

EMPIRICAL CAPM - CURRENT BOND YIELD

UTILITY GROUP

	(a)			(b)		(c)		(d)		(e)		(d)		(f)		(g)	
	Market Return (R _m)			Market		Unadjusted RP		Beta Adjusted RP		Total	Empirical	Market	Size	Size			
	Div	Proj.	Cost of	Risk-Free	Risk	Weight	RP ¹	Beta	Weight	RP ²	RP	K _e	Cap	Adjustment	K _e		
Company	Yield	Growth	Equity	Rate	Premium												
1 ALLETE	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 2,077.5	1.70%	12.5%		
2 Ameren Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	\$ 9,740.4	0.76%	11.8%		
3 American Elec Pwr	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 24,265.4	-0.37%	10.1%		
4 Avista Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 1,766.7	1.72%	12.5%		
5 Black Hills Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.90	75%	5.9%	8.1%	11.7%	\$ 2,505.8	1.70%	13.4%		
6 CMS Energy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 7,514.5	0.92%	11.4%		
7 DTE Energy Co.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	\$ 12,595.0	0.76%	11.8%		
8 Duke Energy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 49,723.6	-0.37%	10.1%		
9 Edison International	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 16,965.0	0.76%	11.5%		
10 El Paso Electric	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.65	75%	4.3%	6.4%	10.1%	\$ 1,408.1	1.72%	11.8%		
11 Empire District Elec	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 1,010.4	1.73%	12.2%		
12 Entergy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 11,368.7	0.76%	11.2%		
13 Exelon Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 25,852.8	-0.37%	10.4%		
14 Great Plains Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.85	75%	5.6%	7.8%	11.4%	\$ 3,971.8	1.14%	12.6%		
15 Hawaiian Elec.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	\$ 2,530.3	1.70%	12.8%		
16 IDACORP, Inc.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 2,795.4	1.14%	11.9%		
17 NorthWestern Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 1,756.2	1.72%	12.2%		
18 Otter Tail Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.95	75%	6.2%	8.4%	12.1%	\$ 1,106.6	1.73%	13.8%		
19 Pepco Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	\$ 5,101.6	0.92%	12.0%		
20 PG&E Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.60	75%	3.9%	6.1%	9.8%	\$ 19,464.3	-0.37%	9.4%		
21 PNM Resources	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.95	75%	6.2%	8.4%	12.1%	\$ 2,037.5	1.70%	13.8%		
22 Portland General Elec.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 2,470.0	1.70%	12.5%		
23 PPL Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	\$ 20,142.4	-0.37%	10.1%		
24 SCANA Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 6,895.0	0.92%	11.7%		
25 Sempra Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 22,973.6	-0.37%	10.4%		
26 UIL Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.85	75%	5.6%	7.8%	11.4%	\$ 2,011.5	1.70%	13.1%		
27 Westar Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	\$ 4,360.8	0.92%	11.7%		
Average												10.8%			11.8%		
Midpoint (h)												10.9%			11.6%		

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retrieved Jan. 8, 2014).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).

(c) Average yield on 30-year Treasury bonds for Feb. 2014 as reported at www.federalreserve.gov/releases/h15/data.htm.

(d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).

(e) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).

(f) www.valueline.com (retrieved Mar. 3, 2014).

(g) *Morningstar*, "Ibbotson S&P 500 Valuation Yearbook," at Appendix C, Table C-1 (2013).

(h) Average of low and high values.

EMPIRICAL CAPM - PROJECTED BOND YIELD

UTILITY GROUP

	Company	(a) (b) Market Return (R _m)			(c) Risk-Free Rate	(d) Market Risk		(e) Unadjusted RP	(f) Beta Adjusted RP			(g) Total Empirical Market	(h) Size Adjustment	Size Adjusted K _e			
		Div	Proj.	Cost of Equity		Risk	Weight		Beta	Weight	RP ²				RP	K _e	Cap
		Yield	Growth	Equity		Premium	RP ¹		Weight	Weight	RP ²				RP	K _e	Cap
1	ALLETE	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 2,077.5	1.70%	12.6%	
2	Ameren Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.80	75%	4.7%	6.7%	11.2%	\$ 9,740.4	0.76%	12.0%	
3	American Elec Pwr	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 24,265.4	-0.37%	10.3%	
4	Avista Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 1,766.7	1.72%	12.7%	
5	Black Hills Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.90	75%	5.3%	7.2%	11.8%	\$ 2,505.8	1.70%	13.5%	
6	CMS Energy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 7,514.5	0.92%	11.6%	
7	DTE Energy Co.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.80	75%	4.7%	6.7%	11.2%	\$ 12,595.0	0.76%	12.0%	
8	Duke Energy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 49,723.6	-0.37%	10.3%	
9	Edison International	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 16,965.0	0.76%	11.7%	
10	El Paso Electric	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.65	75%	3.8%	5.8%	10.3%	\$ 1,408.1	1.72%	12.1%	
11	Empire District Elec	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 1,010.4	1.73%	12.4%	
12	Entergy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 11,368.7	0.76%	11.4%	
13	Exelon Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 25,852.8	-0.37%	10.6%	
14	Great Plains Energy	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.85	75%	5.0%	7.0%	11.5%	\$ 3,971.8	1.14%	12.7%	
15	Hawaiian Elec.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.80	75%	4.7%	6.7%	11.2%	\$ 2,530.3	1.70%	12.9%	
16	IDACORP, Inc.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 2,795.4	1.14%	12.1%	
17	NorthWestern Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 1,756.2	1.72%	12.4%	
18	Otter Tail Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.95	75%	5.6%	7.5%	12.1%	\$ 1,106.6	1.73%	13.8%	
19	Pepco Holdings	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.80	75%	4.7%	6.7%	11.2%	\$ 5,101.6	0.92%	12.1%	
20	PG&E Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.60	75%	3.5%	5.5%	10.0%	\$ 19,464.3	-0.37%	9.7%	
21	PNM Resources	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.95	75%	5.6%	7.5%	12.1%	\$ 2,037.5	1.70%	13.8%	
22	Portland General Elec.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 2,470.0	1.70%	12.6%	
23	PPL Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.70	75%	4.1%	6.1%	10.6%	\$ 20,142.4	-0.37%	10.3%	
24	SCANA Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 6,895.0	0.92%	11.9%	
25	Sempra Energy	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 22,973.6	-0.37%	10.6%	
26	UIL Holdings	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.85	75%	5.0%	7.0%	11.5%	\$ 2,011.5	1.70%	13.2%	
27	Westar Energy	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	\$ 4,360.8	0.92%	11.9%	
	Average												11.0%			12.0%	
	Midpoint (h)												11.1%			11.8%	

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retrieved Jan. 8, 2014).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).

(c) Average yield on 30-year Treasury bonds for 2014-2018 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 21, 2014); IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013); & Blue Chip Financial Forecasts, Vol. 32, No. 12 (Dec. 1, 2013).

(d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).

(e) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).

(f) www.valueline.com (retrieved Mar. 3, 2014).

(g) *Morningstar*, "Ibbotson SBBI 2013 Valuation Yearbook," at Appendix C, Table C-1 (2013).

(h) Average of low and high values.