

1 Cost of Debt, produces financial metrics also within Moody's Guidelines for Baa Bonds.
2 Consequently Mr. Lawton's analysis does not provide any meaningful support for his
3 9.00 recommendation.
4

5 VIII. RESPONSE TO DIRECT TESTIMONY OF WAL-MART WITNESS CHRISS

6 Q. PLEASE SUMMARIZE MR. CHRISS' TESTIMONY REGARDING THE COMPANY'S
7 ROE.

8 A. Mr. Chriss raises concerns with my recommendation because it is higher than average
9 returns since 2014.²¹⁵ Mr. Chriss also suggests that the Commission consider the effect
10 of increases in rates on retailers. Mr. Chriss did not, however, undertake an
11 independent, market-based analysis of the Company's Cost of Equity.
12

13 Q. HAVE YOU REVIEWED AND UPDATED THE INFORMATION CONTAINED IN MR.
14 CHRISS' EXHIBIT SWC-1?

15 A. Yes. As shown in Exhibit RBH-22R, I updated Mr. Chriss' Exhibit SWC-2 and added
16 jurisdictional rankings from Regulatory Research Associates ("RRA"). RRA, which is the
17 source of Mr. Chriss' rate case data, provides an assessment of the extent to which
18 regulatory jurisdictions are constructive from investors' perspectives, or not. As RRA
19 explains, less constructive environments are associated with higher levels of risk:

20 RRA maintains three principal rating categories, Above Average,
21 Average, and Below Average, with Above Average indicating a
22 relatively more constructive, lower-risk regulatory environment from
23 an investor viewpoint, and Below Average indicating a less
24 constructive, higher-risk regulatory climate from an investor
25 viewpoint. Within the three principal rating categories, the numbers
26 1, 2, and 3 indicate relative position. The designation 1 indicates a
27 stronger (more constructive) rating; 2, a mid-range rating; and, 3, a
28 weaker (less constructive) rating. We endeavor to maintain an

215 See Chriss Direct, at 6-9.

1 approximately equal number of ratings above the average and
2 below the average.²¹⁶

3 Sorting the data relating to Mr. Chriss' Exhibit SWC-2 by RRA's ranking, two points
4 become apparent. First, looking at all cases there is a 52 basis point difference between
5 the average return for "Above Average" and "Below Average" jurisdictions (the higher-
6 ranked jurisdictions providing the higher authorized returns, see Table 11, below).
7 Texas is currently ranked as "Average / 3".²¹⁷ As Table 11 indicates, ROEs for vertically
8 integrated electric utilities in "Above Average" jurisdictions range from 9.70 percent to
9 10.55 percent, with a median of 10.14 percent.

10

11 **Table 11: Average Authorized ROE by RRA Ranking**

RRA Ranking	AUTHORIZED ROE: VERTICALLY INTEGRATED		
	Above Avg.	Avg.	Below Avg.
Total Cases	16	45	8
Minimum	9.70%	9.20%	9.30%
Mean	10.10%	9.72%	9.58%
Median	10.14%	9.70%	9.52%
Maximum	10.55%	10.30%	9.96%

18 Those observations are important given that the authorized ROE is a very visible
19 measure of the regulatory environment in which utilities operate. The supportiveness of
20 the regulatory environment, in turn, is important to utility analysts and investors.

21

22 Q. PLEASE NOW SUMMARIZE MR. CHRISS' CONCERNS REGARDING THE EFFECT
23 OF A RATE INCREASE ON RETAILERS.

216 Source: Regulatory Research Associates, accessed June 30, 2017.

217 Source: Regulatory Research Associates.

1 A. Mr. Chriss states that "electricity is a significant operating cost for retailers", and that
2 "[w]hen electric rates increase, that increased cost to retailers can put pressure on
3 consumer prices and on the other expenses required by a business to operate."²¹⁸

4 Mr. Chriss suggests that the Commission,

5 [S]hould thoroughly and carefully consider the impact on customers in
6 examining the requested revenue requirement and ROE, in addition to all
7 other facets of this case, to ensure that any increase in the Company's
8 rates is the minimum amount necessary to provide safe, adequate, and
9 reliable service, while also providing EPE the opportunity to recover its
10 reasonable and prudent costs and earn a reasonable return on its
11 investment.²¹⁹
12

13 Although Mr. Chriss points out certain pressures that apply to retail businesses
14 such as Wal-Mart, those companies have options not available to regulated utilities such
15 as EPE. Wal-Mart has the option to choose whether, where, and when to open retail
16 stores; what services or products will be offered; whether to invest in expansions, or
17 whether to cease operations in a given location. Further, retail businesses may choose
18 to increase their prices without gaining the approval of regulatory commissions. Quite
19 simply, the options available to retailers such as Wal-Mart are not available to regulated
20 utilities. Such options have value; forgoing those options comes at a cost.

21 Lastly, despite the pressures that Mr. Chriss discusses, since 2007 Wal-Mart's
22 Return on Shareholders' Equity has averaged over 20.00 percent.²²⁰ Value Line
23 currently estimates Wal-Mart's Beta coefficient to be 0.65, and assesses Wal-Mart's
24 Financial Strength as A++. EPE, on the other hand, has a Beta coefficient of 0.75, and a
25 Financial Strength rating of B++. By those measures, Wal-Mart is measurably less risky
26 than EPE.²²¹

218 Chriss Direct, at 3-4.

219 *Ibid.*, at 4.

220 Value Line, as of May 17, 2017.

221 Value Line, as of May 31, 2017.

**Chart 21: Wal-Mart Return on Shareholders' Equity and Unemployment Rates
(2007-2016)²²²**



Q. HAS MR. CHRISS CONSIDERED THE EFFECT OF HIS RECOMMENDATION ON THE COMPANY'S FINANCIAL PROFILE?

A. No, he has not. As discussed in my response to Mr. Gorman, it is important to recognize that both Moody's and Standard & Poor's put considerable weight on the nature of regulation. Here, Mr. Chriss suggests that the Commission should reduce the Company's ROE by some unspecified amount without any market-based, comparative analyses to support that recommendation. The consequence of such an action likely would indicate an increased degree of regulatory risk. In my view, therefore, Mr. Chriss has not reasonably considered the effect of his recommendation on the Company's financial profile and, therefore, its ability to attract capital on reasonable terms.

²²² Value Line; Bureau of Labor Statistic (www.bls.gov).

IX. SUMMARY AND CONCLUSION

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S COST OF EQUITY?

A. I believe that a return on common equity in the range of 10.00 percent to 10.75 percent represents the range of equity investors' required return for investment in electric utilities similar to EPE in today's capital markets. Within that range, I continue to find an ROE of 10.50 percent to be reasonable and appropriate. Tables 12a and 12b summarize my analytical results.

Table 12a: Summary of DCF-Based ROE Results²²³

	<i>Low Growth Rate</i>	<i>Mean Growth Rate</i>	<i>High Growth Rate</i>
Constant Growth DCF			
30-Day Average	7.75%	8.59%	9.51%
90-Day Average	7.84%	8.68%	9.60%
180-Day Average	7.95%	8.79%	9.71%
Multi-Stage DCF – Gordon Method			
30-Day Average	8.74%	8.92%	9.14%
90-Day Average	8.83%	9.02%	9.24%
180-Day Average	8.95%	9.14%	9.37%
Multi-Stage DCF – Terminal P/E Method			
30-Day Average	9.60%	10.09%	10.62%
90-Day Average	9.85%	10.34%	10.87%
180-Day Average	10.14%	10.63%	11.17%

/

/

/

²²³ See also Exhibit RBH-1R and Exhibit RBH-2R.

Table 12b: Summary of Risk Premium-Based ROE Results²²⁴

CAPM Approach	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (2.83%)	8.99%	9.24%
Near Term Projected 30-Year Treasury (3.38%)	9.55%	9.79%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (2.83%)	10.33%	10.63%
Near Term Projected 30-Year Treasury (3.38%)	10.89%	11.19%
<i>Bond Yield Plus Risk Premium Approach</i>		
Current 30-Year Treasury (2.83%)	9.97%	
Near Term Projected 30-Year Treasury (3.38%)	10.03%	
Long Term Projected 30-Year Treasury (4.40%)	10.33%	

13 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

14 A. Yes, it does.

²²⁴ See also Exhibit RBH-5R and Exhibit RBH-6R.

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment - Excluding Sustainable Growth
30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.14	\$72.86	2.94%	3.02%	6.10%	5.00%	5.00%	5.37%	8.01%	8.38%	9.13%
Alliant Energy Corporation	LNT	\$1.28	\$41.31	3.05%	3.14%	5.50%	6.45%	6.00%	5.98%	8.83%	9.12%	9.60%
Ameren Corporation	AEE	\$1.78	\$56.31	3.13%	3.22%	6.50%	6.05%	6.00%	6.18%	9.22%	9.41%	9.73%
American Electric Power Company, Inc.	AEP	\$2.38	\$71.34	3.31%	3.37%	5.60%	2.39%	4.00%	4.00%	5.74%	7.37%	9.00%
Avista Corporation	AVA	\$1.43	\$43.15	3.31%	3.38%	NA	5.65%	2.50%	4.08%	5.86%	7.46%	9.08%
Black Hills Corporation	BKH	\$1.78	\$69.84	2.55%	2.65%	5.00%	12.00%	7.50%	8.17%	7.81%	10.82%	14.70%
CMS Energy Corporation	CMS	\$1.33	\$47.27	2.81%	2.91%	6.00%	7.52%	6.50%	6.67%	8.90%	9.58%	10.44%
Dominion Resources, Inc.	D	\$3.02	\$79.64	3.79%	3.89%	6.00%	3.96%	5.50%	5.15%	7.83%	9.04%	9.91%
DTE Energy Company	DTE	\$3.30	\$109.05	3.03%	3.11%	5.90%	4.87%	6.00%	5.59%	7.97%	8.70%	9.12%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$33.15	3.74%	3.79%	4.00%	2.70%	1.50%	2.73%	5.27%	6.52%	7.81%
IDACORP, Inc.	IDA	\$2.20	\$87.62	2.51%	2.58%	4.00%	4.00%	3.50%	3.83%	6.05%	6.39%	6.56%
NorthWestern Corporation	NWE	\$2.10	\$62.22	3.37%	3.44%	3.30%	3.37%	4.50%	3.72%	6.73%	7.16%	7.95%
OGE Energy Corp.	OGE	\$1.21	\$35.42	3.42%	3.51%	5.30%	6.30%	5.50%	5.70%	8.81%	9.21%	9.82%
Otter Tail Corporation	OTTR	\$1.28	\$40.38	3.17%	3.26%	NA	5.20%	6.50%	5.85%	8.45%	9.11%	9.77%
Pinnacle West Capital Corporation	PNW	\$2.62	\$87.55	2.99%	3.08%	5.10%	6.26%	5.50%	5.62%	8.17%	8.70%	9.35%
PNM Resources, Inc.	PNM	\$0.97	\$38.82	2.50%	2.59%	6.50%	7.35%	9.00%	7.62%	9.08%	10.21%	11.61%
Portland General Electric Company	POR	\$1.38	\$46.99	2.89%	2.98%	5.30%	5.55%	6.00%	5.62%	8.27%	8.59%	8.98%
SCANA Corporation	SCG	\$2.45	\$68.51	3.58%	3.67%	5.30%	5.80%	4.00%	5.03%	7.65%	8.70%	9.48%
Southern Company	SO	\$2.32	\$50.47	4.60%	4.69%	5.00%	3.93%	3.50%	4.14%	8.18%	8.84%	9.71%
Wisconsin Energy Corporation	WEC	\$2.08	\$62.91	3.31%	3.40%	5.60%	5.28%	8.00%	5.69%	8.67%	8.99%	9.41%
Xcel Energy Inc.	XEL	\$1.44	\$47.23	3.05%	3.12%	5.40%	NA	4.50%	4.95%	7.62%	8.07%	8.53%
Proxy Group Mean				3.19%	3.28%	5.33%	5.48%	5.19%	5.31%	7.75%	8.59%	9.51%
Proxy Group Median				3.13%	3.22%	5.40%	5.42%	5.50%	5.59%	8.01%	8.70%	9.41%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 30, 2017

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [8])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Equals Average([5], [6], [7])

[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment - Excluding Sustainable Growth
90 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.14	\$69.76	3.07%	3.15%	6.10%	5.00%	5.00%	5.37%	8.14%	8.52%	9.26%
Alliant Energy Corporation	LNT	\$1.28	\$40.13	3.14%	3.23%	5.50%	6.45%	6.00%	5.98%	8.73%	9.22%	9.69%
Ameren Corporation	AEE	\$1.78	\$55.32	3.18%	3.28%	6.50%	6.05%	6.00%	6.18%	9.28%	9.46%	9.78%
American Electric Power Company, Inc.	AEP	\$2.36	\$68.60	3.44%	3.51%	5.60%	2.39%	4.00%	4.00%	5.87%	7.51%	9.14%
Avista Corporation	AVA	\$1.43	\$41.01	3.49%	3.56%	NA	5.65%	2.50%	4.08%	6.03%	7.63%	9.24%
Black Hills Corporation	BKH	\$1.78	\$67.79	2.63%	2.73%	5.00%	12.00%	7.50%	8.17%	7.69%	10.90%	14.78%
CMS Energy Corporation	CMS	\$1.33	\$45.73	2.91%	3.01%	6.00%	7.52%	6.50%	6.67%	9.00%	9.66%	10.54%
Dominion Resources, Inc.	D	\$3.02	\$78.12	3.87%	3.97%	6.00%	3.96%	5.50%	5.15%	7.90%	9.12%	9.98%
DTE Energy Company	DTE	\$3.30	\$104.86	3.15%	3.24%	5.90%	4.87%	6.00%	5.59%	8.09%	8.83%	9.24%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$33.23	3.73%	3.78%	4.00%	2.70%	1.50%	2.73%	5.26%	6.52%	7.81%
IDACORP, Inc.	IDA	\$2.20	\$84.68	2.60%	2.65%	4.00%	4.00%	3.50%	3.83%	6.14%	6.48%	6.65%
NorthWestern Corporation	NWE	\$2.10	\$60.13	3.49%	3.56%	3.30%	3.37%	4.50%	3.72%	6.85%	7.28%	8.07%
OGE Energy Corp.	OGE	\$1.21	\$35.33	3.42%	3.52%	5.30%	6.30%	5.50%	5.70%	8.82%	9.22%	9.83%
Otter Tail Corporation	OTTR	\$1.28	\$38.70	3.31%	3.40%	NA	5.20%	6.50%	5.85%	8.59%	9.25%	9.92%
Pinnacle West Capital Corporation	PNW	\$2.62	\$85.10	3.08%	3.17%	5.10%	6.26%	5.50%	5.62%	8.26%	8.79%	9.44%
PNM Resources, Inc.	PNM	\$0.97	\$37.61	2.58%	2.68%	6.50%	7.35%	9.00%	7.62%	9.16%	10.29%	11.70%
Portland General Electric Company	POR	\$1.38	\$45.68	2.98%	3.06%	5.30%	5.55%	6.00%	5.62%	8.36%	8.68%	9.07%
SCANA Corporation	SCG	\$2.45	\$67.37	3.64%	3.73%	5.30%	5.80%	4.00%	5.03%	7.71%	8.76%	9.54%
Southern Company	SO	\$2.32	\$50.15	4.63%	4.72%	5.00%	3.93%	3.50%	4.14%	8.21%	8.66%	9.74%
Wisconsin Energy Corporation	WEC	\$2.08	\$61.21	3.40%	3.49%	6.50%	5.28%	6.00%	5.59%	8.77%	9.09%	9.50%
Xcel Energy Inc.	XEL	\$1.44	\$45.38	3.17%	3.25%	5.40%	NA	4.50%	4.95%	7.74%	8.20%	8.66%
Proxy Group Mean				3.26%	3.37%	5.33%	5.48%	5.19%	5.31%	7.84%	8.68%	9.60%
Proxy Group Median				3.18%	3.28%	5.40%	5.42%	5.50%	5.59%	8.14%	8.83%	9.50%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 30, 2017

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [8])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Equals Average([5], [6], [7])

[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment - Excluding Sustainable Growth
180 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.14	\$66.24	3.23%	3.32%	6.10%	5.00%	5.00%	5.37%	8.31%	8.68%	9.43%
Alliant Energy Corporation	LNT	\$1.26	\$38.66	3.26%	3.36%	5.50%	6.45%	6.00%	5.98%	8.55%	9.34%	9.81%
Ameren Corporation	AEE	\$1.78	\$53.10	3.31%	3.42%	6.50%	6.05%	6.00%	6.18%	9.41%	9.60%	9.92%
American Electric Power Company, Inc.	AEP	\$2.38	\$65.45	3.61%	3.68%	5.60%	2.39%	4.00%	4.00%	6.04%	7.67%	9.31%
Avista Corporation	AVA	\$1.43	\$40.50	3.53%	3.60%	NA	5.65%	2.50%	4.08%	6.08%	7.68%	9.28%
Black Hills Corporation	BKH	\$1.78	\$64.20	2.77%	2.89%	5.00%	12.00%	7.50%	8.17%	7.84%	11.05%	14.94%
CMS Energy Corporation	CMS	\$1.33	\$43.61	3.05%	3.15%	6.00%	7.52%	6.50%	6.67%	9.14%	9.82%	10.68%
Dominion Resources, Inc.	D	\$3.02	\$76.18	3.97%	4.07%	6.00%	3.96%	5.50%	5.15%	8.00%	9.22%	10.08%
DTE Energy Company	DTE	\$3.30	\$100.51	3.28%	3.38%	5.90%	4.87%	6.00%	5.59%	8.23%	8.97%	9.38%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$32.46	3.82%	3.87%	4.00%	2.70%	1.50%	2.73%	5.35%	6.61%	7.90%
IDACORP, Inc.	IDA	\$2.20	\$81.45	2.70%	2.75%	4.00%	4.00%	3.50%	3.83%	6.25%	6.59%	6.75%
NorthWestern Corporation	NWE	\$2.10	\$58.39	3.60%	3.68%	3.30%	3.37%	4.50%	3.72%	6.96%	7.39%	8.18%
OGE Energy Corp	OGE	\$1.21	\$33.94	3.56%	3.67%	5.30%	6.30%	5.50%	5.70%	8.96%	9.37%	9.98%
Otter Tail Corporation	OTTR	\$1.28	\$38.32	3.34%	3.44%	NA	5.20%	6.50%	5.85%	8.63%	9.29%	9.95%
Pinnacle West Capital Corporation	PNW	\$2.62	\$80.66	3.25%	3.34%	5.10%	6.26%	5.50%	5.62%	8.43%	8.96%	9.61%
PNM Resources, Inc.	PNM	\$0.97	\$35.45	2.74%	2.84%	6.50%	7.35%	9.00%	7.62%	9.32%	10.46%	11.86%
Portland General Electric Company	POR	\$1.36	\$44.24	3.07%	3.16%	5.30%	5.55%	6.00%	5.62%	8.46%	8.78%	9.17%
SCANA Corporation	SCG	\$2.45	\$69.17	3.54%	3.63%	5.30%	5.80%	4.00%	5.03%	7.61%	8.66%	9.44%
Southern Company	SO	\$2.32	\$49.56	4.68%	4.78%	5.00%	3.93%	3.50%	4.14%	8.26%	8.92%	9.80%
Wisconsin Energy Corporation	WEC	\$2.08	\$59.46	3.50%	3.60%	5.50%	5.28%	6.00%	5.69%	8.87%	9.19%	9.60%
Xcel Energy Inc	XEL	\$1.44	\$42.94	3.35%	3.44%	5.40%	NA	4.50%	4.95%	7.93%	8.39%	8.84%
Proxy Group Mean				3.39%	3.48%	5.33%	5.48%	5.19%	5.31%	7.95%	8.79%	9.71%
Proxy Group Median				3.34%	3.44%	5.40%	5.42%	5.50%	5.59%	8.26%	8.96%	9.60%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 30, 2017

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [5])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Equals Average([5], [6], [7])

[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
13.51%	2.83%	10.68%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	19,058.52	0.09%	0.89%	11.00%	11.94%	0.0106%
AMERICAN AIRLINES GROUP INC	AAL	24,787.07	0.11%	1.22%	0.80%	1.82%	0.0021%
ADVANCE AUTO PARTS INC	AAP	8,609.55	0.04%	0.22%	14.85%	15.08%	0.0080%
APPLE INC	AAPL	750,897.24	3.48%	1.68%	10.43%	12.19%	0.4247%
ABBVIE INC	ABBV	115,402.60	0.54%	3.56%	7.45%	11.14%	0.0596%
AMERISOURCEBERGEN CORP	ABC	20,841.20	0.10%	1.54%	9.22%	10.83%	0.0104%
ABBOTT LABORATORIES	ABT	84,351.57	0.39%	2.24%	10.63%	12.99%	0.0608%
ACCENTURE PLC-CL A	ACN	79,866.84	0.37%	1.96%	9.75%	11.81%	0.0437%
ADOBE SYSTEMS INC	ADBE	69,787.30	0.32%	0.00%	19.56%	19.58%	0.0633%
ANALOG DEVICES INC	ADI	28,553.49	0.13%	2.12%	11.76%	14.01%	0.0185%
ARCHER-DANIELS-MIDLAND CO	ADM	23,518.62	0.11%	3.11%	10.00%	13.28%	0.0145%
AUTOMATIC DATA PROCESSING	ADP	45,841.66	0.21%	2.18%	11.10%	13.40%	0.0285%
ALLIANCE DATA SYSTEMS CORP	ADS	14,291.46	0.07%	0.81%	10.00%	10.85%	0.0072%
AUTODESK INC	ADSK	22,219.89	0.10%	0.00%	26.00%	26.00%	0.0268%
AMEREN CORPORATION	AEE	13,264.84	0.06%	3.30%	5.60%	8.99%	0.0055%
AMERICAN ELECTRIC POWER	AEP	34,159.24	0.16%	3.45%	3.00%	6.51%	0.0103%
AES CORP	AES	7,334.20	0.03%	4.34%	8.33%	12.85%	0.0044%
AETNA INC	AET	50,362.01	0.23%	1.10%	11.70%	12.86%	0.0300%
AFLAC INC	AFL	30,827.04	0.14%	2.25%	5.00%	7.31%	0.0105%
ALLERGAN PLC	AGN	81,645.92	0.38%	1.16%	13.95%	15.19%	0.0575%
AMERICAN INTERNATIONAL GROUP	AIG	57,650.74	0.27%	2.05%	11.00%	13.16%	0.0352%
APARTMENT INVT & MGMT CO -A	AIV	6,747.25	0.03%	3.36%	13.69%	17.28%	0.0054%
ASSURANT INC	AIZ	5,680.97	0.03%	2.09%	21.41%	23.72%	0.0063%
ARTHUR J GALLAGHER & CO	AJG	10,277.18	0.05%	2.72%	9.95%	12.81%	0.0061%
AKAMAI TECHNOLOGIES INC	AKAM	8,610.82	0.04%	0.00%	13.82%	13.82%	0.0055%
ALBEMARLE CORP	ALB	11,688.80	0.05%	1.22%	11.70%	12.99%	0.0070%
ALIGN TECHNOLOGY INC	ALGN	12,059.34	0.06%	0.00%	26.17%	26.17%	0.0146%
ALASKA AIR GROUP INC	ALK	11,083.83	0.05%	1.35%	11.84%	13.27%	0.0068%
ALLSTATE CORP	ALL	32,237.98	0.15%	1.66%	11.63%	13.39%	0.0200%
ALLEGION PLC	ALLE	7,729.67	0.04%	0.75%	13.10%	13.90%	0.0050%
ALEXION PHARMACEUTICALS INC	ALXN	27,321.79	0.13%	0.00%	19.51%	19.51%	0.0247%
APPLIED MATERIALS INC	AMAT	44,393.04	0.21%	1.00%	18.97%	20.07%	0.0413%
ADVANCED MICRO DEVICES	AMD	11,793.80	0.05%	0.00%	5.00%	5.00%	0.0027%
AMETEK INC	AME	13,937.65	0.06%	0.53%	9.86%	10.51%	0.0068%
AFFILIATED MANAGERS GROUP	AMG	9,388.09	0.04%	0.48%	15.50%	16.01%	0.0070%
AMGEN INC	AMGN	126,657.79	0.59%	2.66%	4.64%	7.36%	0.0432%
AMERIPRISE FINANCIAL INC	AMP	19,405.86	0.09%	2.55%	6.40%	9.04%	0.0061%
AMERICAN TOWER CORP	AMT	56,237.25	0.28%	1.99%	19.73%	21.92%	0.0572%
AMAZON.COM INC	AMZN	462,680.28	2.15%	0.00%	33.61%	33.61%	0.7212%
AUTONATION INC	AN	4,269.18	0.02%	0.00%	3.92%	3.92%	0.0008%
ANSYS INC	ANSS	10,403.22	0.05%	0.00%	13.60%	13.60%	0.0066%
ANTHEM INC	ANTM	49,851.86	0.23%	1.39%	9.81%	11.27%	0.0261%
AON PLC	AON	34,842.21	0.16%	1.06%	10.52%	11.63%	0.0188%
APACHE CORP	APA	18,234.36	0.08%	2.08%	-18.61%	-18.72%	-0.0141%
ANADARKO PETROLEUM CORP	APC	25,405.78	0.12%	0.44%	-2.96%	-2.53%	-0.0030%
AIR PRODUCTS & CHEMICALS INC	APD	31,147.67	0.14%	2.58%	8.78%	11.48%	0.0186%
AMPHENOL CORP-CL A	APH	22,560.54	0.10%	0.86%	9.33%	10.22%	0.0107%
ALEXANDRIA REAL ESTATE EQUIT	ARE	10,971.61	0.05%	2.78%	7.04%	9.92%	0.0050%
ARCONIC INC	ARNC	9,984.72	0.05%	1.19%	12.60%	13.87%	0.0064%
ACTIVISION BLIZZARD INC	ATVI	43,388.34	0.20%	0.35%	10.69%	11.06%	0.0222%
AVALONBAY COMMUNITIES INC	AVB	26,478.35	0.12%	2.95%	6.93%	9.99%	0.0123%
BROADCOM LTD	AVGO	94,758.41	0.44%	1.75%	15.42%	17.30%	0.0761%
AVERY DENNISON CORP	AVY	7,825.83	0.04%	1.91%	7.10%	9.08%	0.0033%
AMERICAN WATER WORKS CO INC	AWK	13,890.00	0.06%	2.09%	7.00%	9.16%	0.0059%
AMERICAN EXPRESS CO	AXP	75,291.96	0.35%	1.57%	8.87%	10.51%	0.0367%
ACUITY BRANDS INC	AYI	8,556.73	0.04%	0.28%	17.67%	17.95%	0.0071%
AUTOZONE INC	AZO	15,990.39	0.07%	0.00%	12.73%	12.73%	0.0094%
BOEING CO/THE	BA	119,358.14	0.55%	2.88%	14.77%	17.86%	0.0869%
BANK OF AMERICA CORP	BAC	241,433.07	1.12%	1.57%	16.60%	18.31%	0.2050%
BAXTER INTERNATIONAL INC	BAX	32,913.73	0.15%	0.93%	13.16%	14.15%	0.0216%
BED BATH & BEYOND INC	BBBY	4,399.79	0.02%	1.97%	3.21%	5.22%	0.0011%
BB&T CORP	BBT	36,844.32	0.17%	2.78%	8.44%	11.34%	0.0194%
BEST BUY CO INC	BBY	17,483.49	0.08%	2.36%	13.28%	15.80%	0.0128%
CR BARD INC	BCR	22,891.79	0.11%	0.33%	9.30%	9.65%	0.0102%
BECTON DICKINSON AND CO	BDX	44,358.75	0.21%	1.50%	10.25%	11.82%	0.0243%
FRANKLIN RESOURCES INC	BEN	25,141.37	0.12%	1.79%	10.00%	11.88%	0.0138%
BROWN-FORMAN CORP-CLASS B	BF/B	18,792.96	0.09%	1.57%	8.47%	10.10%	0.0068%
BAKER HUGHES INC	BHI	23,193.09	0.11%	1.25%	33.00%	34.46%	0.0371%
BIOGEN INC	BIIB	57,559.58	0.27%	0.00%	6.52%	6.52%	0.0174%
BANK OF NEW YORK MELLON CORP	BK	53,054.53	0.25%	1.64%	11.73%	13.47%	0.0331%
BLACKROCK INC	BLK	68,955.36	0.32%	2.37%	13.24%	15.77%	0.0504%
BALL CORP	BLI	14,822.32	0.07%	0.85%	8.00%	8.89%	0.0061%
BRISTOL-MYERS SQUIBB CO	BMJ	91,796.05	0.43%	2.85%	9.10%	12.08%	0.0514%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	418,309.15	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	37,959.82	0.18%	0.00%	10.54%	10.54%	0.0186%
BORGWARNER INC	BWA	8,989.62	0.04%	1.32%	15.50%	16.92%	0.0071%
BOSTON PROPERTIES INC	BXP	18,927.53	0.09%	2.46%	5.88%	8.41%	0.0074%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
CITIGROUP INC	C	184,137.88	0.85%	1.24%	9.84%	11.14%	0.0952%
CA INC	CA	14,519.43	0.07%	2.96%	4.20%	7.22%	0.0049%
CONAGRA BRANDS INC	CAG	15,215.94	0.07%	2.39%	8.65%	11.14%	0.0079%
CARDINAL HEALTH INC	CAH	24,613.57	0.11%	2.20%	8.27%	10.56%	0.0121%
CATERPILLAR INC	CAT	63,310.82	0.29%	2.80%	7.64%	10.64%	0.0312%
CHUBB LTD	CB	67,881.62	0.31%	1.95%	10.00%	12.05%	0.0379%
CBRE GROUP INC - A	CBG	12,298.63	0.06%	0.00%	9.35%	9.35%	0.0053%
CBOE HOLDINGS INC	CBOE	10,240.71	0.05%	1.11%	20.00%	21.22%	0.0101%
CBS CORP-CLASS B NON VOTING	CBS	25,930.64	0.12%	1.15%	12.84%	13.86%	0.0167%
CROWN CASTLE INTL CORP	CCI	36,676.77	0.17%	3.85%	19.97%	24.21%	0.0412%
CARNIVAL CORP	CCL	47,586.53	0.22%	2.35%	13.07%	15.56%	0.0344%
CELGENE CORP	CELG	101,405.66	0.47%	0.00%	20.46%	20.46%	0.0862%
CERNER CORP	CERN	21,963.63	0.10%	0.00%	12.79%	12.79%	0.0130%
CF INDUSTRIES HOLDINGS INC	CF	6,519.84	0.03%	4.29%	6.00%	10.42%	0.0032%
CITIZENS FINANCIAL GROUP	CFG	18,073.57	0.08%	1.74%	18.25%	20.15%	0.0169%
CHURCH & DWIGHT CO INC	CHD	12,931.34	0.06%	1.46%	8.53%	10.05%	0.0060%
CHESAPEAKE ENERGY CORP	CHK	4,513.09	0.02%	0.00%	-13.77%	-13.77%	-0.0029%
C.H. ROBINSON WORLDWIDE INC	CHRW	9,878.99	0.04%	2.85%	9.28%	12.05%	0.0054%
CHARTER COMMUNICATIONS INC-A	CHTR	103,702.23	0.48%	0.00%	23.97%	23.97%	0.1153%
CIGNA CORP	CI	42,854.29	0.20%	0.02%	12.87%	12.90%	0.0256%
CINCINNATI FINANCIAL CORP	CINF	11,931.66	N/A	2.76%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	65,478.50	0.30%	2.19%	9.12%	11.41%	0.0346%
CLOROX COMPANY	CLX	17,181.08	0.08%	2.42%	7.14%	9.65%	0.0077%
COMERICA INC	CMA	12,958.81	0.06%	1.43%	10.95%	12.45%	0.0075%
COMCAST CORP-CLASS A	CMCSA	184,585.88	0.86%	1.61%	11.45%	13.15%	0.1126%
CME GROUP INC	CME	42,555.45	0.20%	4.68%	11.95%	16.91%	0.0334%
CHIPOTLE MEXICAN GRILL INC	CMG	11,926.69	0.06%	0.00%	34.67%	34.67%	0.0192%
CUMMINS INC	CMI	27,248.94	0.13%	2.56%	10.20%	12.89%	0.0163%
CMS ENERGY CORP	CMS	12,970.97	0.06%	2.87%	6.83%	9.79%	0.0059%
CENTENE CORP	CNC	13,781.54	0.06%	0.00%	13.22%	13.22%	0.0084%
CENTERPOINT ENERGY INC	CNP	11,799.81	0.05%	3.92%	6.53%	10.57%	0.0058%
CAPITAL ONE FINANCIAL CORP	COF	39,902.87	0.19%	1.99%	8.01%	10.07%	0.0186%
CABOT OIL & GAS CORP	COG	11,675.33	0.05%	0.68%	32.05%	32.83%	0.0178%
COACH INC	COH	13,308.63	0.08%	2.85%	12.23%	15.25%	0.0094%
ROCKWELL COLLINS INC	COL	17,063.25	0.08%	1.28%	10.91%	12.28%	0.0097%
COOPER COS INC/THE	COO	11,697.29	0.05%	0.03%	11.20%	11.23%	0.0081%
CONOCOPHILLIPS	COP	54,383.09	0.25%	2.42%	7.00%	9.51%	0.0240%
COSTCO WHOLESALE CORP	COST	70,144.23	0.33%	2.61%	10.36%	13.10%	0.0426%
COTY INC-CL A	COTY	14,025.70	0.07%	3.02%	2.01%	5.05%	0.0033%
CAMPBELL SOUP CO	CPB	15,804.86	0.07%	2.63%	5.49%	8.19%	0.0060%
SALESFORCE COM INC	CRM	61,676.52	0.29%	0.00%	27.90%	27.90%	0.0788%
CISCO SYSTEMS INC	CSCO	156,501.70	0.73%	3.49%	7.10%	10.72%	0.0778%
CSRA INC	CSRA	5,198.25	0.02%	1.26%	7.50%	8.81%	0.0021%
CSX CORP	CSX	50,338.22	0.23%	1.42%	11.06%	12.56%	0.0293%
CINTAS CORP	CTAS	13,274.85	0.06%	1.06%	10.77%	11.88%	0.0073%
CENTURYLINK INC	CTL	13,105.63	0.06%	9.05%	0.46%	9.53%	0.0058%
COGNIZANT TECH SOLUTIONS-A	CTSH	39,109.39	0.18%	0.77%	14.43%	15.25%	0.0277%
CITRIX SYSTEMS INC	CTXS	12,028.38	0.06%	0.00%	12.73%	12.73%	0.0071%
CVS HEALTH CORP	CVS	81,972.28	0.38%	2.45%	12.07%	14.66%	0.0557%
CHEVRON CORP	CVX	197,659.61	0.92%	4.16%	46.41%	51.53%	0.4725%
CONCHO RESOURCES INC	CXO	18,037.45	0.08%	0.00%	-23.60%	-23.60%	-0.0197%
DOMINION ENERGY INC	D	48,199.18	0.22%	3.94%	5.63%	9.69%	0.0217%
DELTA AIR LINES INC	DAL	39,554.90	0.18%	1.78%	11.75%	13.63%	0.0250%
DU PONT (E.I.) DE NEMOURS	DD	69,978.15	0.32%	1.91%	6.90%	8.67%	0.0266%
DEERE & CO	DE	39,531.76	0.18%	1.95%	8.20%	10.23%	0.0188%
DISCOVER FINANCIAL SERVICES	DFS	23,644.06	0.11%	2.00%	6.32%	8.38%	0.0062%
DOLLAR GENERAL CORP	DG	19,768.89	0.09%	1.44%	9.08%	10.59%	0.0097%
QUEST DIAGNOSTICS INC	DGX	15,209.52	0.07%	1.60%	9.44%	11.11%	0.0078%
DR HORTON INC	DHI	12,983.70	0.06%	1.12%	12.36%	13.54%	0.0062%
DANAHER CORP	DHR	58,576.81	0.27%	0.68%	9.62%	10.33%	0.0281%
WALT DISNEY CO/THE	DIS	166,268.40	0.77%	1.49%	7.88%	9.42%	0.0727%
DISCOVERY COMMUNICATIONS-A	DISCA	14,851.71	0.07%	0.00%	17.90%	17.90%	0.0123%
DISH NETWORK CORP-A	DISH	29,240.44	0.14%	0.00%	-3.60%	-3.60%	-0.0049%
DELPHI AUTOMOTIVE PLC	DLPH	23,480.60	0.11%	1.36%	11.88%	13.32%	0.0145%
DIGITAL REALTY TRUST INC	DLR	18,331.32	0.09%	3.31%	5.49%	8.89%	0.0078%
DOLLAR TREE INC	DLTR	16,549.28	0.08%	0.00%	15.07%	15.07%	0.0116%
DOVER CORP	DOV	12,487.82	0.06%	2.25%	13.63%	16.03%	0.0063%
DOW CHEMICAL CO/THE	DOW	77,052.79	0.36%	3.09%	6.12%	9.30%	0.0332%
DR PEPPER SNAPPLE GROUP INC	DPS	16,747.34	0.08%	2.50%	8.58%	11.19%	0.0087%
DARDEN RESTAURANTS INC	DRI	11,245.19	0.05%	2.76%	10.05%	12.96%	0.0068%
DTE ENERGY COMPANY	DTE	18,977.49	0.09%	3.14%	5.35%	8.57%	0.0075%
DUKE ENERGY CORP	DUK	58,503.24	0.27%	4.21%	5.70%	10.03%	0.0272%
DAVITA INC	DVA	12,602.30	0.06%	0.00%	8.73%	8.73%	0.0051%
DEVON ENERGY CORP	DVN	16,806.63	0.08%	0.75%	31.12%	31.99%	0.0249%
DXC TECHNOLOGY CO	DXC	21,837.95	N/A	1.12%	N/A	N/A	N/A
ELECTRONIC ARTS INC	EA	32,729.36	0.15%	0.00%	9.40%	9.40%	0.0143%
EBAY INC	EBAY	37,795.24	0.18%	0.00%	10.04%	10.04%	0.0176%
ECOLAB INC	ECL	38,503.53	0.18%	1.13%	12.96%	14.18%	0.0253%
CONSOLIDATED EDISON INC	ED	24,680.80	0.11%	3.42%	4.50%	8.00%	0.0092%
EQUIFAX INC	EFX	16,519.50	0.08%	1.09%	11.17%	12.32%	0.0094%
EDISON INTERNATIONAL	EIX	25,475.18	0.12%	2.79%	6.18%	9.06%	0.0107%
ESTEE LAUDER COMPANIES-CL A	EL	35,304.55	0.16%	1.37%	10.45%	11.89%	0.0195%
EASTMAN CHEMICAL CO	EMN	12,248.01	0.06%	2.45%	6.97%	9.50%	0.0054%
EMERSON ELECTRIC CO	EMR	38,423.91	0.18%	3.23%	7.07%	10.41%	0.0186%
EOG RESOURCES INC	EOG	52,254.34	0.24%	0.74%	-39.09%	-38.49%	-0.0933%
EQUINIX INC	EQIX	33,436.66	0.16%	1.86%	40.67%	42.91%	0.0665%
EQUITY RESIDENTIAL	EQR	24,169.81	0.11%	3.06%	9.74%	12.97%	0.0145%
EQT CORP	EQT	10,182.98	0.05%	0.20%	15.00%	15.22%	0.0072%
EVERSOURCE ENERGY	ES	19,238.14	0.09%	3.13%	6.10%	9.33%	0.0083%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est	DCF Result	Weighted DCF Result
EXPRESS SCRIPTS HOLDING CO	ESRX	37,890.76	0.18%	0.00%	11.75%	11.75%	0.0206%
ESSEX PROPERTY TRUST INC	ESS	16,876.63	0.08%	2.71%	7.47%	10.28%	0.0080%
E*TRADE FINANCIAL CORP	ETFC	10,458.66	0.05%	0.00%	16.25%	16.25%	0.0079%
EATON CORP PLC	ETN	34,813.36	0.16%	3.07%	10.20%	13.43%	0.0217%
ENTERGY CORP	ETR	13,777.60	0.06%	4.59%	-3.83%	0.67%	0.0004%
ENVISION HEALTHCARE CORP	EVHC	7,365.67	0.03%	0.00%	8.06%	8.06%	0.0028%
EDWARDS LIFESCIENCES CORP	EW	24,807.08	0.12%	0.00%	16.68%	16.68%	0.0192%
EXELON CORP	EXC	33,392.28	0.15%	3.63%	4.00%	7.71%	0.0119%
EXPEDITORS INTL WASH INC	EXPD	10,175.70	0.05%	1.48%	8.80%	10.34%	0.0049%
EXPEDIA INC	EXPE	22,483.55	0.10%	0.75%	19.34%	20.16%	0.0210%
EXTRA SPACE STORAGE INC	EXR	9,825.23	0.05%	4.23%	6.29%	10.65%	0.0046%
FORD MOTOR CO	F	44,558.43	0.21%	5.48%	-5.74%	-0.42%	-0.0009%
FASTENAL CO	FAST	12,591.66	0.06%	2.92%	10.65%	13.73%	0.0080%
FACEBOOK INC-A	FB	437,601.90	2.03%	0.00%	27.48%	27.48%	0.5577%
FORTUNE BRANDS HOME & SECURI	FBHS	10,036.81	0.05%	1.09%	11.98%	13.14%	0.0061%
FREEPORT-MCMORAN INC	FCX	17,376.22	0.08%	0.00%	17.44%	17.44%	0.0141%
FEDEX CORP	FDX	56,106.60	0.27%	0.97%	13.67%	14.70%	0.0398%
FIRSTENERGY CORP	FE	12,939.48	0.06%	4.94%	-2.00%	2.89%	0.0017%
F5 NETWORKS INC	FFIV	8,221.15	0.04%	0.00%	12.44%	12.44%	0.0047%
FIDELITY NATIONAL INFO SERV	FIS	28,231.72	0.13%	1.32%	9.08%	10.46%	0.0137%
FISERV INC	FISV	25,982.32	0.12%	0.00%	11.00%	11.00%	0.0133%
FIFTH THIRD BANCORP	FITB	19,478.99	0.09%	2.28%	2.00%	4.30%	0.0039%
FOOT LOCKER INC	FL	6,470.63	0.03%	2.49%	8.41%	11.01%	0.0033%
FLIR SYSTEMS INC	FLIR	4,729.55	N/A	1.62%	N/A	N/A	N/A
FLUOR CORP	FLR	6,399.23	0.03%	2.00%	13.29%	15.42%	0.0046%
FLOWERVE CORP	FLS	6,064.61	0.03%	1.67%	13.61%	15.39%	0.0043%
FMC CORP	FMC	9,788.81	0.05%	0.93%	12.00%	12.98%	0.0059%
TWENTY-FIRST CENTURY FOX-A	FOXA	52,077.94	0.24%	1.36%	9.60%	11.03%	0.0266%
FEDERAL REALTY INVS TRUST	FRT	9,130.28	0.04%	3.18%	6.31%	9.59%	0.0041%
TECHNIPFMC PLC	FTI	12,691.30	0.06%	0.83%	4.30%	5.14%	0.0030%
FORTIVE CORP	FTV	21,957.70	0.10%	0.39%	8.70%	9.10%	0.0083%
GENERAL DYNAMICS CORP	GD	59,763.89	0.28%	1.67%	8.40%	10.14%	0.0281%
GENERAL ELECTRIC CO	GE	234,553.84	1.09%	3.52%	10.03%	13.72%	0.1492%
GGP INC	GGP	20,794.30	0.10%	3.84%	5.84%	9.79%	0.0094%
GILEAD SCIENCES INC	GILD	92,490.24	0.43%	3.03%	-7.26%	-4.33%	-0.0186%
GENERAL MILLS INC	GIS	31,971.32	0.15%	3.62%	8.13%	11.90%	0.0177%
CORNING INC	GLW	27,652.96	0.13%	2.05%	8.92%	11.06%	0.0142%
GENERAL MOTORS CO	GM	52,713.28	0.24%	4.40%	8.56%	13.14%	0.0321%
ALPHABET INC-CL A	GOOGL	635,341.96	2.95%	0.00%	15.59%	15.59%	0.4594%
GENUINE PARTS CO	GPC	13,672.27	0.06%	2.92%	10.32%	13.38%	0.0085%
GLOBAL PAYMENTS INC	GP	13,772.37	0.06%	0.05%	13.50%	13.55%	0.0087%
GAP INC/THE	GPS	8,702.74	0.04%	4.17%	6.00%	10.29%	0.0042%
GARMIN LTD	GRMN	9,601.60	0.04%	3.94%	5.70%	9.75%	0.0043%
GOLDMAN SACHS GROUP INC	GS	90,823.67	0.42%	1.33%	8.24%	9.62%	0.0405%
GOODYEAR TIRE & RUBBER CO	GT	8,802.74	N/A	1.12%	N/A	N/A	N/A
WW GRAINGER INC	GWW	10,543.98	0.05%	2.78%	8.93%	11.84%	0.0058%
HALLIBURTON CO	HAL	37,066.66	N/A	1.68%	N/A	N/A	N/A
HASBRO INC	HAS	13,939.13	0.06%	2.02%	9.63%	11.76%	0.0076%
HUNTINGTON BANCSHARES INC	HBAN	14,897.86	0.07%	2.48%	10.43%	13.03%	0.0089%
HANESBRANDS INC	HBI	8,433.76	0.04%	2.54%	13.80%	16.51%	0.0085%
HCA HEALTHCARE INC	HCA	31,994.08	0.15%	0.00%	11.44%	11.44%	0.0170%
WELLTOWER INC	HCN	27,407.57	0.13%	4.66%	4.41%	9.16%	0.0116%
HCP INC	HCP	14,975.56	0.07%	4.64%	-1.97%	2.62%	0.0018%
HOME DEPOT INC	HD	183,398.13	0.85%	2.33%	13.00%	15.48%	0.1317%
HESS CORP	HES	13,946.56	0.06%	2.31%	-33.93%	-32.01%	-0.0207%
HARTFORD FINANCIAL SVCS GRP	HIG	19,312.16	0.09%	1.83%	9.50%	11.42%	0.0102%
HILTON WORLDWIDE HOLDINGS IN	HLT	20,116.20	0.09%	0.96%	13.99%	15.03%	0.0140%
HARLEY-DAVIDSON INC	HOG	9,455.57	0.04%	2.70%	8.80%	11.62%	0.0051%
MOLOGIC INC	HOLX	12,706.89	0.06%	0.00%	10.52%	10.52%	0.0062%
HONEYWELL INTERNATIONAL INC	HON	101,612.05	0.47%	2.00%	9.05%	11.14%	0.0525%
HELMERICH & PAYNE	HP	5,899.53	N/A	5.16%	N/A	N/A	N/A
HEWLETT PACKARD ENTERPRIS	HPE	27,251.24	0.13%	1.53%	-1.16%	0.36%	0.0005%
HP INC	HPQ	29,424.70	0.14%	3.05%	3.30%	6.41%	0.0087%
H&R BLOCK INC	HRB	9,403.88	0.03%	3.06%	11.00%	14.23%	0.0042%
HORMEL FOODS CORP	HRL	18,028.85	0.08%	1.99%	6.40%	8.46%	0.0071%
HARRIS CORP	HRS	13,298.18	N/A	1.94%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	14,518.88	0.07%	0.00%	10.61%	10.61%	0.0071%
HOST HOTELS & RESORTS INC	HST	13,616.15	0.06%	4.44%	3.70%	8.22%	0.0062%
HERSHEY CO/THE	HSY	22,846.91	0.11%	2.37%	9.97%	12.46%	0.0132%
HUMANA INC	HUM	34,725.06	0.16%	0.62%	14.85%	15.52%	0.0250%
INTL BUSINESS MACHINES CORP	IBM	144,522.81	0.67%	3.75%	6.10%	9.97%	0.0688%
INTERCONTINENTAL EXCHANGE IN	ICE	39,029.03	0.18%	1.22%	12.74%	14.03%	0.0254%
IDEXX LABORATORIES INC	IDXX	14,224.89	0.07%	0.00%	10.68%	10.68%	0.0071%
INTL FLAVORS & FRAGRANCES	IFF	10,661.11	0.05%	1.91%	7.90%	9.89%	0.0049%
ILLUMINA INC	ILMN	25,333.92	0.12%	0.00%	14.57%	14.57%	0.0171%
INCYTE CORP	INCY	25,783.15	0.12%	0.00%	52.39%	52.39%	0.0627%
IHS MARKIT LTD	INFO	17,580.65	0.08%	0.00%	13.91%	13.91%	0.0113%
INTEL CORP	INTC	158,881.66	0.74%	3.21%	7.87%	11.21%	0.0826%
INTUIT INC	INTU	34,028.17	0.16%	1.02%	15.60%	16.70%	0.0264%
INTERNATIONAL PAPER CO	IP	23,374.21	0.11%	3.26%	7.00%	10.38%	0.0113%
INTERPUBLIC GROUP OF COS INC	IPG	9,719.71	0.05%	2.91%	8.95%	11.89%	0.0054%
INGERSOLL-RAND PLC	IR	23,397.88	0.11%	1.77%	10.26%	12.12%	0.0132%
IRON MOUNTAIN INC	IRM	9,075.04	N/A	6.15%	N/A	N/A	N/A
INTUITIVE SURGICAL INC	ISRG	34,459.74	0.16%	0.00%	9.73%	9.73%	0.0155%
GARTNER INC	IT	11,169.28	0.05%	0.00%	13.75%	13.75%	0.0071%
ILLINOIS TOOL WORKS	ITW	49,485.86	0.23%	1.83%	8.40%	10.31%	0.0237%
INVESCO LTD	IVZ	14,317.29	0.07%	3.29%	14.44%	17.97%	0.0119%
HUNT (JB) TRANSPRT SVCS INC	JBHT	10,050.26	0.05%	1.00%	13.43%	14.49%	0.0089%
JOHNSON CONTROLS INTERNATIONAL	JCI	40,676.39	0.19%	2.25%	12.50%	14.89%	0.0281%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
JACOBS ENGINEERING GROUP INC	JEC	6,549.91	0.03%	1.08%	10.54%	11.65%	0.0035%
JOHNSON & JOHNSON	JNJ	356,367.18	1.65%	2.54%	6.42%	9.03%	0.1493%
JUNIPER NETWORKS INC	JNPR	10,652.85	0.05%	1.51%	9.57%	11.15%	0.0065%
JPMORGAN CHASE & CO	JPM	324,726.27	1.51%	2.26%	10.40%	12.78%	0.1925%
NORDSTROM INC	JWN	7,942.27	0.04%	3.20%	7.63%	10.96%	0.0040%
KELLOGG CO	K	24,330.29	0.11%	3.06%	6.46%	9.61%	0.0108%
KEYCORP	KEY	20,541.05	0.10%	2.01%	7.50%	9.59%	0.0091%
KRAFT HEINZ CO/THE	KHC	104,278.09	0.48%	2.90%	8.39%	11.41%	0.0522%
KIMCO REALTY CORP	KIM	7,810.77	0.04%	5.93%	7.72%	13.88%	0.0050%
KLA-TENCOR CORP	KLAC	14,345.35	0.07%	2.33%	4.80%	7.18%	0.0048%
KIMBERLY-CLARK CORP	KMB	45,824.77	0.21%	2.99%	6.75%	9.83%	0.0209%
KINDER MORGAN INC	KMI	42,773.80	0.20%	2.61%	9.85%	12.59%	0.0250%
CARMAX INC	KMX	11,595.03	0.05%	0.00%	13.89%	13.89%	0.0075%
COCA-COLA CO/THE	KO	191,624.28	0.89%	3.30%	5.16%	8.55%	0.0780%
MICHAEL KORS HOLDINGS LTD	KORS	5,648.59	0.03%	0.00%	2.69%	2.69%	0.0007%
KROGER CO	KR	20,926.12	0.10%	2.17%	7.03%	9.28%	0.0090%
KOHL'S CORP	KSS	6,592.52	0.03%	5.74%	5.58%	11.48%	0.0035%
KANSAS CITY SOUTHERN	KSU	11,101.66	0.05%	1.33%	12.70%	14.11%	0.0073%
LOEWS CORP	L	15,761.03	N/A	0.00%	N/A	N/A	N/A
L BRANDS INC	LB	15,457.98	0.07%	4.48%	6.57%	11.20%	0.0080%
LEGGETT & PLATT INC	LEG	6,950.10	0.03%	2.70%	19.00%	21.96%	0.0071%
LENNAR CORP-A	LEN	12,241.90	0.06%	0.30%	11.29%	11.61%	0.0066%
LABORATORY CRP OF AMER HLDGS	LH	15,768.52	0.07%	0.00%	10.60%	10.60%	0.0078%
LKQ CORP	LKQ	10,158.00	0.05%	0.00%	12.50%	12.50%	0.0059%
L3 TECHNOLOGIES INC	LLL	13,011.75	0.06%	1.83%	6.57%	8.45%	0.0051%
ELI LILLY & CO	LLY	90,806.06	0.42%	2.53%	13.98%	16.68%	0.0703%
LOCKHEED MARTIN CORP	LMT	80,352.29	0.37%	2.68%	6.33%	9.09%	0.0339%
LINCOLN NATIONAL CORP	LNC	15,156.74	0.07%	1.75%	8.22%	10.04%	0.0071%
ALLIANT ENERGY CORP	LNT	9,276.19	0.04%	3.13%	6.43%	9.66%	0.0042%
LOWE'S COS INC	LOW	65,462.88	0.30%	2.06%	15.87%	17.89%	0.0543%
LAM RESEARCH CORP	LRCX	22,814.34	0.11%	1.10%	20.88%	22.09%	0.0234%
LEUCADIA NATIONAL CORP	LUK	9,412.85	0.04%	0.96%	18.00%	19.04%	0.0063%
SOUTHWEST AIRLINES CO	LUV	37,573.74	0.17%	0.79%	8.84%	9.47%	0.0165%
LEVEL 3 COMMUNICATIONS INC	LVT	21,430.27	0.10%	0.00%	5.00%	5.00%	0.0050%
LYONDELLBASELL INDU-CL A	LYB	33,992.72	0.16%	4.15%	6.50%	10.79%	0.0170%
MACY'S INC	M	7,076.74	0.03%	6.07%	-1.10%	5.54%	0.0018%
MASTERCARD INC - A	MA	130,179.88	0.60%	0.73%	15.38%	16.16%	0.0976%
MID-AMERICA APARTMENT COMM	MAA	11,968.59	N/A	3.33%	N/A	N/A	N/A
MACERICH CO/THE	MAC	8,231.71	0.04%	4.95%	4.13%	9.18%	0.0035%
MARRIOTT INTERNATIONAL -CL A	MAR	38,006.53	0.18%	1.29%	15.10%	16.49%	0.0291%
MASCO CORP	MAS	12,202.86	0.06%	1.06%	13.68%	14.81%	0.0064%
MATTEL INC	MAT	7,375.24	0.03%	5.28%	12.77%	18.39%	0.0063%
MCDONALD'S CORP	MCD	124,836.15	0.58%	2.49%	9.98%	12.58%	0.0729%
MICROCHIP TECHNOLOGY INC	MCHP	17,704.93	0.08%	1.87%	15.08%	17.06%	0.0140%
MCKESSON CORP	MCK	34,793.02	0.16%	0.70%	5.08%	5.78%	0.0093%
MOODY'S CORP	MCO	23,277.38	0.11%	1.22%	8.00%	9.27%	0.0100%
MONDELEZ INTERNATIONAL INC-A	MDLZ	65,531.24	0.30%	1.78%	10.49%	12.35%	0.0376%
MEDTRONIC PLC	MDT	120,613.62	0.56%	2.14%	6.42%	8.62%	0.0482%
METLIFE INC	MET	59,111.77	0.27%	2.94%	10.51%	13.60%	0.0373%
MOHAWK INDUSTRIES INC	MHK	17,982.41	0.08%	0.00%	7.01%	7.01%	0.0058%
MCCORMICK & CO-NON VTG SHRS	MKC	12,150.82	0.06%	1.92%	8.00%	9.99%	0.0056%
MARTIN MARIETTA MATERIALS	MLM	13,973.93	0.06%	0.77%	21.84%	22.86%	0.0147%
MARSH & MCLENNAN COS	MMC	40,083.91	0.19%	1.87%	12.28%	14.26%	0.0265%
3M CO	MMM	124,339.31	0.58%	2.27%	7.87%	10.23%	0.0590%
MALLINCKRODT PLC	MNK	4,451.72	0.02%	0.00%	6.50%	6.50%	0.0013%
MONSTER BEVERAGE CORP	MNST	28,208.89	0.13%	0.00%	20.30%	20.30%	0.0266%
ALTRIA GROUP INC	MO	143,849.64	0.67%	3.46%	1.54%	5.03%	0.0336%
MONSANTO CO	MON	51,998.27	0.24%	1.92%	10.20%	12.22%	0.0295%
MOSAIC CO/THE	MOS	8,013.72	0.04%	2.82%	16.35%	19.40%	0.0072%
MARATHON PETROLEUM CORP	MPC	27,145.53	0.13%	2.87%	9.80%	12.81%	0.0161%
MERCK & CO. INC	MRK	175,296.69	0.81%	2.93%	6.00%	9.02%	0.0734%
MARATHON OIL CORP	MRO	10,072.40	N/A	1.59%	N/A	N/A	N/A
MORGAN STANLEY	MS	82,426.29	0.38%	1.98%	16.30%	18.44%	0.0705%
MICROSOFT CORP	MSFT	532,175.08	2.47%	2.24%	10.66%	13.02%	0.3214%
MOTOROLA SOLUTIONS INC	MSI	14,179.29	0.07%	2.16%	3.85%	6.05%	0.0040%
M & T BANK CORP	MTB	24,918.25	0.12%	1.87%	6.76%	8.70%	0.0101%
METTLER-TOLEDO INTERNATIONAL	MTD	15,197.28	0.07%	0.00%	12.24%	12.24%	0.0066%
MICRON TECHNOLOGY INC	MU	33,266.01	0.15%	0.00%	10.00%	10.00%	0.0154%
MURPHY OIL CORP	MUR	4,422.36	N/A	3.98%	N/A	N/A	N/A
MYLAN NV	MYL	20,807.56	0.10%	0.00%	12.00%	12.00%	0.0116%
NAVIENT CORP	NAVI	4,641.18	0.02%	3.92%	8.00%	12.08%	0.0026%
NOBLE ENERGY INC	NBL	13,765.53	0.06%	1.41%	10.58%	12.07%	0.0077%
NASDAQ INC	NDAQ	11,808.81	0.05%	2.06%	9.53%	11.79%	0.0066%
NEXTERA ENERGY INC	NEE	65,603.64	0.30%	2.80%	7.10%	10.00%	0.0304%
NEWMONT MINING CORP	NEM	17,271.43	0.08%	0.75%	-12.95%	-12.25%	-0.0098%
NETFLIX INC	NFLX	64,396.37	0.30%	0.00%	41.30%	41.30%	0.1234%
NEWFIELD EXPLORATION CO	NFX	5,869.08	0.03%	0.00%	12.26%	12.26%	0.0032%
NISOURCE INC	NI	8,233.56	0.04%	2.77%	6.98%	9.85%	0.0038%
NIKE INC -CL B	NKE	97,395.23	0.45%	1.32%	12.07%	13.47%	0.0808%
NIELSEN HOLDINGS PLC	NLSN	13,813.30	0.06%	3.46%	10.00%	13.63%	0.0087%
NORTHROP GRUMMAN CORP	NOC	44,814.58	0.21%	1.51%	7.26%	8.83%	0.0184%
NATIONAL OILWELL VARCO INC	NOV	12,518.57	N/A	0.61%	N/A	N/A	N/A
NRG ENERGY INC	NRG	5,442.94	0.03%	0.70%	-15.70%	-15.06%	-0.0038%
NORFOLK SOUTHERN CORP	NSC	35,266.55	0.16%	2.02%	12.75%	14.90%	0.0244%
NETAPP INC	NTAP	10,883.09	0.05%	2.00%	8.49%	10.57%	0.0053%
NORTHERN TRUST CORP	NTRS	22,318.05	0.10%	1.63%	12.32%	14.06%	0.0145%
NUCOR CORP	NUE	18,463.53	0.09%	2.61%	5.55%	8.23%	0.0070%
NVIDIA CORP	NVDA	86,013.20	0.40%	0.39%	9.56%	9.96%	0.0398%
NEWELL BRANDS INC	NWL	25,903.82	0.12%	1.62%	11.96%	13.68%	0.0164%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
NEWS CORP - CLASS A	NWSA	8,060.65	0.04%	1.57%	13.05%	14.72%	0.0055%
REALTY INCOME CORP	O	15,067.41	0.07%	4.58%	5.07%	9.78%	0.0068%
ONEOK INC	OKE	11,004.54	0.05%	5.23%	10.50%	16.00%	0.0062%
OMNICOM GROUP	OMC	19,294.48	0.09%	2.74%	7.14%	9.98%	0.0089%
ORACLE CORP	ORCL	207,413.24	0.98%	1.35%	8.35%	9.76%	0.0839%
O'REILLY AUTOMOTIVE INC	ORLY	19,906.44	0.09%	0.00%	16.27%	16.27%	0.0150%
OCCIDENTAL PETROLEUM CORP	OXY	45,775.51	0.21%	5.10%	-3.49%	1.52%	0.0032%
PAYCHEX INC	PAYX	20,464.24	0.09%	3.41%	8.28%	11.83%	0.0112%
PEOPLE'S UNITED FINANCIAL	PBCT	6,061.15	0.03%	3.91%	2.00%	5.95%	0.0017%
PACCAR INC	PCAR	23,196.50	0.11%	2.56%	8.73%	9.38%	0.0101%
P G & E CORP	PCG	33,915.13	0.16%	3.17%	3.70%	6.93%	0.0109%
PRICELINE GROUP INC/THE	PCLN	91,921.91	0.43%	0.00%	16.75%	16.75%	0.0714%
PATTERSON COS INC	PDCO	4,523.28	0.02%	2.29%	5.77%	8.13%	0.0017%
PUBLIC SERVICE ENTERPRISE GP	PEG	21,757.85	0.10%	3.99%	3.20%	7.26%	0.0073%
PEPSICO INC	PEP	164,977.61	0.77%	2.74%	6.40%	9.22%	0.0705%
PFIZER INC	PFE	200,459.90	0.93%	3.81%	5.00%	8.91%	0.0828%
PRINCIPAL FINANCIAL GROUP	PFG	18,466.13	0.09%	2.88%	9.06%	12.07%	0.0103%
PROCTER & GAMBLE CO/THE	PG	222,896.09	1.03%	3.11%	7.50%	10.73%	0.1110%
PROGRESSIVE CORP	PGR	25,616.29	0.12%	2.48%	11.67%	14.29%	0.0170%
PARKER HANNIFIN CORP	PH	21,285.38	0.10%	1.62%	10.27%	11.97%	0.0118%
PULTEGROUP INC	PHM	7,739.31	0.04%	1.34%	17.97%	19.43%	0.0070%
PERKINELMER INC	PKI	7,498.08	0.03%	0.41%	8.10%	8.52%	0.0030%
PROLOGIS INC	PLD	31,053.39	0.14%	2.97%	4.85%	7.89%	0.0114%
PHILIP MORRIS INTERNATIONAL	PM	182,416.67	0.85%	3.62%	9.96%	13.76%	0.1164%
PNC FINANCIAL SERVICES GROUP	PNC	60,424.77	0.28%	1.92%	7.06%	9.05%	0.0254%
PENTAIR PLC	PNR	12,126.59	0.06%	2.10%	5.28%	7.44%	0.0042%
PINNACLE WEST CAPITAL	PNW	9,500.49	0.04%	3.13%	5.90%	9.12%	0.0040%
PPG INDUSTRIES INC	PPG	28,222.24	0.13%	1.49%	8.14%	9.69%	0.0127%
PPL CORP	PPL	26,319.39	0.12%	4.09%	1.20%	5.31%	0.0065%
PERRIGO CO PLC	PRGO	10,829.38	0.05%	0.76%	1.58%	2.34%	0.0012%
PRUDENTIAL FINANCIAL INC	PRU	46,392.06	0.22%	2.83%	10.93%	13.92%	0.0299%
PUBLIC STORAGE	PSA	36,252.08	0.17%	3.90%	5.73%	9.74%	0.0164%
PHILLIPS 66	PSX	42,417.53	0.20%	3.26%	16.53%	20.06%	0.0395%
PVH CORP	PVH	8,913.37	0.04%	0.15%	8.56%	8.71%	0.0036%
QUANTA SERVICES INC	PWR	5,102.19	0.02%	0.00%	16.80%	16.80%	0.0040%
PRAXAIR INC	PX	37,823.66	0.18%	2.39%	11.77%	14.30%	0.0251%
PIONEER NATURAL RESOURCES CO	PXD	27,143.63	0.13%	0.05%	15.00%	15.05%	0.0190%
PAYPAL HOLDINGS INC	PYPL	64,471.54	0.30%	0.00%	19.55%	19.55%	0.0585%
QUALCOMM INC	QCOM	81,584.04	0.38%	3.96%	8.40%	12.52%	0.0474%
QORVO INC	QRVO	8,053.25	0.04%	0.00%	13.24%	13.24%	0.0049%
REYNOLDS AMERICAN INC	RAI	92,774.53	0.43%	3.11%	10.22%	13.49%	0.0580%
ROYAL CARIBBEAN CRUISES LTD	RCL	23,492.64	0.11%	1.82%	18.43%	20.42%	0.0222%
EVEREST RE GROUP LTD	RE	10,456.83	0.05%	2.00%	10.00%	12.10%	0.0059%
REGENCY CENTERS CORP	REG	10,684.05	0.05%	3.38%	9.14%	12.65%	0.0063%
REGENERON PHARMACEUTICALS	REGN	52,203.57	0.24%	0.00%	18.73%	18.73%	0.0454%
REGIONS FINANCIAL CORP	RF	17,598.20	0.08%	2.08%	11.65%	13.84%	0.0113%
ROBERT HALF INTL INC	RHI	6,095.71	0.03%	2.01%	8.00%	10.08%	0.0029%
RED HAT INC	RHT	16,997.55	0.08%	0.00%	16.93%	16.93%	0.0133%
TRANSOCEAN LTD	RIG	3,218.30	0.01%	1.04%	-25.20%	-24.29%	-0.0036%
RAYMOND JAMES FINANCIAL INC	RJF	11,553.37	0.05%	1.09%	17.00%	18.18%	0.0067%
RALPH LAUREN CORP	RL	5,996.93	0.03%	2.89%	1.79%	4.70%	0.0013%
ROCKWELL AUTOMATION INC	ROK	20,866.18	0.10%	2.01%	11.21%	13.33%	0.0129%
ROPER TECHNOLOGIES INC	ROP	23,623.46	0.11%	0.80%	12.87%	13.50%	0.0148%
ROSS STORES INC	ROST	22,467.48	0.10%	1.06%	12.83%	13.96%	0.0145%
RANGE RESOURCES CORP	RRC	5,736.67	0.03%	0.35%	-19.16%	-18.85%	-0.0050%
REPUBLIC SERVICES INC	RSG	21,545.95	0.10%	2.06%	10.41%	12.58%	0.0126%
RAYTHEON COMPANY	RTN	47,002.63	0.22%	1.96%	7.83%	9.86%	0.0215%
STARBUCKS CORP	SBUX	84,438.71	0.39%	1.72%	17.30%	19.17%	0.0751%
SCANA CORP	SCG	9,576.86	0.04%	3.66%	6.00%	9.77%	0.0043%
SCHWAB (CHARLES) CORP	SCHW	57,443.23	0.27%	0.74%	21.44%	22.25%	0.0593%
SEALED AIR CORP	SEE	8,764.57	0.04%	1.43%	2.51%	3.95%	0.0016%
SHERWIN-WILLIAMS CO/THE	SHW	32,684.31	0.15%	0.96%	10.59%	11.60%	0.0176%
SIGNET JEWELERS LTD	SIG	4,326.49	0.02%	1.81%	2.90%	4.54%	0.0009%
JM SMUCKER CO/THE	SJM	13,422.95	0.06%	2.70%	4.93%	7.69%	0.0048%
SCHLUMBERGER LTD	SLB	91,483.16	0.42%	3.06%	41.04%	44.73%	0.1898%
SL GREEN REALTY CORP	SLG	10,926.15	0.05%	2.96%	0.40%	3.36%	0.0017%
SNAP-ON INC	SNA	9,155.96	0.04%	1.87%	10.80%	12.77%	0.0054%
SCRIPPS NETWORKS INTER-CL A	SNI	8,863.66	0.04%	1.69%	9.29%	11.06%	0.0045%
SYNOPSIS INC	SNPS	10,962.15	0.05%	0.00%	9.03%	9.03%	0.0046%
SOUTHERN CO/THE	SO	47,651.39	0.22%	4.82%	4.83%	9.76%	0.0216%
SIMON PROPERTY GROUP INC	SPG	50,501.83	0.23%	4.36%	7.15%	11.67%	0.0273%
S&P GLOBAL INC	SPGI	37,636.22	0.17%	1.12%	10.00%	11.18%	0.0195%
STAPLES INC	SPLS	6,577.38	0.03%	4.79%	-1.00%	3.78%	0.0011%
STERICYCLE INC	SRCL	6,507.66	0.03%	0.07%	8.14%	8.21%	0.0025%
SEMPRA ENERGY	SRE	28,281.24	0.13%	2.91%	12.15%	15.24%	0.0200%
SUNTRUST BANKS INC	STI	27,422.77	0.13%	2.07%	6.89%	9.04%	0.0115%
STATE STREET CORP	STT	33,759.63	0.16%	1.78%	9.05%	10.91%	0.0171%
SEAGATE TECHNOLOGY	STX	11,494.31	0.05%	5.90%	13.27%	19.56%	0.0104%
CONSTELLATION BRANDS INC-A	STZ	37,856.20	0.18%	1.06%	16.38%	17.53%	0.0306%
STANLEY BLACK & DECKER INC	SWK	21,538.06	0.10%	1.68%	11.00%	12.77%	0.0128%
SKYWORKS SOLUTIONS INC	SWKS	17,705.13	0.08%	1.17%	14.35%	15.61%	0.0128%
SYNCHRONY FINANCIAL	SYF	24,184.42	0.11%	1.91%	8.20%	10.19%	0.0114%
STRYKER CORP	SYK	51,871.11	0.24%	1.16%	8.29%	9.49%	0.0228%
SYMANTEC CORP	SYMC	17,182.79	0.08%	1.07%	11.38%	12.51%	0.0100%
SYSCO CORP	SY	26,938.49	0.12%	2.57%	11.22%	13.93%	0.0174%
AT&T INC	T	231,984.04	1.08%	5.22%	5.25%	10.60%	0.1141%
MOLSON COORS BREWING CO -B	TAP	18,896.54	0.09%	1.92%	7.09%	9.08%	0.0079%
TRANSDIGM GROUP INC	TDG	13,987.64	0.06%	0.00%	8.32%	8.32%	0.0054%
TE CONNECTIVITY LTD	TEL	27,933.55	0.13%	1.93%	6.40%	8.39%	0.0109%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
TARGET CORP	TGT	28,848.83	0.13%	4.72%	-2.99%	1.66%	0.0022%
TIFFANY & CO	TIF	11,700.80	0.05%	2.02%	10.10%	12.22%	0.0066%
TJX COMPANIES INC	TJX	46,425.25	0.22%	1.64%	11.53%	13.27%	0.0266%
TORCHMARK CORP	TMK	8,949.14	0.04%	0.78%	7.01%	7.82%	0.0032%
THERMO FISHER SCIENTIFIC INC	TMO	68,256.14	0.32%	0.34%	12.20%	12.57%	0.0398%
TRIPADVISOR INC	TRIP	5,364.87	0.03%	0.00%	15.14%	15.14%	0.0038%
T ROWE PRICE GROUP INC	TROV	17,904.52	0.08%	3.06%	12.57%	15.81%	0.0131%
TRAVELERS COS INC/THE	TRV	35,354.48	0.16%	2.23%	7.36%	9.67%	0.0159%
TRACTOR SUPPLY COMPANY	TSCO	6,969.46	0.03%	1.93%	14.10%	16.17%	0.0052%
TYSON FOODS INC-CL A	TSN	24,432.14	0.11%	1.28%	7.40%	8.72%	0.0099%
TESORO CORP	TSO	14,970.81	0.07%	2.42%	16.90%	19.52%	0.0136%
TOTAL SYSTEM SERVICES INC	TSS	10,719.82	0.05%	0.69%	11.00%	11.72%	0.0058%
TIME WARNER INC	TWX	77,871.72	0.36%	1.61%	7.00%	8.66%	0.0313%
TEXAS INSTRUMENTS INC	TXN	76,647.19	0.36%	2.66%	10.43%	13.22%	0.0470%
TEXTRON INC	TXT	12,608.17	0.06%	0.18%	9.16%	9.35%	0.0055%
UNDER ARMOUR INC-CLASS A	UAA	9,199.85	0.04%	0.00%	10.81%	10.81%	0.0046%
UNITED CONTINENTAL HOLDINGS	UAL	23,067.55	0.11%	0.00%	4.43%	4.43%	0.0049%
UDR INC	UDR	10,420.26	0.05%	3.18%	5.94%	9.22%	0.0045%
UNIVERSAL HEALTH SERVICES-B	UHS	11,803.91	0.05%	0.28%	9.49%	9.78%	0.0054%
ULTA BEAUTY INC	ULTA	17,824.42	0.08%	0.00%	21.83%	21.83%	0.0181%
UNITEDHEALTH GROUP INC	UNH	178,682.13	0.83%	1.46%	13.02%	14.57%	0.1208%
UNUM GROUP	UNM	10,641.61	0.05%	1.79%	7.00%	8.86%	0.0044%
UNION PACIFIC CORP	UNP	87,938.21	0.41%	2.24%	9.73%	12.08%	0.0493%
UNITED PARCEL SERVICE-CL B	UPS	95,965.92	0.45%	2.99%	9.13%	12.25%	0.0545%
UNITED RENTALS INC	URI	9,525.50	0.04%	0.00%	17.76%	17.76%	0.0078%
US BANCORP	USB	87,499.90	0.41%	2.26%	11.93%	14.32%	0.0581%
UNITED TECHNOLOGIES CORP	UTX	97,837.89	0.45%	2.27%	8.56%	10.93%	0.0496%
VISA INC-CLASS A SHARES	V	216,225.48	1.00%	0.70%	17.52%	18.28%	0.1833%
VARIAN MEDICAL SYSTEMS INC	VAR	9,485.39	0.04%	0.00%	8.00%	8.00%	0.0035%
VF CORP	VFC	23,066.32	0.11%	2.97%	7.71%	10.79%	0.0115%
VIACOM INC-CLASS B	VIAB	13,707.59	0.06%	2.39%	-0.86%	1.72%	0.0011%
VALERO ENERGY CORP	VLO	30,170.23	0.14%	4.16%	10.00%	14.37%	0.0201%
VULCAN MATERIALS CO	VMC	16,741.56	0.08%	0.77%	25.81%	26.68%	0.0207%
VORNADO REALTY TRUST	VNO	17,779.35	0.08%	2.96%	3.18%	6.18%	0.0051%
VERISK ANALYTICS INC	VRSK	13,949.73	0.06%	0.00%	8.18%	8.18%	0.0053%
VERISIGN INC	VRSN	9,433.17	0.04%	0.00%	9.30%	9.30%	0.0041%
VERTEX PHARMACEUTICALS INC	VRTX	32,097.49	0.15%	0.00%	69.80%	69.80%	0.1039%
VENTAS INC	VTR	24,656.64	0.11%	4.52%	4.10%	8.71%	0.0100%
VERIZON COMMUNICATIONS INC	VZ	182,184.64	0.85%	5.22%	1.62%	6.88%	0.0582%
WATERS CORP	WAT	14,714.10	0.07%	0.00%	8.11%	8.11%	0.0055%
WALGREENS BOOTS ALLIANCE INC	WBA	83,799.28	0.39%	1.93%	9.71%	11.73%	0.0456%
WESTERN DIGITAL CORP	WDC	25,804.08	0.12%	2.27%	20.69%	23.19%	0.0278%
WEC ENERGY GROUP INC	WEC	19,370.25	0.09%	3.39%	6.37%	9.86%	0.0089%
WELLS FARGO & CO	WFC	276,901.39	1.28%	2.80%	11.46%	14.42%	0.1852%
WHOLE FOODS MARKET INC	WFM	13,456.87	0.06%	1.51%	6.55%	8.11%	0.0051%
WHIRLPOOL CORP	WHR	14,174.20	0.07%	2.22%	15.88%	18.28%	0.0120%
WILLIS TOWERS WATSON PLC	WLTW	19,685.10	0.09%	1.44%	10.00%	11.52%	0.0105%
WASTE MANAGEMENT INC	WM	32,416.35	0.15%	2.32%	10.50%	12.95%	0.0195%
WILLIAMS COS INC	WMB	25,019.60	0.12%	3.98%	15.50%	19.78%	0.0230%
WAL-MART STORES INC	WMT	228,137.29	1.06%	2.86%	5.14%	6.07%	0.0854%
WESTROCK CO	WRK	14,227.26	0.07%	2.83%	7.78%	10.72%	0.0071%
WESTERN UNION CO	WU	8,977.39	0.04%	3.67%	7.50%	11.31%	0.0047%
WEYERHAEUSER CO	WY	25,189.74	0.12%	3.82%	7.50%	11.47%	0.0134%
WYNDHAM WORLDWIDE CORP	WYN	10,478.17	0.05%	2.27%	13.90%	16.33%	0.0079%
WYNN RESORTS LTD	WYNN	13,729.05	0.06%	1.49%	19.80%	21.44%	0.0137%
CIMAREX ENERGY CO	XEC	8,941.16	0.04%	0.34%	38.28%	38.69%	0.0160%
XCEL ENERGY INC	XEL	23,299.16	0.11%	3.14%	5.90%	9.13%	0.0099%
XL GROUP LTD	XL	11,451.15	0.05%	1.72%	9.00%	10.80%	0.0057%
XILINX INC	XLNX	15,956.08	0.07%	2.19%	7.97%	10.24%	0.0076%
EXXON MOBIL CORP	XOM	342,074.44	1.58%	3.79%	5.42%	9.31%	0.1477%
DENTSPLY SIRONA INC	XRAY	14,863.27	0.07%	0.53%	9.53%	10.08%	0.0069%
XEROX CORP	XRX	7,301.62	0.03%	3.01%	2.90%	5.95%	0.0020%
XYLEM INC	XYL	9,961.68	0.05%	1.30%	12.10%	13.48%	0.0062%
YUM! BRANDS INC	YUM	25,685.48	0.12%	1.65%	12.62%	14.38%	0.0171%
ZIMMER BIOMET HOLDINGS INC	ZBH	25,891.09	0.12%	0.79%	8.36%	9.20%	0.0110%
ZIONS BANCORPORATION	ZION	8,897.45	0.04%	0.97%	9.00%	10.01%	0.0041%
ZOETIS INC	ZTS	30,615.91	0.14%	0.67%	13.35%	14.07%	0.0200%
Total Market Capitalization:		21,559,595					13.51%

Notes

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Bloomberg Professional

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Bloomberg Professional

[7] Source: Bloomberg Professional

[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]

[9] Equals Col. [5] x Col. [8]

Ex-Ante Market Risk Premium
Market DCF Method Based - Value Line

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
13.94%	2.83%	11.11%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	19,455.81	0.10%	0.87%	6.50%	7.40%	0.0072%
AMERICAN AIRLINES GROUP INC	AAL	24,276.83	0.12%	0.82%	1.00%	1.82%	0.0022%
ADVANCE AUTO PARTS INC	AAP	8,913.09	0.04%	0.20%	9.50%	9.71%	0.0043%
APPLE INC	AAPL	758,122.90	3.80%	1.77%	10.00%	11.86%	0.4510%
ABBVIE INC	ABBV	116,456.10	0.58%	3.50%	11.50%	15.20%	0.0808%
AMERISOURCEBERGEN CORP	ABC	21,042.97	0.11%	1.52%	8.00%	9.58%	0.0101%
ABBOTT LABORATORIES	ABT	85,486.84	0.43%	2.15%	8.50%	10.74%	0.0481%
ACCENTURE PLC-CL A	ACN	77,972.86	0.38%	2.07%	9.00%	11.16%	0.0437%
ADOBE SYSTEMS INC	ADBE	71,145.23	0.36%	0.00%	29.50%	29.50%	0.1053%
ANALOG DEVICES INC	ADI	29,845.34	0.15%	2.21%	18.00%	18.39%	0.0275%
ARCHER-DANIELS-MIDLAND CO	ADM	23,346.07	0.12%	3.12%	5.00%	8.20%	0.0098%
AUTOMATIC DATA PROCESSING	ADP	45,645.49	0.23%	2.41%	10.00%	12.53%	0.0287%
ALLIANCE DATA SYSTEMS CORP	ADS	14,457.13	0.07%	0.80%	9.50%	10.34%	0.0075%
AUTODESK INC	ADSK	23,533.46	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	13,651.10	0.07%	3.22%	6.00%	9.32%	0.0064%
AMERICAN ELECTRIC POWER	AEP	35,300.00	0.18%	3.41%	4.00%	7.48%	0.0132%
AES CORP	AES	7,637.46	N/A	4.15%	N/A	N/A	N/A
AETNA INC	AET	50,743.47	0.25%	1.31%	8.50%	9.87%	0.0251%
AFLAC INC	AFL	30,773.52	0.15%	2.28%	4.00%	6.33%	0.0098%
ALLERGAN PLC	AGN	82,930.11	0.42%	0.11%	10.00%	10.12%	0.0421%
AMERICAN INTERNATIONAL GROUP	AIG	59,423.37	0.30%	2.03%	25.00%	27.28%	0.0813%
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	3.29%	N/A	N/A	N/A
ASSURANT INC	AIZ	5,517.31	0.03%	2.12%	4.00%	6.16%	0.0017%
ARTHUR J GALLAGHER & CO	AJG	10,249.45	0.05%	2.73%	15.50%	18.44%	0.0095%
AKAMAI TECHNOLOGIES INC	AKAM	8,718.04	0.04%	0.00%	12.50%	12.50%	0.0055%
ALBEMARLE CORP	ALB	11,651.11	0.06%	1.22%	9.50%	10.78%	0.0063%
ALASKA AIR GROUP INC	ALGN	12,023.70	0.06%	0.00%	17.00%	17.00%	0.0103%
ALLSTATE CORP	ALK	11,261.81	0.06%	1.32%	10.00%	11.39%	0.0064%
ALLEGION PLC	ALL	32,233.15	0.16%	1.68%	7.50%	9.24%	0.0149%
ALEXION PHARMACEUTICALS INC	ALLE	7,734.16	0.04%	0.79%	10.00%	10.83%	0.0042%
APPLIED MATERIALS INC	ALXN	28,275.52	0.14%	0.00%	20.00%	20.00%	0.0284%
ADVANCED MICRO DEVICES	AMAT	46,574.55	0.23%	1.06%	18.00%	19.16%	0.0448%
AMETEK INC	AMD	13,545.96	N/A	0.00%	N/A	N/A	N/A
AFFILIATED MANAGERS GROUP	AME	13,939.94	0.07%	0.59%	5.50%	6.11%	0.0043%
AMGEN INC	AMG	9,172.35	0.05%	0.49%	7.00%	7.51%	0.0035%
AMERIPRISE FINANCIAL INC	AMGN	127,948.90	0.64%	2.76%	7.50%	10.36%	0.0865%
AMERICAN TOWER CORP	AMP	19,330.16	0.10%	2.63%	11.50%	14.28%	0.0138%
AMAZON.COM INC	AMT	55,783.07	0.28%	2.09%	11.00%	13.20%	0.0389%
AUTONATION INC	AMZN	478,621.40	2.40%	0.00%	58.00%	56.00%	1.3445%
ANTHEM INC	AN	4,004.11	0.02%	0.00%	7.00%	7.00%	0.0014%
AON PLC	ANSS	10,480.32	0.05%	0.00%	7.00%	7.00%	0.0037%
APACHE CORP	ANTM	51,254.90	0.26%	1.35%	10.00%	11.42%	0.0294%
ANADARKO PETROLEUM CORP	AON	35,280.90	0.18%	1.07%	9.50%	10.62%	0.0188%
AIR PRODUCTS & CHEMICALS INC	APA	17,359.25	0.09%	2.19%	23.00%	25.44%	0.0222%
AMPHENOL CORP-CL A	APC	24,885.17	N/A	0.44%	N/A	N/A	N/A
ALEXANDRIA REAL ESTATE EQUIT	APD	31,406.69	0.16%	2.63%	9.00%	11.75%	0.0185%
ARCONIC INC	APH	22,712.60	0.11%	0.88%	8.50%	9.40%	0.0107%
ACTIVISION BLIZZARD INC	ARE	N/A	N/A	0.00%	N/A	N/A	N/A
AVALONBAY COMMUNITIES INC	ARNC	11,152.90	N/A	0.95%	N/A	N/A	N/A
BROADCOM LTD	ATVI	46,087.24	0.23%	0.48%	7.00%	7.51%	0.0174%
AVERY DENNISON CORP	AVB	-	N/A	3.02%	N/A	N/A	N/A
AMERICAN WATER WORKS CO INC	AVGO	99,081.22	0.50%	1.67%	44.00%	46.04%	0.2288%
AMERICAN EXPRESS CO	AVY	7,767.00	0.04%	2.10%	9.00%	11.19%	0.0044%
ACUITY BRANDS INC	AWK	14,413.82	0.07%	2.05%	8.50%	10.64%	0.0077%
AUTOZONE INC	AXP	73,613.75	0.37%	1.65%	5.00%	6.69%	0.0247%
BOEING CO/THE	AYI	7,747.75	0.04%	0.29%	16.50%	16.81%	0.0065%
BANK OF AMERICA CORP	AZO	16,319.48	0.08%	0.00%	12.00%	12.00%	0.0098%
BAXTER INTERNATIONAL INC	BA	120,819.20	0.61%	3.08%	9.50%	12.73%	0.0771%
BED BATH & BEYOND INC	BAC	228,708.20	1.15%	1.44%	16.00%	17.58%	0.2014%
BB&T CORP	BAX	32,931.70	0.17%	1.06%	2.50%	3.57%	0.0059%
BEST BUY CO INC	BBBY	5,071.63	0.03%	1.78%	-1.00%	0.77%	0.0002%
CR BARD INC	BBT	35,179.07	0.18%	2.95%	5.50%	8.53%	0.0151%
BECTON DICKINSON AND CO	BBY	16,897.32	0.08%	2.46%	6.00%	8.53%	0.0072%
FRANKLIN RESOURCES INC	BCR	22,862.32	0.11%	0.34%	9.00%	9.38%	0.0107%
BROWN-FORMAN CORP-CLASS B	BDX	41,607.27	0.21%	1.57%	9.00%	10.54%	0.0222%
BAKER HUGHES INC	BEN	24,922.80	0.13%	1.89%	5.00%	6.94%	0.0087%
BIOGEN INC	BF/B	18,711.33	0.09%	1.52%	8.50%	10.08%	0.0095%
BANK OF NEW YORK MELLON CORP	BHI	23,196.30	N/A	1.25%	N/A	N/A	N/A
BLACKROCK INC	BLIB	59,513.11	0.30%	0.00%	9.50%	9.50%	0.0284%
BALL CORP	BK	51,525.91	0.28%	1.53%	8.50%	10.10%	0.0261%
BRISTOL-MYERS SQUIBB CO	BLK	58,488.48	0.34%	2.36%	8.50%	10.96%	0.0378%
BERKSHIRE HATHAWAY INC-CL B	BLL	14,619.50	0.07%	0.53%	15.00%	15.57%	0.0114%
BOSTON SCIENTIFIC CORP	BMV	94,447.39	0.47%	2.72%	14.50%	17.42%	0.0825%
BORGWARNER INC	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
BOSTON PROPERTIES INC	BSX	38,142.63	0.19%	0.00%	18.50%	18.50%	0.0354%
CITIGROUP INC	BWA	8,671.31	0.04%	1.37%	7.00%	8.42%	0.0037%
CA INC	BXP	-	N/A	2.40%	N/A	N/A	N/A

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
CONAGRA BRANDS INC	C	187,191.70	0.99%	1.04%	10.00%	11.09%	0.1097%
CARDINAL HEALTH INC	CA	14,675.03	0.07%	2.91%	5.50%	8.48%	0.0062%
CATERPILLAR INC	CAG	15,781.87	0.08%	2.16%	1.00%	3.17%	0.0025%
CHUBB LTD	CAH	24,885.00	0.12%	2.38%	13.00%	15.53%	0.0184%
CBRE GROUP INC - A	CAT	61,171.10	0.31%	3.01%	8.50%	11.64%	0.0357%
CBOE HOLDINGS INC	CB	88,004.30	0.34%	1.95%	8.00%	10.03%	0.0342%
CBS CORP-CLASS B NON VOTING	CBG	11,926.99	0.06%	0.00%	7.00%	7.00%	0.0042%
CROWN CASTLE INTL CORP	CBOE	8,232.58	0.04%	1.13%	12.50%	13.70%	0.0057%
CARNIVAL CORP	CBS	26,457.86	0.13%	1.15%	12.00%	13.22%	0.0160%
CELGENE CORP	CCI	36,041.55	0.18%	4.02%	8.50%	12.88%	0.0229%
CERNER CORP	CCL	47,690.94	0.24%	2.44%	12.50%	15.09%	0.0361%
CF INDUSTRIES HOLDINGS INC	CELG	104,404.10	0.52%	0.00%	26.00%	26.00%	0.1362%
CITIZENS FINANCIAL GROUP	CERN	22,245.97	0.11%	0.00%	9.50%	9.50%	0.0108%
CHURCH & DWIGHT CO INC	CF	6,375.28	0.03%	4.50%	10.00%	14.73%	0.0047%
CHESAPEAKE ENERGY CORP	CFG	17,822.87	N/A	1.86%	N/A	N/A	N/A
C.H. ROBINSON WORLDWIDE INC	CHD	13,310.18	0.07%	1.44%	7.00%	8.48%	0.0057%
CHARTER COMMUNICATIONS INC-A	CHK	4,075.34	N/A	0.00%	N/A	N/A	N/A
CIGNA CORP	CHRW	9,500.34	0.05%	2.88%	6.50%	9.27%	0.0044%
CINCINNATI FINANCIAL CORP	CHTR	89,392.48	0.45%	0.00%	26.00%	26.00%	0.1166%
COLGATE-PALMOLIVE CO	CI	43,696.47	0.22%	0.02%	11.50%	11.52%	0.0253%
CLOROX COMPANY	CINF	11,762.32	0.06%	2.80%	6.50%	9.39%	0.0055%
COMERICA INC	CL	66,715.12	0.33%	2.12%	11.50%	13.74%	0.0460%
COMCAST CORP-CLASS A	CLX	17,949.50	0.09%	2.41%	7.50%	10.00%	0.0090%
CME GROUP INC	CMA	12,672.19	0.06%	1.48%	13.50%	15.06%	0.0096%
CHIPOTLE MEXICAN GRILL INC	CMCSA	189,433.70	0.95%	1.58%	11.00%	12.67%	0.1204%
CUMMINS INC	CME	42,154.10	0.21%	2.13%	7.50%	9.71%	0.0205%
CMS ENERGY CORP	CMG	12,071.14	0.06%	0.00%	15.50%	15.50%	0.0094%
CENTENE CORP	CMI	26,689.38	0.13%	2.58%	6.00%	8.68%	0.0116%
CENTERPOINT ENERGY INC	CMS	13,333.60	0.07%	2.88%	6.50%	9.47%	0.0063%
CAPITAL ONE FINANCIAL CORP	CNC	14,296.49	0.07%	0.00%	17.00%	17.00%	0.0122%
CABOT OIL & GAS CORP	CNP	12,105.61	0.06%	3.88%	8.00%	10.00%	0.0061%
COACH INC	COF	38,809.48	0.19%	1.99%	3.00%	5.02%	0.0098%
ROCKWELL COLLINS INC	COG	10,641.83	N/A	0.88%	N/A	N/A	N/A
COOPER COS INC/THE	COH	13,065.53	0.07%	2.90%	9.00%	12.03%	0.0079%
CONOCOPHILLIPS	COL	13,643.49	0.07%	1.27%	8.00%	9.32%	0.0064%
COSTCO WHOLESALE CORP	COO	11,963.43	0.06%	0.02%	16.50%	16.52%	0.0099%
COTY INC-CL A	COP	55,434.63	0.28%	2.41%	80.50%	83.84%	0.1770%
CAMPBELL SOUP CO	COST	70,096.52	0.35%	1.25%	9.00%	10.31%	0.0362%
SALESFORCE.COM INC	COTY	14,264.93	0.07%	2.62%	8.00%	10.72%	0.0077%
CISCO SYSTEMS INC	CPB	17,425.85	0.09%	2.60%	5.00%	7.67%	0.0067%
CSRA INC	CRM	83,008.34	N/A	0.00%	N/A	N/A	N/A
CSX CORP	CSCO	159,186.30	0.80%	3.64%	7.00%	10.77%	0.0860%
CINTAS CORP	CSRA	5,158.57	N/A	1.28%	N/A	N/A	N/A
CENTURYLINK INC	CSX	48,533.34	0.24%	1.52%	9.00%	10.59%	0.0258%
COGNIZANT TECH SOLUTIONS-A	CTAS	13,588.47	0.07%	1.03%	9.50%	10.58%	0.0072%
CITRIX SYSTEMS INC	CTL	13,364.38	0.07%	8.87%	8.50%	17.75%	0.0119%
CVS HEALTH CORP	CTSH	39,533.68	0.20%	0.89%	11.50%	12.44%	0.0247%
CHEVRON CORP	CTXS	12,268.89	0.06%	0.00%	5.50%	5.50%	0.0034%
CONCHO RESOURCES INC	CVS	79,304.94	0.40%	2.59%	9.00%	11.71%	0.0486%
DOMINION ENERGY INC	CVX	197,886.50	0.99%	4.16%	15.50%	19.98%	0.1863%
DELTA AIR LINES INC	COO	16,874.06	0.08%	0.00%	27.00%	27.00%	0.0229%
DU PONT (E.I.) DE NEMOURS	D	49,646.96	0.25%	3.98%	5.50%	9.59%	0.0239%
DEERE & CO	DAL	38,843.34	0.19%	2.10%	11.50%	13.72%	0.0287%
DISCOVER FINANCIAL SERVICES	DD	70,513.32	0.35%	1.99%	8.00%	10.07%	0.0356%
DOLLAR GENERAL CORP	DE	39,618.11	0.20%	1.94%	5.50%	7.49%	0.0149%
QUEST DIAGNOSTICS INC	DFS	23,032.88	0.12%	1.99%	5.00%	7.04%	0.0081%
DR HORTON INC	DG	19,491.91	0.10%	1.58%	11.00%	12.67%	0.0124%
DANAHER CORP	DGX	15,009.72	0.08%	1.84%	9.50%	11.22%	0.0084%
WALT DISNEY CO/THE	DHI	12,569.02	0.06%	1.29%	11.50%	12.86%	0.0081%
DISCOVERY COMMUNICATIONS-A	DHR	59,664.84	0.30%	0.65%	9.00%	9.68%	0.0290%
DISH NETWORK CORP-A	DIS	166,752.00	0.84%	1.50%	7.50%	9.08%	0.0758%
DELPHI AUTOMOTIVE PLC	DISCA	9,814.28	0.05%	0.00%	13.50%	13.50%	0.0066%
DIGITAL REALTY TRUST INC	DISH	26,335.87	0.15%	0.00%	6.00%	6.00%	0.0066%
DOLLAR TREE INC	DLPH	22,969.60	0.12%	1.45%	14.00%	15.55%	0.0179%
DOVER CORP	DLR	-	N/A	3.18%	N/A	N/A	N/A
DOW CHEMICAL CO/THE	DLTR	16,019.85	0.08%	0.00%	16.50%	16.50%	0.0133%
DR PEPPER SNAPPLE GROUP INC	DOV	12,101.79	0.06%	2.28%	1.50%	3.78%	0.0023%
DARDEN RESTAURANTS INC	DOW	77,982.84	0.39%	3.20%	8.00%	11.33%	0.0443%
DTE ENERGY COMPANY	DPS	16,964.28	0.09%	2.54%	7.00%	9.63%	0.0062%
DUKE ENERGY CORP	DR	11,086.07	0.06%	2.54%	14.50%	17.22%	0.0096%
DAVITA INC	DTE	19,657.23	0.10%	3.17%	6.00%	9.27%	0.0091%
DEVON ENERGY CORP	DUK	59,446.92	0.30%	4.10%	5.50%	9.71%	0.0290%
DXC TECHNOLOGY CO	DVA	12,662.36	0.06%	0.00%	10.50%	10.50%	0.0067%
ELECTRONIC ARTS INC	DVN	15,785.26	0.08%	0.80%	15.00%	15.86%	0.0126%
EBAY INC	DXC	10,816.37	0.05%	0.94%	14.00%	15.01%	0.0081%
ECOLAB INC	EA	34,726.29	0.17%	0.00%	13.50%	13.50%	0.0235%
CONSOLIDATED EDISON INC	EBAY	37,859.36	0.19%	0.00%	9.50%	9.50%	0.0180%
EQUIFAX INC	ECL	38,187.20	0.19%	1.12%	8.50%	9.67%	0.0185%
EDISON INTERNATIONAL	ED	25,681.00	0.13%	3.33%	2.50%	5.87%	0.0078%
ESTEE LAUDER COMPANIES-CL A	EFX	16,699.38	0.08%	1.12%	10.00%	11.18%	0.0094%
EASTMAN CHEMICAL CO	EIX	26,354.85	0.13%	2.78%	3.00%	5.82%	0.0077%
EMERSON ELECTRIC CO	EL	36,253.88	0.18%	1.40%	8.50%	9.86%	0.0181%
EOG RESOURCES INC	EMN	12,077.54	0.06%	2.46%	10.00%	12.58%	0.0076%
EQUINIX INC	EMR	37,844.50	0.19%	3.28%	5.00%	8.37%	0.0159%
EQUITY RESIDENTIAL	EOG	50,819.75	0.25%	0.81%	30.00%	30.93%	0.0785%
EQT CORP	EQIX	34,303.87	0.17%	1.82%	23.00%	25.03%	0.0431%
EVERSOURCE ENERGY	EQR	-	N/A	3.03%	N/A	N/A	N/A
EXPRESS SCRIPTS HOLDING CO	EQT	9,017.63	0.05%	0.23%	20.50%	20.75%	0.0094%
ESSEX PROPERTY TRUST INC	ES	19,710.31	0.10%	3.14%	6.50%	9.74%	0.0096%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
E*TRADE FINANCIAL CORP	ESRX	38,524.09	0.19%	0.00%	12.50%	12.50%	0.0242%
EATON CORP PLC	ESS	-	N/A	2.56%	N/A	N/A	N/A
ENTERGY CORP	ETFC	10,034.97	0.05%	0.00%	14.00%	14.00%	0.0070%
ENVISION HEALTHCARE CORP	ETN	33,891.92	0.17%	3.17%	7.00%	10.28%	0.0175%
EDWARDS LIFESCIENCES CORP	ETR	14,209.30	0.07%	4.47%	-3.50%	0.80%	0.0006%
EXELON CORP	EVHC	7,066.46	N/A	0.00%	N/A	N/A	N/A
EXPEDITORS INTL WASH INC	EW	24,938.71	0.13%	0.00%	15.50%	15.50%	0.0194%
EXPEDIA INC	EXC	33,947.16	0.17%	3.55%	7.00%	10.67%	0.0182%
EXTRA SPACE STORAGE INC	EXPD	9,859.84	0.05%	1.53%	8.00%	9.56%	0.0047%
FORD MOTOR CO	EXPE	22,946.68	0.12%	0.74%	23.00%	23.83%	0.0274%
FASTENAL CO	EXR	-	N/A	4.19%	N/A	N/A	N/A
FACEBOOK INC-A	F	44,319.50	0.22%	5.39%	3.00%	8.47%	0.0188%
FORTUNE BRANDS HOME & SECURI	FAST	12,377.61	0.06%	2.99%	4.00%	7.05%	0.0044%
FREEPORT-MCMORAN INC	FB	444,553.20	2.23%	0.00%	29.00%	29.00%	0.6467%
FEDEX CORP	FBHS	10,013.71	0.05%	1.11%	12.00%	13.18%	0.0086%
FIRSTENERGY CORP	FCX	16,568.15	N/A	0.00%	N/A	N/A	N/A
F5 NETWORKS INC	FDX	66,584.57	0.28%	0.95%	12.50%	13.51%	0.0383%
FIDELITY NATIONAL INFO SERV	FE	12,948.33	0.06%	4.94%	9.00%	14.16%	0.0092%
FISERV INC	FFIV	6,267.11	0.04%	0.00%	10.00%	10.00%	0.0041%
FIFTH THIRD BANCORP	FIS	27,918.94	0.14%	1.37%	11.00%	12.45%	0.0174%
FOOT LOCKER INC	FISV	26,593.34	0.13%	0.00%	9.00%	9.00%	0.0120%
FLIR SYSTEMS INC	FITB	18,858.84	0.09%	2.31%	5.00%	7.37%	0.0070%
FLUOR CORP	FL	6,236.61	0.03%	2.61%	9.50%	12.23%	0.0038%
FLOWSERVE CORP	FLIR	4,808.08	0.02%	1.87%	7.50%	9.44%	0.0023%
FMC CORP	FLR	6,148.97	0.03%	1.91%	4.50%	6.45%	0.0020%
TWENTY-FIRST CENTURY FOX-A	FLS	5,762.15	0.03%	1.72%	2.50%	4.24%	0.0012%
FEDERAL REALTY INVS TRUST	FMC	9,950.99	0.05%	0.90%	8.50%	9.44%	0.0047%
TECHNIPFMC PLC	FOXA	49,917.56	0.25%	1.34%	9.50%	10.90%	0.0273%
FORTIVE CORP	FRT	-	N/A	3.27%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
GENERAL ELECTRIC CO	FTV	22,172.19	N/A	0.44%	N/A	N/A	N/A
GGP INC	GD	60,717.13	0.30%	1.87%	5.50%	7.22%	0.0220%
GILEAD SCIENCES INC	GE	239,243.20	1.20%	3.49%	13.50%	17.23%	0.2067%
GENERAL MILLS INC	GGP	-	N/A	3.96%	N/A	N/A	N/A
CORNING INC	GILD	92,117.35	0.46%	2.95%	-3.50%	-0.80%	-0.0028%
GENERAL MOTORS CO	GIS	32,281.60	0.16%	3.46%	5.00%	8.55%	0.0138%
ALPHABET INC-CL A	GLW	27,333.20	0.14%	2.09%	10.50%	12.70%	0.0174%
GENUINE PARTS CO	GM	51,596.51	0.26%	4.56%	6.00%	10.70%	0.0277%
GLOBAL PAYMENTS INC	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GAP INC/THE	GPC	13,216.82	0.07%	3.01%	7.00%	10.12%	0.0067%
GARMIN LTD	GPV	13,798.38	0.07%	0.04%	12.00%	12.04%	0.0083%
GOLDMAN SACHS GROUP INC	GPS	8,719.92	0.04%	4.18%	0.50%	4.69%	0.0021%
GOODYEAR TIRE & RUBBER CO	GRMN	9,660.34	0.05%	3.97%	5.00%	9.07%	0.0044%
VW GRAINGER INC	GS	86,783.21	0.44%	1.37%	9.50%	10.94%	0.0476%
HALLIBURTON CO	GT	8,424.36	0.04%	1.29%	10.00%	11.35%	0.0048%
HASBRO INC	GWW	10,091.39	0.05%	2.96%	5.00%	8.03%	0.0041%
HUNTINGTON BANCSHARES INC	HAL	36,327.30	0.18%	1.72%	20.50%	22.40%	0.0408%
HANESBRANDS INC	HAS	13,809.74	0.07%	2.06%	10.50%	12.67%	0.0088%
HCA HEALTHCARE INC	HBAI	14,067.33	0.07%	2.63%	10.00%	12.76%	0.0090%
WELLTOWER INC	HBI	8,102.25	0.04%	2.70%	9.50%	12.33%	0.0050%
HCP INC	HCA	31,759.39	0.16%	0.00%	9.50%	9.50%	0.0151%
HOME DEPOT INC	HCN	-	N/A	4.50%	N/A	N/A	N/A
HESS CORP	HCP	-	N/A	4.48%	N/A	N/A	N/A
HARTFORD FINANCIAL SVCS GRP	HD	186,109.60	0.93%	2.57%	10.50%	13.20%	0.1233%
HARLEY-DAVIDSON INC	HES	13,037.74	N/A	2.44%	N/A	N/A	N/A
HOLOGIC INC	HIG	19,050.51	0.10%	1.78%	10.00%	11.87%	0.0113%
HONEYWELL INTERNATIONAL INC	HLT	21,491.81	0.11%	0.92%	8.50%	9.46%	0.0102%
HELMERICH & PAYNE	HOG	9,842.39	0.05%	2.80%	8.00%	10.70%	0.0053%
HEWLETT PACKARD ENTERPRIS	HOLX	13,017.66	0.07%	0.00%	25.00%	25.00%	0.0163%
HP INC	HON	102,206.70	0.51%	1.98%	8.00%	10.08%	0.0516%
H&R BLOCK INC	HP	5,658.46	0.03%	5.37%	8.00%	13.58%	0.0039%
HORMEL FOODS CORP	HPE	27,455.28	0.14%	1.56%	4.00%	5.59%	0.0077%
HARRIS CORP	HPQ	29,805.93	N/A	3.11%	N/A	N/A	N/A
HENRY SCHEIN INC	HRB	6,453.22	0.03%	3.06%	7.50%	10.70%	0.0035%
HOST HOTELS & RESORTS INC	HRL	18,192.21	0.09%	2.01%	10.50%	12.62%	0.0115%
HERSHEY CO/THE	HRS	13,511.92	0.07%	1.96%	7.00%	9.05%	0.0061%
HUMANA INC	HSIC	14,642.77	0.07%	0.00%	8.50%	8.50%	0.0062%
INTL BUSINESS MACHINES CORP	HST	-	N/A	4.29%	N/A	N/A	N/A
INTERCONTINENTAL EXCHANGE IN	HSY	23,513.24	0.12%	2.24%	6.50%	8.81%	0.0104%
IDEXX LABORATORIES INC	HUM	34,202.42	0.17%	0.88%	9.50%	10.21%	0.0176%
INTL FLAVORS & FRAGRANCES	IBM	145,056.30	N/A	3.95%	N/A	N/A	N/A
ILLUMINA INC	ICE	36,425.85	0.19%	1.25%	12.00%	13.33%	0.0257%
INCYTE CORP	IDXX	14,842.60	0.07%	0.00%	15.00%	15.00%	0.0110%
IHS MARKIT LTD	IFF	10,668.24	0.05%	2.07%	7.50%	9.65%	0.0052%
INTEL CORP	ILMN	26,716.54	0.13%	0.00%	17.00%	17.00%	0.0228%
INTUIT INC	INCY	27,773.50	0.14%	0.00%	62.00%	62.00%	0.0864%
INTERNATIONAL PAPER CO	INFO	20,170.15	0.10%	0.00%	19.00%	19.00%	0.0192%
INTERPUBLIC GROUP OF COS INC	INTC	161,801.30	0.81%	3.17%	7.50%	10.79%	0.0876%
INGERSOLL-RAND PLC	INTU	35,873.00	0.18%	0.97%	13.00%	14.03%	0.0253%
IRON MOUNTAIN INC	IP	23,304.02	0.12%	3.28%	18.50%	22.08%	0.0258%
INTUITIVE SURGICAL INC	IPG	9,534.01	0.05%	2.98%	12.00%	15.16%	0.0072%
GARTNER INC	IR	23,351.33	0.12%	1.76%	8.00%	9.83%	0.0115%
ILLINOIS TOOL WORKS	IRM	9,011.43	0.05%	6.45%	11.00%	17.80%	0.0080%
INVESCO LTD	ISRG	35,113.09	0.18%	0.00%	11.50%	11.50%	0.0203%
HUNT (JB) TRANSPRT SVCS INC	IT	10,211.34	0.05%	0.00%	15.50%	15.50%	0.0079%
JOHNSON CONTROLS INTERNATION	ITW	50,508.64	0.25%	1.78%	9.50%	11.36%	0.0288%
JACOBS ENGINEERING GROUP INC	IVZ	14,235.89	0.07%	3.32%	5.50%	8.91%	0.0064%
JOHNSON & JOHNSON	JBHT	9,509.13	0.05%	1.06%	9.50%	10.61%	0.0051%
JUNIPER NETWORKS INC	JCI	39,231.72	0.20%	2.49%	0.50%	3.00%	0.0059%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
JPMORGAN CHASE & CO	JEC	6,343.11	0.03%	1.18%	8.00%	9.23%	0.0029%
NORDSTROM INC	JNJ	366,642.30	1.84%	2.50%	9.50%	12.12%	0.2229%
KELLOGG CO	JNPR	10,847.70	0.05%	1.55%	8.00%	9.61%	0.0052%
KEYCORP	JPM	309,165.00	1.55%	2.32%	5.50%	7.88%	0.1223%
KRAFT HEINZ CO/THE	JWN	7,881.68	0.04%	3.12%	2.00%	5.15%	0.0020%
KIMCO REALTY CORP	K	24,643.50	0.12%	2.96%	6.50%	9.58%	0.0118%
KLA-TENCOR CORP	KEY	19,974.12	0.10%	2.09%	11.50%	13.71%	0.0137%
KIMBERLY-CLARK CORP	KHC	106,483.10	N/A	2.76%	N/A	N/A	N/A
KINDER MORGAN INC	KIM	-	N/A	6.22%	N/A	N/A	N/A
CARMAX INC	KLAC	15,154.26	0.08%	2.23%	14.00%	16.39%	0.0125%
COCA-COLA CO/THE	KMB	46,781.77	0.23%	2.95%	10.50%	13.60%	0.0319%
MICHAEL KORS HOLDINGS LTD	KMI	41,436.19	0.21%	2.89%	24.00%	27.01%	0.0561%
KROGER CO	KMX	11,709.44	0.06%	0.90%	10.50%	10.50%	0.0062%
KOHL'S CORP	KO	192,584.10	0.97%	3.33%	4.50%	7.90%	0.0784%
KANSAS CITY SOUTHERN	KORS	5,657.85	0.03%	0.00%	4.50%	4.50%	0.0013%
LOEWS CORP	KR	20,845.44	0.10%	2.35%	8.50%	10.95%	0.0114%
L BRANDS INC	KSS	6,207.30	0.03%	6.06%	7.00%	13.27%	0.0041%
LEGGETT & PLATT INC	KSU	10,784.20	0.06%	1.30%	9.50%	10.86%	0.0069%
LENNAR CORP-A	L	15,622.83	0.08%	0.54%	14.50%	15.08%	0.0118%
LABORATORY CORP OF AMER HLDGS	LB	15,115.10	0.08%	4.54%	2.50%	7.10%	0.0054%
LKQ CORP	LEG	6,987.29	0.03%	2.74%	7.50%	10.34%	0.0036%
L3 TECHNOLOGIES INC	LEN	12,288.31	0.06%	0.31%	10.00%	10.33%	0.0064%
ELI LILLY & CO	LH	15,424.88	0.08%	0.00%	8.50%	8.50%	0.0066%
LOCKHEED MARTIN CORP	LKQ	9,899.00	0.05%	0.00%	11.50%	11.50%	0.0057%
LINCOLN NATIONAL CORP	LLL	13,148.75	0.07%	1.78%	10.00%	11.87%	0.0078%
ALLIANT ENERGY CORP	LLY	93,026.73	0.47%	2.47%	11.00%	13.61%	0.0835%
LOWE'S COS INC	LMT	81,168.50	0.41%	2.88%	9.50%	12.31%	0.0501%
LAM RESEARCH CORP	LNC	14,741.41	0.07%	1.83%	7.00%	8.89%	0.0066%
LEUCADIA NATIONAL CORP	LNT	9,475.16	0.05%	3.03%	6.50%	9.63%	0.0046%
SOUTHWEST AIRLINES CO	LOW	66,824.02	0.34%	2.09%	13.50%	15.73%	0.0527%
LEVEL 3 COMMUNICATIONS INC	LRCX	24,601.91	0.12%	1.27%	15.00%	16.37%	0.0202%
LYONDELLBASELL INDU-CL A	LUK	9,006.19	0.05%	1.00%	31.00%	32.16%	0.0146%
MACY'S INC	LUV	37,198.87	0.19%	0.81%	11.00%	11.85%	0.0221%
MASTERCARD INC - A	LVL	21,604.45	0.11%	0.00%	14.50%	14.50%	0.0157%
MID-AMERICA APARTMENT COMM	LYB	32,226.51	0.16%	4.50%	4.00%	8.59%	0.0139%
MACERICH CO/THE	M	6,726.56	0.03%	8.84%	2.50%	9.43%	0.0032%
MARRIOTT INTERNATIONAL -CL A	MA	130,204.80	0.65%	0.71%	12.00%	12.75%	0.0833%
MASCO CORP	MAA	N/A	N/A	0.00%	N/A	N/A	N/A
MATTEL INC	MAC	-	N/A	5.07%	N/A	N/A	N/A
MCDONALD'S CORP	MAR	38,582.09	0.20%	1.27%	13.50%	14.86%	0.0295%
MICROCHIP TECHNOLOGY INC	MAS	12,271.00	0.06%	1.03%	13.50%	14.60%	0.0080%
MCKESSON CORP	MAT	6,954.78	0.03%	2.96%	12.50%	15.65%	0.0055%
MOODY'S CORP	MCD	126,172.80	0.63%	2.48%	9.00%	11.59%	0.0734%
MONDELEZ INTERNATIONAL INC-A	MCHP	18,343.56	0.09%	1.81%	11.50%	13.41%	0.0123%
MEDTRONIC PLC	MCK	35,109.82	0.18%	0.68%	11.00%	11.72%	0.0206%
METLIFE INC	MCO	22,712.09	0.11%	1.28%	7.00%	8.32%	0.0085%
MOHAWK INDUSTRIES INC	MDLZ	68,213.03	0.34%	1.83%	10.00%	11.92%	0.0408%
MEAD JOHNSON NUTRITION CO	MDT	121,954.00	0.61%	1.88%	6.00%	8.04%	0.0492%
MCCORMICK & CO-NON VTG SHRS	MET	58,455.77	0.28%	3.29%	7.00%	10.41%	0.0285%
MARTIN MARIETTA MATERIALS	MHK	18,033.10	0.09%	0.00%	7.50%	7.50%	0.0088%
MARSH & MCLENNAN COS	MKC	12,431.64	0.06%	1.89%	6.50%	8.45%	0.0053%
3M CO	MLM	14,212.31	0.07%	0.74%	17.50%	18.30%	0.0130%
MALLINCKRODT PLC	MMC	40,522.09	0.20%	1.91%	8.00%	9.99%	0.0203%
MONSTER BEVERAGE CORP	MMM	126,746.30	0.64%	2.22%	8.00%	10.31%	0.0855%
ALTRIA GROUP INC	MNK	4,509.91	0.02%	0.00%	53.00%	53.00%	0.0120%
MONSANTO CO	MNST	28,871.05	0.14%	0.00%	12.00%	12.00%	0.0174%
MOSAIC CO/THE	MO	147,999.90	0.74%	3.19%	9.50%	12.84%	0.0953%
MARATHON PETROLEUM CORP	MON	51,256.99	0.26%	1.85%	8.00%	9.92%	0.0256%
MERCK & CO. INC.	MOS	7,834.70	0.04%	2.69%	3.50%	6.24%	0.0025%
MARATHON OIL CORP	MPC	26,557.23	0.13%	3.13%	5.50%	8.72%	0.0116%
MORGAN STANLEY	MRK	180,923.60	0.91%	2.85%	5.50%	8.43%	0.0765%
MICROSOFT CORP	MRO	9,851.50	N/A	1.73%	N/A	N/A	N/A
MOTOROLA SOLUTIONS INC	MS	82,615.13	0.41%	1.79%	12.00%	13.90%	0.0576%
M & T BANK CORP	MSFT	542,617.90	2.72%	2.22%	8.00%	10.31%	0.2806%
METTLER-TOLEDO INTERNATIONAL	MSI	14,283.36	0.07%	2.35%	10.50%	12.97%	0.0093%
MICRON TECHNOLOGY INC	MTB	24,526.53	0.12%	1.88%	8.00%	9.95%	0.0122%
MURPHY OIL CORP	MTD	15,383.71	0.08%	0.00%	11.00%	11.00%	0.0085%
MYLAN NV	MU	35,270.34	0.18%	0.00%	22.50%	22.50%	0.0398%
NAVIENT CORP	MUR	4,782.77	N/A	4.08%	N/A	N/A	N/A
NOBLE ENERGY INC	MYL	20,957.66	0.11%	0.00%	16.50%	16.50%	0.0173%
NASDAQ INC	NAVI	4,522.95	N/A	4.03%	N/A	N/A	N/A
NEXTERA ENERGY INC	NBL	12,075.60	N/A	1.44%	N/A	N/A	N/A
NEWMONT MINING CORP	NDAQ	11,484.20	0.06%	2.18%	8.50%	10.78%	0.0062%
NETFLIX INC	NEE	68,294.12	0.33%	2.87%	6.50%	9.48%	0.0315%
NEWFIELD EXPLORATION CO	NEI	17,863.31	0.09%	0.80%	0.50%	1.10%	0.0010%
NISOURCE INC	NFLX	66,756.52	0.33%	0.00%	43.00%	43.00%	0.1440%
NIKE INC -CL B	NFX	5,483.50	0.03%	0.00%	18.00%	18.00%	0.0050%
NIELSEN HOLDINGS PLC	NI	8,410.37	0.04%	2.70%	5.50%	8.27%	0.0035%
NORTHROP GRUMMAN CORP	NKE	86,564.80	0.43%	1.37%	15.00%	16.47%	0.0715%
NATIONAL OILWELL VARCO INC	NLSN	13,270.20	N/A	3.68%	N/A	N/A	N/A
NRG ENERGY INC	NOC	44,872.52	0.23%	1.56%	8.00%	9.62%	0.0217%
NORFOLK SOUTHERN CORP	NOV	12,101.11	0.06%	0.83%	3.00%	3.64%	0.0022%
NETAPP INC	NRG	5,446.08	N/A	0.70%	N/A	N/A	N/A
NORTHERN TRUST CORP	NSC	34,020.52	0.17%	2.08%	8.00%	10.16%	0.0173%
NUCOR CORP	NTAP	10,988.81	0.06%	2.05%	9.50%	11.85%	0.0062%
NVIDIA CORP	NTRS	21,659.14	0.11%	1.61%	7.50%	9.17%	0.0100%
NEWELL BRANDS INC	NUE	18,000.25	0.09%	2.82%	20.50%	23.61%	0.0214%
NEWS CORP - CLASS A	NVDA	94,230.15	0.47%	0.35%	19.00%	19.38%	0.0916%
REALTY INCOME CORP	NVL	25,212.99	0.13%	1.76%	23.50%	25.47%	0.0322%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
ONEOK INC	NWSA	7,824.16	0.04%	1.49%	47.00%	48.84%	0.0182%
OMNICOM GROUP	O	-	N/A	4.65%	N/A	N/A	N/A
ORACLE CORP	OKE	10,079.20	0.05%	5.27%	14.50%	20.15%	0.0102%
O'REILLY AUTOMOTIVE INC	OMC	19,143.19	0.10%	2.80%	7.50%	10.41%	0.0100%
OCCIDENTAL PETROLEUM CORP	ORCL	206,984.50	1.04%	1.51%	4.00%	5.54%	0.0575%
PAYCHEX INC	ORLY	20,102.49	0.10%	0.00%	11.00%	11.00%	0.0111%
PEOPLES UNITED FINANCIAL	OKY	46,035.48	0.23%	5.10%	25.00%	30.74%	0.0710%
PACCAR INC	PAYX	21,336.48	0.11%	3.37%	9.00%	12.52%	0.0134%
P G & E CORP	PBCT	5,462.45	0.03%	4.01%	10.50%	14.72%	0.0040%
PRICELINE GROUP INC/THE	PCAR	22,044.07	0.11%	2.81%	5.50%	8.18%	0.0080%
PATTERSON COS INC	PCG	35,135.07	0.18%	3.08%	9.50%	12.73%	0.0224%
PUBLIC SERVICE ENTERPRISE GP	PCLN	91,616.89	0.46%	0.00%	15.50%	15.50%	0.0712%
PEPSICO INC	PDCO	4,655.63	0.02%	2.23%	10.50%	12.85%	0.0030%
PFIZER INC	PEG	22,053.35	0.11%	3.96%	2.50%	6.53%	0.0072%
PRINCIPAL FINANCIAL GROUP	PEP	166,094.50	0.83%	2.77%	7.00%	9.87%	0.0622%
PROCTER & GAMBLE CO/THE	PFE	203,284.80	1.02%	3.76%	11.00%	14.97%	0.1528%
PROGRESSIVE CORP	PGF	18,080.99	0.09%	2.94%	5.00%	8.01%	0.0073%
PARKER HANNIFIN CORP	PG	227,704.40	1.14%	3.10%	7.50%	10.72%	0.1224%
PULTEGROUP INC	PGR	25,811.88	0.13%	1.54%	8.00%	9.60%	0.0123%
PERKINELMER INC	PH	20,963.00	0.11%	1.68%	7.50%	9.24%	0.0097%
PROLOGIS INC	PHM	7,597.41	0.04%	1.58%	16.50%	18.21%	0.0069%
PHILIP MORRIS INTERNATIONAL	PKI	7,448.44	0.04%	0.41%	8.00%	8.43%	0.0031%
PNC FINANCIAL SERVICES GROUP	PLD	-	N/A	3.05%	N/A	N/A	N/A
PENTAIR PLC	PM	185,926.50	0.93%	3.48%	7.50%	11.11%	0.1036%
PINNACLE WEST CAPITAL	PNC	58,568.60	0.29%	1.82%	5.50%	7.37%	0.0217%
PPG INDUSTRIES INC	PNR	11,835.71	0.06%	2.12%	11.00%	13.24%	0.0079%
PPL CORP	PNW	9,836.07	0.05%	3.07%	5.50%	8.65%	0.0043%
PERRIGO CO PLC	PPG	28,327.70	0.14%	1.45%	10.50%	12.03%	0.0171%
PRUDENTIAL FINANCIAL INC	PPL	26,628.30	0.13%	4.13%	1.50%	5.68%	0.0076%
PUBLIC STORAGE	PRGO	10,704.81	N/A	0.86%	N/A	N/A	N/A
PHILLIPS 66	PRU	44,350.57	0.22%	2.90%	5.50%	8.48%	0.0189%
PVH CORP	PSA	-	N/A	3.88%	N/A	N/A	N/A
QUANTA SERVICES INC	PSX	40,725.30	0.20%	3.64%	5.00%	8.73%	0.0178%
PRAIRIE INC	PVH	8,506.53	0.04%	0.14%	7.00%	7.14%	0.0030%
PIONEER NATURAL RESOURCES CO	PWR	4,622.46	0.02%	0.00%	12.50%	12.50%	0.0029%
PAYPAL HOLDINGS INC	PX	37,800.84	0.19%	2.46%	8.00%	10.58%	0.0201%
QUALCOMM INC	PKD	26,321.89	0.13%	0.05%	38.50%	38.56%	0.0509%
QORVO INC	PYPL	64,428.52	N/A	0.00%	N/A	N/A	N/A
RYDER SYSTEM INC	QCOM	83,406.20	0.42%	4.04%	6.00%	10.16%	0.0425%
REYNOLDS AMERICAN INC	QVRO	8,905.07	N/A	0.00%	N/A	N/A	N/A
ROYAL CARIBBEAN CRUISES LTD	RAI	93,386.81	0.47%	3.12%	13.50%	16.83%	0.0788%
REGENCY CENTERS CORP	RCL	24,116.88	0.12%	1.71%	12.50%	14.32%	0.0173%
REGENERON PHARMACEUTICALS	RE	10,541.23	0.05%	2.03%	2.50%	4.58%	0.0024%
REGIONS FINANCIAL CORP	REG	N/A	N/A	0.00%	N/A	N/A	N/A
ROBERT HALF INTL INC	REGN	54,944.99	0.28%	0.00%	22.00%	22.00%	0.0606%
RED HAT INC	RF	16,678.85	0.08%	2.10%	8.50%	10.69%	0.0069%
TRANSOCEAN LTD	RHI	6,032.10	0.03%	2.02%	6.00%	8.08%	0.0024%
RAYMOND JAMES FINANCIAL INC	RHT	17,491.87	0.09%	0.00%	16.50%	16.50%	0.0145%
RALPH LAUREN CORP	RIG	3,076.82	0.02%	0.00%	-18.50%	-18.50%	-0.0029%
ROCKWELL AUTOMATION INC	RJF	11,080.06	0.06%	1.14%	10.50%	11.70%	0.0065%
ROPER TECHNOLOGIES INC	RL	5,871.55	0.03%	2.80%	1.00%	3.81%	0.0011%
ROSS STORES INC	ROK	20,681.88	0.10%	1.96%	5.50%	7.51%	0.0078%
RANGE RESOURCES CORP	ROP	23,713.26	0.12%	0.80%	6.50%	7.12%	0.0085%
REPUBLIC SERVICES INC	ROST	21,782.52	0.11%	1.16%	9.00%	10.21%	0.0112%
RAYTHEON COMPANY	RRC	5,304.72	0.03%	0.37%	26.00%	29.42%	0.0078%
STARBUCKS CORP	RSB	21,645.93	0.11%	2.10%	8.50%	10.69%	0.0116%
SCANA CORP	RTN	46,068.46	0.24%	1.98%	8.00%	10.06%	0.0236%
SCHWAB (CHARLES) CORP	SBUX	66,152.63	0.43%	1.93%	15.00%	17.07%	0.0738%
SEALED AIR CORP	SCG	9,961.56	0.05%	3.57%	4.00%	7.64%	0.0038%
SHERWIN-WILLIAMS CO/THE	SCHW	56,653.35	0.28%	0.77%	14.50%	15.33%	0.0428%
SIGNET JEWELERS LTD	SEE	8,796.41	0.04%	1.43%	12.00%	13.52%	0.0060%
JM SMUCKER CO/THE	SHW	33,037.16	0.17%	0.99%	13.50%	14.52%	0.0241%
SCHLUMBERGER LTD	SIG	3,897.43	0.02%	2.18%	7.00%	9.28%	0.0018%
SL GREEN REALTY CORP	SJM	14,116.38	0.07%	2.48%	7.00%	9.57%	0.0068%
SNAP-ON INC	SLB	90,830.10	0.46%	3.06%	17.50%	20.83%	0.0849%
SCRIPPS NETWORKS INTER-CL A	SLG	-	N/A	2.92%	N/A	N/A	N/A
SYNOPSIS INC	SNA	8,968.77	0.04%	1.84%	9.50%	11.43%	0.0051%
SOUTHERN CO/THE	SNI	8,643.05	0.04%	1.80%	6.50%	8.36%	0.0036%
SIMON PROPERTY GROUP INC	SNPS	11,229.45	0.06%	0.00%	9.00%	9.00%	0.0051%
S&P GLOBAL INC	SO	50,082.75	0.25%	4.65%	3.50%	8.23%	0.0207%
STAPLES INC	SPG	-	N/A	4.40%	N/A	N/A	N/A
STERICYCLE INC	SPGI	37,478.96	0.19%	1.13%	12.00%	13.20%	0.0248%
SEMPRA ENERGY	SPLS	6,009.13	0.03%	5.22%	2.50%	7.79%	0.0023%
SUNTRUST BANKS INC	SRCL	6,583.08	0.03%	0.00%	5.50%	5.50%	0.0018%
STATE STREET CORP	SRE	28,455.87	0.14%	2.96%	8.00%	11.08%	0.0158%
SEAGATE TECHNOLOGY	STI	26,583.02	0.13%	2.03%	6.50%	8.00%	0.0115%
CONSTELLATION BRANDS INC-A	STT	33,375.51	0.17%	1.89%	7.50%	9.46%	0.0158%
STANLEY BLACK & DECKER INC	STX	12,480.21	0.06%	6.00%	4.50%	10.84%	0.0066%
SKYWORKS SOLUTIONS INC	STZ	36,643.04	0.18%	1.15%	14.50%	15.73%	0.0260%
SYNCHRONY FINANCIAL	SWK	21,743.58	0.11%	1.63%	9.00%	10.70%	0.0117%
STRYKER CORP	SWKS	19,049.63	0.10%	1.09%	13.50%	14.86%	0.0140%
SYMANTEC CORP	SYF	23,756.58	0.12%	1.78%	6.50%	8.34%	0.0099%
SYSCO CORP	SYK	52,816.28	0.26%	1.20%	14.50%	15.79%	0.0418%
AT&T INC	SYMC	17,819.99	0.09%	1.04%	6.50%	7.57%	0.0066%
MOLSON COORS BREWING CO -B	SYU	28,295.30	0.14%	2.58%	11.50%	14.23%	0.0202%
TERADATA CORP	T	234,219.40	1.17%	5.20%	5.50%	10.84%	0.1274%
TRANSDIGM GROUP INC	TAP	18,505.03	0.09%	2.04%	3.50%	5.58%	0.0052%
TE CONNECTIVITY LTD	TG	13,913.48	0.07%	0.00%	12.00%	12.00%	0.0064%
TARGET CORP	TEL	28,001.90	0.14%	2.03%	8.00%	10.11%	0.0142%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
TIFFANY & CO	TGT	27,930.44	0.14%	4.90%	4.50%	9.51%	0.0133%
TJX COMPANIES INC	TIF	11,401.32	0.06%	2.19%	8.00%	10.28%	0.0059%
TORCHMARK CORP	TJX	44,225.23	0.22%	1.82%	10.00%	11.81%	0.0264%
THERMO FISHER SCIENTIFIC INC	TMK	8,870.08	0.04%	0.79%	7.50%	8.32%	0.0037%
TRIPADVISOR INC	TMO	73,068.16	0.37%	0.34%	9.00%	9.36%	0.0343%
T ROWE PRICE GROUP INC	TRIP	5,046.24	0.03%	0.00%	12.50%	12.50%	0.0032%
TRAVELERS COS INC/THE	TROW	17,860.23	0.09%	3.16%	7.00%	10.27%	0.0091%
TRACTOR SUPPLY COMPANY	TRV	35,849.81	0.18%	2.25%	1.00%	3.26%	0.0059%
TYSON FOODS INC-CL A	TSCO	6,794.70	0.03%	2.06%	10.50%	12.67%	0.0043%
TESORO CORP	TSN	22,095.76	0.11%	1.56%	9.00%	10.63%	0.0118%
TOTAL SYSTEM SERVICES INC	TSO	10,890.17	0.05%	2.42%	8.50%	9.00%	0.0048%
TIME WARNER INC	TSS	10,898.91	0.05%	0.88%	10.50%	11.22%	0.0061%
TEXAS INSTRUMENTS INC	TWX	77,034.99	0.39%	1.62%	9.50%	11.20%	0.0433%
TEXTRON INC	TXN	78,870.56	0.40%	2.53%	9.50%	12.15%	0.0481%
UNDER ARMOUR INC-CLASS A	TXT	12,146.32	0.06%	0.18%	12.00%	12.19%	0.0074%
UNITED CONTINENTAL HOLDINGS	UAA	9,091.49	0.05%	0.00%	15.50%	15.50%	0.0071%
UDR INC	UAL	24,097.02	0.12%	0.00%	6.00%	6.00%	0.0073%
UNIVERSAL HEALTH SERVICES-B	UDR	-	N/A	3.13%	N/A	N/A	N/A
ULTA BEAUTY INC	UHS	11,139.86	0.06%	0.35%	10.00%	10.37%	0.0058%
UNITEDHEALTH GROUP INC	ULTA	17,637.99	0.09%	0.00%	22.00%	22.00%	0.0195%
UNUM GROUP	UNH	179,972.50	0.90%	1.81%	12.50%	14.21%	0.1283%
UNION PACIFIC CORP	UNM	10,348.60	0.05%	2.03%	10.50%	12.64%	0.0066%
UNITED PARCEL SERVICE-CL B	UNP	96,896.66	0.44%	2.25%	8.00%	10.34%	0.0451%
UNITED RENTALS INC	UPS	94,872.77	0.47%	3.04%	10.00%	13.19%	0.0826%
US BANCORP	URI	8,773.52	0.04%	0.00%	8.00%	8.00%	0.0035%
UNITED TECHNOLOGIES CORP	USB	86,788.01	0.44%	2.22%	5.00%	7.28%	0.0317%
VISA INC-CLASS A SHARES	UTX	97,886.02	0.49%	2.29%	7.50%	9.88%	0.0485%
VARIAN MEDICAL SYSTEMS INC	V	197,858.70	0.99%	0.77%	12.00%	12.82%	0.1272%
VF CORP	VAR	9,800.44	0.05%	0.00%	7.00%	7.00%	0.0034%
VIACOM INC-CLASS B	VFC	22,716.73	0.11%	3.01%	8.50%	11.64%	0.0139%
VALERO ENERGY CORP	VIA	13,688.95	0.07%	2.35%	1.00%	3.36%	0.0023%
VULCAN MATERIALS CO	VLO	28,985.11	0.15%	4.32%	5.00%	9.43%	0.0137%
VORNADO REALTY TRUST	VMO	17,101.59	0.09%	0.77%	20.50%	21.35%	0.0183%
VERISK ANALYTICS INC	VNO	17,709.25	0.09%	3.04%	19.50%	22.84%	0.0203%
VERISIGN INC	VRSK	13,774.01	0.07%	0.00%	10.50%	10.50%	0.0073%
VERTEX PHARMACEUTICALS INC	VRSN	9,524.36	0.05%	0.00%	10.50%	10.50%	0.0050%
VENTAS INC	VRTX	33,732.20	N/A	0.00%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VTR	-	N/A	4.50%	N/A	N/A	N/A
WATERS CORP	VZ	185,284.90	0.93%	5.09%	2.00%	7.14%	0.0864%
WALGREENS BOOTS ALLIANCE INC	WAT	14,791.39	0.07%	0.00%	6.00%	6.00%	0.0045%
WESTERN DIGITAL CORP	WBA	82,532.67	0.41%	1.96%	11.00%	13.07%	0.0541%
WEC ENERGY GROUP INC	WDC	26,262.75	0.13%	2.22%	11.00%	13.34%	0.0178%
WELLS FARGO & CO	WFC	20,090.29	0.10%	3.35%	6.00%	9.45%	0.0069%
WHOLE FOODS MARKET INC	WFC	262,278.80	1.32%	3.09%	4.50%	7.66%	0.1008%
WHIRLPOOL CORP	WFM	13,772.16	0.07%	1.67%	3.50%	5.20%	0.0036%
WILLIS TOWERS WATSON PLC	WHR	14,441.84	0.07%	2.26%	9.50%	11.87%	0.0086%
WASTE MANAGEMENT INC	WMTW	19,644.55	N/A	1.46%	N/A	N/A	N/A
WILLIAMS COS INC	WMI	32,418.22	0.16%	2.32%	7.00%	9.40%	0.0153%
WAL-MART STORES INC	WMB	23,266.42	0.12%	4.26%	18.50%	23.15%	0.0270%
WESTROCK CO	WMT	228,297.00	1.15%	2.70%	4.00%	6.75%	0.0773%
WESTERN UNION CO	WRK	14,269.35	N/A	2.81%	N/A	N/A	N/A
WEYERHAEUSER CO	WU	8,864.16	0.04%	3.73%	5.50%	9.33%	0.0041%
WYNDHAM WORLDWIDE CORP	WY	25,502.89	0.13%	3.65%	14.50%	18.41%	0.0236%
WYNN RESORTS LTD	WYN	10,853.57	0.05%	2.23%	6.50%	8.80%	0.0048%
CIMAREX ENERGY CO	WYNN	14,011.31	0.07%	1.46%	14.00%	15.56%	0.0109%
XCEL ENERGY INC	XEC	6,887.04	0.04%	0.35%	31.00%	31.40%	0.0137%
XL GROUP LTD	XEL	24,037.50	0.12%	3.06%	4.50%	7.65%	0.0092%
XILINX INC	XL	11,548.29	0.06%	2.03%	13.00%	15.16%	0.0088%
EXXON MOBIL CORP	XLNX	18,513.64	0.08%	2.10%	8.00%	10.18%	0.0084%
DENTSPLY SIRONA INC	XOM	343,536.00	1.72%	3.80%	11.50%	15.52%	0.2674%
XEROX CORP	XRAY	14,674.52	0.07%	0.55%	8.00%	8.57%	0.0063%
KYLEM INC	XRX	7,108.46	0.04%	3.58%	4.00%	7.65%	0.0027%
YAHOO! INC	XYL	9,676.85	0.05%	1.34%	12.00%	13.42%	0.0065%
YUM! BRANDS INC	YUM	26,089.00	0.13%	1.65%	6.00%	7.70%	0.0101%
ZIMMER BIOMET HOLDINGS INC	ZBH	26,085.03	0.13%	0.80%	11.00%	11.84%	0.0156%
ZIONS BANCORPORATION	ZION	8,569.77	0.04%	0.83%	12.50%	13.38%	0.0058%
ZOETIS INC	ZTS	31,204.24	0.16%	0.86%	11.50%	12.20%	0.0191%
Total Market Capitalization:		19,935,756.32					13.94%

Notes:

- [1] Equals sum of Col [9]
- [2] Source: Value Line
- [3] Equals [1] - [2]
- [4] Source: Value Line
- [5] Equals weight in S&P 500 based on market capitalization
- [6] Source: Value Line
- [7] Source: Value Line
- [8] Equals ([6] x (1 + (0.5 x [7]))) + [7]
- [9] Equals Col [5] x Col [8]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.669	0.800
Alliant Energy Corporation	LNT	0.532	0.700
Ameren Corporation	AEE	0.531	0.650
American Electric Power Company, Inc.	AEP	0.546	0.650
Avista Corporation	AVA	0.620	0.700
Black Hills Corporation	BKH	0.512	0.850
CMS Energy Corporation	CMS	0.481	0.650
Dominion Resources, Inc.	D	0.521	0.650
DTE Energy Company	DTE	0.543	0.650
Hawaiian Electric Industries, Inc.	HE	0.580	0.700
IDACORP, Inc.	IDA	0.697	0.750
NorthWestern Corporation	NWE	0.592	0.650
OGE Energy Corp.	OGE	0.696	0.950
Otter Tail Corporation	OTTR	0.830	0.900
Pinnacle West Capital Corporation	PNW	0.580	0.700
PNM Resources, Inc.	PNM	0.633	0.700
Portland General Electric Company	POR	0.587	0.700
SCANA Corporation	SCG	0.516	0.650
Southern Company	SO	0.526	0.550
Wisconsin Energy Corporation	WEC	0.473	0.600
Xcel Energy Inc.	XEL	0.449	0.600
Mean		0.577	0.702

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Capital Asset Pricing Model Results
Bloomberg, and Value Line Derived Market Risk Premium

	[1]	[2]	[3]	[4]	[5]	[6]
					CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury [7]	2.83%	0.577	10.69%	11.11%	8.99%	9.24%
Near-Term Projected 30-Year Treasury [8]	3.38%	0.577	10.69%	11.11%	9.55%	9.79%
Mean					9.27%	9.51%
					CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury [7]	2.83%	0.702	10.69%	11.11%	10.33%	10.63%
Near-Term Projected 30-Year Treasury [8]	3.38%	0.702	10.69%	11.11%	10.89%	11.19%
Mean					10.61%	10.91%

Notes:

[1] See Notes [7] and [8]

[2] Source: RBH-4R

[3] Source: RBH-3R

[4] Source: RBH-3R

[5] Equals Col. [1] + (Col. [2] x Col. [3])

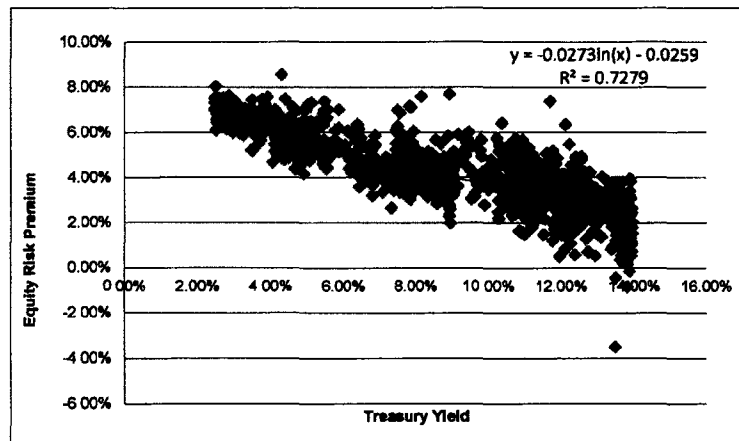
[6] Equals Col. [1] + (Col. [2] x Col. [4])

[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 36, No. 7, July 1, 2017, at 2.

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.59%	-2.73%			
		Current 30-Year Treasury	2.83%	7.14%
		Near-Term Projected 30-Year Treasury	3.38%	6.65%
		Long-Term Projected 30-Year Treasury	4.40%	5.93%
				10.33%



Notes:

[1] Constant of regression equation

[2] Slope of regression equation

[3] Source: Current = Bloomberg Professional,

Near Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 7, July 1, 2017, at 2,

Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 14.

[4] Equals [1] + ln([3]) x [2]

[5] Equals [3] + [4]

[6] Source: SNL Financial

[7] Source: SNL Financial

[8] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period)

[9] Equals [7] - [8]

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.36%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.56%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.86%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/18/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.18%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.48%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/28/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016	9.50%	2.63%	6.87%
8/24/2016	9.75%	2.62%	7.13%
9/1/2016	9.50%	2.59%	6.91%
9/8/2016	10.00%	2.58%	7.42%
9/28/2016	9.58%	2.54%	7.04%
9/30/2016	9.90%	2.53%	7.37%
11/9/2016	9.80%	2.48%	7.32%
11/10/2016	9.50%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016	10.55%	2.51%	8.04%
12/1/2016	10.00%	2.51%	7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016	9.60%	2.53%	7.07%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/14/2016	9.10%	2.53%	6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%
12/22/2016	9.60%	2.55%	7.05%
12/22/2016	9.90%	2.55%	7.35%
12/28/2016	9.50%	2.55%	6.95%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017	9.00%	2.59%	6.41%
1/31/2017	10.10%	2.60%	7.50%
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2/28/2017	10.10%	2.64%	7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.71%	7.54%
4/12/2017	9.40%	2.74%	6.66%
4/20/2017	9.50%	2.76%	6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017	9.50%	2.83%	6.67%
5/23/2017	9.70%	2.84%	6.86%
6/16/2017	9.65%	2.89%	6.76%
6/22/2017	9.70%	2.90%	6.80%
6/22/2017	9.70%	2.90%	6.80%

of Cases: 1518
Average: 4.58%

2014-2017 Reported Authorized Returns on Equity, Vertically Integrated Electric Utility Rate Cases

State	Utility	Parent Company Ticker	Case Identification	Date Authorized	Authorized ROE
North Dakota	Northern States Power Co. - MN	XEL	C-PU-12-813	2/26/2014	9.75
New Mexico	Southwestern Public Service Co	XEL	C-12-00350-UT	3/26/2014	9.96
Texas	Entergy Texas Inc.	ETR	D-41791	5/16/2014	9.80
Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-119 (Elec)	6/6/2014	10.40
Louisiana	Entergy Louisiana LLC	ETR	D-UD-13-01	7/10/2014	9.95
Wyoming	Cheyenne Light Fuel Power Co.	BKH	D-20003-132-ER-13	7/31/2014	9.90
Vermont	Green Mountain Power Corp	-	D-8190, 8191	8/25/2014	9.60
Utah	PacifiCorp	BRK.A	D-13-035-184	8/29/2014	9.80
Florida	Florida Public Utilities Co.	CPK	D-140025-EI	9/15/2014	10.25
Nevada	Nevada Power Co.	BRK.A	D-14-05004	10/9/2014	9.80
Illinois	MidAmerican Energy Co.	BRK.A	D-14-0066	11/6/2014	9.56
Wisconsin	Wisconsin Public Service Corp.	WEC	D-6690-UR-123 (Elec)	11/6/2014	10.20
Wisconsin	Wisconsin Electric Power Co.	WEC	D-05-UR-107 (WEP-Elec)	11/14/2014	10.20
Virginia	Appalachian Power Co.	AEP	C-PUE-2014-00026	11/26/2014	9.70
Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-120 (Elec)	11/26/2014	10.20
Oregon	Portland General Electric Co.	POR	D-UE-283	12/4/2014	9.68
Mississippi	Entergy Mississippi Inc.	ETR	D-2014-UN-0132	12/11/2014	10.07
Wisconsin	Northern States Power Co - WI	XEL	D-4220-UR-120 (Elec)	12/12/2014	10.20
Colorado	Black Hills Colorado Electric	BKH	D-14AL-0393E	12/18/2014	9.83
Wyoming	PacifiCorp	BRK.A	D-20000-446-ER-14	1/23/2015	9.50
Colorado	Public Service Co. of CO	XEL	D-14AL-0660E	2/24/2015	9.83
Washington	PacifiCorp	BRK.A	D-UE-140762	3/25/2015	9.50
Minnesota	Northern States Power Co. - MN	XEL	D-E-002/GR-13-868	3/26/2015	9.72
Michigan	Wisconsin Public Service Corp.	WEC	C-U-17669	4/23/2015	10.20
Missouri	Union Electric Co.	AEE	C-ER-2014-0258	4/29/2015	9.53
West Virginia	Appalachian Power Co.	AEP	C-14-1152-E-42T	5/26/2015	9.75
Missouri	Kansas City Power & Light	GXP	C-ER-2014-0370	9/2/2015	9.50
Kansas	Kansas City Power & Light	GXP	D-15-KCPE-116-RTS	9/10/2015	9.30
Wisconsin	Wisconsin Public Service Corp	WEC	D-6690-UR-124 (Elec)	11/19/2015	10.00
Michigan	Consumers Energy Co.	CMS	C-U-17735	11/19/2015	10.30
Wisconsin	Northern States Power Co - WI	XEL	D-4220-UR-121 (Elec)	12/3/2015	10.00
Michigan	DTE Electric Co.	DTE	C-U-17767	12/11/2015	10.30
Oregon	Portland General Electric Co.	POR	D-UE-294	12/15/2015	9.60
Texas	Southwestern Public Service Co	XEL	D-43695	12/17/2015	9.70
Idaho	Avista Corp.	AVA	C-AVU-E-15-05	12/18/2015	9.50
Wyoming	PacifiCorp	BRK.A	D-20000-469-ER-15	12/30/2015	9.50
Washington	Avista Corp.	AVA	D-UE-150204	1/6/2016	9.50
Arkansas	Entergy Arkansas Inc.	ETR	D-15-015-U	2/23/2016	9.75
Indiana	Indianapolis Power & Light Co.	AES	Ca-44576	3/16/2016	9.85
New Mexico	El Paso Electric Co.	EE	C-15-00127-UT	6/8/2016	9.48
Indiana	Northern IN Public Svc Co.	NI	Ca-44688	7/18/2016	9.98
Tennessee	Kingsport Power Company	AEP	D-16-00001	8/9/2016	9.85
Arizona	UNS Electric Inc.	FTS	D-E-04204A-15-0142	8/18/2016	9.50
Washington	PacifiCorp	BRK.A	D-UE-152253	9/1/2016	9.50
Michigan	Upper Peninsula Power Co.	-	C-U-17895	9/8/2016	10.00
New Mexico	Public Service Co. of NM	PNM	C-15-00261-UT	9/28/2016	9.58
Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-121 (Elec)	11/9/2016	9.80
Oklahoma	Public Service Co. of OK	AEP	Ca-PUD201500208	11/10/2016	9.50
Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-120 (Elec)	11/18/2016	10.00
Florida	Florida Power & Light Co.	NEE	D-160021-EI	11/29/2016	10.55
California	Liberty Utilities CalPeco Ele	AQN	A-15-05-008	12/1/2016	10.00
South Carolina	Duke Energy Progress LLC	DUK	D-2016-227-E	12/7/2016	10.10
Colorado	Black Hills Colorado Electric	BKH	D-16AL-0326E	12/19/2016	9.37
North Carolina	Virginia Electric & Power Co.	D	D-E-22, Sub 532	12/22/2016	9.90
Nevada	Sierra Pacific Power Co.	BRK.A	D-16-06006	12/22/2016	9.60
Idaho	Avista Corp.	AVA	C-AVU-E-16-03	12/28/2016	9.50
Wyoming	MDU Resources Group Inc.	MDU	D-2004-117-ER-16	1/18/2017	9.45
Michigan	DTE Electric Co.	DTE	C-U-18014	1/31/2017	10.10
Arizona	Tucson Electric Power Co.	FTS	D-E-01933A-15-0322	2/24/2017	9.75
Michigan	Consumers Energy Co	CMS	C-U-17990	2/28/2017	10.10
Minnesota	Otter Tail Power Co.	OTTR	D-E-017/GR-15-1033	3/2/2017	9.41
Oklahoma	Oklahoma Gas and Electric Co.	OGE	Ca-PUD201500273	3/20/2017	9.50
Florida	Gulf Power Co.	SO	D-160186-EI	4/4/2017	10.25
Missouri	Kansas City Power & Light	GXP	C-ER-2016-0285	5/3/2017	9.50
Minnesota	Northern States Power Co. - MN	XEL	D-E-002/GR-15-826	5/11/2017	9.20
Arkansas	Oklahoma Gas and Electric Co.	OGE	D-16-052-U	5/18/2017	9.50
North Dakota	MDU Resources Group Inc.	MDU	C-PU-16-666	6/16/2017	9.65
Kentucky	Kentucky Utilities Co.	PPL	C-2016-00370	6/22/2017	9.70

[illegible]

Mr. Filarowicz's Multi-Stage DCF Model - 150 Year Cash Flow

Mod-Item	End-of-Year	AGE	UNIT	ME	SEP	BH	ED	OTE	EIX	EX	HE	IDA	NME	OGE	PMW	PMT	POK	PEO	SE	WIC	WIC	SEL
71/2018	12/31/2018	2.19	1.30	1.64	2.46	1.54	2.81	3.46	2.22	1.94	1.34	2.36	2.15	1.25	2.71	1.01	1.34	1.74	3.36	2.14	1.58	1.46
71/2019	12/31/2019	2.30	1.37	1.90	2.58	1.65	2.90	3.66	2.33	2.00	1.41	1.32	2.26	1.30	2.83	1.00	1.40	1.78	3.34	2.27	1.54	1.40
71/2020	12/31/2020	2.54	1.45	2.04	2.72	1.87	2.90	3.87	2.45	2.23	1.48	1.37	2.42	1.37	2.86	1.17	1.64	1.83	3.56	2.45	1.78	1.60
71/2021	12/31/2021	2.84	1.53	2.21	2.87	2.07	3.00	4.10	2.57	2.36	1.55	1.42	2.53	1.41	3.15	1.26	1.54	1.87	3.85	2.65	1.92	1.80
71/2022	12/31/2022	3.21	1.62	2.35	3.02	2.34	3.10	4.34	2.80	2.64	1.63	1.49	2.50	1.61	3.41	1.36	1.61	1.92	4.03	2.85	2.15	2.00
71/2023	12/31/2023	3.61	1.71	2.47	3.17	2.48	3.36	4.87	3.24	2.87	1.72	1.58	2.73	1.74	3.65	1.43	1.69	2.02	4.35	3.05	2.35	2.15
71/2024	12/31/2024	2.80	1.78	2.70	3.34	2.48	3.54	4.81	3.26	2.81	1.81	1.64	2.87	1.68	3.41	1.35	1.58	2.12	5.13	2.85	2.45	2.15
71/2025	12/31/2025	3.11	1.88	2.93	3.61	2.72	3.72	5.08	3.13	2.98	1.80	1.72	3.02	1.71	3.77	1.58	1.73	2.23	5.39	3.16	2.65	2.35
71/2026	12/31/2026	3.27	1.90	3.03	3.70	2.87	3.81	5.52	3.30	3.17	1.85	1.72	3.10	1.81	3.94	1.68	1.87	2.35	5.67	3.31	2.84	2.45
71/2027	12/31/2027	3.44	2.08	3.18	3.80	3.17	4.23	5.60	3.47	3.33	1.91	1.84	3.30	1.90	4.17	1.75	2.07	2.47	5.87	3.48	3.05	2.55
71/2028	12/31/2028	3.82	2.20	3.18	4.00	3.17	4.33	6.19	3.65	3.54	2.21	1.91	3.51	1.99	4.39	1.84	2.18	2.60	6.28	3.78	3.40	2.80
71/2029	12/31/2029	3.81	2.31	3.35	4.30	3.34	4.56	6.19	3.84	3.62	2.33	2.11	3.69	2.10	4.82	1.94	2.28	2.74	6.50	3.80	3.50	2.95
71/2030	12/31/2030	4.01	2.43	3.52	4.53	3.51	4.79	6.52	4.04	3.81	2.45	2.22	3.89	2.32	5.11	2.14	2.54	3.03	6.86	4.07	3.75	3.10
71/2031	12/31/2031	4.22	2.68	3.71	4.70	3.68	5.04	6.86	4.25	4.01	2.57	2.34	4.00	2.43	5.37	2.25	2.87	3.18	7.09	4.26	4.00	3.30
71/2032	12/31/2032	4.44	2.83	3.90	5.01	3.88	5.30	7.21	4.47	4.35	2.71	2.46	4.30	2.53	5.65	2.37	3.21	3.35	7.31	4.45	4.20	3.45
71/2033	12/31/2033	4.67	2.83	4.10	5.27	4.05	5.58	7.59	4.70	4.55	2.85	2.58	4.52	2.68	5.95	2.50	3.45	3.52	7.61	4.69	4.40	3.60
71/2034	12/31/2034	4.91	3.18	4.31	5.54	4.32	5.87	7.68	4.93	4.61	3.00	2.72	4.76	2.70	6.35	2.57	3.65	3.65	7.85	4.92	4.65	3.75
71/2035	12/31/2035	5.16	3.23	4.54	5.83	4.50	6.17	7.68	5.20	4.81	3.16	2.85	4.91	2.84	6.26	2.83	3.71	3.81	8.05	5.13	4	
71/2036	12/31/2036	5.43	3.30	4.77	6.13	4.78	6.50	8.63	5.37	5.16	3.32	3.07	5.13	3.04	6.59	2.97	3.91	3.92	8.32	5.30	5.00	3.90
71/2037	12/31/2037	5.72	3.47	5.02	6.45	5.06	6.83	9.29	5.78	5.42	3.49	3.17	5.34	3.30	7.02	3.14	3.82	4.32	8.60	5.57	5.20	4.10
71/2038	12/31/2038	6.01	3.63	5.28	6.79	5.28	7.18	10.26	5.97	5.72	3.64	3.30	5.63	3.40	7.78	3.27	3.80	4.52	8.87	5.84	5.40	4.30
71/2039	12/31/2039	6.35	3.84	5.58	7.10	5.49	7.58	10.70	6.20	6.07	3.80	3.30	5.85	3.40	8.06	3.33	3.84	4.78	9.14	6.13	5.60	4.40
71/2040	12/31/2040	6.66	4.06	5.82	7.51	5.69	7.88	11.32	6.45	6.26	4.00	3.38	6.03	3.45	8.46	3.34	4.21	5.03	9.34	6.34	5.70	4.50
71/2041	12/31/2041	7.08	4.27	6.15	8.32	5.85	8.37	11.87	6.75	6.56	4.27	3.08	6.19	3.63	8.82	3.34	4.43	5.29	12.14	6.74	6.14	4.70
71/2042	12/31/2042	7.38	4.47	6.31	8.62	6.05	8.61	11.97	6.92	6.73	4.50	3.48	6.34	3.85	9.05	3.34	4.54	5.59	12.37	7.06	6.34	4.80
71/2043	12/31/2043	7.75	4.70	6.51	8.75	6.25	8.74	12.60	7.11	6.95	4.73	3.49	6.51	4.05	9.39	3.34	4.68	5.56	13.43	7.54	6.50	5.00
71/2044	12/31/2044	8.15	4.94	7.0	9.20	6.45	9.14	13.25	7.35	7.18	4.98	3.45	6.70	4.28	9.87	3.34	4.80	5.85	14.33	8.25	6.54	5.30
71/2045	12/31/2045	8.57	5.20	7.54	9.68	6.75	9.25	13.94	7.58	7.36	5.15	3.63	6.86	4.40	10.39	3.45	4.96	6.16	14.80	8.56	6.57	5.40
71/2046	12/31/2046	8.92	5.47	7.83	10.18	7.00	9.51	14.66	7.80	7.58	5.35	3.75	6.95	4.52	10.63	3.48	5.16	6.45	15.64	8.81	6.77	5.60
71/2047	12/31/2047	9.40	5.76	8.34	10.71	7.31	10.35	15.43	8.05	7.82	5.55	3.80	7.05	4.62	11.50	3.48	5.42	6.48	16.54	9.13	6.87	5.70
71/2048	12/31/2048	9.86	6.08	8.77	11.27	7.54	10.81	16.23	8.26	8.04	5.69	3.86	7.13	4.75	12.08	3.50	5.63	6.71	17.30	9.30	7.00	5.80
71/2049	12/31/2049	9.98	6.26	8.77	11.66	7.74	11.54	16.83	8.45	8.19	5.84	3.92	7.24	4.80	12.68	3.53	5.81	6.85	18.45	9.61	7.18	5.90
71/2050	12/31/2050	10.50	6.37	9.23	11.86	7.97	12.21	17.07	8.63	8.36	6.04	3.95	7.32	4.82	13.22	3.54	6.31	7.54	18.30	9.75	7.30	6.00
71/2051	12/31/2051	11.05	6.70	9.71	12.47	8.19	12.51	17.68	8.93	8.58	6.24	3.92	7.45	5.08	13.88	3.52	6.64	7.84	18.15	10.18	7.54	6.15
71/2052	12/31/2052	11.62	7.05	10.21	13.12	8.42	13.21	18.09	9.13	8.80	6.44	3.97	7.53	5.20	14.06	3.51	6.90	8.34	20.15	11.70	7.90	6.30
71/2053	12/31/2053	12.23	7.42	10.74	13.80	8.62	13.90	18.88	9.32	9.12	6.56	3.97	7.62	5.32	14.81	3.51	7.35	8.78	21.19	12.38	8.23	6.40
71/2054	12/31/2054	13.86	7.80	11.30	14.52	8.85	14.38	20.01	9.58	9.20	6.76	3.98	7.75	5.48	15.38	3.54	7.73	9.23	22.30	13.02	8.50	6.54
71/2055	12/31/2055	13.63	8.21	11.89	15.28	9.15	14.92	22.00	9.83	9.82	6.82	3.98	7.86	5.63	16.36	3.54	8.14	9.71	23.40	13.92	8.80	6.71
71/2056	12/31/2056	14.23	8.64	12.51	16.07	9.40	15.46	23.14	10.34	10.34	7.06	3.90	7.95	5.78	17.25	3.54	8.50	10.22	24.98	14.41	9.26	6.86
71/2057	12/31/2057	14.97	9.05	13.16	16.81	9.65	15.97	24.35	10.59	10.59	7.24	3.86	8.04	5.86	18.14	3.54	8.81	10.75	25.98	15.16	9.54	6.96
71/2058	12/31/2058	15.75	9.56	13.84	17.71	9.89	16.51	25.61	10.87	10.87	7.42	3.82	8.13	6.00	19.06	3.54	9.13	11.31	27.31	16.05	9.87	7.11
71/2059	12/31/2059	16.57	10.05	14.50	18.71	10.15	17.04	26.84	11.17	11.17	7.57	3.78	8.23	6.16	19.98	3.54	9.47	11.91	28.73	16.98	10.34	7.24
71/2060	12/31/2060	18.34	10.54	15.32	18.69	10.40	17.50	28.04	11.43	11.43	7.67	3.75	8.35	6.25	20.08	3.54	9.50	12.12	30.22	17.65	10.48	7.32
71/2061	12/31/2061	18.34	11.13	16.12	20.71	10.60	18.01	29.82	11.67	11.67	7.82	3.72	8.46	6.35	20.94	3.54	9.59	12.58	31.70	18.67	11.02	7.43
71/2062	12/31/2062	18.28	11.71	16.90	21.79	10.80	18.50	31.37	11.93	11.93	8.00	3.68	8.51	6.42	22.22	3.54	9.82	13.12	33.02	19.55	11.50	7.54
71/2063	12/31/2063	20.50	12.31	17.64	22.82	11.77	19.02	33.00	12.46	12.46	8.18	3.64	8.58	6.50	23.69	3.54	10.02	13.65	34.45	20.65	12.30	7.65
71/2064	12/31/2064	21.35	12.90	18.77	24.11	11.80	19.52	34.72	12.63	12.63	8.34	3.61	8.63	6.58	24.67	3.54	10.15	14.07	35.45	21.82	12.80	7.74
71/2065	12/31/2065	22.40	13.80	19.74	25.36	12.47	20.00	36.82	12.63	12.63	8.54	3.58	8.68	6.66	25.87	3.54	10.28	14.57	36.15	23.05	13.30	7.85
71/2066	12/31/2066	23.80	14.34	20.77	26.68	12.80	20.48	38.42	12.63	12.63	8.74	3.54	8.74	6.74	27.22	3.54	10.42	15.33	37.02	24.12	13.84	7.94
71/2067	12/31/2067	24.80	15.08	21.84	28.07	13.15	20.96	40.42	12.63	12.63	8.94	3.50	8.84	6.84	28.62	3.54	10.54	16.13	38.04	25.14	14.38	8.04
71/2068	12/31/2068	26.16	15.87	22.94	29.07	13.50	21.44	42.42	12.63	12.63	9.14	3.46	8.94	6.94	29.72	3.54	10.66	16.86	39.07	26.12	14.91	8.14
71/2069	12/31/2069	27.51	16.69	24.10	30.03	13.85	21.92	44.52	12.63	12.63	9.34	3.42	9.04	7.04	30.84	3.54	10.78	17.63	40.07	27.14	15.45	8.24
71/2070	12/31/2070	28.84	17.53	25.16	31.07	14.20	22.40	46.73	12.63	12.63	9.54	3.38	9.14	7.14	31.96	3.54	10.89	18.40	41.07	28.17	15.99	8.34
71/2071	12/31/2071	30.45	18.38	26.16	32.10	14.55	22.88	48.94	12.63	12.63	9.74	3.34	9.24	7.24	33.08	3.54	10.99	19.17	42.07	29.19	16.53	8.44
71/2072	12/31/2072	31.40	19.15	27.11	3																	

MAE Year	End-of-Year	MAE	LNT	AGE	ASP	BOL	ED	OTE	EX	ES	EXC	HE	IDA	AGE	OGE	PWV	PWV	POR	REG	SRE	WEC	XEL
7/1/2000	12/31/2000	50.55	30.07	44.43	57.08	44.26	60.44	82.18	50.83	48.06	30.86	27.89	40.02	49.28	27.82	61.25	23.70	30.40	36.29	87.63	51.17	34.00
7/1/2001	12/31/2001	53.18	32.28	48.17	60.05	48.56	63.56	86.45	53.18	53.18	32.46	29.45	51.57	51.56	29.27	64.43	27.03	31.98	38.18	92.19	53.83	38.40
7/1/2002	12/31/2002	55.85	33.84	49.74	63.07	49.88	66.88	89.85	55.85	55.85	33.84	30.88	54.25	54.25	30.78	67.78	28.44	33.84	40.18	98.88	56.83	38.30
7/1/2003	12/31/2003	58.60	35.71	51.72	66.45	51.63	70.37	95.05	58.60	58.60	35.80	32.50	57.04	57.04	32.30	71.31	29.82	35.39	42.25	102.03	59.88	40.20
7/1/2004	12/31/2004	61.22	37.56	54.41	69.91	54.21	74.03	100.65	61.22	61.22	37.80	34.20	60.04	60.04	37.30	76.01	31.47	37.23	44.45	107.33	62.88	42.38
7/1/2005	12/31/2005	64.14	39.52	57.24	73.54	57.03	77.88	106.68	64.14	64.14	39.78	36.07	63.16	63.16	35.85	78.82	33.11	39.10	46.70	112.81	65.83	44.50
7/1/2006	12/31/2006	66.54	41.57	60.22	77.57	59.80	81.83	111.40	66.54	66.54	41.83	38.07	65.75	65.75	38.07	81.24	34.83	41.20	49.19	118.78	68.90	46.81
7/1/2007	12/31/2007	69.08	43.73	63.35	81.30	63.11	86.10	117.10	69.08	69.08	44.01	39.82	68.90	68.90	41.73	87.34	36.64	43.34	51.76	124.66	72.87	48.35
7/1/2008	12/31/2008	71.68	46.01	66.84	86.82	66.40	90.87	123.28	71.68	71.68	46.28	41.86	71.68	71.68	44.10	90.88	38.65	45.80	54.44	131.46	76.75	51.91
7/1/2009	12/31/2009	74.30	48.20	70.11	90.04	69.63	95.39	129.70	74.30	74.30	48.55	43.80	74.30	74.30	46.38	95.88	40.65	48.40	57.27	138.29	80.76	54.81
7/1/2010	12/31/2010	76.92	50.37	73.18	94.70	72.48	99.85	136.54	76.92	76.92	50.82	45.80	76.92	76.92	48.40	101.68	42.60	50.40	60.04	145.09	84.80	57.45
7/1/2011	12/31/2011	79.54	52.54	76.15	99.40	75.06	104.88	143.44	79.54	79.54	52.94	47.78	79.54	79.54	50.40	107.68	44.50	52.20	62.88	151.85	88.67	60.44
7/1/2012	12/31/2012	82.16	54.71	78.76	104.04	77.68	109.82	150.38	82.16	82.16	55.00	49.70	82.16	82.16	52.94	110.62	46.40	54.10	65.75	158.70	92.54	63.44
7/1/2013	12/31/2013	84.78	56.88	81.33	108.68	80.20	114.86	155.32	84.78	84.78	57.06	51.60	84.78	84.78	54.86	115.56	48.30	56.00	68.60	165.54	96.40	66.44
7/1/2014	12/31/2014	87.40	59.05	83.94	113.32	82.82	119.80	160.26	87.40	87.40	59.06	53.50	87.40	87.40	56.70	120.50	50.20	57.90	71.46	172.38	100.26	69.44
7/1/2015	12/31/2015	90.02	61.22	86.55	117.91	85.30	124.74	165.20	90.02	90.02	61.22	55.40	90.02	90.02	58.60	125.40	52.10	59.80	74.30	179.22	104.05	72.44
7/1/2016	12/31/2016	92.64	63.39	89.16	122.46	87.78	129.68	170.14	92.64	92.64	63.39	57.30	92.64	92.64	60.70	130.30	54.00	61.70	77.16	186.06	107.84	75.44
7/1/2017	12/31/2017	95.26	65.56	91.77	127.00	90.16	134.62	175.08	95.26	95.26	65.56	59.20	95.26	95.26	62.80	135.20	55.90	63.80	80.00	192.90	111.62	78.44
7/1/2018	12/31/2018	97.88	67.73	94.38	131.54	92.54	139.56	180.02	97.88	97.88	67.73	61.10	97.88	97.88	64.90	140.10	57.80	65.70	82.90	200.00	115.40	81.44
7/1/2019	12/31/2019	100.50	69.90	96.99	136.48	94.92	144.50	184.96	100.50	100.50	69.90	63.00	100.50	100.50	66.80	145.00	59.70	67.60	85.80	207.10	119.16	84.44
7/1/2020	12/31/2020	103.12	72.07	99.60	141.42	97.30	149.44	189.90	103.12	103.12	72.07	64.10	103.12	103.12	68.90	150.00	61.60	69.50	88.70	214.24	122.94	87.44
7/1/2021	12/31/2021	105.74	74.24	102.21	146.36	100.00	154.38	194.84	105.74	105.74	74.24	65.20	105.74	105.74	70.80	155.10	63.50	71.40	91.60	221.38	126.74	90.44
7/1/2022	12/31/2022	108.36	76.41	104.82	151.30	102.48	159.32	199.78	108.36	108.36	76.41	66.30	108.36	108.36	72.90	160.00	65.40	73.30	94.50	228.52	130.54	93.44
7/1/2023	12/31/2023	110.98	78.58	107.39	156.24	104.86	164.26	204.72	110.98	110.98	78.58	67.40	110.98	110.98	74.00	165.00	67.30	75.20	97.40	235.66	134.74	96.44
7/1/2024	12/31/2024	113.60	80.75	109.90	161.16	107.30	169.20	209.66	113.60	113.60	80.75	68.50	113.60	113.60	75.10	165.00	69.20	77.10	100.30	242.80	138.94	99.44
7/1/2025	12/31/2025	116.22	82.92	112.41	166.10	109.78	174.14	214.60	116.22	116.22	82.92	69.60	116.22	116.22	76.20	170.00	71.10	79.00	103.20	249.94	143.14	102.44
7/1/2026	12/31/2026	118.84	85.09	114.97	171.04	112.26	179.08	219.54	118.84	118.84	85.09	70.70	118.84	118.84	77.30	175.00	73.00	80.90	106.10	257.08	147.34	105.44
7/1/2027	12/31/2027	121.46	87.26	117.50	176.00	114.80	184.02	224.48	121.46	121.46	87.26	71.80	121.46	121.46	78.40	180.00	74.90	82.80	108.90	264.22	151.54	108.44
7/1/2028	12/31/2028	124.08	89.43	120.01	180.96	117.22	189.06	229.42	124.08	124.08	89.43	72.90	124.08	124.08	79.50	185.00	76.00	84.70	111.70	271.36	155.74	111.44
7/1/2029	12/31/2029	126.70	91.60	122.48	185.90	119.84	194.00	234.36	126.70	126.70	91.60	74.00	126.70	126.70	80.60	190.00	78.10	86.60	114.60	278.50	159.94	114.44
7/1/2030	12/31/2030	129.32	93.77	124.93	190.84	122.26	198.94	239.30	129.32	129.32	93.77	75.10	129.32	129.32	81.70	195.00	79.20	88.50	117.50	285.64	164.14	117.44
7/1/2031	12/31/2031	131.94	95.94	127.38	195.78	125.20	203.88	244.24	131.94	131.94	95.94	76.20	131.94	131.94	82.80	200.00	80.30	90.40	120.40	292.78	168.34	120.44
7/1/2032	12/31/2032	134.56	98.11	129.83	200.72	127.62	208.82	249.18	134.56	134.56	98.11	77.30	134.56	134.56	83.90	205.00	82.40	92.30	123.30	299.92	172.54	123.44
7/1/2033	12/31/2033	137.18	100.28	132.28	205.66	129.96	213.76	254.12	137.18	137.18	100.28	78.40	137.18	137.18	85.00	210.00	84.50	94.20	126.20	307.06	176.74	126.44
7/1/2034	12/31/2034	139.80	102.45	134.73	210.60	132.40	218.70	259.06	139.80	139.80	102.45	79.50	139.80	139.80	86.10	215.00	85.60	96.10	129.10	314.20	180.94	129.44
7/1/2035	12/31/2035	142.42	104.62	137.18	215.54	134.82	223.64	264.00	142.42	142.42	104.62	80.60	142.42	142.42	87.20	220.00	86.70	98.00	131.90	321.34	185.14	132.44
7/1/2036	12/31/2036	145.04	106.79	139.63	220.48	137.26	228.58	268.94	145.04	145.04	106.79	81.70	145.04	145.04	88.30	225.00	87.80	100.00	134.80	328.48	189.34	135.44
7/1/2037	12/31/2037	147.66	108.96	142.08	225.42	139.68	233.52	273.88	147.66	147.66	108.96	82.80	147.66	147.66	89.40	230.00	88.90	101.10	137.70	335.62	193.54	138.44
7/1/2038	12/31/2038	150.28	111.13	144.53	230.36	142.10	238.46	278.82	150.28	150.28	111.13	83.90	150.28	150.28	90.50	235.00	89.00	102.20	140.60	342.76	197.74	141.44
7/1/2039	12/31/2039	152.90	113.30	146.98	235.30	144.54	243.40	283.76	152.90	152.90	113.30	85.00	152.90	152.90	91.60	240.00	90.10	103.30	143.50	349.90	201.94	144.44
7/1/2040	12/31/2040	155.52	115.47	149.43	240.24	146.96	248.34	288.70	155.52	155.52	115.47	86.10	155.52	155.52	92.70	245.00	91.20	104.40	146.40	357.04	206.14	147.44
7/1/2041	12/31/2041	158.14	117.64	151.88	245.18	149.38	253.28	293.64	158.14	158.14	117.64	87.20	158.14	158.14	93.80	250.00	92.30	105.50	149.30	364.18	210.34	150.44
7/1/2042	12/31/2042	160.76	119.81	154.33	250.12	151.80	258.22	298.58	160.76	160.76	119.81	88.30	160.76	160.76	94.90	255.00	93.40	106.60	152.20	371.32	214.54	153.44
7/1/2043	12/31/2043	163.38	121.98	156.78	255.06	154.22	263.16	303.52	163.38	163.38	121.98	89.40	163.38	163.38	95.00	260.00	94.50	107.70	155.10	378.46	218.74	156.44
7/1/2044	12/31/2044	166.00	124.15	159.23	260.00	156.64	268.10	308.46	166.00	166.00	124.15	90.50	166.00	166.00	96.10	265.00	95.60	108.80	158.00	385.60	222.94	159.44
7/1/2045	12/31/2045	168.62	126.32	161.68	264.94	159.06	273.04	313.40	168.62	168.62	126.32	91.60	168.62	168.62	97.20	270.00	96.70	109.90	160.90	392.74	227.14	162.44
7/1/2046	12/31/2046	171.24	128.49	164.13	269.88	161.48	278.00	318.34	171.24	171.24	128.49	92.70	171.24	171.24	98.30	275.00	97.80	111.00	163.80	399.88	231.34	165.44
7/1/2047	12/31/2047	173.86	130.66	166.58	274.82	163.90	282.94	323.28	173.86	173.86	130.66	93.80	173.86	173.86	99.40	280.00	98.90	112.10	166.70	407.02	235.54	168.44
7/1/2048	1																					

Mid-Year	End-of-Year	ALE	LNT	AEE	AEP	BKH	ED	DTE	EIX	ES	EXC	HE	IDA	NWE	OGE	PNW	PNM	POR	PEG	SRE	WEC	XEL
7/1/2162	12/31/2162	\$3,228.73	\$1,958.87	\$2,837.44	\$3,646.51	\$2,826.85	\$3,860.30	\$5,249.06	\$3,252.96	\$3,089.06	\$1,970.98	\$1,787.96	\$3,130.70	\$3,148.01	\$1,776.87	\$3,811.78	\$1,641.18	\$1,941.38	\$2,317.78	\$5,588.86	\$3,268.34	\$2,210.18
7/1/2163	12/31/2163	\$3,366.62	\$2,080.73	\$2,984.98	\$3,835.07	\$2,973.85	\$4,061.04	\$5,522.01	\$3,422.10	\$3,228.66	\$2,073.48	\$1,880.94	\$3,293.49	\$3,311.71	\$1,869.26	\$4,115.19	\$1,729.52	\$2,042.33	\$2,438.28	\$5,887.99	\$3,438.30	\$2,325.11
7/1/2164	12/31/2164	\$3,573.25	\$2,167.89	\$3,140.21	\$4,034.50	\$3,128.49	\$4,272.21	\$5,808.16	\$3,600.06	\$3,396.55	\$2,181.31	\$1,878.75	\$3,464.75	\$3,483.82	\$1,966.46	\$4,329.18	\$1,816.30	\$2,148.53	\$2,585.07	\$6,184.17	\$3,617.09	\$2,446.02
7/1/2165	12/31/2165	\$3,769.05	\$2,280.52	\$3,303.50	\$4,244.29	\$3,291.17	\$4,494.37	\$6,111.24	\$3,787.25	\$3,573.17	\$2,284.73	\$2,081.64	\$3,644.92	\$3,665.06	\$2,066.72	\$4,554.30	\$1,910.74	\$2,260.26	\$2,698.45	\$6,516.27	\$3,806.18	\$2,573.21
7/1/2166	12/31/2166	\$3,954.52	\$2,369.21	\$3,475.28	\$4,464.99	\$3,482.31	\$4,728.07	\$6,429.02	\$3,984.19	\$3,758.97	\$2,414.06	\$2,189.89	\$3,834.46	\$3,855.87	\$2,178.29	\$4,781.12	\$2,010.10	\$2,377.79	\$2,838.77	\$6,855.11	\$4,003.06	\$2,707.02
7/1/2167	12/31/2167	\$4,180.16	\$2,523.97	\$3,655.98	\$4,697.17	\$3,642.35	\$4,973.93	\$6,763.33	\$4,191.37	\$3,964.44	\$2,539.59	\$2,303.76	\$4,033.85	\$4,056.16	\$2,289.46	\$5,040.26	\$2,114.83	\$2,501.43	\$2,986.39	\$7,211.58	\$4,211.20	\$2,847.79

Source: Attachment MF-5

Please note that the slight discrepancy (approximately 0.01%) results from cash flows beyond year 150 not included in Mr. Filarewicz's model, but implicitly incorporated in the terminal value

Ms. Winker's Constant Growth DCF Results

	5 Year Historical Growth in Earnings	5 Year Historical Growth in Dividends	5 Year Historical Growth in Book Value	10 Year Historical Growth in Earnings	10 Year Historical Growth in Dividends	10 Year Historical Growth in Book Value	5 Year Projected Growth in Earnings	5 Year Projected Growth in Dividends	5 Year Projected Growth in Book Value	2017 BxR Growth Rate	5 Year Projected BxR Growth Rate
AW Proxy Group Average	6.88%	5.68%	4.50%	5.25%	5.79%	4.32%	5.11%	5.70%	3.95%	3.51%	3.70%
Dividend Yield 1 [1]	3.42%										
Dividend Yield 2 [2]	3.38%										
ROE 1	10.30%	9.06%	7.92%	8.67%	9.21%	7.74%	8.53%	9.12%	7.37%	6.93%	7.12%
ROE 2	10.26%	9.04%	7.88%	8.63%	9.17%	7.70%	8.49%	9.08%	7.33%	6.89%	7.08%

See Schedule AW-1 Page 1

[1] 2017 Dividend Yield with 2017 High/Low Stock Price

[2] 2017 Dividend Yield with 2017 High/Low & 5/17/17 Yahoo Closing Stock Price

Proof Concept: Earnings, Dividends, Book Value and
Stock Price Growth Rate Equivalence in Constant Growth DCF

Line Description	IMPLIED GROWTH RATE AT ALLOWED ROE:	
Input	Dividend Yield	3.19% [1]
Assumes g = Allowed ROE - Div Yield	Assumed Growth Rate	7.31%
Input	Total Return	10.50% [1]
Input	Payout Ratio	65.89% [2]
Input	Book Value/Share	20 [2]

		0	1	2	3	4	5	6	7	8	9	10	250
BV/S Escalates at Constant Growth g	Book Value/Share	\$ 20.00	\$ 21.46	\$ 23.03	\$ 24.71	\$ 26.52	\$ 28.46	\$ 30.54	\$ 32.77	\$ 35.16	\$ 37.73	\$ 40.49	\$ 908,980,232.81
Demonstrating Constant BV/S growth			7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%
Earnings based on ROE applied to BV/S	Earnings/share	\$ 2.10	\$ 2.25	\$ 2.42	\$ 2.59	\$ 2.78	\$ 2.99	\$ 3.21	\$ 3.44	\$ 3.69	\$ 3.96	\$ 4.25	\$ 95,442,924.45
Demonstrating Constant EPS growth			7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%
Demonstrating Constant Return Earned based on BV/S and EPS	Allowed ROE	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Div/S based on EPS and Constant Payout ratio	Dividends/Share	\$ 1.38	\$ 1.48	\$ 1.59	\$ 1.71	\$ 1.83	\$ 1.97	\$ 2.11	\$ 2.27	\$ 2.43	\$ 2.61	\$ 2.80	\$ 62,883,887.75
Demonstrating Constant Div/S growth			7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%
Retained Earnings based on difference between EPS and Div/S	Earnings retained to book value	\$ 0.72	\$ 0.77	\$ 0.82	\$ 0.89	\$ 0.95	\$ 1.02	\$ 1.09	\$ 1.17	\$ 1.26	\$ 1.35	\$ 1.45	\$ 32,559,036.69
Demonstrating Constant growth in Retained Earnings			7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%	7.31%
Demonstrating Constant Market/Book ratio	Market/Book Ratio	2.325	2.325	2.325	2.325	2.325	2.325	2.325	2.325	2.325	2.325	2.325	2.325
DCF calculation of market price = [Div/S]*(1+g)/[ROE-g]	Market Price	\$ 46.51	\$ 49.91	\$ 53.55	\$ 57.47	\$ 61.66	\$ 66.17	\$ 71.01	\$ 76.19	\$ 81.76	\$ 87.74	\$ 94.15	\$ 2,113,680,174.90
Demonstrating Price Appreciation equals Long Term Growth Rate	Price Appreciation	7.31%	OK	<== Price appreciation should equal long term growth rate									
Demonstrating Constant Price/Earnings Ratio	Price/Earnings	22.15	22.15	22.15	22.15	22.15	22.15	22.15	22.15	22.15	22.15	22.15	22.15
Present Value Factor calculated based upon the current period and the Constant ROE	Present Value Factor		0.9050	0.8190	0.7412	0.6707	0.6070	0.5493	0.4971	0.4499	0.4071	0.3684	0.0000

CASE 1	DIVIDENDS IN PERPETUITY												
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value Dividend	1.3436	1.3048	1.2671	1.2305	1.1950	1.1604	1.1269	1.0944	1.0627	1.0320		0.001
Total Value of investment sum of all Present Value Dividends in perpetuity (250 instances for demonstration purposes)	Value of Investment	\$ 46.48											

CASE 2		10-YEAR HOLDING PERIOD										
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$ 1.34	\$ 1.30	\$ 1.27	\$ 1.23	\$ 1.19	\$ 1.16	\$ 1.13	\$ 1.09	\$ 1.06	\$ 1.03	
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Present Value of Stock Price	—	—	—	—	—	—	—	—	—	—	34.69
Value of dividends = sum of all Present Value Dividends for periods 1-10	Value of Dividends	\$ 11.82										
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Value of Stock Price	\$ 34.69										
Total Value of investment sum of all Present Value Dividends for periods 1-10 and Present Value of Stock in period 10 (Terminal Value)	Value of Investment	\$ 46.51										

CASE 3		5-YEAR HOLDING PERIOD				
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$ 1.34	\$ 1.30	\$ 1.27	\$ 1.23	\$ 1.19
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Present Value of Stock Price	—	—	—	—	40.17
Value of dividends = sum of all Present Value Dividends for periods 1-5	Value of Dividends	\$ 6.34				
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Value of Stock Price	\$ 40.17				
Total Value of investment sum of all Present Value Dividends for periods 1-5 and Present Value of Stock in period 5 (Terminal Value)	Value of Investment	\$ 46.51				

[1] Note, for purposes of this exhibit, these data are illustrative only.

[2] Note Illustrative only

Growth Rate Regression Analysis

Company Name	Ticker	Trailing P/E	Past 10 Year Earnings Growth Rate	Past 10 Year Dividend Growth Rate	Past 10 Year Book Value Growth Rate	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate	Proj. Book Value Growth Rate
ALLETE, Inc.	ALE	23.1	3.50%	7.50%	5.50%	5.00%	4.00%	4.50%
Alliant Energy Corporation	LNT	25	5.00%	7.50%	4.00%	6.00%	4.50%	4.00%
Ameren Corporation	AEE	21.2	-1.50%	-4.00%	-1.00%	6.00%	4.50%	3.50%
American Electric Power Company, Inc.	AEP	18.3	3.00%	4.00%	4.50%	4.00%	5.00%	3.50%
Avista Corporation	AVA	18.7	6.50%	9.50%	4.00%	2.50%	4.00%	2.50%
Black Hills Corporation	BKH	26	3.50%	2.50%	2.50%	7.50%	5.00%	5.50%
CenterPoint Energy, Inc.	CNP	26.6	3.00%	8.00%	7.50%	6.00%	3.50%	2.00%
CMS Energy Corporation	CMS	22.4	8.50%	-	3.00%	6.50%	6.50%	6.50%
Consolidated Edison, Inc.	ED	19	3.50%	1.50%	4.00%	2.50%	3.00%	3.50%
Dominion Resources, Inc.	D	21.7	5.00%	7.00%	2.50%	5.50%	6.50%	2.00%
DTE Energy Company	DTE	19.4	5.50%	3.50%	4.00%	6.00%	7.00%	4.50%
Duke Energy Corporation	DUK	21.1	3.50%	-	-0.50%	4.50%	3.50%	2.00%
Edison International	EIX	20.5	5.50%	6.00%	5.50%	3.00%	9.00%	4.50%
El Paso Electric Company	EE	21.5	9.50%	-	8.00%	5.00%	7.00%	4.00%
Energy Corporation	ETR	12.3	3.00%	5.00%	3.00%	-3.50%	2.00%	Nil
Exelon Corporation	EXC	14.2	-4.00%	-2.00%	7.00%	7.00%	5.50%	4.50%
FirstEnergy Corp.	FE	18.1	-6.00%	-2.50%	-1.00%	9.00%	2.00%	-1.50%
Great Plains Energy Inc.	GXP	21.7	-3.00%	-5.00%	4.00%	Nil	5.00%	1.00%
Hawaiian Electric Industries, Inc.	HE	14.7	2.50%	-	2.50%	1.50%	2.00%	3.50%
IDACORP, Inc.	IDA	21.7	7.00%	5.00%	5.00%	3.50%	7.00%	4.00%
MGE Energy, Inc.	MGEE	29.4	6.00%	2.50%	6.00%	7.00%	4.00%	6.50%
NextEra Energy, Inc.	NEE	21.3	8.00%	8.50%	8.00%	8.50%	9.50%	5.50%
Eversource Energy	ES	19.7	12.00%	9.50%	6.00%	6.50%	5.50%	4.00%
NorthWestern Corporation	NWE	17.8	-	9.50%	5.00%	4.50%	5.00%	3.50%
OGE Energy Corp.	OGE	20.6	6.00%	4.50%	8.00%	5.50%	9.00%	3.50%
Otter Tail Corporation	OTTR	23.5	-0.50%	1.00%	0.00%	6.50%	2.00%	6.00%
PQ&E Corporation	PCG	24	1.00%	8.00%	5.00%	9.50%	7.50%	5.00%
Pinnacle West Capital Corporation	PNW	21.9	3.50%	2.50%	2.00%	5.50%	5.00%	4.00%
PNM Resources, Inc.	PNM	23.1	-	0.50%	1.00%	9.00%	10.00%	3.50%
Portland General Electric Company	POR	21.2	7.00%	13.50%	3.00%	6.00%	6.00%	3.50%
PPL Corporation	PPL	14.4	2.00%	4.50%	3.00%	NMF	3.50%	NMF
Public Service Enterprise Group Incorporated	PEG	15.1	6.00%	3.50%	7.50%	2.50%	5.00%	3.50%
SCANA Corporation	SCG	15.9	4.00%	3.50%	5.00%	4.00%	5.00%	5.00%
Sempra Energy	SRE	26.7	2.00%	9.50%	7.00%	8.00%	8.50%	3.00%
Southern Company	SO	16.7	3.00%	4.00%	5.00%	3.50%	3.50%	4.00%
Vectren Corporation	VVC	23.3	4.00%	2.50%	3.00%	6.50%	4.50%	6.00%
Westar Energy, Inc.	WR	22.3	4.00%	5.00%	4.50%	6.00%	5.00%	4.50%
Wisconsin Energy Corporation	WEC	21.1	8.50%	15.00%	8.00%	6.00%	6.00%	5.00%
Xcel Energy Inc.	XEL	20.4	5.00%	4.00%	4.50%	4.50%	6.00%	4.00%

SCENARIO 1

Regression Statistics	
Multiple R	0.599089
R Square	0.358884
Adjusted R Square	0.340566
Standard Error	3.082293
Observations	37

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	196.1371	196.1371	19.59228397	8.94815E-05
Residual	35	332.5196	9.500531		
Total	36	518.6557			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	15.68305	1.239321	12.65455	1.28062E-14	13.18709802	18.19901
Proj. Earnings Growth Rate	94.98821	21.45987	4.426317	8.94815E-05	51.42234891	138.5541

SCENARIO 2

Regression Statistics	
Multiple R	0.301656
R Square	0.090996
Adjusted R Square	0.066429
Standard Error	3.704249
Observations	39

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	50.823	50.823	3.703907018	0.062001083
Residual	37	507.8939	13.72146		
Total	38	558.5169			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	17.6532	1.619696	10.89909	4.16986E-13	14.37136885	20.93502
Proj. Dividend Growth Rate	54.12682	28.12435	1.924554	0.062001083	-2.856523474	111.1122

SCENARIO 3

Regression Statistics	
Multiple R	0.290831
R Square	0.084583
Adjusted R Square	0.058428
Standard Error	3.418896
Observations	37

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	37.80095	37.80095	3.233931146	0.080757355
Residual	35	409.1099	11.68885		
Total	36	446.9108			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	18.35648	1.544354	11.88619	7.66616E-14	15.22127047	21.49168
Proj. Book Value Growth Rate	66.46557	36.95995	1.798313	0.080757355	-8.567113247	141.4983

SCENARIO 4

Regression Statistics	
Multiple R	0.192284
R Square	0.036973
Adjusted R Square	0.009458
Standard Error	3.870471
Observations	37

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	20.13003	20.13003	1.343744386	0.254222409
Residual	35	524.3192	14.98055		
Total	36	544.4492			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	19.7588	0.939122	21.03906	1.90085E-21	17.85227903	21.66532
Past 10 Year Earnings Growth Rate	20.43069	17.62482	1.1592	0.254222409	-15.34959712	56.21098

SCENARIO 5

Regression Statistics	
Multiple R	0.153797
R Square	0.023654
Adjusted R Square	-0.00563
Standard Error	3.920342
Observations	35

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	12.28727	12.28727	0.799480213	0.377723956
Residual	33	507.1796	15.36908		
Total	34	519.4669			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	19.98641	0.974854	20.50196	2.39592E-20	18.00305353	21.96976
Past 10 Year Dividend Growth Rate	13.56104	15.16664	0.894137	0.377723956	-17.29570831	44.4178

SCENARIO 6

Regression Statistics	
Multiple R	0.06879
R Square	0.004732
Adjusted R Square	-0.02217
Standard Error	3.876032
Observations	39

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2.642906	2.642906	0.17591671	0.677331399
Residual	37	555.874	15.02362		
Total	38	558.5169			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	20.10231	1.242657	16.17688	2.30233E-18	17.5844508	22.62017
Past 10 Year Book Value Growth Rate	10.64038	25.36901	0.419424	0.677331399	-40.76211717	62.04287

SCENARIO 7

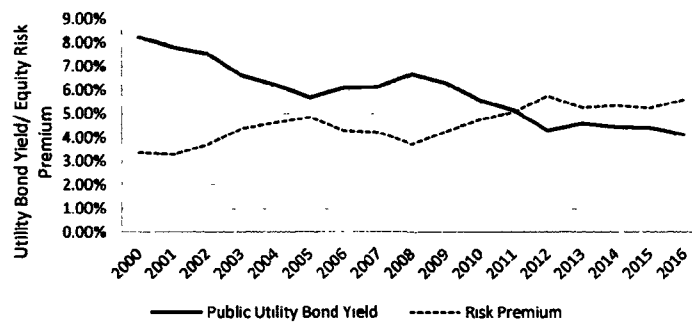
Regression Statistics	
Multiple R	0.631713
R Square	0.399062
Adjusted R Square	0.242295
Standard Error	3.191146
Observations	30

ANOVA					
	df	SS	MS	F	Significance F
Regression	6	155.6362	25.92271	2.545582006	0.048740809
Residual	23	234.2184	10.18341		
Total	29	389.7547			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12.75407	2.876049	4.434579	0.000190564	6.804506063	18.70363
Past 10 Year Earnings Growth Rate	21.74137	29.98479	0.72508	0.475716001	-40.28690542	83.76964
Past 10 Year Dividend Growth Rate	20.30942	22.37839	0.907546	0.373529306	-25.98381528	66.60266
Past 10 Year Book Value Growth Rate	-23.5297	31.42773	-0.74869	0.461631604	-88.54260206	41.48354
Proj. Earnings Growth Rate	100.9941	39.94444	2.528306	0.01877895	18.36278253	163.6255
Proj. Dividend Growth Rate	-16.7599	35.39598	-0.4735	0.640321266	-89.9820945	56.48223
Proj. Book Value Growth Rate	70.05248	45.15934	1.551229	0.134499185	-23.36673944	163.4717

Analysis Using Ms. Winker's Risk Premium Data

Rate Case Year	Average Allowed ROE	Public Utility Bond Yield	Risk Premium	LN (Moody's Public Utility Bond)
2000	11.58%	8.22%	3.36%	-2.50
2001	11.07%	7.79%	3.28%	-2.55
2002	11.21%	7.53%	3.68%	-2.59
2003	10.96%	6.61%	4.36%	-2.72
2004	10.81%	6.20%	4.61%	-2.78
2005	10.51%	5.67%	4.84%	-2.87
2006	10.34%	6.07%	4.27%	-2.80
2007	10.31%	6.12%	4.20%	-2.79
2008	10.37%	6.65%	3.71%	-2.71
2009	10.52%	6.28%	4.24%	-2.77
2010	10.29%	5.55%	4.74%	-2.89
2011	10.19%	5.13%	5.06%	-2.97
2012	10.01%	4.27%	5.74%	-3.15
2013	9.81%	4.57%	5.24%	-3.09
2014	9.75%	4.42%	5.33%	-3.12
2015	9.60%	4.38%	5.22%	-3.13
2016	9.69%	4.11%	5.58%	-3.19
Average:	10.41%	5.86%	4.56%	-2.86



-0.969539184

Source: Schedule AW-3

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.96749886					
R Square	0.93605404					
Adjusted R Square	0.93179098					
Standard Error	0.00198016					
Observations	17					

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.000860954	0.000860954	219.5730821	2.3061E-10
Residual	15	5.88155E-05	3.92104E-06		
Total	16	0.000919769			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.0503948	0.006493388	-7.760937941	1.24864E-06	-0.064235107	-0.03655445
LN (Moody's Public Utility I	-0.033553	0.002264342	-14.81799859	2.3061E-10	-0.038379348	-0.02872669

	<u>Yield</u>	<u>RP</u>	<u>ROE</u>
LN Approach:	4.11%	5.67%	9.76%
	4.56%	5.32%	9.86%

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.96953918					
R Square	0.94000623					
Adjusted R Square	0.93600665					
Standard Error	0.00191799					
Observations	17					

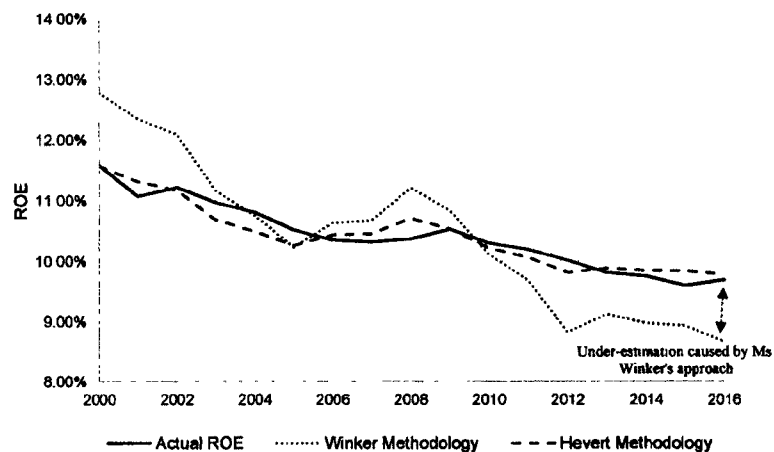
ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.000864589	0.000864589	235.0259622	1.42651E-10
Residual	15	5.51804E-05	3.6787E-06		
Total	16	0.000919769			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.07943254	0.002257873	35.18025447	7.86917E-16	0.074619999	0.08424508
Public Utility Bond Yield	-0.5782839	0.037720996	-15.33055649	1.42651E-10	-0.658684264	-0.49788346

	<u>Yield</u>	<u>RP</u>	<u>ROE</u>
Linear Approach:	4.11%	5.57%	9.86%
	4.56%	5.31%	9.86%

Relative Accuracy of Risk Premium Methodologies Using Ms. Winker's Risk Premium Data

Rate Case Year	Auth. ROE	Public Utility Bond Yield	Winker Predicted RP	Winker Predicted ROE	Error	LN Inverse Predicted RP	LN Inverse Predicted ROE	Error
2000	11.58%	8.22%	4.56%	12.78%	1.20%	3.34%	11.57%	-0.01%
2001	11.07%	7.79%	4.56%	12.35%	1.27%	3.52%	11.31%	0.24%
2002	11.21%	7.53%	4.56%	12.09%	0.87%	3.64%	11.17%	-0.04%
2003	10.96%	6.61%	4.56%	11.16%	0.20%	4.08%	10.68%	-0.28%
2004	10.81%	6.20%	4.56%	10.76%	-0.05%	4.29%	10.49%	-0.32%
2005	10.51%	5.67%	4.56%	10.23%	-0.28%	4.59%	10.26%	-0.25%
2006	10.34%	6.07%	4.56%	10.63%	0.29%	4.36%	10.43%	0.09%
2007	10.31%	6.12%	4.56%	10.67%	0.36%	4.34%	10.45%	0.14%
2008	10.37%	6.85%	4.56%	11.21%	0.84%	4.05%	10.71%	0.34%
2009	10.52%	6.28%	4.56%	10.84%	0.31%	4.25%	10.53%	0.01%
2010	10.28%	5.55%	4.56%	10.11%	-0.18%	4.66%	10.21%	-0.08%
2011	10.19%	5.13%	4.58%	9.68%	-0.50%	4.93%	10.06%	-0.13%
2012	10.01%	4.27%	4.56%	8.83%	-1.18%	5.54%	9.81%	-0.20%
2013	9.81%	4.57%	4.56%	9.12%	-0.68%	5.32%	9.88%	0.08%
2014	9.75%	4.42%	4.56%	8.98%	-0.77%	5.43%	9.85%	0.10%
2015	9.60%	4.38%	4.56%	8.94%	-0.66%	5.46%	9.84%	0.24%
2016	9.69%	4.11%	4.56%	8.67%	-1.02%	5.67%	9.78%	0.09%
Average:	10.41%	5.86%	4.56%	10.41%	0.00%	4.56%	10.41%	0.00%



Source: Schedule AW-3

Monthly Historical Market Risk Premium Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.129526847
R Square	0.016777204
Adjusted R	0.014953043
Standard E	0.213543838
Observations	1081

ANOVA

	df	SS	MS	F	Significance F
Regression	2	0.838804	0.419402	9.19721653	0.000109495
Residual	1078	49.1578465	0.045601		
Total	1080	49.9966505			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.138059122	0.01973607	6.995271	4.63976E-12	0.099333665	0.176784578
Risk Free F	-0.85152528	0.26332345	-3.233762	0.00125879	-1.368209865	-0.334840694
Time	-8.95832E-07	7.5443E-07	-1.187429	0.235320094	-2.37615E-06	5.84485E-07

SUMMARY OUTPUT

Regression Statistics		Risk-free rate	
Multiple R	0.124463578	Implied MRP	8.48%
R Square	0.015491182	Market Return	12.18%
Adjusted R	0.014578755	Beta Coefficient	0.71
Standard E	0.213584404	Implied CAPM Result	9.72%
Observations	1081		

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.77450722	0.774507	16.97799473	4.07097E-05
Residual	1079	49.2221433	0.045618		
Total	1080	49.9966505			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.121219312	0.01372815	8.829983	4.1564E-18	0.094262422	0.148156203
Risk Free F	-0.983618562	0.23871709	-4.120436	4.07097E-05	-1.452020887	-0.515216237

Ibbotson Historical MRP and Risk-Free rate

	MRP	Risk Free Rate (Rf)	Time
Dec-26	0.0801	0.0360	9832
Jan-27	0.0585	0.0360	9863
Feb-27	0.1671	0.0324	9894
Mar-27	0.2489	0.0348	9922
Apr-27	0.2448	0.0324	9953
May-27	0.2973	0.0336	9983
Jun-27	0.2318	0.0324	10014
Jul-27	0.2549	0.0324	10044
Aug-27	0.2860	0.0348	10075
Sep-27	0.3139	0.0324	10106
Oct-27	0.2825	0.0336	10136
Nov-27	0.3313	0.0324	10167
Dec-27	0.3424	0.0324	10197
Jan-28	0.3638	0.0324	10228
Feb-28	0.2785	0.0300	10259
Mar-28	0.4077	0.0324	10288
Apr-28	0.4292	0.0312	10319
May-28	0.3715	0.0324	10349
Jun-28	0.3266	0.0324	10380
Jul-28	0.2592	0.0324	10410
Aug-28	0.2922	0.0348	10441
Sep-28	0.2703	0.0324	10472
Oct-28	0.3586	0.0360	10502
Nov-28	0.4365	0.0324	10533
Dec-28	0.4013	0.0348	10563
Jan-29	0.4911	0.0348	10594
Feb-29	0.5099	0.0324	10625
Mar-29	0.3540	0.0336	10653
Apr-29	0.3242	0.0408	10684
May-29	0.2541	0.0360	10714
Jun-29	0.4600	0.0348	10745
Jul-29	0.5050	0.0384	10775
Aug-29	0.5395	0.0360	10806
Sep-29	0.4243	0.0384	10837
Oct-29	0.1175	0.0372	10867
Nov-29	-0.1360	0.0312	10898
Dec-29	-0.1213	0.0372	10928
Jan-30	-0.1140	0.0348	10959
Feb-30	-0.0848	0.0312	10990
Mar-30	-0.0103	0.0348	11018
Apr-30	-0.0337	0.0324	11049
May-30	-0.0061	0.0324	11079
Jun-30	-0.2633	0.0348	11110
Jul-30	-0.2683	0.0336	11140
Aug-30	-0.3275	0.0312	11171
Sep-30	-0.3906	0.0348	11202
Oct-30	-0.2985	0.0324	11232
Nov-30	-0.2003	0.0312	11263
Dec-30	-0.2826	0.0336	11293
Jan-31	-0.2922	0.0336	11324
Feb-31	-0.2223	0.0312	11355
Mar-31	-0.3372	0.0348	11383
Apr-31	-0.3949	0.0324	11414
May-31	-0.4698	0.0312	11444
Jun-31	-0.2681	0.0336	11475
Jul-31	-0.3485	0.0324	11505
Aug-31	-0.3458	0.0324	11536
Sep-31	-0.4790	0.0324	11567
Oct-31	-0.3754	0.0348	11597
Nov-31	-0.4250	0.0372	11628
Dec-31	-0.4719	0.0384	11658
Jan-32	-0.5136	0.0384	11689
Feb-32	-0.5428	0.0384	11720
Mar-32	-0.5673	0.0372	11749
Apr-32	-0.6211	0.0360	11780
May-32	-0.6623	0.0336	11810
Jun-32	-0.7093	0.0336	11841
Jul-32	-0.5506	0.0336	11871
Aug-32	-0.3758	0.0336	11902
Sep-32	-0.1274	0.0312	11933
Oct-32	-0.3148	0.0324	11963
Nov-32	-0.2839	0.0312	11994
Dec-32	-0.1144	0.0324	12024

	MRP	Risk Free Rate (Rf)	Time
Jan-33	-0.0806	0.0324	12055
Feb-33	-0.2867	0.0276	12086
Mar-33	-0.1649	0.0324	12114
Apr-33	0.5153	0.0300	12145
May-33	1.2798	0.0336	12175
Jun-33	1.5988	0.0300	12206
Jul-33	0.7076	0.0312	12236
Aug-33	0.3737	0.0312	12267
Sep-33	0.2626	0.0300	12298
Oct-33	0.3352	0.0312	12328
Nov-33	0.5566	0.0300	12359
Dec-33	0.5061	0.0336	12389
Jan-34	0.6548	0.0348	12420
Feb-34	0.9585	0.0288	12451
Mar-34	0.8872	0.0324	12479
Apr-34	0.2827	0.0300	12510
May-34	0.0109	0.0300	12540
Jun-34	-0.0897	0.0288	12571
Jul-34	-0.1174	0.0288	12601
Aug-34	-0.1658	0.0288	12632
Sep-34	-0.0592	0.0276	12663
Oct-34	-0.0038	0.0324	12693
Nov-34	-0.0185	0.0300	12724
Dec-34	-0.0444	0.0300	12754
Jan-35	-0.1762	0.0300	12785
Feb-35	-0.1731	0.0252	12816
Mar-35	-0.1986	0.0264	12844
Apr-35	-0.0953	0.0276	12875
May-35	0.0199	0.0276	12905
Jun-35	0.0692	0.0264	12936
Jul-35	0.3117	0.0288	12966
Aug-35	0.2711	0.0276	12997
Sep-35	0.3087	0.0276	13028
Oct-35	0.4550	0.0276	13058
Nov-35	0.3904	0.0288	13089
Dec-35	0.4478	0.0288	13119
Jan-36	0.6142	0.0288	13150
Feb-36	0.7115	0.0276	13181
Mar-36	0.8095	0.0288	13210
Apr-36	0.5221	0.0264	13241
May-36	0.5423	0.0264	13271
Jun-36	0.4863	0.0288	13302
Jul-36	0.4667	0.0276	13332
Aug-36	0.4479	0.0276	13363
Sep-36	0.4179	0.0252	13394
Oct-36	0.4153	0.0276	13424
Nov-36	0.3696	0.0264	13455
Dec-36	0.3128	0.0264	13485
Jan-37	0.2789	0.0252	13516
Feb-37	0.2759	0.0240	13547
Mar-37	0.2298	0.0264	13575
Apr-37	0.2207	0.0276	13606
May-37	0.1546	0.0264	13636
Jun-37	0.0553	0.0300	13667
Jul-37	0.0914	0.0288	13697
Aug-37	0.0226	0.0276	13728
Sep-37	-0.1275	0.0276	13759
Oct-37	-0.2742	0.0276	13789
Nov-37	-0.3497	0.0288	13820
Dec-37	-0.3778	0.0276	13850
Jan-38	-0.3927	0.0276	13881
Feb-38	-0.3602	0.0252	13912
Mar-38	-0.5241	0.0276	13940
Apr-38	-0.3993	0.0264	13971
May-38	-0.4186	0.0264	14001
Jun-38	-0.2249	0.0252	14032
Jul-38	-0.2467	0.0252	14062
Aug-38	-0.2269	0.0264	14093
Sep-38	-0.0798	0.0252	14124
Oct-38	0.1032	0.0264	14154
Nov-38	0.1777	0.0252	14185
Dec-38	0.2850	0.0264	14215
Jan-39	0.1795	0.0252	14246
Feb-39	0.1498	0.0228	14277
Mar-39	0.3266	0.0252	14305

	MRP	Risk Free Rate (Rf)	Time
Apr-39	0.1549	0.0228	14336
May-39	0.2832	0.0240	14366
Jun-39	-0.0401	0.0216	14397
Jul-39	-0.0083	0.0228	14427
Aug-39	-0.0509	0.0216	14458
Sep-39	0.0918	0.0228	14489
Oct-39	-0.0060	0.0276	14519
Nov-39	-0.0155	0.0240	14550
Dec-39	-0.0270	0.0228	14580
Jan-40	0.0079	0.0240	14611
Feb-40	-0.0153	0.0216	14642
Mar-40	0.1535	0.0228	14671
Apr-40	0.1551	0.0216	14702
May-40	-0.1774	0.0228	14732
Jun-40	-0.0495	0.0228	14763
Jul-40	-0.1176	0.0240	14793
Aug-40	-0.0197	0.0228	14824
Sep-40	-0.1517	0.0216	14855
Oct-40	-0.1037	0.0216	14885
Nov-40	-0.0959	0.0216	14916
Dec-40	-0.1182	0.0204	14946
Jan-41	-0.1288	0.0192	14977
Feb-41	-0.1458	0.0192	15008
Mar-41	-0.1528	0.0216	15036
Apr-41	-0.2028	0.0204	15067
May-41	0.0593	0.0204	15097
Jun-41	0.0375	0.0192	15128
Jul-41	0.0618	0.0192	15158
Aug-41	0.0263	0.0192	15189
Sep-41	0.0065	0.0192	15220
Oct-41	-0.0997	0.0192	15250
Nov-41	-0.0942	0.0188	15281
Dec-41	-0.1350	0.0192	15311
Jan-42	-0.0831	0.0252	15342
Feb-42	-0.0901	0.0228	15373
Mar-42	-0.1595	0.0252	15401
Apr-42	-0.1386	0.0240	15432
May-42	-0.0841	0.0228	15462
Jun-42	-0.1182	0.0252	15493
Jul-42	-0.1389	0.0252	15523
Aug-42	-0.1253	0.0252	15554
Sep-42	-0.0917	0.0240	15585
Oct-42	0.0403	0.0252	15615
Nov-42	0.0704	0.0240	15646
Dec-42	0.1783	0.0252	15676
Jan-43	0.2477	0.0240	15707
Feb-43	0.3448	0.0228	15738
Mar-43	0.5175	0.0252	15766
Apr-43	0.5884	0.0240	15797
May-43	0.5532	0.0228	15827
Jun-43	0.5511	0.0252	15858
Jul-43	0.4195	0.0252	15888
Aug-43	0.4205	0.0252	15919
Sep-43	0.4179	0.0240	15950
Oct-43	0.3117	0.0240	15980
Nov-43	0.2258	0.0252	16011
Dec-43	0.2339	0.0252	16041
Jan-44	0.1675	0.0252	16072
Feb-44	0.1077	0.0240	16103
Mar-44	0.0690	0.0252	16132
Apr-44	0.0554	0.0240	16163
May-44	0.0482	0.0264	16193
Jun-44	0.0843	0.0240	16224
Jul-44	0.1220	0.0252	16254
Aug-44	0.1205	0.0252	16285
Sep-44	0.0914	0.0240	16316
Oct-44	0.1050	0.0252	16346
Nov-44	0.2013	0.0240	16377
Dec-44	0.1733	0.0240	16407
Jan-45	0.1706	0.0252	16438
Feb-45	0.2505	0.0216	16469
Mar-45	0.1687	0.0240	16497
Apr-45	0.2907	0.0228	16528
May-45	0.2519	0.0228	16558
Jun-45	0.1854	0.0228	16589

MRP	Risk Free Rate (Rf)	Time
Jul-45	0.1882	0.0216
Aug-45	0.2447	0.0228
Sep-45	0.3024	0.0216
Oct-45	0.3407	0.0228
Nov-45	0.3773	0.0216
Dec-45	0.3425	0.0216
Jan-46	0.4184	0.0204
Feb-46	0.2425	0.0180
Mar-46	0.3627	0.0192
Apr-46	0.2970	0.0204
May-46	0.3078	0.0216
Jun-46	0.2619	0.0192
Jul-46	0.2506	0.0228
Aug-46	0.0957	0.0204
Sep-46	-0.0590	0.0216
Oct-46	-0.0958	0.0228
Nov-46	-0.1323	0.0216
Dec-46	-0.1035	0.0228
Jan-47	-0.1417	0.0216
Feb-47	-0.0863	0.0192
Mar-47	-0.1447	0.0216
Apr-47	-0.2073	0.0204
May-47	-0.2289	0.0204
Jun-47	-0.1554	0.0228
Jul-47	-0.0991	0.0216
Aug-47	-0.0513	0.0204
Sep-47	0.0429	0.0216
Oct-47	0.0748	0.0216
Nov-47	0.0597	0.0204
Dec-47	0.0318	0.0252
Jan-48	-0.0324	0.0240
Feb-48	-0.0623	0.0228
Mar-48	0.0260	0.0264
Apr-48	0.0999	0.0240
May-48	0.1994	0.0216
Jun-48	0.1380	0.0252
Jul-48	0.0407	0.0228
Aug-48	0.0775	0.0252
Sep-48	0.0603	0.0240
Oct-48	0.1115	0.0228
Nov-48	0.0184	0.0252
Dec-48	0.0311	0.0240
Jan-49	0.0769	0.0240
Feb-49	0.0899	0.0216
Mar-49	0.0408	0.0228
Apr-49	-0.0067	0.0216
May-49	-0.1151	0.0240
Jun-49	-0.1176	0.0228
Jul-49	-0.0047	0.0204
Aug-49	-0.0010	0.0228
Sep-49	0.0580	0.0204
Oct-49	0.0196	0.0216
Nov-49	0.1516	0.0204
Dec-49	0.1875	0.0204
Jan-50	0.1850	0.0216
Feb-50	0.2489	0.0192
Mar-50	0.2148	0.0216
Apr-50	0.3009	0.0192
May-50	0.4013	0.0228
Jun-50	0.3238	0.0204
Jul-50	0.2555	0.0216
Aug-50	0.2835	0.0216
Sep-50	0.3266	0.0204
Oct-50	0.2920	0.0228
Nov-50	0.2924	0.0216
Dec-50	0.2958	0.0216
Jan-51	0.3503	0.0240
Feb-51	0.3482	0.0204
Mar-51	0.3151	0.0228
Apr-51	0.3168	0.0240
May-51	0.2125	0.0252
Jun-51	0.2556	0.0240
Jul-51	0.3269	0.0276
Aug-51	0.3338	0.0252
Sep-51	0.2619	0.0228

MRP	Risk Free Rate (Rf)	Time
Oct-51	0.2322	0.0278 18902
Nov-51	0.2255	0.0252 18933
Dec-51	0.2138	0.0264 18963
Jan-52	0.1594	0.0276 18994
Feb-52	0.1105	0.0252 19025
Mar-52	0.1841	0.0276 19054
Apr-52	0.0803	0.0264 19085
May-52	0.1559	0.0240 19115
Jun-52	0.2402	0.0264 19146
Jul-52	0.1793	0.0264 19176
Aug-52	0.1173	0.0252 19207
Sep-52	0.0934	0.0276 19238
Oct-52	0.1073	0.0276 19268
Nov-52	0.1631	0.0252 19299
Dec-52	0.1547	0.0288 19329
Jan-53	0.1292	0.0276 19360
Feb-53	0.1525	0.0252 19391
Mar-53	0.0675	0.0300 19419
Apr-53	0.0876	0.0288 19450
May-53	0.0589	0.0288 19480
Jun-53	-0.0094	0.0324 19511
Jul-53	0.0007	0.0300 19541
Aug-53	-0.0439	0.0300 19572
Sep-53	-0.0228	0.0300 19603
Oct-53	0.0318	0.0276 19633
Nov-53	-0.0061	0.0288 19664
Dec-53	-0.0386	0.0288 19694
Jan-54	0.0208	0.0276 19725
Feb-54	0.0450	0.0264 19756
Mar-54	0.1001	0.0300 19784
Apr-54	0.1909	0.0264 19816
May-54	0.2345	0.0240 19845
Jun-54	0.2495	0.0300 19876
Jul-54	0.2925	0.0264 19906
Aug-54	0.3227	0.0276 19937
Sep-54	0.4338	0.0264 19968
Oct-54	0.3371	0.0252 19998
Nov-54	0.4288	0.0276 20029
Dec-54	0.4986	0.0276 20059
Jan-55	0.4507	0.0264 20090
Feb-55	0.4488	0.0264 20121
Mar-55	0.3957	0.0288 20149
Apr-55	0.3818	0.0264 20180
May-55	0.3292	0.0300 20210
Jun-55	0.4413	0.0276 20241
Jul-55	0.4459	0.0276 20271
Aug-55	0.4790	0.0324 20302
Sep-55	0.3822	0.0288 20333
Oct-55	0.3642	0.0300 20363
Nov-55	0.3549	0.0288 20394
Dec-55	0.2867	0.0288 20424
Jan-56	0.2153	0.0300 20455
Feb-56	0.2566	0.0276 20486
Mar-56	0.3519	0.0276 20515
Apr-56	0.2952	0.0312 20546
May-56	0.2097	0.0312 20576
Jun-56	0.1639	0.0276 20607
Jul-56	0.1500	0.0312 20637
Aug-56	0.1141	0.0312 20668
Sep-56	0.0508	0.0300 20699
Oct-56	0.0850	0.0348 20729
Nov-56	-0.0033	0.0324 20760
Dec-56	0.0320	0.0336 20790
Jan-57	0.0248	0.0348 20821
Feb-57	-0.0393	0.0300 20852
Mar-57	-0.0863	0.0312 20880
Apr-57	-0.0528	0.0348 20911
May-57	0.0547	0.0348 20941
Jun-57	0.0171	0.0300 20972
Jul-57	-0.0322	0.0396 21002
Aug-57	-0.0470	0.0360 21033
Sep-57	-0.0650	0.0372 21064
Oct-57	-0.1005	0.0372 21094
Nov-57	-0.0717	0.0348 21125
Dec-57	-0.1427	0.0348 21155

	MRP	Risk Free Rate (Rf)	Time
Jan-58	-0.0617	0.0324	21186
Feb-58	-0.0470	0.0300	21217
Mar-58	-0.0386	0.0324	21245
Apr-58	-0.0422	0.0312	21276
May-58	-0.0612	0.0288	21306
Jun-58	-0.0382	0.0324	21337
Jul-58	-0.0069	0.0324	21367
Aug-58	0.0666	0.0324	21398
Sep-58	0.1896	0.0384	21429
Oct-58	0.2620	0.0384	21459
Nov-58	0.2736	0.0336	21490
Dec-58	0.3941	0.0396	21520
Jan-59	0.3427	0.0372	21551
Feb-59	0.3693	0.0372	21582
Mar-59	0.3226	0.0420	21610
Apr-59	0.3335	0.0396	21641
May-59	0.3373	0.0396	21671
Jun-59	0.2934	0.0432	21702
Jul-59	0.2836	0.0420	21732
Aug-59	0.2474	0.0420	21763
Sep-59	0.1327	0.0408	21794
Oct-59	0.1152	0.0420	21824
Nov-59	0.1042	0.0420	21855
Dec-59	0.0766	0.0432	21885
Jan-60	-0.0061	0.0420	21916
Feb-60	0.0016	0.0444	21947
Mar-60	-0.0121	0.0432	21976
Apr-60	-0.0631	0.0384	22007
May-60	-0.0609	0.0444	22037
Jun-60	-0.0344	0.0408	22068
Jul-60	-0.0900	0.0384	22098
Aug-60	-0.0522	0.0408	22129
Sep-60	-0.0650	0.0384	22160
Oct-60	-0.0792	0.0396	22190
Nov-60	-0.0517	0.0384	22221
Dec-60	-0.0350	0.0396	22251
Jan-61	0.1103	0.0396	22282
Feb-61	0.1334	0.0360	22313
Mar-61	0.1788	0.0372	22341
Apr-61	0.2050	0.0372	22372
May-61	0.1909	0.0408	22402
Jun-61	0.1347	0.0384	22433
Jul-61	0.2027	0.0396	22463
Aug-61	0.1938	0.0396	22494
Sep-61	0.2482	0.0384	22525
Oct-61	0.2850	0.0408	22555
Nov-61	0.2852	0.0384	22586
Dec-61	0.2317	0.0372	22616
Jan-62	0.1040	0.0444	22647
Feb-62	0.0977	0.0384	22678
Mar-62	0.0616	0.0396	22706
Apr-62	-0.0105	0.0396	22737
May-62	-0.1149	0.0384	22767
Jun-62	-0.1626	0.0360	22798
Jul-62	-0.1412	0.0408	22828
Aug-62	-0.1443	0.0408	22859
Sep-62	-0.1652	0.0360	22890
Oct-62	-0.1910	0.0420	22920
Nov-62	-0.1341	0.0372	22951
Dec-62	-0.1257	0.0384	22981
Jan-63	-0.0431	0.0384	23012
Feb-63	-0.0831	0.0348	23043
Mar-63	-0.0458	0.0372	23071
Apr-63	0.0875	0.0408	23102
May-63	0.1898	0.0396	23132
Jun-63	0.2756	0.0360	23163
Jul-63	0.1854	0.0432	23193
Aug-63	0.2283	0.0396	23224
Sep-63	0.2761	0.0408	23255
Oct-63	0.3121	0.0408	23285
Nov-63	0.1763	0.0384	23316
Dec-63	0.1846	0.0432	23346
Jan-64	0.1597	0.0420	23377
Feb-64	0.2108	0.0384	23408
Mar-64	0.1801	0.0444	23437

	MRP	Risk Free Rate (Rf)	Time
Apr-64	0.1330	0.0420	23468
May-64	0.1330	0.0384	23498
Jun-64	0.1695	0.0456	23529
Jul-64	0.1995	0.0420	23559
Aug-64	0.1226	0.0420	23590
Sep-64	0.1706	0.0408	23621
Oct-64	0.1421	0.0408	23651
Nov-64	0.1469	0.0420	23682
Dec-64	0.1231	0.0420	23712
Jan-65	0.1325	0.0396	23743
Feb-65	0.1203	0.0384	23774
Mar-65	0.0791	0.0456	23802
Apr-65	0.1165	0.0396	23833
May-65	0.0947	0.0396	23863
Jun-65	0.0161	0.0456	23894
Jul-65	0.0159	0.0408	23924
Aug-65	0.0540	0.0444	23955
Sep-65	0.0599	0.0420	23986
Oct-65	0.0822	0.0408	24016
Nov-65	0.0746	0.0444	24047
Dec-65	0.0801	0.0444	24077
Jan-66	0.0482	0.0456	24108
Feb-66	0.0353	0.0408	24139
Mar-66	0.0202	0.0480	24167
Apr-66	0.0110	0.0432	24198
May-66	-0.0438	0.0492	24228
Jun-66	-0.0069	0.0468	24259
Jul-66	-0.0331	0.0456	24289
Aug-66	-0.1374	0.0516	24320
Sep-66	-0.1692	0.0492	24351
Oct-66	-0.1505	0.0480	24381
Nov-66	-0.1367	0.0456	24412
Dec-66	-0.1473	0.0468	24442
Jan-67	-0.0827	0.0480	24473
Feb-67	-0.0556	0.0408	24504
Mar-67	0.0001	0.0468	24532
Apr-67	0.0272	0.0420	24563
May-67	0.0192	0.0516	24593
Jun-67	0.0606	0.0468	24624
Jul-67	0.1217	0.0516	24654
Aug-67	0.2057	0.0504	24685
Sep-67	0.2580	0.0480	24716
Oct-67	0.1562	0.0540	24746
Nov-67	0.1526	0.0540	24777
Dec-67	0.1871	0.0528	24807
Jan-68	0.0394	0.0600	24838
Feb-68	0.0127	0.0504	24869
Mar-68	-0.0190	0.0516	24898
Apr-68	0.0130	0.0588	24929
May-68	0.0884	0.0552	24959
Jun-68	0.0637	0.0504	24990
Jul-68	0.0072	0.0576	25020
Aug-68	0.0395	0.0504	25051
Sep-68	0.0432	0.0528	25082
Oct-68	0.0829	0.0540	25112
Nov-68	0.1379	0.0516	25143
Dec-68	0.0520	0.0588	25173
Jan-69	0.0922	0.0600	25204
Feb-69	0.0775	0.0552	25235
Mar-69	0.1042	0.0564	25263
Apr-69	0.0298	0.0660	25294
May-69	0.0248	0.0564	25324
Jun-69	-0.0540	0.0660	25355
Jul-69	-0.0931	0.0624	25385
Aug-69	-0.0607	0.0576	25416
Sep-69	-0.1300	0.0660	25447
Oct-69	-0.0979	0.0684	25477
Nov-69	-0.1646	0.0588	25508
Dec-69	-0.1569	0.0720	25538
Jan-70	-0.2143	0.0672	25569
Feb-70	-0.1193	0.0624	25600
Mar-70	-0.1541	0.0672	25628
Apr-70	-0.2515	0.0648	25659
May-70	-0.2991	0.0660	25689
Jun-70	-0.3051	0.0768	25720

	MRP	Risk Free Rate (Rf)	Time
Jul-70	-0.1893	0.0708	25750
Aug-70	-0.1823	0.0684	25781
Sep-70	-0.1281	0.0672	25812
Oct-70	-0.1769	0.0660	25842
Nov-70	-0.1041	0.0696	25873
Dec-70	-0.0233	0.0636	25903
Jan-71	0.1096	0.0612	25934
Feb-71	0.0664	0.0552	25965
Mar-71	0.0938	0.0672	25993
Apr-71	0.2647	0.0576	26024
May-71	0.2911	0.0564	26054
Jun-71	0.3515	0.0672	26085
Jul-71	0.2044	0.0624	26115
Aug-71	0.1891	0.0660	26146
Sep-71	0.1474	0.0588	26177
Oct-71	0.1125	0.0564	26207
Nov-71	0.0512	0.0612	26238
Dec-71	0.0832	0.0600	26268
Jan-72	0.0585	0.0600	26299
Feb-72	0.0795	0.0564	26330
Mar-72	0.0432	0.0588	26359
Apr-72	0.0104	0.0576	26390
May-72	0.0670	0.0660	26420
Jun-72	0.0486	0.0588	26451
Jul-72	0.0964	0.0612	26481
Aug-72	0.0965	0.0588	26512
Sep-72	0.1012	0.0564	26543
Oct-72	0.1568	0.0624	26573
Nov-72	0.2198	0.0576	26604
Dec-72	0.1358	0.0540	26634
Jan-73	0.0838	0.0648	26665
Feb-73	0.0169	0.0612	26696
Mar-73	0.0030	0.0672	26724
Apr-73	-0.0463	0.0684	26755
May-73	-0.0833	0.0696	26785
Jun-73	-0.0642	0.0680	26816
Jul-73	-0.0357	0.0732	26846
Aug-73	-0.1077	0.0744	26877
Sep-73	-0.0555	0.0660	26908
Oct-73	-0.0755	0.0756	26938
Nov-73	-0.2182	0.0672	26969
Dec-73	-0.2187	0.0720	26999
Jan-74	-0.2134	0.0732	27030
Feb-74	-0.1749	0.0660	27061
Mar-74	-0.1977	0.0696	27089
Apr-74	-0.2077	0.0816	27120
May-74	-0.2195	0.0816	27150
Jun-74	-0.2178	0.0732	27181
Jul-74	-0.3259	0.0864	27211
Aug-74	-0.3575	0.0780	27242
Sep-74	-0.4744	0.0852	27273
Oct-74	-0.3722	0.0840	27303
Nov-74	-0.3120	0.0744	27334
Dec-74	-0.3449	0.0804	27364
Jan-75	-0.2470	0.0816	27395
Feb-75	-0.1828	0.0720	27426
Mar-75	-0.1488	0.0792	27454
Apr-75	-0.0663	0.0804	27485
May-75	0.0151	0.0804	27515
Jun-75	0.0770	0.0840	27546
Jul-75	0.0920	0.0816	27576
Aug-75	0.1831	0.0780	27607
Sep-75	0.2937	0.0876	27638
Oct-75	0.1741	0.0864	27668
Nov-75	0.2877	0.0732	27699
Dec-75	0.2833	0.0868	27729
Jan-76	0.2878	0.0780	27760
Feb-76	0.2001	0.0720	27791
Mar-76	0.1980	0.0852	27820
Apr-76	0.1340	0.0768	27851
May-76	0.0729	0.0708	27881
Jun-76	0.0523	0.0876	27912
Jul-76	0.1340	0.0780	27942
Aug-76	0.1487	0.0828	27973
Sep-76	0.2279	0.0768	28004

	MRP	Risk Free Rate (Rf)	Time
Oct-76	0.1281	0.0732	28034
Nov-76	0.0846	0.0792	28065
Dec-76	0.1629	0.0756	28095
Jan-77	-0.0190	0.0708	28126
Feb-77	-0.0264	0.0684	28157
Mar-77	-0.0809	0.0780	28185
Apr-77	-0.0647	0.0732	28216
May-77	-0.0798	0.0804	28246
Jun-77	-0.0692	0.0744	28277
Jul-77	-0.0740	0.0708	28307
Aug-77	-0.0982	0.0804	28338
Sep-77	-0.1147	0.0732	28369
Oct-77	-0.1375	0.0756	28399
Nov-77	-0.1019	0.0756	28430
Dec-77	-0.1462	0.0744	28460
Jan-78	-0.1650	0.0828	28491
Feb-78	-0.1552	0.0720	28522
Mar-78	-0.1293	0.0828	28550
Apr-78	-0.0406	0.0756	28581
May-78	-0.0250	0.0900	28611
Jun-78	-0.0815	0.0828	28642
Jul-78	-0.0140	0.0876	28672
Aug-78	0.0410	0.0840	28703
Sep-78	0.0416	0.0780	28734
Oct-78	-0.0236	0.0876	28764
Nov-78	-0.0325	0.0852	28795
Dec-78	-0.0159	0.0816	28825
Jan-79	0.0862	0.0948	28856
Feb-79	0.0882	0.0780	28887
Mar-79	0.1114	0.0888	28915
Apr-79	0.0169	0.0912	28946
May-79	-0.0176	0.0924	28976
Jun-79	0.0510	0.0852	29007
Jul-79	-0.0034	0.0912	29037
Aug-79	0.0287	0.0876	29068
Sep-79	0.0429	0.0816	29099
Oct-79	0.0551	0.0984	29129
Nov-79	0.0824	0.0996	29160
Dec-79	0.0848	0.0996	29190
Jan-80	0.1082	0.0996	29221
Feb-80	0.1441	0.1008	29252
Mar-80	-0.0578	0.1188	29281
Apr-80	-0.0174	0.1200	29312
May-80	0.0801	0.1044	29342
Jun-80	0.0683	0.1032	29373
Jul-80	0.1363	0.1008	29403
Aug-80	0.0839	0.0972	29434
Sep-80	0.0949	0.1164	29465
Oct-80	0.2042	0.1164	29495
Nov-80	0.2843	0.1092	29526
Dec-80	0.1946	0.1296	29556
Jan-81	0.0806	0.1128	29587
Feb-81	0.1089	0.1056	29618
Mar-81	0.2655	0.1332	29648
Apr-81	0.1914	0.1212	29677
May-81	0.1256	0.1248	29707
Jun-81	0.0740	0.1308	29738
Jul-81	-0.0015	0.1308	29768
Aug-81	-0.0791	0.1320	29799
Sep-81	-0.1641	0.1368	29830
Oct-81	-0.1351	0.1404	29860
Nov-81	-0.1896	0.1356	29891
Dec-81	-0.1691	0.1200	29921
Jan-82	-0.1513	0.1296	29952
Feb-82	-0.2143	0.1236	29983
Mar-82	-0.2781	0.1488	30011
Apr-82	-0.2079	0.1344	30042
May-82	-0.2269	0.1212	30072
Jun-82	-0.2582	0.1440	30103
Jul-82	-0.2707	0.1368	30133
Aug-82	-0.1013	0.1344	30164
Sep-82	-0.0203	0.1200	30195
Oct-82	0.0530	0.1092	30225
Nov-82	0.0490	0.1128	30256
Dec-82	0.1025	0.1116	30286

MRP	Risk Free Rate (Rf)	Time
Jan-83	0.1728	0.1044
Feb-83	0.2839	0.0972
Mar-83	0.3333	0.1068
Apr-83	0.3857	0.1020
May-83	0.4147	0.1082
Jun-83	0.5021	0.1080
Jul-83	0.4884	0.1056
Aug-83	0.3152	0.1236
Sep-83	0.3273	0.1152
Oct-83	0.1851	0.1140
Nov-83	0.1412	0.1128
Dec-83	0.1123	0.1128
Jan-84	0.0526	0.1236
Feb-84	-0.0016	0.1104
Mar-84	-0.0295	0.1176
Apr-84	-0.1064	0.1248
May-84	-0.1546	0.1236
Jun-84	-0.1732	0.1272
Jul-84	-0.1684	0.1392
Aug-84	-0.0653	0.1272
Sep-84	-0.0649	0.1128
Oct-84	-0.0647	0.1296
Nov-84	-0.0791	0.1092
Dec-84	-0.0549	0.1176
Jan-85	0.0366	0.1152
Feb-85	0.1087	0.0984
Mar-85	0.0762	0.1128
Apr-85	0.0547	0.1224
May-85	0.2035	0.1164
Jun-85	0.2159	0.0960
Jul-85	0.2147	0.1128
Aug-85	0.0840	0.1020
Sep-85	0.0421	0.1056
Oct-85	0.0891	0.1068
Nov-85	0.1974	0.0972
Dec-85	0.2184	0.1032
Jan-86	0.1379	0.0948
Feb-86	0.2210	0.0876
Mar-86	0.2934	0.0852
Apr-86	0.2903	0.0756
May-86	0.2830	0.0744
Jun-86	0.2743	0.0840
Jul-86	0.2052	0.0782
Aug-86	0.3133	0.0756
Sep-86	0.2390	0.0780
Oct-86	0.2480	0.0828
Nov-86	0.2029	0.0708
Dec-86	0.1007	0.0840
Jan-87	0.2611	0.0768
Feb-87	0.2239	0.0708
Mar-87	0.1809	0.0792
Apr-87	0.1867	0.0780
May-87	0.1320	0.0792
Jun-87	0.1609	0.0900
Jul-87	0.3048	0.0876
Aug-87	0.2554	0.0900
Sep-87	0.3436	0.0900
Oct-87	-0.0290	0.0948
Nov-87	-0.1359	0.0900
Dec-87	-0.0413	0.0936
Jan-88	-0.1191	0.0864
Feb-88	-0.1126	0.0852
Mar-88	-0.1681	0.0864
Apr-88	-0.1476	0.0840
May-88	-0.1595	0.0936
Jun-88	-0.1602	0.0912
Jul-88	-0.2019	0.0852
Aug-88	-0.2772	0.0996
Sep-88	-0.2147	0.0912
Oct-88	0.0582	0.0912
Nov-88	0.1480	0.0840
Dec-88	0.0781	0.0900
Jan-89	0.1053	0.0960
Feb-89	0.0360	0.0828
Mar-89	0.0860	0.0948

MRP	Risk Free Rate (Rf)	Time
Apr-89	0.1445	0.0840 32599
May-89	0.1720	0.0960 32629
Jun-89	0.1212	0.0840 32680
Jul-89	0.2371	0.0816 32690
Aug-89	0.3110	0.0792 32721
Sep-89	0.2504	0.0780 32752
Oct-89	0.1766	0.0884 32782
Nov-89	0.2310	0.0768 32813
Dec-89	0.2381	0.0768 32843
Jan-90	0.0564	0.0876 32874
Feb-90	0.1091	0.0792 32905
Mar-90	0.1062	0.0852 32933
Apr-90	0.0150	0.0900 32964
May-90	0.0759	0.0900 32994
Jun-90	0.0824	0.0816 33025
Jul-90	-0.0241	0.0888 33055
Aug-90	-0.1350	0.0852 33086
Sep-90	-0.1758	0.0828 33117
Oct-90	-0.1720	0.0972 33147
Nov-90	-0.1205	0.0852 33178
Dec-90	-0.1181	0.0864 33208
Jan-91	-0.0014	0.0852 33239
Feb-91	0.0698	0.0768 33270
Mar-91	0.0670	0.0768 33298
Apr-91	0.0849	0.0912 33329
May-91	0.0358	0.0816 33359
Jun-91	-0.0017	0.0756 33390
Jul-91	0.0366	0.0912 33420
Aug-91	0.1872	0.0816 33451
Sep-91	0.2310	0.0816 33482
Oct-91	0.2571	0.0780 33512
Nov-91	0.1317	0.0720 33543
Dec-91	0.2239	0.0816 33573
Jan-92	0.1538	0.0732 33604
Feb-92	0.0889	0.0708 33635
Mar-92	0.0301	0.0804 33664
Apr-92	0.0616	0.0780 33695
May-92	0.0255	0.0732 33725
Jun-92	0.0543	0.0804 33756
Jul-92	0.0520	0.0756 33786
Aug-92	0.0075	0.0720 33817
Sep-92	0.0405	0.0696 33848
Oct-92	0.0310	0.0684 33878
Nov-92	0.1111	0.0732 33909
Dec-92	0.0011	0.0756 33939
Jan-93	0.0343	0.0708 33970
Feb-93	0.0399	0.0660 34001
Mar-93	0.0766	0.0756 34029
Apr-93	0.0238	0.0684 34060
May-93	0.0533	0.0624 34090
Jun-93	0.0614	0.0744 34121
Jul-93	0.0219	0.0648 34151
Aug-93	0.0842	0.0672 34182
Sep-93	0.0899	0.0600 34213
Oct-93	0.0899	0.0588 34243
Nov-93	0.0372	0.0636 34274
Dec-93	0.0339	0.0660 34304
Jan-94	0.0625	0.0660 34335
Feb-94	0.0246	0.0588 34366
Mar-94	-0.0551	0.0696 34394
Apr-94	-0.0149	0.0684 34425
May-94	-0.0331	0.0756 34455
Jun-94	-0.0598	0.0732 34486
Jul-94	-0.0201	0.0720 34516
Aug-94	-0.0247	0.0792 34547
Sep-94	-0.0364	0.0732 34578
Oct-94	-0.0398	0.0792 34608
Nov-94	-0.0660	0.0768 34639
Dec-94	-0.0661	0.0792 34669
Jan-95	-0.0783	0.0840 34700
Feb-95	0.0029	0.0708 34731
Mar-95	0.0790	0.0768 34759
Apr-95	0.1046	0.0696 34790
May-95	0.1230	0.0780 34820
Jun-95	0.1955	0.0648 34851

MRP	Risk Free Rate (Rf)		Time
Jul-95	0.1934	0.0672	34881
Aug-95	0.1461	0.0684	34912
Sep-95	0.2343	0.0624	34943
Oct-95	0.1948	0.0684	34973
Nov-95	0.3078	0.0612	35004
Dec-95	0.3155	0.0588	35034
Jan-96	0.3207	0.0648	35065
Feb-96	0.2890	0.0576	35096
Mar-96	0.2580	0.0624	35125
Apr-96	0.2312	0.0708	35156
May-96	0.2152	0.0696	35186
Jun-96	0.1957	0.0648	35217
Jul-96	0.0912	0.0744	35247
Aug-96	0.1187	0.0684	35278
Sep-96	0.1313	0.0720	35309
Oct-96	0.1711	0.0696	35339
Nov-96	0.2162	0.0624	35370
Dec-96	0.1635	0.0672	35400
Jan-97	0.1965	0.0672	35431
Feb-97	0.2006	0.0612	35462
Mar-97	0.1270	0.0708	35490
Apr-97	0.1802	0.0708	35521
May-97	0.2248	0.0696	35551
Jun-97	0.2758	0.0708	35582
Jul-97	0.4516	0.0696	35612
Aug-97	0.3480	0.0588	35643
Sep-97	0.3353	0.0696	35674
Oct-97	0.2570	0.0648	35704
Nov-97	0.2290	0.0564	35735
Dec-97	0.2689	0.0648	35765
Jan-98	0.2120	0.0576	35796
Feb-98	0.2974	0.0528	35827
Mar-98	0.4186	0.0624	35855
Apr-98	0.3528	0.0588	35886
May-98	0.2495	0.0576	35916
Jun-98	0.2397	0.0624	35947
Jul-98	0.1347	0.0588	35977
Aug-98	0.0235	0.0576	36008
Sep-98	0.0378	0.0528	36039
Oct-98	0.1696	0.0504	36069
Nov-98	0.1827	0.0540	36100
Dec-98	0.2318	0.0540	36130
Jan-99	0.2744	0.0504	36161
Feb-99	0.1493	0.0480	36192
Mar-99	0.1209	0.0636	36220
Apr-99	0.1605	0.0576	36251
May-99	0.1562	0.0540	36281
Jun-99	0.1615	0.0660	36312
Jul-99	0.1407	0.0612	36342
Aug-99	0.3333	0.0648	36373
Sep-99	0.2155	0.0624	36404
Oct-99	0.1966	0.0800	36434
Nov-99	0.1416	0.0672	36465
Dec-99	0.1443	0.0660	36495
Jan-00	0.0350	0.0684	36526
Feb-00	0.0561	0.0612	36557
Mar-00	0.1146	0.0648	36586
Apr-00	0.0449	0.0564	36617
May-00	0.0376	0.0672	36647
Jun-00	0.0101	0.0624	36678
Jul-00	0.0273	0.0624	36708
Aug-00	0.1032	0.0600	36739
Sep-00	0.0776	0.0552	36770
Oct-00	-0.0027	0.0636	36800
Nov-00	-0.0997	0.0576	36831
Dec-00	-0.1450	0.0540	36861
Jan-01	-0.0677	0.0588	36892
Feb-01	-0.1324	0.0504	36923
Mar-01	-0.2708	0.0540	36951
Apr-01	-0.1861	0.0564	36982
May-01	-0.1656	0.0600	37012
Jun-01	-0.2046	0.0564	37043
Jul-01	-0.2056	0.0624	37073
Aug-01	-0.2990	0.0552	37104
Sep-01	-0.3154	0.0492	37135

	MRP	Risk Free Rate (Rf)	Time
Oct-01	-0.3066	0.0576	37165
Nov-01	-0.1714	0.0492	37196
Dec-01	-0.1740	0.0552	37226
Jan-02	-0.2191	0.0576	37257
Feb-02	-0.1467	0.0516	37288
Mar-02	-0.0491	0.0516	37316
Apr-02	-0.1910	0.0648	37347
May-02	-0.1972	0.0588	37377
Jun-02	-0.2328	0.0528	37408
Jul-02	-0.2975	0.0612	37438
Aug-02	-0.2328	0.0528	37469
Sep-02	-0.2552	0.0504	37500
Oct-02	-0.1991	0.0480	37530
Nov-02	-0.2131	0.0480	37561
Dec-02	-0.2751	0.0540	37591
Jan-03	-0.2794	0.0492	37622
Feb-03	-0.2725	0.0456	37653
Mar-03	-0.2956	0.0480	37681
Apr-03	-0.1811	0.0480	37712
May-03	-0.1274	0.0468	37742
Jun-03	-0.0407	0.0432	37773
Jul-03	0.0609	0.0456	37803
Aug-03	0.0702	0.0504	37834
Sep-03	0.1888	0.0552	37865
Oct-03	0.1589	0.0492	37895
Nov-03	0.1041	0.0468	37926
Dec-03	0.2305	0.0564	37956
Jan-04	0.2954	0.0504	37987
Feb-04	0.3397	0.0456	38018
Mar-04	0.2997	0.0516	38047
Apr-04	0.1820	0.0468	38078
May-04	0.1353	0.0480	38108
Jun-04	0.1334	0.0576	38139
Jul-04	0.0801	0.0516	38169
Aug-04	0.0605	0.0540	38200
Sep-04	0.0906	0.0480	38231
Oct-04	0.0485	0.0456	38261
Nov-04	0.0793	0.0492	38292
Dec-04	0.0571	0.0516	38322
Jan-05	0.0129	0.0492	38353
Feb-05	0.0276	0.0420	38384
Mar-05	0.0175	0.0492	38412
Apr-05	0.0164	0.0468	38443
May-05	0.0342	0.0480	38473
Jun-05	0.0198	0.0432	38504
Jul-05	0.0995	0.0408	38534
Aug-05	0.0775	0.0480	38565
Sep-05	0.0804	0.0420	38596
Oct-05	0.0403	0.0468	38626
Nov-05	0.0375	0.0468	38657
Dec-05	0.0021	0.0468	38687
Jan-06	0.0556	0.0480	38718
Feb-06	0.0407	0.0432	38749
Mar-06	0.0703	0.0468	38777
Apr-06	0.1072	0.0468	38808
May-06	0.0286	0.0576	38838
Jun-06	0.0334	0.0528	38869
Jul-06	-0.0003	0.0540	38899
Aug-06	0.0371	0.0516	38930
Sep-06	0.0610	0.0468	38961
Oct-06	0.1130	0.0504	38991
Nov-06	0.0955	0.0468	39022
Dec-06	0.1147	0.0432	39052
Jan-07	0.0935	0.0516	39083
Feb-07	0.0740	0.0456	39114
Mar-07	0.0715	0.0468	39142
Apr-07	0.1020	0.0504	39173
May-07	0.1788	0.0492	39203
Jun-07	0.1579	0.0480	39234
Jul-07	0.1061	0.0552	39264
Aug-07	0.1009	0.0504	39295
Sep-07	0.1201	0.0444	39326
Oct-07	0.0940	0.0516	39356
Nov-07	0.0305	0.0468	39387
Dec-07	0.0107	0.0444	39417

	MRP	Risk Free Rate (Rf)	Time
Jan-08	-0.0710	0.0480	39448
Feb-08	-0.0793	0.0408	39479
Mar-08	-0.0977	0.0444	39508
Apr-08	-0.0913	0.0420	39539
May-08	-0.1138	0.0444	39569
Jun-08	-0.1815	0.0480	39600
Jul-08	-0.1601	0.0468	39630
Aug-08	-0.1569	0.0432	39661
Sep-08	-0.2686	0.0468	39692
Oct-08	-0.4070	0.0444	39722
Nov-08	-0.4258	0.0432	39753
Dec-08	-0.4113	0.0396	39783
Jan-09	-0.4167	0.0288	39814
Feb-09	-0.4692	0.0360	39845
Mar-09	-0.4229	0.0420	39873
Apr-09	-0.3879	0.0348	39904
May-09	-0.3653	0.0396	39934
Jun-09	-0.3078	0.0456	39965
Jul-09	-0.2429	0.0432	39995
Aug-09	-0.2258	0.0432	40026
Sep-09	-0.1100	0.0408	40057
Oct-09	0.0582	0.0396	40087
Nov-09	0.2117	0.0420	40118
Dec-09	0.2237	0.0408	40148
Jan-10	0.2680	0.0432	40179
Feb-10	0.4964	0.0396	40210
Mar-10	0.4495	0.0480	40238
Apr-10	0.3427	0.0456	40269
May-10	0.1689	0.0408	40299
Jun-10	0.0998	0.0444	40330
Jul-10	0.1018	0.0372	40360
Aug-10	0.0113	0.0384	40391
Sep-10	0.0710	0.0312	40422
Oct-10	0.1334	0.0324	40452
Nov-10	0.0615	0.0384	40483
Dec-10	0.1128	0.0384	40513
Jan-11	0.1805	0.0420	40544
Feb-11	0.1880	0.0384	40575
Mar-11	0.1139	0.0432	40603
Apr-11	0.1320	0.0408	40634
May-11	0.2170	0.0432	40664
Jun-11	0.2692	0.0384	40695
Jul-11	0.1580	0.0384	40725
Aug-11	0.1453	0.0396	40756
Sep-11	-0.0186	0.0300	40787
Oct-11	0.0545	0.0264	40817
Nov-11	0.0508	0.0276	40848
Dec-11	-0.0052	0.0264	40878
Jan-12	0.0170	0.0252	40909
Feb-12	0.0284	0.0228	40940
Mar-12	0.0589	0.0264	40969
Apr-12	0.0175	0.0300	41000
May-12	-0.0306	0.0264	41030
Jun-12	0.0340	0.0204	41061
Jul-12	0.0672	0.0240	41091
Aug-12	0.1595	0.0204	41122
Sep-12	0.2826	0.0192	41153
Oct-12	0.1278	0.0240	41183
Nov-12	0.1383	0.0228	41214
Dec-12	0.1382	0.0216	41244
Jan-13	0.1412	0.0264	41275
Feb-13	0.1081	0.0264	41306
Mar-13	0.1143	0.0252	41334
Apr-13	0.1377	0.0312	41365
May-13	0.2463	0.0264	41395
Jun-13	0.1784	0.0276	41426
Jul-13	0.2140	0.0360	41456
Aug-13	0.1546	0.0324	41487
Sep-13	0.1587	0.0348	41518
Oct-13	0.2371	0.0348	41548
Nov-13	0.2720	0.0312	41579
Dec-13	0.2869	0.0372	41609
Jan-14	0.1781	0.0372	41640
Feb-14	0.2238	0.0300	41671
Mar-14	0.1838	0.0348	41699

	MRP	Risk Free Rate (Rf)	Time
Apr-14	0.1720	0.0324	41730
May-14	0.1709	0.0336	41760
Jun-14	0.2162	0.0300	41791
Jul-14	0.1382	0.0312	41821
Aug-14	0.2225	0.0300	41852
Sep-14	0.1698	0.0276	41883
Oct-14	0.1427	0.0300	41913
Nov-14	0.1410	0.0276	41944
Dec-14	0.1105	0.0264	41974
Jan-15	0.1183	0.0240	42005
Feb-15	0.1372	0.0180	42036
Mar-15	0.1023	0.0252	42064
Apr-15	0.1071	0.0228	42095
May-15	0.0942	0.0240	42125
Jun-15	0.0467	0.0276	42156
Jul-15	0.0834	0.0288	42186
Aug-15	-0.0214	0.0264	42217
Sep-15	-0.0312	0.0252	42248
Oct-15	0.0271	0.0252	42278
Nov-15	0.0014	0.0264	42309
Dec-15	-0.0123	0.0264	42339
Jan-16	-0.0316	0.0252	42370
Feb-16	-0.0857	0.0240	42401
Mar-16	-0.0036	0.0216	42430
Apr-16	-0.0081	0.0204	42461
May-16	-0.0066	0.0240	42491
Jun-16	0.0186	0.0216	42522
Jul-16	0.0396	0.0168	42552
Aug-16	0.1066	0.0192	42583
Sep-16	0.1365	0.0180	42614
Oct-16	0.0261	0.0192	42644
Nov-16	0.0591	0.0216	42675
Dec-16	0.0934	0.0264	42705

Analysis Using Gorman's Rolling Average Equity Risk Premium Data

Year	Authorized Electric Returns	Treasury Bond Yield	Indicated Risk Premium	Rolling 5-Year Average Treasury	Rolling 5-Year Average Risk Premium	Slope	Rolling 10-Year Average Treasury	Rolling 10-Year Average Risk Premium	Slope
1986	13.93%	7.80%	6.13%						
1987	12.99%	8.58%	4.41%						
1988	12.79%	8.96%	3.83%						
1989	12.97%	8.45%	4.52%						
1990	12.70%	8.61%	4.09%	8.48%	4.60%	-46.32%			-48.18%
1991	12.55%	8.14%	4.41%	8.55%	4.25%				
1992	12.09%	7.67%	4.42%	8.36%	4.26%				
1993	11.41%	8.60%	4.81%	7.89%	4.45%				
1994	11.34%	7.37%	3.97%	7.68%	4.34%				
1995	11.55%	6.88%	4.67%	7.33%	4.48%		7.91%	4.53%	
1996	11.39%	6.70%	4.69%	7.04%	4.51%		7.80%	4.38%	
1997	11.40%	6.61%	4.79%	6.83%	4.59%		7.60%	4.42%	
1998	11.66%	5.58%	6.08%	6.63%	4.84%		7.26%	4.65%	
1999	10.77%	5.87%	4.90%	6.33%	5.03%		7.00%	4.68%	
2000	11.43%	5.94%	5.49%	6.14%	5.19%		6.73%	4.82%	
2001	11.09%	5.49%	5.60%	5.90%	5.37%		6.47%	4.94%	
2002	11.16%	5.43%	5.73%	5.66%	5.66%		6.25%	5.07%	
2003	10.97%	4.96%	6.01%	5.54%	5.55%		6.08%	5.19%	
2004	10.75%	5.05%	5.70%	5.37%	5.71%		5.85%	5.37%	
2005	10.54%	4.65%	5.89%	5.11%	5.79%		5.63%	5.49%	
2006	10.34%	4.90%	5.44%	5.00%	5.76%		5.45%	5.56%	
2007	10.31%	4.83%	5.48%	4.88%	5.71%		5.27%	5.63%	
2008	10.37%	4.28%	6.09%	4.74%	5.72%		5.14%	5.83%	
2009	10.52%	4.07%	6.45%	4.55%	5.87%		4.96%	5.79%	
2010	10.29%	4.25%	6.04%	4.47%	5.90%		4.79%	5.84%	
2011	10.19%	3.91%	6.28%	4.27%	6.07%		4.63%	5.91%	
2012	10.01%	2.92%	7.09%	3.89%	6.39%		4.38%	6.05%	
2013	9.81%	3.45%	6.36%	3.72%	6.44%		4.23%	6.08%	
2014	9.75%	3.34%	6.41%	3.57%	6.44%		4.06%	6.15%	
2015	9.60%	2.84%	6.76%	3.29%	6.58%		3.88%	6.24%	
2016	9.60%	2.80%	7.00%	3.03%	6.72%		3.65%	6.40%	
2017	9.61%	3.04%	6.57%	3.05%	6.62%		3.47%	6.50%	
Average	11.12%	5.62%	5.50%	5.62%	5.45%		5.59%	5.45%	
Minimum				3.03%	4.25%		3.47%	4.38%	
Maximum				8.55%	6.72%		7.91%	6.50%	

Source: Exhibit MPG-13

Analysis Using Gorman's Rolling Average Equity Risk Premium Data

Year	Authorized Electric Returns	Utility Bond Yield	Indicated Risk Premium	Rolling 5-Year Average Utility Bond	5-Year Average Risk Premium	Rolling Slope	Rolling 10-Year Average Utility Bond	10-Year Average Risk Premium	Slope
1986	13.93%	9.58%	4.35%						
1987	12.99%	10.10%	2.89%						
1988	12.79%	10.49%	2.30%						
1989	12.97%	9.77%	3.20%						
1990	12.70%	9.86%	2.84%	9.96%	3.12%	-46.03%			-45.87%
1991	12.55%	9.36%	3.19%	9.92%	2.88%				
1992	12.09%	8.69%	3.40%	9.63%	2.99%				
1993	11.41%	7.59%	3.82%	9.05%	3.29%				
1994	11.34%	8.31%	3.03%	8.76%	3.26%				
1995	11.55%	7.89%	3.66%	8.37%	3.42%		9.16%	3.27%	
1996	11.39%	7.75%	3.64%	8.05%	3.51%		8.98%	3.20%	
1997	11.40%	7.60%	3.80%	7.83%	3.59%		8.73%	3.29%	
1998	11.66%	7.04%	4.62%	7.72%	3.75%		8.39%	3.52%	
1999	10.77%	7.62%	3.15%	7.58%	3.77%		8.17%	3.52%	
2000	11.43%	8.24%	3.19%	7.65%	3.68%		8.01%	3.55%	
2001	11.09%	7.76%	3.33%	7.65%	3.62%		7.85%	3.56%	
2002	11.16%	7.37%	3.79%	7.61%	3.61%		7.72%	3.60%	
2003	10.97%	6.58%	4.39%	7.52%	3.57%		7.62%	3.66%	
2004	10.75%	6.16%	4.59%	7.22%	3.86%		7.40%	3.82%	
2005	10.54%	5.65%	4.69%	6.71%	4.20%		7.18%	3.94%	
2006	10.34%	6.07%	4.27%	6.37%	4.39%		7.01%	4.00%	
2007	10.31%	6.07%	4.24%	6.11%	4.48%		6.88%	4.04%	
2008	10.37%	6.53%	3.84%	6.10%	4.37%		6.81%	3.97%	
2009	10.52%	6.04%	4.48%	6.07%	4.34%		6.65%	4.10%	
2010	10.29%	5.46%	4.83%	6.03%	4.33%		6.37%	4.26%	
2011	10.19%	5.04%	5.15%	5.83%	4.51%		6.10%	4.45%	
2012	10.01%	4.13%	5.88%	5.44%	4.84%		5.77%	4.68%	
2013	9.81%	4.48%	5.33%	5.03%	5.13%		5.56%	4.75%	
2014	9.75%	4.28%	5.47%	4.68%	5.33%		5.37%	4.84%	
2015	9.60%	4.12%	5.48%	4.41%	5.46%		5.22%	4.90%	
2016	9.60%	3.93%	5.67%	4.19%	5.57%		5.01%	5.04%	
2017	9.61%	4.18%	5.43%	4.20%	5.48%		4.82%	5.16%	
Average	11.12%	6.99%	4.13%	6.99%	4.08%		6.99%	4.05%	
Minimum				4.19%	2.88%		4.82%	3.20%	
Maximum				9.96%	5.57%		9.16%	5.16%	

Source: Exhibit MPG-14

Analysis Using Gorman's Rolling Average Equity Risk Premium Data

SUMMARY OUTPUT

Regression Statistics		MRP	Rf
Multiple R	0.904908967	6.45%	3.47%
R Square	0.818860238	ROE	9.92%
Adjusted R Square	0.812822246		
Standard Error	0.004020123		
Observations	32		

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.002191774	0.002191774	135.6179718	1.176E-12
Residual	30	0.000484842	1.61614E-05		
Total	31	0.002676616			

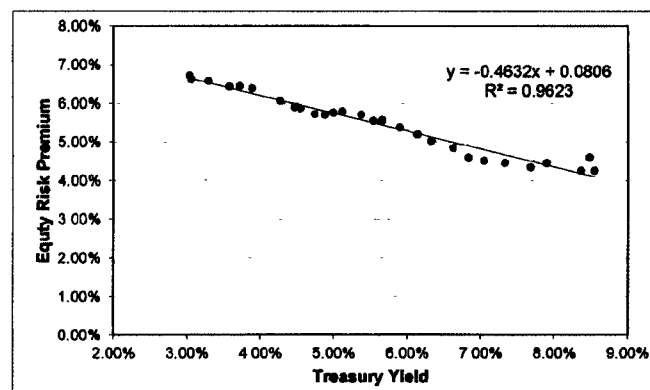
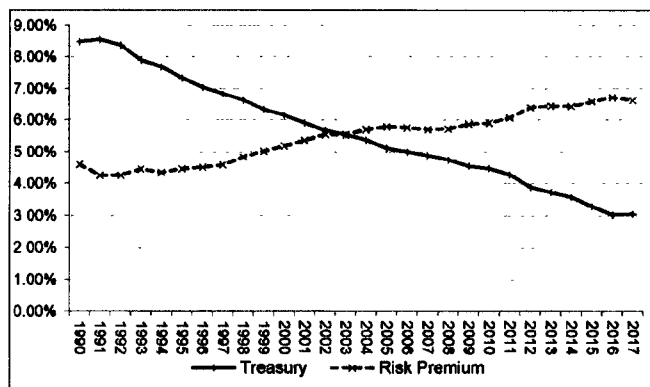
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.079819146	0.002243271	35.58158433	4.2857E-26	0.075237775	0.084400517	0.075237775	0.084400517
Treasury Bond Yield	-0.441119237	0.037878901	-11.64551295	1.176E-12	-0.518478274	-0.3637602	-0.518478274	-0.3637602

SUMMARY OUTPUT

Regression Statistics		MRP	Rf
Multiple R	0.921494806	5.11%	4.82%
R Square	0.849152678	ROE	9.93%
Adjusted R Square	0.844124434		
Standard Error	0.003781036		
Observations	32		

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.002414299	0.002414299	168.876583	7.42936E-14
Residual	30	0.000428887	1.42962E-05		
Total	31	0.002843186			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.072834432	0.002617556	28.93062637	1.79307E-23	0.067692899	0.077975964	0.067692899	0.077975964
Utility Bond Yield	-0.451116225	0.034713926	-12.99525233	7.42936E-14	-0.522011519	-0.38022093	-0.522011519	-0.38022093



Analysis Using Mr. Gorman's Annual Equity Risk Premium Data

Year	ROE	Utility "A" Bond Yield	Treasury Bond Yield	Credit Spread	Treasury Equity Risk Premium	Utility Bond Equity Risk Premium	Treasury Yield	Credit Spread
1986	13.93%	9.58%	7.80%	1.78%	6.13%	4.35%	7.80%	1.78%
1987	12.99%	10.10%	8.58%	1.52%	4.41%	2.89%	8.58%	1.52%
1988	12.79%	10.49%	8.96%	1.53%	3.83%	2.30%	8.96%	1.53%
1989	12.97%	9.77%	8.45%	1.32%	4.52%	3.20%	8.45%	1.32%
1990	12.70%	9.86%	8.61%	1.25%	4.09%	2.84%	8.61%	1.25%
1991	12.55%	9.36%	8.14%	1.22%	4.41%	3.19%	8.14%	1.22%
1992	12.09%	8.69%	7.67%	1.02%	4.42%	3.40%	7.67%	1.02%
1993	11.41%	7.59%	6.60%	0.99%	4.81%	3.82%	6.60%	0.99%
1994	11.34%	8.31%	7.37%	0.94%	3.97%	3.03%	7.37%	0.94%
1995	11.55%	7.89%	6.88%	1.01%	4.67%	3.66%	6.88%	1.01%
1996	11.39%	7.75%	6.70%	1.05%	4.69%	3.64%	6.70%	1.05%
1997	11.40%	7.60%	6.61%	0.99%	4.79%	3.80%	6.61%	0.99%
1998	11.66%	7.04%	5.58%	1.46%	6.08%	4.62%	5.58%	1.46%
1999	10.77%	7.62%	5.87%	1.75%	4.90%	3.15%	5.87%	1.75%
2000	11.43%	8.24%	5.94%	2.30%	5.49%	3.19%	5.94%	2.30%
2001	11.09%	7.76%	5.49%	2.27%	5.60%	3.33%	5.49%	2.27%
2002	11.16%	7.37%	5.43%	1.94%	5.73%	3.79%	5.43%	1.94%
2003	10.97%	6.58%	4.96%	1.62%	6.01%	4.39%	4.96%	1.62%
2004	10.75%	6.16%	5.05%	1.11%	5.70%	4.59%	5.05%	1.11%
2005	10.54%	5.65%	4.65%	1.00%	5.89%	4.89%	4.65%	1.00%
2006	10.34%	6.07%	4.90%	1.17%	5.44%	4.27%	4.90%	1.17%
2007	10.31%	6.07%	4.83%	1.24%	5.48%	4.24%	4.83%	1.24%
2008	10.37%	6.53%	4.28%	2.25%	6.09%	3.84%	4.28%	2.25%
2009	10.52%	6.04%	4.07%	1.97%	6.45%	4.48%	4.07%	1.97%
2010	10.29%	5.48%	4.25%	1.21%	6.04%	4.83%	4.25%	1.21%
2011	10.19%	5.04%	3.91%	1.13%	6.28%	5.15%	3.91%	1.13%
2012	10.01%	4.13%	2.92%	1.21%	7.09%	5.88%	2.92%	1.21%
2013	9.81%	4.48%	3.45%	1.03%	6.36%	5.33%	3.45%	1.03%
2014	9.75%	4.28%	3.34%	0.94%	6.41%	5.47%	3.34%	0.94%
2015	9.60%	4.12%	2.84%	1.27%	6.76%	5.48%	2.84%	1.27%
2016	9.60%	3.93%	2.60%	1.33%	7.00%	5.67%	2.60%	1.33%
2017	9.61%	4.18%	3.04%	1.14%	6.57%	5.43%	3.04%	1.14%

Source: Exhibits MPG-13 and MPG-14

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.904906967	RF		3.70%		
R Square	0.818860238	RP		6.35%		
Adjusted R Square	0.812822246	ROE		10.05%		
Standard Error	0.004020123					
Observations	32					

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.002191774	0.002191774	135.6179718	1.176E-12
Residual	30	0.000484842	1.61614E-05		
Total	31	0.002676616			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.079819146	0.002243271	35.58158433	4.2857E-26	0.075237775	0.084400517
Treasury Yield	-0.441119237	0.037878901	-11.64551295	1.176E-12	-0.518478274	-0.3637602

RESIDUAL OUTPUT

Observation	Equity Risk Premium	Residuals	$(e_t - e_{t-1})^2$	$(e_t)^2$
1	0.045419198	0.015897469		
2	0.041971116	0.002128884	0.00019	0.00000
3	0.040298538	-0.001990205	0.00002	0.00000
4	0.042548247	0.002680087	0.00002	0.00001
5	0.041846132	-0.000929465	0.00001	0.00000
6	0.04393042	0.000211246	0.00000	0.00000
7	0.046000005	-0.001766671	0.00000	0.00000
8	0.050712628	-0.002595962	0.00000	0.00001
9	0.047308658	-0.007608658	0.00003	0.00006
10	0.049451763	-0.002793429	0.00002	0.00001
11	0.050260481	-0.003368815	0.00000	0.00001
12	0.050679545	-0.002737878	0.00000	0.00001
13	0.055212045	0.005604622	0.00007	0.00003
14	0.053943827	-0.00490216	0.00011	0.00002
15	0.053605635	0.001269365	0.00004	0.00000
16	0.055586996	0.000379671	0.00000	0.00000
17	0.055866372	0.001433628	0.00000	0.00000
18	0.05795066	0.00217434	0.00000	0.00000
19	0.057557329	-0.000523995	0.00001	0.00000
20	0.059325482	-0.000383815	0.00000	0.00000
21	0.058212324	-0.003794142	0.00001	0.00001
22	0.058494707	-0.003736374	0.00000	0.00001
23	0.060942919	-3.45854E-05	0.00001	0.00000
24	0.061869269	0.002639064	0.00001	0.00001
25	0.061067903	-0.000676236	0.00001	0.00000
26	0.062567708	0.000223959	0.00000	0.00000
27	0.066934788	0.003956878	0.00001	0.00002
28	0.064607884	-0.000991218	0.00002	0.00000
29	0.065085764	-0.000985764	0.00000	0.00000
30	0.067287684	0.000303983	0.00000	0.00000
31	0.068361074	0.001663926	0.00000	0.00000
32	0.066394417	-0.000727751	0.00001	0.00000
			0.00062	0.00023

Durbin-Watson		2.85287		
dL		1.147	4-dL	4-dU
dU		1.274	2.853	2.726
DW>2	TRUE			
DW<4-dU?	TRUE	No Autocorrelation		

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.921494806	RF	4.52%			
R Square	0.849152678	RP	5.24%			
Adjusted R Square	0.844124434	ROE	9.76%			
Standard Error	0.003781036					
Observations	32					

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.002414299	0.002414299	168.876583	7.42936E-14	
Residual	30	0.000428887	1.42962E-05			
Total	31	0.002843186				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.072834432	0.002517555	28.93062637	1.79307E-23	0.067692899	0.077976964
Utility "A" Bond Yield	-0.451116225	0.034713926	-12.99525233	7.42936E-14	-0.522011519	-0.38022093

RESIDUAL OUTPUT

Observation	Equity Risk Premium	Residuals	$(e_t - e_{t-1})^2$	$(e_t)^2$
1	0.029617497	0.013882503		
2	0.027271693	0.001628307	0.00015	0.00000
3	0.02551234	-0.00251234	0.00002	0.00001
4	0.028780376	0.003239624	0.00003	0.00001
5	0.028354372	4.56282E-05	0.00001	0.00000
6	0.030608953	0.001290047	0.00000	0.00000
7	0.033632432	0.000367568	0.00000	0.00000
8	0.03859471	-0.00039471	0.00000	0.00000
9	0.035346673	-0.005046673	0.00002	0.00003
10	0.037241361	-0.000641361	0.00002	0.00000
11	0.037872924	-0.001472924	0.00000	0.00000
12	0.038549599	-0.000549599	0.00000	0.00000
13	0.041075849	0.005124151	0.00003	0.00003
14	0.038469375	-0.006959375	0.00015	0.00005
15	0.035643658	-0.003765325	0.00001	0.00001
16	0.037816535	-0.004541535	0.00000	0.00002
17	0.039575888	-0.001700888	0.00001	0.00000
18	0.043147225	0.000744442	0.00001	0.00000
19	0.045045672	0.000854328	0.00000	0.00000
20	0.047350124	0.001558209	0.00000	0.00000
21	0.045459195	-0.002742529	0.00002	0.00001
22	0.04543664	-0.003069973	0.00000	0.00001
23	0.043384061	-0.004967394	0.00000	0.00002
24	0.045590771	-0.000782438	0.00002	0.00000
25	0.048183466	7.2156E-05	0.00000	0.00000
26	0.050094945	0.001397898	0.00000	0.00000
27	0.054199468	0.004591968	0.00001	0.00002
28	0.052642601	0.000697691	0.00002	0.00000
29	0.053538344	0.001187562	0.00000	0.00000
30	0.054269209	0.000576823	0.00000	0.00000
31	0.055104666	0.001693343	0.00000	0.00000
32	0.053971683	0.000314816	0.00000	0.00000
			0.00053	0.00024

Durbin-Watson		2.24603		
dL		1.147	4-dL	4-dU
dU		1.274	2.853	2.726
DW>2	TRUE			
DW<4-dU?	TRUE	No Autocorrelation		

SUMMARY OUTPUT

Regression Statistics		Credit Spread	0.82%
Multiple R	0.919738718	RF	3.70%
R Square	0.845919309	RP	6.14%
Adjusted R Square	0.835293054	ROE	9.84%
Standard Error	0.003771101		
Observations	32		

ANOVA

	df	SS	MS	F	Significance F
Regression	2	0.002264201	0.001132101	79.60653541	1.66859E-12
Residual	29	0.000412415	1.42212E-05		
Total	31	0.002676616			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.074750167	0.003077879	24.28626036	8.01304E-21	0.068455198	0.081045136
Treasury Yield	-0.442492923	0.03553775	-12.45134876	3.67558E-13	-0.515175784	-0.369810063
Credit Spread	0.374308885	0.165862726	2.256738989	0.031732624	0.035081517	0.713536253

RESIDUAL OUTPUT

Observation	Equity Risk Premium	Residuals	$(e_t - e_{t-1})^2$	$(e_t)^2$
1	0.046912031	0.014404636		
2	0.042473769	0.001626231	0.00016	0.00000
3	0.040836534	-0.002528201	0.00002	0.00001
4	0.042307199	0.002901134	0.00003	0.00001
5	0.041344001	-0.000427334	0.00001	0.00000
6	0.043331845	0.000808822	0.00000	0.00000
7	0.044656137	-0.000422804	0.00000	0.00000
8	0.049264906	-0.001148239	0.00000	0.00000
9	0.045656942	-0.005956942	0.00002	0.00004
10	0.04805314	-0.001394807	0.00002	0.00000
11	0.049026578	-0.002134911	0.00000	0.00000
12	0.049241076	-0.00129941	0.00000	0.00000
13	0.055537585	0.005279081	0.00004	0.00003
14	0.055380272	-0.006318805	0.00013	0.00004
15	0.057070368	-0.002195368	0.00002	0.00000
16	0.058936248	-0.002969582	0.00000	0.00001
17	0.057993752	-0.000693752	0.00001	0.00000
18	0.058889861	0.001235139	0.00000	0.00000
19	0.05658633	0.000447003	0.00000	0.00000
20	0.057948249	0.000993417	0.00000	0.00000
21	0.05745604	-0.003037859	0.00002	0.00001
22	0.057997633	-0.003239299	0.00000	0.00001
23	0.064233988	-0.003325655	0.00000	0.00001
24	0.064118278	0.000390056	0.00001	0.00000
25	0.06048316	-9.14931E-05	0.00000	0.00000
26	0.061674257	0.00111741	0.00000	0.00000
27	0.06635491	0.004536756	0.00001	0.00002
28	0.063338074	0.000278592	0.00002	0.00000
29	0.06347971	0.00062029	0.00000	0.00000
30	0.066950485	0.000641182	0.00000	0.00000
31	0.068244825	0.001780175	0.00000	0.00000
32	0.065543331	0.000123336	0.00000	0.00000
			0.00054	0.00020
Durbin-Watson			2.63929	
dL			1.085	4-dL
dU			1.345	2.915
DW>2			TRUE	2.655
DW<4-dU			TRUE	No Autocorrelation

Mr. Gorman's Financial Integrity Analysis (Exhibit MPG-19)

Description	Retail		S&P Benchmark (Medial Volatility)			Reference
	Cost of Service		Intermediate	Significant	Aggressive	
	Amount					
	(1)	(2)	(3)	(4)	(5)	
Rate Base (TX)	\$ 1,693,784				Schedule A-1.	
Weighted Common Return	4.42%				Page 2, Line 2, Col. 4.	
Pre-Tax Rate of Return	10.37%				Page 2, Line 3, Col. 5	
Income to Common	\$ 74,930				Line 1 x Line 2.	
EBIT	\$ 175,627				Line 1 x Line 3.	
Depreciation & Amortization	\$ 65,299				Schedule A-1.	
Imputed Amortization	\$ 1,139				S&P Capital IQ, Downloaded June 15	
Deferred Income Taxes & ITC	\$ 50,874				Schedule A-1	
Funds from Operations (FFO)	\$ 192,242				Sum of Line 4 and Lines 6 through 8.	
Imputed Interest Expense + Cap. Interest	\$ 8,022				S&P Capital IQ, Downloaded June 15	
EBITDA	\$ 250,088				Sum of Lines 5 through 7 and Line 10.	
Total Debt Ratio	53.0%				Page 3, Line 4, Col. 2	
Debt to EBITDA	3.59x	2.5x - 3.5x	8.5x - 4.5x	4.5x - 5.5x	(Line 1 x Line 12) / Line 11.	
FFO to Total Debt	21.41%	23% - 35%	13% - 23%	9% - 13%	Line 9 / (Line 1 x Line 12).	

Gorman's Financial Integrity Analysis, ROE of 5.50%

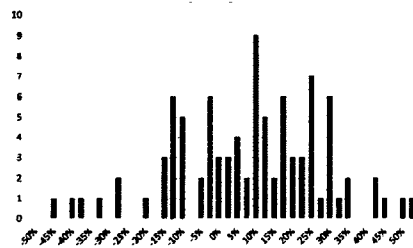
Description	Retail Cost of Service Amount (1)	S&P Benchmark (Medial Volatility)			Reference (5)
		Intermediate (2)	Significant (3)	Aggressive (4)	
Rate Base	\$ 1,693,784				Schedule A-1.
Weighted Common Return	2.66%				Page 2, Line 2, Col. 4.
Pre-Tax Rate of Return	7.45%				Page 2, Line 3, Col. 5.
Income to Common	\$ 45,040				Line 1 x Line 2.
EBIT	\$ 128,238				Line 1 x Line 3.
Depreciation & Amortization	\$ 65,299				Schedule A-1.
Imputed Amortization	\$ 1,139				S&P Capital IQ, Downloaded June 15
Deferred Income Taxes & ITC	\$ 50,874				Schedule A-1
Funds from Operations (FFO)	\$ 162,352				Sum of Line 4 and Lines 6 through 8.
Imputed Interest Expense	\$ 8,022				S&P Capital IQ, Downloaded June 15
EBITDA	\$ 200,696				Sum of Lines 5 through 7 and Line 10
Total Debt Ratio	53.0%	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	Page 3, Line 4, Col. 2
Debt to EBITDA	4.47x				(Line 1 x Line 12) / Line 11.
FFO to Total Debt	18.09%	23% - 35%	35% - 45%	45% - 55%	Line 9 / (Line 1 x Line 12).

Gorman's Financial Integrity Analysis, ROE of 10.50%

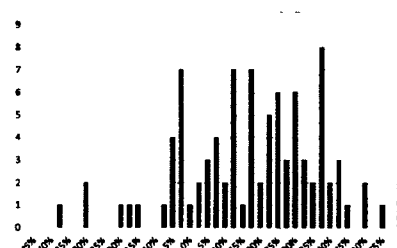
Description	Retail Cost of Service Amount (1)	S&P Benchmark (Medial Volatility)			Reference (5)
		Intermediate (2)	Significant (3)	Aggressive (4)	
Rate Base	\$ 1,693,784				Schedule A-1.
Weighted Common Return	5.08%				Page 2, Line 2, Col. 4.
Pre-Tax Rate of Return	11.45%				Page 2, Line 3, Col. 5.
Income to Common	\$ 85,985				Line 1 x Line 2.
EBIT	\$ 193,895				Line 1 x Line 3.
Depreciation & Amortization	\$ 65,299				Schedule A-1.
Imputed Amortization	\$ 1,139				S&P Capital IQ, Downloaded June 15
Deferred Income Taxes & ITC	\$ 50,874				Schedule A-1
Funds from Operations (FFO)	\$ 203,298				Sum of Line 4 and Lines 6 through 8.
Imputed Interest Expense	\$ 8,022				S&P Capital IQ, Downloaded June 15
EBITDA	\$ 268,356				Sum of Lines 5 through 7 and Line 10.
Total Debt Ratio	53.0%	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	Page 3, Line 4, Col. 2
Debt to EBITDA	3.35x				(Line 1 x Line 12) / Line 11.
FFO to Total Debt	22.65%	23% - 35%	35% - 45%	45% - 55%	Line 9 / (Line 1 x Line 12).

Source:
Exhibit MPG-19 (differences due to rounding)

Frequency Distribution of Market Risk Premium, 1926 - 2016



Frequency Distribution of Observed Market Returns, 1926 - 2016



Sources: Morningstar, Inc., Ibbotson Stocks, Bonds, Bills and Inflation 2016 Appendix A, at 3-5 21-23.
Duff & Phelps, 2017 Stocks, Bonds, Bills and Inflation Yearbook (Preview Version), at 17

Market Risk Premium 1926 - 2016

Large Company Stocks Total Returns		Long-Term Government Bond Income Returns		MRP	MRP			Returns		
Year	Jan-Dec	Jan-Dec	Jan-Dec		Bin	Frequency	Cumulative %	Bin	Frequency	Cumulative %
1926	0.1162	0.0973	0.0789	0.0789	-50.00%	0	0.0%	-50.00%	0	0.0%
1927	0.3749	0.0341	0.2408	0.2408	-47.50%	0	0.0%	-47.50%	0	0.0%
1928	0.4361	0.0322	0.4038	0.4038	-45.00%	1	1.1%	-45.00%	0	0.0%
1929	-0.0842	0.0347	-0.1180	-0.1180	-42.50%	0	1.1%	-42.50%	1	1.1%
1930	-0.2490	0.0332	-0.2822	-0.2822	-40.00%	1	2.2%	-40.00%	0	1.1%
1931	-0.4334	0.0333	-0.4867	-0.4867	-37.50%	1	3.3%	-37.50%	0	1.1%
1932	-0.0819	0.0309	-0.1188	-0.1188	-35.00%	0	3.3%	-35.00%	2	3.3%
1933	0.5399	0.0312	0.5087	0.5087	-32.50%	1	4.4%	-32.50%	0	3.3%
1934	-0.0144	0.0316	-0.0462	-0.0462	-30.00%	0	4.4%	-30.00%	0	3.3%
1935	0.4787	0.0281	0.4486	0.4486	-27.50%	2	6.6%	-27.50%	0	3.3%
1936	0.3392	0.0277	0.3115	0.3115	-25.00%	0	6.6%	-25.00%	1	4.4%
1937	-0.3503	0.0286	-0.3789	-0.3789	-22.50%	0	6.6%	-22.50%	1	5.5%
1938	0.3112	0.0264	0.2848	0.2848	-20.00%	1	7.7%	-20.00%	1	6.6%
1939	-0.0041	0.0240	-0.0281	-0.0281	-17.50%	0	7.7%	-17.50%	0	6.6%
1940	-0.0978	0.0223	-0.1201	-0.1201	-15.00%	3	11.0%	-15.00%	0	6.6%
1941	-0.1159	0.0194	-0.1353	-0.1353	-12.50%	6	17.6%	-12.50%	1	7.7%
1942	0.2034	0.0246	0.1788	0.1788	-10.00%	5	23.1%	-10.00%	4	12.1%
1943	0.2590	0.0244	0.2346	0.2346	-7.50%	0	23.1%	-7.50%	7	19.8%
1944	0.1975	0.0246	0.1729	0.1729	-5.00%	2	28.3%	-5.00%	1	20.8%
1945	0.3644	0.0234	0.3410	0.3410	-2.50%	6	31.9%	-2.50%	2	23.1%
1946	-0.0807	0.0204	-0.1011	-0.1011	0.00%	3	35.2%	0.00%	3	26.4%
1947	0.0571	0.0213	0.0358	0.0358	2.50%	3	38.5%	2.50%	4	30.8%
1948	0.0550	0.0240	0.0310	0.0310	5.00%	4	42.9%	5.00%	2	33.0%
1949	0.1879	0.0225	0.1854	0.1854	7.50%	2	45.1%	7.50%	7	40.7%
1950	0.3171	0.0212	0.2959	0.2959	10.00%	9	54.9%	10.00%	1	41.8%
1951	0.2402	0.0238	0.2164	0.2164	12.50%	5	60.4%	12.50%	7	49.5%
1952	0.1837	0.0286	0.1571	0.1571	15.00%	2	62.6%	15.00%	2	51.6%
1953	-0.0099	0.0284	-0.0383	-0.0383	17.50%	6	69.2%	17.50%	5	57.1%
1954	0.5262	0.0279	0.4983	0.4983	20.00%	3	72.5%	20.00%	6	63.7%
1955	0.2156	0.0275	0.2881	0.2881	22.50%	3	75.8%	22.50%	3	67.0%
1956	0.0656	0.0299	0.0357	0.0357	25.00%	7	83.5%	25.00%	8	73.8%
1957	-0.1078	0.0344	-0.1422	-0.1422	27.50%	1	84.6%	27.50%	3	76.5%
1958	0.4336	0.0327	0.4009	0.4009	30.00%	6	91.2%	30.00%	2	78.1%
1959	0.1196	0.0401	0.0795	0.0795	32.50%	1	92.3%	32.50%	8	87.9%
1960	0.0047	0.0426	-0.0379	-0.0379	35.00%	2	94.5%	35.00%	2	90.1%
1961	0.2849	0.0383	0.2306	0.2306	37.50%	0	94.5%	37.50%	3	93.4%
1962	-0.0873	0.0400	-0.1273	-0.1273	40.00%	0	94.5%	40.00%	1	94.5%
1963	0.2280	0.0386	0.1891	0.1891	42.50%	2	96.7%	42.50%	0	94.5%
1964	0.1844	0.0415	0.1233	0.1233	45.00%	1	97.8%	45.00%	2	96.7%
1965	0.1245	0.0420	0.0825	0.0825	47.50%	0	97.8%	47.50%	0	96.7%
1966	-0.1006	0.0449	-0.1455	-0.1455	50.00%	1	98.9%	50.00%	1	97.8%
1967	0.2398	0.0459	0.1939	0.1939	51.00%	1	100.0%	52.50%	0	97.8%
1968	0.1106	0.0550	0.0556	0.0556				55.00%	2	100.0%
1969	-0.0850	0.0595	-0.1445	-0.1445				57.50%	0	100.0%
1970	0.0350	0.0574	-0.0286	-0.0286						
1971	0.1430	0.0632	0.0786	0.0786						
1972	0.1869	0.0587	0.1312	0.1312						
1973	-0.1488	0.0651	-0.2120	-0.2120						
1974	-0.2647	0.0727	-0.3374	-0.3374						
1975	0.2723	0.0798	0.2924	0.2924						
1976	0.2393	0.0789	0.1904	0.1904						
1977	-0.0718	0.0714	-0.1430	-0.1430						
1978	0.0657	0.0790	-0.0133	-0.0133						
1979	0.1861	0.0886	0.0675	0.0675						
1980	0.3250	0.0997	0.2263	0.2263						
1981	-0.0492	0.1155	-0.1647	-0.1647						
1982	0.2155	0.1350	0.0805	0.0805						
1983	0.2258	0.1038	0.1218	0.1218						
1984	0.0627	0.1174	-0.0547	-0.0547						
1985	0.3173	0.1125	0.2048	0.2048						
1986	0.1887	0.0898	0.0980	0.0980						
1987	0.0525	0.0792	-0.0287	-0.0287						
1988	0.1861	0.0697	0.0784	0.0784						
1989	0.3169	0.0881	0.2288	0.2288						
1990	-0.0310	0.0818	-0.1129	-0.1129						
1991	0.3047	0.0822	0.2225	0.2225						
1992	0.0762	0.0728	0.0036	0.0036						
1993	0.1008	0.0717	0.0281	0.0281						
1994	0.0132	0.0659	-0.0527	-0.0527						
1995	0.3758	0.0760	0.2988	0.2988						
1996	0.2286	0.0618	0.1678	0.1678						
1997	0.3336	0.0684	0.2672	0.2672						
1998	0.2858	0.0583	0.2275	0.2275						
1999	0.2104	0.0657	0.1547	0.1547						
2000	-0.0910	0.0850	-0.1560	-0.1560						
2001	-0.1189	0.0553	-0.1742	-0.1742						
2002	-0.2210	0.0559	-0.2769	-0.2769						
2003	0.2898	0.0480	0.2388	0.2388						
2004	0.1088	0.0502	0.0580	0.0580						
2005	0.0491	0.0468	0.0022	0.0022						
2006	0.1579	0.0488	0.1111	0.1111						
2007	0.0549	0.0488	0.0063	0.0063						
2008	-0.3700	0.0445	-0.4145	-0.4145						
2009	0.2646	0.0347	0.2299	0.2299						

Alternative Bond Yield Plus Risk Premium Analyses

	[1]	[2]	[3]	[4]
	Constant	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX
	-0.027	-0.026	0.026	0.000
Long Term Average [5]			1.82%	19.26
		30-Yr Treasury Yield [6]	Risk Premium [7]	Return on Equity [8]
Current 30-Year Treasury		2.83%	7.00%	9.82%
Near-Term Projected 30-Year Treasury		3.38%	6.54%	9.92%
Long-Term Projected 30-Year Treasury		4.40%	5.87%	10.27%
Mr. Gorman's projected 30-Year Treasury		3.70%	6.31%	10.01%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.840159
R Square	0.705867
Adjusted R Square	0.70454
Standard Error	0.005319
Observations	669

ANOVA

	df	SS	MS	F	Significance F
Regression	3	0.045146391	0.0150488	531.9605803	3.3829E-176
Residual	665	0.01881239	2.8289E-05		
Total	668	0.063958781			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.026856	0.002314745	-11.602218	1.799E-28	-0.03140128	-0.022311082	-0.03140128	-0.02231108
LN(30-Year Treasury)	-0.026547	0.000772014	-33.090837	1.1168E-142	-0.02706247	-0.024030712	-0.02706247	-0.02403071
Moody's Utility Baa Credit Spread	0.026376	0.077677435	0.33955618	0.734297991	-0.12614672	0.178898428	-0.12614672	0.178898428
VIX	0.000273	8.42914E-05	4.23890847	2.56382E-05	0.000146287	0.000398764	0.000146287	0.000398764

Notes:

- [1] Equals Regression Intercept
- [2] Equals Regression Coefficient of 30-year Treasury Yield variable
- [3] Equals Regression Coefficient of Credit Spread variable
- [4] Equals Regression Coefficient of VIX variable
- [5] Long-Term Historical Average of each variable
- [6] Source: Current = Bloomberg Professional, Near-Term: Blue Chip Financial Forecasts, Vol. 36, No. 7, July 1, 2017, at 2. Long-Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 14
- [7] Equals [1] + ([2] x [8]) + ([3] x [5]) + ([4] x [5])
- [8] Equals [6] + [7]
- [9] Source: SNL Financial
- [10] Source: SNL Financial
- [11] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period)
- [12] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period)
- [13] Equals LN[11]
- [14] Equals [12] - [11]
- [15] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period)
- [16] Equals [10] - [11]

[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
1/10/1990	12.80%	8.24%		-2.50		19.95	4.58%
1/11/1990	12.90%	8.24%		-2.50		19.96	4.68%
1/17/1990	12.80%	8.22%		-2.50		21.59	4.58%
1/26/1990	12.00%	8.20%		-2.50		22.87	3.80%
2/9/1990	12.10%	8.17%		-2.50		23.58	3.93%
2/24/1990	12.86%	8.15%		-2.51		23.35	4.71%
3/30/1990	12.90%	8.16%		-2.51		22.17	4.74%
4/4/1990	15.76%	8.17%		-2.51		22.16	7.59%
4/12/1990	12.52%	8.18%		-2.50		22.04	4.34%
4/19/1990	12.75%	8.20%		-2.50		22.01	4.55%
5/21/1990	12.10%	8.28%		-2.49		21.42	3.82%
5/29/1990	12.40%	8.30%		-2.49		21.25	4.10%
5/31/1990	12.00%	8.30%		-2.49		21.17	3.70%
6/4/1990	12.90%	8.30%		-2.49		21.11	4.60%
6/6/1990	12.26%	8.31%		-2.49		21.08	3.94%
6/15/1990	13.20%	8.32%		-2.49		20.80	4.88%
6/20/1990	12.92%	8.32%		-2.49		20.68	4.60%
6/27/1990	12.90%	8.33%		-2.49		20.52	4.57%
6/29/1990	12.50%	8.33%		-2.48		20.45	4.17%
7/6/1990	12.10%	8.34%		-2.48		20.33	3.76%
7/6/1990	12.10%	8.34%		-2.48		20.33	3.76%
8/10/1990	12.55%	8.41%		-2.48		20.52	4.14%
8/16/1990	13.21%	8.43%		-2.47		20.64	4.78%
8/22/1990	13.10%	8.45%		-2.47		20.82	4.65%
8/24/1990	13.00%	8.46%		-2.47		21.00	4.54%
9/26/1990	11.45%	8.50%		-2.45		21.96	2.88%
10/2/1990	13.00%	8.61%		-2.45		22.09	4.39%
10/5/1990	12.84%	8.62%		-2.45		22.18	4.22%
10/19/1990	13.00%	8.67%		-2.45		22.68	4.33%
10/25/1990	12.30%	8.68%		-2.44		22.81	3.62%
11/21/1990	12.70%	8.69%		-2.44		22.98	4.01%
12/13/1990	12.30%	8.67%		-2.44		22.96	3.63%
12/17/1990	12.87%	8.67%		-2.45		22.99	4.20%
12/18/1990	13.10%	8.67%		-2.45		23.00	4.43%
12/19/1990	12.00%	8.66%		-2.45		23.02	3.34%
12/20/1990	12.75%	8.66%		-2.45		23.04	4.09%
12/21/1990	12.60%	8.66%		-2.45		23.05	3.84%
12/27/1990	12.79%	8.66%		-2.45		23.11	4.13%
1/2/1991	13.10%	8.65%		-2.45		23.23	4.45%
1/4/1991	12.50%	8.65%		-2.45		23.31	3.85%
1/15/1991	12.75%	8.64%		-2.45		23.74	4.11%
1/25/1991	11.70%	8.63%		-2.45		23.92	3.07%
2/4/1991	12.50%	8.60%		-2.45		23.93	3.90%
2/7/1991	12.50%	8.59%		-2.45		23.93	3.91%
2/12/1991	13.00%	8.58%		-2.46		23.96	4.43%
2/14/1991	12.72%	8.57%		-2.46		23.98	4.15%
2/22/1991	12.80%	8.55%		-2.46		24.05	4.25%
3/6/1991	13.10%	8.53%		-2.46		24.14	4.57%
3/8/1991	12.30%	8.52%		-2.46		24.18	3.78%
3/8/1991	12.30%	8.52%		-2.46		24.18	3.78%
4/22/1991	13.00%	8.49%		-2.47		24.19	4.51%
5/7/1991	13.50%	8.47%		-2.47		24.21	5.03%
5/13/1991	13.25%	8.47%		-2.47		24.13	4.78%
5/30/1991	12.75%	8.44%		-2.47		23.59	4.31%
6/12/1991	12.00%	8.41%		-2.48		23.06	3.59%
6/25/1991	11.70%	8.39%		-2.48		22.50	3.31%
6/28/1991	12.50%	8.38%		-2.48		22.35	4.12%
7/1/1991	12.00%	8.38%		-2.48		22.30	3.62%
7/3/1991	12.50%	8.37%		-2.48		22.18	4.13%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
7/19/1991	12.10%	8.34%		-2.48		21.69	3.78%
8/1/1991	12.90%	8.32%		-2.48		20.95	4.58%
8/16/1991	13.20%	8.29%		-2.49		20.17	4.91%
9/27/1991	12.50%	8.23%		-2.50		19.03	4.27%
9/30/1991	12.25%	8.23%		-2.50		19.01	4.02%
10/17/1991	13.00%	8.20%		-2.50		18.52	4.80%
10/23/1991	12.50%	8.20%		-2.50		18.27	4.30%
10/23/1991	12.50%	8.20%		-2.50		18.27	4.30%
10/31/1991	11.80%	8.19%		-2.50		17.73	3.81%
11/1/1991	12.00%	8.19%		-2.50		17.67	3.81%
11/5/1991	12.25%	8.19%		-2.50		17.58	4.08%
11/12/1991	12.50%	8.18%		-2.50		17.38	4.32%
11/12/1991	12.50%	8.18%		-2.50		17.38	4.32%
11/25/1991	12.40%	8.18%		-2.50		17.24	4.22%
11/26/1991	11.60%	8.18%		-2.50		17.22	3.42%
11/26/1991	11.60%	8.18%		-2.50		17.22	3.42%
11/27/1991	12.10%	8.18%		-2.50		17.21	3.92%
12/18/1991	12.25%	8.15%		-2.51		17.09	4.10%
12/19/1991	12.60%	8.15%		-2.51		17.08	4.45%
12/19/1991	12.60%	8.15%		-2.51		17.08	4.45%
12/20/1991	12.65%	8.14%		-2.51		17.08	4.51%
1/9/1992	12.80%	8.09%		-2.51		17.13	4.71%
1/16/1992	12.75%	8.07%		-2.52		17.14	4.68%
1/21/1992	12.00%	8.06%		-2.52		17.13	3.94%
1/22/1992	13.00%	8.06%		-2.52		17.12	4.94%
1/27/1992	12.65%	8.05%		-2.52		17.08	4.60%
1/31/1992	12.00%	8.04%		-2.52		17.12	3.98%
2/11/1992	12.40%	8.03%		-2.52		17.16	4.37%
2/25/1992	12.50%	8.01%		-2.52		17.14	4.49%
3/16/1992	11.43%	7.98%		-2.53		17.25	3.45%
3/18/1992	12.28%	7.98%		-2.53		17.25	4.30%
4/2/1992	12.10%	7.95%		-2.53		17.23	4.15%
4/9/1992	11.45%	7.94%		-2.53		17.25	3.51%
4/10/1992	11.50%	7.93%		-2.53		17.24	3.57%
4/14/1992	11.50%	7.93%		-2.53		17.22	3.57%
5/5/1992	11.50%	7.89%		-2.54		17.08	3.61%
5/12/1992	11.87%	7.88%		-2.54		17.08	3.99%
5/12/1992	11.87%	7.88%		-2.54		17.08	3.99%
6/1/1992	12.30%	7.87%		-2.54		17.01	4.43%
6/12/1992	10.90%	7.86%		-2.54		16.96	3.04%
6/26/1992	12.35%	7.85%		-2.54		16.91	4.50%
6/29/1992	11.00%	7.85%		-2.54		16.89	3.15%
6/30/1992	13.00%	7.85%		-2.55		16.87	5.15%
7/13/1992	11.90%	7.84%		-2.55		16.78	4.06%
7/13/1992	11.90%	7.84%		-2.55		16.78	4.06%
7/22/1992	11.20%	7.83%		-2.55		16.66	3.37%
8/3/1992	12.00%	7.81%		-2.55		16.51	4.19%
8/6/1992	12.50%	7.80%		-2.55		16.48	4.70%
9/22/1992	12.00%	7.71%		-2.56		15.90	4.29%
9/28/1992	11.40%	7.71%		-2.56		15.79	3.69%
9/30/1992	11.75%	7.70%		-2.56		15.76	4.05%
10/2/1992	13.00%	7.70%		-2.56		15.75	5.30%
10/12/1992	12.20%	7.70%		-2.56		15.88	4.50%
10/16/1992	13.16%	7.70%		-2.56		15.84	5.48%
10/30/1992	11.75%	7.71%		-2.56		15.75	4.04%
11/3/1992	12.00%	7.71%		-2.56		15.75	4.29%
12/3/1992	11.85%	7.68%		-2.57		15.37	4.17%
12/15/1992	11.00%	7.66%		-2.57		15.19	3.34%
12/16/1992	11.90%	7.66%		-2.57		15.16	4.24%
12/16/1992	11.90%	7.66%		-2.57		15.16	4.24%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
12/17/1992	12.00%	7.66%		-2.57		15.13	4.34%
12/22/1992	12.30%	7.65%		-2.57		15.01	4.65%
12/22/1992	12.30%	7.65%		-2.57		15.01	4.65%
12/29/1992	12.25%	7.63%	8.61%	-2.57	0.98%	14.87	4.62%
12/30/1992	12.00%	7.63%	8.61%	-2.57	0.98%	14.86	4.37%
12/31/1992	11.90%	7.63%	8.61%	-2.57	0.98%	14.83	4.27%
1/12/1993	12.00%	7.61%	8.62%	-2.58	1.01%	14.72	4.39%
1/21/1993	11.25%	7.59%	8.61%	-2.58	1.02%	14.55	3.68%
2/2/1993	11.40%	7.56%	8.56%	-2.58	1.00%	14.36	3.84%
2/15/1993	12.30%	7.52%	8.53%	-2.59	1.01%	14.23	4.78%
2/24/1993	11.90%	7.49%	8.48%	-2.59	0.99%	14.19	4.41%
2/26/1993	11.80%	7.48%	8.48%	-2.59	0.98%	14.17	4.32%
2/26/1993	11.80%	7.48%	8.48%	-2.59	0.96%	14.17	4.32%
4/23/1993	11.75%	7.29%	8.29%	-2.62	1.00%	13.85	4.46%
5/11/1993	11.75%	7.25%	8.26%	-2.62	1.02%	13.85	4.50%
5/14/1993	11.50%	7.24%	8.26%	-2.63	1.02%	13.87	4.26%
5/25/1993	11.50%	7.23%	8.26%	-2.63	1.04%	13.88	4.27%
5/28/1993	11.00%	7.22%	8.26%	-2.63	1.04%	13.85	3.78%
6/3/1993	12.00%	7.21%	8.26%	-2.63	1.05%	13.84	4.79%
6/16/1993	11.50%	7.19%	8.24%	-2.63	1.06%	13.77	4.31%
6/18/1993	12.10%	7.18%	8.24%	-2.63	1.06%	13.76	4.92%
6/25/1993	11.67%	7.17%	8.23%	-2.64	1.06%	13.73	4.50%
7/21/1993	11.38%	7.10%	8.20%	-2.65	1.10%	13.46	4.28%
7/23/1993	10.46%	7.09%	8.19%	-2.65	1.10%	13.37	3.37%
8/24/1993	11.50%	6.96%	8.13%	-2.67	1.17%	12.80	4.54%
9/21/1993	10.50%	6.81%	8.06%	-2.69	1.24%	12.72	3.69%
9/29/1993	11.47%	6.77%	8.03%	-2.69	1.26%	12.73	4.70%
9/30/1993	11.60%	6.76%	8.03%	-2.69	1.27%	12.74	4.84%
11/2/1993	10.80%	6.80%	7.90%	-2.72	1.29%	12.67	4.20%
11/12/1993	12.00%	6.57%	7.87%	-2.72	1.30%	12.76	5.43%
11/26/1993	11.00%	6.52%	7.84%	-2.73	1.32%	12.86	4.48%
12/14/1993	10.55%	6.48%	7.80%	-2.74	1.32%	12.75	4.07%
12/16/1993	10.60%	6.48%	7.80%	-2.74	1.32%	12.73	4.12%
12/21/1993	11.30%	6.47%	7.80%	-2.74	1.33%	12.68	4.83%
1/4/1994	10.07%	6.44%	7.78%	-2.74	1.34%	12.50	3.63%
1/13/1994	11.00%	6.42%	7.77%	-2.75	1.35%	12.46	4.58%
1/21/1994	11.00%	6.40%	7.75%	-2.75	1.35%	12.39	4.60%
1/28/1994	11.35%	6.39%	7.74%	-2.75	1.35%	12.37	4.96%
2/3/1994	11.40%	6.38%	7.73%	-2.75	1.35%	12.34	5.02%
2/17/1994	10.60%	6.36%	7.71%	-2.76	1.35%	12.38	4.24%
2/25/1994	11.25%	6.35%	7.71%	-2.76	1.35%	12.40	4.90%
2/25/1994	11.25%	6.35%	7.71%	-2.76	1.35%	12.40	4.90%
3/1/1994	11.00%	6.35%	7.70%	-2.76	1.36%	12.41	4.65%
3/4/1994	11.00%	6.35%	7.70%	-2.76	1.36%	12.44	4.65%
4/25/1994	11.00%	6.41%	7.74%	-2.75	1.33%	13.02	4.59%
5/10/1994	11.75%	6.45%	7.77%	-2.74	1.32%	13.19	5.30%
5/13/1994	10.50%	6.46%	7.78%	-2.74	1.32%	13.24	4.04%
6/3/1994	11.00%	6.54%	7.84%	-2.73	1.30%	13.31	4.46%
6/27/1994	11.40%	6.65%	7.94%	-2.71	1.29%	13.42	4.75%
8/5/1994	12.75%	6.88%	8.14%	-2.68	1.29%	13.41	5.67%
10/31/1994	10.00%	7.33%	8.53%	-2.61	1.21%	13.76	2.67%
11/9/1994	10.85%	7.39%	8.60%	-2.61	1.21%	13.92	3.46%
11/9/1994	10.85%	7.39%	8.60%	-2.61	1.21%	13.92	3.46%
11/18/1994	11.20%	7.45%	8.65%	-2.60	1.20%	14.12	3.75%
11/22/1994	11.60%	7.47%	8.67%	-2.59	1.20%	14.14	4.13%
11/28/1994	11.06%	7.49%	8.69%	-2.59	1.20%	14.20	3.57%
12/8/1994	11.50%	7.54%	8.76%	-2.58	1.21%	14.30	3.96%
12/8/1994	11.50%	7.54%	8.76%	-2.58	1.21%	14.30	3.96%
12/14/1994	10.95%	7.56%	8.77%	-2.58	1.21%	14.29	3.39%
12/15/1994	11.50%	7.57%	8.78%	-2.58	1.21%	14.27	3.93%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
12/19/1994	11.50%	7.58%	8.79%	-2.58	1.21%	14.24	3.92%
12/28/1994	12.15%	7.61%	8.82%	-2.58	1.21%	14.15	4.54%
1/9/1995	12.28%	7.64%	8.86%	-2.57	1.22%	14.14	4.64%
1/31/1995	11.00%	7.69%	8.93%	-2.57	1.24%	13.72	3.31%
2/10/1995	12.80%	7.70%	8.95%	-2.58	1.25%	13.58	4.90%
2/17/1995	11.90%	7.70%	8.96%	-2.56	1.26%	13.50	4.20%
3/9/1995	11.50%	7.71%	8.98%	-2.56	1.26%	13.38	3.79%
3/20/1995	12.00%	7.72%	8.98%	-2.56	1.26%	13.34	4.28%
3/23/1995	12.81%	7.72%	8.98%	-2.56	1.26%	13.32	5.09%
3/29/1995	11.80%	7.72%	8.99%	-2.56	1.27%	13.31	3.88%
4/6/1995	11.10%	7.71%	8.99%	-2.56	1.28%	13.31	3.39%
4/7/1995	11.00%	7.71%	8.99%	-2.56	1.28%	13.30	3.29%
4/19/1995	11.00%	7.70%	8.98%	-2.56	1.29%	13.21	3.30%
5/12/1995	11.63%	7.68%	8.96%	-2.57	1.29%	13.20	3.95%
5/25/1995	11.20%	7.65%	8.94%	-2.57	1.30%	13.21	3.55%
6/9/1995	11.25%	7.60%	8.91%	-2.58	1.31%	13.25	3.65%
6/21/1995	12.25%	7.58%	8.88%	-2.58	1.32%	13.23	4.69%
6/30/1995	11.10%	7.52%	8.85%	-2.59	1.33%	13.19	3.58%
9/11/1995	11.30%	7.20%	8.58%	-2.63	1.38%	12.51	4.10%
9/27/1995	11.30%	7.12%	8.51%	-2.64	1.38%	12.25	4.18%
9/27/1995	11.30%	7.12%	8.51%	-2.64	1.38%	12.25	4.18%
9/29/1995	11.00%	7.11%	8.49%	-2.64	1.38%	12.24	3.89%
11/9/1995	11.38%	6.90%	8.30%	-2.67	1.40%	12.46	4.48%
11/9/1995	11.38%	6.90%	8.30%	-2.67	1.40%	12.46	4.48%
11/17/1995	11.00%	6.86%	8.26%	-2.68	1.41%	12.50	4.14%
12/4/1995	11.35%	6.78%	8.21%	-2.69	1.43%	12.51	4.57%
12/11/1995	11.40%	6.74%	8.18%	-2.70	1.43%	12.52	4.66%
12/20/1995	11.60%	6.70%	8.14%	-2.70	1.44%	12.50	4.90%
12/27/1995	12.00%	6.66%	8.11%	-2.71	1.45%	12.48	5.34%
2/5/1996	12.25%	6.48%	7.98%	-2.74	1.50%	12.63	5.77%
3/29/1996	10.67%	6.42%	7.92%	-2.75	1.50%	13.47	4.25%
4/8/1996	11.00%	6.42%	7.92%	-2.75	1.50%	13.62	4.58%
4/11/1996	12.58%	6.43%	7.93%	-2.74	1.51%	13.73	6.16%
4/11/1996	12.59%	6.43%	7.93%	-2.74	1.51%	13.73	6.16%
4/24/1996	11.25%	6.43%	7.95%	-2.74	1.51%	13.92	4.82%
4/30/1996	11.00%	6.43%	7.95%	-2.74	1.52%	13.98	4.57%
5/13/1996	11.00%	6.44%	7.97%	-2.74	1.53%	14.14	4.56%
5/23/1996	11.25%	6.43%	7.98%	-2.74	1.54%	14.23	4.82%
6/25/1996	11.25%	6.48%	8.01%	-2.74	1.53%	14.71	4.77%
8/27/1996	11.20%	6.48%	8.01%	-2.74	1.53%	14.75	4.72%
8/12/1996	10.40%	6.67%	8.09%	-2.72	1.51%	15.35	3.83%
9/27/1996	11.00%	6.71%	8.18%	-2.70	1.48%	15.96	4.29%
10/18/1996	12.25%	6.76%	8.22%	-2.69	1.46%	16.20	5.49%
11/5/1996	11.00%	6.81%	8.25%	-2.69	1.44%	16.42	4.19%
11/28/1996	11.30%	6.83%	8.26%	-2.68	1.43%	16.58	4.47%
12/18/1996	11.75%	6.83%	8.27%	-2.68	1.44%	16.80	4.92%
12/31/1996	11.50%	6.83%	8.27%	-2.68	1.44%	16.84	4.67%
1/3/1997	10.70%	6.83%	8.27%	-2.68	1.43%	16.86	3.87%
2/13/1997	11.80%	6.82%	8.24%	-2.68	1.42%	17.23	4.98%
2/20/1997	11.80%	6.82%	8.24%	-2.68	1.42%	17.29	4.98%
3/31/1997	10.02%	6.80%	8.21%	-2.69	1.40%	17.83	3.22%
4/2/1997	11.65%	6.80%	8.21%	-2.69	1.40%	17.86	4.85%
4/28/1997	11.50%	6.81%	8.20%	-2.69	1.39%	18.20	4.69%
4/29/1997	11.70%	6.81%	8.20%	-2.69	1.39%	18.21	4.69%
7/17/1997	12.00%	6.77%	8.14%	-2.69	1.37%	19.03	5.23%
12/12/1997	11.00%	6.80%	7.98%	-2.72	1.36%	22.57	4.40%
12/23/1997	11.12%	6.57%	7.94%	-2.72	1.37%	22.84	4.55%
2/2/1998	12.75%	6.39%	7.81%	-2.75	1.42%	23.43	6.36%
3/2/1998	11.25%	6.29%	7.71%	-2.77	1.42%	23.40	4.96%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
3/6/1998	10.75%	6.27%	7.70%	-2.77	1.43%	23.37	4.48%
3/20/1998	10.50%	6.22%	7.65%	-2.78	1.42%	23.35	4.28%
4/30/1998	12.20%	6.12%	7.55%	-2.79	1.42%	23.66	6.08%
7/10/1998	11.40%	5.94%	7.40%	-2.82	1.46%	23.13	5.46%
9/15/1998	11.90%	5.78%	7.30%	-2.85	1.62%	23.82	6.12%
11/30/1998	12.60%	5.58%	7.26%	-2.89	1.68%	26.04	7.02%
12/10/1998	12.20%	5.54%	7.25%	-2.89	1.71%	26.30	6.66%
12/17/1998	12.10%	5.52%	7.25%	-2.90	1.73%	26.55	6.58%
2/5/1999	10.30%	5.38%	7.24%	-2.92	1.86%	27.50	4.92%
3/4/1999	10.50%	5.34%	7.25%	-2.93	1.91%	28.15	5.16%
4/6/1999	10.94%	5.32%	7.26%	-2.93	1.96%	28.43	5.62%
7/29/1999	10.75%	5.52%	7.64%	-2.90	2.02%	25.84	5.23%
9/23/1999	10.75%	5.70%	7.72%	-2.86	2.02%	24.85	5.05%
11/17/1999	11.10%	5.90%	7.90%	-2.83	2.00%	24.34	5.20%
1/7/2000	11.50%	6.05%	8.03%	-2.81	1.98%	23.49	5.45%
1/7/2000	11.50%	6.05%	8.03%	-2.81	1.98%	23.49	5.45%
2/17/2000	10.60%	6.17%	8.15%	-2.78	1.96%	23.37	4.43%
3/28/2000	11.25%	6.20%	8.23%	-2.78	2.03%	22.98	5.05%
5/24/2000	11.00%	6.18%	8.34%	-2.78	2.16%	23.85	4.82%
7/18/2000	12.20%	6.16%	8.40%	-2.79	2.24%	23.37	6.04%
9/29/2000	11.16%	6.03%	8.42%	-2.81	2.38%	22.44	5.13%
11/28/2000	12.90%	5.89%	8.40%	-2.83	2.51%	22.97	7.01%
11/30/2000	12.10%	5.88%	8.40%	-2.83	2.51%	23.03	6.22%
1/23/2001	11.25%	5.79%	8.33%	-2.85	2.54%	23.50	5.46%
2/8/2001	11.50%	5.77%	8.31%	-2.85	2.54%	23.17	5.73%
5/8/2001	10.75%	5.62%	8.12%	-2.88	2.50%	24.37	5.13%
6/26/2001	11.00%	5.62%	8.06%	-2.88	2.46%	24.90	5.38%
7/25/2001	11.02%	5.60%	8.06%	-2.88	2.46%	25.06	5.42%
7/25/2001	11.02%	5.60%	8.06%	-2.88	2.46%	25.06	5.42%
7/31/2001	11.00%	5.59%	8.05%	-2.88	2.46%	24.98	5.41%
8/31/2001	10.50%	5.56%	8.01%	-2.89	2.46%	24.60	4.94%
9/7/2001	10.75%	5.55%	8.01%	-2.89	2.45%	24.54	5.20%
9/10/2001	11.00%	5.55%	8.01%	-2.89	2.45%	24.57	5.45%
9/20/2001	10.00%	5.55%	8.00%	-2.89	2.45%	24.85	4.45%
10/24/2001	10.30%	5.54%	8.01%	-2.89	2.47%	25.70	4.76%
11/28/2001	10.60%	5.49%	8.01%	-2.90	2.51%	26.15	5.11%
12/3/2001	12.88%	5.49%	8.01%	-2.90	2.52%	26.20	7.39%
12/20/2001	12.50%	5.50%	8.03%	-2.90	2.53%	26.14	7.00%
1/22/2002	10.00%	5.50%	8.06%	-2.90	2.56%	25.52	4.50%
3/27/2002	10.10%	5.45%	8.09%	-2.91	2.65%	24.63	4.65%
4/22/2002	11.80%	5.45%	8.12%	-2.91	2.67%	24.46	6.35%
5/29/2002	10.17%	5.46%	8.15%	-2.91	2.68%	24.27	4.71%
6/10/2002	12.00%	5.47%	8.16%	-2.91	2.69%	24.33	6.53%
8/18/2002	11.16%	5.48%	8.17%	-2.90	2.70%	24.40	5.68%
8/20/2002	11.00%	5.48%	8.18%	-2.90	2.70%	24.45	5.52%
8/20/2002	11.00%	5.48%	8.18%	-2.90	2.70%	24.45	5.52%
7/15/2002	11.00%	5.48%	8.19%	-2.90	2.72%	24.13	5.52%
9/12/2002	12.30%	5.45%	8.14%	-2.91	2.89%	25.14	6.85%
9/26/2002	10.45%	5.41%	8.12%	-2.92	2.71%	25.82	5.04%
12/4/2002	11.55%	5.29%	8.04%	-2.94	2.75%	28.01	6.26%
12/13/2002	11.75%	5.27%	8.02%	-2.94	2.75%	28.25	6.48%
12/20/2002	11.40%	5.25%	8.01%	-2.95	2.76%	28.44	6.15%
1/8/2003	11.10%	5.19%	7.96%	-2.98	2.77%	28.87	5.91%
1/31/2003	12.45%	5.13%	7.89%	-2.97	2.76%	29.61	7.32%
2/28/2003	12.30%	5.05%	7.79%	-2.99	2.75%	30.69	7.25%
3/6/2003	10.75%	5.03%	7.77%	-2.99	2.74%	30.93	5.72%
3/7/2003	9.98%	5.02%	7.76%	-2.99	2.74%	30.99	4.94%
3/20/2003	12.00%	4.98%	7.70%	-3.00	2.71%	31.50	7.02%
4/3/2003	12.00%	4.96%	7.64%	-3.00	2.68%	31.71	7.04%
4/15/2003	11.15%	4.94%	7.59%	-3.01	2.65%	31.67	6.21%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
6/25/2003	10.75%	4.79%	7.24%	-3.04	2.45%	28.30	5.96%
6/29/2003	10.75%	4.79%	7.23%	-3.04	2.44%	28.22	5.96%
7/9/2003	9.75%	4.79%	7.19%	-3.04	2.40%	27.50	4.96%
7/18/2003	9.75%	4.79%	7.16%	-3.04	2.37%	27.03	4.96%
7/25/2003	9.50%	4.80%	7.13%	-3.04	2.33%	26.35	4.70%
8/29/2003	10.50%	4.83%	7.02%	-3.03	2.19%	24.80	5.07%
12/17/2003	9.85%	4.94%	6.75%	-3.01	1.82%	20.53	4.91%
12/17/2003	9.85%	4.94%	6.75%	-3.01	1.82%	20.53	4.91%
12/18/2003	11.50%	4.94%	6.75%	-3.01	1.82%	20.45	6.56%
12/19/2003	12.00%	4.94%	6.75%	-3.01	1.81%	20.38	7.06%
12/19/2003	12.00%	4.94%	6.75%	-3.01	1.81%	20.38	7.06%
12/23/2003	10.50%	4.94%	6.75%	-3.01	1.81%	20.21	5.56%
1/13/2004	12.00%	4.95%	6.71%	-3.01	1.77%	19.36	7.05%
3/2/2004	10.75%	4.99%	6.82%	-3.00	1.64%	18.18	5.76%
3/26/2004	10.25%	5.02%	6.80%	-2.99	1.58%	17.98	5.23%
4/5/2004	11.25%	5.03%	6.80%	-2.99	1.57%	17.86	6.22%
5/18/2004	10.50%	5.07%	6.81%	-2.98	1.54%	17.45	5.43%
5/25/2004	10.25%	5.08%	6.80%	-2.98	1.53%	17.37	5.17%
5/27/2004	10.25%	5.08%	6.80%	-2.98	1.52%	17.34	5.17%
6/2/2004	11.22%	5.08%	6.80%	-2.98	1.52%	17.30	6.14%
6/30/2004	10.50%	5.10%	6.57%	-2.98	1.47%	16.97	5.40%
6/30/2004	10.50%	5.10%	6.57%	-2.98	1.47%	16.97	5.40%
7/16/2004	11.60%	5.11%	6.56%	-2.97	1.45%	16.72	6.49%
8/25/2004	10.25%	5.10%	6.53%	-2.98	1.43%	16.53	5.15%
9/9/2004	10.40%	5.10%	6.51%	-2.98	1.42%	16.36	5.30%
11/9/2004	10.50%	5.07%	6.43%	-2.98	1.37%	15.94	5.43%
11/23/2004	11.00%	5.06%	6.42%	-2.98	1.36%	15.75	5.94%
12/14/2004	10.97%	5.07%	6.41%	-2.98	1.35%	15.58	5.90%
12/21/2004	11.25%	5.07%	6.41%	-2.98	1.34%	15.51	6.18%
12/21/2004	11.25%	5.07%	6.41%	-2.98	1.34%	15.51	6.18%
12/22/2004	10.70%	5.07%	6.41%	-2.98	1.34%	15.49	5.63%
12/22/2004	10.70%	5.07%	6.41%	-2.98	1.34%	15.49	5.63%
12/29/2004	9.85%	5.07%	6.41%	-2.98	1.34%	15.33	4.78%
1/8/2005	10.70%	5.08%	6.41%	-2.98	1.33%	15.14	5.62%
2/18/2005	10.30%	4.98%	6.33%	-3.00	1.35%	14.60	5.32%
2/25/2005	10.50%	4.96%	6.31%	-3.00	1.35%	14.48	5.54%
3/10/2005	11.00%	4.93%	6.27%	-3.01	1.34%	14.19	6.07%
3/24/2005	10.30%	4.90%	6.23%	-3.02	1.34%	14.06	5.40%
4/4/2005	10.00%	4.88%	6.21%	-3.02	1.33%	14.02	5.12%
4/7/2005	10.25%	4.87%	6.20%	-3.02	1.33%	14.00	5.38%
5/18/2005	10.25%	4.78%	6.08%	-3.04	1.30%	13.90	5.47%
5/25/2005	10.75%	4.78%	6.07%	-3.04	1.30%	13.77	5.90%
5/26/2005	9.75%	4.78%	6.06%	-3.04	1.30%	13.74	4.96%
6/1/2005	9.75%	4.75%	6.05%	-3.05	1.30%	13.66	5.00%
7/19/2005	11.50%	4.84%	5.95%	-3.07	1.31%	13.17	6.86%
8/5/2005	11.75%	4.82%	5.93%	-3.07	1.31%	12.95	7.13%
8/15/2005	10.13%	4.61%	5.92%	-3.08	1.31%	12.85	5.52%
9/28/2005	10.00%	4.54%	5.87%	-3.09	1.32%	12.77	5.46%
10/4/2005	10.75%	4.54%	5.87%	-3.09	1.33%	12.78	6.21%
12/12/2005	11.00%	4.55%	5.93%	-3.09	1.38%	12.96	6.45%
12/13/2005	10.75%	4.55%	5.93%	-3.09	1.38%	12.96	6.20%
12/21/2005	10.29%	4.54%	5.93%	-3.09	1.39%	12.91	5.75%
12/21/2005	10.29%	4.54%	5.93%	-3.09	1.39%	12.91	5.75%
12/22/2005	11.00%	4.54%	5.94%	-3.09	1.39%	12.90	6.46%
12/22/2005	11.00%	4.54%	5.94%	-3.09	1.39%	12.90	6.46%
12/28/2005	10.00%	4.54%	5.94%	-3.09	1.40%	12.87	5.46%
12/28/2005	10.00%	4.54%	5.94%	-3.09	1.40%	12.87	5.46%
1/5/2006	11.00%	4.53%	5.94%	-3.09	1.41%	12.82	6.47%
1/27/2006	9.75%	4.52%	5.94%	-3.10	1.42%	12.73	5.23%
3/3/2006	10.39%	4.53%	5.96%	-3.09	1.43%	12.40	5.86%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
4/17/2008	10.20%	4.81%	6.05%	-3.08	1.44%	12.34	5.69%
4/26/2008	10.60%	4.84%	6.06%	-3.07	1.44%	12.34	5.90%
5/17/2008	11.60%	4.69%	6.14%	-3.06	1.45%	12.47	6.91%
6/6/2008	10.00%	4.74%	6.19%	-3.05	1.44%	12.72	5.26%
6/27/2008	10.75%	4.80%	6.25%	-3.04	1.45%	13.07	5.95%
7/6/2008	10.20%	4.83%	6.28%	-3.03	1.45%	13.12	5.37%
7/24/2008	9.60%	4.86%	6.32%	-3.02	1.46%	13.30	4.74%
7/26/2008	10.50%	4.86%	6.33%	-3.02	1.47%	13.30	5.64%
7/28/2008	10.05%	4.86%	6.33%	-3.02	1.47%	13.29	5.19%
8/23/2008	9.55%	4.89%	6.36%	-3.02	1.47%	13.19	4.66%
9/1/2008	10.54%	4.90%	6.36%	-3.02	1.47%	13.19	5.64%
9/14/2008	10.00%	4.91%	6.37%	-3.01	1.47%	13.24	5.09%
10/6/2008	9.67%	4.92%	6.37%	-3.01	1.45%	13.29	4.75%
11/21/2008	10.08%	4.95%	6.39%	-3.01	1.44%	13.11	5.13%
11/21/2008	10.08%	4.95%	6.39%	-3.01	1.44%	13.11	5.13%
11/21/2008	10.08%	4.95%	6.39%	-3.01	1.44%	13.11	5.13%
12/1/2008	10.25%	4.95%	6.38%	-3.00	1.43%	13.08	5.30%
12/1/2008	10.25%	4.95%	6.38%	-3.00	1.43%	13.08	5.30%
12/7/2008	10.75%	4.95%	6.38%	-3.00	1.43%	13.08	5.80%
12/21/2008	10.90%	4.95%	6.38%	-3.01	1.42%	12.98	5.95%
12/21/2008	10.90%	4.95%	6.38%	-3.01	1.42%	12.98	5.95%
12/22/2008	10.25%	4.95%	6.37%	-3.01	1.42%	12.97	5.30%
1/5/2007	10.00%	4.95%	6.37%	-3.01	1.42%	12.97	5.05%
1/11/2007	10.10%	4.95%	6.37%	-3.01	1.42%	12.98	5.15%
1/11/2007	10.10%	4.95%	6.37%	-3.01	1.42%	12.98	5.15%
1/11/2007	10.10%	4.95%	6.37%	-3.01	1.42%	12.98	5.15%
1/12/2007	10.10%	4.95%	6.37%	-3.01	1.42%	12.97	5.15%
1/13/2007	10.40%	4.95%	6.37%	-3.01	1.42%	12.97	5.45%
1/19/2007	10.80%	4.94%	6.36%	-3.01	1.42%	12.95	5.86%
3/21/2007	11.36%	4.87%	6.26%	-3.02	1.40%	12.82	6.48%
3/22/2007	9.75%	4.86%	6.26%	-3.02	1.40%	12.81	4.89%
5/15/2007	10.00%	4.81%	6.18%	-3.03	1.38%	12.23	5.19%
5/17/2007	10.25%	4.81%	6.18%	-3.04	1.38%	12.22	5.44%
5/17/2007	10.25%	4.81%	6.18%	-3.04	1.38%	12.22	5.44%
5/22/2007	10.20%	4.80%	6.18%	-3.04	1.37%	12.20	5.40%
5/22/2007	10.20%	4.80%	6.18%	-3.04	1.37%	12.20	5.40%
5/23/2007	10.70%	4.80%	6.18%	-3.04	1.37%	12.19	5.90%
5/25/2007	9.67%	4.80%	6.18%	-3.04	1.37%	12.18	4.87%
6/15/2007	9.90%	4.82%	6.18%	-3.03	1.36%	12.27	5.06%
6/21/2007	10.20%	4.83%	6.19%	-3.03	1.36%	12.30	5.37%
6/22/2007	10.50%	4.83%	6.19%	-3.03	1.36%	12.31	5.67%
6/28/2007	10.75%	4.84%	6.19%	-3.03	1.36%	12.38	6.91%
7/12/2007	9.67%	4.86%	6.21%	-3.02	1.35%	12.56	4.81%
7/19/2007	10.00%	4.87%	6.21%	-3.02	1.35%	12.65	5.13%
7/19/2007	10.00%	4.87%	6.21%	-3.02	1.35%	12.65	5.13%
8/15/2007	10.40%	4.86%	6.23%	-3.02	1.36%	13.75	5.52%
10/9/2007	10.00%	4.91%	6.31%	-3.01	1.41%	15.91	5.06%
10/17/2007	9.10%	4.91%	6.32%	-3.01	1.41%	16.13	4.19%
10/31/2007	9.96%	4.90%	6.33%	-3.02	1.43%	16.59	5.08%
11/29/2007	10.90%	4.87%	6.34%	-3.02	1.47%	18.10	6.03%
12/6/2007	10.75%	4.86%	6.35%	-3.02	1.49%	18.41	5.89%
12/13/2007	9.96%	4.86%	6.36%	-3.02	1.50%	18.60	5.10%
12/14/2007	10.70%	4.86%	6.36%	-3.02	1.51%	18.63	5.84%
12/14/2007	10.70%	4.86%	6.36%	-3.02	1.51%	18.63	5.84%
12/19/2007	10.20%	4.86%	6.37%	-3.03	1.52%	18.72	5.34%
12/20/2007	10.20%	4.86%	6.37%	-3.03	1.52%	18.75	5.36%
12/20/2007	10.20%	4.86%	6.37%	-3.03	1.52%	18.75	5.36%
12/28/2007	10.25%	4.85%	6.39%	-3.03	1.54%	18.83	5.40%
12/31/2007	11.25%	4.85%	6.39%	-3.03	1.54%	18.86	6.40%
1/8/2008	10.75%	4.83%	6.39%	-3.03	1.56%	19.13	5.92%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
1/17/2008	10.75%	4.81%	6.40%	-3.03	1.58%	19.48	5.94%
1/28/2008	9.40%	4.80%	6.40%	-3.04	1.60%	19.95	4.60%
1/30/2008	10.00%	4.79%	6.40%	-3.04	1.61%	20.10	5.21%
1/31/2008	10.71%	4.79%	6.40%	-3.04	1.61%	20.17	5.92%
2/29/2008	10.25%	4.75%	6.44%	-3.05	1.69%	21.41	5.50%
3/12/2008	10.25%	4.73%	6.46%	-3.05	1.73%	21.95	5.52%
3/25/2008	9.10%	4.68%	6.47%	-3.05	1.79%	22.51	4.42%
4/22/2008	10.25%	4.60%	6.49%	-3.06	1.89%	23.28	5.65%
4/24/2008	10.10%	4.60%	6.50%	-3.06	1.90%	23.32	5.50%
5/1/2008	10.70%	4.59%	6.50%	-3.06	1.92%	23.42	6.11%
5/19/2008	11.00%	4.56%	6.52%	-3.09	1.96%	23.33	6.44%
5/27/2008	10.00%	4.56%	6.53%	-3.09	1.98%	23.21	5.45%
6/10/2008	10.70%	4.54%	6.55%	-3.09	2.01%	22.88	6.16%
6/27/2008	10.50%	4.54%	6.58%	-3.09	2.04%	22.74	5.96%
6/27/2008	10.50%	4.54%	6.58%	-3.09	2.04%	22.74	5.96%
7/10/2008	10.43%	4.52%	6.60%	-3.10	2.07%	22.86	5.91%
7/18/2008	9.40%	4.52%	6.60%	-3.10	2.09%	23.05	4.88%
7/30/2008	10.80%	4.51%	6.64%	-3.10	2.13%	23.31	6.29%
7/31/2008	10.70%	4.51%	6.64%	-3.10	2.13%	23.32	6.19%
8/11/2008	10.25%	4.51%	6.66%	-3.10	2.16%	23.36	5.74%
8/26/2008	10.18%	4.50%	6.70%	-3.10	2.20%	23.26	5.66%
9/10/2008	10.30%	4.50%	6.73%	-3.10	2.23%	23.04	5.80%
9/24/2008	10.65%	4.48%	6.77%	-3.11	2.29%	23.44	6.17%
9/24/2008	10.65%	4.48%	6.77%	-3.11	2.29%	23.44	6.17%
9/24/2008	10.65%	4.48%	6.77%	-3.11	2.29%	23.44	6.17%
9/30/2008	10.20%	4.48%	6.79%	-3.11	2.32%	23.77	5.72%
10/8/2008	10.15%	4.46%	6.83%	-3.11	2.37%	24.68	6.69%
11/13/2008	10.55%	4.45%	7.14%	-3.11	2.69%	29.55	6.10%
11/17/2008	10.20%	4.44%	7.16%	-3.11	2.72%	29.97	5.76%
12/1/2008	10.25%	4.40%	7.27%	-3.12	2.87%	31.78	5.85%
12/23/2008	11.00%	4.27%	7.39%	-3.15	3.12%	34.10	6.73%
12/29/2008	10.00%	4.24%	7.41%	-3.16	3.17%	34.33	5.76%
12/29/2008	10.00%	4.24%	7.41%	-3.16	3.17%	34.33	5.76%
12/31/2008	10.75%	4.22%	7.42%	-3.17	3.20%	34.45	6.53%
1/14/2009	10.50%	4.15%	7.47%	-3.18	3.32%	35.20	6.35%
1/21/2009	10.50%	4.12%	7.49%	-3.19	3.38%	35.74	6.38%
1/21/2009	10.50%	4.12%	7.49%	-3.19	3.38%	35.74	6.38%
1/21/2009	10.50%	4.12%	7.49%	-3.19	3.38%	35.74	6.38%
1/27/2009	10.75%	4.09%	7.52%	-3.20	3.43%	36.20	6.67%
1/30/2009	10.50%	4.08%	7.53%	-3.20	3.46%	36.50	6.42%
2/4/2009	8.75%	4.06%	7.55%	-3.20	3.49%	36.66	4.69%
3/4/2009	10.50%	3.98%	7.64%	-3.23	3.68%	39.48	6.54%
3/12/2009	11.50%	3.93%	7.67%	-3.24	3.74%	40.32	7.57%
4/2/2009	11.10%	3.85%	7.76%	-3.26	3.91%	41.94	7.25%
4/21/2009	10.61%	3.80%	7.83%	-3.27	4.03%	42.82	6.81%
4/24/2009	10.00%	3.79%	7.85%	-3.27	4.06%	43.01	6.21%
4/30/2009	11.25%	3.78%	7.87%	-3.28	4.09%	43.20	7.47%
5/4/2009	10.74%	3.77%	7.88%	-3.28	4.11%	43.30	6.97%
5/20/2009	10.25%	3.74%	7.92%	-3.29	4.17%	43.85	6.51%
5/28/2009	10.50%	3.74%	7.94%	-3.29	4.20%	44.13	6.76%
6/22/2009	10.00%	3.78%	7.98%	-3.28	4.21%	44.90	6.24%
6/24/2009	10.80%	3.77%	7.98%	-3.28	4.21%	44.87	7.03%
7/8/2009	10.63%	3.77%	7.98%	-3.28	4.21%	44.89	6.86%
7/17/2009	10.50%	3.78%	7.96%	-3.28	4.19%	44.53	6.72%
8/31/2009	10.25%	3.82%	7.63%	-3.27	3.82%	39.06	6.43%
10/14/2009	10.70%	4.01%	7.28%	-3.22	3.27%	33.94	6.69%
10/23/2009	10.88%	4.06%	7.22%	-3.20	3.16%	33.27	6.82%
11/2/2009	10.70%	4.09%	7.17%	-3.20	3.08%	32.69	6.61%
11/3/2009	10.70%	4.10%	7.17%	-3.20	3.07%	32.55	6.60%
11/24/2009	10.25%	4.15%	7.05%	-3.18	2.89%	30.96	6.10%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
11/25/2009	10.75%	4.16%	7.04%	-3.18	2.88%	30.84	6.59%
11/30/2009	10.35%	4.17%	7.02%	-3.18	2.85%	30.67	6.18%
12/3/2009	10.50%	4.18%	7.00%	-3.18	2.82%	30.27	6.32%
12/7/2009	10.70%	4.18%	6.96%	-3.17	2.80%	29.98	6.52%
12/16/2009	10.90%	4.21%	6.93%	-3.17	2.72%	29.08	6.69%
12/16/2009	10.90%	4.21%	6.93%	-3.17	2.72%	29.08	6.69%
12/18/2009	10.40%	4.22%	6.92%	-3.16	2.69%	28.81	6.18%
12/18/2009	10.40%	4.22%	6.92%	-3.16	2.69%	28.81	6.18%
12/22/2009	10.20%	4.23%	6.90%	-3.16	2.67%	28.54	5.97%
12/22/2009	10.20%	4.23%	6.90%	-3.16	2.67%	28.54	5.97%
12/22/2009	10.20%	4.23%	6.90%	-3.16	2.67%	28.54	5.97%
12/30/2009	10.00%	4.26%	6.86%	-3.16	2.60%	27.98	5.74%
1/4/2010	10.80%	4.28%	6.84%	-3.15	2.57%	27.77	6.52%
1/11/2010	11.00%	4.30%	6.80%	-3.15	2.50%	27.16	6.70%
1/26/2010	10.13%	4.35%	6.70%	-3.13	2.35%	26.14	5.78%
1/27/2010	10.40%	4.35%	6.69%	-3.13	2.33%	26.08	6.05%
1/27/2010	10.40%	4.35%	6.69%	-3.13	2.33%	26.08	6.05%
1/27/2010	10.40%	4.35%	6.69%	-3.13	2.33%	26.08	6.05%
2/9/2010	9.80%	4.38%	6.60%	-3.13	2.22%	25.50	5.42%
2/18/2010	10.60%	4.40%	6.55%	-3.12	2.16%	25.09	6.20%
2/24/2010	10.18%	4.41%	6.52%	-3.12	2.12%	24.84	5.77%
3/2/2010	9.63%	4.41%	6.49%	-3.12	2.08%	24.58	5.22%
3/4/2010	10.50%	4.41%	6.48%	-3.12	2.07%	24.45	6.09%
3/5/2010	10.50%	4.41%	6.47%	-3.12	2.06%	24.40	6.09%
3/11/2010	11.90%	4.42%	6.44%	-3.12	2.03%	24.14	7.48%
3/17/2010	10.00%	4.41%	6.41%	-3.12	1.99%	23.87	5.59%
3/25/2010	10.15%	4.42%	6.37%	-3.12	1.95%	23.60	5.73%
4/2/2010	10.10%	4.43%	6.33%	-3.12	1.90%	23.19	5.67%
4/27/2010	10.00%	4.46%	6.26%	-3.11	1.81%	22.18	5.54%
4/29/2010	9.90%	4.46%	6.25%	-3.11	1.80%	22.13	5.44%
4/29/2010	9.90%	4.46%	6.25%	-3.11	1.80%	22.13	5.44%
4/29/2010	9.90%	4.46%	6.25%	-3.11	1.80%	22.13	5.44%
5/12/2010	10.30%	4.45%	6.21%	-3.11	1.76%	22.27	5.85%
5/12/2010	10.30%	4.45%	6.21%	-3.11	1.76%	22.27	5.85%
5/28/2010	10.10%	4.44%	6.17%	-3.11	1.73%	22.82	5.66%
5/28/2010	10.10%	4.44%	6.17%	-3.11	1.73%	22.82	5.66%
6/7/2010	10.30%	4.44%	6.17%	-3.11	1.73%	23.01	5.86%
6/16/2010	10.00%	4.44%	6.17%	-3.11	1.73%	23.17	5.96%
6/28/2010	9.67%	4.43%	6.17%	-3.12	1.73%	23.20	5.24%
6/28/2010	9.67%	4.43%	6.17%	-3.12	1.73%	23.20	5.24%
6/30/2010	9.40%	4.43%	6.17%	-3.12	1.74%	23.30	4.97%
7/1/2010	10.25%	4.43%	6.17%	-3.12	1.74%	23.35	5.82%
7/15/2010	10.53%	4.43%	6.16%	-3.12	1.74%	23.44	6.10%
7/15/2010	10.53%	4.43%	6.16%	-3.12	1.74%	23.44	6.10%
7/30/2010	10.70%	4.41%	6.16%	-3.12	1.74%	23.39	6.29%
8/4/2010	10.50%	4.41%	6.15%	-3.12	1.74%	23.39	6.09%
8/6/2010	9.83%	4.41%	6.15%	-3.12	1.74%	23.40	5.42%
8/25/2010	9.90%	4.37%	6.10%	-3.13	1.73%	23.38	5.53%
9/3/2010	10.60%	4.35%	6.07%	-3.14	1.73%	23.43	6.25%
9/14/2010	10.70%	4.33%	6.06%	-3.14	1.73%	23.48	6.37%
9/16/2010	10.00%	4.33%	6.05%	-3.14	1.73%	23.44	5.67%
9/16/2010	10.00%	4.33%	6.05%	-3.14	1.73%	23.44	5.67%
9/30/2010	9.75%	4.29%	6.02%	-3.15	1.73%	23.46	5.46%
10/14/2010	10.35%	4.24%	5.98%	-3.16	1.74%	23.48	6.11%
10/28/2010	10.70%	4.21%	5.95%	-3.17	1.74%	23.52	6.49%
11/2/2010	10.38%	4.20%	5.95%	-3.17	1.75%	23.57	6.18%
11/4/2010	10.70%	4.20%	5.94%	-3.17	1.75%	23.58	6.50%
11/19/2010	10.20%	4.18%	5.93%	-3.18	1.76%	23.30	6.02%
11/22/2010	10.00%	4.18%	5.93%	-3.18	1.76%	23.26	5.82%
12/1/2010	10.13%	4.16%	5.92%	-3.18	1.76%	23.19	5.97%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
12/6/2010	9.86%	4.15%	5.91%	-3.18	1.76%	23.17	5.71%
12/9/2010	10.25%	4.15%	5.91%	-3.18	1.76%	23.12	6.10%
12/13/2010	10.70%	4.15%	5.91%	-3.18	1.76%	23.10	6.55%
12/14/2010	10.13%	4.15%	5.91%	-3.18	1.76%	23.10	5.98%
12/15/2010	10.44%	4.15%	5.91%	-3.18	1.76%	23.09	6.29%
12/17/2010	10.00%	4.15%	5.91%	-3.18	1.76%	23.06	5.85%
12/20/2010	10.60%	4.15%	5.91%	-3.18	1.76%	23.07	6.45%
12/21/2010	10.30%	4.14%	5.90%	-3.18	1.76%	23.07	6.16%
12/27/2010	9.90%	4.14%	5.90%	-3.18	1.76%	23.04	5.76%
12/29/2010	11.15%	4.14%	5.90%	-3.18	1.76%	23.04	7.01%
1/5/2011	10.15%	4.13%	5.90%	-3.19	1.76%	23.06	6.02%
1/12/2011	10.30%	4.12%	5.89%	-3.19	1.77%	23.04	6.18%
1/13/2011	10.30%	4.12%	5.89%	-3.19	1.77%	23.03	6.16%
1/18/2011	10.00%	4.12%	5.89%	-3.19	1.77%	23.02	5.88%
1/20/2011	9.30%	4.12%	5.88%	-3.19	1.76%	23.03	5.18%
1/20/2011	9.30%	4.12%	5.88%	-3.19	1.76%	23.03	5.18%
1/31/2011	9.60%	4.12%	5.88%	-3.19	1.76%	23.09	5.48%
2/3/2011	10.00%	4.12%	5.88%	-3.19	1.76%	23.10	5.88%
2/25/2011	10.00%	4.14%	5.89%	-3.18	1.74%	22.61	5.88%
3/25/2011	9.80%	4.18%	5.86%	-3.18	1.70%	21.32	6.62%
3/30/2011	10.00%	4.18%	5.87%	-3.17	1.69%	21.18	5.82%
4/12/2011	10.00%	4.21%	5.86%	-3.17	1.65%	20.76	5.79%
4/25/2011	10.74%	4.23%	5.86%	-3.18	1.63%	20.20	6.51%
4/26/2011	9.67%	4.23%	5.86%	-3.18	1.63%	20.15	5.44%
4/27/2011	10.40%	4.24%	5.86%	-3.18	1.62%	20.11	6.16%
5/4/2011	10.00%	4.24%	5.85%	-3.18	1.61%	19.87	5.78%
5/4/2011	10.00%	4.24%	5.85%	-3.18	1.61%	19.87	5.78%
5/24/2011	10.50%	4.27%	5.85%	-3.15	1.58%	19.45	6.23%
6/8/2011	10.75%	4.30%	5.85%	-3.15	1.55%	19.06	6.45%
6/16/2011	9.20%	4.32%	5.86%	-3.14	1.55%	18.86	4.88%
6/17/2011	9.85%	4.32%	5.86%	-3.14	1.55%	18.85	5.63%
7/13/2011	10.20%	4.36%	5.88%	-3.13	1.51%	18.50	5.84%
8/1/2011	9.20%	4.39%	5.89%	-3.13	1.50%	18.46	4.81%
8/8/2011	10.00%	4.38%	5.88%	-3.13	1.49%	18.77	5.62%
8/11/2011	10.00%	4.38%	5.87%	-3.13	1.49%	19.06	5.62%
8/12/2011	10.35%	4.37%	5.87%	-3.13	1.49%	19.14	5.98%
8/19/2011	10.25%	4.36%	5.85%	-3.13	1.49%	19.52	5.89%
9/2/2011	12.88%	4.32%	5.82%	-3.14	1.50%	20.30	8.56%
9/22/2011	10.00%	4.24%	5.77%	-3.16	1.52%	21.32	5.76%
10/12/2011	10.30%	4.14%	5.71%	-3.18	1.57%	22.80	6.16%
10/20/2011	10.50%	4.10%	5.68%	-3.19	1.58%	23.24	6.40%
11/30/2011	10.90%	3.87%	5.54%	-3.25	1.66%	25.24	7.03%
11/30/2011	10.90%	3.87%	5.54%	-3.25	1.66%	25.24	7.03%
12/14/2011	10.00%	3.80%	5.49%	-3.27	1.69%	25.64	6.20%
12/14/2011	10.00%	3.80%	5.49%	-3.27	1.69%	25.64	6.20%
12/20/2011	10.20%	3.76%	5.47%	-3.28	1.71%	25.73	6.44%
12/21/2011	10.20%	3.76%	5.47%	-3.28	1.71%	25.74	6.44%
12/22/2011	9.90%	3.75%	5.46%	-3.28	1.71%	25.74	6.15%
12/22/2011	9.90%	3.75%	5.46%	-3.28	1.71%	25.74	6.15%
12/23/2011	10.19%	3.74%	5.46%	-3.28	1.71%	25.74	6.46%
1/25/2012	10.50%	3.57%	5.37%	-3.33	1.80%	25.85	6.93%
1/27/2012	10.50%	3.56%	5.36%	-3.34	1.80%	25.86	6.94%
2/15/2012	10.20%	3.47%	5.30%	-3.36	1.82%	26.07	6.73%
2/23/2012	9.90%	3.44%	5.28%	-3.37	1.84%	26.09	6.46%
2/27/2012	10.25%	3.43%	5.27%	-3.37	1.84%	26.10	6.82%
2/29/2012	10.40%	3.41%	5.26%	-3.38	1.85%	26.12	6.99%
3/29/2012	10.37%	3.32%	5.20%	-3.41	1.89%	26.97	7.05%
4/4/2012	10.00%	3.30%	5.19%	-3.41	1.90%	26.86	6.70%
4/26/2012	10.00%	3.21%	5.14%	-3.44	1.94%	26.88	6.79%
5/2/2012	10.00%	3.18%	5.13%	-3.45	1.95%	25.81	6.82%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
6/7/2012	9.80%	3.17%	5.12%	-3.45	1.95%	25.81	6.83%
5/15/2012	10.00%	3.14%	5.10%	-3.46	1.95%	25.77	6.86%
5/29/2012	10.05%	3.11%	5.08%	-3.47	1.98%	25.29	6.94%
6/7/2012	10.30%	3.08%	5.07%	-3.48	2.00%	24.83	7.22%
6/14/2012	9.40%	3.08%	5.07%	-3.49	2.01%	24.50	6.34%
6/15/2012	10.40%	3.06%	5.06%	-3.49	2.01%	24.44	7.34%
6/18/2012	9.60%	3.06%	5.06%	-3.49	2.01%	24.37	6.54%
6/19/2012	9.25%	3.05%	5.06%	-3.49	2.01%	24.30	6.20%
6/26/2012	10.10%	3.04%	5.06%	-3.49	2.02%	23.90	7.06%
6/29/2012	10.00%	3.04%	5.05%	-3.49	2.02%	23.83	6.96%
7/9/2012	10.20%	3.03%	5.05%	-3.50	2.02%	23.23	7.17%
7/16/2012	9.80%	3.02%	5.04%	-3.50	2.02%	22.67	6.78%
7/20/2012	9.31%	3.01%	5.04%	-3.50	2.03%	22.15	6.30%
7/20/2012	9.31%	3.01%	5.04%	-3.50	2.03%	22.15	6.30%
9/13/2012	9.80%	2.94%	4.99%	-3.53	2.05%	19.17	6.86%
9/19/2012	9.80%	2.94%	4.99%	-3.53	2.05%	18.99	6.86%
9/19/2012	9.80%	2.94%	4.99%	-3.53	2.05%	18.99	6.86%
9/26/2012	9.50%	2.94%	4.98%	-3.53	2.04%	18.55	6.56%
10/12/2012	9.60%	2.93%	4.96%	-3.53	2.02%	18.06	6.67%
10/23/2012	9.75%	2.93%	4.94%	-3.53	2.00%	17.86	6.82%
10/24/2012	10.30%	2.93%	4.93%	-3.53	2.00%	17.85	7.37%
11/9/2012	10.30%	2.92%	4.90%	-3.53	1.98%	17.75	7.38%
11/28/2012	10.40%	2.90%	4.86%	-3.54	1.97%	17.61	7.50%
11/29/2012	9.75%	2.89%	4.86%	-3.54	1.97%	17.59	6.86%
11/29/2012	9.75%	2.89%	4.86%	-3.54	1.97%	17.59	6.86%
12/5/2012	9.71%	2.89%	4.85%	-3.54	1.96%	17.53	6.82%
12/5/2012	9.71%	2.89%	4.85%	-3.54	1.96%	17.53	6.82%
12/12/2012	9.80%	2.88%	4.84%	-3.55	1.96%	17.49	6.92%
12/13/2012	9.50%	2.88%	4.84%	-3.55	1.96%	17.48	6.62%
12/13/2012	9.50%	2.88%	4.84%	-3.55	1.96%	17.48	6.62%
12/14/2012	10.40%	2.88%	4.83%	-3.55	1.96%	17.47	7.52%
12/19/2012	9.71%	2.87%	4.83%	-3.55	1.95%	17.46	6.84%
12/19/2012	9.71%	2.87%	4.83%	-3.55	1.95%	17.46	6.84%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/20/2012	9.50%	2.87%	4.83%	-3.55	1.95%	17.44	6.63%
12/21/2012	10.20%	2.87%	4.82%	-3.55	1.95%	17.43	7.33%
12/26/2012	9.80%	2.86%	4.82%	-3.55	1.96%	17.45	6.94%
1/9/2013	9.70%	2.85%	4.79%	-3.56	1.95%	17.49	6.85%
1/9/2013	9.70%	2.85%	4.79%	-3.56	1.95%	17.49	6.85%
1/9/2013	9.70%	2.85%	4.79%	-3.56	1.95%	17.49	6.85%
1/16/2013	9.60%	2.84%	4.78%	-3.56	1.94%	17.44	6.76%
1/16/2013	9.60%	2.84%	4.78%	-3.56	1.94%	17.44	6.76%
2/13/2013	10.20%	2.84%	4.74%	-3.56	1.90%	17.01	7.36%
2/22/2013	9.75%	2.85%	4.73%	-3.56	1.88%	16.90	6.90%
2/27/2013	10.00%	2.86%	4.73%	-3.56	1.87%	16.86	7.14%
3/14/2013	9.30%	2.88%	4.72%	-3.55	1.84%	16.37	6.42%
3/27/2013	9.80%	2.90%	4.71%	-3.54	1.81%	15.90	6.90%
5/1/2013	9.84%	2.94%	4.66%	-3.53	1.72%	15.26	6.90%
5/15/2013	10.30%	2.96%	4.64%	-3.52	1.68%	15.03	7.34%
5/30/2013	10.20%	2.96%	4.64%	-3.51	1.66%	14.88	7.22%
5/31/2013	9.00%	2.98%	4.64%	-3.51	1.66%	14.89	6.02%
6/11/2013	10.00%	3.00%	4.64%	-3.51	1.64%	14.96	7.00%
6/21/2013	9.75%	3.02%	4.65%	-3.50	1.62%	15.01	6.73%
6/25/2013	9.80%	3.03%	4.65%	-3.50	1.62%	15.02	6.77%
7/12/2013	9.38%	3.07%	4.68%	-3.48	1.60%	15.06	6.29%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
8/8/2013	9.83%	3.14%	4.73%	-3.46	1.59%	14.83	6.89%
8/14/2013	9.15%	3.18%	4.75%	-3.45	1.59%	14.74	5.99%
9/11/2013	10.20%	3.28%	4.83%	-3.42	1.57%	14.57	6.94%
9/11/2013	10.20%	3.28%	4.83%	-3.42	1.57%	14.57	6.94%
9/24/2013	10.20%	3.31%	4.87%	-3.41	1.57%	14.48	6.89%
10/3/2013	9.65%	3.33%	4.89%	-3.40	1.56%	14.46	6.32%
11/6/2013	10.20%	3.41%	4.96%	-3.38	1.55%	14.40	6.79%
11/21/2013	10.00%	3.44%	4.98%	-3.37	1.54%	14.36	6.56%
11/26/2013	10.00%	3.45%	4.99%	-3.37	1.54%	14.35	6.55%
12/3/2013	10.25%	3.47%	5.00%	-3.36	1.53%	14.38	6.78%
12/4/2013	9.50%	3.47%	5.00%	-3.36	1.53%	14.38	6.03%
12/5/2013	10.20%	3.48%	5.01%	-3.36	1.53%	14.38	6.72%
12/9/2013	8.72%	3.48%	5.01%	-3.36	1.53%	14.35	5.24%
12/9/2013	8.72%	3.48%	5.01%	-3.36	1.53%	14.35	5.24%
12/13/2013	9.75%	3.50%	5.02%	-3.35	1.52%	14.34	6.25%
12/16/2013	9.95%	3.50%	5.03%	-3.35	1.52%	14.35	6.45%
12/16/2013	9.95%	3.50%	5.03%	-3.35	1.52%	14.35	6.45%
12/16/2013	9.95%	3.50%	5.03%	-3.35	1.52%	14.35	6.45%
12/17/2013	9.50%	3.51%	5.03%	-3.35	1.52%	14.36	5.99%
12/17/2013	9.50%	3.51%	5.03%	-3.35	1.52%	14.36	5.99%
12/18/2013	8.72%	3.51%	5.03%	-3.35	1.52%	14.37	5.21%
12/18/2013	8.72%	3.51%	5.03%	-3.35	1.52%	14.37	5.21%
12/19/2013	10.15%	3.51%	5.04%	-3.35	1.52%	14.37	6.64%
12/30/2013	9.50%	3.54%	5.05%	-3.34	1.51%	14.40	5.96%
2/20/2014	9.20%	3.68%	5.14%	-3.30	1.46%	14.61	5.52%
2/26/2014	9.75%	3.69%	5.15%	-3.30	1.46%	14.64	6.06%
3/17/2014	9.55%	3.72%	5.17%	-3.29	1.45%	14.72	5.83%
3/26/2014	9.40%	3.73%	5.17%	-3.29	1.45%	14.67	5.67%
3/26/2014	9.40%	3.73%	5.17%	-3.29	1.45%	14.67	5.67%
4/2/2014	9.70%	3.73%	5.17%	-3.29	1.45%	14.59	5.97%
5/16/2014	9.80%	3.70%	5.11%	-3.30	1.40%	14.38	6.10%
5/30/2014	9.70%	3.68%	5.08%	-3.30	1.40%	14.34	6.02%
6/6/2014	10.40%	3.67%	5.07%	-3.30	1.40%	14.27	6.73%
6/30/2014	9.55%	3.64%	5.02%	-3.31	1.38%	13.95	5.91%
7/2/2014	9.62%	3.64%	5.02%	-3.31	1.38%	13.91	5.98%
7/10/2014	9.95%	3.63%	5.00%	-3.32	1.37%	13.86	6.32%
7/23/2014	9.75%	3.61%	4.97%	-3.32	1.36%	13.71	6.14%
7/29/2014	9.45%	3.60%	4.96%	-3.32	1.36%	13.58	5.85%
7/31/2014	9.90%	3.60%	4.95%	-3.32	1.35%	13.57	6.30%
8/20/2014	9.75%	3.57%	4.92%	-3.33	1.36%	13.61	6.18%
8/25/2014	9.60%	3.56%	4.91%	-3.34	1.36%	13.59	6.04%
8/29/2014	9.80%	3.54%	4.90%	-3.34	1.36%	13.57	6.26%
9/11/2014	9.60%	3.51%	4.88%	-3.35	1.37%	13.56	6.09%
9/15/2014	10.25%	3.51%	4.88%	-3.35	1.37%	13.57	6.74%
10/9/2014	9.80%	3.45%	4.83%	-3.37	1.39%	13.61	6.35%
11/6/2014	9.56%	3.37%	4.79%	-3.39	1.41%	14.11	6.19%
11/6/2014	9.56%	3.37%	4.79%	-3.39	1.41%	14.11	6.19%
11/14/2014	10.20%	3.35%	4.78%	-3.40	1.42%	13.88	6.85%
11/26/2014	9.70%	3.33%	4.77%	-3.40	1.44%	13.82	6.37%
11/26/2014	9.70%	3.33%	4.77%	-3.40	1.44%	13.82	6.37%
12/4/2014	9.68%	3.31%	4.76%	-3.41	1.45%	13.79	6.37%
12/10/2014	9.25%	3.29%	4.75%	-3.41	1.46%	13.80	5.96%
12/10/2014	9.25%	3.29%	4.75%	-3.41	1.46%	13.80	5.96%
12/11/2014	10.07%	3.28%	4.75%	-3.42	1.46%	13.83	6.78%
12/12/2014	10.20%	3.28%	4.75%	-3.42	1.47%	13.67	6.92%
12/17/2014	9.17%	3.27%	4.75%	-3.42	1.48%	13.96	5.90%
12/18/2014	9.83%	3.26%	4.75%	-3.42	1.48%	13.98	6.57%
1/23/2015	9.50%	3.14%	4.69%	-3.46	1.55%	14.37	6.36%
2/24/2015	9.83%	3.04%	4.65%	-3.49	1.61%	14.67	6.79%
3/18/2015	9.75%	2.98%	4.64%	-3.51	1.66%	14.88	6.77%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
3/25/2015	9.50%	2.98%	4.83%	-3.52	1.67%	14.94	6.54%
3/26/2015	9.72%	2.95%	4.83%	-3.52	1.68%	14.97	6.77%
4/23/2015	10.20%	2.87%	4.81%	-3.55	1.74%	15.19	7.33%
4/29/2015	9.53%	2.86%	4.80%	-3.56	1.75%	15.20	6.67%
5/1/2015	9.60%	2.85%	4.80%	-3.56	1.75%	15.23	6.75%
5/26/2015	9.75%	2.83%	4.83%	-3.56	1.80%	15.16	6.92%
6/17/2015	9.00%	2.82%	4.88%	-3.57	1.84%	15.29	6.18%
6/17/2015	9.00%	2.82%	4.88%	-3.57	1.84%	15.29	6.18%
9/2/2015	9.50%	2.79%	4.79%	-3.58	2.00%	15.67	6.71%
9/10/2015	9.30%	2.79%	4.81%	-3.58	2.02%	15.97	6.51%
10/15/2015	9.00%	2.81%	4.90%	-3.57	2.09%	16.67	6.19%
11/19/2015	10.00%	2.88%	5.03%	-3.55	2.15%	16.29	7.12%
11/19/2015	10.00%	2.88%	5.03%	-3.55	2.15%	16.29	7.12%
12/3/2015	10.00%	2.90%	5.08%	-3.54	2.19%	16.27	7.10%
12/9/2015	9.14%	2.90%	5.10%	-3.54	2.20%	16.32	6.24%
12/9/2015	9.14%	2.90%	5.10%	-3.54	2.20%	16.32	6.24%
12/11/2015	10.30%	2.90%	5.11%	-3.54	2.21%	16.41	7.40%
12/15/2015	9.60%	2.91%	5.12%	-3.54	2.22%	16.40	6.69%
12/17/2015	9.70%	2.91%	5.13%	-3.54	2.23%	16.53	6.79%
12/18/2015	9.50%	2.91%	5.14%	-3.54	2.23%	16.56	6.59%
12/30/2015	9.50%	2.93%	5.17%	-3.53	2.25%	16.59	6.57%
1/6/2016	9.50%	2.94%	5.20%	-3.53	2.26%	16.71	6.56%
2/23/2016	9.75%	2.94%	5.33%	-3.53	2.40%	16.29	6.81%
3/16/2016	9.85%	2.91%	5.36%	-3.54	2.45%	16.67	6.94%
4/29/2016	9.80%	2.83%	5.31%	-3.56	2.47%	16.56	6.97%
6/3/2016	9.75%	2.80%	5.24%	-3.57	2.43%	16.78	6.95%
6/8/2016	9.48%	2.80%	5.23%	-3.58	2.43%	16.67	6.68%
6/15/2016	9.00%	2.78%	5.20%	-3.58	2.42%	16.34	6.22%
6/15/2016	9.00%	2.78%	5.20%	-3.58	2.42%	16.34	6.22%
7/18/2016	9.98%	2.71%	5.08%	-3.61	2.37%	17.47	7.27%
8/9/2016	9.85%	2.68%	4.98%	-3.63	2.32%	17.08	7.19%
8/18/2016	9.50%	2.63%	4.94%	-3.64	2.30%	16.96	6.87%
8/24/2016	9.75%	2.62%	4.91%	-3.64	2.29%	16.91	7.13%
9/1/2016	9.50%	2.59%	4.87%	-3.65	2.27%	16.79	6.91%
9/8/2016	10.00%	2.58%	4.84%	-3.66	2.26%	16.69	7.42%
9/28/2016	9.58%	2.54%	4.75%	-3.67	2.22%	16.54	7.04%
9/30/2016	9.90%	2.53%	4.74%	-3.68	2.21%	16.46	7.37%
11/9/2016	9.80%	2.48%	4.68%	-3.70	2.10%	15.66	7.32%
11/10/2016	9.50%	2.48%	4.58%	-3.70	2.09%	15.62	7.02%
11/15/2016	9.55%	2.49%	4.57%	-3.69	2.08%	15.52	7.08%
11/18/2016	10.00%	2.50%	4.56%	-3.69	2.07%	15.39	7.50%
11/29/2016	10.55%	2.51%	4.55%	-3.69	2.04%	14.98	8.04%
12/1/2016	10.00%	2.51%	4.55%	-3.68	2.03%	14.90	7.46%
12/6/2016	8.64%	2.52%	4.54%	-3.68	2.02%	14.79	6.12%
12/6/2016	8.64%	2.52%	4.54%	-3.68	2.02%	14.79	6.12%
12/7/2016	10.10%	2.52%	4.53%	-3.68	2.01%	14.74	7.58%
12/12/2016	9.60%	2.53%	4.53%	-3.68	2.00%	14.63	7.07%
12/14/2016	9.10%	2.53%	4.52%	-3.68	1.99%	14.59	6.57%
12/19/2016	9.00%	2.54%	4.52%	-3.67	1.98%	14.52	6.46%
12/19/2016	9.00%	2.54%	4.52%	-3.67	1.98%	14.52	6.46%
12/22/2016	9.60%	2.55%	4.51%	-3.67	1.96%	14.41	7.05%
12/22/2016	9.60%	2.55%	4.51%	-3.67	1.96%	14.41	7.05%
12/28/2016	9.50%	2.56%	4.50%	-3.67	1.95%	14.34	6.95%
1/18/2017	9.45%	2.56%	4.48%	-3.66	1.89%	14.20	6.87%
1/24/2017	9.00%	2.59%	4.47%	-3.65	1.88%	14.13	6.41%
1/31/2017	10.10%	2.60%	4.47%	-3.65	1.87%	14.05	7.50%
2/15/2017	9.60%	2.62%	4.46%	-3.64	1.84%	13.90	6.96%
2/22/2017	9.60%	2.64%	4.46%	-3.64	1.82%	13.82	6.96%
2/24/2017	9.75%	2.64%	4.46%	-3.63	1.82%	13.80	7.11%
2/28/2017	10.10%	2.64%	4.46%	-3.63	1.82%	13.78	7.46%

Date of Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
3/2/2017	9.41%	2.65%	4.46%	-3.63	1.81%	13.75	6.76%
3/20/2017	9.50%	2.68%	4.46%	-3.62	1.78%	13.58	6.82%
4/4/2017	10.25%	2.71%	4.46%	-3.61	1.75%	13.30	7.54%
4/12/2017	9.40%	2.74%	4.47%	-3.60	1.73%	13.09	6.68%
4/20/2017	9.50%	2.76%	4.47%	-3.59	1.71%	13.06	6.74%
5/3/2017	9.50%	2.79%	4.48%	-3.58	1.70%	12.95	6.71%
5/11/2017	9.20%	2.81%	4.50%	-3.57	1.68%	12.88	6.39%
5/18/2017	9.50%	2.83%	4.50%	-3.57	1.68%	12.88	6.67%
5/23/2017	9.70%	2.84%	4.51%	-3.56	1.67%	12.86	6.86%
6/16/2017	9.65%	2.89%	4.52%	-3.54	1.63%	12.69	6.76%
6/22/2017	9.70%	2.90%	4.52%	-3.54	1.63%	12.65	6.80%
6/22/2017	9.70%	2.90%	4.52%	-3.54	1.63%	12.65	6.80%
Average:					1.82%	19.26	5.58%
Count:							791

[illegible]

Mid-Year	End-of-Year	ALE	LNT	AEE	AEP	AVA	BKH	CMS	DTE	IDA	NWE	OGE	OTTR	PNW	PNM	POR	SCG	WEC	XEL
7/1/2078	12/31/2078	\$ 49.21	\$ 42.00	\$ 68.11	\$ 27.22	\$ 18.27	\$ 193.42	\$ 67.65	\$ 77.33	\$ 24.75	\$ 22.87	\$ 40.00	\$ 23.51	\$ 70.25	\$ 90.72	\$ 37.98	\$ 48.52	\$ 90.39	\$ 28.50
7/1/2079	12/31/2079	\$ 51.85	\$ 45.13	\$ 72.36	\$ 28.31	\$ 18.94	\$ 209.23	\$ 72.06	\$ 81.35	\$ 23.76	\$ 22.76	\$ 42.26	\$ 24.71	\$ 74.14	\$ 97.64	\$ 40.08	\$ 50.86	\$ 95.70	\$ 29.91
7/1/2080	12/31/2080	\$ 54.63	\$ 47.82	\$ 76.88	\$ 29.44	\$ 17.63	\$ 226.32	\$ 76.87	\$ 85.58	\$ 26.89	\$ 24.72	\$ 44.54	\$ 26.97	\$ 78.25	\$ 105.08	\$ 42.33	\$ 53.56	\$ 101.31	\$ 31.40
7/1/2081	12/31/2081	\$ 57.56	\$ 50.67	\$ 81.69	\$ 30.62	\$ 18.34	\$ 244.81	\$ 82.00	\$ 90.04	\$ 27.71	\$ 25.70	\$ 47.16	\$ 27.29	\$ 82.59	\$ 113.12	\$ 44.70	\$ 56.27	\$ 107.26	\$ 32.86
7/1/2082	12/31/2082	\$ 60.65	\$ 53.68	\$ 86.80	\$ 31.85	\$ 19.09	\$ 254.81	\$ 87.47	\$ 94.72	\$ 28.77	\$ 26.72	\$ 49.82	\$ 28.68	\$ 87.10	\$ 121.75	\$ 47.20	\$ 59.12	\$ 113.56	\$ 34.50
7/1/2083	12/31/2083	\$ 63.91	\$ 56.87	\$ 92.22	\$ 33.13	\$ 19.87	\$ 284.45	\$ 93.31	\$ 99.64	\$ 29.87	\$ 27.77	\$ 52.83	\$ 30.15	\$ 91.90	\$ 131.05	\$ 49.84	\$ 62.12	\$ 120.22	\$ 36.31
7/1/2084	12/31/2084	\$ 67.34	\$ 60.26	\$ 97.90	\$ 34.45	\$ 20.88	\$ 309.85	\$ 95.53	\$ 104.82	\$ 31.02	\$ 28.87	\$ 55.50	\$ 31.64	\$ 97.09	\$ 141.06	\$ 52.64	\$ 65.27	\$ 127.28	\$ 38.11
7/1/2085	12/31/2085	\$ 70.95	\$ 63.84	\$ 104.11	\$ 35.84	\$ 21.52	\$ 335.17	\$ 106.18	\$ 110.27	\$ 32.21	\$ 30.02	\$ 58.74	\$ 33.30	\$ 102.47	\$ 151.82	\$ 55.68	\$ 68.57	\$ 134.75	\$ 40.01
7/1/2086	12/31/2086	\$ 74.76	\$ 67.64	\$ 110.62	\$ 37.27	\$ 22.40	\$ 362.55	\$ 113.26	\$ 116.01	\$ 33.44	\$ 31.21	\$ 62.05	\$ 35.00	\$ 108.14	\$ 163.40	\$ 58.70	\$ 72.05	\$ 142.06	\$ 41.90
7/1/2087	12/31/2087	\$ 78.77	\$ 71.67	\$ 117.53	\$ 38.76	\$ 23.31	\$ 392.17	\$ 120.62	\$ 122.04	\$ 34.72	\$ 32.44	\$ 65.58	\$ 36.78	\$ 114.13	\$ 173.88	\$ 61.96	\$ 75.70	\$ 161.04	\$ 44.08
7/1/2088	12/31/2088	\$ 83.00	\$ 75.93	\$ 124.88	\$ 40.32	\$ 24.26	\$ 424.21	\$ 128.68	\$ 128.39	\$ 35.05	\$ 33.73	\$ 69.26	\$ 38.08	\$ 120.48	\$ 199.30	\$ 65.45	\$ 79.53	\$ 159.80	\$ 46.27
7/1/2089	12/31/2089	\$ 87.45	\$ 80.45	\$ 132.68	\$ 41.93	\$ 25.25	\$ 458.87	\$ 137.48	\$ 135.06	\$ 37.44	\$ 35.05	\$ 73.16	\$ 40.63	\$ 127.13	\$ 203.75	\$ 69.12	\$ 83.56	\$ 189.29	\$ 48.56
7/1/2090	12/31/2090	\$ 92.14	\$ 85.24	\$ 140.97	\$ 43.61	\$ 26.28	\$ 496.36	\$ 146.95	\$ 142.09	\$ 38.87	\$ 36.45	\$ 77.28	\$ 42.70	\$ 134.17	\$ 219.31	\$ 72.98	\$ 87.80	\$ 179.23	\$ 50.97
7/1/2091	12/31/2091	\$ 97.09	\$ 90.31	\$ 148.78	\$ 45.36	\$ 27.35	\$ 535.91	\$ 156.44	\$ 149.48	\$ 40.36	\$ 37.89	\$ 81.65	\$ 44.86	\$ 141.61	\$ 238.06	\$ 77.08	\$ 92.25	\$ 189.76	\$ 53.60
7/1/2092	12/31/2092	\$ 102.30	\$ 95.68	\$ 158.15	\$ 47.18	\$ 28.47	\$ 580.77	\$ 166.85	\$ 157.25	\$ 41.91	\$ 39.40	\$ 86.26	\$ 47.17	\$ 148.45	\$ 254.08	\$ 81.39	\$ 98.92	\$ 200.88	\$ 56.18
7/1/2093	12/31/2093	\$ 107.79	\$ 101.37	\$ 168.09	\$ 49.07	\$ 29.83	\$ 628.22	\$ 178.02	\$ 165.43	\$ 43.52	\$ 40.95	\$ 91.13	\$ 49.58	\$ 157.73	\$ 273.48	\$ 86.86	\$ 101.83	\$ 212.88	\$ 58.95
7/1/2094	12/31/2094	\$ 113.57	\$ 107.41	\$ 179.96	\$ 51.03	\$ 30.83	\$ 679.55	\$ 189.90	\$ 174.03	\$ 45.18	\$ 42.58	\$ 98.27	\$ 52.10	\$ 166.47	\$ 294.23	\$ 90.78	\$ 108.90	\$ 225.16	\$ 61.88
7/1/2095	12/31/2095	\$ 118.87	\$ 113.80	\$ 189.89	\$ 53.08	\$ 32.09	\$ 735.07	\$ 202.57	\$ 183.06	\$ 46.92	\$ 44.28	\$ 101.71	\$ 54.78	\$ 176.89	\$ 318.90	\$ 95.85	\$ 112.41	\$ 238.38	\$ 64.95
7/1/2096	12/31/2096	\$ 126.09	\$ 120.57	\$ 202.82	\$ 55.21	\$ 33.40	\$ 795.12	\$ 216.08	\$ 192.60	\$ 48.71	\$ 46.02	\$ 107.45	\$ 57.65	\$ 186.42	\$ 349.98	\$ 101.21	\$ 118.11	\$ 252.37	\$ 68.17
7/1/2097	12/31/2097	\$ 132.86	\$ 127.74	\$ 215.50	\$ 57.42	\$ 34.70	\$ 850.09	\$ 230.51	\$ 202.81	\$ 50.68	\$ 47.84	\$ 113.51	\$ 60.48	\$ 195.70	\$ 387.01	\$ 108.88	\$ 124.09	\$ 287.18	\$ 71.58
7/1/2098	12/31/2098	\$ 138.98	\$ 135.34	\$ 228.96	\$ 59.72	\$ 36.17	\$ 930.35	\$ 245.90	\$ 213.15	\$ 52.52	\$ 49.73	\$ 119.92	\$ 63.58	\$ 208.54	\$ 385.02	\$ 112.87	\$ 130.38	\$ 282.87	\$ 75.11
7/1/2099	12/31/2099	\$ 147.50	\$ 143.39	\$ 243.27	\$ 62.11	\$ 37.65	\$ 1,008.36	\$ 262.90	\$ 224.23	\$ 54.53	\$ 51.70	\$ 126.68	\$ 66.82	\$ 217.98	\$ 425.18	\$ 119.19	\$ 136.68	\$ 299.47	\$ 78.84
7/1/2100	12/31/2100	\$ 155.42	\$ 151.83	\$ 258.48	\$ 64.60	\$ 39.18	\$ 1,088.58	\$ 279.81	\$ 236.89	\$ 56.82	\$ 53.75	\$ 133.83	\$ 70.23	\$ 230.08	\$ 457.63	\$ 125.86	\$ 143.92	\$ 317.05	\$ 82.75
7/1/2101	12/31/2101	\$ 163.78	\$ 160.97	\$ 274.63	\$ 67.19	\$ 40.78	\$ 1,177.62	\$ 298.48	\$ 248.16	\$ 58.80	\$ 56.88	\$ 141.39	\$ 73.81	\$ 242.80	\$ 492.67	\$ 132.91	\$ 151.21	\$ 335.56	\$ 86.86
7/1/2102	12/31/2102	\$ 172.55	\$ 170.54	\$ 291.80	\$ 69.68	\$ 42.44	\$ 1,273.73	\$ 318.40	\$ 261.06	\$ 61.05	\$ 59.00	\$ 149.36	\$ 77.57	\$ 256.25	\$ 536.16	\$ 140.35	\$ 158.88	\$ 355.36	\$ 91.18
7/1/2103	12/31/2103	\$ 181.80	\$ 180.00	\$ 310.04	\$ 72.68	\$ 44.17	\$ 1,377.70	\$ 339.65	\$ 274.64	\$ 63.39	\$ 60.39	\$ 157.70	\$ 81.53	\$ 270.45	\$ 579.63	\$ 148.21	\$ 166.93	\$ 376.22	\$ 95.70
7/1/2104	12/31/2104	\$ 191.56	\$ 191.44	\$ 329.41	\$ 75.69	\$ 45.97	\$ 1,490.35	\$ 362.31	\$ 288.92	\$ 65.82	\$ 62.78	\$ 166.70	\$ 85.68	\$ 286.43	\$ 614.19	\$ 156.51	\$ 175.38	\$ 398.31	\$ 100.45
7/1/2105	12/31/2105	\$ 201.84	\$ 202.63	\$ 350.00	\$ 78.62	\$ 47.84	\$ 1,612.12	\$ 386.49	\$ 303.94	\$ 68.34	\$ 65.27	\$ 178.11	\$ 90.05	\$ 301.24	\$ 691.08	\$ 165.28	\$ 184.27	\$ 421.59	\$ 105.44
7/1/2106	12/31/2106	\$ 212.67	\$ 214.80	\$ 371.88	\$ 81.77	\$ 49.79	\$ 1,743.83	\$ 412.29	\$ 319.75	\$ 70.96	\$ 67.85	\$ 186.04	\$ 94.65	\$ 317.93	\$ 711.54	\$ 174.53	\$ 193.61	\$ 446.44	\$ 110.68
7/1/2107	12/31/2107	\$ 224.08	\$ 227.69	\$ 395.12	\$ 85.05	\$ 51.82	\$ 1,888.30	\$ 439.80	\$ 336.37	\$ 73.58	\$ 70.54	\$ 196.54	\$ 98.47	\$ 335.55	\$ 765.85	\$ 184.31	\$ 203.42	\$ 472.85	\$ 116.17
7/1/2108	12/31/2108	\$ 238.11	\$ 241.24	\$ 419.81	\$ 88.45	\$ 53.93	\$ 2,040.41	\$ 469.15	\$ 353.87	\$ 76.51	\$ 73.33	\$ 207.63	\$ 104.55	\$ 354.14	\$ 824.31	\$ 194.63	\$ 213.72	\$ 500.39	\$ 121.94
7/1/2109	12/31/2109	\$ 248.79	\$ 256.69	\$ 446.05	\$ 92.00	\$ 56.13	\$ 2,207.11	\$ 500.48	\$ 372.27	\$ 79.44	\$ 76.24	\$ 219.35	\$ 109.88	\$ 373.76	\$ 887.23	\$ 205.53	\$ 224.55	\$ 529.77	\$ 127.90
7/1/2110	12/31/2110	\$ 262.14	\$ 270.80	\$ 473.93	\$ 95.88	\$ 58.42	\$ 2,387.43	\$ 533.85	\$ 391.62	\$ 82.48	\$ 79.26	\$ 231.73	\$ 115.48	\$ 394.48	\$ 954.06	\$ 217.04	\$ 235.93	\$ 580.86	\$ 134.35
7/1/2111	12/31/2111	\$ 278.21	\$ 288.91	\$ 503.55	\$ 99.62	\$ 60.80	\$ 2,582.48	\$ 569.48	\$ 411.99	\$ 85.85	\$ 82.40	\$ 244.81	\$ 121.37	\$ 416.31	\$ 1,027.85	\$ 229.19	\$ 247.88	\$ 593.79	\$ 141.02
7/1/2112	12/31/2112	\$ 291.03	\$ 303.98	\$ 535.02	\$ 103.51	\$ 63.28	\$ 2,793.47	\$ 607.48	\$ 433.41	\$ 88.93	\$ 85.85	\$ 258.62	\$ 127.56	\$ 439.38	\$ 1,108.31	\$ 242.03	\$ 260.44	\$ 628.64	\$ 148.02
7/1/2113	12/31/2113	\$ 308.65	\$ 322.07	\$ 568.46	\$ 107.65	\$ 65.85	\$ 3,021.70	\$ 648.02	\$ 455.95	\$ 92.34	\$ 89.05	\$ 273.22	\$ 134.07	\$ 463.72	\$ 1,190.78	\$ 255.58	\$ 273.64	\$ 665.54	\$ 156.37
7/1/2114	12/31/2114	\$ 323.10	\$ 341.23	\$ 603.90	\$ 111.97	\$ 68.54	\$ 3,269.57	\$ 691.26	\$ 478.06	\$ 95.88	\$ 92.58	\$ 288.64	\$ 140.91	\$ 489.41	\$ 1,281.05	\$ 269.89	\$ 287.50	\$ 704.61	\$ 163.08
7/1/2115	12/31/2115	\$ 340.44	\$ 361.53	\$ 641.74	\$ 116.45	\$ 71.33	\$ 3,535.61	\$ 737.40	\$ 504.60	\$ 99.55	\$ 96.24	\$ 304.93	\$ 148.88	\$ 516.52	\$ 1,379.49	\$ 285.91	\$ 302.07	\$ 745.97	\$ 171.18
7/1/2116	12/31/2116	\$ 358.71	\$ 383.04	\$ 681.85	\$ 121.12	\$ 74.24	\$ 3,824.47	\$ 786.80	\$ 530.84	\$ 103.57	\$ 100.65	\$ 322.13	\$ 155.05	\$ 545.14	\$ 1,484.79	\$ 300.97	\$ 317.57	\$ 789.76	\$ 178.58
7/1/2117	12/31/2117	\$ 377.96	\$ 406.83	\$ 724.48	\$ 125.97	\$ 77.26	\$ 4,138.93	\$ 839.10	\$ 559.44	\$ 107.33	\$ 104.92	\$ 340.31	\$ 163.58	\$ 575.34	\$ 1,598.13	\$ 317.82	\$ 333.45	\$ 836.12	\$ 188.90
7/1/2118	12/31/2118	\$ 398.25	\$ 428.86	\$ 760.74	\$ 131.02	\$ 80.41	\$ 4,474.92	\$ 895.09	\$ 587.48	\$ 111.45	\$ 108.14	\$ 359.52	\$ 171.93	\$ 607.21	\$ 1,720.12	\$ 336.62	\$ 350.35	\$ 885.20	\$ 197.97
7/1/2119	12/31/2119	\$ 419.62	\$ 455.57	\$ 817.85	\$ 136.27	\$ 83.89	\$ 4,840.52	\$ 954.83	\$ 618.03	\$ 115.72	\$ 112.42	\$ 379.81	\$ 180.68	\$ 640.85	\$ 1,851.42	\$ 354.42	\$ 368.10	\$ 937.16	\$ 207.79
7/1/2120	12/31/2120	\$ 442.14	\$ 482.67	\$ 868.97	\$ 141.73	\$ 87.10	\$ 5,235.90	\$ 1,018.54	\$ 650.17	\$ 120.15	\$ 118.87	\$ 401.24	\$ 189.91	\$ 676.36	\$ 1,992.75	\$ 374.26	\$ 386.75	\$ 992.17	\$ 218.11
7/1/2121	12/31/2121	\$ 465.87	\$ 511.39	\$ 923.28	\$ 147.41	\$ 90.65	\$ 5,653.77	\$ 1,088.51	\$ 683.98	\$ 124.76	\$ 121.50	\$ 423.88	\$ 198.00	\$ 713.83	\$ 2,144.85	\$ 395.22	\$ 406.34	\$ 1,050.41	\$ 228.94
7/1/2122	12/31/2122	\$ 490.87	\$ 541.82	\$ 980.89	\$ 153.31	\$ 94.34	\$ 6,126.50	\$ 1,159.02	\$ 718.55	\$ 129.54	\$ 126.31	\$ 447.81	\$ 208.77	\$ 753.37	\$ 2,308.59	\$ 417.35	\$ 426.93	\$ 1,112.07	\$ 240.31
7/1/2123	12/31/2123	\$ 517.21	\$ 574.06	\$ 1,042.20	\$ 159.45	\$ 98.19	\$ 6,627.04	\$ 1,236.37	\$ 756.96	\$ 134.51	\$ 131.31	\$ 473.08	\$ 220.47	\$ 795.11	\$ 2,484.81	\$ 440.73	\$ 448.56	\$ 1,177.35	\$ 252.24
7/1/2124	12/31/2124	\$ 544.97	\$ 608.21	\$ 1,107.44	\$ 165.84	\$ 102.19	\$ 7,168.46	\$ 1,318.87	\$ 796.32	\$ 139.67	\$ 136.51	\$ 499.77	\$ 231.72	\$ 839.16	\$ 2,674.48	\$ 465.41	\$ 471.20	\$ 1,246.46	\$ 264.75
7/1/2125	12/31/2125	\$ 574.22	\$ 644.40	\$ 1,176.05	\$ 172.40	\$ 106.35	\$ 7,754.13	\$ 1,406.80	\$ 837.73	\$ 145.02	\$ 141.92	\$ 527.96	\$ 243.54	\$ 885.65	\$ 2,878.04	\$ 491.47	\$ 486.17	\$ 1,319.63	\$ 277.81
7/1/2126	12/31/2126	\$ 605.09	\$ 682.74	\$ 1,250.19	\$ 178.40	\$ 110.60	\$ 8,387.64	\$ 1,500.77	\$ 881.29	\$ 150.58	\$ 147.54	\$ 557.77	\$ 255.96	\$ 934.71	\$ 3,098.37	\$ 518.96	\$ 520.26	\$ 1,397.09	\$ 281.71
7/1/2127	12/31/2127	\$ 637.50	\$ 723.37	\$ 1,326.33	\$ 186.59	\$ 115.20	\$ 9,072.91	\$ 1,600.92	\$ 927.12	\$ 156.35	\$ 153.92	\$ 589.25	\$ 269.01	\$ 980.49	\$ 3,334.68	\$ 546.06	\$ 5		

Mid-Year	End-of-Year	ALE	LNT	AEE	AEP	AVA	BKH	CMS	DTE	IDA	NWE	OGE	OTTR	PNW	PNM	POR	SCG	WEC	XEL
7/1/2100	12/31/2100	\$ 3,578.41	\$ 4,871.81	\$ 9,821.12	\$ 862.18	\$ 430.40	\$ 121,155.66	\$ 13,480.28	\$ 4,939.20	\$ 541.02	\$ 552.52	\$ 3,006.63	\$ 1,368.85	\$ 5,846.00	\$ 37,785.43	\$ 3,306.28	\$ 2,792.71	\$ 9,716.35	\$ 1,515.16
7/1/2101	12/31/2101	\$ 3,770.46	\$ 5,161.09	\$ 10,434.94	\$ 709.52	\$ 447.94	\$ 131,032.44	\$ 14,396.94	\$ 5,196.03	\$ 561.78	\$ 574.40	\$ 3,810.06	\$ 1,459.69	\$ 6,189.87	\$ 40,666.72	\$ 3,494.60	\$ 2,994.21	\$ 10,286.70	\$ 1,560.39
7/1/2102	12/31/2102	\$ 3,972.80	\$ 5,468.81	\$ 11,087.12	\$ 737.95	\$ 466.19	\$ 141,737.79	\$ 15,357.70	\$ 5,466.23	\$ 583.29	\$ 597.15	\$ 4,026.07	\$ 1,534.13	\$ 6,511.68	\$ 43,774.14	\$ 3,680.30	\$ 3,082.88	\$ 10,890.52	\$ 1,609.35
7/1/2103	12/31/2103	\$ 4,180.01	\$ 5,794.20	\$ 11,780.07	\$ 767.51	\$ 485.19	\$ 153,317.77	\$ 16,382.57	\$ 5,760.47	\$ 605.65	\$ 620.80	\$ 4,252.22	\$ 1,612.37	\$ 6,872.43	\$ 47,115.61	\$ 3,866.95	\$ 3,259.06	\$ 11,529.80	\$ 1,752.24
7/1/2104	12/31/2104	\$ 4,410.66	\$ 6,138.96	\$ 12,516.32	\$ 798.26	\$ 504.96	\$ 165,943.83	\$ 17,476.83	\$ 6,049.50	\$ 628.87	\$ 645.38	\$ 4,482.19	\$ 1,694.60	\$ 7,263.16	\$ 50,712.10	\$ 4,115.18	\$ 3,403.19	\$ 12,206.60	\$ 1,839.24
7/1/2105	12/31/2105	\$ 4,647.36	\$ 6,504.22	\$ 13,298.59	\$ 830.25	\$ 525.53	\$ 178,393.28	\$ 18,642.05	\$ 6,364.07	\$ 652.98	\$ 670.94	\$ 4,745.70	\$ 1,781.03	\$ 7,654.96	\$ 54,583.12	\$ 4,345.83	\$ 3,575.62	\$ 12,923.12	\$ 1,930.55
7/1/2106	12/31/2106	\$ 4,896.77	\$ 6,881.23	\$ 14,129.75	\$ 863.51	\$ 546.95	\$ 194,049.71	\$ 19,886.10	\$ 6,695.00	\$ 678.01	\$ 697.51	\$ 5,013.51	\$ 1,871.86	\$ 8,079.07	\$ 58,749.63	\$ 4,588.99	\$ 3,766.79	\$ 13,681.71	\$ 2,026.41
7/1/2107	12/31/2107	\$ 5,159.57	\$ 7,301.25	\$ 15,012.86	\$ 898.11	\$ 569.24	\$ 208,903.57	\$ 21,213.18	\$ 7,043.14	\$ 704.00	\$ 725.13	\$ 5,296.44	\$ 1,967.32	\$ 8,526.95	\$ 63,234.19	\$ 4,845.97	\$ 3,947.13	\$ 14,484.83	\$ 2,127.02

Source: Schedule D.L-4

Please note that the slight discrepancy (approximately 0.01%) results from cash flows beyond year 150 not included in Mr. Lawton's model, but implicitly incorporated in the terminal value

Mr. Lawton's CAPM & ECAPM Results - As Filed

Company	Ticker	Value Line Beta	Risk Free Rate 30 Year Treasury	Market Risk Premium	CAPM Results	ECAPM Results
ALLETE, Inc.	ALE	0.80	3.00%	7.55%	9.04%	9.41%
Alliant Energy Corporation	LNT	0.70	3.00%	7.55%	8.28%	8.85%
Ameren Corporation	AEE	0.70	3.00%	7.55%	8.28%	8.85%
American Electric Power	AEP	0.65	3.00%	7.55%	7.90%	8.56%
Avista Corporation	AVA	0.70	3.00%	7.55%	8.28%	8.85%
Black Hills Corporation	BKH	0.85	3.00%	7.55%	9.41%	9.70%
CMS Energy Corporation	CMS	0.65	3.00%	7.55%	7.90%	8.56%
DTE Energy Company	DTE	0.65	3.00%	7.55%	7.90%	8.56%
IDACORP, Inc.	IDA	0.75	3.00%	7.55%	8.66%	9.13%
NorthWestern Corporation	NWE	0.65	3.00%	7.55%	7.90%	8.56%
OGE Energy Corp.	OGE	0.95	3.00%	7.55%	10.17%	10.26%
Otter Tail Corporation	OTTR	0.85	3.00%	7.55%	9.41%	9.70%
Pinnacle West Capital Corporation	PNW	0.70	3.00%	7.55%	8.28%	8.85%
PNM Resources, Inc.	PNM	0.70	3.00%	7.55%	8.28%	8.85%
Portland General Electric Company	POR	0.70	3.00%	7.55%	8.28%	8.85%
SCANA Corporation	SCG	0.65	3.00%	7.55%	7.90%	8.56%
Wisconsin Energy Corporation	WEC	0.60	3.00%	7.55%	7.53%	8.28%
Xcel Energy Inc.	XEL	0.60	3.00%	7.55%	7.53%	8.28%
AVERAGE		0.71	3.00%	7.55%	8.39%	8.93%
MEDIAN		0.70	3.00%	7.55%	8.28%	8.85%

Mr. Lawton's CAPM & ECAPM Results - Adjusted Market Risk Premium

Company	Ticker	Value Line Beta	Risk Free Rate 30 Year Treasury	Market Risk Premium	CAPM Results	ECAPM Results
ALLETE, Inc.	ALE	0.80	3.00%	9.10%	10.28%	10.73%
Alliant Energy Corporation	LNT	0.70	3.00%	9.10%	9.37%	10.05%
Ameren Corporation	AEE	0.70	3.00%	9.10%	9.37%	10.05%
American Electric Power	AEP	0.65	3.00%	9.10%	8.91%	9.71%
Avista Corporation	AVA	0.70	3.00%	9.10%	9.37%	10.05%
Black Hills Corporation	BKH	0.85	3.00%	9.10%	10.73%	11.07%
CMS Energy Corporation	CMS	0.65	3.00%	9.10%	8.91%	9.71%
DTE Energy Company	DTE	0.65	3.00%	9.10%	8.91%	9.71%
IDACORP, Inc.	IDA	0.75	3.00%	9.10%	9.82%	10.39%
NorthWestern Corporation	NWE	0.65	3.00%	9.10%	8.91%	9.71%
OGE Energy Corp.	OGE	0.95	3.00%	9.10%	11.64%	11.76%
Otter Tail Corporation	OTTR	0.85	3.00%	9.10%	10.73%	11.07%
Pinnacle West Capital Corporation	PNW	0.70	3.00%	9.10%	9.37%	10.05%
PNM Resources, Inc.	PNM	0.70	3.00%	9.10%	9.37%	10.05%
Portland General Electric Company	POR	0.70	3.00%	9.10%	9.37%	10.05%
SCANA Corporation	SCG	0.65	3.00%	9.10%	8.91%	9.71%
Wisconsin Energy Corporation	WEC	0.60	3.00%	9.10%	8.46%	9.37%
Xcel Energy Inc.	XEL	0.60	3.00%	9.10%	8.46%	9.37%
AVERAGE		0.71	3.00%	9.10%	9.49%	10.14%
MEDIAN		0.70	3.00%	9.10%	9.37%	10.05%

Notes:

Source: Schedule (DJI-9).

1.11%

1.22%

Recently Authorized ROEs

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	All Cases			Vertically Integrated		
										Above Average	Average	Below Average	Above Average	Average	Below Average
New York	Consolidated Edison Co. of NY	C-13-E-0030	Electric	Distribution	2/20/2014	9.20		9.20	Average / 1		9.20				
North Dakota	Northern States Power Co. - MN	C-PU-12-813	Electric	Vertically Integrated	2/28/2014	9.75	9.75		Average / 1		9.75				
New Hampshire	Liberty Utilities Granite St	D-DE-13-083	Electric	Distribution	3/17/2014	9.55		9.55	Average / 3		9.55			9.75	
District of Columbia	Potomac Electric Power Co.	FC-1103-2013-E	Electric	Distribution	3/29/2014	9.40		9.40	Below Average / 2			9.40			
New Mexico	Southwestern Public Service Co	C-12-00350-UT	Electric	Vertically Integrated	3/29/2014	9.95	9.95		Below Average / 2			9.95			9.95
Delaware	Delmarva Power & Light Co	D-13-115	Electric	Distribution	4/2/2014	9.70		9.70	Average / 3		9.70				
Texas	Entergy Texas Inc.	D-41791	Electric	Vertically Integrated	5/16/2014	9.80	9.80		Average / 3		9.80			9.80	
Massachusetts	Fitchburg Gas & Electric Light	DPU 13-90	Electric	Distribution	5/30/2014	9.70		9.70	Average / 3		9.70				
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-119 (Elec)	Electric	Vertically Integrated	6/6/2014	10.40	10.40		Above Average / 2	10.40			10.40		
Maine	Emera Maine	D-2013-00443	Electric	Distribution	6/30/2014	9.55		9.55	Average / 2		9.55				
Maryland	Potomac Electric Power Co	C-9336	Electric	Distribution	7/2/2014	9.82		9.82	Below Average / 3			9.82			
Louisiana	Entergy Louisiana LLC	D-UD-13-01	Electric	Vertically Integrated	7/10/2014	9.95	9.95		Average / 2		9.95			9.95	
New Jersey	Rockland Electric Company	D-ER-13111135	Electric	Distribution	7/23/2014	9.75		9.75	Below Average / 2			9.75			
Maine	Central Maine Power Co	D-2013-00168	Electric	Distribution	7/29/2014	9.45		9.45	Average / 2		9.45				
Wyoming	Cheyenne Light Fuel Power Co.	D-20003-132-ER-13	Electric	Vertically Integrated	7/31/2014	9.90	9.90		Average / 3		9.90			9.90	
New Jersey	Atlantic City Electric Co.	D-ER-14030245	Electric	Distribution	8/20/2014	9.75		9.75	Below Average / 2			9.75			
Vermont	Green Mountain Power Corp	D-8190, 8191	Electric	Vertically Integrated	8/25/2014	9.80	9.80		Average / 2		9.80			9.80	
Utah	PacificCorp	D-13-035-184	Electric	Vertically Integrated	8/29/2014	9.80	9.80		Average / 2		9.80			9.80	
Texas	Lone Star Transmission LLC	D-42489	Electric	Transmission	9/11/2014	9.60			Average / 3		9.60				
Florida	Florida Public Utilities Co.	D-140025-EI	Electric	Vertically Integrated	9/15/2014	10.25	10.25		Above Average / 2	10.25			10.25		
Nevada	Nevada Power Co.	D-14-05004	Electric	Vertically Integrated	10/9/2014	9.80	9.80		Average / 2		9.80			9.80	
Illinois	MidAmerican Energy Co	D-14-0086	Electric	Vertically Integrated	11/8/2014	9.58	9.58		Average / 2		9.58			9.58	
Wisconsin	Wisconsin Public Service Corp	D-6690-UR-123 (Elec)	Electric	Vertically Integrated	11/9/2014	10.20	10.20		Above Average / 2	10.20			10.20		
Wisconsin	Wisconsin Electric Power Co.	D-05-UR-107 (WEP-Elec)	Electric	Vertically Integrated	11/14/2014	10.20	10.20		Above Average / 2	10.20			10.20		
Virginia	Appalachian Power Co.	C-PUE-2014-00026	Electric	Vertically Integrated	11/26/2014	9.70	9.70		Above Average / 2	9.70			9.70		
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-120 (Elec)	Electric	Vertically Integrated	11/28/2014	10.20	10.20		Above Average / 2	10.20			10.20		
Oregon	Portland General Electric Co	D-UE-283	Electric	Vertically Integrated	12/4/2014	9.68	9.68		Average / 2		9.68			9.68	
Illinois	Ameren Illinois	D-14-0317	Electric	Distribution	12/10/2014	9.25		9.25	Average / 2		9.25				
Illinois	Commonwealth Edison Co.	D-14-0312	Electric	Distribution	12/10/2014	9.25		9.25	Average / 2		9.25				
Mississippi	Entergy Mississippi Inc.	D-2014-UN-0132	Electric	Vertically Integrated	12/11/2014	10.07	10.07		Above Average / 3	10.07			10.07		
Wisconsin	Northern States Power Co - WI	D-4220-UR-120 (Elec)	Electric	Vertically Integrated	12/12/2014	10.20	10.20		Above Average / 2	10.20			10.20		
Connecticut	Connecticut Light & Power Co.	D-14-05-06	Electric	Distribution	12/17/2014	9.17		9.17	Below Average / 3			9.17			
Colorado	Black Hills Colorado Electric	D-14AL-0393E	Electric	Vertically Integrated	12/18/2014	9.83	9.83		Average / 2		9.83			9.83	
Wyoming	PacificCorp	D-20000-448-ER-14	Electric	Vertically Integrated	1/23/2015	9.50	9.50		Average / 3		9.50			9.50	
Colorado	Public Service Co. of CO	D-14AL-0680E	Electric	Vertically Integrated	2/24/2015	9.83	9.83		Average / 2		9.83			9.83	
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-12111052	Electric	Distribution	3/18/2015	9.75		9.75	Below Average / 2			9.75			
Washington	PacificCorp	D-UE-140762	Electric	Vertically Integrated	3/25/2015	9.50	9.50		Average / 3		9.50			9.50	
Minnesota	Northern States Power Co. - MN	D-E-002/GR-13-868	Electric	Vertically Integrated	3/29/2015	9.72	9.72		Average / 2		9.72			9.72	
Michigan	Wisconsin Public Service Corp.	C-U-17689	Electric	Vertically Integrated	4/23/2015	10.20	10.20		Average / 1	10.20			10.20		
Missouri	Union Electric Co.	C-ER-2014-0258	Electric	Vertically Integrated	4/29/2015	9.53	9.53		Below Average / 1			9.53			9.53
Texas	Cross Texas Transmission	D-43950	Electric	Transmission	5/1/2015	9.80			Average / 3		9.80				
West Virginia	Appalachian Power Co.	C-14-1152-E-42T	Electric	Vertically Integrated	5/28/2015	9.75	9.75		Below Average / 1			9.75			9.75
New York	Central Hudson Gas & Electric	C-14-E-0318	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1		9.00				
New York	Consolidated Edison Co. of NY	C-15-E-0050/C-13-E-0030 (Ext)	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1		9.00				
Missouri	Kansas City Power & Light	C-ER-2014-0370	Electric	Vertically Integrated	9/2/2015	9.50	9.50		Below Average / 1			9.50			9.50
Kansas	Kansas City Power & Light	D-15-KCPE-116-RTS	Electric	Vertically Integrated	9/10/2015	9.30	9.30		Below Average / 1			9.30			9.30
New York	Orange & Rockland Utls Inc	C-14-E-0493	Electric	Distribution	10/15/2015	9.00		9.00	Average / 1		9.00				
Michigan	Consumers Energy Co.	C-U-17735	Electric	Vertically Integrated	11/19/2015	10.30	10.30		Average / 1				10.30		
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-124 (Elec)	Electric	Vertically Integrated	11/19/2015	10.00	10.00		Above Average / 2	10.00			10.00		
Wisconsin	Northern States Power Co - WI	D-4220-UR-121 (Elec)	Electric	Vertically Integrated	12/3/2015	10.00	10.00		Above Average / 2	10.00			10.00		
Illinois	Ameren Illinois	D-15-0305	Electric	Distribution	12/9/2015	9.14		9.14	Average / 2		9.14				
Illinois	Commonwealth Edison Co	D-15-0267	Electric	Distribution	12/9/2015	9.14		9.14	Average / 2		9.14				
Michigan	DTE Electric Co	C-U-17767	Electric	Vertically Integrated	12/11/2015	10.30	10.30		Average / 1		10.30			10.30	
Oregon	Portland General Electric Co	D-UE-294	Electric	Vertically Integrated	12/15/2015	9.60	9.60		Average / 2		9.60			9.60	
Texas	Southwestern Public Service Co	D-43695	Electric	Vertically Integrated	12/17/2015	9.70	9.70		Average / 3		9.70			9.70	
Idaho	Avista Corp.	C-AVU-E-15-05	Electric	Vertically Integrated	12/18/2015	9.50	9.50		Average / 2		9.50			9.50	
Wyoming	PacificCorp	D-20000-459-ER-15	Electric	Vertically Integrated	12/30/2015	9.50	9.50		Average / 3		9.50			9.50	
Washington	Avista Corp.	D-UE-150204	Electric	Vertically Integrated	1/6/2016	9.50	9.50		Average / 3		9.50			9.50	
Arkansas	Entergy Arkansas Inc.	D-15-015-U	Electric	Vertically Integrated	2/23/2016	9.75	9.75		Average / 1		9.75			9.75	
Indiana	Indianapolis Power & Light Co.	Ca-44576	Electric	Vertically Integrated	3/16/2016	9.85	9.85		Average / 1		9.85			9.85	
Massachusetts	Fitchburg Gas & Electric Light	DPU 15-80	Electric	Distribution	4/29/2016	9.80		9.80	Average / 3		9.80				
Maryland	Baltimore Gas and Electric Co.	C-9408 (elec)	Electric	Distribution	6/3/2016	9.75		9.75	Below Average / 3			9.75			
New Mexico	El Paso Electric Co.	C-15-00127-UT	Electric	Vertically Integrated	6/6/2016	9.48	9.48		Below Average / 2			9.48			9.48
New York	NY State Electric & Gas Corp.	C-15-E-0283	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1		9.00				

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	All Cases			Vertically Integrated		
										Above Average	Average	Below Average	Above Average	Average	Below Average
New York	Rochester Gas & Electric Corp.	C-15-E-0285	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1		9.00				
Indiana	Northern IN Public Svc Co.	Ca-44688	Electric	Vertically Integrated	7/18/2016	9.98	9.98		Average / 1		9.98			9.98	
Tennessee	Kingsport Power Company	D-16-00001	Electric	Vertically Integrated	8/9/2016	9.85	9.85		Above Average / 3	9.85			9.85		
Arizona	UNS Electric Inc.	D-E-04204A-15-0142	Electric	Vertically Integrated	8/18/2016	9.50	9.50		Average / 3		9.50			9.50	
New Jersey	Atlantic City Electric Co.	D-ER-16030252	Electric	Distribution	8/24/2016	9.75		9.75	Below Average / 2			9.75			
Washington	PacifiCorp	D-UE-152253	Electric	Vertically Integrated	9/1/2016	9.50	9.50		Average / 3		9.50			9.50	
Michigan	Upper Peninsula Power Co.	C-U-17895	Electric	Vertically Integrated	9/8/2016	10.00	10.00		Average / 1		10.00			10.00	
New Mexico	Public Service Co. of NM	C-15-00281-UT	Electric	Vertically Integrated	9/28/2016	9.58	9.58		Below Average / 2			9.58			9.58
Massachusetts	Massachusetts Electric Co	DPU-15-155	Electric	Distribution	9/30/2016	9.90		9.90	Average / 3		9.90				
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-121 (Elec)	Electric	Vertically Integrated	11/9/2016	9.80	9.80		Above Average / 2	9.80			9.80		
Oklahoma	Public Service Co. of OK	Ca-PUD201600208	Electric	Vertically Integrated	11/10/2016	9.50	9.50		Average / 3		9.50			9.50	
Maryland	Potomac Electric Power Co.	C-9418	Electric	Distribution	11/15/2016	9.55		9.55	Below Average / 3			9.55			
Wisconsin	Wisconsin Power and Light Co	D-8680-UR-120 (Elec)	Electric	Vertically Integrated	11/18/2016	10.00	10.00		Above Average / 2	10.00			10.00		
Florida	Florida Power & Light Co	D-160021-EJ	Electric	Vertically Integrated	11/29/2016	10.55	10.55		Above Average / 2	10.55			10.55		
California	Liberty Utilities CalPeco Ele	A-15-05-008	Electric	Vertically Integrated	12/1/2016	10.00	10.00		Above Average / 3	10.00			10.00		
Illinois	Ameren Illinois	D-16-0282	Electric	Distribution	12/6/2016	8.64		8.64	Average / 2		8.64				
Illinois	Commonwealth Edison Co	D-16-0259	Electric	Distribution	12/6/2016	8.64		8.64	Average / 2		8.64				
South Carolina	Duke Energy Progress LLC	D-2016-227-E	Electric	Vertically Integrated	12/7/2016	10.10	10.10		Average / 1		10.10			10.10	
New Jersey	Jersey Centrl Power & Light Co.	D-ER-16040383	Electric	Distribution	12/12/2016	9.60		9.60	Below Average / 2			9.60			
Connecticut	United Illuminating Co	D-16-06-04	Electric	Distribution	12/14/2016	9.10		9.10	Below Average / 3			9.10			
Colorado	Black Hills Colorado Electric	D-16AL-0326E	Electric	Vertically Integrated	12/19/2016	9.37	9.37		Average / 2		9.37			9.37	
Maine	Emera Maine	D-2015-00360	Electric	Distribution	12/19/2016	9.00		9.00	Average / 2		9.00				
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 532	Electric	Vertically Integrated	12/22/2016	9.90	9.90		Average / 1		9.90			9.90	
Nevada	Sierra Pacific Power Co	D-16-06006	Electric	Vertically Integrated	12/22/2016	9.60	9.60		Average / 2		9.60			9.60	
Idaho	Avista Corp.	C-AVU-E-16-03	Electric	Vertically Integrated	12/28/2016	9.50	9.50		Average / 2		9.50			9.50	
Texas	Electric Transmission Texas	D-45636-ETT	Electric	Transmission	1/12/2017	9.60			Average / 3		9.60				
Wyoming	MDU Resources Group Inc.	D-2004-117-ER-16	Electric	Vertically Integrated	1/18/2017	9.45	9.45		Average / 3					9.45	
New York	Consolidated Edison Co. of NY	C-16-E-0060	Electric	Distribution	1/24/2017	9.00		9.00	Average / 1		9.00				
Michigan	DTE Electric Co.	C-U-18014	Electric	Vertically Integrated	1/31/2017	10.10	10.10		Average / 1		10.10			10.10	
Maryland	Delmarva Power & Light Co.	C-9424	Electric	Distribution	2/15/2017	9.60		9.60	Below Average / 3			9.60			
New Jersey	Rockland Electric Company	D-ER-16050428	Electric	Distribution	2/22/2017	9.60		9.60	Below Average / 2			9.60			
Arizona	Tucson Electric Power Co.	D-E-01933A-15-0322	Electric	Vertically Integrated	2/24/2017	9.75	9.75		Average / 3		9.75			9.75	
Michigan	Consumers Energy Co.	C-U-17990	Electric	Vertically Integrated	2/28/2017	10.10	10.10		Average / 1		10.10			10.10	
Minnesota	Otter Tail Power Co.	D-E-017/GR-15-1033	Electric	Vertically Integrated	3/2/2017	9.41	9.41		Average / 2		9.41			9.41	
Oklahoma	Oklahoma Gas and Electric Co	Ca-PUD201500273	Electric	Vertically Integrated	3/20/2017	9.50	9.50		Average / 3		9.50			9.50	
Florida	Gulf Power Co.	D-160186-EI	Electric	Vertically Integrated	4/4/2017	10.25	10.25		Above Average / 2	10.25			10.25		
New Hampshire	Liberty Utilities Granite St	D-DE-16-383	Electric	Distribution	4/12/2017	9.40		9.40	Average / 3		9.40				
New Hampshire	Unitil Energy Systems Inc.	D-DE-16-384	Electric	Distribution	4/20/2017	9.50		9.50	Average / 3		9.50				
Missouri	Kansas City Power & Light	C-ER-2016-0285	Electric	Vertically Integrated	5/3/2017	9.50	9.50		Below Average / 1			9.50			9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-15-826	Electric	Vertically Integrated	5/11/2017	9.20	9.20		Average / 2		9.20			9.20	
Arkansas	Oklahoma Gas and Electric Co.	D-16-052-U	Electric	Vertically Integrated	5/18/2017	9.50	9.50		Average / 1		9.50			9.50	
Delaware	Delmarva Power & Light Co.	D-16-0849	Electric	Distribution	5/23/2017	9.70		9.70	Average / 3		9.70				
North Dakota	MDU Resources Group Inc.	C-PU-16-666	Electric	Vertically Integrated	6/16/2017	9.65	9.65		Average / 1					9.65	
Kentucky	Kentucky Utilities Co.	C-2016-00370	Electric	Vertically Integrated	6/22/2017	9.70	9.70		Average / 1		9.70			9.70	
Kentucky	Louisville Gas & Electric Co	C-2016-00371 (elec)	Electric	Vertically Integrated	6/22/2017	9.70	9.70		Average / 1		9.70			9.70	
Total Cases						109	69	37		16	72	21	16	45	8
Mean						9.65	9.79	9.38		10.10	9.57	9.57	10.10	9.72	9.58
Median						9.62	9.75	9.45		10.14	9.60	9.60	10.14	9.70	9.52
Maximum						10.55	10.55	9.90		10.55	10.30	9.96	10.55	10.30	9.96
Minimum						8.64	9.20	8.64		9.70	8.64	9.10	9.70	9.20	9.30

Source: SNL Financial