1.28%	1.37	23.10%	3.35%	NMF
IDACORP, Inc.	0.29%	0.36%	0.32%	2.19	8.89%	3.35%	12.24%
NorthWestern Corporation	0.33%	0.19%	0.26%	2.18	7.01%	3.35%	10.36%
OGE Energy Corporation	0.31%	0.33%	0.32%	2.21	8.75%	3.35%	12.10%
Portland General Electric Company	0.29%	0.38%	0.34%	1.81	7.56%	3.35%	10.91%
Xcel Energy Inc.	0.28%	0.28%	0.28%	2.83	9.79%	3.35%	13.14%
						Average	<u>11.89%</u>
						Median	<u>12.17%</u>
					Average of Mean and Median		<u>12.03%</u>

Notes:

- (1) The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH coefficient. The historical data used are the equity risk premiums for the first available trading month as reported by Bloomberg Professional Service.
- (2) Average of Column [1] and Column [2].
- (3) $(1 + (\text{Column [3]} * \text{Column [4]})^{12}) - 1$.
- (4) From note 2 on page 2 of Schedule 7.
- (5) Column [5] + Column [6].

Northern States Power Company, a Minnesota Corporation
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

<u>Line No.</u>		<u>Proxy Group of Twelve Electric Companies</u>
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	4.50 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds	<u>0.51</u> (2)
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.01 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	<u>0.19</u> (3)
5.	Adjusted Prospective Bond Yield	5.20 %
6.	Equity Risk Premium (4)	<u>5.63</u>
7.	Risk Premium Derived Common Equity Cost Rate	<u><u>10.83</u></u> %

- Notes:
- (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 9 and 10 of this Schedule).
 - (2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.51% from page 4 of this Schedule.
 - (3) Adjustment to reflect the Baa1 Moody's LT issuer rating of the Utility Proxy Group as shown on page 5 of this Schedule. The 0.19% upward adjustment is derived by taking 2/3 of the spread between A2 and Baa2 Public Utility Bonds ($1/3 * 0.29\% = 0.19\%$) as derived from page 4 of this Schedule.
 - (4) From page 7 of this Schedule.

Northern States Power Company, a Minnesota Corporation
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1]	[2]	[3]
	<u>Aaa Rated Corporate Bond</u>	<u>A2 Rated Public Utility Bond</u>	<u>Baa2 Rated Public Utility Bond</u>
Apr-2022	3.75 %	4.30 %	4.60 %
Mar-2022	3.43	3.98	4.28
Feb-2022	<u>3.25</u>	<u>3.68</u>	<u>3.95</u>
Average	<u>3.48 %</u>	<u>3.99 %</u>	<u>4.28 %</u>

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:	<u>0.51 % (1)</u>
Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds:	<u>0.29 % (2)</u>

Notes:

- (1) Column [2] - Column [1].
- (2) Column [3] - Column [2].

Source of Information:

Bloomberg Professional Service

Northern States Power Company, a Minnesota Corporation
Comparison of Long-Term Issuer Ratings for
Proxy Group of Twelve Electric Companies

<u>Proxy Group of Twelve Electric Companies</u>	<u>Moody's</u>		<u>Standard & Poor's</u>	
	<u>Long-Term Issuer Rating</u>		<u>Long-Term Issuer Rating</u>	
	<u>April 2022</u>		<u>April 2022</u>	
	<u>Long-Term Issuer Rating (1)</u>	<u>Numerical Weighting (2)</u>	<u>Long-Term Issuer Rating (1)</u>	<u>Numerical Weighting (2)</u>
Alliant Energy Corporation	A3/Baa1	7.5	A/A-	6.5
Ameren Corporation	A3	7.0	BBB+	8.0
American Electric Power Company, Inc.	Baa1	8.0	A-	7.0
Duke Energy Corporation	A3	7.0	BBB+	8.0
Edison International	Baa2	9.0	BBB	9.0
Entergy Corporation	Baa1	8.0	BBB+	8.0
Evergy, Inc.	Baa1	8.0	A-	7.0
IDACORP, Inc.	A3	7.0	BBB	9.0
NorthWestern Corporation	Baa2	9.0	BBB	9.0
OGE Energy Corporation	A3	7.0	A-	7.0
Portland General Electric Company	A3	7.0	BBB+	8.0
Xcel Energy Inc.	A3	7.0	A-	7.0
Average	<u>Baa1</u>	<u>7.6</u>	<u>BBB+</u>	<u>7.8</u>

Notes:

- (1) Ratings are that of the average of each company's utility operating subsidiaries.
(2) From page 6 of this Schedule.

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

<u>Moody's Bond Rating</u>	<u>Numerical Bond Weighting</u>	<u>Standard & Poor's Bond Rating</u>
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Northern States Power Company, a Minnesota Corporation
Judgment of Equity Risk Premium for
Proxy Group of Twelve Electric Companies

Line No.	Proxy Group of Twelve Electric Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1) 6.65 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2) 5.04
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,192 Fully-Litigated Electric Utility Rate Cases (3) 5.21
4.	Average equity risk premium 5.63 %

Notes: (1) From page 8 of this Schedule.
(2) From page 11 of this Schedule.
(3) From page 12 of this Schedule.

Northern States Power Company, a Minnesota Corporation
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Twelve Electric Companies

<u>Line No.</u>	<u>Equity Risk Premium Measure</u>	<u>Proxy Group of Twelve Electric Companies</u>
1.	Ibbotson Equity Risk Premium (1)	6.13 %
2.	Regression on Ibbotson Risk Premium Data (2)	7.96
3.	Ibbotson Equity Risk Premium based on PRPM (3)	8.35
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	8.46
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.98
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	<u>9.89</u>
7.	Conclusion of Equity Risk Premium	8.63 %
8.	Adjusted Beta (7)	<u>0.77</u>
9.	Forecasted Equity Risk Premium	<u><u>6.65</u></u> %

Notes:

- (1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® S&P® 2021 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1926-2021.
- (2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2021 referenced in Note 1 above.
- (3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through April 2022.
- (4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 4.50% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 12.96% (described fully in note 1 on page 2 of Schedule 7).
- (5) Using data from Value Line for the S&P 500, an expected total return of 15.48% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 4.50% results in an expected equity risk premium of 10.98%.
- (6) Using data from Bloomberg Professional Service for the S&P 500, an expected total return of 14.39% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 4.50% results in an expected equity risk premium of 9.89%.
- (7) Average of mean and median beta from page 1 of Schedule 7.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2022 S&P Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, April 29, 2022 and December 1, 2021
Bloomberg Professional Service

Consensus Forecasts of U.S. Interest Rates and Key Assumptions

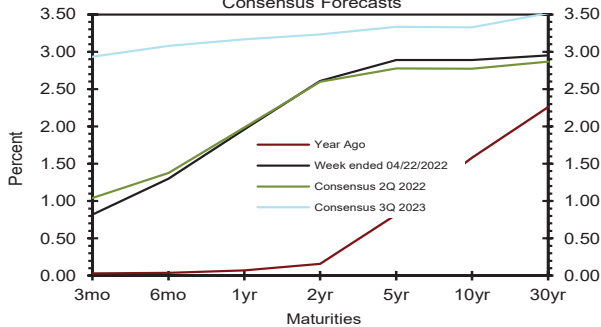
Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week Ending				Average For Month				Latest Qtr	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
	Apr 22	Apr 15	Apr 8	Apr 1	Mar	Feb	Jan	1Q 2022	2022	2022	2022	2023	2023	2023	
Federal Funds Rate	0.33	0.33	0.33	0.33	0.20	0.08	0.08	0.12	1.0	1.7	2.2	2.6	2.9	3.0	
Prime Rate	3.50	3.50	3.50	3.50	3.37	3.25	3.25	3.29	4.0	4.8	5.2	5.6	5.9	6.1	
SOFR	0.27	0.29	0.30	0.28	0.16	0.05	0.05	0.09	0.8	1.6	2.1	2.5	2.7	2.9	
Commercial Paper, 1-mo.	0.48	0.38	0.32	0.34	0.32	0.16	0.07	0.18	0.9	1.7	2.1	2.6	2.8	3.0	
Treasury bill, 3-mo.	0.82	0.76	0.67	0.55	0.45	0.31	0.15	0.30	1.0	1.8	2.2	2.6	2.8	2.9	
Treasury bill, 6-mo.	1.30	1.22	1.15	1.07	0.86	0.64	0.33	0.61	1.4	2.1	2.4	2.8	3.0	3.1	
Treasury bill, 1 yr.	1.96	1.81	1.77	1.67	1.34	1.00	0.55	0.96	2.0	2.4	2.7	3.0	3.1	3.2	
Treasury note, 2 yr.	2.61	2.43	2.49	2.35	1.91	1.44	0.98	1.44	2.6	2.9	3.0	3.2	3.2	3.2	
Treasury note, 5 yr.	2.89	2.73	2.68	2.49	2.11	1.81	1.54	1.82	2.8	3.0	3.1	3.3	3.3	3.3	
Treasury note, 10 yr.	2.89	2.76	2.59	2.39	2.13	1.93	1.76	1.94	2.8	3.0	3.1	3.3	3.3	3.3	
Treasury note, 30 yr.	2.95	2.85	2.63	2.49	2.41	2.25	2.10	2.25	2.9	3.1	3.2	3.4	3.5	3.5	
Corporate Aaa bond	4.16	4.02	3.75	3.64	3.63	3.36	3.06	3.35	4.0	4.2	4.4	4.6	4.7	4.8	
Corporate Baa bond	4.78	4.63	4.35	4.23	4.23	3.92	3.54	3.90	4.8	5.1	5.3	5.5	5.6	5.7	
State & Local bonds	3.79	3.67	3.55	3.51	3.30	3.01	2.74	3.02	3.4	3.7	3.8	4.0	4.1	4.1	
Home mortgage rate	5.11	5.00	4.72	4.67	4.17	3.76	3.45	3.79	4.9	5.1	5.2	5.3	5.4	5.4	

Key Assumptions	History								Consensus Forecasts-Quarterly					
	2Q 2020	3Q 2020	4Q 2020	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022	2023	2023	2023
Fed's AFE \$ Index	112.4	107.2	105.1	103.4	102.9	105.0	107.0	108.4	110.9	111.5	111.7	111.5	111.2	110.9
Real GDP	-31.2	33.8	4.5	6.3	6.7	2.3	6.9	-1.4	2.8	2.7	2.4	2.3	2.1	2.0
GDP Price Index	-1.5	3.6	2.2	4.3	6.1	6.0	7.1	8.0	5.6	4.0	3.4	3.0	2.8	2.6
Consumer Price Index	-3.4	4.8	2.2	4.1	8.2	6.7	7.9	9.2	6.9	4.3	3.4	3.0	2.7	2.6
PCE Price Index	-1.6	3.7	1.5	3.8	6.5	5.3	6.4	7.0	5.8	3.9	3.2	2.8	2.6	2.4

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Advanced Foreign Economies Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).

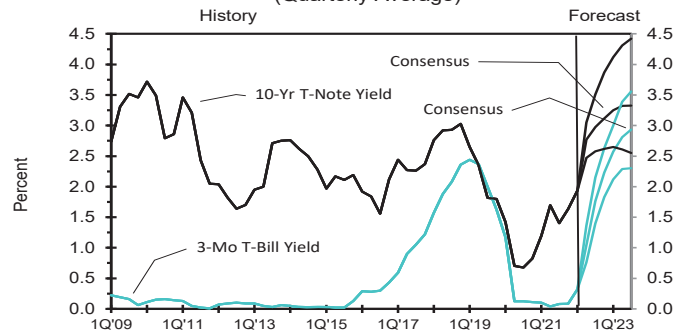
U.S. Treasury Yield Curve

Week ended April 22, 2022 & Year Ago vs. 2Q 2022 & 3Q 2023
Consensus Forecasts



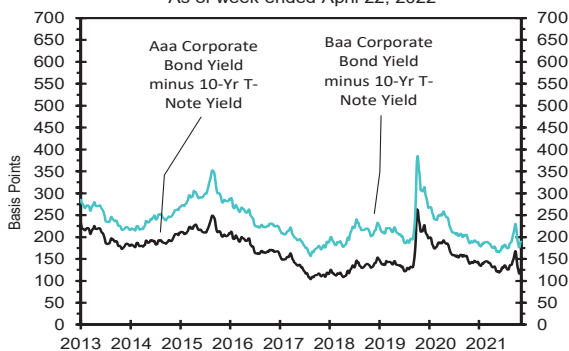
US 3-Mo T-Bills & 10-Yr T-Note Yield

(Quarterly Average)



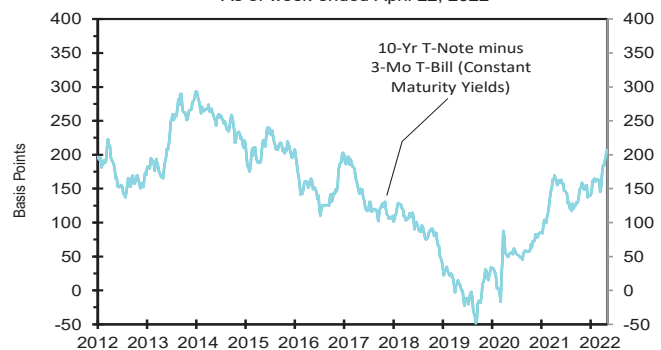
Corporate Bond Spreads

As of week ended April 22, 2022



U.S. Treasury Yield Curve

As of week ended April 22, 2022



Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2023 through 2027 and averages for the five-year periods 2023-2027 and 2028-2032. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

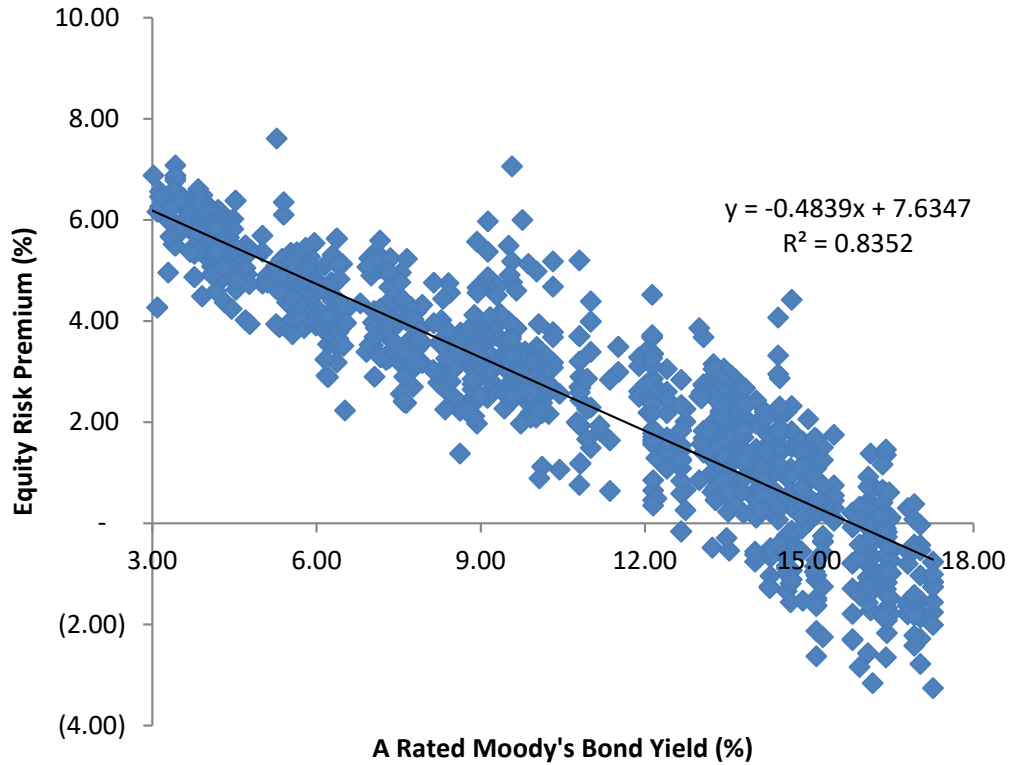
		Average For The Year					Five-Year Averages	
		2023	2024	2025	2026	2027	2023-2027	2028-2032
1. Federal Funds Rate	CONSENSUS	0.8	1.6	2.0	2.2	2.3	1.8	2.2
	Top 10 Average	1.2	2.2	2.7	2.7	2.8	2.3	2.9
	Bottom 10 Average	0.4	1.0	1.4	1.7	1.8	1.2	1.5
2. Prime Rate	CONSENSUS	4.0	4.7	5.1	5.3	5.4	4.9	5.3
	Top 10 Average	4.3	5.3	5.8	5.8	5.9	5.4	6.0
	Bottom 10 Average	3.6	4.1	4.5	4.9	5.0	4.4	4.6
3. LIBOR, 3-Mo.	CONSENSUS	1.0	1.7	2.2	2.4	2.5	1.9	2.4
	Top 10 Average	1.3	2.1	2.7	2.9	3.0	2.4	3.1
	Bottom 10 Average	0.7	1.2	1.6	1.9	2.0	1.5	1.8
4. Commercial Paper, 1-Mo	CONSENSUS	0.9	1.6	2.1	2.3	2.4	1.9	2.4
	Top 10 Average	1.2	2.0	2.6	2.8	2.9	2.3	2.9
	Bottom 10 Average	0.6	1.2	1.6	1.9	2.0	1.5	1.8
5. Treasury Bill Yield, 3-Mo	CONSENSUS	0.8	1.4	1.8	2.0	2.3	1.7	2.2
	Top 10 Average	1.2	1.9	2.5	2.6	2.8	2.2	2.9
	Bottom 10 Average	0.4	0.8	1.2	1.5	1.8	1.1	1.6
6. Treasury Bill Yield, 6-Mo	CONSENSUS	0.8	1.4	1.9	2.1	2.4	1.7	2.3
	Top 10 Average	1.2	2.0	2.6	2.7	2.9	2.3	3.0
	Bottom 10 Average	0.4	0.9	1.2	1.6	1.9	1.2	1.7
7. Treasury Bill Yield, 1-Yr	CONSENSUS	1.0	1.6	2.1	2.4	2.5	1.9	2.4
	Top 10 Average	1.4	2.1	2.7	2.8	3.0	2.4	3.1
	Bottom 10 Average	0.6	1.2	1.5	1.9	2.0	1.4	1.8
8. Treasury Note Yield, 2-Yr	CONSENSUS	1.3	1.9	2.4	2.6	2.6	2.2	2.6
	Top 10 Average	1.7	2.5	3.0	3.1	3.2	2.7	3.4
	Bottom 10 Average	0.8	1.4	1.8	2.0	2.1	1.6	1.9
9. Treasury Note Yield, 5-Yr	CONSENSUS	1.9	2.4	2.8	2.9	2.9	2.6	3.0
	Top 10 Average	2.3	3.0	3.4	3.5	3.6	3.1	3.8
	Bottom 10 Average	1.5	1.9	2.1	2.3	2.3	2.0	2.2
10. Treasury Note Yield, 10-Yr	CONSENSUS	2.4	2.8	3.1	3.2	3.2	2.9	3.3
	Top 10 Average	2.8	3.3	3.7	3.8	3.9	3.5	4.2
	Bottom 10 Average	2.0	2.3	2.4	2.5	2.5	2.3	2.4
11. Treasury Bond Yield, 30-Yr	CONSENSUS	2.9	3.3	3.6	3.7	3.7	3.4	3.8
	Top 10 Average	3.4	3.9	4.3	4.4	4.4	4.1	4.6
	Bottom 10 Average	2.4	2.8	2.9	3.0	3.0	2.8	3.0
12. Corporate Aaa Bond Yield	CONSENSUS	3.7	4.2	4.5	4.6	4.8	4.4	4.9
	Top 10 Average	4.3	4.7	5.1	5.2	5.4	4.9	5.6
	Bottom 10 Average	3.2	3.7	3.9	4.1	4.2	3.8	4.2
13. Corporate Baa Bond Yield	CONSENSUS	4.6	5.0	5.3	5.5	5.6	5.2	5.7
	Top 10 Average	5.1	5.5	5.9	6.1	6.2	5.7	6.5
	Bottom 10 Average	4.0	4.5	4.8	4.9	5.0	4.7	5.0
14. State & Local Bonds Yield	CONSENSUS	3.2	3.7	3.9	4.1	4.2	3.8	4.3
	Top 10 Average	3.8	4.3	4.5	4.7	4.8	4.4	5.0
	Bottom 10 Average	2.7	3.2	3.4	3.5	3.6	3.3	3.6
15. Home Mortgage Rate	CONSENSUS	4.0	4.4	4.7	4.8	4.8	4.5	4.9
	Top 10 Average	4.5	5.0	5.3	5.4	5.4	5.1	5.7
	Bottom 10 Average	3.6	3.9	4.1	4.1	4.2	4.0	4.1
A. Fed's AFE Nominal \$ Index	CONSENSUS	106.2	106.0	106.1	106.2	106.4	106.2	106.5
	Top 10 Average	108.1	108.4	108.9	109.0	109.2	108.7	110.1
	Bottom 10 Average	104.4	104.0	103.7	103.7	103.9	103.9	103.1
		----- Year-Over-Year, % Change -----					Five-Year Averages	
		2023	2024	2025	2026	2027	2023-2027	2028-2032
B. Real GDP	CONSENSUS	2.6	2.2	2.1	2.0	2.0	2.2	2.0
	Top 10 Average	3.1	2.6	2.5	2.4	2.3	2.6	2.4
	Bottom 10 Average	2.2	1.7	1.7	1.7	1.7	1.8	1.7
C. GDP Chained Price Index	CONSENSUS	2.5	2.2	2.2	2.1	2.1	2.2	2.1
	Top 10 Average	3.0	2.7	2.5	2.4	2.4	2.6	2.4
	Bottom 10 Average	2.0	1.9	1.9	1.9	1.9	1.9	1.8
D. Consumer Price Index	CONSENSUS	2.6	2.3	2.3	2.2	2.2	2.3	2.2
	Top 10 Average	3.2	2.8	2.6	2.5	2.5	2.7	2.5
	Bottom 10 Average	2.1	2.0	2.0	2.0	2.0	2.0	1.9
E. PCE Price Index	CONSENSUS	2.5	2.2	2.1	2.1	2.1	2.2	2.1
	Top 10 Average	3.0	2.6	2.4	2.4	2.3	2.6	2.4
	Bottom 10 Average	2.0	1.9	1.9	1.9	1.9	1.9	1.9

Northern States Power Company, a Minnesota Corporation
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

<u>Line No.</u>		<u>Implied Equity Risk Premium</u>
	<u>Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):</u>	
1.	Historical Equity Risk Premium	4.28 %
2.	Regression of Historical Equity Risk Premium (2)	5.52
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.89
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	5.00
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	<u>4.51</u>
6.	Average Equity Risk Premium (6)	<u><u>5.04 %</u></u>

- Notes: (1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2021. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
- (2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2021 referenced in note 1 above.
- (3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - April 2022.
- (4) Using data from Value Line for the S&P Utilities Index, an expected total return of 10.01% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the expected A2 rated public utility bond yield of 5.01% results in an expected equity risk premium of 5.00%. (10.01% - 5.01 = 5.00%)
- (5) Using data from the Bloomberg Professional Service for the S&P Utilities Index, an expected total return of 9.52% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the expected A2 rated public utility bond yield of 5.01% results in an expected equity risk premium of 4.51%. (9.52% - 5.01 = 4.51%)
- (6) Average of lines 1 through 5.

Northern States Power Company, a Minnesota Corporation
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields



		Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
<u>Constant</u>	<u>Slope</u>		
7.6347 %	-0.4839	5.01 %	5.21 %

Notes:

(1) From line 3 of page 3 of this Schedule.

Source of Information: Regulatory Research Associates