

## LONG TERM INTEREST RATE TRENDS

YEAR	BOND YIELD	10 YR TREASURY	20 YR TREASURY	10 YR SPREAD	20 YR SPREAD
1993	7.56%	5.87%	6.29%	1.69%	1.27%
1994	8.30%	7.09%	7.49%	1.21%	0.81%
1995	7.91%	6.57%	6.95%	1.34%	0.96%
1996	7.74%	6.44%	6.83%	1.30%	0.91%
1997	7.63%	6.35%	6.69%	1.28%	0.94%
1998	7.00%	5.26%	5.72%	1.74%	1.28%
1999	7.55%	5.65%	6.20%	1.90%	1.35%
2000	8.14%	6.03%	6.23%	2.11%	1.91%
2001	7.72%	5.02%	5.63%	2.70%	2.09%
2002	7.53%	4.61%	5.43%	2.92%	2.10%
2003	6.61%	4.01%	4.96%	2.60%	1.65%
2004	6.20%	4.27%	5.04%	1.93%	1.16%
2005	5.67%	4.29%	4.64%	1.38%	1.03%
2006	6.08%	4.80%	5.00%	1.28%	1.08%
2007	6.11%	4.63%	4.91%	1.48%	1.20%
AVERAGE	7.18%	5.39%	5.87%	1.79%	1.32%

**Sources:**

Single A Bond Yield from Dr. Hadaway Rebuttal SCH-8R

Treasury Yields from Federal Reserve website - [www.federalreserve.gov](http://www.federalreserve.gov)



## Open Market Operations

Open market operations--purchases and sales of U.S. Treasury and federal agency securities--are the Federal Reserve's principal tool for implementing monetary policy. The short-term objective for open market operations is specified by the Federal Open Market Committee (FOMC). This objective can be a desired quantity of reserves or a desired price (the federal funds rate). The federal funds rate is the interest rate at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight.

The Federal Reserve's objective for open market operations has varied over the years. During the 1980s, the focus gradually shifted toward attaining a specified level of the federal funds rate, a process that was largely complete by the end of the decade. Beginning in 1994, the FOMC began announcing changes in its policy stance, and in 1995 it began to explicitly state its target level for the federal funds rate. Since February 2000, the statement issued by the FOMC shortly after each of its meetings usually has included the Committee's assessment of the risks to the attainment of its long-run goals of price stability and sustainable economic growth.

For more information on open market operations, see the [article](#) in the *Federal Reserve Bulletin* (102 KB PDF).

### Intended federal funds rate Change and level, 1990 to present

Date	Change (basis points)		Level (percent)
	Increase	Decrease	
<b>2008</b>			
April 30		25	2.00
March 18		75	2.25
January 30		50	3.00
January 22		75	3.50
<b>2007</b>			
December 11		25	4.25
October 31		25	4.50
September 18		50	4.75
<b>2006</b>			
June 29	25		5.25
May 10	25		5.00
March 28	25		4.75

January 31 25 4 50

**2005**

December 13 25 4 25

November 1 25 4 00

September 20 25 3 75

August 9 25 3 50

June 30 25 3 25

May 3 25 3 00

March 22 25 2 75

February 2 25 2 50

**2004**

December 14 25 2 25

November 10 25 2 00

September 21 25 1 75

August 10 25 1 50

June 30 25 1 25

**2003**

June 25 25 1 00

**2002**

November 6 50 1 25

**2001**

December 11 25 1 75

November 6 50 2 00

October 2 50 2 50

September 17 50 3 00

August 21 25 3 50

June 27 25 3 75

May 15 50 4 00

April 18 50 4 50

March 20 50 5 00

January 31 50 5 50

January 3 50 6 00

**2000**

May 16 50 6 50

March 21 25 6 00

February 2 25 5 75

**1999**

November 16 25 5 50

August 24	25	5.25
June 30	25	5.00

1998

November 17	25	4.75
October 15	25	5.00
September 29	25	5.25

1997

March 25	25	5.50
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1996

January 31	25	5.25
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1995

December 19	25	5.50
July 6	25	5.75
February 1	50	6.00

1994

November 15	75	5.50
August 16	50	4.75
May 17	50	4.25
April 18	25	3.75
March 22	25	3.50
February 4	25	3.25

1992

September 4	25	3.00
July 2	50	3.25
April 9	25	3.75

1991

December 20	50	4.00
December 6	25	4.50
November 6	25	4.75
October 31	25	5.00
September 13	25	5.25
August 6	25	5.50
April 30	25	5.75
March 8	25	6.00
February 1	50	6.25
January 9	25	6.75

1990

December 18	25	7 00
December 7	25	7 25
November 13	25	7 50
October 29	25	7 75
July 13	25	8 00

A basis point is 1/100 percentage point

REBUTTAL  
UPDATE HADAWAY  
CONSTANT GROWTH

LINE NO.	COMPANY	SYMBOL	DIV	PRICE	YIELD	GROWTH	ROE	TRADITIONAL		GDP	TWO STAGE	AVG DCF	30 YR TREAS	CAPM	3 MO. TREAS	CAPM	RISK	PREM	MORN STAR	RISK	PREM	AVG CAPM	RISK	
								GROWTH	DCF															GROWTH
1	ALLETE	ALE	\$1.80	\$37.13	4.85%	4.17%	9.01%	5.50%	10.35%	10.10%	9.82%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
2	ALLIANT ENERGY	LNT	\$1.53	\$36.69	4.17%	6.11%	10.28%	5.50%	9.67%	9.93%	9.96%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
3	CH ENERGY GROUP	CHG	\$2.16	\$38.78	5.57%	1.50%	7.07%	5.50%	11.07%	10.49%	9.54%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
4	CON. EDISON	ED	\$2.36	\$43.15	5.47%	3.56%	9.03%	5.50%	10.97%	10.33%	10.11%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
5	DTE ENERGY CO	DTE	\$2.12	\$41.49	5.11%	5.17%	10.28%	5.50%	10.61%	10.25%	10.38%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
6	IDACORP INC	IDA	\$1.20	\$31.82	3.77%	4.67%	8.44%	5.50%	9.27%	8.71%	8.81%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
7	MGE ENERGY INC	MGEE	\$1.45	\$32.95	4.40%	6.00%	10.40%	5.50%	9.90%	9.40%	9.90%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
8	NSTAR	NST	\$1.53	\$31.97	4.79%	6.58%	11.37%	5.50%	10.29%	10.41%	10.69%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
9	PPL CORPORATION	PPL	\$1.46	\$47.95	3.04%	13.34%	16.38%	5.50%	8.54%	9.66%	11.53%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
10	PROGRESS ENERGY	PGN	\$2.49	\$44.08	5.65%	4.68%	10.33%	5.50%	11.15%	10.48%	10.65%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
11	SCANA CORP	SCG	\$1.92	\$38.32	5.01%	4.73%	9.74%	5.50%	10.51%	10.19%	10.15%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
12	SOUTHERN CO.	SO	\$1.72	\$36.46	4.72%	5.01%	9.72%	5.50%	10.22%	10.17%	10.04%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
13	VECTREN CORP	VVC	\$1.35	\$26.98	5.00%	4.98%	9.98%	5.50%	10.50%	10.16%	10.22%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
14	XCEL ENERGY	XEL	\$0.95	\$20.73	4.58%	5.72%	10.30%	5.50%	10.08%	10.02%	10.13%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%
15	AVERAGE		\$1.72	\$36.32	4.72%	5.44%	10.17%	5.50%	10.22%	10.02%	10.14%	9.30%	8.00%	10.30%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	9.40%	9.40%

Sources:  
 Columns A & B: From Dr. Hadaway Rebuttal SCH-7R  
 Column C: Column A/B  
 Column D: From Page 2 of this Schedule  
 Column E: Column C plus Column D  
 Column F: Dr. Hadaway Rebuttal SCH-3R 20 Year Average  
 Column G: Column C plus Column F  
 Column H: Two stage model employing 5.5% GDP growth  
 Column I: Average of Columns E, G and H  
 Column J & K: From Page 3 of this Schedule  
 Column L & M: Direct Testimony Schedule CCS 3.10  
 Column N: Average of Columns J through M

COMPANY	SYMBOL	ZACHS EPS	VALUE LINE EPS	YAHOO
1 ALLETE	ALE	5.00%	2.50%	5.00%
2 ALLIANT ENERGY	LNT	6.00%	6.00%	6.33%
3 CH ENERGY GROUP	CHG		1.50%	n/a
4 CON. EDISON	ED	3.20%	4.50%	2.97%
5 DTE ENERGY CO	DTE	6.00%	4.50%	5.00%
6 IDACORP INC	IDA	6.00%	2.00%	6.00%
7 MGE ENERGY INC	MGEE		6.00%	
8 NSTAR	NST	6.20%	7.50%	6.04%
9 PPL CORPORATION	PPL	12.30%	13.50%	14.22%
10 PROGRESS ENERGY	PGN	4.60%	3.50%	5.95%
11 SCANA CORP	SCG	4.80%	4.00%	5.40%
12 SOUTHERN CO.	SO	4.70%	5.00%	5.32%
13 VECTREN CORP	VVC	5.60%	4.00%	5.33%
14 XCEL ENERGY	XEL	5.20%	5.50%	6.46%

**ROCKY MOUNTAIN POWER  
COMPARABLE GROUP  
CAPITAL ASSET PRICING MODEL UPDATE**

<b>LONG TERM CAPM ANALYSIS</b>			
<b>RISK FREE RATE</b>	<b>VALUE LINE BETA</b>	<b>LONG TERM RISK PREMIUM</b>	<b>CAPM ROE</b>
4.45%	84.33%	5.75%	9.30%

<b>SHORT TERM CAPM ANALYSIS</b>			
<b>RISK FREE RATE</b>	<b>VALUE LINE BETA</b>	<b>LONG TERM RISK PREMIUM</b>	<b>CAPM ROE</b>
1.56%	84.33%	7.60%	8.00%

<b>LONG-TERM CAPM RESULT</b>	9.30%
<b>SHORT-TERM CAPM RESULT</b>	8.50%
<b>MIDPOINT CAPM RESULT</b>	8.90%

<b>MONTH</b>	<b>30 YEAR TREASURY</b>	<b>3-MONTH SECONDARY MKT</b>
Feb-08	4.52%	2.12%
Mar-08	4.39%	1.26%
Apr-08	4.44%	1.29%
<b>AVERAGE</b>	4.45%	1.56%
<b>MAY 1 LEVEL</b>	4.49%	1.42%

Sources:  
 Lawton Direct Testimony Exhibit CCS 3 9 updated  
 Treasury Data [www.federalreserve.gov](http://www.federalreserve.gov)