STATE TAX COMMISSION OF MISSOURI
P.O. BOX 146
JEFFERSON CITY, MO 65102-0146
P: 573.751.2414 E: OriginalAssessment@stc.mo.gov

Cost of Capital Study
January 1, 2026
Staff Recommendation

Electric Industry (SIC 4911)			Reference
Equity:			
Risk Adjusted Models			
	CAPM	10.33%	Page 5
Dividend Growth Models			
	DGM or DCF Model (Dividend Growth)	9.25%	Page 7
	DGM or DCF Model (Earnings Growth)	9.35%	Page 7
	DGM or DCF Model (b * ROE = Growth)	7.50%	Page 7
	Multi Stage DCF	NM	Page 8
	Average	**9.11%**	
Estimated Cost of Equity Capital		**9.61%**	1
Debt:			
Estimated Cost of Debt Capital		**5.88%**	Page 3

Cost of Capital Summary

Capital Component	Market Capital Structure	Cost of Capital	Before-Tax Weighted Average Cost of Capital
Debt	40.00%	5.88%	2.35%
Equity	60.00%	9.61%	5.77%
Total	**100.00%**		**8.12%**
		Rounded	**8.00%**

[1] Average 2025 COE (9.20%) – Average 2026 COE (9.11%) = 0.09%. 2025 Estimated COE (9.70%) – 0.09% = **9.61%**

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Electric Industry (SIC 4911)

		Reference
Direct Rate		
Equity:		
Estimated Cost of Equity Capital	**5.09%**	Page 9
Debt:		
Estimated Cost of Debt Capital	**3.20%**	Page 10

Cost of Capital Summary

Capital Component	Market Capital Structure	Cost of Capital	Before-Tax Weighted Average Cost of Capital
Debt	40.00%	3.20%	1.28%
Equity	60.00%	5.09%	3.05%
Total	**100.00%**		**4.33%**
		Rounded	**4.25%**

Cost of Capital Study
January 1, 2026
Analysis of Debt Capital

Electric Industry (SIC 4911)			
		Ratings	
Company	**Ticker**	**Moody's**	**S&P**
Alliant Energy Corporation	LNT	Baa2	BBB+
Ameren Corporation	AEE	Baa1	BBB+
American Electric Power Company, Inc.	AEP	Baa2	BBB+
CenterPoint Energy, Inc.	CNP	Baa2	BBB+
CMS Energy Corporation	CMS	Baa2	BBB+
Entergy Corporation	ETR	Baa2	BBB+
Evergy, Inc.	EVRG	Baa2	BBB+
Fortis, Inc.	FTS.TO	Baa3	A-
MGE Energy, Inc.	MGEE	NR	NR
OGE Energy Corporation	OGE	Baa1	BBB+
Otter Tail Corporation	OTTR	Baa2	BBB
WEC Energy Group, Inc.	WEC	Baa1	A-
	Average Rating	**Baa2**	**BBB+**

NR = Not Rated
RW = Rating Withdrawn

Mergent Bond Record, January 2026				
Corporate	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.29%	5.45%	5.74%
November	5.26%	5.42%	5.58%	5.78%
December	5.31%	5.49%	5.63%	5.90%
Average	**5.23%**	**5.40%**	**5.55%**	**5.81%**
Public Utilities	**Aaa**	**Aa**	**A**	**Baa**
October	-	5.37%	5.51%	5.71%
November	-	5.49%	5.62%	5.83%
December	-	5.57%	5.68%	5.88%
Average	**-**	**5.48%**	**5.60%**	**5.81%**
Industrials	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.21%	5.40%	5.75%
November	5.26%	5.34%	5.53%	5.88%
December	5.31%	5.41%	5.58%	5.91%
Average	**5.23%**	**5.32%**	**5.50%**	**5.85%**
Debt Yield Rate Estimate				**5.88%**

Data Source:
https://www.moodys.com
https://standardandpoors.com
Mergent Bond Record, January 2026

Ratings			
Dispersions & Averages			
Agency		**# of Companies**	
S&P			
AAA	1		
AA	2		
A	3	2	6
BBB	4	9	36
BB	5		
B	6		
CCC	7		
C	9		
D	10		
Total		**11**	**42**
Average Rating:			**3.82**
Agency		**# of Companies**	
Moody's			
Aaa	1		
Aa	2		
A	3		
Baa	4	11	44
Ba	5		
B	6		
Caa	7		
Ca	8		
C	9		
Total		**11**	**44**
Average Rating:			**4.00**

Cost of Capital Study

January 1, 2026

Analysis of the Market Capital Structure

Electric Industry (SIC 4911)								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Ticker	Debt	Debt	Stock	Shares (mil)	Equity	Equity	Total Capital
Company Name	Symbol	($ mil)	%	Price	Outstanding	($ mil)	%	($ mil)
Alliant Energy Corporation	LNT	11,924	41.48%	65.45	257.05	16,824	58.52%	28,748
Ameren Corporation	AEE	20,075	42.72%	99.50	270.49	26,914	57.28%	46,989
American Electric Power Company, Inc.	AEP	45,397	42.25%	115.94	535.27	62,059	57.75%	107,456
CenterPoint Energy, Inc.	CNP	21,802	46.67%	38.16	652.87	24,914	53.33%	46,716
CMS Energy Corporation	CMS	18,073	45.70%	70.56	304.30	21,471	54.30%	39,544
DTE Energy	DTE	22,750	45.74%	129.96	207.68	26,990	54.26%	49,740
Entergy Corporation	ETR	30,447	42.29%	93.02	446.60	41,543	57.71%	71,990
Evergy, Inc.	EVRG	13,063	43.59%	73.42	230.21	16,902	56.41%	29,965
Fortis, Inc.	FTS.TO	33,589	56.57%	51.30	502.60	25,783	43.43%	59,372
MGE Energy, Inc.	MGEE	765	20.89%	79.29	36.54	2,897	79.11%	3,662
OGE Energy Corporation	OGE	5,835	40.14%	43.20	201.46	8,703	59.86%	14,538
Otter Tail Corporation	OTTR	1,043	23.09%	82.88	41.91	3,474	76.91%	4,517
WEC Energy Group, Inc.	WEC	20,825	37.79%	105.41	325.29	34,289	62.21%	55,114
Mean:		**18,891**	**40.69%**			**24,059**	**59.31%**	**42,950**
Median:		**20,075**	**42.29%**			**24,914**	**57.71%**	**46,716**
Market Capital Structure Estimate:		**Debt:**	**40.00%**			**Equity:**	**60.00%**	

Data Source:

Columns (1) & (4), Value Line Industry Summary & Index, 12-05-2025
Column (2) = Column (1) / Column (7)
Column (3), NASDAQ, 12-31-2025 - 30-Day Average
Column (5) = Column (3) * Column (4)
Column (6) = Column (5) / Column (7)
Column (7) = Column (1) + Column (5)

Cost of Capital Study

January 1, 2026

Capital Asset Pricing Model (CAPM)

CAPM ==> $K_e = R_f + (\beta * \text{ERP})$

Electric Industry (SIC 4911)	
Risk-Free Rate (R_f)	4.80%
Beta (β)	0.80
Equity Risk Premium (ERP): (R_m - R_f)*	6.91%
Adjusted Equity Risk Premium: (β * ERP)	5.53%
Cost of Equity Capital - CAPM	**10.33%**
U.S. Department of the Treasury, Daily Treasury Yield Curve Rates, Selected Yields	
U.S. Treasury Securities:	
2025 December - 30 Day Average	4.80%
2025 November - December - 60 Day Average	4.75%
2025 October - December - 90 Day Average	4.71%
Risk-Free Rate of Return R_f, 30-year Treasury Rate. 2025 December - 30 Day Average.	**4.80%**
* Equity Risk Premium = Average of 6.78% (historical) and 7.03% (Damodaran Implied ERP) - From Business Valuation Resources	

Cost of Capital Study

January 1, 2026

Beta (β) Analysis

Electric Industry (SIC 4911)		
Company Name	**Ticker Symbol**	**Beta "β"**
Alliant Energy Corporation	LNT	0.80
Ameren Corporation	AEE	0.80
American Electric Power Company, Inc.	AEP	0.70
CenterPoint Energy, Inc.	CNP	0.80
CMS Energy Corporation	CMS	0.70
DTE Energy	DTE	0.80
Entergy Corporation	ETR	0.75
Evergy, Inc.	EVRG	0.75
Fortis, Inc.	FTS.TO	0.50
MGE Energy, Inc.	MGEE	0.80
OGE Energy Corporation	OGE	0.85
Otter Tail Corporation	OTTR	0.90
WEC Energy Group, Inc.	WEC	0.65
	Mean:	0.75
	Median:	0.80
	Beta (β) Estimate:	**0.80**

Data Source:
Value Line Industry Summary & Index, 12-05-2025

Cost of Capital Study

January 1, 2026

Dividend Growth Model (DGM or DCF)

DGM or DCF Model ==> $K_e = \dfrac{D_1}{P_0} + g$

where

Ke = Cost of Equity

D_1 = Expected Dividends

P_0 = Current Price

g = Sustainable Growth

Electric Industry (SIC 4911)

		(1)	(2)		(3)	(4)	(5)	(6)				
		Stock	**Expected**	**Dividend**	**Dividend**	**Earnings**						
	Ticker	**Price**	**Dividend**	**Yield**	**Growth**	**Growth**				**(Dividends)**	**(Earnings)**	**g=(b * ROE)**
Company Name	**Symbol**	**P_0**	**D_1**	**(D_1 / P_0)**	**g**	**g**	**b**	**ROE**	**g=(b * ROE)**	**K_e**	**K_e**	**K_e**
Alliant Energy Corporation	LNT	65.45	2.15	3.28%	6.00%	6.00%	37.00%	11.50%	4.26%	9.28%	9.28%	7.54%
Ameren Corporation	AEE	99.50	3.03	3.05%	6.50%	6.50%	44.00%	11.00%	4.84%	9.55%	9.55%	7.89%
American Electric Power Company, Inc.	AEP	115.94	3.98	3.43%	5.50%	6.50%	37.00%	10.00%	3.70%	8.93%	9.93%	7.13%
CenterPoint Energy, Inc.	CNP	38.16	0.95	2.49%	5.50%	7.00%	52.00%	10.00%	5.20%	7.99%	9.49%	7.69%
CMS Energy Corporation	CMS	70.56	2.30	3.26%	7.50%	8.50%	40.00%	12.50%	5.00%	10.76%	11.76%	8.26%
DTE Energy	DTE	129.96	4.71	3.62%	3.00%	4.50%	40.00%	11.50%	4.60%	6.62%	8.12%	8.22%
Entergy Corporation	ETR	93.02	2.60	2.80%	5.50%	3.00%	40.00%	11.00%	4.40%	8.30%	5.80%	7.20%
Evergy, Inc.	EVRG	73.42	2.84	3.87%	7.00%	7.50%	32.00%	9.00%	2.88%	10.87%	11.37%	6.75%
Fortis, Inc.	FTS.TO	51.30	2.59	5.05%	6.00%	5.00%	18.00%	7.00%	1.26%	11.05%	10.05%	6.31%
MGE Energy, Inc.	MGEE	79.29	1.95	2.46%	7.00%	6.50%	49.00%	10.00%	4.90%	9.46%	8.96%	7.36%
OGE Energy Corporation	OGE	43.20	1.73	4.00%	3.00%	6.50%	25.00%	12.50%	3.13%	7.00%	10.50%	7.13%
Otter Tail Corporation	OTTR	82.88	2.18	2.63%	7.00%	4.50%	48.00%	12.50%	6.00%	9.63%	7.13%	8.63%
WEC Energy Group, Inc.	WEC	105.41	3.81	3.61%	7.00%	6.00%	32.00%	12.50%	4.00%	10.61%	9.61%	7.61%
			Mean:	**3.35%**	**5.88%**	**6.00%**	**38.00%**	**10.85%**	**4.17%**	**9.23%**	**9.35%**	**7.52%**
			Median:	**3.28%**	**6.00%**	**6.50%**	**40.00%**	**11.00%**	**4.40%**	**9.46%**	**9.55%**	**7.54%**
									Cost of Equity Capital - DCF K_e Estimate:	**9.25%**	**9.35%**	**7.50%**

b = (1 - payout ratio) = Retention Ratio

ROE = Return on Book Equity

Data Source:

Column (1), NASDAQ, 12-31-2025, 30-day average

Columns (2) - (6), Value Line Industry Summary & Index, 12-05-2025

Cost of Capital Study
January 1, 2026
Support for Market Multiples

Electric Industry (SIC 4911)				
		(1)	(2)	
Company Name	Ticker Symbol	Stock Price	Earnings (Trailing)	P/E Current
Alliant Energy Corporation	LNT	65.45	3.25	20.14
Ameren Corporation	AEE	99.50	5.00	19.90
American Electric Power Company, Inc.	AEP	115.94	5.90	19.65
CenterPoint Energy, Inc.	CNP	38.16	1.75	21.81
CMS Energy Corporation	CMS	70.56	3.60	19.60
DTE Energy	DTE	129.96	7.20	18.05
Entergy Corporation	ETR	93.02	4.10	22.69
Evergy, Inc.	EVRG	73.42	4.00	18.36
Fortis, Inc.	FTS.TO	51.30	3.50	14.66
MGE Energy, Inc.	MGEE	79.29	3.65	21.72
OGE Energy Corporation	OGE	43.20	2.30	18.78
Otter Tail Corporation	OTTR	82.88	6.55	12.65
WEC Energy Group, Inc.	WEC	105.41	5.25	20.08
			Mean	**19.17**
			Median	**19.65**
			P/E Estimate	**19.65**
			Equity Rate	**5.09%**

Data Source:
Column (1) NASDAQ, 12-31-2025 NASDAQ, 30-day average
Coulmn (2) Value Line Industry Summay & Index, 12-05-2025

Cost of Capital Study

January 1, 2026

Direct Debt Rate Calculation

Electric Industry (SIC 4911)	
Direct Capitalization Debt Rate	
Interest Expense ($ mil)	7,379
Total Value of LT Debt (TVLTD) ($ mil)	230,250
Current Yield = Interest Expense/TVLTD	**3.20%**
Data Source: Value Line Investment Survey, 12-05-2025	

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Cost of Capital Study
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Staff Recommendation

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)			Reference
Equity:			
Risk Adjusted Models			Page 5
	CAPM	12.12%	
Dividend Growth Models			Page 7
	DGM or DCF Model (Dividend Growth)	11.10%	Page 7
	DGM or DCF Model (Earnings Growth)	8.89%	Page 7
	DGM or DCF Model (b * ROE = Growth)	9.81%	Page 8
	Multi Stage DCF	NM	
	Average	**10.48%**	
Estimated Cost of Equity Capital		**13.29%**	1
Debt:			Page 3
Estimated Cost of Debt Capital		**5.83%**	

Cost of Capital Summary

Capital Component	**Market Capital Structure**	**Cost of Capital**	**Before-Tax Weighted Average Cost of Capital**
Debt	30.00%	5.83%	1.75%
Equity	70.00%	13.29%	9.30%
TOTAL	**100.00%**		**11.05%**
		Rounded	**11.00%**

[1] Average 2025 COE (10.90%) – Average 2026 COE (10.48%) = 0.42%. 2025 Estimated COE (13.71%) – 0.42% = **13.29%**

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Staff Recommendation

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)

Direct Rate		Reference
Equity:		
Estimated Cost of Equity Capital	**5.88%**	Page 9
Debt:		
Estimated Cost of Debt Capital	**3.60%**	Page 10

Cost of Capital Summary

Capital Component	**Market Capital Structure**	**Cost of Capital**	**Before-Tax Weighted Average Cost of Capital**
Debt	30.00%	3.60%	1.08%
Equity	70.00%	5.88%	4.12%
Total	**100.00%**		**5.20%**
		Rounded	**5.25%**

Cost of Capital Study
January 1, 2026
Analysis of Debt Capital

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)				
			Ratings	
Company	**Ticker**		**Moody's**	**S&P**
Cheniere Energy PTRS	CQP		Baa3	BBB
Devon Energy	DVN		Baa2	BBB
Enbridge, Inc.	ENB.TO		Baa2	BBB+
Enterprise Products	EPD		A3	A-
EOG Resources	EOG		A3	A-
Exxon Mobil Corp.	XOM		Aa2	AA-
Hess Midstream	HESM		Ba1	BB+
Kinder Morgan, Inc.	KMI		Baa2	BBB
Marathon Petroleum	MPC		Baa2	BBB
National Fuel Gas	NFG		Baa3	BBB-
Oneok, Inc	OKE		Baa2	BBB
Ovintiv	OVV		Baa3	BBB-
Phillips 66	PSX		A3	BBB+
Valero Energy	VLO		Baa2	BBB
Western Midstream	WES		Baa3	BBB-
Williams Co, Inc.	WMB		Baa2	BBB

		Average Rating	Baa	BBB
NR = Not Rated				
RW = Rating Withdrawn				

Mergent Bond Record, January 2026				
Corporate	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.29%	5.45%	5.74%
November	5.26%	5.42%	5.58%	5.78%
December	5.31%	5.49%	5.63%	5.90%
Average	**5.23%**	**5.40%**	**5.55%**	**5.81%**

Public Utilities	**Aaa**	**Aa**	**A**	**Baa**
October	-	5.37%	5.51%	5.71%
November	-	5.49%	5.62%	5.83%
December	-	5.57%	5.68%	5.88%
Average	**-**	**5.48%**	**5.60%**	**5.81%**

Industrials	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.21%	5.40%	5.75%
November	5.26%	5.34%	5.53%	5.88%
December	5.31%	5.41%	5.58%	5.91%
Average	**5.23%**	**5.32%**	**5.50%**	**5.85%**

Debt Yield Rate Estimate	**5.83%** [1]

Data Source:
https://www.moodys.com
https://standardandpoors.com
Mergent Bond Record, January 2026

Ratings				
Dispersions & Averages				
Agency	# of Companies			
S&P				
AAA	1			
AA	2	1	2	
A	3	2	6	
BBB	4	12	48	
BB	5	1	5	
B	6			
CCC	7			
C	9			
D	10			
Total		**16**	**61**	
Average Rating:				**3.81**
Agency	**# of Companies**			
Moody's				
Aaa	1			
Aa	2	1	2	
A	3	3	9	
Baa	4	11	44	
Ba	5	1	5	
B	6			
Caa	7			
Ca	8			
C	9			
Total		**16**	**60**	
Average Rating:				**3.75**

[1] - 'A' (5.68%) and 'Baa' (5.88%) Ratings - 3.75 Assigned Value. Debt Cost lies at the 75 percentile of the range 5.68 and 5.88 which is 5.83%.

Cost of Capital Study

January 1, 2026

Analysis of the Market Capital Structure

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Company Name	**Stock Symbol**	**Debt ($ mil)**	**Debt %**	**Stock Price**	**Shares (mil) Outstanding**	**Equity ($ mil)**	**Equity %**	**Total Capital ($ mil)**
Cheniere Energy PTRS	CQP	14,761	36.11%	53.96	484.00	26,117	63.89%	40,878
Devon Energy	DVN	8,391	26.65%	36.84	627.00	23,099	73.35%	31,490
Enbridge, Inc.	ENB.TO	102,400	49.67%	47.57	2,181.00	103,750	50.33%	206,150
Enterprise Products	EPD	33,578	99.79%	32.17	2.16	70	0.21%	33,648
EOG Resources	EOG	7,694	11.72%	106.85	542.60	57,977	88.28%	65,671
Exxon Mobil Corp.	XOM	42,036	7.79%	118.02	4,217.00	497,690	92.21%	539,726
Hess Midstream	HESM	3,795	46.12%	34.26	129.39	4,433	53.88%	8,228
Kinder Morgan, Inc.	KMI	32,600	35.14%	27.05	2,224.00	60,159	64.86%	92,759
Marathon Petroleum	MPC	32,844	37.97%	178.52	300.60	53,663	62.03%	86,507
National Fuel Gas	NFG	2,833	27.72%	81.74	90.38	7,388	72.28%	10,221
Oneok, Inc	OKE	33,727	42.12%	73.58	629.76	46,338	57.88%	80,065
Ovintiv	OVV	5,212	34.12%	39.74	253.26	10,065	65.88%	15,277
Phillips 66	PSX	21,755	28.58%	134.92	402.92	54,362	71.42%	76,117
Valero Energy	VLO	10,581	17.03%	169.03	305.01	51,556	82.97%	62,137
Western Midstream	WES	6,937	30.20%	39.30	408.00	16,034	69.80%	22,971
Williams Co, Inc.	WMB	27,987	27.55%	60.26	1,221.22	73,591	72.45%	101,578
Mean:		**24,196**	**34.89%**			**67,893**	**65.11%**	**92,089**
Median:		**18,258**	**32.16%**			**48,947**	**67.84%**	**63,904**
Market Capital Structure Estimate:		**Debt:**	**30.00%**			**Equity:**	**70.00%**	

Data Source:
Columns (1) & (4), Value Line Industry Summary & Index, 11-21-2025
Column (2) = Column (1) / Column (7)
Column (3), NASDAQ, 11-31-2025
Column (5) = Column (3) * Column (4)
Column (7) = Column (1) + Column (5)

Cost of Capital Study

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Capital Asset Pricing Model (CAPM)

CAPM ==> K_e = R_f + β (ERP)

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)		
Risk-Free Rate		4.80%
Beta (β)		1.06
Equity Risk Premium (ERP): (R_m - R_f)*		6.91%
Adjusted Equity Risk Premium: (β * ERP)		7.32%
Cost of Equity Capital - CAPM		**12.12%**
U.S. Department of the Treasury, Daily Treasury Yield Curve Rates, Selected Yields		
U.S. Treasury Securities:		
2025 December - 30 Day Average		4.80%
2025 November - December - 60 Day Average		4.75%
2025 October - December - 90 Day Average		4.71%
Risk-Free Rate of Return R_f, 30-year Treasury Rate. 2025 December - 30 Day Average.		**4.80%**

* Equity Risk Premium = Average of 6.78% (historical) and 7.03% (Damodaran Implied ERP) - From Business Valuation Resources

Cost of Capital Study
January 1, 2026
Beta (β) Analysis

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)			
Company Name	**Stock Symbol**		**Beta "β"**
Cheniere Energy PTRS	CQP		0.95
Chevron Corp.	CVX		0.95
Devon Energy	DVN		1.40
Enbridge, Inc.	ENB.TO		0.70
Enterprise Products	EPD		0.90
EOG Resources	EOG		1.15
Exxon Mobil Corp.	XOM		0.90
Hess Midstream	HESM		0.95
Kinder Morgan, Inc.	KMI		1.00
Marathon Petroleum	MPC		1.15
National Fuel Gas	NFG		0.85
Oneok, Inc	OKE		1.30
Ovintiv	OVV		1.45
Phillips 66	PSX		1.20
Valero Energy	VLO		1.15
Western Midstream	WES		1.15
Williams Co, Inc.	WMB		0.95
		Mean:	**1.06**
		Median:	**1.00**
		Beta (β) Estimate:	**1.06**

Data Source:
Value Line Industry Summary & Index, 11-21-2025

Cost of Capital Study

January 1, 2026

Dividend Growth Model (DGM or DCF)

DGM or DCF Model ==> $K_e = \dfrac{D_1}{P_0} + g$

where

K_e = Cost of Equity

D_1 = Expected Dividends

P_0 = Current Price

g = Sustainable Growth

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)

Company Name	Stock Symbol	(1) Stock Price P_0	(2) Expected Dividend D_1	Dividend Yield (D_1 / P_0)	(3) Dividend Growth g	(4) Earnings Growth g	(5) b	(6) ROE	g=(b * ROE)	(Dividends) K_e	(Earnings) K_e	g=(b * ROE) K_e
Cheniere Energy PTRS	CQP	53.96	3.28	6.08%	6.00%	2.00%	37.00%	NMF	NMF	12.08%	8.08%	NMF
Devon Energy	DVN	36.84	1.04	2.82%	8.00%	-1.50%	76.00%	16.00%	12.16%	10.82%	1.32%	14.98%
Enbridge, Inc.	ENB.TO	47.57	3.90	8.20%	2.50%	5.00%	NMF	9.50%	NMF	10.70%	13.20%	NMF
Enterprise Products	EPD	32.17	2.24	6.96%	10.50%	6.00%	17.00%	19.00%	3.23%	17.46%	12.96%	10.19%
EOG Resources	EOG	106.85	4.15	3.88%	8.50%	3.50%	61.00%	18.50%	11.29%	12.38%	7.38%	15.17%
Exxon Mobil Corp.	XOM	118.02	4.20	3.56%	3.50%	-3.00%	42.00%	10.50%	4.41%	7.06%	0.56%	7.97%
Hess Midstream	HESM	34.26	3.10	9.05%	9.00%	10.50%	-7.00%	85.00%	-5.95%	18.05%	19.55%	3.10%
Kinder Morgan, Inc.	KMI	27.05	1.19	4.40%	5.50%	8.50%	6.00%	8.50%	0.51%	9.90%	12.90%	4.91%
Marathon Petroleum	MPC	178.52	4.00	2.24%	6.00%	-8.00%	64.00%	17.00%	10.88%	8.24%	-5.76%	13.12%
National Fuel Gas	NFG	81.74	2.18	2.67%	4.50%	9.50%	70.00%	20.40%	14.28%	7.17%	12.17%	16.95%
Oneok, Inc	OKE	73.58	4.28	5.82%	4.00%	10.50%	24.00%	16.00%	3.84%	9.82%	16.32%	9.66%
Ovintiv	OVV	39.74	1.34	3.37%	8.00%	2.00%	74.00%	11.00%	8.14%	11.37%	5.37%	11.51%
Phillips 66	PSX	134.92	4.95	3.67%	5.00%	NMF	NMF	6.00%	NMF	8.67%	NMF	NMF
Valero Energy	VLO	169.03	4.72	2.79%	5.50%	-4.50%	30.00%	8.50%	2.55%	8.29%	-1.71%	5.34%
Western Midstream	WES	39.30	3.75	9.54%	9.00%	8.50%	0.00%	42.50%	0.00%	18.54%	18.04%	9.54%
Williams Co, Inc.	WMB	60.26	2.09	3.47%	3.50%	9.50%	7.00%	22.50%	1.58%	6.97%	12.97%	5.05%
			Mean:	**4.91%**	**6.19%**	**3.90%**	**35.79%**	**20.73%**	**5.15%**	**11.10%**	**8.89%**	**9.81%**
			Median:	**3.78%**	**5.75%**	**5.00%**	**33.50%**	**16.00%**	**3.84%**	**10.30%**	**12.17%**	**9.66%**
									Cost of Equity Capital - DCF K_e Estimate:	**11.10%**	**8.89%**	**9.81%**

Notes:

b = (1 - payout ratio) = Retention Ratio

ROE = Return on Book Equity

Not Meaningful (NMF)

Data Source:

Column (1), NASDAQ, 12-31-2025, 30-day average

Columns (2) - (6), Value Line Industry Summary & Index, 11-21-2025

Cost of Capital Study

January 1, 2026

Support for Market Multiples

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)				
		(1)	(2)	
Company Name	**Ticker**	**Stock Price**	**Earnings**	**P/E Multiple**
Cheniere Energy PTRS	CQP	53.96	3.90	13.84
Devon Energy	DVN	36.84	4.00	9.21
Enbridge, Inc.	ENB.TO	47.57	2.85	16.69
Enterprise Products	EPD	32.17	2.60	12.37
EOG Resources	EOG	106.85	10.20	10.48
Exxon Mobil Corp.	XOM	118.02	7.00	16.86
Hess Midstream	HESM	34.26	2.70	12.69
Kinder Morgan, Inc.	KMI	27.05	1.25	21.64
Marathon Petroleum	MPC	178.52	10.25	17.42
National Fuel Gas	NFG	81.74	6.91	11.83
Oneok, Inc	OKE	73.58	5.50	13.38
Ovintiv	OVV	39.74	4.55	8.73
Phillips 66	PSX	134.92	3.80	35.51
Valero Energy	VLO	169.03	6.50	26.00
Western Midstream	WES	39.30	3.55	11.07
Williams Co, Inc.	WMB	60.26	2.15	28.03
			Mean:	**16.61**
			Median:	**13.61**
			P/E Estimate:	**17.00**
			Equity Rate:	**5.88%**

Data Source:
(1) NASDAQ, 12-30-2025 December, 2025 30-Day Average
(2) Value Line Industry Summay & Index, 11-21-2025

Cost of Capital Study

January 1, 2026

Direct Debt Rate Calculation

Fluid/Natural Gas Pipeline Industries (SIC 4612/4922)	
Direct Capitalization Debt Rate	
Interest Expense ($ mil)	$ 14,350
Total Value of Debt (TVD) ($ mil)	$ 398,364
Current Yield = Interest Expense/TVD	**3.60%**
Data Source:	
Value Line Investment Survey, 11-21-2025	

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Cost of Capital Study
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Staff Recommendation

Railroad Class I Industry (SIC 4011)			Reference
Equity:			
Risk Adjusted Models			
	CAPM	11.36%	Page 5
Dividend Growth Models			
	DGM or DCF Model (Dividend Growth)	10.00%	Page 7
	DGM or DCF Model (Earnings Growth)	10.70%	Page 7
	DGM or DCF Model (b * ROE = Growth)	15.00%	Page 7
	Multi Stage DCF	NA	Page 8
	Average	**11.77%**	
Estimated Cost of Equity Capital		**12.33%**	1
Debt:			Page 3
Estimated Cost of Debt Capital		**5.71%**	

Cost of Capital Summary

Capital Component	Market Capital Structure	Cost of Capital	Before-Tax Weighted Average Cost of Capital
Debt	20.00%	5.71%	1.14%
Equity	80.00%	12.33%	9.86%
Total	**100.00%**		**11.00%**
		Rounded	**11.00%**

[1] Average 2025 COE (11.87%) – Average 2026 COE (11.77%) = 0.10%. 2025 Estimated COE (12.43%) – 0.10% = **12.33%**.

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Cost of Capital Study

January 1, 2026

Staff Recommendation

Railroad Non-Class I Industry (SIC 4013)			Reference
Equity:			
Risk Adjusted Models			
	CAPM	11.36%	Page 5
Dividend Growth Models			
	DGM or DCF Model (Dividend Growth)	10.00%	Page 7
	DGM or DCF Model (Earnings Growth)	10.70%	Page 7
	DGM or DCF Model (b * ROE = Growth)	15.00%	Page 7
	Multi Stage DCF	NA	Page 8
	Average	**11.77%**	
Estimated Cost of Equity Capital		**12.33%**	
Debt:			Page 3
Estimated Cost of Debt Capital		**5.71%**	

Cost of Capital Summary

Capital Component	Market Capital Structure	Cost of Capital	Before-Tax Weighted Average Cost of Capital
Debt	20.00%	5.71%	1.14%
Equity	80.00%	12.33%	9.86%
Total	**100.00%**		**11.00%**
		Rounded	**11.25%**

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Cost of Capital Study

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Staff Recommendation

Railroad Class I Industry (SIC 4011)

		Reference
Direct Rate		
Equity:		
Estimated Cost of Equity Capital	**4.68%**	Page 9
Debt:		
Estimated Cost of Debt Capital	**4.15%**	Page 10

Cost of Capital Summary

Capital Component	**Market Capital Structure**	**Cost of Capital**	**Before-Tax Weighted Average Cost of Capital**
Debt	20.00%	4.15%	0.83%
Equity	80.00%	4.68%	3.74%
Total	**100.00%**		**4.57%**
		Rounded	**4.50%**

Cost of Capital Study
January 1, 2026
Analysis of Debt Capital

Railroad Class I Industry (SIC 4011)				
			Ratings	
Company	**Ticker**		**Moody's**	**S&P**
Canadian National Railway	CNI		A2	A-
Canadian Pacific Kansas City	CP		Baa1	BBB+
CSX Corp.	CSX		A3	BBB+
Norfolk Southern Corp.	NSC		Baa1	BBB+
Union Pacific Corp.	UNP		A3	A-
		Average Rating	**A**	**BBB**
NR = Not Rated				
RW = Rating Withdrawn				
Mergent Bond Record, January 2026				
Corporate	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.29%	5.45%	5.74%
November	5.26%	5.42%	5.58%	5.78%
December	5.31%	5.49%	5.63%	5.90%
Average	**5.23%**	**5.40%**	**5.55%**	**5.81%**
Public Utilities	**Aaa**	**Aa**	**A**	**Baa**
October	-	5.37%	5.51%	5.71%
November	-	5.49%	5.62%	5.83%
December	-	5.57%	5.68%	5.88%
Average	**-**	**5.48%**	**5.60%**	**5.81%**
Industrials	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.21%	5.40%	5.75%
November	5.26%	5.34%	5.53%	5.88%
December	5.31%	5.41%	5.58%	5.91%
Average	**5.23%**	**5.32%**	**5.50%**	**5.85%**
Debt Yield Rate Estimate				**5.71%**

Data Sources:
https://www.moodys.com
https://standardandpoors.com
Mergent Bond Record, January 2026

Ratings				
Dispersions & Averages Number of Companies				
Agency				
S&P				
AAA	1			
AA	2			
A	3	2	6	
BBB	4	3	12	
BB	5			
B	6			
CCC	7			
C	9			
D	10			
Total		**5**	**18**	
Average Rating:				**3.60**
Agency				
Moody's				
Aaa	1			
Aa	2			
A	3	3	9	
Baa	4	2	8	
Ba	5			
B	6			
Caa	7			
Ca	8			
C	9			
Total		**5**	**17**	
Average Rating:				**3.40**

Cost of Capital Study

January 1, 2026

Analysis of the Market Capital Structure

Railroad Class I Industry (SIC 4011)		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Company Name	**Stock Symbol**	**Debt ($ mil)**	**Debt %**	**Stock Price**	**Shares (mil) Outstanding**	**Equity ($ mil)**	**Equity %**	**Total Capital ($ mil)**
Canadian National Railway	CNI	15,200	20.05%	98.15	617.70	60,627	79.95%	75,827
Canadian Pacific Kansas City	CP	17,200	20.50%	74.05	900.83	66,707	79.50%	83,907
CSX Corp.	CSX	19,200	22.05%	36.46	1,862.14	67,894	77.95%	87,094
Norfolk Southern Corp.	NSC	17,100	20.65%	292.82	224.39	65,706	79.35%	82,806
Union Pacific Corp.	UNP	31,800	18.58%	234.90	593.16	139,333	81.42%	171,133
Mean:		**20,100**	**20.37%**			**80,053.40**	**79.63%**	**100,153**
Median:		**17,200**	**20.50%**			**66,707.00**	**79.50%**	**83,907**
Market Capital Structure Estimate:		**Debt:**	**20.00%**			**Equity:**	**80.00%**	

Data Source:
Columns (1) & (4), Value Line Industry Summary & Index, 11-14-2025
Column (2) = Column (1) / Column (7)
Column (3), NASDAQ, 12-30-2025
Column (5) = Column (3) * Column (4)
Column (7) = Column (1) + Column (5)

Cost of Capital Study

January 1, 2026

Capital Asset Pricing Model (CAPM)

CAPM ==> $K_e = R_f + \beta (ERP)$

Railroad Class I Industry (SIC 4011)	
Risk-Free Rate	4.80%
Beta (β)	0.95
Equity Risk Premium (ERP): $(R_m - R_f)$*	6.91%
Adjusted Equity Risk Premium: (β * ERP)	6.56%
Cost of Equity Capital - CAPM	**11.36%**
U.S. Department of the Treasury, Daily Treasury Yield Curve Rates, Selected Yields	
U.S. Treasury Securities:	
2025 December - 30 Day Average	4.80%
2025 November - December - 60 Day Average	4.75%
2025 October - December - 90 Day Average	4.71%
Risk-Free Rate of Return R_f, 30-year Treasury Rate. 2025 December - 30 Day Average.	**4.80%**

* Equity Risk Premium = Average of 6.78% (historical) and 7.03% (Damodaran Implied ERP) - From Business Valuation Resources

Cost of Capital Study

January 1, 2026

Beta (β) Analysis

Railroad Class I Industry (SIC 4011)			
Company Name	**Stock Symbol**		**Beta "β"**
Canadian National Railway	CNI		0.95
Canadian Pacific Kansas City	CP		0.95
CSX Corp.	CSX		1.00
Norfolk Southern Corp.	NSC		1.00
Union Pacific Corp.	UNP		0.95
		Mean:	0.97
		Median:	0.95
		Beta (β) Estimate:	**0.95**

Data Source:
Value Line Industry Summary & Index, 11-14-2025

Cost of Capital Study
January 1, 2026
Dividend Growth Model (DGM or DCF)

DGM or DCF Model ==> $K_e = \dfrac{D_1}{P_0} + g$

where
K_e = Cost of Equity
D_1 = Expected Dividends
P_0 = Current Price
g = Sustainable Growth

Railroad Class I Industry (SIC 4011)

Company Name	Stock Symbol	(1) Stock Price P_0	(2) Expected Dividend D_1	Dividend Yield (D_1 / P_0)	(3) Dividend Growth g	(4) Earnings Growth g	(5) b	(6) ROE	g=(b * ROE)	(Dividends) K_e	(Earnings) K_e	g=(b * ROE) K_e
Canadian National Railway	CNI	98.15	2.80	2.85%	9.00%	8.00%	52.00%	22.50%	11.70%	11.85%	10.85%	14.55%
Canadian Pacific Kansas City	CP	74.05	0.64	0.86%	9.00%	10.00%	80.00%	8.00%	6.40%	9.86%	10.86%	7.26%
CSX Corp.	CSX	36.46	0.60	1.65%	12.50%	8.50%	68.00%	24.00%	16.32%	14.15%	10.15%	17.97%
Norfolk Southern Corp.	NSC	292.82	5.40	1.84%	4.50%	11.00%	56.00%	18.00%	10.08%	6.34%	12.84%	11.92%
Union Pacific Corp.	UNP	234.90	5.60	2.38%	5.00%	6.50%	54.00%	39.00%	21.06%	7.38%	8.88%	23.44%
			Mean:	**1.92%**	**8.00%**	**8.80%**	**62.00%**	**22.30%**	**13.11%**	**9.92%**	**10.72%**	**15.03%**
			Median:	**1.84%**	**9.00%**	**8.50%**	**56.00%**	**22.50%**	**11.70%**	**9.86%**	**10.85%**	**14.55%**
									Cost of Equity Capital - DCF K_e Estimate:	**10.00%**	**10.70%**	**15.00%**

-
b = (1 - payout ratio) = Retention Ratio
ROE = Return on Book Equity
Not Meaningful (NMF)
Data Source:
Column (1), NASDAQ, December Closing Average
Columns (2) - (6), Value Line Industry Summary & Index, 11-15-2025

Cost of Capital Study

January 1, 2026

Support for Market Multiples

Railroad Class I Industry (SIC 4011)				
		(1)	(2)	
Company Name	**Ticker**	**Stock Price**	**Earnings**	**P/E Multiple**
Canadian National Railway	CNI	98.15	5.50	17.85
Canadian Pacific Kansas City	CP	74.05	3.15	23.51
CSX Corp.	CSX	36.46	1.65	22.10
Norfolk Southern Corp.	NSC	292.82	12.40	23.61
Union Pacific Corp.	UNP	234.90	11.85	19.82
			Mean	**21.38**
			Median	**22.10**
			P/E Estimate	**21.38**
			Equity Rate	**4.68%**

Data Source:
Column (1) NASDAQ, December Closing Average
Coulmn (2) Value Line Industry Summay & Index, 11-15-2025

Cost of Capital Study

January 1, 2026

Direct Debt Rate Calculation

Railroad Class I (SIC 4011)		
Direct Capitalization Debt Rate		
Interest Expense ($ mil)	$	3,944
Total Value of Debt (TVD) ($ mil)	$	95,000
Current Yield = Interest Expense/TVD		**4.15%**
Data Source:		
Value Line Investment Survey, 11-14-2025		

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Cost of Capital Study

January 1, 2026

Staff Recommendation

Telecommunications Industry (SIC 4813)			Reference
Equity:			
Risk Adjusted Models			
	CAPM	10.88%	Page 5
Dividend Growth Models			
	DGM or DCF Model (Dividend Growth)	14.00%	Page 7
	DGM or DCF Model (Earnings Growth)	13.75%	Page 7
	DGM or DCF Model (b * ROE = Growth)	14.25%	Page 7
	Multi Stage DCF	NA	Page 8
	Average	**13.22%**	
Estimated Cost of Equity Capital		**16.16%**	1
Debt:			
Estimated Cost of Debt Capital		**6.02%**	Page 3

Cost of Capital Summary

Capital Component	Market Capital Structure	Cost of Capital	Before-Tax Weighted Average Cost of Capital
Debt	55.00%	6.02%	3.31%
Equity	45.00%	16.16%	7.27%
Total	**100.00%**		**10.58%**
		Rounded	**10.50%**

[1] Average 2025 COE (12.09%) – Average 2026 COE (11.77%) = 0.10%. 2025 Estimated COE (15.03%) + 1.13% = **16.16%**.

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Cost of Capital Study

January 1, 2026

Staff Recommendation

Telecommunications Industry (SIC 4813)

Direct Rate

		Reference
Equity:		
Estimated Cost of Equity Capital	**11.66%**	Page 9
Debt:		
Estimated Cost of Debt Capital	**4.80%**	Page 10

Cost of Capital Summary

Capital Component	**Market Capital Structure**	**Cost of Capital**	**Before-Tax Weighted Average Cost of Capital**
Debt	55.00%	4.80%	2.64%
Equity	45.00%	11.66%	5.25%
Total	**100.00%**		**7.89%**
		Rounded	**8.00%**

Cost of Capital Study
January 1, 2026
Analysis of Debt Capital

Telecommunications Industry (SIC: 4813)				
			Ratings	
Company	**Ticker**		**Moody's**	**S&P**
AT&T	T		Baa2	BBB
Cable One	CABO		Ba3	BB
Comcast Corporation	CMCSA		A3	A-
Deutsche Telekom	DTEGY		A3	BBB+
Lumen Technologies	LUMN		B3	CCC+
Shenandoah Telecommunications	SHEN		NPS	AA
		Average Rating	**Baa**	**BBB**
NR = Not Rated				
RW = Rating Withdrawn				

Mergent Bond Record, January 2026

Corporate	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.29%	5.45%	5.74%
November	5.26%	5.42%	5.58%	5.78%
December	5.31%	5.49%	5.63%	5.90%
Average	**5.23%**	**5.40%**	**5.55%**	**5.81%**

Public Utilities	**Aaa**	**Aa**	**A**	**Baa**
October	-	5.37%	5.51%	5.71%
November	-	5.49%	5.62%	5.83%
December	-	5.57%	5.68%	5.88%
Average	**-**	**5.48%**	**5.60%**	**5.81%**

Industrials	**Aaa**	**Aa**	**A**	**Baa**
October	5.13%	5.21%	5.40%	5.75%
November	5.26%	5.34%	5.53%	5.88%
December	5.31%	5.41%	5.58%	5.91%
Average	**5.23%**	**5.32%**	**5.50%**	**5.85%**

Debt Yield Rate Estimate	**6.02%**

Data Source:
https://www.moodys.com
https://standardandpoors.com
Mergent Bond Record, January 2026
ICE BofA Single-B US High Yield Index Option-Adjusted Spread | FRED | St. Louis Fed

Ratings				
Dispersions & Averages Number of Companies				
Agency				
S&P				
AAA	1			
AA	2	1		
A	3	1	3	
BBB	4	2	8	
BB	5	1	5	
B	6			
CC	8	1	8	
C	9			
D	10			
Total		6	24	
Average Rating:			**4.00**	
Agency				
Moody's				
Aaa	1			
Aa	2			
A	3	2	6	
Baa	4	1	4	
Ba	5	1	5	
B	6	1	6	
Caa	7			
Ca	8			
C	9			
Total		5	21	
Average Rating:			**4.20**	

Cost of Capital Study

January 1, 2026

Analysis of the Market Capital Structure

Telecommunications Industry (SIC 4813)								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Company Name	**Ticker Symbol**	**Debt ($ mil)**	**Debt %**	**Stock Price**	**Shares (mil) Outstanding**	**Equity ($ mil)**	**Equity %**	**Total Capital ($ mil)**
AT&T	T	139,468	44.33%	24.71	7,089	175,169	55.67%	314,637
Cable One	CABO	3,281	82.38%	124.44	5.64	702	17.62%	3,983
Comcast Corporation	CMCSA	99,063	55.29%	21.99	3,643	80,110	44.71%	179,173
Deutsche Telekom	DTEGY	166,300	51.57%	32.00	4,881	156,192	48.43%	322,492
Lumen Technologies	LUMN	17,672	67.74%	8.21	1,025	8,415	32.26%	26,087
Shenandoah Telecommunications	SHEN	534.10	46.08%	11.36	55	625	53.93%	1,159
	Mean:	**71,053**	**57.90%**			**70,202**	**42.10%**	**141,255**
	Median:	**58,368**	**53.43%**			**44,263**	**46.57%**	**102,630**
	Market Capital Structure Estimate:	**Debt:**	**55.00%**			**Equity:**	**45.00%**	

Data Source:

Columns (1) & (4), Value Line Industry Summary & Index, 12-05-2025
Column (2) = Column (1) / Column (7)
Column (3), NASDAQ, 12-30-2024
Column (5) = Column (3) * Column (4)
Column (7) = Column (1) + Column (5)

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Capital Asset Pricing Model (CAPM)

CAPM ==> K_e = R_f + (β * ERP)

Telecommunications Industry (SIC 4813)	
Risk-Free Rate (R_f)	4.80%
Beta (β)	0.88
Equity Risk Premium (ERP): (R_m - R_f)	6.91%
Adjusted Equity Risk Premium: (β * ERP)	6.08%
Cost of Equity Capital - CAPM	**10.88%**
U.S. Department of the Treasury, Daily Treasury Yield Curve Rates, Selected Yields	
U.S. Treasury Securities:	
2025 December - 30 Day Average	4.80%
2025 November - December - 60 Day Average	4.75%
2025 October - December - 90 Day Average	4.71%
Risk-Free Rate of Return R_f, 30-year Treasury Rate. 2025 December - 30 Day Average.	**4.80%**
* Equity Risk Premium = Average of 6.78% (historical) and 7.03% (Damodaran Implied ERP) - From Business Valuation Resources	

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Beta (β) Analysis

Telecommunications Industry (SIC 4813)		
Company Name	**Ticker Symbol**	**Beta "β"**
AT&T	T	0.70
Cable One	CABO	0.95
Comcast Corporation	CMCSA	0.90
Deutsche Telekom	DTEGY	0.80
Lumen Technologies	LUMN	1.45
Shenandoah Telecommunications	SHEN	0.85
	Mean:	0.99
	Median:	0.88
	Beta (β) Estimate:	**0.88**

Data Source:
Value Line Industry Summary & Index, 12-05-2025

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Dividend Growth Model (DGM or DCF)

DGM or DCF Model ==> $K_e = \dfrac{D_1}{P_0} + g$

where

K_e =	Cost of Equity
D_1 =	Expected Dividends
P_0 =	Current Price
g =	Sustainable Growth

Telecommunications Industry (SIC 4813)

Company Name	Ticker Symbol	(1) Stock Price P_0	(2) Expected Dividend D_1	Dividend Yield (D_1 / P_0)	(3) Dividend Growth g	(4) EPS Growth g	(5) b	(6) ROE	g=(b * ROE)	(Dividends) K_e	(Earnings) K_e	g=(b * ROE) K_e
AT&T	T	24.71	1.11	4.49%	0.50%	6.50%	57.00%	17.00%	9.69%	NMF	10.99%	14.18%
Cable One	CABO	124.44	NMF	NMF	NMF	2.00%	NMF	NMF	NMF	NMF	NMF	NMF
Comcast Corporation	CMCSA	21.99	1.38	6.28%	7.00%	7.50%	70.00%	18.50%	12.95%	13.28%	13.78%	19.23%
Deutsche Telekom	DTEGY	32.00	0.90	2.81%	12.00%	12.50%	57.00%	18.00%	10.26%	14.81%	15.31%	13.07%
Lumen Technologies	LUMN	8.21	NMF	NMF	NMF	NMF	NMF	NMF	NMF	NMF	NMF	NMF
Shenandoah Telecommunications	SHEN	11.36	0.12	1.06%	9.00%	NMF	NMF	NMF	NMF	NMF	NMF	NMF
			Mean:	**1.73%**	**7.13%**	**7.13%**	**61.33%**	**17.83%**	**10.97%**	**14.05%**	**13.36%**	**15.49%**
			Median:	**3.65%**	**8.00%**	**7.00%**	**57.00%**	**18.00%**	**10.26%**	**14.05%**	**13.78%**	**14.18%**
									Cost of Equity Capital - DCF K_e Estimate:	**14.00%**	**13.75%**	**14.25%**

Notes:

b = (1 - payout ratio) = Retention Ratio

ROE = Return on Book Equity

Not Meaningful (NMF)

Data Source:

Column (1), NASDAQ, 12-31-2025 - 30-Day Average

Columns (2) - (6), Value Line Industry Summary & Index, 12-05-2025

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Market Multiples

Telecommunications Industry (SIC 4813)				
		(1)	(2)	
Company Name	**Ticker**	**Stock Price**	**EPS**	**P/E Multiple**
AT&T	T	24.71	2.05	12.05
Cable One	CABO	124.44	56.00	2.22
Comcast Corporation	CMCSA	21.99	4.30	5.11
Deutsche Telekom	DTEGY	32.00	2.30	13.91
Lumen Technologies	LUMN	8.21	2.00	4.11
Shenandoah Telecommunications	SHEN	11.36	0.75	15.15
			Mean:	**8.76**
			Median:	**8.58**
			P/E Estimate:	**8.58**
			Equity Rate:	**11.66%**

Data Source:
Column (1) NASDAQ, 12-31-2025 - December 30 Day Average
Coulmn (2) Value Line Industry Summay & Index, 12-05-2025

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Direct Debt Rate Calculation

Telecommunications Industry (SIC 4813)	
Direct Capitalization Debt Rate	
Interest Expense ($ mil)	$ 19,602
Total Value of Debt (TVD) ($ mil)	$ 408,390
Current Yield = Interest Expense/TVD	**4.80%**
Data Source:	
Value Line Investment Survey, 12-05-2025	