Montana Department of
REVENUE

Capitalization Rate Study

Centrally Assessed Properties
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January 2013

METHODOLOGY

The Business Tax and Valuation Bureau develops a capitalization rate for each centrally assessed utility industry group using the band-of-investment technique. The typical industry rate for each source of capital (common equity and debt) is weighted according to its proportion in the typical market capital structure for each industry to derive a weighted average direct capitalization rate for the specific industry. The rate for each of the sources of capital is taken from directly observed information in the market.

For a company in a given industry, the capitalization rate for its industry is applied directly to an estimate of the company's typical net utility operating income to derive an income indicator of value for the company.

COMPARABLE COMPANIES

The companies used as comparables are taken from the appropriate industry group in the Value Line Investment Survey.

THE RATE FOR COMMON EQUITY

Under direct capitalization, the measure of the rate for common equity is the Earnings/Price (E/P) ratio. The E/P ratio is the annual earnings (net operating income) per share of common stock divided by the average market price per share of common stock.

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For each of the companies included in the equity portion of the industry capitalization rate data set, the Bureau calculates several different measures of the E/P ratio, and then calculates an industry (simple) average for each of these measures:

E/P (Yahoo)	The previous calendar year's earnings per share reported on Yahoo Finance's website is divided by the average of the previous calendar year's monthly high and low price (January through December) reported by Yahoo Finance.
E/P (VL)	The previous calendar year's earnings per share reported in the Value Line Investment Survey is divided by the average of the previous calendar year's monthly high and low price (January through December) reported by Yahoo Finance.
Inverse of P/E (Yahoo)	This is calculated by dividing 1 by the Price/Earnings (P/E) ratio reported by Yahoo Finance for end of the previous calendar year.
Inverse of P/E (VL)	This is calculated by dividing 1 by the P/E ratio reported in the Value Line Investment Survey for end of the previous calendar year.
Inverse of MEDIAN P/E (VL)	This is calculated by dividing 1 by the MEDIAN Price/Earnings ratio reported in the Value Line Investment Survey for end of the previous calendar year. Value Line derives the MEDIAN P/E ratio by calculating the average of a company's last 10 years P/E ratios after deleting the 2 highest and 2 lowest values.

THE RATE FOR PREFERRED STOCK

The measure of the rate for preferred stock is percent dividend yield.

The Business Tax and Valuation Bureau does not calculate an annual (simple) average of the monthly percent yields for all preferred stock issues as a separate rate used in the band of investment. Instead, the preferred stock is included in the debt portion of the capital structure.

THE RATE FOR DEBT

The measure of the rate for debt used in the direct capitalization rate is the current yield. Current yield is equal to the annual coupon rate divided by price (expressed as a percent). While the measure of the rate of debt for the yield rate is yield to maturity. The yield to maturity is the interest rate that equates the present value of a bond's cash flow to its current price (expressed as a percent). Yield to maturity assumes that the bond will be held to maturity. If the bond is not held until maturity, or if the interim cash flows are reinvested at a rate that differs from the yield to maturity, an investor's actual yield will differ from the yield to maturity. The yield to maturity calculation equates a bond's cash flows to its current price; this yield calculation considers both coupon and income and any capital gain or loss the investor will realize by holding the bond to maturity.

Valuation theory typically requires the use of current yields (the annual coupon rate divided by price) for direct capitalization and the use of yield to maturity for yield capitalization, the two rates will generally not vary significantly for seasoned issues (except under certain circumstances) and they will be the same for new issues.

Yield to Maturity	For each of the companies included in the embedded debt portion Embedded debt of the industry capitalization rate data set, the bureau calculates an annual (simple) average of the monthly yield to maturities for all debt issues listed in the Standard & Poor's Bond Guide. These average yields are then used to calculate an industry (simple) average.

DIRECT CAPITALIZATION of "GROSS" CASH FLOW

The Business Tax and Valuation Bureau develops another direct capitalization rate for each centrally assessed utility industry group. This direct capitalization rate is calculated like the rate for capitalizing net operating income. The only difference is that the rate for common equity is "gross" cash flow per share divided by price per share.

"Gross" cash flow is defined as net utility operating income plus depreciation and amortization expense minus preferred stock dividends.

For a company in a given industry, the capitalization rate for its industry is applied directly to an estimate of the company's typical "gross" cash flow to derive an income indicator of value for the company.

The use of the "gross" cash flow capitalization model is less common than the traditional net operating income capitalization model. The "gross" cash flow model can be valuable in developing an income indicator of value for industries or companies that have been experiencing net operating losses, or in cases where book depreciation does not reflect economic depreciation.

YIELD CAPITALIZATION of PROJECTED FUTURE (NET) CASH FLOWS

The Business Tax and Valuation Bureau also develops a yield capitalization rate for each centrally assessed utility industry group. Yield capitalization is fundamentally different from direct capitalization, both in the rates developed for each source of capital (common equity and debt), and the level and nature of income that the capitalization rate is applied to.

The rate for each source of capital is the “cost of capital” for each industry group. The cost of debt is the yield to maturity for debt derived from the set of comparable companies for each industry group. The cost of equity capital is calculated using several methods, including the DCF (discounted cash flow) model, the ERP (equity risk premium model), the CAPM (capital asset pricing model) or a combination there of depending on the quantity and quality of available data.

The correct application of a yield capitalization rate is to use the rate for the industry to discount a stream of estimated future (net) cash flows for a company to present value.

It is important to note that the cash flow used in yield capitalization is “true”, “net” or “free” cash flow and not the ”gross” cash flow used in the Department’s direct ”gross” cash flow indicator.

The development of a valid future cash flow stream requires considerable time and effort. Most companies choose not to spend the time and effort to develop this future cash flow stream. Therefore, in the event a company does not provide a future cash flow stream as requested in the Annual Reporting Forms, the Department normalizes “net” historical cash flows to determine a cash flow stream. The yield capitalization rate for specific industries is applied directly to this derived cash flow stream.

Properly developed and applied, yield capitalization and direct capitalization usually result in similar indicators of value.

Mike Kadas
Director

Montana Department of Revenue

2014 Capitalization Rate Study
Business Tax & Valuation Bureau
Centrally Assessed Properties

Steve Bullock
Governor

The Centrally Assessed Property Appraisers, of the Business Tax & Valuation Bureau of the Montana Department of Revenue, produced this study. The team members include:

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2014 Capitalization Rate Study

Scheduled Airlines

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Scheduled Passenger Airlines
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	Median	
6.85%	4.62%	Yahoo
6.60%	5.27%	Value Line
6.72%	4.95%	Average

Inverse of P/E Ratios:

5.78%	5.31%	Yahoo
7.25%	6.22%	Value Line
6.51%	5.76%	Average of Inverse of the P/E
6.69%	7.14%	Inverse of median P/E, Value Line
6.62%	5.36%	Average of all above except median P/E
Mean = 6.63%	5.71%	
Median = 6.69%	5.31%	

Equity Measure NUOI = 7.00%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	7.23%	6.91%	ALL
	5.31%	5.34%	BBB- & Above
	-----	-----	BB- & Above
Mean =	6.27%	6.12%	
Median =	5.31%	5.34%	

Debt Measure = 6.91%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	59.66%	x	7.00%	=	4.18%
Debt	40.34%	x	6.91%	=	2.79%
	100.00%				6.96%
Direct Cap Rate NUOI =					**7.00%**

Gross Cash Flow / Price:

All	Median	
17.00%	17.71%	Value Line

Equity Measure Gross = 17.75%

Industry Market Capital Structure Gross Cash Flow (GCF) Rate					
Equity	59.66%	x	17.75%	=	10.59%
Debt	40.34%	x	6.91%	=	2.79%
	100.00%				13.38%
Direct Cap Rate GCF =					**13.50%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Scheduled Freight Airlines
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	Median	
5.65%	5.51%	Yahoo
5.50%	4.52%	Value Line
5.57%	5.02%	Average

Inverse of P/E Ratios:

6.01%	2.31%	Yahoo
6.12%	4.69%	Value Line
6.07%	3.50%	Average of Inverse of the P/E
6.94%	5.56%	Inverse of median P/E, V. L.
5.82%	4.26%	Average of all above except median P/E
Mean = 6.04%	4.52%	
Median = 6.01%	4.69%	

Equity Measure NUOI = 6.00%

Debt Measure Calculated: Current Yield

	Annual	4th Qtr	
	5.07%	5.29%	ALL
	5.07%	5.29%	BBB- & Above
	-----	-----	BB- & Above
Mean =	5.07%	5.29%	
Median =	5.07%	5.29%	

Debt Measure = 5.30%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	90.59%	x	6.00%	=	5.44%
Debt	9.41%	x	5.30%	=	0.50%
	100.00%				5.93%
Direct Cap Rate NUOI =					**6.00%**

Gross Cash Flow / Price:

All	Median	
10.27%	8.63%	Value Line

Equity Measure Gross = 10.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	90.59%	x	10.00%	=	9.06%
Debt	9.41%	x	5.30%	=	0.50%
	100.00%				9.56%
Direct Cap Rate GCF =					**9.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Scheduled Airlines
2014 Assessment Year

Equity Measures Calculated:		**Passenger**	**Freight**
Dividend Growth Model		10.00%	9.20%
Capital Asset Pricing Model		10.05%	8.95%
	Mean =	10.03%	9.07%
	Equity Measure FCF =	**10.25%**	**8.80%**

Debt Measures Calculated, Yield to Maturity:

	All Bonds				**20 Year Plus Bonds**			
	Passenger		**Freight**		**Passenger**		**Freight**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**	**Annual**	**4th Qtr**	**Annual**	**4th Qtr**
A	-----	-----	**2.82%**	**2.90%**	-----	-----	-----	-----
BBB's	2.87%	2.68%	4.04%	4.35%	5.79%	5.88%	5.13%	5.58%
NR	6.71%	5.35%	---	---	3.04%	2.97%	---	---
All =	3.79%	4.06%	3.79%	4.06%	5.13%	5.58%	5.13%	4.42%
Mean =	4.79%	4.02%	4.04%	4.35%	4.41%	4.42%	5.13%	5.58%
Median =	4.79%	4.02%	4.04%	4.35%	4.41%	4.42%	5.13%	5.58%

Debt Measure Passenger=	**6.00%**
Debt Measure Freight=	**5.60%**

Yield Cap Rate Free Cash Flow - Passenger						
Equity	59.66%	x	10.25%	=	6.12%	
Debt	40.34%	x	6.00%	=	2.42%	
	100.00%				8.54%	
Weighted Average Cost of Capital (WACC) =						**8.75%**

Yield Cap Rate Free Cash Flow - Freight						
Equity	90.59%	x	8.80%	=	7.97%	
Debt	9.41%	x	5.60%	=	0.53%	
	100.00%				8.50%	
Weighted Average Cost of Capital (WACC) =						**8.50%**

Where Assumed Growth Rate = Inflation **Growth = 1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure from Value Line and YaHoo Finance
Industry: Airlines
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L
Company	Ticker Symbol	(VL) Fin Str	(VL) Shares (000)	(YAHOO) Avg Price Common 4th Qtr	(VL) Book Value Per Share	Mkt Value Common DxE	(VL) Book Value Common DxF	(VL) Book Value Preferred (000)	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt Value Pref. & Debt
AMR Corp.	AAMRQ		335,300	0.00	(23.82)	**0**	(7,986,846)	0	8,314,000	1.00	8,314,000
Allegiant Travel	**ALGT**	**B++**	**19,300**	**105.44**	**20.71**	**2,034,992**	**399,703**	**0**	**139,200**	**1.00**	**139,200**
Alaska Air Group	**ALK**	**B+**	**70,400**	**73.37**	**20.19**	**5,165,248**	**1,421,376**	**0**	**871,000**	**1.00**	**871,000**
Delta Air Lines	**DAL**	**C++**	**851,400**	**27.47**	**(2.50)**	**23,387,958**	**(2,128,500)**	**0**	**11,082,000**	**1.00**	**11,082,000**
JetBlue Airways	JBLU	C++	281,000	8.54	6.72	2,399,740	1,888,320	0	2,457,000	1.00	2,457,000
US Airways Group	LCC	C++	196,979	22.55		4,441,876			5,911,000	1.00	5,911,000
Southwest Airlines	LUV	B+	730,300	18.84	9.57	13,758,852	6,988,971	0	2,883,000	1.00	2,883,000
Republic Airways Holdings Inc	**RJET**	**C+**	**48,600**	**10.69**	**10.57**	**519,534**	**513,702**	**0**	**1,843,300**	**1.00**	**1,843,300**
Spirit Airlines	SAVE	B++	72,500	45.41	8.03	3,292,225	582,175	0	0	1.00	0
SkyWest	**SKYW**	**B**	**51,800**	**14.79**	**26.78**	**766,122**	**1,387,204**	**0**	**1,470,600**	**1.00**	**1,470,600**
United Cont'l Hldgs.	UAL	C++	332,500	37.83	1.45	12,578,475	482,125	0	11,232,000	1.00	11,232,000
Atlas Air Worldwide	AAWW	B+	26,400	41.15	48.57	1,086,360	1,282,248	0	1,149,300	1.00	1,149,300
Air T Inc	**AIRT**	**B**	**2,400**	**11.97**	**11.50**	**28,728**	**27,600**	**0**	**0**	**1.00**	0
Air Transport Services Grp.	ATSG	C++	64,100	8.09	4.67	518,569	299,347	0	343,200	1.00	343,200
FedEx Corp.	**FDX**	**A+**	**318,000**	**143.77**	**54.71**	**45,718,860**	**17,397,780**	**0**	**2,739,000**	**1.00**	**2,739,000**
United Parcel Serv.	**UPS**	**A**	**953,000**	**105.08**	**4.88**	**100,141,240**	**4,650,640**	**0**	**11,089,000**	**1.00**	**11,089,000**

SUMS & AVERAGES				
ALL	215,838,779	37,321,191	61,523,600	61,523,600
PASSENGER AIRLINES	68,345,022	13,663,576	46,203,100	46,203,100
MEDIAN OF PASSENGER AIRLINES	3,867,051	984,690	2,670,000	2,670,000
FREIGHT CARRIERS	147,493,757	23,657,615	15,320,500	15,320,500
MEDIAN OF FREIGHT CARRIERS	1,086,360	1,282,248	1,944,150	1,944,150

FOREIGN CARRIERS -British Air, World Air Holdings & WestJet Airlines Ltd.
Data not used because of outliers and bankruptcy

* Bold denotes operations in Montana
** All **Negative** values left out of calculations

INDUSTRY MARKET STRUCTURE:						
	ALL		Passenger Airlines		Freight	
EQUITY	77.82%	215,838,779	59.66%	68,345,022	90.59%	147,493,757
DEBT	22.18%	61,523,600	40.34%	46,203,100	9.41%	15,320,500
TOTAL	100.00%	277,362,379	100.00%	114,548,122	100.00%	162,814,257

Notes/Rational for Changes to Guideline Companies

2014 NOTES
AMR. Corp merged with US Airways in December data no longer available for ticker AMMRQ and LLC now trades under AAL

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure from Value Line and YaHoo Finance
Industry: Airlines
2014 Assessment Year

A	B	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Company	Ticker Symbol	(YAHOO) EPS	(YAHOO) E/P M/E	(VL) EPS	(VL) E/P O/E	(VL) CF/S	(VL) CF/P Q/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/S	(VL) P/E	(VL) Inverse of P/E 1/U	(VL) Median P/E	(VL) Inverse of Median P/E 1/W	(VL) Beta
AMR Corp.	AAMRQ			1.84										1.55
Allegiant Travel	**ALGT**	**4.67**	**4.43%**	**4.90**	**4.65%**	**8.50**	**8.06%**	**94.37**	**1.06%**	**19.26**	**5.19%**			**0.65**
Alaska Air Group	**ALK**	**6.66**	**9.08%**	**5.20**	**7.09%**	**9.30**	**12.68%**	**60.03**	**1.67%**	**13.13**	**7.62%**	**14.00**	**7.14%**	**1.05**
Delta Air Lines	**DAL**	**2.42**	**8.81%**	**2.82**	**10.27%**	**4.95**	**18.02%**	**19.81**	**5.05%**	**8.74**	**11.44%**			**1.30**
JetBlue Airways	JBLU	0.38	4.45%	0.45	5.27%	1.60	18.74%	6.78	14.76%	16.20	6.17%			1.25
US Airways Group	LCC	2.92	12.95%			4.60	20.40%	17.94	5.57%					
Southwest Airlines	LUV	0.86	4.56%	0.99	5.25%	2.25	11.94%	14.05	7.12%	16.38	6.11%	26.00	**3.85%**	1.05
Republic Airways Holdings Inc	**RJET**	**0.47**	**4.40%**	**0.89**	**8.33%**			**10.81**	**9.25%**					**1.05**
Spirit Airlines	SAVE	**2.10**	4.62%	2.30	5.06%	2.70	5.95%	31.38	3.19%	**17.04**	**5.87%**			**1.00**
SkyWest	**SKYW**	**1.23**	**8.32%**	**1.25**	**8.45%**	**5.85**	**39.55%**	**14.45**	**6.92%**	**10.69**	**9.35%**	**11.00**	**9.09%**	**1.10**
United Cont'l Hldgs.	UAL	**(0.56)**	(1.48%)	1.90	5.02%	6.70	17.71%	31.53	3.17%	15.98	6.26%			1.40
Atlas Air Worldwide	AAWW	4.48	10.89%	3.90	9.48%	6.40	15.55%	43.25	2.31%	11.02	9.07%			1.60
Air T Inc	**AIRT**	0.66	**5.51%**	**0.40**	**3.34%**			**10.18**	**9.82%**			**10.00**	**10.00%**	**0.65**
Air Transport Services Grp.	ATSG	0.55	6.80%	0.50	6.18%			6.29	15.90%					1.65
FedEx Corp.	**FDX**	**5.17**	**3.60%**	**5.70**	**3.96%**	**12.41**	**8.63%**	**110.04**	**0.91%**	**21.78**	4.59%	**18.00**	**5.56%**	**1.05**
United Parcel Serv.	**UPS**	**1.53**	**1.46%**	**4.75**	**4.52%**	**6.95**	**6.61%**	**88.66**	**1.13%**	**21.30**	**4.69%**	**19.00**	**5.26%**	**0.90**

SUMS & AVERAGES					
ALL	6.42%	6.21%	15.32%	5.85%	6.94%	6.82%	1.15
PASSENGER AIRLINES	6.85%	6.60%	17.00%	5.78%	7.25%	6.69%	1.14
MEDIAN OF PASSENGER AIRLINES	4.62%	5.27%	17.71%	5.31%	6.22%	7.14%	1.08
FREIGHT CARRIERS	5.65%	5.50%	10.27%	6.01%	6.12%	6.94%	1.17
MEDIAN OF FREIGHT CARRIERS	5.51%	4.52%	8.63%	2.31%	4.69%	5.56%	1.05

FOREIGN CARRIERS -British Air, World Air Holdings & WestJet Airlines Ltd.
Data not used because of outliers and bankruptcy

Overall Industry Beta = **1.15**
Passenger Beta = **1.10**
Freight Beta = **0.90**

* Bold denotes operations in Montana
** All **Negative** values left out of calculations

Notes/Rational for Changes to Guideline Companies

2014 NOTES
AMR. Corp merged with US Airways in December data no longer

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Airlines
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Scheduled Passenger Airlines

Company Name	Ticker	Stock Price (Po)	Expected Dividend 1 Year	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke 1 Year
Allegiant Travel	**ALGT**	**105.44**	**Nil**		**NMF**	
Alaska Air Group	**ALK**	**73.37**	**0.80**	1.09%	**Nil**	1.09%
AMR Corp.	AAMRQ					
Delta Air Lines	**DAL**	**27.47**	**0.24**	0.87%	**NMF**	0.87%
JetBlue Airways	JBLU	8.54	**Nil**		**Nil**	
Southwest Airlines	LUV	18.84	0.16	0.85%	37.00%	37.85%
US Airways Group	LCC	22.55	**Nil**		**Nil**	
Republic Airways Holdings Inc	**RJET**	**10.69**	**Nil**		**Nil**	
Spirit Airlines	SAVE	45.41	**Nil**		**NMF**	
SkyWest	**SKYW**	**14.79**	**0.16**	**1.08%**	**4.00%**	**5.08%**
United Cont'l Hldgs.	**UAL**	**37.83**	**Nil**		**Nil**	
					Median=	3.09%
					Mean=	11.22%

Cost of Equity - Domestic, (K_E) = **10.00%**

Scheduled Freight Airlines

Company Name	Ticker	Stock Price (Po)	Expected Dividend 1 Year	Dividend Yield (D1/P0)	Dividend Growth	Ke 1 Year
Atlas Air Worldwide	AAWW	41.15	**Nil**		**Nil**	
Air T Inc	**AIRT**	**11.97**				
Air Transport Services Grp.	ATSG	8.09				
FedEx Corp	**FDX**	**143.77**	**0.60**	**0.42%**	**8.00%**	**8.42%**
United Parcel'B'	**UPS**	**105.08**	**2.60**	**2.47%**	**7.50%**	**9.97%**
					Median=	9.20%
					Mean=	9.20%

Cost of Equity - Freight, (K_E) = **9.20%**

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Airlines
2014 Assessment Year

$$K_E = R_F + \beta (R_M - R_F)$$

	Passenger	Freight
K_E = Cost of Equity	**10.05%**	**8.95%**
R_F = Risk Free Rate	3.96%	3.96%
β= Beta	1.10	0.90
R_M = Market Rate of Return	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied premium	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied premium	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%
	Mean =	10.20%
	Median =	9.80%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013
Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014
U.S. Treasury Securities December 31, 2013

1 Year	R_f =	0.12%
10 Year	R_f =	3.03%
30 Year	R_f =	3.96%

Federal Reserve Statistical Release
Treasury constant Maturities, December 31, 2013
Market yield on U.S. Treasury securities, Annual Averages

1 year constant maturity, quoted on investment basis	R_f =	0.13%
10-year constant maturity, quoted on investment basis	R_f =	3.04%
30-year constant maturity, quoted on investment basis	R_f =	3.96%
	Mean =	2.15%
	Median =	3.03%
	Weighted Mean =	2.75%

U.S. Treasury Securities Long-Term December 31, 2013

20 year constant maturity	R_f =	**3.72%**
30 year constant maturity	R_f =	**3.96%**
	R_f =	**3.96%**

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Airlines
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Avg.	Annual Avg.	Yahoo P-E	Yahoo EPS lst 12 mo
AAMRQ	AMR Corp.	high	Merged with US Airways no longer available on Yahoo on Dec. 10, 2013																
		low																	
AAWW	Atlas Air Worldwide	high	$47.47	$48.54	$47.45	$41.04	$47.24	$47.79	$46.41	$48.44	$48.79	$50.98	$39.48	$41.41	$41.15	$40.26	$43.25	8.70	4.48
		low	$42.73	$43.59	$40.49	$37.10	$36.61	$43.34	$42.06	$42.21	$45.00	$36.97	$36.24	$36.50					
AIRT	Air T Inc	high	$8.90	$9.68	$9.69	$9.68	$10.39	$10.49	$10.64	$10.99	$11.80	$11.42	$11.71	$12.18	$11.97	$11.36	$10.18	17.56	0.66
		low	$8.31	$8.87	$9.10	$9.00	$9.20	$9.67	$9.70	$9.77	$10.38	$10.76	$11.10	$11.00					
ALGT	Allegiant Travel	high	$78.85	$82.00	$89.46	$93.47	$95.77	$108.56	$109.72	$98.76	$106.81	$109.56	$114.77	$112.87	$105.44	$106.60	$94.37	23.09	4.67
		low	$72.17	$72.73	$80.03	$82.79	$86.99	$92.51	$91.06	$92.27	$91.28	$96.69	$102.94	$102.75					
ALK	Alaska Air Group	high	$47.83	$51.96	$64.55	$64.50	$68.00	$58.24	$62.96	$63.46	$64.74	$71.44	$78.53	$78.39	$73.37	$71.46	$60.03	11.11	6.66
		low	$43.32	$45.77	$51.31	$56.35	$55.15	$50.31	$51.16	$56.20	$56.07	$60.26	$70.51	$69.61					
ATSG	Air Transport Services Grp.	high	$4.70	$5.55	$6.09	$5.89	$6.27	$6.85	$7.19	$6.93	$7.70	$8.00	$7.89	$8.20	$8.09	$7.46	$6.29	14.05	0.55
		low	$4.08	$4.55	$5.32	$5.23	$5.36	$5.88	$6.38	$5.95	$6.28	$6.64	$6.75	$7.25					
DAL	Delta Air Lines	high	$14.20	$14.90	$17.25	$17.33	$19.43	$19.05	$22.01	$22.05	$24.10	$26.72	$29.44	$29.42	$27.47	$26.94	$19.81	11.53	2.42
		low	$11.97	$13.16	$14.26	$13.94	$16.68	$16.94	$18.30	$18.53	$19.57	$23.63	$26.05	$26.40					
FDX	FedEx Corp.	high	$103.14	$107.50	$109.66	$99.53	$103.05	$103.47	$108.98	$113.34	$118.31	$133.84	$140.55	$144.13	$143.77	$132.72	$110.04	27.118	5.17
		low	$93.37	$101.45	$95.30	$90.61	$91.84	$94.60	$97.54	$106.54	$106.38	$111.25	$130.25	$136.27					
GLUX	Great Lakes Aviation	high	$2.15	$1.92	$1.80	$1.75	$1.63	$1.49	$1.50	$1.28	$1.30	$1.03	$1.15	$1.23	$1.21	$1.02	$1.35	(12.39)	(0.09)
		low	$1.70	$1.47	$1.40	$1.31	$1.29	$1.21	$1.20	$1.03	$0.96	$0.84	$0.86	$1.00					
HA	Hawaiian Hldgs.	high	$7.30	$5.97	$6.48	$5.90	$6.04	$6.42	$7.88	$7.80	$7.78	$8.58	$9.24	$9.76	$9.63	$8.60	$6.91	15.84	0.58
		low	$5.52	$5.31	$5.62	$5.18	$5.31	$5.77	$6.02	$6.90	$6.96	$7.35	$8.08	$8.61					
JBLU	JetBlue Airways	high	$6.42	$6.21	$7.01	$7.28	$7.00	$6.63	$6.93	$6.67	$6.89	$7.69	$9.20	$8.95	$8.54	$7.95	$6.78	22.62	0.38
		low	$5.73	$5.70	$6.00	$6.14	$6.12	$5.95	$6.13	$6.08	$6.04	$6.57	$7.05	$8.24					
JLWT	Janel World Trade Ltd	high	$0.10	$0.11	$0.06	$0.07	$0.09	$0.09	$0.09	$0.06	$0.06	$0.05	$0.16	$0.05	$0.04	$0.07	$0.07	NA	(0.12)
		low	$0.06	$0.06	$0.04	$0.06	$0.06	$0.07	$0.04	$0.04	$0.04	$0.05	$0.04	$0.04					
LCC	US Airways Group	high	$15.64	$15.40	$17.43	$17.13	$19.70	$18.20	$19.49	$19.59	$19.48	$23.16	$25.49	$23.62	$22.55	$22.38	$17.94	7.72	2.92
		low	$13.60	$12.70	$13.32	$15.03	$16.60	$15.59	$16.04	$15.28	$16.11	$18.98	$21.60	$21.45					
LUV	Southwest Airlines	high	$11.62	$11.90	$13.58	$13.77	$14.56	$14.28	$14.02	$14.24	$14.82	$17.34	$18.98	$19.00	$18.84	$17.46	$14.05	21.35	0.86
		low	$10.36	$11.15	$11.66	$12.45	$13.40	$12.79	$12.58	$12.64	$12.73	$14.48	$17.20	$17.73					
PNCLQ	Pinnacle Airlines Corp	high	Filed Bankruptcy is now a Delta subsidiary																
		low																	
RJET	Republic Airways Holdings Inc	high	$9.39	$9.94	$11.95	$11.82	$11.70	$11.60	$13.88	$13.92	$13.51	$12.68	$12.47	$11.24	$10.69	$11.00	$10.81	21.71	0.47
		low	$6.05	$8.22	$9.22	$9.44	$10.14	$9.56	$11.09	$10.81	$11.17	$10.76	$9.69	$9.17					
SAVE	Spirit Airlines	high	$19.96	$21.33	$26.87	$27.08	$31.66	$33.75	$36.83	$35.22	$35.16	$46.40	$46.92	$47.62	$45.41	$42.85	$31.38	21.40	2.10
		low	$17.40	$18.51	$20.20	$24.30	$26.64	$29.20	$31.42	$29.65	$30.92	$32.50	$41.41	$42.25					
SKYW	SkyWest	high	$13.93	$14.49	$16.32	$16.25	$15.29	$14.61	$15.67	$15.60	$15.45	$15.39	$17.29	$16.95	$14.79	$15.39	$14.45	12.72	1.23
		low	$12.53	$12.25	$13.69	$13.42	$13.79	$12.80	$13.42	$12.30	$12.65	$13.49	$14.88	$14.34					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Airlines
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Avg.	Annual Avg.	Yahoo P-E	Yahoo EPS lst 12 mo
UAL	United Cont'l Hldgs.	high	$26.37	$27.22	$32.95	$32.69	$35.27	$33.59	$36.74	$35.94	$34.45	$34.34	$40.19	$39.62	$37.83	$35.54	$31.53	NA	(0.56)
		low	$23.62	$23.89	$26.58	$27.90	$31.58	$29.00	$30.05	$27.32	$28.39	$29.11	$33.61	$36.39					
UPS	United Parcel Serv.	high	$82.76	$84.87	$85.93	$86.46	$89.96	$87.82	$91.78	$88.69	$92.12	$98.99	$103.04	$105.37	$105.08	$99.04	$88.66	67.33	1.53
		low	$75.02	$79.00	$82.28	$81.95	$84.65	$84.20	$85.25	$85.18	$85.70	$88.45	$97.75	$100.65					
UTIW	Uti Worldwide Inc	high	$15.19	$15.94	$16.05	$14.80	$16.29	$16.55	$17.02	$17.62	$17.38	$16.18	$15.96	$17.70	$17.56	$15.80	$15.52	NA	(1.62)
		low	$13.34	$14.39	$14.00	$13.78	$14.13	$14.87	$15.66	$15.96	$14.61	$14.56	$15.00	$15.41					
WJA.TO	WestJet Airlines Ltd.	high	$22.90	$22.86	$25.00	$25.47	$25.05	$23.00	$22.99	$22.72	$25.12	$27.24	$28.71	$28.99	$27.85	$27.10	$23.71	14.38	1.96
		low	$19.78	$20.91	$22.00	$24.40	$20.63	$20.85	$19.65	$21.12	$21.90	$23.43	$26.87	$27.36					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Airlines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
United Parcel Service of Amer	8.38	911308AA2	Deb	4/1/2020	A+	6.03	6.05	6.05	6.01	6.20	6.36	6.40	6.50	6.42	6.30	6.39	6.47	6.27%	6.39%
Federal Express	7.6	313309AP1	Nts	7/1/2097	BBB	5.09	5.13	5.17	4.93	5.30	5.68	5.75	5.98	5.90	6.03	6.21	6.30	5.62%	6.18%
FedEx Corp	8		Nts	1/15/2019	BBB	6.09	6.07	6.09	6.08	6.20	6.37	6.34	6.42	6.36	6.37	6.34	6.44	6.26%	6.38%
FedEx Corp	3.7875		Gtd NTs	8/1/2042	BBB	4.11	4.13	4.14	4.03	4.22	4.58	4.66	4.70	4.65	4.56	4.68	4.72	4.43%	4.65%
FedEx Corp	2.625		Gtd NTs	8/1/2022	BBB	2.68	2.67	2.67	2.63	2.72	2.83	2.94	2.88	2.86	2.82	2.86	2.90	2.79%	2.86%
Southwest Airlines Co.	7.375	844741AN8	Deb	03/01/2027	BBB-	6.45	6.42	6.39	6.04	6.20	6.47	6.51	6.67	6.50	6.41	6.49	6.56	6.43%	6.49%
Southwest Airlines Co.	5.25	844741AW8	Nts	10/01/2014	BBB-	4.90	4.94	4.96	4.97	4.98	5.00	5.02	5.03	5.04	5.05	5.07	5.08	5.00%	5.07%
Southwest Airlines Co.	5.12	844741AX6	Nts	03/01/2017	BBB-	4.66	4.66	4.66	4.59	4.66	4.73	4.75	4.77	4.64	4.64	4.66	4.71	4.68%	4.67%
Southwest Airlines Co.	5.75	844741AY4	Nts	12/15/2016	BBB-	5.10	5.11	5.12	5.09	5.11	5.15	5.18	5.18	5.15	5.13	5.13	5.16	5.13%	5.14%
AMR Corp.	9	001765AC0	Deb	09/15/2016	NR	9.83	8.29	7.86	7.75	7.50	7.82	7.65	9.11	8.49	7.74	7.37	7.43	8.07%	7.51%
AMR Corp.	10.2	001765AE6	Deb	03/15/2020	NR	11.27	9.44	8.92	8.86	8.55	8.83	8.71	10.35	9.62	8.77	8.24	8.21	9.15%	8.41%
AMR Corp.	9.88	001765AG1	Deb	06/15/2020	NR	10.91	9.14	8.64	8.59	8.28	8.51	8.44	10.03	9.32	8.49	7.93	7.84	8.84%	8.09%
AMR Corp.	10	001765AK2	Deb	04/15/2021	NR	11.04	9.25	8.68	8.62	8.36	8.62	8.51	10.12	9.43	8.60	8.16	8.15	8.96%	8.30%
AMR Corp.	9.75	001765AP1	Deb	08/15/2021	NR	10.77	9.02	8.53	8.47	8.17	8.36	8.33	9.89	9.19	8.38	7.99	7.86	8.75%	8.08%
AMR Corp.	9.8	001765AQ9	Deb	10/01/2021	NR	10.82	9.07	8.57	8.52	8.21	8.44	8.37	9.94	9.24	8.43	8.03	7.99	8.80%	8.15%
Delta Air Lines, Inc.	9.5		Sr Second Nt 144a	09/15/2014	NR	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07%	9.07%
JetBlue Airways Corp.	5.5		Deb Conv Ser A	9/15/2038	NR	4.11	3.97	3.56	3.59	3.96	4.03	3.76	3.97	3.74	3.47	2.78	5.50	3.87%	3.92%
			Counts of data			17	17	17	17	17	17	17	17	17	17	17	17	17	17

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

S&P Bond Rating	ALL		Freight Only		Passenger Only	
	Annual	4th Qtr	Annual	4th Qtr	Annual	4th Qtr
A	6.27%	6.39%	6.27%	6.39%	---	---
BBB's	5.04%	5.18%	4.78%	5.02%	5.31%	5.34%
NR	8.19%	7.69%	---	---	8.19%	7.69%
ALL	6.60%	6.43%	5.07%	5.29%	7.23%	6.91%
BBB- & Above	5.18%	5.31%	5.07%	5.29%	5.31%	5.34%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Airlines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
United Parcel Service of Amer	8.38	911308AA2	Deb	4/1/2020	A+	2.43	2.45	2.40	2.23	2.71	3.15	3.20	3.45	3.17	2.76	2.98	2.95	2.82%	2.90%
FedEx Corp	8		Nts	1/15/2019	BBB	2.33	2.29	2.34	2.32	2.68	3.24	2.37	2.68	2.46	2.48	2.39	2.73	2.53%	2.53%
FedEx Corp	2.625		Gtd NTs	8/1/2022	BBB	2.88	2.83	2.85	2.66	3.09	3.59	3.61	3.81	3.71	3.54	3.71	3.90	3.35%	3.72%
Federal Express	7.6	313309AP1	Nts	7/1/2097	BBB	5.06	5.10	5.14	4.90	5.28	5.66	5.74	5.97	5.89	6.02	6.21	6.29	5.61%	6.17%
FedEx Corp	3.7875		Gtd NTs	8/1/2042	BBB	4.22	4.24	4.27	4.03	4.37	4.88	5.00	5.04	4.98	4.86	5.00	5.07	4.66%	4.98%
Southwest Airlines Co.	7.375	844741AN8	Deb	03/01/2027	BBB-	5.86	5.81	5.76	5.12	5.41	5.87	5.94	6.20	5.92	5.75	5.89	6.00	5.79%	5.88%
Southwest Airlines Co.	5.25	844741AW8	Nts	10/01/2014	BBB-	1.04	1.35	1.39	1.28	1.26	1.30	1.41	1.22	1.27	1.05	1.08	0.96	1.22%	1.03%
Southwest Airlines Co.	5.12	844741AX6	Nts	03/01/2017	BBB-	2.54	2.52	2.48	1.98	2.34	2.75	2.84	2.88	1.95	1.90	1.97	2.29	2.37%	2.05%
Southwest Airlines Co.	5.75	844741AY4	Nts	12/15/2016	BBB-	2.33	2.31	2.29	2.06	2.06	2.27	2.36	2.29	2.04	1.78	1.70	1.77	2.11%	1.75%
AMR Corp.	9	001765AC0	Deb	09/15/2016	NR	11.94	6.28	4.43	3.89	2.61	3.98	3.08	9.47	6.73	3.05	0.99	1.73	4.85%	1.92%
AMR Corp.	10.2	001765AE6	Deb	03/15/2020	NR	12.22	8.65	7.53	7.37	6.62	7.24	6.95	10.52	8.95	6.99	5.65	5.37	7.84%	6.00%
AMR Corp.	9.88	001765AG1	Deb	06/15/2020	NR	11.84	8.38	7.30	7.15	6.43	6.94	6.74	10.18	8.67	6.79	5.38	5.33	7.59%	5.83%
AMR Corp.	10	001765AK2	Deb	04/15/2021	NR	11.83	8.60	7.46	7.31	6.76	7.27	7.01	10.23	8.89	7.14	6.15	5.97	7.89%	6.42%
AMR Corp.	9.75	001765AP1	Deb	08/15/2021	NR	11.52	8.40	7.43	7.30	6.66	7.04	6.95	10.02	8.67	7.00	6.12	5.90	7.75%	6.34%
AMR Corp.	9.8	001765AQ9	Deb	10/01/2021	NR	11.55	8.46	7.50	7.37	6.74	7.19	7.02	10.07	8.74	7.08	6.20	6.12	7.84%	6.47%
Delta Air Lines, Inc.	9.5		Sr Second Nt 144a	09/15/2014	NR	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88%	6.88%
JetBlue Airways Corp.	5.5		Deb Conv Ser A	9/15/2038	NR	3.49	3.27	2.59	2.66	3.22	3.34	2.88	3.22	2.85	2.39	1.02	5.49	3.04%	2.97%
			Counts of data			17	17	17	17	17	17	17	17	17	17	17	17	17	17

Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called
means 20 year plus bond
longest term passenger bonds

	ALL		Freight Only		Passenger Only		20 YEAR PLUS BONDS Freight Only		20 YEAR PLUS BONDS Passenger Only	
	Annual	4th Qtr	Annual	4th Qtr	Annual	4th Qtr	Annual	4th Qtr	Annual	4th Qtr
A	2.82%	2.90%	2.82%	2.90%	---	---	---	---	---	---
BBB's	3.45%	3.51%	4.04%	4.35%	2.87%	2.68%	5.13%	5.58%	5.79%	5.88%
NR	6.71%	5.35%	---	---	6.71%	5.35%	---	---	3.04%	2.97%
ALL	4.95%	4.34%	3.79%	4.06%	5.43%	4.46%	5.13%	5.58%	4.41%	4.42%
BBB- & Above	3.38%	3.45%	3.79%	4.06%	2.87%	2.68%	5.13%	5.58%	4.41%	4.42%

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Electric Utilities

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Electric Utilities - Regulated
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	Western	
5.60%	5.80%	Yahoo
5.84%	5.88%	Value Line
5.72%	5.84%	Average of E/Ps

Inverse of P/E Ratios:

3.00%	3.00%	Yahoo
6.01%	6.03%	Value Line
4.51%	4.51%	Average of Inverse of the P/E
6.71%	6.53%	Inverse of median P/E, Value Line
5.11%	5.18%	Average of all above except median P/E
Mean = 5.43%	5.45%	
Median = 5.84%	5.88%	

Equity Measure NUOI = 6.00%

Debt Measures Calculated, Current Yield:

	Annual	4th Qtr	
	5.37%	5.54%	ALL
	5.21%	5.33%	BBB- & Above
	5.26%	5.38%	BB- & Above
Mean =	5.28%	5.42%	
Median =	5.26%	5.38%	

Debt Measure = 5.50%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	59.00%	x	6.00%	=	3.54%
Debt	41.00%	x	5.50%	=	2.26%
	100.00%				5.80%
Direct Cap Rate NUOI =					**6.00%**

Gross Cash Flow / Price:

All	Western	
12.93%	13.09%	Value Line

Equity Measure Gross = 13.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	59.00%	x	13.00%	=	7.67%
Debt	41.00%	x	5.50%	=	2.26%
	100.00%				9.93%
Direct Cap Rate GCF =					**10.00%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Electric Utility - Exempt Wholesale Generators
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	B++	
4.82%	5.05%	Yahoo
5.88%	6.18%	Value Line
5.35%	5.61%	Average of E/Ps

Inverse of P/E Ratios:

3.05%	2.62%	Yahoo
6.35%	6.53%	Value Line
4.70%	4.57%	Average of Inverse of the P/E
6.94%	7.03%	Inverse of median P/E, Value Line
5.02%	5.09%	Average of all above except median P/E
Mean = 5.41%	5.48%	
Median = 5.88%	6.18%	

Equity Measure NUOI = 7.00%

Debt Measures Calculated, Current Yield:

	Annual	4th Qtr	
	5.37%	5.54%	ALL
	5.21%	5.33%	BBB- & Above
	5.26%	5.38%	BB- & Above
Mean =	5.28%	5.42%	
Median =	5.26%	5.38%	

Debt Measure = 5.40%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	57.00%	x	7.00%	=	3.99%
Debt	43.00%	x	5.40%	=	2.32%
	100.00%				6.31%
Direct Cap Rate NUOI =					**6.50%**

Gross Cash Flow / Price:

All	B++	
14.63%	15.07%	Value Line

Equity Measure Gross = 15.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	57.00%	x	15.00%	=	8.55%
Debt	43.00%	x	5.40%	=	2.32%
	100.00%				10.87%
Direct Cap Rate GCF =					**11.00%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Electric Utilities
2014 Assessment Year

Equity Measures Calculated:	**All**	**Western**	**Wholesale Generators**
Dividend Growth Model - Dividends	9.25%	9.20%	10.00%
Dividend Growth Model - Earmings	9.90%	9.90%	9.00%
Dividend Growth Model - Plowback	7.90%	7.70%	8.40%
Capital Asset Pricing Model	8.17%	8.06%	8.39%
Mean =	8.81%	8.71%	8.95%
Equity Measure FCF =	**8.85%**	**8.75%**	**9.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.64%	4.11%	4.91%	5.21%
BBB- & Above	3.27%	3.65%	4.80%	5.07%
BB- & Above	3.33%	3.71%	4.80%	5.07%
Mean =	3.41%	3.83%	4.84%	5.12%
Median =	3.33%	3.71%	4.80%	5.07%
Debt Measure =				**5.15%**

Yield Cap Rate Free Cash Flow - Electric Utilities						
Equity	59.00%	x	8.75%	=	5.16%	
Debt	41.00%	x	5.15%	=	2.11%	
	100.00%				7.27%	
Weighted Average Cost of Capital (WACC) =						**7.50%**

Yield Cap Rate Free Cash Flow - Wholesale Generators						
Equity	57.00%	x	9.00%	=	5.13%	
Debt	43.00%	x	5.15%	=	2.21%	
	100.00%				7.34%	
Weighted Average Cost of Capital (WACC) =						**7.50%**

Where Assumed Growth Rate = Inflation **Growth = 1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Electric Utilities - Regulated
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares	(YAHOO) Avg. Price Common 4th Quarter	(VL) Book Value Per Share	Mkt. Value Common DxE	(VL) Book Value Common	(VL) Book Value Preferred	Mkt. Value Preferred IxL	(VL) Book Value Debt	Mkt/Book Debt Ratio	Mkt. Value Debt KxL
MDU Resources Group	MDU	A+	189,400	30.55	13.90	5,786,170	2,633,200	15,000	15,000	1,610,900	1.00	1,610,900
Alliant Energy	LNT	A	111,000	51.09	28.24	5,670,990	3,134,900	205,100	205,100	3,136,600	1.00	3,136,600
OGE Energy	OGE	A	197,600	33.67	14.00	6,653,192	2,767,200	0	0	2,848,600	1.00	2,848,600
Avista Corp.	**AVA**	**A**	**59,800**	**28.19**	**21.06**	**1,685,762**	**1,259,500**	**0**	**0**	**1,301,800**	**1.00**	**1,301,800**
Pinnacle West Capital	**PNW**	**A**	**109,700**	**52.34**	**36.22**	**5,741,698**	**3,972,800**	**0**	**0**	**3,199,100**	**1.00**	**3,199,100**
Xcel Energy Inc.	**XEL**	**B++**	**488,000**	**27.94**	**18.18**	**13,634,720**	**8,874,100**	**0**	**0**	**10,143,900**	**1.00**	**10,143,900**
Portland General	**POR**	**B++**	**75,600**	**30.20**	**22.86**	**2,283,120**	**1,728,000**	**0**	**0**	**1,536,000**	**1.00**	**1,536,000**
IDACORP Inc.	**IDA**	**B++**	**50,200**	**51.42**	**35.04**	**2,581,284**	**1,758,800**	**0**	**0**	**1,466,600**	**1.00**	**1,466,600**
NorthWestern Corp.	**NWE**	**B+**	**37,200**	**43.32**	**25.11**	**1,611,504**	**934,000**	**0**	**0**	**1,086,600**	**1.00**	**1,086,600**
Black Hills	**BKH**	**B+**	**44,200**	**52.51**	**27.88**	**2,320,942**	**1,232,500**	**0**	**0**	**938,900**	**1.00**	**938,900**
G't Plains Energy	GXP	B+	153,500	24.24	21.76	3,720,840	3,340,000	39,000	39,000	2,756,800	1.00	2,756,800
UNS Energy	**UNS**	**B+**	**41,300**	**59.85**	**25.80**	**2,471,805**	**1,065,500**	**0**	**0**	**1,760,600**	**1.00**	**1,760,600**
NV Energy Inc.	**NVE**	**B+**	**235,100**	**23.74**	**15.13**	**5,581,274**	**3,557,400**	**0**	**0**	**4,669,800**	**1.00**	**4,669,800**
PNM Resources	**PNM**	**B**	**79,700**	**24.12**	**20.03**	**1,922,364**	**1,596,700**	**11,500**	**11,500**	**1,669,800**	**1.00**	**1,669,800**
SUMS & AVGS - ALL COMPANIES						61,665,665	37,854,600	270,600	270,600	38,126,000		38,126,000
SUMS & AVGS - B++ & ABOVE COMPANIES						44,036,936	26,128,500	220,100	220,100	25,243,500		25,243,500
SUMS & AVGS - B+ & ABOVE COMPANIES						59,743,301	36,257,900	259,100	259,100	36,456,200		36,456,200
SUMS & AVGS - WESTERN COMPANIES 'AVA, BKH, IDA, NWE, PNM, PNW, POR, UNS, & NVE						39,834,473	25,979,300	11,500	11,500	27,773,100		27,773,100

Preferred stock is grouped with debt.
* All **Negative** values left out of calculations

INDUSTRY MARKET STRUCTURE

	ALL COMPANIES		B++ COMPANIES		B+ & ABOVE COMPANIES		WESTERN COMPANIES***	
EQUITY	62.00%	61,665,665	63.00%	44,036,936	62.00%	59,743,301	59.00%	39,834,473
DEBT	38.00%	38,396,600	37.00%	25,463,600	38.00%	36,715,300	41.00%	27,784,600
TOTAL	100.00%	$100,062,265	100.00%	69,500,536	100.00%	96,458,601	100.00%	$67,619,073

Notes/Rational for Changes to Guideline Companies
2013 - No changes to Guideline Companies

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Electric Utilities - Regulated
2014 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
Company	Ticker Symbol	(YAHOO) EPS ltst 12mo	(YAHOO) E/P N/E	(VL) EPS	(VL) E/P P/E	(VL) CF/S	(VL) CF/P R/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/T	(VL) P/E	(VL) Inverse of P/E 1/V	(VL) Median P/E	(VL) Inverse of Median P/E 1/X	(VL) Industry Group	(VL) Beta
MDU Resources Group	MDU	0.67	2.19%	1.45	4.75%	3.45	11.29%	26.44	3.78%	19.78	5.06%	14.00	7.14%	GASDIVRS	1.00
Alliant Energy	LNT	3.26	6.38%	3.25	6.36%	6.60	12.92%	49.96	2.00%	15.60	6.41%	14.00	7.14%	UTILCENT	0.75
OGE Energy	OGE	1.85	5.49%	1.85	5.49%	3.40	10.10%	51.58	1.94%	17.24	5.80%	14.00	7.14%	UTILCENT	0.85
Avista Corp.	**AVA**	**1.59**	**5.64%**	**1.81**	**6.42%**	**3.90**	**13.83%**	**26.95**	**3.71%**	**15.62**	**6.40%**	**16.00**	**6.25%**	**UTILWEST**	**0.75**
Pinnacle West Capital	**PNW**	**3.64**	**6.95%**	**3.54**	**6.76%**	**8.20**	**15.67%**	**55.75**	**1.79%**	**14.45**	**6.92%**	**14.00**	**7.14%**	**UTILWEST**	**0.75**
Xcel Energy Inc.	**XEL**	**1.89**	**6.76%**	**1.90**	**6.80%**	**4.10**	**14.67%**	**28.68**	**3.49%**	**14.73**	**6.79%**	**14.00**	**7.14%**	**UTILWEST**	**0.65**
Portland General	**POR**	**1.13**	**3.74%**	**1.55**	**5.13%**	**4.70**	**15.56%**	**29.85**	**3.35%**	**16.34**	**6.12%**	**NA**		**UTILWEST**	**0.75**
IDACORP Inc.	**IDA**	**3.33**	**6.48%**	**3.33**	**6.48%**	**6.05**	**11.77%**	**48.75**	**2.05%**	**15.28**	**6.54%**	**14.00**	**7.14%**	**UTILWEST**	**0.75**
NorthWestern Corp.	**NWE**	**3.33**	**7.69%**	**2.60**	**6.00%**	**2.60**	**6.00%**	**41.31**	**2.42%**	**16.87**	**5.93%**	**NA**		**UTILWEST**	**0.70**
Black Hills	**BKH**	**2.88**	**5.48%**	**2.77**	**5.28%**	**6.20**	**11.81%**	**47.28**	**2.12%**	**21.74**	**4.60%**	**17.00**	**5.88%**	**UTILWEST**	**0.90**
G't Plains Energy	GXP	1.54	6.35%	1.55	6.39%	3.85	15.88%	22.83	4.38%	15.28	6.54%	15.00	6.67%	UTILCENT	0.85
UNS Energy	**UNS**	**2.90**	**4.85%**	**3.07**	**5.13%**	**7.36**	**12.30%**	**47.79**	**2.09%**	**19.26**	**5.19%**	**17.00**	**5.88%**	**UTILWEST**	**0.70**
NV Energy Inc.	**NVE**	**1.22**	**5.14%**	**1.20**	**5.05%**	**3.70**	**15.59%**	**22.11**	**4.52%**			**NA**		**UTILWEST**	**0.80**
PNM Resources	**PNM**	**1.26**	**5.22%**	**1.39**	**5.76%**	**3.30**	**13.68%**	**22.65**	**4.42%**	**17.30**	**5.78%**	**16.00**	**6.25%**	**UTILWEST**	**0.95**

SUMS & AVGS - ALL COMPANIES	5.60%	5.84%	12.93%	3.00%	6.01%	6.71%	0.80
SUMS & AVGS - B++ & ABOVE COMPANIES	5.46%	6.02%	13.23%	2.76%	6.26%	7.02%	0.78
SUMS & AVGS - B+ & ABOVE COMPANIES	5.63%	5.85%	12.88%	2.90%	6.03%	6.75%	0.78
SUMS & AVGS - WESTERN COMPANIES	5.80%	5.88%	13.09%	3.00%	6.03%	6.53%	0.77
'AVA, BKH, IDA, NWE, PNM, PNW, POR, UNS, &							

Beta of Industry = 0.76
Beta of Western Sector = 0.74

Preferred stock is grouped with debt.
* All **Negative** values left out of calculations

Notes/Rational for Changes to Guideline Companies
2013 - No changes to Guideline Companies

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Exempt Wholesale Generators
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common	(VL) Book Value Per Share	Mkt. Value Common ExD	Book Value Common	(VL) Book Value Preferred	Mkt. Value Preferred	(VL) Book Value Debt	Mkt/Book Debt Ratio	Mkt Value Debt
Sempra	SRE	A	242,400	89.05	42.42	21,586,528	10,282,000	99,000	99,000	11,621,000	1.00	11,621,000
Duke Energy Corporation	DUK	A	704,000	70.14	58.04	49,378,560	40,863,000	93,000	93,000	36,351,000	1.00	36,351,000
Southern Company	SO	A	867,800	41.33	21.08	35,863,281	18,297,000	1,082,000	1,082,000	19,274,000	1.00	19,274,000
Ameren Corporation	AEE	B++	242,600	35.81	27.27	8,688,315	6,616,000	142,000	142,000	6,626,000	1.00	6,626,000
PPL Corp	PPL	B++	581,900	30.38	18.01	17,676,182	10,480,000	0	0	18,725,000	1.00	18,725,000
Dynegy	D	B++	576,000	64.35	18.35	37,062,720	10,568,000	257,000	257,000	16,851,000	1.00	16,851,000
NRG Energy	NRG	B+	323,200	27.93	31.82	9,028,053	10,284,000	249,000	249,000	15,733,000	1.00	15,733,000
AES Corp	AES	B	744,300	14.27	6.14	10,617,440	4,569,000	0	0	18,519,000	1.00	18,519,000
SUMS & AVGS - ALL COMPANIES						189,901,079	111,959,000	1,922,000	1,922,000	143,700,000		143,700,000
SUMS & AVGS - A COMPANIES						106,828,369	69,442,000	1,274,000	1,274,000	67,246,000		67,246,000
SUMS & AVGS - B++ COMPANIES						63,427,217	27,664,000	399,000	399,000	42,202,000		42,202,000

These companies have significant amounts of non-utility generation

Preferred stock is grouped with debt.
* All **Negative** values left out of calculations

	INDUSTRY MARKET STRUCTURE					
	ALL COMPANIES		B++ COMPANIES		A COMPANIES	
EQUITY	57.00%	189,901,079	60.00%	63,427,217	61.00%	106,828,369
DEBT	43.00%	145,622,000	40.00%	42,601,000	39.00%	68,520,000
TOTAL	100.00%	335,523,079	100.00%	106,028,217	100.00%	175,348,369

Notes/Rational for Changes to Guideline Companies
2014 Cap Rate Study
Added back Dynegy after Bankruptcy data became available again

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Exempt Wholesale Generators
2014 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
Company	Ticker Symbol	(YAHOO) EPS last 12mo	(YAHOO) E/P N/E	(VL) EPS	(VL) E/P P/E	(VL) CF/S	(VL) CF/P R/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/T	(VL) P/E	(VL) Inverse of P/E 1/V	(VL) Median P/E	(VL) Inverse of Medain P/E 1/X	(VL) Industry Group	(VL) Beta
Sempra	SRE	4.05	4.55%	4.67	5.24%	9.05	10.16%	82.75	1.21%	20.28	4.93%	12.00	8.33%	UTILWEST	0.75
Duke Energy Corporation	DUK	3.41	4.86%	4.05	5.77%	8.60	12.26%	69.31	1.44%	15.42	6.49%			UTILEAST	0.65
Southern Company	SO	1.88	4.55%	2.65	6.41%	5.20	12.58%	43.69	2.29%	14.82	6.75%	16.00	6.25%	UTILEAST	0.55
Ameren Corporation	AEE	(3.73)	(10.42%)	2.00	5.58%	5.25	14.66%	34.56	2.89%	15.70	6.37%	14.00	7.14%	UTILCENT	0.80
PPL Corp	PPL	1.76	5.79%	2.40	7.90%	4.70	15.47%	30.58	3.27%	12.93	7.73%	13.00	7.69%	UTILEAST	0.65
Dynegy	D	2.77	4.30%	3.25	5.05%			59.18	1.69%	18.25	5.48%	16.00	6.25%	UTILEAST	0.70
NRG Energy	NRG	1.42	5.08%	0.50	1.79%	4.15	14.86%	26.46	3.78%	28.73	3.48%	15.00	6.67%	POWER	1.05
AES Corp	AES	0.66	4.63%	1.32	9.25%	3.20	22.43%	12.80	7.81%	10.45	9.57%	16.00	6.25%	POWER	1.25
SUMS & AVGS - ALL COMPANIES			4.82%		5.88%		14.63%		3.05%		6.35%		6.94%		0.80
SUMS & AVGS - A COMPANIES			4.65%		5.81%		11.67%		1.65%		6.05%		7.29%		0.65
SUMS & AVGS - B++ COMPANIES			5.05%		6.18%		15.07%		2.62%		6.53%		7.03%		0.72

These companies have significant amounts of non-utility generation

Beta of Industry = 0.80

Preferred stock is grouped with debt.
* All **Negative** values left out of calculations

Notes/Rational for Changes to Guideline Companie
2014 Cap Rate Study
Added back Dynegy after Bankruptcy data became ava

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)
Industry: Electric Utilities
2014 Assessment Year

$K_E = R_F + \beta (R_M - R_F)$

	Electric Utilities	Western Utilities	Wholesale Generators
K_E = Cost of Equity	**8.17%**	**8.06%**	**8.39%**
R_F = Risk Free Rate	3.96%	3.96%	3.96%
β= Beta	0.76	0.74	0.80
R_M = Market Rate of Return	9.50%	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%	5.54%	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied premium	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied premium	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%
	Mean =	10.20%
	Median =	9.80%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013
Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014
U.S. Treasury Securities December 31, 2013

	1 Year	R_f =	0.12%
	10 Year	R_f =	3.03%
	30 Year	R_f =	3.96%

Federal Reserve Statistical Release
Treasury constant Maturities, December 31, 2013
Market yield on U.S. Treasury securities, Annual Averages

	1 year constant maturity, quoted on investment basis	R_f =	0.13%
	10-year constant maturity, quoted on investment basis	R_f =	3.04%
	30-year constant maturity, quoted on investment basis	R_f =	3.96%
		Mean =	2.15%
		Median =	3.03%
		Weighted Mean =	2.75%

U.S. Treasury Securities Long-Term December 31, 2013

20 year constant maturity	R_f =	**3.72%**
30 year constant maturity	R_f =	**3.96%**

R_f = **3.96%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Dividend Growth

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker*	Stock Price (Po)	Expected Dividend 1 Year **	Dividend Yield (D1/P0)	Dividend Growth **	Ke 1 Year
Alliant Energy	LNT	51.09	1.96	3.84%	4.50%	8.34%
Avista Corp	**AVA**	**28.19**	**1.28**	**4.54%**	**4.50%**	**9.04%**
Black Hills Corp	**BKH**	**52.51**	**1.56**	**2.97%**	**2.50%**	**5.47%**
Great Plains Energy	GXP	24.24	0.94	3.88%	4.50%	8.38%
Idacorp Inc	**IDA**	**51.42**	**1.72**	**3.35%**	**7.00%**	**10.35%**
MDU Resources Group	MDU	30.55	0.71	2.32%	4.50%	6.82%
NorthWestern Corp	**NWE**	**43.32**	**1.56**	**3.60%**	**4.00%**	**7.60%**
OGE Energy	OGE	33.67	0.93	2.76%	8.50%	11.26%
PNM Resources	**PNM**	**24.12**	**0.74**	**3.07%**	**12.50%**	**15.57%**
Pinnacle West Capital	**PNW**	**52.34**	**2.29**	**4.38%**	**2.00%**	**6.38%**
Portland General Electric	**POR**	**30.20**	**1.72**	**5.70%**	**3.00%**	**8.70%**
NV Energy	**NVE**	**23.74**	**0.82**	**3.45%**	**10.00%**	**13.45%**
Xcel Energy	**XEL**	**27.94**	**1.15**	**4.12%**	**4.50%**	**8.62%**
Unisource Energy	**UNS**	**59.85**	**1.76**	**2.94%**	**5.50%**	**8.44%**

***Bold** denotes primarly western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey
Weighted Mean= 9.34%
Mean= 9.17%
Median= 8.53%

Cost of Equity - All, (K_E) = 9.25%

Western Companies Only
AVA, BKH, IDA,PNM
PNW, POR, NVE, XEL,UNS
Weighted Mean= 9.26%
Mean= 9.36%
Median= 8.66%

Cost of Equity - Western, (K_E) = 9.20%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Earnings Growth

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker*	Stock Price (Po)	Expected Dividend 1 Year **	Dividend Yield (D1/P0)	Earnings Growth **	Ke 1 Year
Alliant Energy	LNT	51.09	1.96	3.84%	6.00%	9.84%
Avista Corp	**AVA**	**28.19**	**1.28**	**4.54%**	**4.00%**	**8.54%**
Black Hills Corp	**BKH**	**52.51**	**1.56**	**2.97%**	**11.50%**	**14.47%**
Great Plains Energy	GXP	24.24	0.94	3.88%	6.50%	10.38%
Idacorp Inc	**IDA**	**51.42**	**1.72**	**3.35%**	**2.00%**	**5.35%**
MDU Resources Group	MDU	30.55	0.71	2.32%	8.00%	10.32%
NorthWestern Corp	**NWE**	**43.32**	**1.56**	**3.60%**	**4.50%**	**8.10%**
OGE Energy	OGE	33.67	0.93	2.76%	5.00%	7.76%
PNM Resources	**PNM**	**24.12**	**0.74**	**3.07%**	**12.00%**	**15.07%**
Pinnacle West Capital	**PNW**	**52.34**	**2.29**	**4.38%**	**5.00%**	**9.38%**
Portland General Electric	**POR**	**30.20**	**1.72**	**5.70%**	**3.50%**	**9.20%**
NV Energy	**NVE**	**23.74**	**0.82**	**3.45%**	**8.50%**	**11.95%**
Xcel Energy	**XEL**	**27.94**	**1.15**	**4.12%**	**4.50%**	**8.62%**
Unisource Energy	**UNS**	**59.85**	**1.76**	**2.94%**	**6.50%**	**9.44%**

***Bold** denotes primarly western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey
Weighted Mean= 9.96%
Mean= 9.89%
Median= 9.41%

Cost of Equity - All, (K_E) = 9.90%

Western Companies Only
AVA, BKH, IDA,PNM
PNW, POR, NVE, XEL,UNS
Weighted Mean= 9.91%
Mean= 10.01%
Median= 9.29%

Cost of Equity - Western, (K_E) = 9.90%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Return on Equity

KE = Cost of Equity
D1 = Expected Dividends
b = Retained Earnings (plowback)
Po = Current Price Per Share
G = Sustainable Growth
ROE = Return on Equity

Company Name	Ticker*	Stock Price (Po)	Expected Dividend 1 Year **	Dividend Yield (D1/P0)	b (1- payout ratio)	ROE	Growth (b*ROE) **	Ke 1 Year
Alliant Energy	LNT	51.09	1.96	3.84%	39.00%	11.50%	4.49%	8.32%
Avista Corp	**AVA**	**28.19**	**1.28**	**4.54%**	**32.00%**	**8.50%**	2.72%	**7.26%**
Black Hills Corp	**BKH**	**52.51**	**1.56**	**2.97%**	**42.00%**	**9.00%**	3.78%	**6.75%**
Great Plains Energy	GXP	24.24	0.94	3.88%	44.00%	7.50%	3.30%	7.18%
Idacorp Inc	**IDA**	**51.42**	**1.72**	**3.35%**	**50.00%**	**9.00%**	4.50%	**7.85%**
MDU Resources Group	MDU	30.55	0.71	2.32%	56.00%	10.00%	5.60%	7.92%
NorthWestern Corp	**NWE**	**43.32**	**1.56**	**3.60%**	**42.00%**	**9.50%**	3.99%	**7.59%**
OGE Energy	OGE	33.67	0.93	2.76%	54.00%	12.50%	6.75%	9.51%
PNM Resources	**PNM**	**24.12**	**0.74**	**3.07%**	**50.00%**	**7.00%**	3.50%	**6.57%**
Pinnacle West Capital	**PNW**	**52.34**	**2.29**	**4.38%**	**41.00%**	**10.00%**	4.10%	**8.48%**
Portland General Electric	**POR**	**30.20**	**1.72**	**5.70%**	**42.00%**	**7.50%**	3.15%	**8.85%**
NV Energy	**NVE**	**23.74**	**0.82**	**3.45%**	**43.00%**	**9.00%**	3.87%	**7.32%**
Xcel Energy	**XEL**	**27.94**	**1.15**	**4.12%**	**41.00%**	**9.50%**	3.90%	**8.01%**
Unisource Energy	**UNS**	**59.85**	**1.76**	**2.94%**	**47.00%**	**12.00%**	5.64%	**8.58%**

***Bold** denotes primarily western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey

Weighted Mean= 7.92%
Mean= 7.87%
Median= 7.88%

Cost of Equity - All, (K_E) = 7.90%

Western Companies Only
AVA, BKH, IDA,PNM
PNW, POR, NVE, XEL,UNS

Weighted Mean= 7.62%
Mean= 7.73%
Median= 7.72%

Cost of Equity - Western, (K_E) = 7.70%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Dividend Growth

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker	Stock Price (Po)	Expected Dividend	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke 1 Year
NRG Energy	NRG	28.59	0.48	1.68%	NMF	
Ameren Corporation	AEE	36.16	1.60	4.42%	1.50%	5.92%
Dynegy	DYN	21.52				
Southern Co	SO	40.60	2.08	5.12%	3.50%	8.62%
Duke Energy	DUK	69.01	3.15	4.56%	2.00%	6.56%
PPL Corp	PPL	30.09	1.50	4.99%	2.00%	6.99%
Sempra	SRE	89.76	2.64	2.94%	7.50%	10.44%
AES Corp	AES	14.46	0.20	1.38%	42.00%	43.38%

Mean = 13.65%
Median = 7.80%

Cost of Equity, (K_E) = 10.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Earnings

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker	Stock Price (Po)	Expected Dividend	Dividend Yield (D1/P0)	Earnings Growth	Ke 1 Year
NRG Energy	NRG	28.59	0.48	1.68%	5.00%	6.68%
Ameren Corporation	AEE	36.16	1.60	4.42%	(0.50%)	3.92%
Dynegy	DYN	21.52				
Southern Co	SO	40.60	2.08	5.12%	3.00%	8.12%
Duke Energy	DUK	69.01	3.15	4.56%	4.00%	8.56%
PPL Corp	PPL	30.09	1.50	4.99%	Nil	4.99%
Sempra	SRE	89.76	2.64	2.94%	4.50%	7.44%
AES Corp	AES	14.46	0.20	1.38%	22.00%	23.38%
		41.274	1.664	3.59%	7.70%	11.73%

Mean = 9.01%
Median = 7.44%

Cost of Equity, (K_E) = 9.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2014 Assessment Year

$K_E = D1 / P_O + G_A$
Based on Return on Equity

KE = Cost of Equity
D1 = Expected Dividends
b = Retained Earnings (plowback)
Po = Current Price Per Share
G = Sustainable Growth
ROE = Return on Equity

Company Name	Ticker*	Stock Price (Po)	Expected Dividend 1 Year **	Dividend Yield (D1/P0)	b (1- payout ratio)	ROE	Growth (b*ROE) **	Ke 1 Year
NRG Energy	NRG	28.59	0.48	1.68%	65.00%	4.00%	2.60%	4.28%
Ameren Corporation	AEE	36.16	1.60	4.42%	29.00%	8.00%	2.32%	6.74%
Dynegy	DYN	21.52						
Southern Co	SO	40.60	2.08	5.12%	26.00%	12.50%	3.25%	8.37%
Duke Energy	DUK	69.01	3.15	4.56%	30.00%	7.50%	2.25%	6.81%
PPL Corp	PPL	30.09	1.50	4.99%	34.00%	10.50%	3.57%	8.56%
Sempra	SRE	89.76	2.64	2.94%	43.00%	10.00%	4.30%	7.24%
AES Corp	AES	14.46	0.20	1.38%	88.00%	17.50%	15.40%	16.78%

Bold *denotes primarly western operations*

All Companies In Survey

Weighted Mean= 9.26%
Mean= 8.40%
Median= 7.24%

Cost of Equity - All, (K_E) = 8.40%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
AEE	Ameren Corporation	high	$32.60	$34.04	$35.12	$36.36	$36.74	$34.99	$36.47	$36.70	$35.97	$36.78	$37.31	$36.64	$36.16	$35.81	$34.56	NA	(3.73)
		low	$30.64	$32.37	$33.45	$34.26	$33.41	$32.34	$33.15	$33.24	$32.61	$34.18	$35.26	$34.71					
AES	AES Corp.	high	$11.36	$11.80	$12.73	$13.94	$14.00	$12.61	$12.90	$13.38	$13.77	$14.49	$15.30	$15.54	$14.46	$14.27	$12.80	21.99	0.66
		low	$10.66	$10.80	$11.52	$12.36	$12.07	$11.17	$11.62	$12.38	$12.55	$13.16	$13.61	$13.49					
AVA	Avista Corp.	high	$25.90	$26.87	$27.48	$28.11	$29.26	$27.25	$29.02	$29.21	$27.38	$28.26	$28.27	$28.45	$28.19	$27.44	$26.95	17.37	1.59
		low	$24.10	$25.39	$25.36	$26.53	$26.40	$25.68	$26.57	$26.18	$25.55	$25.88	$27.00	$26.78					
BKH	Black Hills	high	$40.97	$41.90	$44.32	$46.95	$50.53	$49.35	$54.12	$55.09	$50.36	$52.40	$54.83	$53.14	$52.51	$51.15	$47.28	17.80	2.88
		low	$36.89	$39.55	$41.02	$43.19	$45.82	$45.07	$48.21	$47.85	$46.62	$47.00	$50.16	$49.39					
CMS	CMS Energy Corp.	high	$25.74	$26.79	$27.95	$29.94	$29.98	$27.72	$28.82	$28.62	$27.06	$28.29	$27.81	$27.09	$26.77	$26.90	$27.03	15.96	1.66
		low	$24.60	$25.43	$25.99	$27.67	$26.79	$25.76	$26.29	$26.40	$25.74	$25.81	$26.47	$25.90					
CNL	Cleco Corp.	high	$42.83	$44.77	$47.17	$49.52	$49.40	$46.76	$49.26	$50.42	$46.07	$47.79	$46.83	$47.35	$46.62	$45.88	$45.70	17.68	2.61
		low	$40.39	$42.36	$43.57	$46.24	$44.81	$43.75	$45.46	$45.02	$43.76	$43.69	$44.70	$44.92					
CNP	CenterPoint Energy	high	$20.61	$21.53	$24.05	$24.70	$24.73	$23.90	$24.99	$25.65	$24.63	$25.04	$25.30	$23.51	$23.18	$23.83	$23.14	29.85	0.77
		low	$19.34	$20.32	$21.27	$23.42	$22.81	$22.22	$23.08	$22.73	$22.49	$23.75	$22.94	$22.46					
CPN	Calpine Corp	high	$19.82	$20.09	$20.62	$22.16	$21.73	$21.89	$21.97	$20.25	$20.07	$21.03	$20.50	$19.80	$19.51	$19.68	$19.89	41.00	0.47
		low	$17.95	$18.18	$18.23	$20.36	$20.21	$19.33	$19.24	$18.60	$18.59	$19.17	$18.85	$18.74					
CPST	Capstone Turbine	high	$0.94	$1.06	$1.00	$0.99	$1.25	$1.34	$1.52	$1.48	$1.28	$1.45	$1.34	$1.33	$1.29	$1.25	$1.12	NA	(0.06)
		low	$0.73	$0.85	$0.89	$0.85	$0.82	$1.08	$1.17	$1.10	$1.07	$1.12	$1.12	$1.16					
D	Dominion Resources	high	$54.54	$57.19	$58.25	$61.72	$61.85	$57.25	$60.38	$60.44	$64.04	$65.03	$67.97	$65.07	$64.69	$64.35	$59.18	23.12	2.77
		low	$51.92	$53.90	$55.45	$57.94	$56.55	$53.79	$55.51	$57.03	$56.58	$61.36	$63.64	$63.00					
DTE	DTE Energy	high	$63.48	$67.01	$68.38	$73.32	$73.21	$67.76	$71.59	$71.77	$68.65	$70.31	$70.64	$67.65	$66.39	$67.37	$67.16	18.62	3.55
		low	$60.33	$63.35	$65.74	$68.13	$65.45	$63.38	$64.71	$66.47	$64.92	$64.45	$66.66	$64.52					
DUK	Duke Energy	high	$68.92	$70.30	$72.68	$75.42	$75.46	$68.96	$71.91	$72.01	$68.64	$73.06	$73.53	$70.54	$69.01	$70.14	$69.31	20.30	3.41
		low	$64.44	$67.78	$68.05	$71.25	$66.17	$64.62	$66.50	$65.33	$64.16	$66.05	$69.74	$67.92					
DYN	Dynegy Inc.	high	$21.05	$20.29	$24.10	$24.78	$25.18	$24.61	$23.22	$20.79	$20.37	$20.23	$21.65	$22.08	$21.52	$20.21	$21.19	2.58	8.20
		low	$19.10	$19.34	$19.28	$22.79	$22.70	$21.53	$20.27	$18.97	$18.88	$18.11	$19.00	$20.19					
EDE	Empire Dist. Elec.	high	$21.26	$21.90	$22.41	$23.35	$23.24	$22.48	$24.32	$23.39	$22.23	$23.09	$23.26	$23.00	$22.69	$22.49	$22.14	15.25	1.48
		low	$20.57	$21.21	$21.19	$21.92	$21.70	$21.26	$22.11	$21.07	$20.77	$21.27	$22.21	$22.13					
EE	El Paso Electric	high	$33.98	$33.99	$34.18	$37.72	$38.91	$36.50	$39.12	$38.40	$34.68	$36.08	$36.08	$36.18	$35.11	$34.75	$34.86	15.22	2.29
		low	$31.84	$32.77	$32.72	$32.47	$35.38	$34.07	$34.95	$34.13	$32.26	$32.43	$34.18	$33.54					
EIX	Edison Int'l	high	$48.24	$48.31	$51.24	$54.19	$53.08	$48.40	$50.34	$50.17	$47.36	$49.95	$49.85	$46.98	$46.30	$47.09	$47.81	199.89	0.23
		low	$44.92	$45.17	$47.64	$49.65	$45.94	$44.86	$45.62	$45.54	$44.26	$45.49	$45.27	$44.97					
ETR	Entergy Corp.	high	$65.21	$65.29	$65.39	$71.81	$72.10	$71.59	$72.60	$70.05	$65.83	$68.63	$65.49	$63.55	$63.27	$63.75	$65.59	12.84	4.82
		low	$62.38	$61.09	$61.42	$63.12	$66.72	$66.25	$67.34	$61.88	$61.66	$63.03	$61.60	$60.22					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
GXP	G't Plains Energy	high	$21.41	$22.47	$23.20	$24.14	$24.44	$23.21	$24.65	$24.64	$22.71	$23.94	$24.88	$24.53	$24.24	$23.62	$22.83	15.61	1.54
		low	$20.39	$21.31	$21.59	$22.67	$22.08	$21.73	$22.24	$21.87	$21.46	$21.79	$23.04	$23.54					
HE	Hawaiian Elec.	high	$27.00	$27.92	$27.80	$28.30	$28.24	$26.29	$27.14	$27.24	$25.54	$26.89	$27.15	$26.24	$26.06	$25.84	$26.21	18.82	1.36
		low	$25.50	$26.57	$26.49	$26.31	$26.06	$23.84	$24.83	$24.81	$24.12	$24.51	$25.27	$24.95					
IDA	IDACORP Inc.	high	$46.44	$47.82	$48.53	$49.21	$50.16	$49.12	$53.10	$54.74	$49.34	$52.84	$52.00	$53.99	$51.42	$51.05	$48.75	15.66	3.33
		low	$43.13	$45.93	$46.09	$46.70	$46.62	$46.03	$47.30	$47.76	$45.62	$47.57	$49.60	$50.32					
LNT	Alliant Energy	high	$46.15	$48.28	$50.23	$53.52	$53.50	$50.63	$54.18	$53.95	$50.62	$53.00	$53.69	$52.72	$51.09	$51.60	$49.96	15.80	3.26
		low	$43.73	$45.73	$47.09	$49.44	$48.86	$46.79	$49.14	$49.49	$48.17	$48.83	$51.03	$50.32					
MDU	MDU Resources Group	high	$23.42	$24.35	$25.00	$25.00	$27.14	$26.37	$28.65	$30.21	$28.29	$30.46	$30.97	$30.64	$30.55	$29.58	$26.44	44.13	0.67
		low	$21.50	$23.00	$23.74	$23.37	$24.58	$24.09	$25.94	$26.59	$25.94	$27.53	$29.36	$28.50					
NI	NiSource Inc	high	$27.31	$27.78	$29.38	$31.39	$30.99	$29.52	$31.48	$31.26	$31.09	$32.52	$32.60	$33.48	$32.88	$31.67	$29.58	19.45	1.65
		low	$24.85	$26.68	$27.51	$29.05	$28.33	$27.11	$28.27	$28.99	$28.85	$30.09	$30.65	$30.70					
NRG	NRG Energy	high	$24.27	$24.56	$26.51	$28.18	$28.67	$27.55	$29.19	$27.28	$28.25	$30.28	$28.68	$28.89	$28.59	$27.93	$26.46	19.45	1.42
		low	$22.60	$23.43	$23.82	$26.07	$25.52	$24.86	$25.81	$25.24	$25.69	$27.11	$26.30	$26.34					
NVE	NV Energy Inc.	high	$19.00	$19.83	$20.34	$21.63	$23.68	$23.65	$23.73	$23.82	$23.62	$23.90	$23.85	$23.75	$23.74	$23.71	$22.11	19.41	1.22
		low	$18.28	$18.81	$19.41	$19.91	$19.10	$23.43	$23.44	$23.32	$23.36	$23.55	$23.58	$23.62					
NWE	NorthWestern Corp.	high	$37.03	$39.20	$40.35	$43.14	$43.17	$41.67	$44.33	$42.99	$45.85	$47.18	$46.61	$43.96	$43.32	$44.41	$41.31	12.80	3.33
		low	$35.06	$36.88	$38.53	$39.57	$40.34	$38.12	$39.08	$40.05	$39.68	$43.92	$43.45	$41.31					
OGE	OGE Energy	high	$58.80	$61.39	$70.16	$72.44	$73.18	$69.77	$68.76	$39.55	$36.93	$37.46	$40.00	$34.54	$33.67	$35.67	$51.58	18.21	1.85
		low	$56.12	$55.39	$57.35	$68.65	$67.51	$64.39	$33.85	$35.11	$34.45	$34.97	$34.19	$32.85					
OTTR	Otter Tail Corp.	high	$27.19	$29.21	$31.34	$31.70	$31.24	$28.78	$31.88	$31.79	$28.93	$30.04	$30.95	$30.04	$29.27	$29.12	$28.77	25.81	1.12
		low	$25.17	$26.76	$28.27	$29.84	$27.09	$26.50	$28.02	$26.10	$25.84	$26.80	$29.10	$27.78					
PCG	PG&E Corp.	high	$42.71	$43.29	$44.57	$48.50	$48.45	$46.33	$47.30	$46.90	$42.47	$42.45	$42.95	$41.46	$40.28	$41.13	$43.29	25.00	1.63
		low	$40.29	$41.00	$42.38	$44.38	$44.75	$43.20	$44.11	$41.08	$40.56	$39.95	$39.91	$40.04					
PNM	PNM Resources	high	$21.41	$22.63	$23.37	$24.01	$24.00	$22.90	$24.14	$24.39	$22.84	$24.53	$24.46	$24.36	$24.12	$23.46	$22.65	18.68	1.26
		low	$20.06	$20.95	$21.91	$22.64	$21.77	$21.11	$21.65	$21.86	$21.11	$22.02	$22.65	$22.72					
PNW	Pinnacle West Capital	high	$53.62	$56.01	$57.96	$61.09	$61.89	$58.13	$60.33	$59.98	$56.12	$58.70	$56.72	$53.97	$52.34	$54.73	$55.75	14.60	3.64
		low	$51.50	$52.95	$55.56	$57.41	$55.60	$51.56	$54.02	$53.86	$52.03	$53.84	$52.81	$52.32					
POR	Portland General	high	$28.83	$29.87	$30.53	$32.26	$32.91	$31.40	$32.49	$33.26	$29.11	$29.72	$29.92	$30.57	$30.20	$29.20	$29.85	26.36	1.13
		low	$27.42	$28.38	$29.43	$30.15	$30.25	$29.14	$29.81	$28.35	$27.57	$27.82	$28.19	$29.00					
PPL	PPL Corp.	high	$30.36	$30.95	$31.35	$33.40	$33.55	$30.43	$31.96	$32.09	$31.13	$31.79	$31.20	$30.86	$30.09	$30.38	$30.58	16.99	1.76
		low	$28.64	$29.96	$29.95	$30.81	$29.52	$28.44	$29.03	$30.28	$29.81	$29.55	$29.91	$28.95					
SCG	SCANA Corp.	high	$46.98	$49.64	$51.23	$54.27	$54.41	$50.91	$52.93	$52.91	$48.59	$47.89	$48.15	$47.75	$46.93	$46.75	$48.87	13.66	3.44
		low	$45.57	$46.70	$48.49	$50.98	$50.07	$47.22	$47.84	$47.91	$45.72	$44.75	$45.73	$46.24					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
SO	Southern Co.	high	$45.00	$45.25	$46.95	$48.74	$48.30	$45.06	$45.75	$44.48	$42.96	$42.94	$42.47	$41.71	$40.60	$41.33	$43.69	21.74	1.88
		low	$42.82	$43.37	$44.55	$46.57	$43.71	$42.32	$42.93	$41.31	$40.63	$40.36	$40.45	$40.03					
SRE	Sempra Energy	high	$75.40	$78.18	$80.21	$82.87	$84.85	$83.46	$88.11	$88.78	$89.46	$92.74	$93.00	$90.42	$89.76	$89.05	$82.75	21.78	4.05
		low	$70.61	$75.20	$77.03	$79.44	$78.11	$77.49	$78.67	$81.77	$82.13	$84.55	$87.61	$86.00					
TE	TECO Energy	high	$17.81	$17.87	$17.85	$19.15	$19.22	$17.66	$17.90	$17.99	$17.10	$17.72	$17.75	$17.57	$17.24	$17.15	$17.35	18.61	0.92
		low	$16.78	$16.71	$17.16	$17.65	$17.21	$16.40	$16.46	$16.46	$16.15	$16.40	$16.80	$16.67					
UNS	UNS Energy	high	$45.35	$47.30	$49.13	$51.33	$51.54	$47.67	$51.86	$51.81	$47.96	$50.35	$50.00	$60.02	$59.85	$49.72	$47.79	18.23	2.90
		low	$43.10	$45.11	$46.37	$47.06	$46.57	$42.51	$44.52	$45.61	$43.81	$45.30	$46.93	$45.72					
VVC	Vectren Corp.	high	$31.69	$33.24	$35.45	$37.57	$37.54	$34.61	$37.48	$37.88	$34.03	$35.48	$35.55	$35.63	$35.50	$34.46	$34.09	22.09	1.57
		low	$29.47	$31.52	$32.71	$34.84	$33.92	$32.15	$33.06	$32.46	$31.83	$32.45	$33.92	$33.72					
XEL	Xcel Energy Inc.	high	$27.80	$28.82	$29.74	$31.79	$31.77	$29.74	$30.31	$30.41	$28.35	$29.40	$29.12	$28.56	$27.94	$28.27	$28.68	14.83	1.89
		low	$26.77	$27.59	$28.41	$29.47	$28.33	$27.38	$27.76	$27.28	$26.90	$27.14	$27.91	$27.51					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	6.75	880591CJ9	Global Pwr Bonds'95E	11/1/2025	AAA	4.72	4.68	4.70	4.67	4.85	5.14	5.15	5.27	5.20	5.16	5.22	5.33	5.01%	5.24%
Tennessee Valley Authority	6.25	880591CU4	Pwr Bonds '97E	12/15/2017	AAA	5.01	5.00	5.02	5.03	5.10	5.21	5.23	5.26	5.25	5.24	5.24	5.28	5.16%	5.25%
Tennessee Valley Authority	6	880591CW0	Global Pwr Bonds '98C	3/15/2013	AAA	5.96	5.99											5.98%	
Tennessee Valley Authority	7.125	880591DM1	Global Pwr Bonds '00G	5/1/2030	AAA	4.76	4.67	4.73	4.69	4.91	5.17	5.25	5.33	5.29	5.27	5.33	5.45	5.07%	5.35%
Tennessee Valley Authority	4.88	880591DS8	Global Pwr Bonds'01D	12/15/2016	AAA	4.21	4.21	4.22	4.23	4.27	4.31	4.33	4.36	4.34	4.34	4.35	4.37	4.30%	4.35%
Tennessee Valley Authority	4.7	880591DV1	Pwr Bonds\03 B"	7/15/2033	AAA	4.01	3.95	3.96	3.95	4.15	4.40	4.47	4.57	4.56	4.51	4.58	4.66	4.31%	4.58%
Tennessee Valley Authority	4.75	880591DW9	Pwr Bonds'03C	8/1/2013	AAA	4.65	4.66	4.68	4.70	4.72	4.73	4.75						4.70%	
Tennessee Valley Authority	4.38	880591DY5	Global Pwr Bonds'05B	6/15/2015	AAA	4.00	4.01	4.02	4.03	4.05	4.07	4.08	4.09	4.10	4.11	4.12	4.14	4.07%	4.12%
Madison Gas & Electric	7.7	557497AL8	1st	2/15/2028	AA-	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.59	7.57%	7.58%
Madison Gas & Elec Co MTN BE	7.12	5574A0AB3	Tranche # Tr 00002	4/1/2032	AA-	5.26	5.28	5.25	5.10	5.31	5.48	5.51	5.66	5.58	5.53	5.65	5.71	5.44%	5.63%
Alabama Power Co.	5.5	010392DZ8	Sr Nts 'Q'	10/15/2017	A	4.63	4.64	4.64	4.64	4.71	4.81	4.82	4.85	4.82	4.81	4.84	4.86	4.76%	4.84%
Alabama Power Co.	5.88	010392EB0	Sr Nts 'S'	12/1/2022	A	4.72	4.73	4.72	4.64	4.84	4.98	4.98	5.08	5.02	4.98	5.07	5.15	4.91%	5.07%
Alabama Power Co.	5.7	010392EC8	Sr Nts 'T'	2/15/2033	A	4.66	4.66	4.65	4.51	4.74	4.90	4.93	5.07	5.00	5.03	5.10	5.12	4.86%	5.08%
Alabama Power Co.	5.6	010392EE4	Sr Nts'V'	3/15/2033	A	4.81	4.84	4.83	4.68	4.92	5.09	5.12	5.26	5.19	5.13	5.25	5.33	5.04%	5.24%
Alabama Power Co.	5.12	010392EK0	Sr Nts 'Z'	2/15/2019	A	4.40	4.41	4.41	4.39	4.48	4.57	4.53	4.54	4.49	4.48	4.50	4.59	4.48%	4.52%
Alabama Power Co.	5.2	010392ER5	Sr Nts'FF'	1/15/2016	A	4.67	4.68	4.65	4.65	4.69	4.72	4.73	4.76	4.76	4.77	4.75	4.79	4.72%	4.77%
Alabama Power Co.	5.55	010392EW4	Sr Nts'07A	2/1/2017	A	4.84	4.79	4.80	4.80	4.85	4.92	4.93	4.99	4.96	4.96	4.98	5.04	4.91%	4.99%
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.73	4.76	4.75	4.62	4.89	5.11	5.11	5.27	5.19	5.13	5.26	5.18	5.00%	5.19%
Progress Energy, Inc.	8.62	144141BP2	1st	9/15/2021	A	6.17	6.17	6.16	6.09	6.30	6.47	6.50	6.62	6.52	6.49	6.60	6.72	6.40%	6.60%
Progress Energy, Inc.	5.12	144141CT3	1st	9/15/2013	A	4.98	4.99	5.01	5.03	5.05	5.07	5.09						5.03%	
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.77	4.73	4.72	4.57	4.82	5.02	5.05	5.24	5.16	5.10	5.23	5.16	4.96%	5.16%
Progress Energy, Inc.	5.15	144141CW6	1st	4/1/2015	A	4.68	4.70	4.71	4.73	4.75	4.77	4.79	4.81	4.83	4.84	4.85	4.87	4.78%	4.85%
Progress Energy, Inc.	5.25	144141CX4	1st	12/15/2015	A	4.64	4.65	4.66	4.68	4.70	4.73	4.73	4.75	4.77	4.78	4.80	4.81	4.73%	4.80%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.74	4.77	4.76	4.61	4.93	5.15	5.16	5.27	5.19	5.13	5.19	5.18	5.01%	5.17%
Connecticut Lt & Pwr	5	207597DT9	1st & Ref '05A	4/1/2015	A	4.58	4.59	4.60	4.62	4.64	4.66	4.66	4.70	4.70	4.71	4.72	4.74	4.66%	4.72%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	4.75	4.77	4.76	4.61	4.83	5.07	5.10	5.25	5.17	5.12	5.24	5.29	5.00%	5.22%
Detroit Edison Co.	6.35	250847DU1	Sr Nts	10/15/2032	A	4.92	4.95	4.94	4.79	5.03	5.20	5.26	5.40	5.35	5.30	5.40	5.48	5.17%	5.39%
Detroit Edison Co.	5.4	250847DV9	Sr Nts'D'	8/1/2014	A	5.07	5.06	5.08	5.10	5.12	5.14	5.16	5.18	5.20	5.21	5.24	5.26	5.15%	5.24%
Detroit Edison Co.	4.8	250847DX5	Sr(Sec)Nts'AR'	2/15/2015	A	4.48	4.46	4.47	4.49	4.51	4.52	4.55	4.56	4.57	4.58	4.59	4.61	4.53%	4.59%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	4.70	4.73	4.72	4.56	4.81	4.98	5.01	5.16	5.09	5.03	5.15	5.24	4.93%	5.14%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.58	4.51	4.54	4.38	4.64	4.88	4.88	5.04	4.96	4.90	4.95	5.04	4.78%	4.96%
Duke Energy Corp.	5.3	264399EM4	1st & Ref	10/1/2015	A	4.72	4.72	4.74	4.76	4.78	4.80	4.81	4.84	4.85	4.86	4.87	4.90	4.80%	4.88%
Florida Power & Light	4.85	341081EN3	1st	2/1/2013	A	4.85												4.85%	
Florida Power & Light	5.85	341081EP8	1st	2/1/2033	A	4.62	4.65	4.64	4.56	4.75	4.92	4.92	5.06	5.11	5.06	5.18	5.17	4.89%	5.14%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.58	4.58	4.57	4.40	4.63	4.83	4.88	5.03	4.90	4.85	4.96	4.95	4.76%	4.92%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.58	4.58	4.57	4.40	4.63	4.83	4.88	5.03	4.90	4.85	4.96	4.95	4.76%	4.92%
Florida Power & Light	5.95	341081ER4	1st	10/1/2033	A	4.69	4.65	4.59	4.47	4.71	4.90	4.87	5.01	4.94	4.89	4.96	5.05	4.81%	4.97%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	4.33	4.29	4.26	4.16	4.40	4.60	4.60	4.68	4.64	4.59	4.65	4.72	4.49%	4.65%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.49	4.43	4.42	4.29	4.57	4.82	4.75	4.87	4.79	4.75	4.84	4.89	4.66%	4.83%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.52	4.52	4.54	4.35	4.65	4.89	4.81	4.96	4.96	4.87	4.92	5.01	4.75%	4.93%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.67	4.66	4.69	4.56	4.81	5.03	4.99	5.11	5.11	5.00	5.05	5.14	4.90%	5.06%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.56	4.57	4.58	4.43	4.69	4.93	4.86	5.01	4.93	4.88	4.97	5.06	4.79%	4.97%
Florida Power Corp.	5.9	341099CB3	1st	3/1/2033	A	4.81	4.83	4.82	4.68	4.98	5.24	5.21	5.29	5.22	5.17	5.25	5.34	5.07%	5.25%
Florida Power Corp.	4.8	341099CC1	1st	3/1/2013	A	4.78	4.80											4.79%	
Florida Power Corp.	5.8	341099CG2	1st Mtg Bd	9/15/2017	A	4.88	4.87	4.88	4.87	4.94	5.02	4.98	5.05	5.02	5.01	5.02	5.09	4.97%	5.04%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	4.83	4.86	4.85	4.65	4.92	5.24	5.10	5.26	5.20	5.12	5.12	5.17	5.03%	5.14%
Georgia Power Co.	5.75	373334FS5	Sr Nts 'N'	4/15/2023	A	4.59	4.60	4.59	4.51	4.69	4.84	4.89	4.99	4.98	4.94	5.04	5.14	4.82%	5.04%
Georgia Power Co.	4.9	373334FT3	Sr Nts 'Q'	9/15/2013	A	4.76	4.78	4.79	4.81	4.83	4.85	4.87	4.89					4.82%	
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.39	5.40	5.42	5.42	5.46	5.49	5.50	5.53	5.53	5.54	5.55	5.58	5.48%	5.56%
Georgia Power Co.	5.25	373334GA3	Sr Nt Ser Z	12/15/2015	A	4.66	4.68	4.69	4.70	4.72	4.75	4.76	4.78	4.79	4.80	4.81	4.84	4.75%	4.82%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	4.68	4.68	4.69	4.54	4.83	5.14	5.07	5.20	5.16	5.07	5.19	5.25	4.96%	5.17%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	4.68	4.68	4.69	4.54	4.83	5.14	5.07	5.20	5.16	5.07	5.19	5.25	4.96%	5.17%
Georgia Power Co.	5.7	373334GE5	Sr Nts'07B	6/1/2017	A	4.80	4.80	4.81	4.82	4.89	4.98	4.96	5.02	4.98	4.98	5.00	5.05	4.92%	5.01%
Gulf Power Co.	4.35	402479BT5	Sr Nts 'G'	7/15/2013	A	4.27	4.29	4.30	4.31	4.33	4.34							4.31%	
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.19	5.19	5.20	5.25	5.29	5.32	5.32	5.35	5.35	5.35	5.35	5.38	5.30%	5.36%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Gulf Power Co.	5.3	402479BX6	Sr Nts'M'	12/1/2016	A	4.70	4.71	4.72	4.64	4.68	4.72	4.72	4.76	4.75	4.74	4.75	4.79	4.72%	4.76%
MidAmerican Energy Co.	5.95	595620AG0	Sr Nts	7/15/2017	A	4.97	4.98	4.99	4.97	5.04	5.12	5.14	5.20	5.12	5.12	5.14	5.18	5.08%	5.15%
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.66	4.66	4.65	4.49	4.76	5.02	5.02	5.14	5.07	4.98	5.07	5.12	4.89%	5.06%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	5.04	5.05	5.06	5.07	5.10	5.13	5.13	5.16	5.15	5.16	5.17	5.20	5.12%	5.18%
Northern IllinoisGas	6.58	665228BQ4	1st	2/15/2028	A	5.30	5.31	5.26	5.14	5.38	5.57	5.60	5.74	5.63	5.57	5.70	5.84	5.50%	5.70%
Northern IllinoisGas	7.2	665228BV3	1st	5/15/2016	A	6.12	6.13	6.15	6.16	6.21	6.26	6.27	6.32	6.32	6.34	6.36	6.41	6.25%	6.37%
Northern Sts Pwr (Minn)	7.125	665772BN8	1st	7/1/2025	A	5.20	5.22	5.20	5.04	5.27	5.44	5.47	5.60	5.51	5.48	5.60	5.73	5.40%	5.60%
Northern Sts Pwr (Minn)	6.5	665772BQ1	1st	3/1/2028	A	4.93	4.83	4.83	4.74	4.99	5.18	5.20	5.34	5.38	5.24	5.37	5.51	5.13%	5.37%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st	7/15/2035	A	4.41	4.44	4.43	4.28	4.52	4.78	4.72	4.84	4.79	4.74	4.86	4.88	4.64%	4.83%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	4.65	4.68	4.67	4.51	4.78	5.04	5.07	5.09	5.08	4.99	5.12	5.18	4.91%	5.10%
Northern Sts Pwr (Minn)	6.2	665772CC1	1st	7/1/2037	A	4.64	4.67	4.66	4.50	4.76	5.00	5.04	5.06	5.05	4.98	5.10	5.18	4.89%	5.09%
Oncor Electric Delivery	6.38	68233DAL1	Sr Sec Nts	1/15/2015	A	5.78	5.79	5.82	5.84	5.86	5.89	5.91	5.94	5.96	5.98	6.01	6.04	5.90%	6.01%
Oncor Electric Delivery	7.25	68233DAP2	Sr Sec Nts	1/15/2033	A	5.54	5.44	5.43	5.18	5.37	5.64	5.57	5.72	5.70	5.72	5.81	5.77	5.57%	5.77%
Oncor Electric Delivery	7	68233DAR8	Deb	9/1/2022	A	5.49	5.49	5.43	5.23	5.42	5.62	5.59	5.70	5.66	5.68	5.78	5.86	5.58%	5.77%
Oncor Electric Delivery	7	68233DAT4	Sr Sec Nts	5/1/2032	A	5.51	5.41	5.37	5.13	5.31	5.57	5.54	5.66	5.65	5.68	5.78	5.74	5.53%	5.73%
PacifiCorp	7.7	695114BT4	1st	11/15/2031	A	5.29	5.30	5.30	5.12	5.32	5.64	5.64	5.72	5.65	5.60	5.72	5.81	5.51%	5.71%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	4.77	4.80	4.79	4.64	4.89	5.06	5.09	5.24	5.16	5.17	5.29	5.38	5.02%	5.28%
PacifiCorp	4.95	695114BY3	1st	8/15/2014	A	4.65	4.68	4.69	4.71	4.73	4.74	4.75	4.77	4.76	4.77	4.79	4.81	4.74%	4.79%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.51	4.47	4.46	4.35	4.59	4.82	4.85	4.89	4.86	4.80	4.89	4.95	4.70%	4.88%
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.71	4.70	4.69	4.57	4.82	5.10	5.07	5.15	5.14	5.09	5.18	5.20	4.95%	5.16%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.61	4.59	4.56	4.45	4.71	5.00	4.93	5.04	4.98	4.93	5.03	5.02	4.82%	4.99%
Potomac Electric Power	4.95	737679CW8	Sr Nts	11/15/2013	A	4.78	4.79	4.81	4.83	4.85	4.86	4.88	4.90	4.92	4.94			4.86%	4.94%
Potomac Electric Power	4.65	737679CX6	Sr Nts	4/15/2014	A	4.44	4.45	4.47	4.48	4.50	4.51	4.52	4.54	4.55	4.56	4.58	4.59	4.52%	4.58%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	4.99	5.02	5.01	4.70	4.95	5.12	5.18	5.33	5.25	5.23	5.35	5.44	5.13%	5.34%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	4.71	4.74	4.73	4.51	4.76	4.97	5.00	5.15	5.07	5.11	5.23	5.32	4.94%	5.22%
Public Serv, Colorado	5.5	744448BX8	1st Coll Tr Ser 15	4/1/2014	A	5.19	5.20	5.23	5.25	5.27	5.29	5.32	5.34	5.36	5.38	5.40	5.43	5.31%	5.40%
Public Serv, New Hamp.	5.25	744482BG4	1st 'L'	7/15/2014	A	4.96	4.97	4.99	5.00	5.03	5.04	5.06	5.07	5.09	5.10	5.12	5.14	5.05%	5.12%
South Carolina Electric & Gas Co.	7.12	837004BC3	1st	6/15/2013	A	6.95	6.98	7.02	7.07	7.11								7.03%	
South Carolina Electric & Gas Co.	6.62	837004BV1	1st	2/1/2032	A	5.11	4.96	4.95	4.85	5.16	5.39	5.39	5.53	5.46	5.41	5.40	5.35	5.25%	5.39%
South Carolina Electric & Gas Co.	5.8	837004BW9	1st	1/15/2033	A	4.82	4.84	4.83	4.69	4.93	5.15	5.15	5.29	5.22	5.17	5.13	5.15	5.03%	5.15%
South Carolina Electric & Gas Co.	5.3	837004BX7	1st	5/15/2033	A	4.65	4.65	4.64	4.50	4.73	4.98	4.98	5.06	4.96	4.91	4.93	4.95	4.83%	4.93%
South Carolina Electric & Gas Co.	5.25	837004BY5	1st	11/1/2018	A	4.39	4.39	4.39	4.40	4.46	4.55	4.54	4.61	4.56	4.53	4.56	4.61	4.50%	4.57%
South Carolina Electric & Gas Co.	5.25	837004BZ2	1st	3/1/2035	A	4.86	4.89	4.88	4.72	4.98	5.18	4.94	5.09	5.02	4.96	5.08	5.10	4.98%	5.05%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	5.04	5.07	5.06	4.90	5.16	5.38	5.27	5.43	5.35	5.30	5.42	5.45	5.24%	5.39%
Southern California Edison Co.	5	842400ER0	1st & Ref '04A	1/15/2014	A	4.79	4.80	4.82	4.84	4.86	4.87	4.89	4.91	4.93	4.94			4.87%	4.94%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	4.66	4.66	4.65	4.51	4.74	4.97	4.97	5.05	5.04	4.99	5.11	5.09	4.87%	5.06%
Southern California Edison Co.	5	842400EY5	1st & Ref'05A	1/15/2016	A	4.45	4.46	4.46	4.47	4.50	4.54	4.56	4.58	4.57	4.58	4.58	4.61	4.53%	4.59%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.58	4.55	4.54	4.39	4.63	4.93	4.80	4.96	4.93	4.87	4.98	5.03	4.77%	4.96%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.51	4.50	4.49	4.34	4.59	4.85	4.75	4.88	4.84	4.78	4.89	4.91	4.69%	4.86%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.57	4.57	4.56	4.40	4.68	4.95	4.82	4.97	4.96	4.91	4.94	5.03	4.78%	4.96%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.59	4.53	4.52	4.36	4.64	4.92	4.79	4.94	4.95	4.87	4.96	5.02	4.76%	4.95%
Southern Indiana Gas & El	8.88	843163AP1	1st	6/1/2016	A	7.24	7.26	7.27	7.30	7.36	7.42	7.44	7.51	7.52	7.54	7.57	7.64	7.42%	7.58%
Southern Indiana Gas & El	6.72	843163AX4	Sr Nts	8/1/2029	A	5.46	5.49	5.44	5.30	5.53	5.68	5.71	5.85	5.78	5.74	5.85	5.93	5.65%	5.84%
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	4.86	4.89	4.88	4.73	4.98	5.25	5.35	5.50	5.42	5.37	5.49	5.58	5.19%	5.48%
Wisconsin Public Service	7.125	976843AX0	1st	7/1/2023	A	7.08	7.08	7.08	7.08	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.09%	7.10%
Wisconsin Public Service	4.8	976843BD3	Sr(Sec)Nts	12/1/2013	A	4.65	4.66	4.67	4.69	4.71	4.72	4.73	4.75	4.76	4.78	4.80		4.72%	4.79%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.60	4.63	4.61	4.46	4.71	4.89	4.92	5.04	4.96	4.91	5.03	5.12	4.82%	5.02%
Arizona Public Service	4.65	040555CE2	Nts	5/15/2015	A-	4.28	4.29	4.30	4.31	4.33	4.36	4.37	4.39	4.40	4.41	4.40	4.42	4.36%	4.41%
Arizona Public Service	5.625	040555CF9	Nts	5/15/2033	A-	4.91	4.84	4.99	4.84	5.05	5.28	5.28	5.43	5.35	5.30	5.42	5.44	5.18%	5.39%
Arizona Public Service	5.8	040555CG7	Nts	6/30/2014	A-	5.41	5.43	5.45	5.47	5.50	5.52	5.55	5.57	5.59	5.61	5.63	5.66	5.53%	5.63%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.70	4.60	4.59	4.57	4.82	5.02	5.02	5.17	5.10	5.04	5.16	5.12	4.91%	5.11%
Arizona Public Service	6.25	040555CJ1	Nt	8/1/2016	A-	5.34	5.33	5.35	5.35	5.38	5.45	5.45	5.50	5.50	5.50	5.52	5.57	5.44%	5.53%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	5.13	5.13	5.22	5.06	5.29	5.55	5.55	5.74	5.63	5.57	5.70	5.69	5.44%	5.65%
Avista Corp.	5.45	05379BAH0	1st	12/1/2019	A-	4.63	4.63	4.63	4.61	4.72	4.82	4.80	4.88	4.82	4.80	4.83	4.93	4.76%	4.85%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	5.02	5.05	5.04	4.88	5.14	5.32	5.32	5.48	5.40	5.34	5.47	5.56	5.25%	5.46%
Avista Corp.	5.7	05379BAM9	1st	7/1/2037	A-	4.79	4.82	4.81	4.64	4.91	5.09	5.16	5.32	5.24	5.18	5.31	5.40	5.06%	5.30%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	4.79	4.82	4.81	4.64	4.91	5.09	5.16	5.32	5.24	5.18	5.31	5.40	5.06%	5.30%
CenterPoint Energy Res	5.95	15189WAB6	Sr Nts	1/15/2014	A-	5.68	5.70	5.71	5.73	5.76								5.72%	
CenterPoint Energy Houston	5.7	15189XAC2	Gen Mtge'J2'	3/15/2013	A-	5.66	5.69											5.68%	
CenterPoint Energy Houston	6.95	15189XAD0	Gen Mtge'K2'	3/15/2033	A-	5.02	4.99	4.98	4.83	5.08	5.24	5.31	5.42	5.35	5.30	5.42	5.40	5.20%	5.37%
CenterPoint Energy Houston	5.6	15189XAH1	Gen Mtge'L2'	7/1/2023	A-	4.66	4.67	4.65	4.57	4.72	4.97	4.97	5.02	4.95	4.91	5.00	5.07	4.85%	4.99%
CenterPoint Energy Res	7.875	15189YAB2	Sr Nts	4/1/2013	A-	7.77	7.82	7.88										7.82%	
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	5.10	5.07	5.06	4.89	5.16	5.35	5.38	5.53	5.48	5.49	5.58	5.62	5.31%	5.56%
Commonwealth Edison	7.625	202795FJ4	1st Ser 92	4/15/2013	A-	7.51	7.55	7.61										7.56%	
Commonwealth Edison	7.5	202795FM7	1st Ser 94	7/1/2013	A-	7.29	7.32	7.36	7.41	7.46								7.37%	

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Commonwealth Edison	5.875	202795HG8	1st Ser 100	2/1/2033	A-	4.75	4.70	4.69	4.55	4.78	4.99	4.99	5.22	5.12	5.06	5.15	5.18	4.93%	5.13%
Commonwealth Edison	4.7	202795HH6	1st Ser 101	4/15/2015	A-	4.33	4.34	4.34	4.35	4.38	4.39	4.42	4.44	4.43	4.44	4.45	4.47	4.40%	4.45%
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.67	4.67	4.65	4.54	4.76	4.99	4.93	5.10	5.09	5.01	5.07	5.16	4.89%	5.08%
Commonwealth Edison	5.95	202795HN3	1st Ser 104	8/15/2016	A-	5.10	5.11	5.13	5.13	5.16	5.20	5.24	5.25	5.25	5.26	5.28	5.32	5.20%	5.29%
Connecticut Lt & Pwr	7.875	207597CZ6	1st & Ref D	10/1/2024	A-	5.74	5.76	5.74	5.64	5.88	6.06	6.09	6.22	6.13	6.08	6.21	6.34	5.99%	6.21%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	4.83	4.86	4.85	4.66	4.89	5.13	5.13	5.28	5.21	5.15	5.28	5.27	5.05%	5.23%
Connecticut Lt & Pwr	5.38	207597DW2	1st & Ref'07A	3/1/2017	A-	4.64	4.65	4.65	4.65	4.72	4.79	4.81	4.83	4.81	4.80	4.80	4.87	4.75%	4.82%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	4.77	4.80	4.79	4.63	4.83	5.07	5.11	5.26	5.18	5.13	5.25	5.31	5.01%	5.23%
Consolidated Edison, Inc.	5.88	209111EB5	Deb '03A	4/1/2033	A-	4.86	4.89	4.88	4.73	4.97	5.17	5.11	5.25	5.18	5.13	5.24	5.33	5.06%	5.23%
Consolidated Edison, Inc.	3.85	209111EC3	Deb'03B	6/15/2013	A-	3.80	3.81	3.82	3.83	3.85								3.82%	
Consolidated Edison, Inc.	4.7	209111EE9	Deb'04A	2/1/2014	A-	4.51	4.52	4.55	4.56	4.58	4.59	4.60	4.61	4.63	4.65	4.66	4.68	4.60%	4.66%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.79	4.82	4.81	4.63	4.87	5.07	5.04	5.22	5.21	5.15	5.27	5.17	5.00%	5.20%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.46	4.48	4.47	4.32	4.56	4.76	4.77	4.96	4.85	4.82	4.94	4.93	4.69%	4.90%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.63	4.66	4.65	4.50	4.75	4.95	4.88	5.12	5.05	4.93	5.05	5.11	4.86%	5.03%
Consolidated Edison, Inc.	5.38	209111EK5	Deb'05C	12/15/2015	A-	4.78	4.77	4.79	4.80	4.82	4.85	4.85	4.87	4.88	4.89	4.91	4.94	4.85%	4.91%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.66	4.65	4.64	4.49	4.77	4.98	4.98	5.13	5.05	5.00	5.09	5.11	4.88%	5.07%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	4.76	4.72	4.72	4.63	4.88	5.13	5.09	5.25	5.21	5.15	5.17	5.26	5.00%	5.19%
Consolidated Edison, Inc.	5.5	209111EN9	Deb'06C	9/15/2016	A-	4.76	4.74	4.75	4.76	4.81	4.85	4.87	4.90	4.88	4.89	4.89	4.92	4.84%	4.90%
Consolidated Edison, Inc.	5.3	209111EP4	Deb'06D	12/1/2016	A-	4.59	4.58	4.59	4.59	4.63	4.68	4.69	4.72	4.67	4.69	4.69	4.73	4.65%	4.70%
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.60	4.62	4.61	4.46	4.75	5.00	4.93	5.05	4.97	4.91	4.96	5.06	4.83%	4.98%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.75	4.75	4.74	4.58	4.87	5.16	5.06	5.21	5.20	5.11	5.17	5.20	4.98%	5.16%
Consumers Energy Co.	5.5	210518CE4	1st 'P'	8/15/2016	A-	4.78	4.76	4.77	4.77	4.81	4.86	4.86	4.90	4.90	4.90	4.92	4.93	4.85%	4.92%
Consumers Energy Co.	5	210518CF1	1st Mtg Bd	3/15/2015	A-	4.59	4.59	4.60	4.62	4.64	4.65							4.62%	
Consumers Energy Co.	5.65	210518CL8	1st	4/15/2020	A-	4.63	4.63	4.62	4.54	4.67	4.78	4.84	4.89	4.82	4.80	4.87	4.90	4.75%	4.86%
Entergy Arkansas	6.38	29364DAK6	1st	11/1/2034	A-	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37%	6.37%
Entergy Arkansas	5.66	29364DAL4	1st	2/1/2025	A-	5.41	5.27	5.28	5.30	5.32	5.33	5.35	5.37	5.38	5.39	5.41	5.47	5.36%	5.42%
Entergy Gulf States	6.18	29364LAT9	1st	3/1/2035	A-	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17%	6.17%
Entergy Mississippi	5.15	29364NAH1	1st	2/1/2013	A-	5.15												5.15%	
Entergy Mississippi	4.95	29364NAK4	1st	6/1/2018	A-	4.94	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96%	4.96%
Entergy Mississippi	6.25	29364NAL2	1st	4/1/2034	A-	6.17	6.17	6.18	6.18	6.06	6.08	6.10	6.12	6.13	6.14	6.17	6.19	6.14%	6.17%
Entergy New Orleans	5.65	29364PAJ2	1st	9/10/2029	A-	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64%	5.64%
Entergy New Orleans	5.6	29364PAK9	1st	9/1/2024	A-	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59%	5.59%
Idaho Pwr	6	45138LAL7	Sec M-T Nts'D'	11/15/2032	A-	4.91	4.91	4.90	4.69	4.90	5.06	5.15	5.30	5.22	5.17	5.28	5.34	5.07%	5.26%
Idaho Pwr	4.25	45138LAM5	Sec M-T Nts 'E'	10/1/2013	A-	4.15	4.16	4.17	4.18	4.19	4.20	4.22	4.23	4.25				4.19%	
Idaho Pwr	5.5	45138LAN3	Sec M-T Nts 'E'	4/1/2033	A-	4.75	4.75	4.74	4.53	4.74	4.90	5.02	5.16	5.08	5.03	5.15	5.21	4.92%	5.13%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	4.73	4.73	4.72	4.51	4.72	4.88	5.04	5.19	5.11	5.05	5.17	5.23	4.92%	5.15%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	4.83	4.82	4.81	4.60	4.82	4.99	5.15	5.29	5.21	5.16	5.28	5.34	5.03%	5.26%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	8/15/2035	A-	4.65	4.64	4.63	4.42	4.63	4.80	4.96	5.11	5.03	4.97	5.10	5.16	4.84%	5.08%
Idaho Pwr Co 1st Mtg Secd MTN	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	4.86	4.85	4.84	4.62	4.85	5.03	5.20	5.36	5.27	5.21	5.34	5.41	5.07%	5.32%
Interstate Pwr & Lt	6.45	461070AC8	Sr Deb	10/15/2033	A-	5.13	5.16	5.08	4.93	5.18	5.39	5.42	5.57	5.46	5.34	5.43	5.52	5.30%	5.43%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	5.07	5.10	5.03	4.88	5.13	5.33	5.37	5.52	5.41	5.29	5.38	5.47	5.25%	5.38%
Interstate Pwr & Lt	5.5	461070AE4	Sr Deb	7/15/2025	A-	4.82	4.83	4.81	4.71	4.92	5.10	5.13	5.25	5.14	5.04	5.13	5.20	5.01%	5.12%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.94	5.96	5.96	5.75	6.00	6.20	6.07	6.19	6.12	6.01	6.13	6.22	6.05%	6.12%
KeySpan Corp.	4.65	49337WAG5	Nts	4/1/2013	A-	4.61	4.63	4.65										4.63%	
KeySpan Corp.	5.88	49337WAH3	Nts	4/1/2033	A-	5.24	5.27	5.26	5.01	5.26	5.46	5.46	5.61	5.53	5.44	5.52	5.61	5.39%	5.52%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	5.09	5.12	5.11	4.86	5.11	5.44	5.45	5.54	5.46	5.33	5.46	5.52	5.29%	5.44%
Oklahoma Gas & Elec Co	6.65	678858AZ4	Sr Nts	7/15/2027	A-	5.18	5.19	5.17	5.03	5.28	5.47	5.50	5.64	5.54	5.48	5.61	5.75	5.40%	5.61%
Oklahoma Gas & Elec Co	6.5	678858BB6	Sr Nt	7/15/2017	A-	5.42	5.43	5.42	5.42	5.46	5.54	5.55	5.62	5.59	5.58	5.61	5.70	5.53%	5.63%
Oklahoma Gas & Elec Co	6.5	678858BC4	Sr Nt	4/15/2028	A-	5.40	5.41	5.39	5.26	5.53	5.73	5.76	5.91	5.56	5.50	5.63	5.78	5.57%	5.64%
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	4.85	4.88	4.87	4.71	4.95	5.19	5.19	5.34	5.27	5.21	5.33	5.36	5.10%	5.30%
Oklahoma Gas & Elec Co	5.15	678858BG5	Sr Nts	1/15/2016	A-	4.64	4.65	4.61	4.62	4.65	4.68	4.69	4.72	4.71	4.72	4.73	4.76	4.68%	4.74%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	4.97	5.00	4.99	4.83	5.08	5.26	5.29	5.34	5.26	5.21	5.33	5.42	5.17%	5.32%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.63	4.66	4.65	4.48	4.74	4.99	5.02	5.09	5.06	5.00	5.13	5.13	4.88%	5.09%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.66	4.69	4.68	4.52	4.78	4.96	4.99	5.15	5.07	5.01	5.14	5.16	4.90%	5.10%
Penna P&L	7.375	709051CD6	1st	3/1/2014	A-	6.87	6.90	6.93	6.97	7.02	7.05	7.09	7.12	7.17	7.20	7.25	7.29	7.07%	7.25%
Portland Gen'l Elec	9.31	73651HAV3	M-T Nts	8/11/2021	A-	6.61	6.63	6.56	6.49	6.46	6.61	6.65	6.78	6.71	6.68	6.80	6.92	6.66%	6.80%
Public Svc Co New Hampshire Fo	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	4.86	4.89	4.88	4.72	4.98	5.12	5.15	5.30	5.23	5.17	5.29	5.38	5.08%	5.28%
Public Service Electric and Gas Co.	8	744567BA5	1st & Ref	6/1/2037	A-	5.69	5.72	5.71	5.53	5.82	6.01	6.05	6.22	6.14	6.08	6.22	6.32	5.96%	6.21%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	4.91	4.87	4.86	4.69	4.96	5.14	5.17	5.33	5.25	5.19	5.32	5.41	5.09%	5.31%
Public Service Electric and Gas Co.	5	744567BB3	1st & Ref	7/1/2037	A-	4.91	4.87	4.86	4.69	4.96	5.14	5.17	5.33	5.25	5.19	5.32	5.41	5.09%	5.31%
Public Service Electric and Gas Co.	9.25	744567CN6	1st & Ref CC	6/1/2021	A-	6.40	6.42	6.42	6.35	6.56	6.71	6.75	6.87	6.81	6.78	6.89	7.01	6.66%	6.89%
Public Service Electric and Gas Co.	6.75	744567EP9	1st & Ref VV	1/1/2016	A-	5.87	5.84	5.85	5.86	5.92	5.96	5.97	6.02	6.02	6.04	6.06	6.11	5.96%	6.07%
Public Svc Elec Gas Co Secd MT	7.04	74456QAG1	MTN Tranche # Tr 00007	11/6/2020	A-	5.54	5.55	5.55	5.48	5.66	5.78	5.81	5.91	5.84	5.81	5.90	5.99	5.74%	5.90%
Public Service Electric and Gas Co.	5.38	74456QAL0	Sec M-T Nts 'C'	9/1/2013	A-	5.22	5.24	5.26	5.28	5.31	5.32	5.35	5.38					5.30%	
Public Service Electric and Gas Co.	5	74456QAN6	Sec M-T Nts'D'	8/15/2014	A-	4.68	4.69	4.71	4.72	4.75	4.76	4.78	4.79	4.81	4.82	4.84	4.86	4.77%	4.84%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Public Svc Elec Gas Co Secd MT	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.45	4.44	4.43	4.28	4.53	4.72	4.72	4.87	4.76	4.71	4.83	4.88	4.64%	4.81%
Public Svc Elec Gas Co Secd MT	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.54	4.51	4.50	4.36	4.61	4.82	4.83	4.98	4.90	4.81	4.95	4.99	4.73%	4.92%
Public Svc Elec Gas Co Secd MT	5.8	74456QAR7	Secured Mtn Series E Nc	5/1/2037	A-	4.55	4.53	4.52	4.38	4.64	4.85	4.88	5.03	4.92	4.87	5.00	5.05	4.77%	4.97%
Puget Sound Pwr & Lt	7.02	74531EAA0	Sr M-T Nts'A'	12/1/2027	A-	5.33	5.34	5.35	5.03	5.23	5.44	5.47	5.56	5.40	5.46	5.46	5.58	5.39%	5.50%
Puget Sound Energy	6.74	74531EAB8	Sr M-T Nts 'A'	6/15/2018	A-	5.42	5.42	5.42	5.41	5.50	5.60	5.60	5.69	5.64	5.63	5.66	5.75	5.56%	5.68%
Puget Sound Energy	7	74531EAC6	Sr M-T Nts 'B'	3/9/2029	A-	5.66	5.55	5.57	5.43	5.32	5.47	5.50	5.63	5.57	5.56	5.66	5.74	5.56%	5.65%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.53	4.55	4.54	4.39	4.63	4.86	4.86	5.01	4.96	4.91	5.03	5.02	4.77%	4.99%
Puget Sound Energy	5.2	745332BV7	Sr(Sec)Nts	10/1/2015	A-	4.69	4.70	4.71	4.72	4.75	4.76	4.77	4.79	4.80	4.81	4.84	4.84	4.77%	4.83%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	4.88	4.87	4.86	4.71	4.96	5.28	5.21	5.37	5.29	5.23	5.36	5.42	5.12%	5.34%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	4.76	4.76	4.75	4.59	4.85	5.13	5.09	5.25	5.17	5.12	5.24	5.27	5.00%	5.21%
Southwestern Public Serv	5.6	845743BK8	Sr Nts'E'	10/1/2016	A-	5.01	5.02	5.03	4.91	4.96	4.99	4.99	5.03	5.02	5.03	5.04	5.08	5.01%	5.05%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	4.94	4.91	4.89	4.73	5.00	5.24	5.21	5.37	5.32	5.26	5.39	5.42	5.14%	5.36%
Virginia Electric & Power Co.	4.75	927804EU4	Sr Nts 'A'	3/1/2013	A-	4.73	4.75											4.74%	
Virginia Electric & Power Co.	5.25	927804EW0	Sr Nts 'C'	12/15/2015	A-	4.67	4.68	4.69	4.70	4.71	4.73	4.74	4.77	4.78	4.82	4.83	4.86	4.75%	4.84%
Virginia Electric & Power Co.	5.4	927804EZ3	Sr Nts'A'	1/15/2016	A-	4.75	4.76	4.78	4.79	4.82	4.86	4.86	4.90	4.90	4.91	4.92	4.96	4.85%	4.93%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.66	4.66	4.64	4.49	4.75	4.94	4.95	5.11	5.08	4.98	5.10	5.17	4.88%	5.08%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.66	4.63	4.62	4.44	4.77	4.99	4.93	5.08	5.07	4.99	5.09	5.13	4.87%	5.07%
Virginia Electric & Power Co.	5.95	927804FC3	Sr Nt 2007 Ser B	9/15/2017	A-	4.93	4.92	4.94	4.92	5.00	5.08	5.09	5.13	5.10	5.10	5.11	5.16	5.04%	5.12%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	4.72	4.72	4.71	4.53	4.81	5.09	5.09	5.18	5.14	5.08	5.23	5.26	4.96%	5.19%
Virginia Electric & Power Co.	5.4	927804FF6	Sr Nt 2008 Ser A	4/30/2018	A-	4.50	4.50	4.49	4.49	4.57	4.68	4.64	4.72	4.68	4.68	4.69	4.75	4.62%	4.71%
Washington Water Power	7.53	94068VAA1	Secd MTN	5/5/2023	A-	5.77	5.78	5.77	5.68	5.90	6.06	6.06	6.19	6.11	6.06	6.18	6.30	5.99%	6.18%
Washington Water Power	7.39	94068VAF0	Sec M-T Nts'A'	5/11/2018	A-	6.07	6.08	6.09	6.08	6.19	6.30	6.28	6.36	6.31	6.30	6.33	6.45	6.24%	6.36%
Westar Energy, Inc.	6	95709TAA8	1st Mtg Bd	7/1/2014	A-	5.62	5.61	5.63	5.65	5.68	5.70	5.72	5.74	5.76	5.78	5.81	5.83	5.71%	5.81%
Westar Energy, Inc.	5.15	95709TAB6	1st Mtg Bd	1/1/2017	A-	4.59	4.54	4.54	4.53	4.56	4.62	4.63	4.68	4.68	4.68	4.70	4.76	4.63%	4.71%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.65	5.64	5.65	5.66	5.69	5.71	5.72	5.75	5.80	5.80	5.81	5.87	5.73%	5.83%
Westar Energy, Inc.	5.1	95709TAD2	1st	7/15/2020	A-	4.32	4.36	4.28	4.23	4.36	4.46	4.51	4.56	4.52	4.50	4.53	4.56	4.43%	4.53%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.52	5.50	5.51	5.51	5.55	5.58	5.58	5.62	5.69	5.70	5.71	5.79	5.61%	5.73%
Wisconsin Electric Power Company	6.875	976656BL1	Deb	12/1/2095	A-	5.39	5.28	5.02	4.78	5.04	5.42	5.46	5.77	5.65	5.57	5.75	5.88	5.42%	5.73%
Wisconsin Electric Power	6.5	976656BP2	Deb	6/1/2028	A-	5.26	5.27	5.15	4.90	5.16	5.49	5.10	5.24	5.14	5.08	5.38	5.53	5.23%	5.33%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	4.51	4.53	4.48	4.37	4.62	4.80	4.86	5.01	4.91	4.88	4.97	5.06	4.75%	4.97%
AmerenUE	5.1	02360FAA4	Sr Sec Nts	10/1/2019	BBB+	4.34	4.33	4.33	4.32	4.41	4.49	4.48	4.56	4.46	4.44	4.47	4.57	4.43%	4.49%
AmerenUE	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.49	4.52	4.50	4.35	4.60	4.81	4.78	4.93	4.85	4.80	4.87	4.94	4.70%	4.87%
AmerenUE	5.4	02360FAC0	Sr Sec Nts	2/1/2016	BBB+	4.83	4.84	4.80	4.81	4.85	4.88	4.89	4.92	4.92	4.93	4.94	4.98	4.88%	4.95%
CenterPoint Energy, Inc.	6.85	15189TAG2	Sr Nts'B'	6/1/2015	BBB+	6.09	6.08	6.09	6.13	6.15	6.20	6.21	6.24	6.26	6.28	6.31	6.33	6.20%	6.31%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nts	2/1/2017	BBB+	5.15	5.16	5.12	5.12	5.19	5.27	5.21	5.27	5.24	5.24	5.24	5.30	5.21%	5.26%
Central Illinois Light	6.2	153645AX4	Sr Secd Nt 144a	6/15/2016	BBB+	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50%	5.50%
Central Illinois Light	6.7	153645BA3	Sr Secd Nt 144a	6/15/2036	BBB+	6.20	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22%	6.22%
Cincinnati Gas & Electric Co.	6.9	172070BT0	Deb	6/1/2025	BBB+	5.55	5.57	5.55	5.44	5.39	5.59	5.74	5.87	5.77	5.72	5.84	5.81	5.65%	5.79%
Cleco Power LLC	5.375	185508AC2	Nts	5/1/2013	BBB+	5.32	5.33	5.35										5.33%	
Cleco Power LLC	4.95	185508AD0	Nts	7/15/2015	BBB+	4.57	4.58	4.59	4.60	4.62	4.63	4.64	4.66	4.67	4.68	4.69	4.71	4.64%	4.69%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	5.28	5.31	5.30	5.13	5.40	5.73	5.69	5.75	5.67	5.61	5.60	5.69	5.51%	5.63%
Consumers Energy Co.	6.875	210518AT3	Sr Nts 'B'	3/1/2018	BBB+	5.54	5.56	5.56	5.55	5.63	5.73	5.73	5.80	5.72	5.71	5.75	5.85	5.68%	5.77%
Consumers Energy Co.	5.15	210518CG9	1st	2/15/2017	BBB+	4.47	4.48	4.48	4.48	4.53	4.57	4.59	4.61	4.57	4.57	4.59	4.65	4.55%	4.60%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	4.72	4.75	4.74	4.52	4.77	4.94	5.04	5.19	5.12	5.09	5.22	5.27	4.95%	5.19%
Consumers Energy Co.	5.65	210518CQ7	1st	9/15/2018	BBB+	4.66	4.67	4.66	4.64	4.71	4.80	4.79	4.85	4.81	4.80	4.82	4.89	4.76%	4.84%
Consumers Energy Co.	6.12	210518CR5	1st	3/15/2019	BBB+	4.95	4.95	4.96	4.92	4.98	5.11	5.04	5.14	5.11	5.09	5.10	5.19	5.05%	5.13%
Delmarva Pwr & Light	5	247109BH3	Nt	11/15/2014	BBB+	4.69	4.70	4.71	4.71	4.73	4.74	4.76	4.77	4.79	4.80	4.81	4.82	4.75%	4.81%
Delmarva Pwr & Light	5	247109BJ9	Fixed Rt Nt	6/1/2015	BBB+	4.63	4.64	4.65	4.66	4.68	4.69	4.70	4.72	4.73	4.74	4.72	4.74	4.69%	4.73%
Dominion Resources	7.82	257469AC0	Remkt Nts 'E'	9/15/2014	BBB+	6.55	6.57	6.60	6.63	6.67	6.70	6.73	6.76	6.80	6.83	6.83	6.88	6.71%	6.85%
Dominion Resources	6.75	257469AG1	Sr Nts 'E'	12/15/2032	BBB+	5.26	5.29	5.28	5.13	5.38	5.55	5.58	5.73	5.66	5.61	5.73	5.82	5.50%	5.72%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Sr Nts '05B	6/15/2035	BBB+	4.78	4.82	4.81	4.66	4.91	5.19	5.07	5.20	5.33	5.27	5.40	5.39	5.07%	5.35%
Dominion Resources, Inc. (Va.)	5.15	25746UAW9	Sr Nts '05C	7/15/2015	BBB+	4.67	4.68	4.70	4.70	4.72	4.74	4.76	4.77	4.79	4.80	4.81	4.84	4.75%	4.82%
Dominion Resources, Inc. (Va.)	5.6	25746UBB4	SrNts'06A	11/15/2016	BBB+	4.81	4.82	4.84	4.84	4.89	4.93	4.97	5.02	4.99	5.00	5.01	5.03	4.93%	5.01%
Dominion Resources, Inc. (Va.)	6	25746UBC2	Sr Nts '07A	11/30/2017	BBB+	4.99	5.00	5.01	4.99	5.08	5.16	5.14	5.23	5.19	5.17	5.16	5.24	5.11%	5.19%
Duke Energy Corp.	6	264399DK9	Sr Nts 'A'	12/1/2028	BBB+	4.83	4.85	4.82	4.78	5.04	5.37	5.37	5.32	5.16	5.10	5.15	5.30	5.09%	5.18%
Duke Energy Corp.	6.45	264399ED4	Sr Nts	10/15/2032	BBB+	5.00	5.04	5.03	4.82	5.06	5.25	5.29	5.42	5.35	5.33	5.41	5.48	5.21%	5.41%
Empire District Electric Co. (The)	7.2	291641AS7	1st	12/1/2016	BBB+	6.16	6.17	6.19	6.20	6.26	6.29	6.29	6.35	6.33	6.34	6.36	6.41	6.28%	6.37%
Enersis S.A.	7.4	29274FAB0	Nt	12/1/2016	BBB+	6.36	6.36	6.35	6.32	6.37	6.44	6.40	6.41	6.40	6.41	6.43	6.47	6.39%	6.44%
Exelon Corp.	5.62	30161NAC5	Sr Nts	6/15/2035	BBB+	5.10	5.13	5.08	4.89	5.14	5.43	5.40	5.52	5.60	5.58	5.66	5.67	5.35%	5.64%
Florida Pwr	6.75	34110QAL2	Nts	2/1/2028	BBB+	5.63	5.65	5.62	5.49	5.76	5.81	5.52	5.67	5.56	5.51	5.68	5.82	5.64%	5.67%
MidAmerican Funding	6.93	59562HAJ7	Sr Sec Bonds	3/1/2029	BBB+	5.26	5.24	5.23	5.19	5.41	5.60	5.57	5.69	5.63	5.56	5.66	5.74	5.48%	5.65%
MidAmerican Energy Hldg	5	59562VAK3	Sr Nts	2/15/2014	BBB+	4.78	4.79	4.81	4.83	4.84	4.86	4.88	4.89	4.91	4.93	4.95	4.97	4.87%	4.95%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	4.87	4.91	4.92	4.74	5.08	5.39	5.30	5.48	5.43	5.37	5.41	5.39	5.19%	5.39%
National Grid plc	6.3	636274AC6	Notes	8/1/2016	BBB+	5.43	5.42	5.42	5.43	5.47	5.56	5.54	5.57	5.54	5.54	5.56	5.60	5.51%	5.57%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	5.43	5.42	5.42	5.43	5.47	5.56	5.54	5.57	5.54	5.54	5.56	5.60	5.51%	5.57%
Nevada Power	5.88	641423BK3	Gen & Ref'L'	1/15/2015	BBB+	5.34	5.36	5.38	5.41	5.44	5.46	5.47	5.49	5.51	5.53	5.55	5.57	5.46%	5.55%
Nevada Power	6.75	641423BU1	Gen & Refunding Mtg Nt	7/1/2037	BBB+	4.98	4.98	4.97	4.80	5.05	5.27	5.22	5.38	5.34	5.28	5.39	5.43	5.17%	5.37%
PSI Energy, Inc.	5	693627AX9	Deb	9/15/2013	BBB+	4.86	4.87	4.89	4.91	4.93	4.94	4.97	4.99					4.92%	
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	5.30	5.33	5.32	5.08	5.25	5.53	5.57	5.73	5.68	5.44	5.47	5.56	5.44%	5.49%
PSI Energy	6.05	693627AZ4	Deb	6/15/2016	BBB+	5.28	5.26	5.27	5.24	5.28	5.33	5.34	5.37	5.37	5.38	5.39	5.44	5.33%	5.40%
PSEG Power LLC	8.62	69362BAJ1	Sr Nts	4/15/2031	BBB+	6.01	5.95	5.94	5.73	5.95	6.21	6.24	6.34	6.30	6.25	6.31	6.34	6.13%	6.30%
PSEG Power LLC	5.5	69362BAN2	Sr Nts	12/1/2015	BBB+	4.92	4.93	4.94	4.96	4.97	4.99	5.01	5.02	5.03	5.04	5.04	5.07	4.99%	5.05%
Potomac Edison Co.	5.35	737662BP0	1st	11/15/2014	BBB+	4.97	4.98	4.99	5.00	5.02	5.04	5.05	5.07	5.09	5.11	5.13	5.15	5.05%	5.13%
Potomac Edison Co.	5.12	737662BR6	1st	8/15/2015	BBB+	4.68	4.68	4.69	4.71	4.73	4.75	4.76	4.77	4.78	4.80			4.74%	4.80%
Public Svc No Car	6.99	744516AA3	Sr Deb	1/15/2026	BBB+	5.30	5.31	5.29	5.19	5.43	5.60	5.53	5.67	5.58	5.62	5.74	5.96	5.52%	5.77%
Public Svc No Car	7.45	744516AB1	Sr Deb	12/15/2026	BBB+	5.43	5.44	5.42	5.31	5.54	5.73	5.63	5.77	5.67	5.80	5.93	6.14	5.65%	5.96%
Sierra Pacific Power	6.75	826418BE4	Gen & Refunding Mtg Nt	7/1/2037	BBB+	5.02	5.05	5.04	4.84	5.08	5.30	5.29	5.45	5.37	5.31	5.44	5.50	5.22%	5.42%
Southern California Edison Co.	6.65	842400EB5	Nts	4/1/2029	BBB+	5.05	5.07	5.09	4.97	5.13	5.36	5.39	5.52	5.46	5.41	5.52	5.60	5.30%	5.51%
Southern Power Co	4.88	843646AF7	Sr Nt	7/15/2015	BBB+	4.44	4.45	4.46	4.47	4.49	4.53	4.53	4.55	4.55	4.56	4.57	4.59	4.52%	4.57%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	5.80	5.81	5.81	5.80	5.88	5.96	5.96	6.02	5.98	5.97	5.99	6.07	5.92%	6.01%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	4.75	4.74	4.73	4.64	4.90	5.24	5.28	5.43	5.34	5.29	5.43	5.42	5.10%	5.38%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	4.66	4.63	4.62	4.53	4.79	5.17	5.14	5.30	5.25	5.19	5.32	5.31	4.99%	5.27%
Tampa Electric Co.	6.1	875127AX0	Fixed Rt	5/15/2018	BBB+	4.94	4.93	4.95	4.94	5.02	5.11	5.12	5.19	5.15	5.14	5.16	5.24	5.07%	5.18%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	4.82	4.85	4.84	4.69	4.94	5.11	5.14	5.28	5.14	5.09	5.21	5.29	5.03%	5.20%
Union Electric	4.75	906548BZ4	Sr Sec Nts	4/1/2015	BBB+	4.43	4.43	4.45	4.46	4.48	4.49	4.49	4.51	4.52	4.53	4.54	4.51	4.49%	4.53%
Union Electric	4.65	906548CB6	Sr Sec Nts	10/1/2013	BBB+	4.55	4.56	4.57	4.58	4.60	4.61	4.62	4.63	4.65				4.60%	
Union Electric	5.5	906548CC4	Sr Sec Nts	5/15/2014	BBB+	5.21	5.23	5.24	5.26	5.29	5.30	5.32	5.33	5.35	5.37	5.39	5.40	5.31%	5.39%
Union Electric	5	906548CD2	Sr Sec Nts	2/1/2020	BBB+	4.42	4.43	4.43	4.37	4.50	4.60	4.61	4.68	4.64	4.53	4.59	4.66	4.54%	4.59%
Union Electric	6.4	906548CE0	Sr Sec Nts	6/15/2017	BBB+	5.28	5.29	5.30	5.29	5.37	5.46	5.46	5.51	5.48	5.48	5.51	5.58	5.42%	5.52%
Union Electric	6	906548CF7	Sr Sec Nts	4/1/2018	BBB+	4.98	4.99	4.99	4.98	5.07	5.16	5.16	5.24	5.19	5.19	5.21	5.31	5.12%	5.24%
Union Electric	6.7	906548CG5	Sr Sec Nts	2/1/2019	BBB+	5.36	5.36	5.34	5.31	5.38	5.48	5.48	5.57	5.54	5.53	5.57	5.58	5.46%	5.56%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	4.92	4.95	4.88	4.72	4.98	5.30	5.30	5.39	5.38	5.35	5.43	5.45	5.17%	5.41%
AEP Texas North	5.5	0010EQAB2	Sr Nts	3/1/2013	BBB	5.47	5.50											5.49%	
Appalachian Power Co.	5.95	037735BZ9	Sr Nts'H'	5/15/2033	BBB	5.11	5.14	5.13	4.98	5.23	5.51	5.55	5.70	5.62	5.56	5.68	5.71	5.41%	5.65%
Appalachian Power	4.95	037735CB1	Sr Nts'I'	2/1/2015	BBB	4.63	4.59	4.61	4.62	4.66	4.67	4.68	4.70	4.71	4.73	4.74	4.74	4.67%	4.74%
Appalachian Power	5	037735CD7	Sr Nts'K'	6/1/2017	BBB	4.38	4.39	4.39	4.39	4.45	4.52	4.51	4.57	4.54	4.53	4.53	4.57	4.48%	4.54%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	5.05	5.01	4.94	4.80	5.06	5.31	5.38	5.53	5.45	5.40	5.52	5.55	5.25%	5.49%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	5.11	5.12	5.11	4.94	5.20	5.48	5.52	5.68	5.67	5.64	5.70	5.73	5.41%	5.69%
Cleveland Electric Illuminating Co.	7.88	186108BU9	Sec Nts 'D'	11/1/2017	BBB	6.27	6.29	6.36	6.31	6.40	6.50	6.54	6.62	6.49	6.47	6.46	6.56	6.44%	6.50%
Commonwealth Edison	6.95	202795GX2	Nts	7/15/2018	BBB	5.70	5.71	5.65	5.64	5.75	5.85	5.85	5.94	5.89	5.99	6.02	6.09	5.84%	6.03%
DTE Energy Co.	6.35	233331AM9	Sr Nts'06B	6/1/2016	BBB	5.45	5.45	5.47	5.48	5.51	5.56	5.56	5.61	5.61	5.62	5.63	5.67	5.55%	5.64%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	Enhanced Jr Sub Nt 200	6/30/2066	BBB	6.74	6.75	6.78	6.74	6.75	6.80	6.84	6.94	7.00	7.00	6.98	6.96	6.86%	6.98%
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	Jr Sub Nt 2006 Ser B En	9/30/2066	BBB	2.79	2.79	2.79	2.74	2.73	2.75	2.77	2.76	2.76	2.73	2.73	2.73	2.76%	2.73%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	5.01	5.03	5.14	5.09	5.36	5.54	5.57	5.73	5.65	5.59	5.72	5.78	5.43%	5.70%
Empire District Electric Co. (The)	4.5	291641AY4	Sr Nts	6/15/2013	BBB	4.45	4.46	4.47	4.48	4.50								4.47%	
Empire District Electric Co. (The)	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.69	5.72	5.71	5.53	5.81	5.98	6.02	6.18	6.06	6.00	6.13	6.22	5.92%	6.12%
Empire District Elec	6.7	29164RAA9	Sr Nts	11/15/2033	BBB	5.94	5.97	5.96	5.79	6.06	6.23	6.26	6.43	6.31	6.25	6.38	6.48	6.17%	6.37%
Energy East Corp.	6.75	29266MAE9	Nts	9/15/2033	BBB	6.29	6.32	6.27	6.42	6.34	6.64	6.55	6.66	6.54	6.37	6.29	6.38	6.42%	6.35%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	6.19	6.22	6.24	6.17	6.24	6.52	6.48	6.46	6.30	6.16	6.18	6.21	6.28%	6.18%
Indiana Mich Pwr	5.05	454889AK2	Sr Nts'F'	11/15/2014	BBB	4.72	4.72	4.74	4.75	4.77	4.79	4.80	4.80	4.81	4.83	4.84	4.85	4.79%	4.84%
Indiana Mich Pwr	5.65	454889AL0	Sr Nts'G'	12/1/2015	BBB	5.10	5.11	5.12	5.14	5.16	5.18	5.19	5.21	5.22	5.23	5.25	5.27	5.18%	5.25%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	5.05	5.08	5.03	4.85	5.10	5.43	5.39	5.55	5.50	5.52	5.48	5.58	5.30%	5.53%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	4.97	5.04	5.03	4.80	5.06	5.31	5.48	5.53	5.45	5.39	5.42	5.51	5.25%	5.44%
Kansas City Power & Light	5.85	485134BJ8	Sr Nt	6/15/2017	BBB	5.03	5.06	5.07	5.04	5.12	5.22	5.24	5.26	5.22	5.22	5.24	5.30	5.17%	5.25%
Kentucky Power	5.62	491386AL2	Sr Nts'D'	12/1/2032	BBB	5.42	5.45	5.31	5.15	5.40	5.58	5.61	5.76	5.68	5.62	5.74	5.83	5.55%	5.73%
Ohio Power Co.	6.6	677415CF6	Sr Nts 'G'	2/15/2033	BBB	5.22	5.18	5.14	5.00	5.24	5.54	5.57	5.64	5.62	5.56	5.59	5.67	5.41%	5.61%
Ohio Power Co.	4.85	677415CG4	Sr Nts 'H'	1/15/2014	BBB	4.67	4.67	4.69	4.70	4.72	4.73	4.75	4.77	4.79	4.80	4.82	4.84	4.75%	4.82%
Ohio Power Co.	6	677415CL3	Sr Nts'K'	6/1/2016	BBB	5.23	5.24	5.24	5.25	5.29	5.33	5.33	5.37	5.35	5.36	5.38	5.41	5.32%	5.38%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	5.18	5.21	5.22	5.23	5.27	5.30	5.31	5.34	5.35	5.36	5.37	5.40	5.30%	5.38%
PPL Energy Supply	6.2	69352JAH0	Sr Nts	5/15/2016	BBB	5.43	5.41	5.43	5.44	5.49	5.57	5.58	5.62	5.62	5.59	5.59	5.63	5.53%	5.60%
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	5.50	5.56	5.59	5.41	5.69	5.93	6.04	6.21	6.27	6.10	6.23	6.33	5.91%	6.22%
PPL Energy Supply	6.5	69352JAL1	Sr Nts	5/1/2018	BBB	5.44	5.47	5.49	5.46	5.50	5.61	5.61	5.69	5.74	5.74	5.75	5.84	5.61%	5.78%
PPL Energy Supply	6.3	69352JAM9	Sr Nts	7/15/2013	BBB	6.14	6.16	6.19	6.23	6.26	6.29							6.21%	
Pacific Gas & Electric Co.	4.8	694308GD3	1st	3/1/2014	BBB	4.60	4.60	4.62	4.63	4.65	4.66	4.68	4.69	4.71	4.73	4.75	4.76	4.67%	4.75%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	4.74	4.73	4.80	4.65	4.86	5.19	5.07	5.38	5.45	5.35	5.34	5.28	5.07%	5.32%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	4.79	4.75	4.74	4.58	4.85	5.12	5.02	5.28	5.31	5.24	5.30	5.26	5.02%	5.27%
Pepco Holdings, Inc.	6.12	713291AP7	Nts	6/1/2017	BBB	5.35	5.36	5.36	5.36	5.44	5.52	5.52	5.58	5.55	5.54	5.56	5.64	5.48%	5.58%
Progress Energy, Inc.	7.75	743263AE5	Sr Nts	3/1/2031	BBB	5.70	5.67	5.63	5.46	5.72	5.99	5.94	6.08	6.03	5.95	6.03	6.01	5.85%	6.00%
Progress Energy, Inc.	7	743263AG0	Sr Nts	10/30/2031	BBB	5.49	5.43	5.42	5.24	5.49	5.75	5.72	5.82	5.79	5.70	5.80	5.79	5.62%	5.76%
Progress Energy, Inc.	5.62	743263AL9	Sr Nts	1/15/2016	BBB	4.99	4.99	4.99	5.01	5.04	5.09	5.08	5.12	5.11	5.11	5.13	5.16	5.07%	5.13%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Public Serv, New Mexico	7.5	744499AN4	Sr Unsec Nts 'B'	8/1/2018	BBB	6.31	6.32	6.32	6.24	6.35	6.46	6.50	6.59	6.32	6.31	6.34	6.44	6.38%	6.36%
Public Service Co. of Oklahoma	6.15	744533BH2	Sr Nts'F'	8/1/2016	BBB	5.31	5.32	5.34	5.37	5.42	5.46	5.46	5.51	5.50	5.51	5.52	5.57	5.44%	5.53%
Public Service Co. of Oklahoma	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	5.22	5.12	5.03	5.00	5.21	5.47	5.51	5.67	5.59	5.53	5.65	5.72	5.39%	5.63%
Southwest'n Elec Power	5.38	845437BE1	Sr Nts	4/15/2015	BBB	5.03	5.03	4.99	4.98	5.01	5.02	5.04	5.06	5.07	5.08	5.09	5.10	5.04%	5.09%
Southwest'n Elec Power	4.9	845437BG6	Sr Nt Ser D	7/1/2015	BBB	4.62	4.59	4.60	4.61	4.63	4.64	4.65	4.66	4.67	4.68	4.64	4.65	4.64%	4.66%
Southwest'n Elec Power	5.55	845437BH4	Sr Nt Ser E	1/15/2017	BBB	4.95	4.93	4.94	4.88	4.92	4.99	5.02	5.08	5.05	5.05	4.98	5.05	4.99%	5.03%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	5.74	5.76	5.79	5.76	5.76	5.79	5.81	5.93	6.04	6.07	6.05	6.07	5.88%	6.06%
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	5.75	5.76	5.76	5.73	5.75	5.77	5.93	6.03	6.12	6.09	6.10	6.06	5.90%	6.08%
CMS Energy Corp.	6.88	125896AZ3	Sr Nts	12/15/2015	BBB-	6.09	6.08	6.02	6.03	6.09	6.11	6.13	6.16	6.16	6.18	6.20	6.19	6.12%	6.19%
CMS Energy Corp.	6.55	125896BA7	Sr Nts	7/17/2017	BBB-	5.55	5.54	5.48	5.48	5.55	5.63	5.66	5.70	5.67	5.63	5.66	5.71	5.61%	5.67%
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.27	5.27	5.26	5.09	5.31	5.56	5.62	5.91	5.82	5.75	5.91	5.84	5.55%	5.83%
Cleveland Elec. Illum	5.7	186108CF1	Sr Nts	4/1/2017	BBB-	5.02	5.03	5.03	5.02	5.10	5.17	5.17	5.23	5.17	5.16	5.18	5.26	5.13%	5.20%
Constellation Energy Group, Inc.	7.6	210371AF7	Nts	4/1/2032	BBB-	5.77	5.80	5.79	5.58	5.84	6.01	6.35	6.37	6.36	6.30	6.43	6.42	6.09%	6.38%
Constellation Energy Group, Inc.	4.55	210371AK6	Nts	6/15/2015	BBB-	4.22	4.22	4.23	4.24	4.25	4.27	4.28	4.29	4.30	4.31	4.32	4.33	4.27%	4.32%
Duquesne Light Holdings, Inc.	5.5	266233AA3	Sr Nts	8/15/2015	BBB-	5.09	5.09	5.08	5.03	5.05	5.07	5.08	5.10	5.15	5.16	5.17	5.15	5.10%	5.16%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.57	5.60	5.49	5.25	5.52	5.74	5.92	6.08	5.93	5.80	5.93	6.02	5.74%	5.92%
Exelon Corp.	4.9	30161NAD3	Sr Nts	6/15/2015	BBB-	4.50	4.51	4.52	4.53	4.54	4.56	4.58	4.60	4.61	4.62	4.63	4.64	4.57%	4.63%
Hawaiian Elec Indus	6.51	41987QAX1	M-T Nts'C'	5/5/2014	BBB-	6.11	6.13	6.16	6.18	6.21	6.23	6.26	6.28	6.31	6.33	6.36	6.39	6.25%	6.36%
Hawaiian Elec Indus	5.25	41987QBB8	M-T Nts 'D'	3/7/2013	BBB-	5.22	5.25											5.24%	
NiSource Finance	6.15	65473QAK9	Sr Nt	3/1/2013	BBB-	6.11												6.11%	
NiSource Finance	5.25	65473QAQ6	Gtd Nt	9/15/2017	BBB-	4.60	4.57	4.57	4.56	4.63	4.72	4.72	4.76	4.71	4.69	4.72	4.75	4.67%	4.72%
NiSource Finance	5.45	65473QAR4	Gtd Nt	9/15/2020	BBB-	4.66	4.67	4.66	4.61	4.76	4.89	4.87	4.96	4.94	4.86	4.87	4.90	4.80%	4.88%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	5.27	5.30	5.36	5.20	5.47	5.68	5.80	5.96	5.95	5.83	5.87	5.86	5.63%	5.85%
Pennsylvania Electric	6.625	708696BM0	Sr Nts 'C'	4/1/2019	BBB-	5.76	5.75	5.75	5.73	5.77	5.88	5.87	5.96	5.90	5.88	5.91	5.89	5.84%	5.89%
FirstEnergy Corp.	7.38	337932AC1	Nts 'C'	11/15/2031	BB+	5.86	5.97	6.32	6.16	6.53	6.99	6.89	7.40	7.29	6.98	6.97	6.78	6.68%	6.91%
El Paso Energy Corp MTN BE	8.05	28368EAA4	MTN	10/15/2030	BB	6.94	7.11	7.14	7.04	7.17	7.54	7.57	7.70	7.80	7.85	7.84	7.93	7.47%	7.87%
El Paso Energy Corp MTN BE	7.75	28368EAE6	MTN-tranche # Tr 00005	1/15/2032	BB	6.60	6.80	6.86	6.80	6.90	7.27	7.30	7.47	7.57	7.54	7.57	7.63	7.19%	7.58%
AES Corp. (The)	7.750	00130HBC8	Sr Nts	3/1/2014	BB-	7.25	7.32	7.35	7.33	7.45	7.48	7.50	7.52	7.59	7.59	7.63	7.67	7.47%	7.63%
AmerenEnergy Generating	7.95	02360XAJ6	Sr Nts 'F'	6/1/2032	BB-	12.42	14.45	10.74	10.67	9.93	10.39	10.32	10.56	10.46	10.25	9.81	10.06	10.84%	10.04%
NRG Energy, Inc.	7.25	629377AT9	SrNts	2/1/2014	BB-	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10%	7.10%
TXU Corp.	5.55	873168AL2	Sr Nts'P'	11/15/2014	D	5.96	6.37	6.31	6.10	6.45	7.00	8.13	9.42	14.23	13.87	11.93	13.70	9.12%	13.17%
TXU Corp.	6.5	873168AN8	Sr Nts'Q'	11/15/2024	D	9.55	10.15	9.59	8.90	8.90	9.42	10.87	12.90	20.31	18.57	17.33	18.57	12.92%	18.16%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	10.00	10.39	9.79	9.22	9.09	9.63	11.14	13.26	20.46	18.71	17.46	18.71	13.16%	18.29%
Allegheny Generating	6.88	017364AG5	Deb	9/1/2023	NR	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81%	6.81%
American Electric Power Co., Inc.	5.25	025537AE1	Sr Nts	6/1/2015	NR	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74%	4.74%
Cleveland Electric Illuminating Co.	5.65	186108CD6	Sr Nts	12/15/2013	NR	5.42	5.44	5.46	5.47	5.50	5.52	5.54	5.56	5.57	5.57	5.57	5.84	5.54%	5.66%
DynegyHldgs	8.38	26816LAT9	Sr Nts	5/1/2016	NR	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69%	14.69%
Empire District Electric Co. (The)	7.05	291641AX6	Sr Nts	12/15/2022	NR	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05%	7.05%
Entergy Gulf States	5.6	29364LAS1	1st	12/1/2014	NR	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60%	5.60%
Entergy Gulf States	5.7	29364LAU6	1st	6/1/2015	NR	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70%	5.70%
Entergy Mississippi	5.92	29364NAN8	1st	2/1/2016	NR	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92%	5.92%
MDU Resources Group, Inc.	5.98	552690AF6	Sr(Sec)Nts	12/15/2033	NR	6.08	6.11	6.06	5.54	5.78	5.96	5.99	6.15	6.06	5.93	6.05	6.12	5.99%	6.03%
Madison Gas & Elec Co MTN BE	5.26	5574A0AC1	MTN	9/29/2017	NR	4.54	4.55	4.54	4.54	4.60	4.58	4.59						4.56%	
NRG Energy, Inc.	7.38	629377AX0	SrNts	1/15/2017	NR	7.11												7.11%	
NorthWestern Corp.	5.88	668074AM9	Sr Sec Nts	11/1/2014	NR	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72%	5.72%
Ohio Edison Co.	6.4	677347CD6	Sr Nt	7/15/2016	NR	5.48	5.49	5.51	5.52	5.56	5.60	5.66	5.55					5.55%	
Ohio Power Co.	6.38	677415CJ8	Sr Nts 'I'	7/15/2033	NR	6.28	6.29	6.31	6.34	6.35	6.36	6.37	6.37	6.38	6.38	6.38	6.38	6.35%	6.38%
Orange & Rockland Utils	7	684065AU9	Deb 'G'	3/1/2029	NR	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69%	6.69%
PPL Energy Supply	2.62	69352JAE7	Sr Nt Conv	5/15/2023	NR	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25%	2.25%
Savannah Electric&Power	5.5	804787DJ5	Sr Nts'F'	12/15/2028	NR	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50%	5.50%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Sierra Pacific Resources	8.625	826428AH7	Sr Nts	3/15/2014	NR	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37%	8.37%
Sierra Pacific Resources	6.75	826428AN4	Sr Nts	8/15/2017	NR	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60%	6.60%
TECO Energy, Inc.	6.75	872375AP5	Nts	5/1/2015	NR	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92%	5.92%
Tennessee Valley Authority	8.25	880591BL5	Pwr Bonds '92D	4/15/2042	NR	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.78%	7.78%
Tennessee Valley Authority	6.235	880591CF7	Pwr Bonds '95B	7/15/2045	NR	5.04	5.02	4.97	4.93	5.13	5.31	5.50	5.51	5.59	5.53	5.61	5.28	5.29%	5.47%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	4.37	4.32	4.33	4.34	4.55	4.77	4.92	4.97	4.94	4.91	5.03	5.12	4.71%	5.02%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	4.37	4.33	4.37	4.30	4.55	4.87	5.00	5.04	4.97	4.91	4.99	5.17	4.74%	5.02%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	4.32	4.26	4.30	4.28	4.50	4.75	4.86	4.96	4.92	4.90	4.99	5.08	4.68%	4.99%
Union Electric	7.69	906548BT8	Sub Cap Inc Sec'A'	12/15/2036	NR	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49%	7.49%
			Counts of data			362	358	353	349	349	344	341	339	335	333	330	329	362	333

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.82%	4.82%
AA's	6.51%	6.60%
A's	5.15%	5.27%
BBB+'s	5.24%	5.38%
BBB's	5.41%	5.52%
BB's	7.79%	7.86%
B's	----	----
CC's	----	----
D	11.73%	16.54%
NR's	6.21%	6.32%
ALL	5.37%	5.54%
BBB- & Above	5.21%	5.33%
BB- & Above	5.26%	5.38%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	6.75	880591CJ9	Global Pwr Bonds'95E	11/1/2025	AAA	2.78	2.68	2.71	2.66	2.83	3.51	3.51	3.81	3.63	3.54	3.68	3.93	3.27%	3.72%
Tennessee Valley Authority	6.25	880591CU4	Pwr Bonds '97E	12/15/2017	AAA	1.12	1.07	1.17	1.22	1.56	2.02	1.22	1.38	1.34	1.27	1.27	1.49	1.34%	1.34%
Tennessee Valley Authority	7.125	880591DM1	Global Pwr Bonds '00G	5/1/2030	AAA	3.27	3.10	3.22	3.15	3.54	4.00	4.15	4.29	4.22	4.20	4.20	4.42	3.81%	4.27%
Tennessee Valley Authority	4.88	880591DS8	Global Pwr Bonds'01D	12/15/2016	AAA	0.86	0.85	0.09	1.00	1.21	1.46	0.62	0.88	0.72	0.67	0.78	0.93	0.84%	0.79%
Tennessee Valley Authority	4.7	880591DV1	Pwr Bonds\03 B"	7/15/2033	AAA	3.49	3.39	3.39	3.39	3.76	4.40	4.29	4.46	4.44	4.39	4.51	4.64	4.05%	4.51%
Tennessee Valley Authority	4.75	880591DW9	Pwr Bonds'03C	8/1/2013	AAA	2.48												2.48%	
Tennessee Valley Authority	4.38	880591DY5	Global Pwr Bonds'05B	6/15/2015	AAA	0.02	0.02	0.02	0.13	0.33		0.67	0.85	0.95	1.15	1.22	0.02	0.49%	0.80%
Madison Gas & Electric	7.7	557497AL8	1st	2/15/2028	AA-	7.51	7.51	7.51	7.50	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.53	7.51%	7.52%
Madison Gas & Elec Co MTN B	7.12	5574A0AB3	Tranche # Tr 00002	4/1/2032	AA-	4.37	4.41	4.34	4.10	4.44	4.70	4.75	4.98	4.85	4.76	4.95	5.04	4.64%	4.92%
Alabama Power Co.	5.5	010392DZ8	Sr Nts 'Q'	10/15/2017	A	1.39	1.37	1.33	1.23	1.54	2.00	1.99	2.13	1.87	1.77	1.84	1.94	1.70%	1.85%
Alabama Power Co.	5.88	010392EB0	Sr Nts 'S'	12/1/2022	A	2.99	3.01	2.96	2.72	3.26	3.61	3.60	3.86	3.67	3.55	3.79	4.00	3.42%	3.78%
Alabama Power Co.	5.7	010392EC8	Sr Nts 'T'	2/15/2033	A	4.07	4.06	4.04	3.80	4.19	4.45	4.50	4.73	4.61	4.64	4.76	4.79	4.39%	4.73%
Alabama Power Co.	5.6	010392EE4	Sr Nts'V'	3/15/2033	A	4.37	4.41	4.39	4.15	4.54	4.80	4.85	5.08	4.96	4.87	5.06	5.19	4.72%	5.04%
Alabama Power Co.	5.12	010392EK0	Sr Nts 'Z'	2/15/2019	A	2.23	2.21	2.17	2.07	2.43	2.79	2.59	2.58	2.32	2.22	2.29	2.68	2.38%	2.40%
Alabama Power Co.	5.2	010392ER5	Sr Nts'FF'	1/15/2016	A	1.33	1.31	0.92	0.80	1.00	1.16	1.11	1.32	1.18	1.11	0.76	0.97	1.08%	0.95%
Alabama Power Co.	5.55	010392EW4	Sr Nts'07A	2/1/2017	A	1.74	1.42	1.38	1.28	1.49	1.85	1.84	2.13	1.88	1.77	1.85	2.14	1.73%	1.92%
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.22	4.26	4.24	4.05	4.44	4.75	4.75	4.98	4.86	4.77	4.96	4.84	4.59%	4.86%
Progress Energy, Inc.	8.62	144141BP2	1st	9/15/2021	A	3.29	3.26	3.21	2.97	3.46	3.86	3.90	4.16	3.89	3.77	4.01	4.27	3.67%	4.02%
Progress Energy, Inc.	5.12	144141CT3	1st	9/15/2013	A	0.46	0.35	0.32	0.43	0.50	0.46	0.59						0.44%	
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.32	4.26	4.24	4.00	4.39	4.70	4.75	5.03	4.91	4.82	5.01	4.91	4.61%	4.91%
Progress Energy, Inc.	5.15	144141CW6	1st	4/1/2015	A	0.57	0.55	0.54	0.52	0.62	0.70	0.65	0.72	0.75	0.70	0.51	0.56	0.62%	0.59%
Progress Energy, Inc.	5.25	144141CX4	1st	12/15/2015	A	0.67	0.60	0.59	0.57	0.66	0.75	0.64	0.71	0.68	0.64	0.63	0.64	0.65%	0.64%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.17	4.21	4.19	3.98	4.44	4.75	4.77	4.93	4.81	4.72	4.81	4.79	4.55%	4.77%
Connecticut Lt & Pwr	5	207597DT9	1st & Ref '05A	4/1/2015	A	0.77	0.75	0.74	0.72	0.82	0.85	0.70	0.97	0.78	0.70	0.58	0.67	0.75%	0.65%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	4.32	4.36	4.34	4.10	4.44	4.80	4.85	5.08	4.96	4.87	5.06	5.14	4.69%	5.02%
Detroit Edison Co.	6.35	250847DU1	Sr Nts	10/15/2032	A	4.17	4.21	4.19	3.95	4.34	4.60	4.70	4.93	4.84	4.75	4.91	5.04	4.55%	4.90%
Detroit Edison Co.	5.4	250847DV9	Sr Nts'D'	8/1/2014	A	1.07	0.75	0.74	0.74	0.84	0.85	0.83	0.81	0.87	0.77	0.85	0.83	0.83%	0.82%
Detroit Edison Co.	4.8	250847DX5	Sr(Sec)Nts'AR'	2/15/2015	A	1.27	0.93	0.92	0.90	1.00	1.03	1.25	1.22	1.20	1.15	1.15	1.25	1.11%	1.18%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	4.32	4.36	4.34	4.10	4.49	4.75	4.80	5.03	4.91	4.82	5.01	5.14	4.67%	4.99%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.12	4.01	4.04	3.80	4.19	4.55	4.55	4.78	4.66	4.57	4.65	4.78	4.39%	4.67%
Duke Energy Corp.	5.3	264399EM4	1st & Ref	10/1/2015	A	0.67	0.60	0.60	0.57	0.65	0.68	0.64	0.71	0.68	0.60	0.51	0.60	0.63%	0.57%
Florida Power & Light	5.85	341081EP8	1st	2/1/2033	A	3.92	3.96	3.94	3.80	4.12	4.40	4.40	4.63	4.71	4.62	4.81	4.79	4.34%	4.74%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.02	4.01	3.99	3.70	4.09	4.40	4.49	4.72	4.51	4.42	4.61	4.59	4.30%	4.54%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.02	4.01	3.99	3.70	4.09	4.40	4.49	4.72	4.51	4.42	4.61	4.59	4.30%	4.54%
Florida Power & Light	5.95	341081ER4	1st	10/1/2033	A	4.02	3.96	3.84	3.65	4.04	4.35	4.30	4.53	4.41	4.32	4.44	4.57	4.20%	4.44%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	3.97	3.91	3.86	3.70	4.09	4.40	4.40	4.53	4.47	4.38	4.49	4.59	4.23%	4.49%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.02	3.92	3.90	3.70	4.14	4.53	4.43	4.62	4.49	4.41	4.56	4.64	4.28%	4.54%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.02	4.01	4.04	3.75	4.21	4.57	4.45	4.68	4.66	4.52	4.61	4.74	4.36%	4.62%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.02	4.01	4.04	3.84	4.23	4.55	4.50	4.68	4.66	4.50	4.57	4.70	4.36%	4.59%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.02	4.02	4.04	3.80	4.21	4.55	4.45	4.68	4.56	4.47	4.61	4.74	4.35%	4.61%
Florida Power Corp.	5.9	341099CB3	1st	3/1/2033	A	4.21	4.25	4.23	3.99	4.49	4.90	4.85	4.98	4.86	4.77	4.91	5.04	4.62%	4.91%
Florida Power Corp.	4.8	341099CC1	1st	3/1/2013	A	0.31												0.31%	
Florida Power Corp.	5.8	341099CG2	1st Mtg Bd	9/15/2017	A	1.59	1.47	1.43	1.33	1.63	1.99	1.69	1.98	1.73	1.62	1.60	1.94	1.67%	1.72%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	4.27	4.31	4.29	4.00	4.39	4.85	4.65	4.88	4.79	4.67	4.67	4.74	4.54%	4.69%
Georgia Power Co.	5.75	373334FS5	Sr Nts 'N'	4/15/2023	A	2.87	2.89	2.84	2.60	3.09	3.49	3.58	3.84	3.82	3.70	3.94	4.20	3.41%	3.95%
Georgia Power Co.	4.9	373334FT3	Sr Nts 'Q'	9/15/2013	A	0.36	0.35	0.36	0.42	0.52	0.30	0.52						0.40%	
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.22	5.24	5.25	5.27	5.32	5.36	5.38	5.42	5.42	5.43	5.45	5.49	5.35%	5.46%
Georgia Power Co.	5.25	373334GA3	Sr Nt Ser Z	12/15/2015	A	0.86	0.85	0.79	0.75	0.84	0.95	0.90	0.97	0.88	0.80	0.79	0.89	0.86%	0.83%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	4.27	4.26	4.28	4.04	4.49	4.93	4.84	5.03	4.96	4.82	5.01	5.09	4.67%	4.97%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	4.27	4.26	4.28	4.04	4.49	4.93	4.84	5.03	4.96	4.82	5.01	5.09	4.67%	4.97%
Georgia Power Co.	5.7	373334GE5	Sr Nts'07B	6/1/2017	A	1.24	1.22	1.18	1.16	1.43	1.88	1.69	1.98	1.67	1.56	1.60	1.84	1.54%	1.67%
Gulf Power Co.	4.35	402479BT5	Sr Nts 'G'	7/15/2013	A	0.72	0.71	0.70	0.83	1.03								0.80%	
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.00	4.99	5.01	5.08	5.13	5.18	5.18	5.23	5.21	5.22	5.22	5.26	5.14%	5.23%
Gulf Power Co.	5.3	402479BX6	Sr Nts'M'	12/1/2016	A	1.88	1.86	1.84	1.26	1.46	1.64	1.53	1.74	1.59	1.43	1.40	1.62	1.60%	1.48%
MidAmerican Energy Co.	5.95	595620AG0	Sr Nts	7/15/2017	A	1.39	1.37	1.33	1.18	1.46	1.82	1.84	2.08	1.58	1.47	1.50	1.64	1.56%	1.54%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.17	4.16	4.14	3.90	4.31	4.70	4.70	4.88	4.76	4.62	4.76	4.84	4.50%	4.74%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	4.88	4.89	4.90	4.91	4.96	5.01	5.01	5.05	5.04	5.05	5.06	5.10	4.99%	5.07%
Northern IllinoisGas	6.58	665228BQ4	1st	2/15/2028	A	4.38	4.40	4.29	4.05	4.49	4.84	4.88	5.14	4.94	4.82	5.06	5.30	4.72%	5.06%
Northern IllinoisGas	7.2	665228BV3	1st	5/15/2016	A	1.68	1.66	1.59	1.54	1.69	1.85	1.75	1.96	1.80	1.73	1.72	1.87	1.74%	1.77%
Northern Sts Pwr (Minn)	7.125	665772BN8	1st	7/1/2025	A	3.44	3.46	3.41	3.04	3.53	3.88	3.92	4.18	3.99	3.90	4.14	4.40	3.77%	4.15%
Northern Sts Pwr (Minn)	6.5	665772BQ1	1st	3/1/2028	A	3.73	3.51	3.51	3.32	3.81	4.16	4.20	4.46	4.52	4.25	4.49	4.75	4.06%	4.50%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st	7/15/2035	A	3.96	4.00	3.98	3.74	4.13	4.54	4.45	4.63	4.56	4.47	4.66	4.69	4.32%	4.61%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	3.97	4.01	3.99	3.75	4.17	4.55	4.60	4.63	4.61	4.47	4.66	4.74	4.35%	4.62%
Northern Sts Pwr (Minn)	6.2	665772CC1	1st	7/1/2037	A	4.02	4.06	4.04	3.80	4.19	4.55	4.60	4.63	4.61	4.50	4.69	4.79	4.37%	4.66%
Oncor Electric Delivery	6.38	68233DAL1	Sr Sec Nts	1/15/2015	A	1.07	1.00	1.01	0.96	0.97	1.07	1.01	1.06	1.07	1.00	0.98	1.03	1.02%	1.00%
Oncor Electric Delivery	7.25	68233DAP2	Sr Sec Nts	1/15/2033	A	4.82	4.66	4.64	4.25	4.54	4.95	4.85	5.08	5.03	5.05	5.19	5.12	4.85%	5.12%
Oncor Electric Delivery	7	68233DAR8	Deb	9/1/2022	A	3.59	3.56	3.41	2.85	3.33	3.81	3.70	3.96	3.85	3.87	4.11	4.30	3.70%	4.09%
Oncor Electric Delivery	7	68233DAT4	Sr Sec Nts	5/1/2032	A	4.82	4.66	4.59	4.20	4.49	4.90	4.85	5.03	5.01	5.05	5.21	5.14	4.83%	5.13%
PacifiCorp	7.7	695114BT4	1st	11/15/2031	A	4.17	4.19	4.17	3.87	4.20	4.70	4.70	4.83	4.71	4.62	4.81	4.94	4.49%	4.79%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	4.22	4.26	4.24	4.00	4.39	4.65	4.70	4.93	4.81	4.82	5.01	5.14	4.60%	4.99%
PacifiCorp	4.95	695114BY3	1st	8/15/2014	A	0.87	1.00	0.99	0.98	1.08	1.10	1.07	1.06	0.52	0.43	0.44	0.47	0.83%	0.45%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.12	4.06	4.04	3.85	4.24	4.60	4.65	4.71	4.66	4.57	4.71	4.79	4.42%	4.69%
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.12	4.11	4.09	3.90	4.29	4.70	4.65	4.78	4.76	4.67	4.81	4.84	4.48%	4.77%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.12	4.09	4.04	3.88	4.27	4.70	4.60	4.75	4.66	4.59	4.73	4.72	4.43%	4.68%
Potomac Electric Power	4.95	737679CW8	Sr Nts	11/15/2013	A	0.58	0.46	0.40	0.43	0.50	0.47	0.51	0.42	0.93				0.52%	
Potomac Electric Power	4.65	737679CX6	Sr Nts	4/15/2014	A	0.82	0.80	0.81	0.78	0.85	0.82	0.82	0.79	0.88	0.76	0.89	0.85	0.82%	0.83%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	4.62	4.66	4.64	4.15	4.54	4.80	4.90	5.13	5.01	4.97	5.16	5.29	4.82%	5.14%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	4.37	4.41	4.39	4.05	4.44	4.76	4.80	5.03	4.91	4.97	5.16	5.29	4.72%	5.14%
Public Serv, Colorado	5.5	744448BX8	1st Coll Tr Ser 15	4/1/2014	A	0.45	0.37	0.38	0.40	0.45	0.40	0.57	0.53	0.66	0.51	0.50	0.43	0.47%	0.48%
Public Serv, New Hamp.	5.25	744482BG4	1st 'L'	7/15/2014	A	1.27	1.25	1.24	1.23	1.33	1.33	1.31	1.29	1.34	1.25	1.32	1.31	1.29%	1.29%
South Carolina Electric & Gas C	7.12	837004BC3	1st	6/15/2013	A	0.55	0.55	0.49	0.89									0.62%	
South Carolina Electric & Gas C	6.62	837004BV1	1st	2/1/2032	A	4.32	4.06	4.04	3.87	4.39	4.75	4.75	4.98	4.86	4.77	4.76	4.66	4.52%	4.73%
South Carolina Electric & Gas C	5.8	837004BW9	1st	1/15/2033	A	4.27	4.31	4.29	4.05	4.44	4.80	4.80	5.03	4.91	4.82	4.76	4.79	4.61%	4.79%
South Carolina Electric & Gas C	5.3	837004BX7	1st	5/15/2033	A	4.27	4.26	4.24	4.00	4.39	4.79	4.79	4.93	4.76	4.67	4.71	4.74	4.55%	4.71%
South Carolina Electric & Gas C	5.25	837004BY5	1st	11/1/2018	A	1.67	1.65	1.61	1.58	1.84	2.20	2.09	2.38	2.12	1.94	2.01	2.23	1.94%	2.06%
South Carolina Electric & Gas C	5.25	837004BZ2	1st	3/1/2035	A	4.67	4.71	4.69	4.45	4.84	5.15	4.79	5.02	4.90	4.81	5.00	5.03	4.84%	4.95%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	4.57	4.61	4.59	4.35	4.74	5.05	4.90	5.13	5.01	4.92	5.11	5.14	4.84%	5.06%
Southern California Edison Co.	5	842400ER0	1st & Ref '04A	1/15/2014	A	0.43	0.41	0.44	0.37	0.44	0.46	0.40	0.34	0.59	0.01			0.39%	0.01%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	3.97	3.96	3.94	3.70	4.09	4.45	4.45	4.58	4.56	4.47	4.66	4.63	4.29%	4.59%
Southern California Edison Co.	5	842400EY5	1st & Ref'05A	1/15/2016	A	0.81	0.79	0.67	0.62	0.75	1.02	1.01	1.14	0.87	0.80	0.69	0.90	0.84%	0.80%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.12	4.06	4.04	3.80	4.19	4.65	4.45	4.70	4.64	4.55	4.71	4.79	4.39%	4.68%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.07	4.06	4.04	3.80	4.19	4.60	4.44	4.65	4.58	4.49	4.66	4.69	4.36%	4.61%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.07	4.06	4.04	3.80	4.24	4.65	4.45	4.68	4.66	4.57	4.63	4.76	4.38%	4.65%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.17	4.06	4.04	3.80	4.23	4.65	4.45	4.68	4.69	4.56	4.71	4.79	4.40%	4.69%
Southern Indiana Gas & El	8.88	843163AP1	1st	6/1/2016	A	1.88	1.86	1.72	1.67	1.82	1.98	1.89	2.09	1.94	1.86	1.85	2.01	1.88%	1.91%
Southern Indiana Gas & El	6.72	843163AX4	Sr Nts	8/1/2029	A	4.70	4.74	4.64	4.40	4.79	5.05	5.10	5.33	5.21	5.12	5.31	5.44	4.99%	5.29%
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	4.22	4.26	4.24	4.00	4.39	4.80	4.95	5.18	5.06	4.97	5.16	5.29	4.71%	5.14%
Wisconsin Public Service	7.125	976843AX0	1st	7/1/2023	A	7.04	7.04	7.04	7.03	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.07%	7.08%
Wisconsin Public Service	4.8	976843BD3	Sr(Sec)Nts	12/1/2013	A	0.96	0.94	0.97	0.97	1.04	0.94	0.97	0.90	1.22	0.91			0.98%	0.91%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.17	4.21	4.19	3.95	4.34	4.60	4.65	4.83	4.71	4.62	4.81	4.94	4.50%	4.79%
Arizona Public Service	4.65	040555CE2	Nts	5/15/2015	A-	0.90	0.87	0.86	0.84	0.92	1.15	1.10	1.17	1.14	1.10	0.85	0.94	0.99%	0.96%
Arizona Public Service	5.625	040555CF9	Nts	5/15/2033	A-	4.52	4.41	4.64	4.40	4.74	5.10	5.10	5.33	5.21	5.12	5.31	5.34	4.94%	5.26%
Arizona Public Service	5.8	040555CG7	Nts	6/30/2014	A-	0.77	0.75	0.66	0.67	0.84	0.80	0.88	0.87	0.92	0.76	0.86	0.86	0.80%	0.83%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.32	4.16	4.14	4.10	4.49	4.80	4.80	5.03	4.91	4.82	5.01	4.94	4.63%	4.92%
Arizona Public Service	6.25	040555CJ1	Nt	8/1/2016	A-	1.26	1.13	1.11	1.02	1.09	1.39	1.28	1.49	1.40	1.23	1.21	1.42	1.25%	1.29%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	4.52	4.51	4.64	4.40	4.74	5.10	5.10	5.37	5.21	5.12	5.31	5.29	4.94%	5.24%
Avista Corp.	5.45	05379BAH0	1st	12/1/2019	A-	2.63	2.61	2.57	2.47	2.82	3.19	3.09	3.38	3.12	3.02	3.09	3.48	2.96%	3.20%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	4.52	4.56	4.54	4.30	4.69	4.95	4.95	5.18	5.06	4.97	5.16	5.29	4.85%	5.14%
Avista Corp.	5.7	05379BAM9	1st	7/1/2037	A-	4.42	4.46	4.44	4.20	4.59	4.85	4.95	5.18	5.06	4.97	5.16	5.29	4.80%	5.14%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	4.42	4.46	4.44	4.20	4.59	4.85	4.95	5.18	5.06	4.97	5.16	5.29	4.80%	5.14%
CenterPoint Energy Res	5.95	15189WAB6	Sr Nts	1/15/2014	A-	1.11	1.09	0.68	0.69	0.75								0.86%	
CenterPoint Energy Houston	5.7	15189XAC2	Gen Mtge'J2'	3/15/2013	A-	0.61												0.61%	
CenterPoint Energy Houston	6.95	15189XAD0	Gen Mtge'K2'	3/15/2033	A-	4.12	4.06	4.04	3.80	4.19	4.45	4.55	4.73	4.61	4.52	4.71	4.68	4.37%	4.64%
CenterPoint Energy Houston	5.6	15189XAH1	Gen Mtge'L2'	7/1/2023	A-	3.29	3.31	3.26	3.02	3.41	4.06	4.05	4.16	3.97	3.85	4.09	4.25	3.73%	4.06%
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	4.67	4.63	4.61	4.37	4.76	5.02	5.07	5.28	5.21	5.22	5.34	5.39	4.96%	5.32%
Commonwealth Edison	7.625	202795FJ4	1st Ser 92	4/15/2013	A-	0.56	0.40											0.48%	
Commonwealth Edison	7.5	202795FM7	1st Ser 94	7/1/2013	A-	0.65	0.64	0.59	0.94									0.71%	
Commonwealth Edison	5.875	202795HG8	1st Ser 100	2/1/2033	A-	4.12	4.04	4.02	3.78	4.17	4.50	4.50	4.87	4.70	4.61	4.76	4.79	4.41%	4.72%
Commonwealth Edison	4.7	202795HH6	1st Ser 101	4/15/2015	A-	0.87	0.85	0.66	0.67	0.77	0.80	1.00	1.07	0.85	0.67	0.67	0.77	0.80%	0.70%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.12	4.12	4.09	3.92	4.25	4.60	4.50	4.76	4.74	4.62	4.71	4.84	4.44%	4.72%
Commonwealth Edison	5.95	202795HN3	1st Ser 104	8/15/2016	A-	1.16	1.14	1.12	1.00	1.12	1.29	1.38	1.39	1.29	1.22	1.21	1.35	1.22%	1.26%
Connecticut Lt & Pwr	7.875	207597CZ6	1st & Ref D	10/1/2024	A-	3.89	3.91	3.86	3.62	4.11	4.46	4.50	4.76	4.57	4.45	4.69	4.95	4.31%	4.70%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	4.22	4.26	4.24	3.95	4.29	4.65	4.65	4.88	4.76	4.67	4.86	4.84	4.52%	4.79%
Connecticut Lt & Pwr	5.38	207597DW2	1st & Ref'07A	3/1/2017	A-	1.39	1.37	1.33	1.23	1.59	1.95	1.99	2.08	1.83	1.72	1.65	2.04	1.68%	1.80%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	4.37	4.41	4.39	4.15	4.44	4.80	4.85	5.08	4.96	4.87	5.06	5.14	4.71%	5.02%
Consolidated Edison, Inc.	5.88	209111EB5	Deb '03A	4/1/2033	A-	4.32	4.36	4.34	4.10	4.49	4.80	4.70	4.93	4.81	4.72	4.91	5.04	4.63%	4.89%
Consolidated Edison, Inc.	3.85	209111EC3	Deb'03B	6/15/2013	A-	0.66	0.65	0.63	0.83									0.69%	
Consolidated Edison, Inc.	4.7	209111EE9	Deb'04A	2/1/2014	A-	0.61	0.59	0.84	0.82	0.88	0.82	0.51	0.46	0.64	0.45	0.80		0.67%	0.63%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.32	4.36	4.34	4.05	4.44	4.75	4.70	4.98	4.96	4.87	5.06	4.89	4.64%	4.94%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.00	4.04	4.02	3.78	4.17	4.48	4.50	4.79	4.61	4.57	4.76	4.74	4.37%	4.69%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.32	4.36	4.34	4.10	4.49	4.80	4.70	5.07	4.95	4.77	4.96	5.04	4.66%	4.92%
Consolidated Edison, Inc.	5.38	209111EK5	Deb'05C	12/15/2015	A-	1.02	0.85	0.84	0.77	0.86	0.93	0.85	0.86	0.79	0.75	0.74	0.84	0.84%	0.78%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.12	4.11	4.09	3.85	4.29	4.60	4.60	4.83	4.71	4.62	4.76	4.79	4.45%	4.72%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	4.17	4.10	4.09	3.95	4.34	4.70	4.65	4.88	4.81	4.72	4.76	4.89	4.51%	4.79%
Consolidated Edison, Inc.	5.5	209111EN9	Deb'06C	9/15/2016	A-	1.13	0.96	0.92	0.86	1.07	1.24	1.28	1.44	1.20	1.13	1.01	1.12	1.11%	1.09%
Consolidated Edison, Inc.	5.3	209111EP4	Deb'06D	12/1/2016	A-	1.16	1.04	1.02	0.93	1.10	1.34	1.33	1.44	0.99	1.01	0.94	1.15	1.12%	1.03%
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.12	4.14	4.12	3.90	4.34	4.70	4.60	4.78	4.66	4.57	4.65	4.78	4.45%	4.67%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.17	4.16	4.14	3.90	4.34	4.75	4.60	4.83	4.81	4.67	4.76	4.79	4.49%	4.74%
Consumers Energy Co.	5.5	210518CE4	1st 'P'	8/15/2016	A-	1.18	0.96	0.90	0.78	0.99	1.21	1.08	1.32	1.18	1.11	1.09	1.04	1.07%	1.08%
Consumers Energy Co.	5	210518CF1	1st Mtg Bd	3/15/2015	A-	0.82	0.70	0.62	0.62	0.67	0.70							0.69%	
Consumers Energy Co.	5.65	210518CL8	1st	4/15/2020	A-	2.34	2.28	2.23	1.89	2.34	2.71	2.88	3.06	2.77	2.65	2.89	2.96	2.58%	2.83%
Entergy Arkansas	6.38	29364DAK6	1st	11/1/2034	A-	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37%	6.37%
Entergy Arkansas	5.66	29364DAL4	1st	2/1/2025	A-	5.14	4.83	4.86	4.89	4.93	4.96	4.99	5.03	5.06	5.08	5.12	5.24	5.01%	5.15%
Entergy Gulf States	6.18	29364LAT9	1st	3/1/2035	A-	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17%	6.17%
Entergy Mississippi	4.95	29364NAK4	1st	6/1/2018	A-	4.93	5.00	4.99	5.00	5.00	5.01	5.00	5.01	5.01	5.01	5.01	5.02	5.00%	5.01%
Entergy Mississippi	6.25	29364NAL2	1st	4/1/2034	A-	6.14	6.14	6.15	6.16	5.99	6.01	6.04	6.06	6.09	6.10	6.13	6.16	6.10%	6.13%
Entergy New Orleans	5.65	29364PAJ2	1st	9/10/2029	A-	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64%	5.64%
Entergy New Orleans	5.6	29364PAK9	1st	9/1/2024	A-	5.58	5.58	5.58	5.58	5.58	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59%	5.59%
Idaho Pwr	6	45138LAL7	Sec M-T Nts'D'	11/15/2032	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.70	4.93	4.80	4.71	4.90	4.99	4.56%	4.87%
Idaho Pwr	4.25	45138LAM5	Sec M-T Nts 'E'	10/1/2013	A-	0.72	0.70	0.72	0.74	0.66	0.53	0.59	0.44					0.64%	
Idaho Pwr	5.5	45138LAN3	Sec M-T Nts 'E'	4/1/2033	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.75	4.98	4.85	4.76	4.95	5.04	4.59%	4.92%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	8/15/2035	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr Co 1st Mtg Secd MT	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Interstate Pwr & Lt	6.45	461070AC8	Sr Deb	10/15/2033	A-	4.52	4.56	4.44	4.20	4.59	4.90	4.95	5.18	5.01	4.82	4.96	5.09	4.77%	4.96%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	4.52	4.56	4.44	4.20	4.59	4.90	4.95	5.18	5.01	4.82	4.96	5.09	4.77%	4.96%
Interstate Pwr & Lt	5.5	461070AE4	Sr Deb	7/15/2025	A-	4.04	4.06	4.01	3.77	4.26	4.66	4.70	4.96	4.71	4.50	4.69	4.85	4.43%	4.68%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.02	5.06	5.04	4.70	5.09	5.40	5.20	5.38	5.26	5.07	5.26	5.39	5.16%	5.24%
KeySpan Corp.	4.65	49337WAG5	Nts	4/1/2013	A-	0.54	0.46											0.50%	
KeySpan Corp.	5.88	49337WAH3	Nts	4/1/2033	A-	4.92	4.96	4.94	4.55	4.94	5.25	5.25	5.48	5.36	5.22	5.34	5.47	5.14%	5.34%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	4.77	4.81	4.79	4.42	4.79	5.28	5.30	5.43	5.31	5.12	5.31	5.39	5.06%	5.27%
Oklahoma Gas & Elec Co	6.65	678858AZ4	Sr Nts	7/15/2027	A-	4.04	4.06	4.01	3.72	4.21	4.56	4.60	4.86	4.67	4.55	4.79	5.05	4.43%	4.80%
Oklahoma Gas & Elec Co	6.5	678858BB6	Sr Nt	7/15/2017	A-	1.84	1.82	1.68	1.58	1.69	2.05	1.99	2.28	2.03	1.92	2.00	2.39	1.94%	2.10%
Oklahoma Gas & Elec Co	6.5	678858BC4	Sr Nt	4/15/2028	A-	4.63	4.64	4.59	4.35	4.84	5.19	5.23	5.49	4.86	4.75	4.99	5.25	4.90%	5.00%
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	4.45	4.49	4.47	4.23	4.59	4.95	4.95	5.18	5.06	4.97	5.16	5.19	4.81%	5.11%
Oklahoma Gas & Elec Co	5.15	678858BG5	Sr Nts	1/15/2016	A-	1.36	1.34	0.94	0.89	1.06	1.23	1.12	1.33	1.05	0.98	0.96	1.17	1.12%	1.04%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	4.52	4.56	4.54	4.30	4.69	4.95	5.00	5.08	4.96	4.87	5.06	5.19	4.81%	5.04%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.07	4.11	4.09	3.83	4.22	4.59	4.64	4.75	4.69	4.60	4.79	4.79	4.43%	4.73%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.22	4.26	4.24	4.00	4.39	4.65	4.70	4.93	4.81	4.72	4.91	4.94	4.56%	4.86%
Penna P&L	7.375	709051CD6	1st	3/1/2014	A-	0.57	0.55	0.55	0.56	0.65	0.55	0.58	0.52	0.75	0.52	0.88	0.68	0.61%	0.69%
Portland Gen'l Elec	9.31	73651HAV3	M-T Nts	8/11/2021	A-	3.69	3.71	3.51	3.27	3.16	3.51	3.56	3.83	3.63	3.51	3.75	4.00	3.59%	3.75%
Public Svc Co New Hampshire	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	4.52	4.56	4.54	4.30	4.69	4.90	4.95	5.18	5.06	4.97	5.16	5.29	4.84%	5.14%
Public Service Electric and Gas	8	744567BA5	1st & Ref	6/1/2037	A-	5.07	5.11	5.09	4.85	5.24	5.50	5.55	5.78	5.66	5.57	5.76	5.89	5.42%	5.74%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	4.87	4.81	4.79	4.55	4.94	5.20	5.25	5.48	5.36	5.27	5.46	5.59	5.13%	5.44%
Public Service Electric and Gas	5	744567BB3	1st & Ref	7/1/2037	A-	4.87	4.81	4.79	4.55	4.94	5.20	5.25	5.48	5.36	5.27	5.46	5.59	5.13%	5.44%
Public Service Electric and Gas	9.25	744567CN6	1st & Ref CC	6/1/2021	A-	3.14	3.16	3.11	2.87	3.36	3.71	3.76	4.01	3.82	3.70	3.94	4.20	3.57%	3.95%
Public Service Electric and Gas	6.75	744567EP9	1st & Ref VV	1/1/2016	A-	1.48	1.19	1.07	1.02	1.22	1.38	1.29	1.49	1.36	1.28	1.27	1.47	1.29%	1.34%
Public Svc Elec Gas Co Secd M	7.04	74456QAG1	MTN Tranche # Tr 00007	11/6/2020	A-	3.09	3.11	3.06	2.82	3.31	3.66	3.70	3.96	3.72	3.60	3.84	4.10	3.50%	3.85%
Public Service Electric and Gas	5.38	74456QAL0	Sec M-T Nts 'C'	9/1/2013	A-	0.51	0.50	0.50	0.53	0.66	0.37	0.55						0.52%	
Public Service Electric and Gas	5	74456QAN6	Sec M-T Nts'D'	8/15/2014	A-	0.57	0.50	0.54	0.53	0.63	0.65	0.62	0.52	0.54	0.45	0.52	0.51	0.55%	0.49%
Public Svc Elec Gas Co Secd M	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.02	4.01	3.99	3.75	4.14	4.45	4.45	4.68	4.51	4.42	4.61	4.69	4.31%	4.57%
Public Svc Elec Gas Co Secd M	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.02	3.98	3.96	3.74	4.13	4.44	4.45	4.68	4.56	4.42	4.63	4.69	4.31%	4.58%
Public Svc Elec Gas Co Secd M	5.8	74456QAR7	Secured Mtn Series E Note	5/1/2037	A-	4.02	3.98	3.96	3.75	4.14	4.45	4.50	4.73	4.56	4.47	4.68	4.74	4.33%	4.63%
Puget Sound Pwr & Lt	7.02	74531EAA0	Sr M-T Nts'A'	12/1/2027	A-	4.14	4.16	4.16	3.53	3.91	4.31	4.35	4.51	4.20	4.30	4.29	4.50	4.20%	4.36%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Puget Sound Energy	6.74	74531EAB8	Sr M-T Nts 'A'	6/15/2018	A-	1.94	1.92	1.83	1.73	2.04	2.40	2.34	2.63	2.35	2.25	2.32	2.64	2.20%	2.40%
Puget Sound Energy	7	74531EAC6	Sr M-T Nts 'B'	3/9/2029	A-	4.87	4.66	4.69	4.45	4.24	4.50	4.55	4.78	4.65	4.62	4.81	4.94	4.65%	4.79%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.04	4.08	4.06	3.82	4.19	4.55	4.55	4.78	4.71	4.62	4.81	4.79	4.42%	4.74%
Puget Sound Energy	5.2	745332BV7	Sr(Sec)Nts	10/1/2015	A-	1.07	1.05	1.04	1.02	1.11	1.15	1.05	1.12	1.09	1.05	1.17	0.95	1.07%	1.06%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	4.17	4.16	4.14	3.90	4.29	4.75	4.65	4.88	4.76	4.67	4.86	4.94	4.51%	4.82%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	4.17	4.16	4.14	3.90	4.29	4.70	4.65	4.88	4.76	4.67	4.86	4.89	4.51%	4.81%
Southwestern Public Serv	5.6	845743BK8	Sr Nts'E'	10/1/2016	A-	2.28	2.26	2.24	1.41	1.61	1.79	1.63	1.84	1.69	1.63	1.61	1.82	1.82%	1.69%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	4.52	4.46	4.44	4.20	4.59	4.94	4.90	5.13	5.06	4.97	5.16	5.19	4.80%	5.11%
Virginia Electric & Power Co.	4.75	927804EU4	Sr Nts 'A'	3/1/2013	A-	0.27												0.27%	
Virginia Electric & Power Co.	5.25	927804EW0	Sr Nts 'C'	12/15/2015	A-	0.87	0.85	0.79	0.77	0.71	0.75	0.75	0.82	0.79	1.05	1.04	1.14	0.86%	1.08%
Virginia Electric & Power Co.	5.4	927804EZ3	Sr Nts'A'	1/15/2016	A-	0.74	0.72	0.72	0.67	0.81	0.97	0.89	1.10	0.96	0.89	0.82	1.02	0.86%	0.91%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.07	4.06	4.02	3.78	4.19	4.47	4.50	4.73	4.68	4.52	4.71	4.81	4.38%	4.68%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.12	4.06	4.04	3.77	4.27	4.60	4.50	4.73	4.70	4.59	4.74	4.79	4.41%	4.71%
Virginia Electric & Power Co.	5.95	927804FC3	Sr Nt 2007 Ser B	9/15/2017	A-	1.33	1.22	1.23	1.08	1.40	1.76	1.69	1.88	1.63	1.52	1.50	1.67	1.49%	1.56%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	4.12	4.11	4.09	3.82	4.24	4.65	4.65	4.78	4.71	4.62	4.84	4.88	4.46%	4.78%
Virginia Electric & Power Co.	5.4	927804FF6	Sr Nt 2008 Ser A	4/30/2018	A-	1.44	1.42	1.30	1.23	1.59	2.05	1.80	2.16	1.90	1.82	1.83	2.11	1.72%	1.92%
Washington Water Power	7.53	94068VAA1	Secd MTN	5/5/2023	A-	3.89	3.91	3.86	3.62	4.11	4.46	4.45	4.71	4.52	4.40	4.64	4.90	4.29%	4.65%
Washington Water Power	7.39	94068VAF0	Sec M-T Nts'A'	5/11/2018	A-	2.94	2.92	2.88	2.78	3.14	3.50	3.39	3.63	3.37	3.27	3.34	3.73	3.24%	3.45%
Westar Energy, Inc.	6	95709TAA8	1st Mtg Bd	7/1/2014	A-	1.22	0.90	0.78	0.79	0.90	0.87	0.74	0.64	0.72	0.50	0.61	0.48	0.76%	0.53%
Westar Energy, Inc.	5.15	95709TAB6	1st Mtg Bd	1/1/2017	A-	1.94	1.54	1.50	1.33	1.44	1.80	1.79	2.08	1.99	1.88	1.96	2.35	1.80%	2.06%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.54	5.51	5.53	5.54	5.58	5.62	5.63	5.67	5.73	5.74	5.76	5.84	5.64%	5.78%
Westar Energy, Inc.	5.1	95709TAD2	1st	7/15/2020	A-	2.44	2.56	2.26	2.02	2.51	2.86	3.00	3.19	3.02	2.90	2.99	3.09	2.74%	2.99%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.39	5.35	5.37	5.38	5.42	5.46	5.47	5.52	5.63	5.64	5.64	5.75	5.50%	5.68%
Wisconsin Electric Power Comp	6.875	976656BL1	Deb	12/1/2095	A-	5.37	5.26	4.99	4.75	5.02	5.40	5.45	5.76	5.64	5.55	5.74	5.87	5.40%	5.72%
Wisconsin Electric Power	6.5	976656BP2	Deb	6/1/2028	A-	4.37	4.39	4.16	3.67	4.16	4.76	4.03	4.28	4.09	3.97	4.54	4.80	4.27%	4.44%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	3.97	4.01	3.92	3.75	4.14	4.40	4.50	4.73	4.57	4.52	4.66	4.79	4.33%	4.66%
AmerenUE	5.1	02360FAA4	Sr Sec Nts	10/1/2019	BBB+	2.27	2.22	2.18	2.08	2.43	2.75	2.69	2.98	2.52	2.42	2.49	2.93	2.50%	2.61%
AmerenUE	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.12	4.16	4.14	3.90	4.29	4.60	4.55	4.78	4.66	4.57	4.68	4.79	4.44%	4.68%
AmerenUE	5.4	02360FAC0	Sr Sec Nts	2/1/2016	BBB+	1.38	1.36	0.95	0.90	1.10	1.26	1.16	1.37	1.23	1.16	1.14	1.35	1.20%	1.22%
CenterPoint Energy, Inc.	6.85	15189TAG2	Sr Nts'B'	6/1/2015	BBB+	1.42	1.16	1.04	1.18	1.14	1.35	1.20	1.22	1.16	1.10	1.11	1.05	1.18%	1.09%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nts	2/1/2017	BBB+	1.94	1.92	1.63	1.53	1.84	2.20	1.79	2.06	1.77	1.66	1.58	1.88	1.82%	1.71%
CenterPoint Energy Res	7.875	15189YAB2	Sr Nts	4/1/2013	BBB+	0.57	0.56											0.57%	
Central Illinois Light	6.2	153645AX4	Sr Secd Nt 144a	6/15/2016	BBB+	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77%	3.77%
Central Illinois Light	6.7	153645BA3	Sr Secd Nt 144a	6/15/2036	BBB+	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09%	6.09%
Cincinnati Gas & Electric Co.	6.9	172070BT0	Deb	6/1/2025	BBB+	4.34	4.36	4.31	4.07	3.96	4.36	4.65	4.91	4.72	4.60	4.84	4.75	4.49%	4.73%
Cleco Power LLC	5.375	185508AC2	Nts	5/1/2013	BBB+	1.29	1.28	1.16										1.24%	
Cleco Power LLC	4.95	185508AD0	Nts	7/15/2015	BBB+	1.52	1.50	1.49	1.47	1.56	1.60	1.55	1.62	1.59	1.55	1.54	1.64	1.55%	1.58%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	4.82	4.86	4.84	4.60	4.99	5.45	5.40	5.48	5.36	5.27	5.26	5.39	5.14%	5.31%
Consumers Energy Co.	6.875	210518AT3	Sr Nts 'B'	3/1/2018	BBB+	1.82	1.83	1.76	1.65	1.91	2.27	2.21	2.46	2.00	1.89	1.96	2.36	2.01%	2.07%
Consumers Energy Co.	5.15	210518CG9	1st	2/15/2017	BBB+	1.29	1.27	1.23	1.13	1.39	1.56	1.64	1.68	1.36	1.25	1.33	1.62	1.40%	1.40%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	4.22	4.26	4.24	3.90	4.29	4.55	4.70	4.93	4.81	4.77	4.96	5.04	4.56%	4.92%
Consumers Energy Co.	5.65	210518CQ7	1st	9/15/2018	BBB+	1.69	1.67	1.58	1.43	1.69	2.05	1.99	2.18	1.97	1.83	1.90	2.18	1.85%	1.97%
Consumers Energy Co.	6.12	210518CR5	1st	3/15/2019	BBB+	1.99	1.97	1.93	1.73	1.94	2.40	2.09	2.41	2.27	2.10	2.11	2.42	2.11%	2.21%
Delmarva Pwr & Light	5	247109BH3	Nt	11/15/2014	BBB+	1.37	1.25	1.24	0.98	1.07	1.10	1.05	1.12	1.11	1.04	1.07	0.83	1.10%	0.98%
Delmarva Pwr & Light	5	247109BJ9	Fixed Rt Nt	6/1/2015	BBB+	1.52	1.50	1.49	1.47	1.56	1.60	1.55	1.62	1.59	1.55	1.15	1.09	1.47%	1.26%
Dominion Resources	7.82	257469AC0	Remkt Nts 'E'	9/15/2014	BBB+	1.07	1.05	1.03	1.04	1.14	1.15	1.11	1.12	1.19	1.08	0.59	0.78	1.03%	0.82%
Dominion Resources	6.75	257469AG1	Sr Nts 'E'	12/15/2032	BBB+	4.57	4.61	4.59	4.35	4.74	5.00	5.05	5.28	5.16	5.07	5.26	5.39	4.92%	5.24%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Sr Nts '05B	6/15/2035	BBB+	4.25	4.31	4.29	4.05	4.44	4.85	4.68	4.88	5.06	4.97	5.16	5.14	4.67%	5.09%
Dominion Resources, Inc. (Va.)	5.15	25746UAW9	Sr Nts '05C	7/15/2015	BBB+	0.94	0.92	0.94	0.85	0.88	0.95	0.95	0.92	1.03	0.87	0.88	0.94	0.92%	0.90%
Dominion Resources, Inc. (Va.)	5.6	25746UBB4	SrNts'06A	11/15/2016	BBB+	1.16	1.19	1.17	1.11	1.34	1.52	1.68	1.89	1.63	1.57	1.54	1.55	1.45%	1.55%
Dominion Resources, Inc. (Va.)	6	25746UBC2	Sr Nts '07A	11/30/2017	BBB+	1.66	1.64	1.60	1.43	1.79	2.15	1.99	2.35	2.09	1.92	1.78	2.13	1.88%	1.94%
Duke Energy Corp.	6	264399DK9	Sr Nts 'A'	12/1/2028	BBB+	3.94	3.96	3.91	3.82	4.31	4.92	4.90	4.81	4.51	4.40	4.49	4.75	4.39%	4.55%
Duke Energy Corp.	6.45	264399ED4	Sr Nts	10/15/2032	BBB+	4.26	4.32	4.30	3.95	4.34	4.65	4.70	4.92	4.80	4.75	4.89	4.99	4.57%	4.88%
Empire District Electric Co. (The	7.2	291641AS7	1st	12/1/2016	BBB+	2.58	2.56	2.54	2.48	2.68	2.79	2.68	2.89	2.69	2.63	2.61	2.82	2.66%	2.69%
Enersis S.A.	7.4	29274FAB0	Nt	12/1/2016	BBB+	2.88	2.82	2.67	2.42	2.56	2.82	2.51	2.47	2.31	2.22	2.19	2.31	2.52%	2.24%
Exelon Corp.	5.62	30161NAC5	Sr Nts	6/15/2035	BBB+	4.87	4.91	4.83	4.55	4.92	5.35	5.30	5.48	5.59	5.56	5.68	5.69	5.23%	5.64%
Florida Pwr	6.75	34110QAL2	Nts	2/1/2028	BBB+	4.87	4.90	4.84	4.60	5.09	5.16	4.63	4.89	4.70	4.58	4.89	5.15	4.86%	4.87%
MidAmerican Funding	6.93	59562HAJ7	Sr Sec Bonds	3/1/2029	BBB+	4.20	4.15	4.13	4.05	4.44	4.76	4.70	4.92	4.80	4.67	4.84	4.97	4.55%	4.83%
MidAmerican Energy Hldg	5	59562VAK3	Sr Nts	2/15/2014	BBB+	0.69	0.66	0.63	0.62	0.58	0.56	0.57	0.52	0.73	0.52	0.81	0.74	0.64%	0.69%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	4.35	4.41	4.41	4.15	4.66	5.10	4.97	5.23	5.16	5.07	5.13	5.09	4.81%	5.10%
National Grid plc	6.3	636274AC6	Notes	8/1/2016	BBB+	1.61	1.46	1.32	1.28	1.44	1.91	1.65	1.76	1.43	1.30	1.25	1.39	1.48%	1.31%
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	1.61	1.46	1.32	1.28	1.44	1.91	1.65	1.76	1.43	1.30	1.25	1.39	1.48%	1.31%
Nevada Power	5.88	641423BK3	Gen & Ref'L'	1/15/2015	BBB+	0.77	0.80	0.79	0.83	0.93	1.00	0.79	0.84	0.82	0.75	0.68	0.65	0.80%	0.69%
Nevada Power	6.75	641423BU1	Gen & Refunding Mtg Nt S	7/1/2037	BBB+	4.37	4.36	4.34	4.10	4.46	4.77	4.70	4.93	4.86	4.77	4.93	4.99	4.63%	4.90%
PSI Energy, Inc.	5	693627AX9	Deb	9/15/2013	BBB+	0.46	0.50	0.55	0.50	0.61	0.32	0.46						0.49%	
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	4.98	5.02	5.00	4.65	4.89	5.30	5.35	5.58	5.51	5.16	5.21	5.34	5.17%	5.24%
PSI Energy	6.05	693627AZ4	Deb	6/15/2016	BBB+	1.63	1.39	1.37	1.02	1.21	1.42	1.32	1.47	1.33	1.23	1.21	1.42	1.34%	1.29%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
PSEG Power LLC	8.62	69362BAJ1	Sr Nts	4/15/2031	BBB+	4.97	4.86	4.84	4.50	4.84	5.23	5.28	5.43	5.36	5.27	5.36	5.39	5.11%	5.34%
PSEG Power LLC	5.5	69362BAN2	Sr Nts	12/1/2015	BBB+	1.32	1.30	1.24	1.22	1.18	1.27	1.30	1.27	1.22	1.10	0.99	1.09	1.21%	1.06%
Potomac Edison Co.	5.35	737662BP0	1st	11/15/2014	BBB+	1.07	1.05	0.89	0.78	0.88	0.90	0.86	0.92	0.92	0.84	0.88	0.89	0.91%	0.87%
Potomac Edison Co.	5.12	737662BR6	1st	8/15/2015	BBB+	1.32	1.26	1.24	1.22	1.31	1.35	1.30	1.37	1.34	1.30	1.29	1.39	1.31%	1.33%
Public Svc No Car	6.99	744516AA3	Sr Deb	1/15/2026	BBB+	3.84	3.86	3.81	3.57	4.06	4.41	4.25	4.51	4.32	4.40	4.64	5.05	4.23%	4.70%
Public Svc No Car	7.45	744516AB1	Sr Deb	12/15/2026	BBB+	3.94	3.96	3.91	3.67	4.11	4.46	4.25	4.51	4.32	4.55	4.79	5.17	4.30%	4.84%
Sierra Pacific Power	6.75	826418BE4	Gen & Refunding Mtg Nt S	7/1/2037	BBB+	4.42	4.46	4.44	4.15	4.51	4.82	4.80	5.03	4.91	4.82	5.01	5.09	4.71%	4.97%
Southern California Edison Co.	6.65	842400EB5	Nts	4/1/2029	BBB+	3.97	4.01	4.04	3.80	4.09	4.50	4.55	4.78	4.66	4.57	4.76	4.89	4.39%	4.74%
Southern Power Co	4.88	843646AF7	Sr Nt	7/15/2015	BBB+	0.87	0.84	0.83	0.81	0.88	1.10	1.05	1.02	0.94	0.90	0.83	0.87	0.91%	0.87%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	5.62	5.63	5.63	5.62	5.72	5.82	5.82	5.90	5.85	5.84	5.87	5.96	5.77%	5.89%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	4.02	4.01	3.99	3.85	4.24	4.75	4.80	5.03	4.89	4.80	5.01	4.99	4.53%	4.93%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	4.07	4.01	3.99	3.86	4.25	4.80	4.76	4.99	4.91	4.82	5.01	4.99	4.54%	4.94%
Tampa Electric Co.	6.1	875127AX0	Fixed Rt	5/15/2018	BBB+	1.49	1.37	1.41	1.30	1.59	1.95	1.94	2.19	1.93	1.83	1.83	2.19	1.75%	1.95%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	4.47	4.51	4.49	4.25	4.64	4.90	4.95	5.18	4.96	4.87	5.06	5.19	4.79%	5.04%
Union Electric	4.75	906548BZ4	Sr Sec Nts	4/1/2015	BBB+	1.37	1.35	1.34	1.32	1.41	1.45	1.35	1.42	1.39	1.35	1.35	0.63	1.31%	1.11%
Union Electric	4.65	906548CB6	Sr Sec Nts	10/1/2013	BBB+	1.39	1.37	1.39	1.41	1.48	1.35	1.42	1.26					1.38%	
Union Electric	5.5	906548CC4	Sr Sec Nts	5/15/2014	BBB+	1.27	1.25	1.24	1.23	1.30	1.27	1.26	1.23	1.32	1.21	1.33	0.58	1.21%	1.04%
Union Electric	5	906548CD2	Sr Sec Nts	2/1/2020	BBB+	2.94	2.96	2.91	2.67	3.16	3.51	3.55	3.81	3.62	3.18	3.42	3.68	3.28%	3.43%
Union Electric	6.4	906548CE0	Sr Sec Nts	6/15/2017	BBB+	1.39	1.37	1.33	1.17	1.53	1.89	1.83	2.01	1.76	1.65	1.70	1.99	1.64%	1.78%
Union Electric	6	906548CF7	Sr Sec Nts	4/1/2018	BBB+	1.84	1.82	1.78	1.68	2.04	2.40	2.34	2.63	2.37	2.27	2.34	2.73	2.19%	2.45%
Union Electric	6.7	906548CG5	Sr Sec Nts	2/1/2019	BBB+	2.23	2.21	2.08	1.88	2.09	2.45	2.39	2.68	2.52	2.42	2.49	2.48	2.33%	2.46%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	4.31	4.35	4.24	4.00	4.39	4.85	4.85	4.98	4.96	4.92	5.04	5.06	4.66%	5.01%
AEP Texas North	5.5	0010EQAB2	Sr Nts	3/1/2013	BBB	0.42												0.42%	
Appalachian Power Co.	5.95	037735BZ9	Sr Nts'H'	5/15/2033	BBB	4.69	4.73	4.71	4.47	4.86	5.30	5.35	5.58	5.46	5.37	5.56	5.59	5.14%	5.51%
Appalachian Power	4.95	037735CB1	Sr Nts'I'	2/1/2015	BBB	1.47	0.95	0.94	0.92	1.22	1.25	1.20	1.27	1.25	1.20	1.21	1.00	1.16%	1.14%
Appalachian Power	5	037735CD7	Sr Nts'K'	6/1/2017	BBB	1.64	1.62	1.58	1.48	1.84	2.20	2.09	2.38	2.12	2.02	1.94	2.14	1.92%	2.03%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	4.72	4.66	4.56	4.35	4.74	5.10	5.20	5.43	5.31	5.22	5.41	5.44	5.01%	5.36%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	4.62	4.64	4.62	4.37	4.74	5.15	5.20	5.43	5.41	5.37	5.46	5.49	5.04%	5.44%
Cleveland Electric Illuminating (	7.88	186108BU9	Sec Nts 'D'	11/1/2017	BBB	2.19	2.17	2.37	2.08	2.34	2.70	2.74	3.03	2.39	2.17	2.05	2.38	2.38%	2.20%
Commonwealth Edison	6.95	202795GX2	Nts	7/15/2018	BBB	2.64	2.62	2.33	2.23	2.59	2.95	2.89	3.18	2.92	3.26	3.33	3.58	2.88%	3.39%
DTE Energy Co.	6.35	233331AM9	Sr Nts'06B	6/1/2016	BBB	1.31	1.23	1.21	1.16	1.20	1.41	1.26	1.47	1.33	1.26	1.17	1.35	1.28%	1.26%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	Enhanced Jr Sub Nt 2006 S	6/30/2066	BBB	6.72	6.73	6.76	6.72	6.73	6.78	6.83	6.92	6.99	6.99	6.97	6.94	6.84%	6.97%
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	Jr Sub Nt 2006 Ser B Enha	9/30/2066	BBB	2.85	2.85	2.85	2.80	2.78	2.81	2.83	2.82	2.82	2.79	2.79	2.79	2.82%	2.79%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	4.57	4.61	4.76	4.70	5.09	5.35	5.40	5.63	5.51	5.42	5.61	5.69	5.20%	5.57%
Empire District Electric Co. (The	4.5	291641AY4	Sr Nts	6/15/2013	BBB	1.59	1.58	1.57	1.74									1.62%	
Empire District Electric Co. (The	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.65	5.69	5.67	5.43	5.82	6.05	6.10	6.33	6.16	6.07	6.26	6.39	5.97%	6.24%
Empire District Elec	6.7	29164RAA9	Sr Nts	11/15/2033	BBB	5.65	5.69	5.67	5.43	5.82	6.05	6.10	6.33	6.16	6.07	6.26	6.39	5.97%	6.24%
Energy East Corp.	6.75	29266MAE9	Nts	9/15/2033	BBB	6.12	6.16	6.09	6.30	6.19	6.60	6.48	6.63	6.46	6.22	6.11	6.24	6.30%	6.19%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	6.02	6.06	6.09	6.00	6.09	6.45	6.40	6.38	6.16	5.97	6.01	6.04	6.14%	6.01%
Indiana Mich Pwr	5.05	454889AK2	Sr Nts'F'	11/15/2014	BBB	1.17	1.00	1.04	0.98	1.07	1.10	1.05	0.88	0.68	0.66	0.52	0.42	0.88%	0.53%
Indiana Mich Pwr	5.65	454889AL0	Sr Nts'G'	12/1/2015	BBB	1.77	1.75	1.74	1.72	1.81	1.85	1.80	1.87	1.84	1.80	1.79	1.89	1.80%	1.83%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	4.67	4.71	4.64	4.38	4.74	5.20	5.15	5.38	5.30	5.32	5.28	5.41	5.02%	5.34%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	4.52	4.61	4.59	4.25	4.64	5.00	5.25	5.33	5.21	5.12	5.16	5.29	4.91%	5.19%
Kansas City Power & Light	5.85	485134BJ8	Sr Nt	6/15/2017	BBB	1.94	2.07	2.03	1.83	2.19	2.65	2.69	2.73	2.47	2.37	2.44	2.69	2.34%	2.50%
Kentucky Power	5.62	491386AL2	Sr Nts'D'	12/1/2032	BBB	5.32	5.36	5.14	4.90	5.29	5.55	5.60	5.83	5.71	5.62	5.81	5.94	5.51%	5.79%
Ohio Power Co.	6.6	677415CF6	Sr Nts 'G'	2/15/2033	BBB	4.57	4.51	4.44	4.20	4.59	5.05	5.10	5.20	5.16	5.07	5.11	5.24	4.85%	5.14%
Ohio Power Co.	4.85	677415CG4	Sr Nts 'H'	1/15/2014	BBB	0.81	0.67	0.71	0.54	0.64	0.56	0.58	0.55	0.74	0.72	0.80		0.67%	0.76%
Ohio Power Co.	6	677415CL3	Sr Nts'K'	6/1/2016	BBB	1.48	1.46	1.32	1.26	1.42	1.59	1.51	1.69	1.42	1.35	1.33	1.47	1.44%	1.38%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	4.98	5.00	5.03	5.03	5.07	5.12	5.15	5.20	5.20	5.22	5.22	5.27	5.12%	5.24%
PPL Energy Supply	6.2	69352JAH0	Sr Nts	5/15/2016	BBB	1.76	1.54	1.57	1.51	1.72	2.19	2.08	2.29	2.15	1.83	1.66	1.87	1.85%	1.79%
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	5.32	5.41	5.44	5.20	5.59	5.90	6.05	6.28	6.36	6.13	6.31	6.44	5.87%	6.29%
PPL Energy Supply	6.5	69352JAL1	Sr Nts	5/1/2018	BBB	2.54	2.62	2.63	2.46	2.58	2.99	2.93	3.22	3.37	3.32	3.34	3.66	2.97%	3.44%
PPL Energy Supply	6.3	69352JAM9	Sr Nts	7/15/2013	BBB	0.81	0.70	0.67	0.89	1.19								0.85%	
Pacific Gas & Electric Co.	4.8	694308GD3	1st	3/1/2014	BBB	0.77	0.58	0.59	0.62	0.64	0.55	0.56	0.53	0.74	0.59	0.81	0.72	0.64%	0.71%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	4.09	4.06	4.17	3.92	4.27	4.78	4.59	5.07	5.18	5.02	5.01	4.90	4.59%	4.98%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	4.37	4.31	4.29	4.05	4.46	4.85	4.70	5.08	5.12	5.02	5.11	5.04	4.70%	5.06%
Pepco Holdings, Inc.	6.12	713291AP7	Nts	6/1/2017	BBB	2.59	2.57	2.53	2.43	2.79	3.15	3.09	3.38	3.12	3.02	3.09	3.49	2.94%	3.20%
Progress Energy, Inc.	7.75	743263AE5	Sr Nts	3/1/2031	BBB	4.77	4.71	4.64	4.35	4.76	5.19	5.10	5.32	5.24	5.10	5.22	5.19	4.97%	5.17%
Progress Energy, Inc.	7	743263AG0	Sr Nts	10/30/2031	BBB	4.76	4.66	4.64	4.35	4.74	5.15	5.10	5.26	5.21	5.06	5.21	5.19	4.94%	5.15%
Progress Energy, Inc.	5.62	743263AL9	Sr Nts	1/15/2016	BBB	1.27	1.17	1.05	1.03	1.14	1.41	1.19	1.40	1.25	1.06	1.04	1.21	1.19%	1.10%
Public Serv, New Mexico	7.5	744499AN4	Sr Unsec Nts 'B'	8/1/2018	BBB	3.69	3.67	3.63	3.28	3.64	4.00	4.09	4.38	3.32	3.22	3.24	3.59	3.65%	3.35%
Public Service Co. of Oklahoma	6.15	744533BH2	Sr Nts'F'	8/1/2016	BBB	1.53	1.51	1.49	1.56	1.77	1.94	1.83	2.04	1.90	1.83	1.81	2.02	1.77%	1.89%
Public Service Co. of Oklahoma	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	4.77	4.61	4.49	4.45	4.74	5.10	5.15	5.38	5.26	5.17	5.35	5.44	4.99%	5.32%
Southwest'n Elec Power	5.38	845437BE1	Sr Nts	4/15/2015	BBB	2.17	2.15	1.56	1.34	1.44	1.47	1.42	1.49	1.47	1.42	1.30	1.25	1.54%	1.32%
Southwest'n Elec Power	4.9	845437BG6	Sr Nt Ser D	7/1/2015	BBB	2.32	2.00	1.99	1.97	2.06	2.11	2.05	2.12	2.09	2.05	1.39	1.34	1.96%	1.59%
Southwest'n Elec Power	5.55	845437BH4	Sr Nt Ser E	1/15/2017	BBB	2.34	2.20	2.16	1.73	1.89	2.25	2.39	2.68	2.42	2.32	1.79	2.18	2.20%	2.10%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	5.72	5.74	5.77	5.74	5.74	5.77	5.80	5.92	6.04	6.07	6.05	6.07	5.87%	6.06%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	5.73	5.73	5.73	5.71	5.73	5.75	5.92	6.02	6.12	6.09	6.09	6.05	5.89%	6.08%
CMS Energy Corp.	6.88	125896AZ3	Sr Nts	12/15/2015	BBB-	2.22	2.10	1.54	1.47	1.67	1.70	1.65	1.72	1.60	1.55	1.51	1.14	1.66%	1.40%
CMS Energy Corp.	6.55	125896BA7	Sr Nts	7/17/2017	BBB-	2.29	2.17	1.83	1.73	1.99	2.33	2.39	2.52	2.27	1.99	2.07	2.24	2.15%	2.10%
Cleveland Electric Illuminating (	5.65	186108CD6	Sr Nts	12/15/2013	BBB-	0.88	0.96	0.78	0.59	0.80	0.68	0.66	0.58					0.74%	
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.02	5.01	4.99	4.75	5.07	5.41	5.50	5.90	5.77	5.68	5.90	5.80	5.40%	5.79%
Cleveland Elec. Illum	5.7	186108CF1	Sr Nts	4/1/2017	BBB-	2.29	2.27	2.23	2.13	2.49	2.85	2.79	3.08	2.62	2.52	2.59	2.99	2.57%	2.70%
Constellation Energy Group, Inc	7.6	210371AF7	Nts	4/1/2032	BBB-	5.00	5.04	5.02	4.70	5.09	5.35	5.85	5.88	5.86	5.77	5.96	5.94	5.46%	5.89%
Constellation Energy Group, Inc	4.55	210371AK6	Nts	6/15/2015	BBB-	1.22	1.20	1.09	1.07	1.09	1.20	1.15	1.18	1.17	1.15	1.09	1.09	1.14%	1.11%
Duquesne Light Holdings, Inc.	5.5	266233AA3	Sr Nts	8/15/2015	BBB-	2.22	2.20	1.99	1.37	1.46	1.50	1.45	1.52	1.84	1.80	1.79	1.29	1.70%	1.63%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.32	5.36	5.19	4.85	5.24	5.55	5.80	6.03	5.81	5.62	5.81	5.94	5.54%	5.79%
Exelon Corp.	4.9	30161NAD3	Sr Nts	6/15/2015	BBB-	1.16	1.15	1.11	1.07	1.03	1.12	1.20	1.22	1.19	1.13	1.16	1.12	1.14%	1.14%
Hawaiian Elec Indus	6.51	41987QAX1	M-T Nts'C'	5/5/2014	BBB-	1.37	1.35	1.33	1.33	1.35	1.30	1.28	1.24	1.34	1.20	1.36	1.27	1.31%	1.28%
Hawaiian Elec Indus	5.25	41987QBB8	M-T Nts 'D'	3/7/2013	BBB-	1.02												1.02%	
NiSource Finance	6.15	65473QAK9	Sr Nt	3/1/2013	BBB-	0.16												0.16%	
NiSource Finance	5.25	65473QAQ6	Gtd Nt	9/15/2017	BBB-	2.04	1.87	1.81	1.68	2.02	2.45	2.39	2.56	2.21	2.08	2.16	2.30	2.13%	2.18%
NiSource Finance	5.45	65473QAR4	Gtd Nt	9/15/2020	BBB-	2.96	2.96	2.92	2.70	3.21	3.65	3.55	3.86	3.76	3.45	3.49	3.55	3.34%	3.50%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	4.71	4.76	4.84	4.60	4.99	5.29	5.45	5.68	5.66	5.48	5.54	5.52	5.21%	5.51%
Pennsylvania Electric	6.625	708696BM0	Sr Nts 'C'	4/1/2019	BBB-	3.88	3.82	3.78	3.68	3.79	4.15	4.09	4.38	4.12	4.02	4.09	3.98	3.98%	4.03%
FirstEnergy Corp.	7.38	337932AC1	Nts 'C'	11/15/2031	BB+	5.20	5.36	5.89	5.65	6.19	6.84	6.70	7.41	7.26	6.82	6.81	6.54	6.39%	6.72%
El Paso Energy Corp MTN BE	8.05	28368EAA4	MTN	10/15/2030	BB	6.52	6.76	6.79	6.65	6.84	7.35	7.40	7.58	7.71	7.77	7.76	7.89	7.25%	7.81%
El Paso Energy Corp MTN BE	7.75	28368EAE6	MTN-tranche # Tr 00005	1/15/2032	BB	6.17	6.46	6.54	6.45	6.59	7.10	7.15	7.38	7.51	7.47	7.51	7.59	6.99%	7.52%
AES Corp. (The)	7.750	00130HBC8	Sr Nts	3/1/2014	BB-	1.46	1.97	1.85	0.98	2.33	2.50	2.13	1.76	2.99	1.74	1.81	1.68	1.93%	1.74%
AmerenEnergy Generating	7.95	02360XAJ6	Sr Nts 'F'	6/1/2032	BB-	13.10	15.22	11.28	11.21	10.38	10.90	10.83	11.11	11.00	10.77	10.26	10.55	11.38%	10.53%
NRG Energy, Inc.	7.25	629377AT9	SrNts	2/1/2014	BB-	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47%	6.47%
TXU Corp.	5.55	873168AL2	Sr Nts'P'	11/15/2014	D	9.89	14.34	14.12	12.21	16.77	24.03	49.99	49.99	49.99	49.99	49.99	49.99	32.61%	49.99%
TXU Corp.	6.5	873168AN8	Sr Nts'Q'	11/15/2024	D	11.52	12.40	11.62	10.61	10.63	11.43	13.55	16.25	24.56	22.84	21.58	22.97	15.83%	22.46%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	10.64	11.08	10.43	9.80	9.66	10.27	11.92	14.10	21.10	19.44	18.26	19.46	13.85%	19.05%
Allegheny Generating	6.88	017364AG5	Deb	9/1/2023	NR	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76%	6.76%
American Electric Power Co., In	5.25	025537AE1	Sr Nts	6/1/2015	NR	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54		1.54%	1.54%
DynegyHldgs	8.38	26816LAT9	Sr Nts	5/1/2016	NR	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35	27.35%	27.35%
Empire District Electric Co. (The	7.05	291641AX6	Sr Nts	12/15/2022	NR	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05%	7.05%
Entergy Gulf States	5.6	29364LAS1	1st	12/1/2014	NR	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60%	5.60%
Entergy Gulf States	5.7	29364LAU6	1st	6/1/2015	NR	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70%	5.70%
Entergy Mississippi	5.92	29364NAN8	1st	2/1/2016	NR	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93%	5.93%
MDU Resources Group, Inc.	5.98	552690AF6	Sr(Sec)Nts	12/15/2033	NR	6.12	6.16	6.09	5.35	5.69	5.95	6.00	6.23	6.10	5.90	6.09	6.19	5.99%	6.06%
Madison Gas & Elec Co MTN B	5.26	5574A0AC1	MTN	9/29/2017	NR	1.74	1.72	1.63	1.53	1.84	1.65	1.65						1.68%	
NRG Energy, Inc.	7.38	629377AX0	SrNts	1/15/2017	NR	6.30												6.30%	
NorthWestern Corp.	5.88	668074AM9	Sr Sec Nts	11/1/2014	NR	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10%	5.10%
Ohio Edison Co.	6.4	677347CD6	Sr Nt	7/15/2016	NR	1.43	1.41	1.42	1.36	1.47	1.59	1.83	0.99					1.44%	
Ohio Power Co.	6.38	677415CJ8	Sr Nts 'I'	7/15/2033	NR	6.24	6.26	6.28	6.32	6.34	6.36	6.36	6.37	6.37	6.37	6.37	6.37	6.33%	6.37%
Orange & Rockland Utils	7	684065AU9	Deb 'G'	3/1/2029	NR	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57%	6.57%
PPL Energy Supply	2.62	69352JAE7	Sr Nt Conv	5/15/2023	NR	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88%	0.88%
Savannah Electric&Power	5.5	804787DJ5	Sr Nts'F'	12/15/2028	NR	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49	5.49%	5.49%
Sierra Pacific Resources	8.625	826428AH7	Sr Nts	3/15/2014	NR	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47%	7.47%
Sierra Pacific Resources	6.75	826428AN4	Sr Nts	8/15/2017	NR	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30%	6.30%
TECO Energy, Inc.	6.75	872375AP5	Nts	5/1/2015	NR	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02%	0.02%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	8.25	880591BL5	Pwr Bonds '92D	4/15/2042	NR	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74%	7.74%
Tennessee Valley Authority	6.235	880591CF7	Pwr Bonds '95B	7/15/2045	NR	4.77	4.73	4.68	4.64	4.90	5.12	5.34	5.51	5.47	5.39	5.49	5.66	5.14%	5.51%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	3.59	3.51	3.54	3.54	3.90	4.24	4.46	4.54	4.49	4.42	4.59	4.73	4.13%	4.58%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	3.63	3.59	3.63	3.54	3.93	4.39	4.56	4.61	4.51	4.42	4.59	4.81	4.18%	4.61%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	3.56	3.46	3.51	3.49	3.85	4.24	4.42	4.56	4.49	4.44	4.59	4.71	4.11%	4.58%
Union Electric	7.69	906548BT8	Sub Cap Inc Sec'A'	12/15/2036	NR	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45%	7.45%
			Counts of data			362	355	352	351	347	344	343	338	334	333	331	328	362	333

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	2.33%	2.57%
AA's	6.08%	6.22%
A's	3.40%	3.84%
BBB+'s	2.85%	3.09%
BBB's	3.28%	3.66%
BB's	6.74%	6.80%
B's	----	----
CC's	----	----
D	20.76%	30.50%
NR's	5.85%	6.30%
ALL	3.64%	4.11%
BBB- & Above	3.27%	3.65%
BB- & Above	3.33%	3.71%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YEAR BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	4.7	880591DV1	Pwr Bonds\03 B"	7/15/2033	AAA	3.49	3.39	3.39	3.39	3.76	4.40	4.29	4.46	4.44	4.39	4.51	4.64	4.05%	4.51%
Alabama Power Co.	5.7	010392EC8	Sr Nts 'T'	2/15/2033	A	4.07	4.06	4.04	3.80	4.19	4.45	4.50	4.73	4.61	4.64	4.76	4.79	4.39%	4.73%
Alabama Power Co.	5.6	010392EE4	Sr Nts'V'	3/15/2033	A	4.37	4.41	4.39	4.15	4.54	4.80	4.85	5.08	4.96	4.87	5.06	5.19	4.72%	5.04%
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.22	4.26	4.24	4.05	4.44	4.75	4.75	4.98	4.86	4.77	4.96	4.84	4.59%	4.86%
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.32	4.26	4.24	4.00	4.39	4.70	4.75	5.03	4.91	4.82	5.01	4.91	4.61%	4.91%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.17	4.21	4.19	3.98	4.44	4.75	4.77	4.93	4.81	4.72	4.81	4.79	4.55%	4.77%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	4.32	4.36	4.34	4.10	4.44	4.80	4.85	5.08	4.96	4.87	5.06	5.14	4.69%	5.02%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	4.32	4.36	4.34	4.10	4.49	4.75	4.80	5.03	4.91	4.82	5.01	5.14	4.67%	4.99%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.12	4.01	4.04	3.80	4.19	4.55	4.55	4.78	4.66	4.57	4.65	4.78	4.39%	4.67%
Florida Power & Light	5.85	341081EP8	1st	2/1/2033	A	3.92	3.96	3.94	3.80	4.12	4.40	4.40	4.63	4.71	4.62	4.81	4.79	4.34%	4.74%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.02	4.01	3.99	3.70	4.09	4.40	4.49	4.72	4.51	4.42	4.61	4.59	4.30%	4.54%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.02	4.01	3.99	3.70	4.09	4.40	4.49	4.72	4.51	4.42	4.61	4.59	4.30%	4.54%
Florida Power & Light	5.95	341081ER4	1st	10/1/2033	A	4.02	3.96	3.84	3.65	4.04	4.35	4.30	4.53	4.41	4.32	4.44	4.57	4.20%	4.44%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	3.97	3.91	3.86	3.70	4.09	4.40	4.40	4.53	4.47	4.38	4.49	4.59	4.23%	4.49%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.02	3.92	3.90	3.70	4.14	4.53	4.43	4.62	4.49	4.41	4.56	4.64	4.28%	4.54%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.02	4.01	4.04	3.75	4.21	4.57	4.45	4.68	4.66	4.52	4.61	4.74	4.36%	4.62%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.02	4.01	4.04	3.84	4.23	4.55	4.50	4.68	4.66	4.50	4.57	4.70	4.36%	4.59%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.02	4.02	4.04	3.80	4.21	4.55	4.45	4.68	4.56	4.47	4.61	4.74	4.35%	4.61%
Florida Power Corp.	5.9	341099CB3	1st	3/1/2033	A	4.21	4.25	4.23	3.99	4.49	4.90	4.85	4.98	4.86	4.77	4.91	5.04	4.62%	4.91%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	4.27	4.31	4.29	4.00	4.39	4.85	4.65	4.88	4.79	4.67	4.67	4.74	4.54%	4.69%
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.22	5.24	5.25	5.27	5.32	5.36	5.38	5.42	5.42	5.43	5.45	5.49	5.35%	5.46%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	4.27	4.26	4.28	4.04	4.49	4.93	4.84	5.03	4.96	4.82	5.01	5.09	4.67%	4.97%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	4.27	4.26	4.28	4.04	4.49	4.93	4.84	5.03	4.96	4.82	5.01	5.09	4.67%	4.97%
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.00	4.99	5.01	5.08	5.13	5.18	5.18	5.23	5.21	5.22	5.22	5.26	5.14%	5.23%
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.17	4.16	4.14	3.90	4.31	4.70	4.70	4.88	4.76	4.62	4.76	4.84	4.50%	4.74%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	4.88	4.89	4.90	4.91	4.96	5.01	5.01	5.05	5.04	5.05	5.06	5.10	4.99%	5.07%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st	7/15/2035	A	3.96	4.00	3.98	3.74	4.13	4.54	4.45	4.63	4.56	4.47	4.66	4.69	4.32%	4.61%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	3.97	4.01	3.99	3.75	4.17	4.55	4.60	4.63	4.61	4.47	4.66	4.74	4.35%	4.62%
Northern Sts Pwr (Minn)	6.2	665772CC1	1st	7/1/2037	A	4.02	4.06	4.04	3.80	4.19	4.55	4.60	4.63	4.61	4.50	4.69	4.79	4.37%	4.66%
Oncor Electric Delivery	7.25	68233DAP2	Sr Sec Nts	1/15/2033	A	4.82	4.66	4.64	4.25	4.54	4.95	4.85	5.08	5.03	5.05	5.19	5.12	4.85%	5.12%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	4.22	4.26	4.24	4.00	4.39	4.65	4.70	4.93	4.81	4.82	5.01	5.14	4.60%	4.99%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.12	4.06	4.04	3.85	4.24	4.60	4.65	4.71	4.66	4.57	4.71	4.79	4.42%	4.69%
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.12	4.11	4.09	3.90	4.29	4.70	4.65	4.78	4.76	4.67	4.81	4.84	4.48%	4.77%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.12	4.09	4.04	3.88	4.27	4.70	4.60	4.75	4.66	4.59	4.73	4.72	4.43%	4.68%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	4.62	4.66	4.64	4.15	4.54	4.80	4.90	5.13	5.01	4.97	5.16	5.29	4.82%	5.14%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	4.37	4.41	4.39	4.05	4.44	4.76	4.80	5.03	4.91	4.97	5.16	5.29	4.72%	5.14%
South Carolina Electric & Gas (	5.8	837004BW9	1st	1/15/2033	A	4.27	4.31	4.29	4.05	4.44	4.80	4.80	5.03	4.91	4.82	4.76	4.79	4.61%	4.79%
South Carolina Electric & Gas (	5.3	837004BX7	1st	5/15/2033	A	4.27	4.26	4.24	4.00	4.39	4.79	4.79	4.93	4.76	4.67	4.71	4.74	4.55%	4.71%
South Carolina Electric & Gas (	5.25	837004BZ2	1st	3/1/2035	A	4.67	4.71	4.69	4.45	4.84	5.15	4.79	5.02	4.90	4.81	5.00	5.03	4.84%	4.95%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	4.57	4.61	4.59	4.35	4.74	5.05	4.90	5.13	5.01	4.92	5.11	5.14	4.84%	5.06%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	3.97	3.96	3.94	3.70	4.09	4.45	4.45	4.58	4.56	4.47	4.66	4.63	4.29%	4.59%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.12	4.06	4.04	3.80	4.19	4.65	4.45	4.70	4.64	4.55	4.71	4.79	4.39%	4.68%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.07	4.06	4.04	3.80	4.19	4.60	4.44	4.65	4.58	4.49	4.66	4.69	4.36%	4.61%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.07	4.06	4.04	3.80	4.24	4.65	4.45	4.68	4.66	4.57	4.63	4.76	4.38%	4.65%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.17	4.06	4.04	3.80	4.23	4.65	4.45	4.68	4.69	4.56	4.71	4.79	4.40%	4.69%
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	4.22	4.26	4.24	4.00	4.39	4.80	4.95	5.18	5.06	4.97	5.16	5.29	4.71%	5.14%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.17	4.21	4.19	3.95	4.34	4.60	4.65	4.83	4.71	4.62	4.81	4.94	4.50%	4.79%
Arizona Public Service	5.625	040555CF9	Nts	5/15/2033	A-	4.52	4.41	4.64	4.40	4.74	5.10	5.10	5.33	5.21	5.12	5.31	5.34	4.94%	5.26%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.32	4.16	4.14	4.10	4.49	4.80	4.80	5.03	4.91	4.82	5.01	4.94	4.63%	4.92%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	4.52	4.51	4.64	4.40	4.74	5.10	5.10	5.37	5.21	5.12	5.31	5.29	4.94%	5.24%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	4.52	4.56	4.54	4.30	4.69	4.95	4.95	5.18	5.06	4.97	5.16	5.29	4.85%	5.14%
Avista Corp.	5.7	05379BAM9	1st	7/1/2037	A-	4.42	4.46	4.44	4.20	4.59	4.85	4.95	5.18	5.06	4.97	5.16	5.29	4.80%	5.14%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	4.42	4.46	4.44	4.20	4.59	4.85	4.95	5.18	5.06	4.97	5.16	5.29	4.80%	5.14%
CenterPoint Energy Houston	6.95	15189XAD0	Gen Mtge'K2'	3/15/2033	A-	4.12	4.06	4.04	3.80	4.19	4.45	4.55	4.73	4.61	4.52	4.71	4.68	4.37%	4.64%
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	4.67	4.63	4.61	4.37	4.76	5.02	5.07	5.28	5.21	5.22	5.34	5.39	4.96%	5.32%
Commonwealth Edison	5.875	202795HG8	1st Ser 100	2/1/2033	A-	4.12	4.04	4.02	3.78	4.17	4.50	4.50	4.87	4.70	4.61	4.76	4.79	4.41%	4.72%
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.12	4.12	4.09	3.92	4.25	4.60	4.50	4.76	4.74	4.62	4.71	4.84	4.44%	4.72%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	4.22	4.26	4.24	3.95	4.29	4.65	4.65	4.88	4.76	4.67	4.86	4.84	4.52%	4.79%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	4.37	4.41	4.39	4.15	4.44	4.80	4.85	5.08	4.96	4.87	5.06	5.14	4.71%	5.02%
Consolidated Edison, Inc.	5.88	209111EB5	Deb '03A	4/1/2033	A-	4.32	4.36	4.34	4.10	4.49	4.80	4.70	4.93	4.81	4.72	4.91	5.04	4.63%	4.89%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.32	4.36	4.34	4.05	4.44	4.75	4.70	4.98	4.96	4.87	5.06	4.89	4.64%	4.94%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.00	4.04	4.02	3.78	4.17	4.48	4.50	4.79	4.61	4.57	4.76	4.74	4.37%	4.69%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.32	4.36	4.34	4.10	4.49	4.80	4.70	5.07	4.95	4.77	4.96	5.04	4.66%	4.92%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.12	4.11	4.09	3.85	4.29	4.60	4.60	4.83	4.71	4.62	4.76	4.79	4.45%	4.72%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	4.17	4.10	4.09	3.95	4.34	4.70	4.65	4.88	4.81	4.72	4.76	4.89	4.51%	4.79%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YEAR BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.12	4.14	4.12	3.90	4.34	4.70	4.60	4.78	4.66	4.57	4.65	4.78	4.45%	4.67%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.17	4.16	4.14	3.90	4.34	4.75	4.60	4.83	4.81	4.67	4.76	4.79	4.49%	4.74%
Entergy Arkansas	6.38	29364DAK6	1st	11/1/2034	A-	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37%	6.37%
Entergy Gulf States	6.18	29364LAT9	1st	3/1/2035	A-	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17%	6.17%
Entergy Mississippi	6.25	29364NAL2	1st	4/1/2034	A-	6.14	6.14	6.15	6.16	5.99	6.01	6.04	6.06	6.09	6.10	6.13	6.16	6.10%	6.13%
Idaho Pwr	5.5	45138LAN3	Sec M-T Nts 'E'	4/1/2033	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.75	4.98	4.85	4.76	4.95	5.04	4.59%	4.92%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	8/15/2035	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Idaho Pwr Co 1st Mtg Secd MT	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	4.32	4.31	4.29	3.95	4.29	4.55	4.80	5.03	4.90	4.81	5.00	5.09	4.61%	4.97%
Interstate Pwr & Lt	6.45	461070AC8	Sr Deb	10/15/2033	A-	4.52	4.56	4.44	4.20	4.59	4.90	4.95	5.18	5.01	4.82	4.96	5.09	4.77%	4.96%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	4.52	4.56	4.44	4.20	4.59	4.90	4.95	5.18	5.01	4.82	4.96	5.09	4.77%	4.96%
KeySpan Corp.	5.88	49337WAH3	Nts	4/1/2033	A-	4.92	4.96	4.94	4.55	4.94	5.25	5.25	5.48	5.36	5.22	5.34	5.47	5.14%	5.34%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	4.77	4.81	4.79	4.42	4.79	5.28	5.30	5.43	5.31	5.12	5.31	5.39	5.06%	5.27%
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	4.45	4.49	4.47	4.23	4.59	4.95	4.95	5.18	5.06	4.97	5.16	5.19	4.81%	5.11%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	4.52	4.56	4.54	4.30	4.69	4.95	5.00	5.08	4.96	4.87	5.06	5.19	4.81%	5.04%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.07	4.11	4.09	3.83	4.22	4.59	4.64	4.75	4.69	4.60	4.79	4.79	4.43%	4.73%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.22	4.26	4.24	4.00	4.39	4.65	4.70	4.93	4.81	4.72	4.91	4.94	4.56%	4.86%
Public Svc Co New Hampshire	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	4.52	4.56	4.54	4.30	4.69	4.90	4.95	5.18	5.06	4.97	5.16	5.29	4.84%	5.14%
Public Service Electric and Gas	8	744567BA5	1st & Ref	6/1/2037	A-	5.07	5.11	5.09	4.85	5.24	5.50	5.55	5.78	5.66	5.57	5.76	5.89	5.42%	5.74%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	4.87	4.81	4.79	4.55	4.94	5.20	5.25	5.48	5.36	5.27	5.46	5.59	5.13%	5.44%
Public Service Electric and Gas	5	744567BB3	1st & Ref	7/1/2037	A-	4.87	4.81	4.79	4.55	4.94	5.20	5.25	5.48	5.36	5.27	5.46	5.59	5.13%	5.44%
Public Svc Elec Gas Co Secd M	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.02	4.01	3.99	3.75	4.14	4.45	4.45	4.68	4.51	4.42	4.61	4.69	4.31%	4.57%
Public Svc Elec Gas Co Secd M	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.02	3.98	3.96	3.74	4.13	4.44	4.45	4.68	4.56	4.42	4.63	4.69	4.31%	4.58%
Public Svc Elec Gas Co Secd M	5.8	74456QAR7	Secured Mtn Series E Not	5/1/2037	A-	4.02	3.98	3.96	3.75	4.14	4.45	4.50	4.73	4.56	4.47	4.68	4.74	4.33%	4.63%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.04	4.08	4.06	3.82	4.19	4.55	4.55	4.78	4.71	4.62	4.81	4.79	4.42%	4.74%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	4.17	4.16	4.14	3.90	4.29	4.75	4.65	4.88	4.76	4.67	4.86	4.94	4.51%	4.82%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	4.17	4.16	4.14	3.90	4.29	4.70	4.65	4.88	4.76	4.67	4.86	4.89	4.51%	4.81%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	4.52	4.46	4.44	4.20	4.59	4.94	4.90	5.13	5.06	4.97	5.16	5.19	4.80%	5.11%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.07	4.06	4.02	3.78	4.19	4.47	4.50	4.73	4.68	4.52	4.71	4.81	4.38%	4.68%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.12	4.06	4.04	3.77	4.27	4.60	4.50	4.73	4.70	4.59	4.74	4.79	4.41%	4.71%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	4.12	4.11	4.09	3.82	4.24	4.65	4.65	4.78	4.71	4.62	4.84	4.88	4.46%	4.78%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.54	5.51	5.53	5.54	5.58	5.62	5.63	5.67	5.73	5.74	5.76	5.84	5.64%	5.78%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.39	5.35	5.37	5.38	5.42	5.46	5.47	5.52	5.63	5.64	5.64	5.75	5.50%	5.68%
Wisconsin Electric Power Com	6.875	976656BL1	Deb	12/1/2095	A-	5.37	5.26	4.99	4.75	5.02	5.40	5.45	5.76	5.64	5.55	5.74	5.87	5.40%	5.72%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	3.97	4.01	3.92	3.75	4.14	4.40	4.50	4.73	4.57	4.52	4.66	4.79	4.33%	4.66%
AmerenUE	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.12	4.16	4.14	3.90	4.29	4.60	4.55	4.78	4.66	4.57	4.68	4.79	4.44%	4.68%
Central Illinois Light	6.7	153645BA3	Sr Secd Nt 144a	6/15/2036	BBB+	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09%	6.09%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	4.82	4.86	4.84	4.60	4.99	5.45	5.40	5.48	5.36	5.27	5.26	5.39	5.14%	5.31%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	4.22	4.26	4.24	3.90	4.29	4.55	4.70	4.93	4.81	4.77	4.96	5.04	4.56%	4.92%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Sr Nts '05B	6/15/2035	BBB+	4.25	4.31	4.29	4.05	4.44	4.85	4.68	4.88	5.06	4.97	5.16	5.14	4.67%	5.09%
Exelon Corp.	5.62	30161NAC5	Sr Nts	6/15/2035	BBB+	4.87	4.91	4.83	4.55	4.92	5.35	5.30	5.48	5.59	5.56	5.68	5.69	5.23%	5.64%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	4.35	4.41	4.41	4.15	4.66	5.10	4.97	5.23	5.16	5.07	5.13	5.09	4.81%	5.10%
Nevada Power	6.75	641423BU1	Gen & Refunding Mtg Nt S	7/1/2037	BBB+	4.37	4.36	4.34	4.10	4.46	4.77	4.70	4.93	4.86	4.77	4.93	4.99	4.63%	4.90%
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	4.98	5.02	5.00	4.65	4.89	5.30	5.35	5.58	5.51	5.16	5.21	5.34	5.17%	5.24%
Sierra Pacific Power	6.75	826418BE4	Gen & Refunding Mtg Nt S	7/1/2037	BBB+	4.42	4.46	4.44	4.15	4.51	4.82	4.80	5.03	4.91	4.82	5.01	5.09	4.71%	4.97%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	5.62	5.63	5.63	5.62	5.72	5.82	5.82	5.90	5.85	5.84	5.87	5.96	5.77%	5.89%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	4.02	4.01	3.99	3.85	4.24	4.75	4.80	5.03	4.89	4.80	5.01	4.99	4.53%	4.93%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	4.07	4.01	3.99	3.86	4.25	4.80	4.76	4.99	4.91	4.82	5.01	4.99	4.54%	4.94%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	4.47	4.51	4.49	4.25	4.64	4.90	4.95	5.18	4.96	4.87	5.06	5.19	4.79%	5.04%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	4.31	4.35	4.24	4.00	4.39	4.85	4.85	4.98	4.96	4.92	5.04	5.06	4.66%	5.01%
Appalachian Power Co.	5.95	037735BZ9	Sr Nts'H'	5/15/2033	BBB	4.69	4.73	4.71	4.47	4.86	5.30	5.35	5.58	5.46	5.37	5.56	5.59	5.14%	5.51%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	4.72	4.66	4.56	4.35	4.74	5.10	5.20	5.43	5.31	5.22	5.41	5.44	5.01%	5.36%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	4.62	4.64	4.62	4.37	4.74	5.15	5.20	5.43	5.41	5.37	5.46	5.49	5.04%	5.44%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	Enhanced Jr Sub Nt 2006	6/30/2066	BBB	6.72	6.73	6.76	6.72	6.73	6.78	6.83	6.92	6.99	6.99	6.97	6.94	6.84%	6.97%
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	Jr Sub Nt 2006 Ser B Enh	9/30/2066	BBB	2.85	2.85	2.85	2.80	2.78	2.81	2.83	2.82	2.82	2.79	2.79	2.79	2.82%	2.79%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	4.57	4.61	4.76	4.70	5.09	5.35	5.40	5.63	5.51	5.42	5.61	5.69	5.20%	5.57%
Empire District Electric Co. (Th	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.65	5.69	5.67	5.43	5.82	6.05	6.10	6.33	6.16	6.07	6.26	6.39	5.97%	6.24%
Empire District Elec	6.7	29164RAA9	Sr Nts	11/15/2033	BBB	5.65	5.69	5.67	5.43	5.82	6.05	6.10	6.33	6.16	6.07	6.26	6.39	5.97%	6.24%
Energy East Corp.	6.75	29266MAE9	Nts	9/15/2033	BBB	6.12	6.16	6.09	6.30	6.19	6.60	6.48	6.63	6.46	6.22	6.11	6.24	6.30%	6.19%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	6.02	6.06	6.09	6.00	6.09	6.45	6.40	6.38	6.16	5.97	6.01	6.04	6.14%	6.01%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	4.67	4.71	4.64	4.38	4.74	5.20	5.15	5.38	5.30	5.32	5.28	5.41	5.02%	5.34%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	4.52	4.61	4.59	4.25	4.64	5.00	5.25	5.33	5.21	5.12	5.16	5.29	4.91%	5.19%
Ohio Power Co.	6.6	677415CF6	Sr Nts 'G'	2/15/2033	BBB	4.57	4.51	4.44	4.20	4.59	5.05	5.10	5.20	5.16	5.07	5.11	5.24	4.85%	5.14%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	4.98	5.00	5.03	5.03	5.07	5.12	5.15	5.20	5.20	5.22	5.22	5.27	5.12%	5.24%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YEAR BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	5.32	5.41	5.44	5.20	5.59	5.90	6.05	6.28	6.36	6.13	6.31	6.44	5.87%	6.29%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	4.09	4.06	4.17	3.92	4.27	4.78	4.59	5.07	5.18	5.02	5.01	4.90	4.59%	4.98%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	4.37	4.31	4.29	4.05	4.46	4.85	4.70	5.08	5.12	5.02	5.11	5.04	4.70%	5.06%
Public Service Co. of Oklahom	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	4.77	4.61	4.49	4.45	4.74	5.10	5.15	5.38	5.26	5.17	5.35	5.44	4.99%	5.32%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	5.72	5.74	5.77	5.74	5.74	5.77	5.80	5.92	6.04	6.07	6.05	6.07	5.87%	6.06%
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	5.73	5.73	5.73	5.71	5.73	5.75	5.92	6.02	6.12	6.09	6.09	6.05	5.89%	6.08%
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.02	5.01	4.99	4.75	5.07	5.41	5.50	5.90	5.77	5.68	5.90	5.80	5.40%	5.79%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.32	5.36	5.19	4.85	5.24	5.55	5.80	6.03	5.81	5.62	5.81	5.94	5.54%	5.79%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	4.71	4.76	4.84	4.60	4.99	5.29	5.45	5.68	5.66	5.48	5.54	5.52	5.21%	5.51%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	10.64	11.08	10.43	9.80	9.66	10.27	11.92	14.10	21.10	19.44	18.26	19.46	13.85%	19.05%
MDU Resources Group, Inc.	5.98	552690AF6	Sr(Sec)Nts	12/15/2033	NR	6.12	6.16	6.09	5.35	5.69	5.95	6.00	6.23	6.10	5.90	6.09	6.19	5.99%	6.06%
Ohio Power Co.	6.38	677415CJ8	Sr Nts 'I'	7/15/2033	NR	6.24	6.26	6.28	6.32	6.34	6.36	6.36	6.37	6.37	6.37	6.37	6.37	6.33%	6.37%
Tennessee Valley Authority	8.25	880591BL5	Pwr Bonds '92D	4/15/2042	NR	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74%	7.74%
Tennessee Valley Authority	6.235	880591CF7	Pwr Bonds '95B	7/15/2045	NR	4.77	4.73	4.68	4.64	4.90	5.12	5.34	5.51	5.47	5.39	5.49	5.66	5.14%	5.51%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	3.59	3.51	3.54	3.54	3.90	4.24	4.46	4.54	4.49	4.42	4.59	4.73	4.13%	4.58%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	3.63	3.59	3.63	3.54	3.93	4.39	4.56	4.61	4.51	4.42	4.59	4.81	4.18%	4.61%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	3.56	3.46	3.51	3.49	3.85	4.24	4.42	4.56	4.49	4.44	4.59	4.71	4.11%	4.58%
Union Electric	7.69	906548BT8	Sub Cap Inc Sec'A'	12/15/2036	NR	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45%	7.45%
			Counts of data			147	147	147	147	147	147	147	147	147	147	147	147	147	147

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.05%	4.51%
AA's	---	---
A's	4.67%	4.94%
BBB+'s	4.92%	5.18%
BBB's	5.28%	5.57%
BB's	---	---
B's	---	---
CC's	---	---
D	13.85%	19.05%
NR's	5.63%	5.86%
ALL	4.91%	5.21%
BBB- & Above	4.80%	5.07%
BB- & Above	4.80%	5.07%

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Gas Pipelines

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Gas Pipelines
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	Median	
4.54%	4.16%	Yahoo
3.46%	3.72%	Value Line
4.00%	3.94%	Average of E/Ps

Inverse of P/E Ratios:

2.86%	2.13%	Yahoo
4.30%	4.61%	Value Line
3.58%	3.37%	Average of Inverse of the P/E
5.14%	5.21%	Inverse of median P/E, Value Line
3.79%	3.65%	Average of all above except median P/E
Mean = 4.06%	3.97%	
Median = 4.30%	4.16%	

Equity Measure NUOI = 5.05%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.94%	6.05%	ALL
	5.80%	5.98%	BBB- & Above
	5.82%	5.94%	BB- & Above
Mean =	5.85%	5.99%	
Median =	5.82%	5.98%	

Debt Measure = 6.00%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate

Equity	68.00%	x	5.05%	=	3.43%
Debt	32.00%	x	6.00%	=	1.92%
	100.00%				5.35%
Direct Cap Rate NUOI =					**5.50%**

Gross Cash Flow / Price:

Mean	Median	
7.96%	7.65%	Value Line

Equity Measure Gross = 8.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)

Equity	68.00%	x	8.00%	=	5.44%
Debt	32.00%	x	6.00%	=	1.92%
	100.00%				7.36%
Direct Cap Rate GCF =					**7.50%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Gas Pipelines
2014 Assessment Year

Equity Measures Calculated:	**All**
Dividend Growth Model	14.00%
Capital Asset Pricing Model	10.05%
Mean =	12.03%
Median =	12.03%

Equity Measure FCF = 10.25%

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	4.44%	4.56%	4.97%	5.17%
BBB- & Above	3.91%	4.24%	5.14%	5.41%
BB- & Above	3.99%	4.23%	4.87%	5.08%
Mean =	4.11%	4.34%	5.00%	5.22%
Median =	3.99%	4.24%	4.97%	5.17%

Debt Measure = 5.25%

Yield Cap Rate Free Cash Flow - Gas Pipelines						
Equity	68.00%	x	10.25%	=	6.97%	
Debt	32.00%	x	5.25%	=	1.68%	
	100.00%				8.65%	
Weighted Average Cost of Capital (WACC) =						**8.75%**

Where Assumed Growth Rate = Inflation **Growth = 1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Gas Pipelines
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common 4th Quarter	(VL) Book Value Per Share H/D	Mkt. Value Common (000) DxE	(VL) Book Value Common (000)	(VL) Book Value Preferred (000)	Mkt. Value Preferred (000) IxL	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Debt (000) KxL
Spectra Energy Partners, LP	SEP	B++	103,600	45.35	16.056	4,698,260	1,663,400	0	0	699,600	1.00	699,600
ONEOK Partners LP	OKS	B++	219,800	51.92	19.591	11,412,016	4,306,200	0	0	4,803,600	1.00	4,803,600
Energy Transfer	ETP	B++	301,500	56.29	29.894	16,971,435	9,013,000	188,000	188,000	15,442,000	1.00	15,442,000
TransCanada P.L.	TRP	B++	705,000	45.66	22.251	32,190,300	15,687,000	1,224,000	1,224,000	18,019,000	1.00	18,019,000
Boardwalk	BWP	B+	230,000	25.52	16.857	5,869,600	3,877,100	0	0	3,539,200	1.00	3,539,200
Enterprise Products	EPD	B+	898,800	65.58	14.673	58,943,304	13,187,700	0	0	14,655,200	1.00	14,655,200
Kinder Morgan Egy Ptnrs L.P.	KMP	B+	373,200	79.31	22.680	29,598,492	8,464,000	2,860,000	2,860,000	16,175,000	1.00	16,175,000
Williams Ptrs.	WPZ	B+	398,000	49.96	22.319	19,884,080	8,883,000	0	0	8,437,000	1.00	8,437,000
El Paso Pipeline	EPB	B	209,000	35.30	9.507	7,377,700	1,987,000	0	0	4,246,000	1.00	4,246,000
EQT Midstream Partners LP	EQM	NA	34,700	58.36	13.579	2,025,092	471,200	0	0	203,300	1.00	203,300
Western Gas Partners LP	WES	A	104,700	61.07	18.692	6,394,029	1,957,100	0	0	1,168,300	1.00	1,168,300
Access Midstream Partners L.P.	ACMP	B++	149,100	56.01	24.714	8,351,091	3,684,800	0	0	2,500,000	1.00	2,500,000
Markwest Energy Partners LP	MWE	B+	127,500	65.31	22.645	8,327,025	2,887,200	0	0	2,523,100	1.00	2,523,100
Targa Resources Partners LP	NGLS	B+	100,100	51.55	16.626	5,160,155	1,664,300	0	0	2,393,700	1.00	2,393,700
Atlas Energy LP	ATLS	B	51,400	46.85	9.064	2,408,090	465,900	0	0	1,529,500	1.00	1,529,500
Eagle Rock Energy Partners Ltd	EROC	B	144,700	5.78	6.001	836,366	868,400	0	0	1,154,800	1.00	1,154,800
Crosstex Energy LP	XTEX	B	66,700	27.24	12.492	1,816,908	833,200	154,100	154,100	1,057,100	1.00	1,057,100
SUMS & AVGS - ALL COMPANIES						222,263,943	79,900,500	4,426,100	4,426,100	98,546,400		98,546,400
SUMS & AVGS - B++ & ABOVE COMPANIES						73,623,102	34,354,400	1,412,000	1,412,000	41,464,200		41,464,200
SUMS & AVGS - PRIMARILY GATHERING						33,293,664	12,360,900	154,100	154,100	12,326,500		12,326,500
MEDIAN VALUE - ALL COMPANIES						7,377,700	2,887,200	706,000	706,000	2,523,100		2,523,100

* All **Negative** values left out of calculations

INDUSTRY MARKET STRUCTURE						
	ALL COMPANIES		PRIMARILY GATHERING		B++ & ABOVE COMPANIES	
EQUITY	68.00%	222,263,943	73.00%	33,293,664	63.00%	73,623,102
DEBT	32.00%	102,972,500	27.00%	12,480,600	37.00%	42,876,200
TOTAL	100.00%	325,236,443	100.00%	45,774,264	100.00%	116,499,302

Notes/Rational for Changes to Guideline Companies

2014 Guideline Company Changes
No changes were made for 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Gas Pipelines
2014 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Company	Ticker Symbol	(YAHOO) EPS ltst 12mo	(YAHOO) E/P N/E	(VL) EPS	(VL) E/P P/E	(VL) CF/S	(VL) CF/P R/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/T	(VL) P/E	(VL) Inverse of P/E 1/V	(VL) Median P/E	(VL) Inverse of Median P/E 1/X	(VL) Beta
Spectra Energy Partners, LP	SEP	7.99	17.62%	1.74	3.84%			40.50	2.47%					0.70
ONEOK Partners LP	OKS	1.31	2.53%	2.36	4.55%			53.02	1.89%			15.00	6.67%	0.80
Energy Transfer	ETP	2.26	4.01%	1.75	3.11%	4.80	8.53%	50.31	1.99%	31.51	3.17%			0.75
TransCanada P.L.	TRP	2.30	5.04%	2.25	4.93%	4.25	9.31%	45.88	2.18%	20.62	4.85%	17.00	5.88%	0.85
Boardwalk	BWP	1.22	4.78%	1.20	4.70%	2.50	9.80%	28.90	3.46%	21.19	4.72%			0.70
Enterprise Products	EPD	2.82	4.30%	2.85	4.35%	4.05	6.18%	60.08	1.66%	21.68	4.61%	22.00	4.55%	0.80
Kinder Morgan Egy Ptnrs L.P.	KMP	3.63	4.58%	2.40	3.03%	5.75	7.25%	84.00	1.19%	32.82	3.05%	29.00	3.45%	0.75
Williams Ptrs.	WPZ	2.82	5.64%	1.80	3.60%	3.50	7.01%	50.86	1.97%	24.82	4.03%			1.05
El Paso Pipeline	EPB	1.86	5.27%	1.90	5.38%	2.70	7.65%	41.40	2.42%	17.67	5.66%			0.65
EQT Midstream Partners LP	EQM	2.34	4.01%	2.30	3.94%			45.76	2.19%					0.00
Western Gas Partners LP	WES	1.04	1.70%	1.67	2.73%			58.73	1.70%					0.75
Access Midstream Partners L.P.	ACMP	1.22	2.18%	0.98	1.75%			44.88	2.23%					0.75
Markwest Energy Partners LP	MWE	0.51	0.78%	0.51	0.78%			64.62	1.55%					1.15
Targa Resources Partners LP	NGLS	0.61	1.18%	0.88	1.71%			47.40	2.11%					1.15
Atlas Energy LP	ATLS	(1.23)	(2.63%)	(0.51)	(1.09%)			47.02	2.13%					2.00
Eagle Rock Energy Partners Ltd	EROC	(1.10)	(19.03%)	(0.72)	(12.46%)			7.94	12.60%					1.05
Crosstex Energy LP	XTEX	(1.83)	(6.72%)	(0.56)	(2.06%)			20.49	4.88%					1.85
SUMS & AVGS - ALL COMPANIES			4.54%		3.46%		7.96%		2.86%		4.30%		5.14%	0.98
SUMS & AVGS - B++ & ABOVE COMPANIES			6.27%		3.63%		8.92%		2.15%		4.01%		6.27%	0.77
SUMS & AVGS - PRIMARILY GATHERING			1.46%		1.74%				3.88%					1.24
MEDIAN VALUE - ALL COMPANIES			4.16%		3.72%		7.65%		2.13%		4.61%		5.21%	0.80

* All **Negative** values left out of calculations

Industry Beta = 1.10

Notes/Rational for Changes to Guideline Companies

2014 Guideline Company Changes
No changes were made for 2014

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Gas Pipelines
2014 Assessment Year

$$K_E = R_F + \beta\ (R_M - R_F)$$

	Gas Pipelines
K_E = Cost of Equity	**10.05%**
R_F = Risk Free Rate	3.96%
β= Beta	1.10
R_M = Market Rate of Return	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premium	2/28/13 until furth	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%
	Mean =	10.20%
	Median =	9.80%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013

Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014

U.S. Treasury Securities December 31, 2013

1 Year	R_f =	0.12%
10 Year	R_f =	3.03%
30 Year	R_f =	3.96%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2013

Market yield on U.S. Treasury securities, Annual Averages

1 year constant maturity, quoted on investment basis	R_f =	0.13%
10-year constant maturity, quoted on investment basis	R_f =	3.04%
30-year constant maturity, quoted on investment basis	R_f =	3.96%
	Mean =	2.15%
	Median =	3.03%

U.S. Treasury Securities Long-Term December 31, 2013

20 year constant maturity	R_f = **3.72%**	Weighted Mean = 2.75%
30 year constant maturity	R_f = **3.96%**	
	R_f =	**3.96%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Gas Pipelines
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth	Ke 1 Year
Spectra Energy Partners, LP	SEP	45.35			5.50%	
ONEOK Partners LP	OKS	51.92			15.50%	
Energy Transfer	ETP	56.29	3.64	6.47%	2.50%	8.97%
TransCanada P.L.	TRP	45.66	1.90	4.16%	3.00%	7.16%
EQT Midstream Partners LP	EQM	58.36				
Boardwalk	BWP	25.52	2.13	8.35%	1.50%	9.85%
Enterprise Products	EPD	65.58	2.92	4.45%	9.50%	13.95%
Kinder Morgan Egy Ptnrs L.P.	KMP	79.31	5.60	7.06%	7.00%	14.06%
Williams Ptrs.	WPZ	49.96	3.62	7.25%	7.50%	14.75%
El Paso Pipeline	EPB	35.30	2.79	7.90%	11.00%	18.90%
Western Gas Partners LP	WES	61.07			18.50%	
Access Midstream Partners L.P.	ACMP	56.01			11.50%	
Markwest Energy Partners LP	MWE	65.31			12.50%	
Targa Resources Partners LP	TRGP	87.57			13.00%	
Atlas Energy LP	ATLS	46.85			67.00%	
Eagle Rock Energy Partners Ltd	EROC	5.78			17.50%	
Crosstex Energy LP	XTEX	27.24			7.50%	

Weighted Mean =	15.41%
Mean =	12.52%
Median =	13.95%

Cost of Equity, (K_E) = 14.00%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Gas Pipelines
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
ACMP	Access Midstream Partners L.P.	high	$ 36.52	$ 38.00	$ 41.68	$ 42.35	$ 45.05	$ 48.74	$ 49.29	$ 48.97	$ 48.79	$ 53.64	$ 57.48	$ 57.00	$ 56.01	$52.47	$44.88	43.87	1.22
		low	$ 33.76	$ 35.45	$ 37.00	$ 38.00	$ 41.22	$ 41.85	$ 45.57	$ 45.33	$ 44.75	$ 46.66	$ 50.01	$ 50.04					
ATLS	Atlas Energy LP	high	$ 38.75	$ 42.07	$ 44.56	$ 52.78	$ 53.60	$ 53.01	$ 53.05	$ 55.70	$ 55.00	$ 55.89	$ 51.37	$ 48.27	$ 46.85	$47.59	$47.02	NA	(1.23)
		low	$ 34.74	$ 36.64	$ 41.02	$ 43.13	$ 49.00	$ 47.03	$ 44.80	$ 48.51	$ 49.57	$ 45.93	$ 41.79	$ 42.26					
BWP	Boardwalk	high	$ 27.54	$ 27.79	$ 29.33	$ 31.10	$ 31.74	$ 30.54	$ 33.00	$ 31.65	$ 30.98	$ 31.91	$ 30.77	$ 26.20	$ 25.52	$28.07	$28.90	20.60	1.22
		low	$ 25.32	$ 25.47	$ 26.19	$ 28.50	$ 29.48	$ 28.02	$ 30.24	$ 29.06	$ 29.22	$ 29.81	$ 25.63	$ 24.07					
CHK	Chesapeake Energy	high	$ 21.20	$ 20.88	$ 22.97	$ 20.64	$ 22.86	$ 22.28	$ 23.54	$ 26.63	$ 27.46	$ 28.71	$ 29.06	$ 27.82	$ 27.05	$27.09	$23.00	19.87	1.36
		low	$ 16.32	$ 19.09	$ 19.23	$ 18.21	$ 18.85	$ 19.32	$ 20.30	$ 24.02	$ 25.63	$ 25.65	$ 25.06	$ 26.22					
DVN	Devon Energy	high	$ 58.40	$ 61.80	$ 58.53	$ 56.69	$ 61.10	$ 58.00	$ 57.99	$ 59.40	$ 60.38	$ 66.92	$ 65.60	$ 62.40	$ 61.87	$61.66	$57.54	(41.24)	(1.46)
		low	$ 51.63	$ 52.69	$ 53.18	$ 50.81	$ 54.59	$ 51.66	$ 52.00	$ 55.15	$ 56.99	$ 57.58	$ 59.40	$ 58.03					
EEP	Enbridge Energy Partners LLP	high	$ 30.68	$ 30.19	$ 30.25	$ 30.42	$ 31.17	$ 30.64	$ 33.49	$ 31.78	$ 30.48	$ 31.30	$ 30.96	$ 30.56	$ 29.30	$29.84	$29.80	NA	(0.16)
		low	$ 28.41	$ 27.01	$ 27.44	$ 29.10	$ 28.52	$ 28.01	$ 30.50	$ 29.00	$ 28.97	$ 29.05	$ 28.74	$ 28.41					
ENB.TO	Enbridge Inc.	high	$ 44.87	$ 45.98	$ 47.38	$ 47.96	$ 49.17	$ 45.90	$ 46.96	$ 46.46	$ 43.92	$ 45.30	$ 46.75	$ 46.60	$ 46.41	$44.41	$44.86	40.98	1.09
		low	$ 42.59	$ 43.84	$ 45.53	$ 45.18	$ 44.35	$ 41.84	$ 44.03	$ 42.16	$ 42.00	$ 41.74	$ 43.30	$ 42.74					
EPB	El Paso Pipeline	high	$ 41.81	$ 42.98	$ 44.19	$ 44.76	$ 43.98	$ 44.99	$ 44.85	$ 43.15	$ 42.43	$ 43.04	$ 41.94	$ 41.51	$ 35.30	$39.97	$41.40	20.12	1.86
		low	$ 37.30	$ 40.08	$ 40.08	$ 41.56	$ 40.70	$ 39.04	$ 41.38	$ 40.60	$ 39.90	$ 40.15	$ 39.86	$ 33.34					
EPD	Enterprise Products	high	$ 56.83	$ 57.69	$ 60.34	$ 62.47	$ 63.56	$ 62.36	$ 65.59	$ 63.25	$ 62.35	$ 64.80	$ 63.76	$ 66.92	$ 65.58	$62.66	$60.08	22.64	2.82
		low	$ 51.01	$ 54.30	$ 55.31	$ 58.60	$ 59.34	$ 56.11	$ 61.07	$ 58.12	$ 57.65	$ 59.13	$ 60.57	$ 60.77					
EQM	EQT Midstream Partners LP	high	$ 36.57	$ 38.74	$ 40.74	$ 47.22	$ 51.72	$ 51.58	$ 49.09	$ 49.20	$ 51.22	$ 55.10	$ 56.41	$ 59.39	$ 58.36	$53.54	$45.76	23.53	2.34
		low	$ 31.30	$ 34.66	$ 37.24	$ 35.26	$ 45.26	$ 44.83	$ 42.16	$ 43.62	$ 46.71	$ 48.45	$ 51.12	$ 50.75					
EQT	EQT Corp	high	$ 62.43	$ 63.39	$ 68.44	$ 76.91	$ 83.33	$ 84.00	$ 88.16	$ 88.23	$ 94.42	$ 91.59	$ 88.05	$ 91.19	$ 89.78	$86.39	$77.71	40.48	2.14
		low	$ 56.84	$ 57.86	$ 62.05	$ 64.71	$ 73.62	$ 76.93	$ 78.57	$ 82.62	$ 84.10	$ 84.75	$ 80.72	$ 82.06					
EROC	Eagle Rock Energy Partners Ltd	high	$ 9.73	$ 9.59	$ 9.84	$ 10.52	$ 10.27	$ 8.91	$ 8.25	$ 8.13	$ 7.24	$ 7.88	$ 6.38	$ 6.75	$ 5.78	$6.17	$7.94	NA	(1.10)
		low	$ 8.73	$ 8.94	$ 9.22	$ 9.41	$ 8.35	$ 7.46	$ 6.88	$ 6.01	$ 6.05	$ 5.95	$ 5.05	$ 5.01					
ETP	Energy Transfer	high	$ 48.00	$ 48.38	$ 50.71	$ 50.95	$ 53.00	$ 50.75	$ 52.91	$ 54.85	$ 53.29	$ 54.46	$ 54.93	$ 57.31	$ 56.29	$53.46	$50.31	24.11	2.26
		low	$ 43.67	$ 45.50	$ 46.08	$ 46.79	$ 47.32	$ 45.16	$ 49.96	$ 49.40	$ 50.00	$ 50.60	$ 51.79	$ 51.65					
KMP	Kinder Morgan Egy Ptnrs L.P.	high	$ 89.89	$ 89.39	$ 89.77	$ 92.99	$ 89.89	$ 85.88	$ 88.08	$ 83.92	$ 82.39	$ 84.50	$ 82.45	$ 81.91	$ 79.31	$80.81	$84.00	21.91	3.63
		low	$ 80.83	$ 85.61	$ 83.70	$ 86.69	$ 83.26	$ 77.71	$ 82.12	$ 81.06	$ 77.91	$ 78.77	$ 80.10	$ 77.13					
MWE	Markwest Energy Partners LP	high	$ 55.50	$ 58.75	$ 61.97	$ 63.97	$ 71.20	$ 68.61	$ 70.21	$ 71.46	$ 72.35	$ 74.92	$ 75.79	$ 69.05	$ 65.31	$69.70	$64.62	129.03	0.51
		low	$ 51.77	$ 53.92	$ 56.35	$ 56.90	$ 60.25	$ 61.02	$ 65.27	$ 66.33	$ 66.86	$ 68.57	$ 67.30	$ 62.56					
NFG	Natl Fuel Gas	high	$ 54.90	$ 59.05	$ 61.44	$ 62.73	$ 64.58	$ 62.22	$ 65.63	$ 67.68	$ 69.27	$ 72.53	$ 72.40	$ 72.12	$ 71.40	$69.23	$62.67	22.52	3.08
		low	$ 48.51	$ 54.41	$ 56.97	$ 56.80	$ 60.49	$ 56.87	$ 57.52	$ 64.96	$ 64.65	$ 65.23	$ 66.47	$ 66.60					
NFX	Newfield Exploration Co	high	$ 30.03	$ 30.50	$ 24.72	$ 23.30	$ 25.73	$ 24.64	$ 27.85	$ 25.30	$ 28.41	$ 32.55	$ 31.75	$ 28.90	$ 24.63	$28.51	$25.67	NA	(9.39)
		low	$ 26.52	$ 22.95	$ 22.14	$ 19.57	$ 21.40	$ 22.15	$ 23.56	$ 22.71	$ 23.52	$ 27.30	$ 27.77	$ 22.79					
NGLS	Targa Resources Partners LP	high	$ 41.01	$ 43.00	$ 46.25	$ 49.24	$ 49.96	$ 50.87	$ 54.13	$ 51.86	$ 51.51	$ 54.25	$ 53.46	$ 52.65	$ 51.55	$50.93	$47.40	82.57	0.61
		low	$ 37.59	$ 39.85	$ 40.93	$ 44.33	$ 43.52	$ 43.54	$ 48.79	$ 48.03	$ 47.57	$ 48.14	$ 49.01	$ 48.09					
OKE	ONEOK Inc.	high	$ 47.64	$ 48.22	$ 47.79	$ 52.46	$ 49.83	$ 45.58	$ 55.49	$ 53.52	$ 55.22	$ 57.56	$ 59.51	$ 62.23	$ 54.44	$57.38	$50.17	43.53	1.37
		low	$ 43.24	$ 44.11	$ 44.44	$ 47.05	$ 45.13	$ 40.42	$ 39.39	$ 49.83	$ 50.55	$ 52.28	$ 55.65	$ 57.03					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Gas Pipelines
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
OKS	ONEOK Partners LP	high	$ 60.33	$ 61.34	$ 57.40	$ 57.52	$ 54.46	$ 52.34	$ 52.60	$ 52.01	$ 54.00	$ 55.75	$ 55.10	$ 53.74	$ 51.92	$52.76	$53.02	39.25	1.31
		low	$ 54.77	$ 53.45	$ 51.79	$ 52.92	$ 49.59	$ 45.40	$ 48.22	$ 48.15	$ 49.58	$ 50.78	$ 52.02	$ 49.17					
SE	Spectra Energy Corp.	high	$ 28.40	$ 29.94	$ 30.94	$ 31.53	$ 32.05	$ 34.83	$ 37.11	$ 36.48	$ 34.47	$ 36.16	$ 36.01	$ 35.74	$ 35.62	$34.65	$32.36	22.11	1.55
		low	$ 26.86	$ 27.78	$ 28.54	$ 29.75	$ 30.54	$ 29.62	$ 34.26	$ 32.99	$ 32.57	$ 33.73	$ 33.45	$ 32.80					
SEP	Spectra Energy Partners, LP	high	$ 34.70	$ 38.01	$ 40.08	$ 40.12	$ 38.19	$ 47.23	$ 47.73	$ 44.74	$ 44.71	$ 46.75	$ 45.98	$ 45.83	$ 45.35	$44.04	$40.50	5.43	7.99
		low	$ 31.59	$ 33.75	$ 36.66	$ 36.27	$ 35.35	$ 34.42	$ 43.93	$ 40.20	$ 40.00	$ 42.67	$ 42.00	$ 41.02					
TRGP	Targa Resources Corp	high	$ 60.93	$ 63.89	$ 68.42	$ 69.21	$ 69.43	$ 67.60	$ 69.75	$ 69.98	$ 74.94	$ 80.20	$ 82.35	$ 89.74	$ 87.57	$79.46	$68.77	62.95	1.33
		low	$ 54.31	$ 58.55	$ 60.16	$ 64.52	$ 64.10	$ 60.01	$ 64.40	$ 65.56	$ 67.91	$ 72.24	$ 74.50	$ 77.72					
TRP	TransCanada P.L.	high	$ 49.64	$ 48.87	$ 48.90	$ 49.60	$ 49.65	$ 46.97	$ 46.12	$ 46.79	$ 44.94	$ 45.25	$ 46.45	$ 46.02	$ 45.66	$44.60	$45.88	19.42	2.30
		low	$ 47.16	$ 45.80	$ 46.05	$ 46.58	$ 45.54	$ 42.39	$ 42.83	$ 42.59	$ 43.06	$ 42.41	$ 44.17	$ 43.32					
WES	Western Gas Partners LP	high	$ 52.60	$ 58.16	$ 59.81	$ 60.68	$ 63.57	$ 65.11	$ 65.16	$ 63.27	$ 61.55	$ 61.61	$ 63.98	$ 64.07	$ 61.07	$60.44	$58.73	58.54	1.04
		low	$ 46.82	$ 52.12	$ 53.87	$ 55.57	$ 58.76	$ 56.83	$ 60.33	$ 58.19	$ 54.58	$ 57.54	$ 57.71	$ 57.70					
WMB	Williams Cos	high	$ 35.45	$ 36.22	$ 38.00	$ 38.57	$ 38.20	$ 35.37	$ 34.76	$ 36.77	$ 36.94	$ 37.47	$ 36.23	$ 38.68	$ 38.57	$35.88	$35.37	42.24	0.86
		low	$ 33.10	$ 33.09	$ 33.34	$ 36.11	$ 35.02	$ 31.25	$ 32.36	$ 34.02	$ 34.95	$ 34.67	$ 34.22	$ 33.98					
WPZ	Williams Ptrs.	high	$ 51.27	$ 54.50	$ 52.14	$ 54.66	$ 53.99	$ 51.68	$ 53.74	$ 52.49	$ 53.36	$ 53.98	$ 51.71	$ 51.67	$ 49.96	$50.94	$50.86	17.75	2.82
		low	$ 48.39	$ 48.68	$ 48.06	$ 50.75	$ 49.26	$ 45.37	$ 49.96	$ 47.93	$ 48.85	$ 50.77	$ 49.04	$ 48.46					
XTEX	Crosstex Energy LP	high	$ 17.08	$ 18.48	$ 18.58	$ 19.82	$ 21.89	$ 21.39	$ 22.05	$ 21.34	$ 20.15	$ 29.50	$ 27.19	$ 27.81	$ 27.24	$25.35	$20.49	NA	(1.83)
		low	$ 14.70	$ 16.44	$ 16.65	$ 17.63	$ 17.90	$ 18.51	$ 20.45	$ 18.22	$ 18.31	$ 19.29	$ 23.06	$ 25.25					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.25	98385XAC0	Sr Nts	04/15/2013	AAA	6.17	6.20	6.24										6.20%	
XTO Energy Inc.	4.9	98385XAD8	Sr Nts	02/01/2014	AAA	4.68	4.70	4.72	4.74	4.76	4.77	4.79	4.81	4.83	4.84	4.86	4.88	4.78%	4.86%
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	4.77	4.78	4.80	4.80	4.82	4.85	4.86	4.89	4.89	4.90	4.91	4.94	4.85%	4.92%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	4.90	4.91	4.92	4.92	4.97	5.02	5.03	5.07	5.06	5.06	5.07	5.11	5.00%	5.08%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.44	4.46	4.45	4.30	4.53	4.81	4.86	5.05	4.98	4.90	5.02	5.09	4.74%	5.00%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	5.08	5.09	5.10	5.10	5.19	5.29	5.30	5.37	5.28	5.29	5.33	5.41	5.24%	5.34%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.51	4.54	4.53	4.41	4.65	4.94	4.98	5.13	5.04	4.97	5.10	5.15	4.83%	5.07%
XTO Energy Inc.	4.62	98385XAN6	Sr Nts	06/15/2013	AAA	4.55	4.57	4.58	4.60	4.62								4.58%	
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	4.50	4.51	4.51	4.49	4.58	4.69	4.67	4.73	4.70	4.66	4.69	4.78	4.63%	4.71%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.48	4.51	4.49	4.33	4.59	4.85	4.87	5.02	4.96	4.89	5.00	5.10	4.76%	5.00%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	6.90	6.82	6.83	6.79	6.92	7.10	7.13	7.26	7.15	7.14	7.22	7.35	7.05%	7.24%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	6.18	6.16	6.16	6.08	6.28	6.45	6.49	6.61	6.53	6.50	6.61	6.71	6.40%	6.61%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	5.53	5.56	5.37	5.19	5.38	5.58	5.62	5.76	5.67	5.88	5.89	5.95	5.62%	5.91%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	5.49	5.54	5.53	5.39	5.59	5.79	5.83	5.98	5.88	5.83	5.96	5.96	5.73%	5.92%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	5.32	5.13	5.10	4.96	5.16	5.36	5.39	5.53	5.44	5.73	5.79	5.85	5.40%	5.79%
Northwest Natural Gas	9.05	66765RAA4	Sec M-T Nts A	08/13/2021	A+	6.33	6.35	6.32	6.25	6.44	6.59	6.63	6.63	6.56	6.53	6.64	6.75	6.50%	6.64%
Northwest Natural Gas	8.26	66765RAT3	Sec M-T Nts B	09/21/2014	A+	7.40	7.43	7.46	7.51	7.56	7.59	7.63	7.68	7.72	7.76	7.81	7.85	7.62%	7.81%
Northwest Natural Gas	7	66765RAY2	Sec M-T Nts B	08/01/2017	A+	5.78	5.79	5.79	5.79	5.88	5.97	5.97	6.00	5.96	5.96	5.99	6.08	5.91%	6.01%
Northwest Natural Gas	7.63	66765RBF2	Sec M-T Nts B	12/09/2019	A+	5.86	5.87	5.86	5.84	5.95	6.08	6.08	6.11	6.04	6.02	6.06	6.19	6.00%	6.09%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	6.64	6.66	6.62	6.54	6.77	6.97	7.02	7.16	7.09	7.01	7.03	7.17	6.89%	7.07%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	6.11	6.15	6.17	6.02	6.20	6.45	6.51	6.58	6.51	6.42	6.55	6.64	6.36%	6.54%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	6.09	6.12	6.18	6.02	6.21	6.46	6.52	6.59	6.52	6.43	6.56	6.65	6.36%	6.55%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	6.17	6.19	6.09	6.01	6.18	6.38	6.43	6.59	6.52	6.52	6.57	6.63	6.36%	6.57%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	5.98	6.01	5.97	5.82	6.03	6.29	6.35	6.48	6.41	6.32	6.45	6.54	6.22%	6.44%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	6.69	6.71	6.33	6.24	6.47	6.68	6.71	6.84	6.78	6.74	6.86	7.02	6.67%	6.87%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	5.95	5.97	5.74	5.64	5.90	6.15	6.00	6.14	6.05	6.00	6.14	6.25	5.99%	6.13%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	5.45	5.46	5.38	5.27	5.53	5.82	5.71	5.85	5.80	5.65	5.77	5.88	5.63%	5.77%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	5.61	5.64	5.65	5.51	5.54	5.77	5.80	5.95	5.88	5.83	5.87	5.84	5.74%	5.85%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	5.18	5.21	5.22	5.08	5.33	5.59	5.44	5.59	5.47	5.42	5.54	5.67	5.40%	5.54%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	5.05	5.08	5.18	5.00	5.24	5.49	5.34	5.50	5.49	5.40	5.41	5.49	5.31%	5.43%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.70	4.67	4.70	4.59	4.84	5.10	4.99	5.14	5.06	5.01	5.13	5.25	4.93%	5.13%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	5.02	5.05	5.09	4.95	5.23	5.48	5.38	5.55	5.46	5.40	5.52	5.61	5.31%	5.51%
Louisiana Land/Exp	7.625	546268AF0	Deb	04/15/2013	A	7.52	7.55	7.61										7.56%	
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	6.05	6.07	5.46	5.37	5.60	5.83	5.85	5.99	5.91	5.79	5.89	6.01	5.82%	5.90%
Michigan Consol Gas	8.25	594457BD4	1st	05/01/2014	A	7.58	7.61	7.66	7.70	7.75	7.78	7.81	7.84	7.90	7.96	8.01	8.04	7.80%	8.00%
Michigan Consol Gas	5.7	594457BT9	Sr Nts	03/15/2033	A	5.00	5.02	4.92	4.77	5.01	5.18	5.24	5.39	5.31	5.26	5.38	5.46	5.16%	5.37%
Michigan Consol Gas	5	594457BU6	Sr Nts'E'	10/01/2019	A	4.37	4.37	4.36	4.35	4.37	4.46	4.45	4.53	4.47	4.46	4.48	4.57	4.44%	4.50%
Northern IllinoisGas	6.58	665228BQ4	1st	02/15/2028	A	5.30	5.31	5.26	5.14	5.38	5.57	5.60	5.74	5.63	5.57	5.70	5.84	5.50%	5.70%
Northern IllinoisGas	7.2	665228BV3	1st	05/15/2016	A	6.12	6.13	6.15	6.16	6.21	6.26	6.27	6.32	6.32	6.34	6.36	6.41	6.25%	6.37%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	6.53	6.55	6.54	6.54	6.68	6.80	6.82	6.94	6.87	6.81	6.84	6.99	6.74%	6.88%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	5.77	5.74	5.71	5.37	5.64	5.89	5.94	6.10	5.99	5.94	6.13	6.22	5.87%	6.10%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nt 144a	02/15/2029	A	6.12	6.16	6.15	5.79	6.02	6.24	6.29	6.44	6.38	6.34	6.42	6.52	6.24%	6.43%
Occidental Pete Corp Med Term	8.75	67461FED5	'N Tranche # Tr 00	1/15/2023	A	6.28	6.31	6.30	6.20	6.43	6.63	6.68	6.82	6.74	6.64	6.76	6.89	6.56%	6.76%
Occidental Petro	8.75	67461FED5	Sr Nts	01/15/2023	A	6.28	6.31	6.30	6.20	6.43	6.63	6.68	6.82	6.74	6.64	6.76	6.89	6.56%	6.76%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	5.27	5.28	5.29	5.29	5.42	5.54	5.54	5.57	5.50	5.49	5.53	5.58	5.44%	5.53%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	5.32	5.34	5.35	5.22	5.42	5.66	5.68	5.83	5.76	5.68	5.55	5.63	5.54%	5.62%
Piedmont Natural Gas Co., Inc.	5	720186AD7	Nts'E'	12/19/2013	A	4.84	4.85	4.86	4.88	4.89	4.91	4.93	4.94	4.96	4.97	4.99		4.91%	4.98%
Piedmont Natural Gas Co., Inc.	6	720186AE5	Nts'E'	12/19/2033	A	5.23	4.91	4.90	4.75	4.90	5.07	5.10	5.21	5.13	5.08	5.17	5.26	5.06%	5.17%
Piedmont Natural Gas	7.95	72018QAG6	M-T Nts'C'	09/14/2029	A	5.84	5.78	5.71	5.57	5.57	5.73	5.77	5.90	5.98	5.94	6.04	6.12	5.83%	6.03%
Western Atlas Inc	8.55	957674AD6	Deb	06/15/2024	A	5.97	5.99	5.91	5.81	6.06	6.26	6.30	6.28	6.20	6.16	6.25	6.31	6.13%	6.24%
ANR Pipeline	7.38	001814AQ5	Deb	02/15/2024	A-	5.59	5.61	5.59	5.62	5.84	6.06	6.09	6.22	5.92	5.85	5.98	6.10	5.87%	5.98%
ANR Pipeline	9.62	001814AR3	Deb	11/01/2021	A-	6.42	6.44	6.42	6.32	6.54	6.78	6.83	6.93	6.89	6.82	6.92	7.12	6.70%	6.95%
ANR Pipeline	7	001814AS1	Deb	06/01/2025	A-	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42				5.42%	
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	5.68	5.75	5.73	5.61	5.90	6.16	6.08	6.18	6.02	5.97	6.11	6.16	5.95%	6.08%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	5.70	5.77	5.75	5.65	5.89	6.16	6.13	6.26	6.10	6.05	6.19	6.24	5.99%	6.16%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.45	5.59	5.57	5.35	5.71	6.12	6.02	6.23	6.12	6.01	6.21	6.17	5.88%	6.13%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.29	5.44	5.43	5.26	5.54	5.89	5.81	5.98	5.74	5.65	5.82	5.85	5.64%	5.77%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	5.75	5.77	5.78	5.74	5.82	5.93	5.91	5.97	5.91	5.91	5.90	6.01	5.87%	5.94%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	5.87	5.90	5.90	5.86	5.99	6.08	6.08	6.14	6.06	6.06	6.04	6.18	6.01%	6.09%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.86	5.00	4.99	4.81	5.07	5.40	5.27	5.48	5.42	5.24	5.32	5.29	5.18%	5.28%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	4.82	4.84	4.85	4.85	4.92	4.99	4.95	5.01	4.97	4.97	4.97	5.00	4.93%	4.98%
Apache Corp.	5.25	037411AT2	Nts	04/15/2013	A-	5.20	5.21	5.24										5.22%	
Atmos Energy Corp.	6.75	049560AA3	Deb	07/15/2028	A-	5.36	5.38	5.35	5.21	5.48	5.68	5.76	5.92	5.80	5.74	5.88	6.03	5.63%	5.88%
Atmos Energy Corp.	4.95	049560AF2	Sr Nts	10/15/2014	A-	4.63	4.64	4.65	4.66	4.68	4.70	4.71	4.73	4.75	4.76	4.77	4.79	4.71%	4.77%
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	4.88	4.90	4.89	4.74	4.99	5.16	5.30	5.45	5.37	5.31	5.44	5.49	5.16%	5.41%
Atmos Energy Corp.	6.35	049560AH8	Sr Nts	06/15/2017	A-	5.29	5.30	5.30	5.30	5.37	5.45	5.46	5.53	5.49	5.49	5.52	5.61	5.43%	5.54%
Consolidated Nat Gas	6.62	209615BN2	Deb	12/01/2013	A-	6.34	6.36	6.39	6.40	6.44	6.46	6.49	6.52	6.56	6.59			6.46%	6.59%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	4.89	4.90	4.90	4.87	4.95	5.06	5.05	5.12	5.06	5.06	5.08	5.13	5.01%	5.09%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	5.32	5.33	5.31	5.18	5.17	5.38	5.44	5.58	5.48	5.42	5.55	5.75	5.41%	5.57%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.94	5.96	5.96	5.75	6.00	6.20	6.07	6.19	6.12	6.01	6.13	6.22	6.05%	6.12%
KeySpan Corp.	4.65	49337WAG5	Nts	04/01/2013	A-	4.61	4.63	4.65										4.63%	
KeySpan Corp.	5.88	49337WAH3	Nts	04/01/2033	A-	5.24	5.27	5.26	5.01	5.26	5.46	5.46	5.61	5.53	5.44	5.52	5.61	5.39%	5.52%
Southwest Gas Corp.	8	844895AL6	Deb	08/01/2026	A-	5.75	5.77	5.73	5.61	5.85	6.04	6.07	6.21	6.11	5.98	6.09	6.18	5.95%	6.08%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.18	5.26	5.30	5.14	5.45	5.71	5.60	5.77	5.70	5.58	5.69	5.69	5.51%	5.65%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.33	5.36	5.35	5.24	5.41	5.60	5.49	5.65	5.56	5.50	5.62	5.69	5.48%	5.60%
Consolidated Nat Gas	6.88	209615BQ5	Deb	10/15/2026	BBB+	5.91	5.92	5.38	5.26	5.48	5.67	5.70	5.84	5.74	5.68	5.81	5.95	5.70%	5.81%
Consolidated Nat Gas	6.8	209615BS1	Deb	12/15/2027	BBB+	5.83	5.85	5.28	5.16	5.39	5.58	5.61	5.76	5.65	5.59	5.73	5.87	5.61%	5.73%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.49	5.67	5.78	5.59	5.82	6.11	5.99	6.17	6.09	6.00	6.10	6.10	5.91%	6.07%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.67	5.54	5.52	5.33	5.64	6.07	6.11	6.27	6.13	6.12	6.26	6.07	5.89%	6.15%
Enterprise Products Oper	6.375	293791AD1	Sr Nts 'B'	02/01/2013	BBB+	6.38												6.38%	
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	5.18	5.20	5.22	5.23	5.26	5.28	5.29	5.32	5.32	5.34	5.36	5.38	5.28%	5.36%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.48	5.53	5.30	5.14	5.38	5.75	5.54	5.69	5.66	5.63	5.66	5.66	5.54%	5.65%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	4.63	4.62	4.63	4.65	4.67	4.69	4.69	4.71	4.72	4.74	4.75	4.77	4.69%	4.75%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.04	5.08	5.01	4.86	5.13	5.47	5.36	5.49	5.41	5.32	5.46	5.43	5.26%	5.40%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	6.53	6.60	6.59	6.59	6.72	6.88	6.88	7.02	6.96	6.95	6.98	6.86	6.80%	6.93%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	5.80	6.09	6.11	5.85	6.02	6.32	6.16	6.37	6.27	6.10	6.24	6.17	6.13%	6.17%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.55	5.92	5.88	5.63	5.83	6.11	5.88	6.13	6.07	5.89	6.03	5.97	5.91%	5.96%
Enbridge Energy Partners, L.P.	4.75	29250RAC0	Sr Nts 'B'	06/01/2013	BBB	4.69	4.71	4.72	4.73	4.75								4.72%	
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.47	5.50	5.47	5.38	5.64	5.85	5.88	6.00	5.87	5.80	5.90	5.94	5.73%	5.88%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	5.11	5.09	5.12	5.09	5.13	5.19	5.19	5.22	5.20	5.22	5.23	5.26	5.17%	5.24%
Energen Corp.	5	29265NAQ1	Nts	10/01/2013	BBB	4.91	4.92	4.93	4.94	4.95	4.96	4.97	4.98	5.00				4.95%	
Equitable Resources, Inc.	7.75	294549AE0	Deb	07/15/2026	BBB	6.00	6.02	6.30	6.17	6.39	6.59	6.62	6.77	6.66	6.60	6.74	6.86	6.48%	6.73%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	5.75	5.77	5.77	5.59	5.89	6.30	6.18	6.30	6.27	6.15	6.30	6.33	6.05%	6.26%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.85	5.81	5.80	5.62	5.93	6.32	6.19	6.34	6.31	6.21	6.32	6.37	6.09%	6.30%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.65	5.68	5.71	5.53	5.82	6.16	6.02	6.24	6.22	6.10	6.22	6.19	5.96%	6.17%
Kinder Morgan Energy Partners, L.P.	5	494550AR7	Sr Nts	12/15/2013	BBB	4.82	4.82	4.84	4.86	4.88	4.90	4.92	4.93	4.95	4.97	4.99		4.90%	4.98%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	5.17	5.16	5.16	5.15	5.23	5.32	5.26	5.31	5.29	5.27	5.30	5.35	5.25%	5.31%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.46	5.45	5.43	5.20	5.53	5.89	5.73	5.99	5.90	5.78	5.92	5.93	5.68%	5.88%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.47	5.53	5.55	5.27	5.63	6.07	5.81	6.07	6.16	5.90	5.93	6.04	5.79%	5.96%
Lakehead Pipe Line Co	7	511546AA1	Sr Nts	10/01/2018	BBB	5.86	5.87	5.84	5.83	5.78	5.90	5.91	5.99	5.94	5.90	5.94	6.01	5.90%	5.95%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nts	10/01/2028	BBB	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58%	5.58%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	5.23	5.41	5.45	5.27	5.46	5.73	5.81	5.86	5.73	5.67	5.73	5.79	5.60%	5.73%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.00	6.00	5.99	5.96	6.15	6.42	6.40	6.55	6.50	6.41	6.51	6.59	6.29%	6.50%
National Fuel Gas Co.	5.25	636180BE0	Nts	03/01/2013	BBB	5.22	5.25											5.24%	
Northwest Pipeline	7.12	667748AF4	Deb	12/01/2025	BBB	5.53	5.54	5.52	5.41	5.66	5.86	5.73	5.86	5.76	5.71	5.83	5.92	5.69%	5.82%
Northwest Pipeline	7	667748AM9	Sr Nts	06/15/2016	BBB	5.93	5.91	5.93	5.94	5.99	6.05	6.07	6.12	6.11	6.08	6.10	6.15	6.03%	6.11%
ONEOK, Inc.	6.5	682680AA1	Sr InsurNts	09/30/2028	BBB	6.49	6.49	6.49	6.48	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49%	6.49%
ONEOK, Inc.	6.88	682680AB9	Deb	09/30/2028	BBB	5.76	5.77	5.73	5.60	5.73	6.07	6.21	6.40	6.28	6.21	6.36	6.52	6.05%	6.36%
ONEOK, Inc.	5.2	682680AM5	Nts	06/15/2015	BBB	4.80	4.81	4.78	4.79	4.81	4.83	4.86	4.89	4.89	4.89	4.90	4.92	4.85%	4.90%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BBB	5.41	5.47	5.41	5.23	5.49	5.75	6.22	6.56	6.53	6.44	6.48	6.41	5.95%	6.44%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	5.28	5.29	5.32	5.32	5.31	5.39	5.40	5.42	5.44	5.45	5.47	5.47	5.38%	5.46%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.40	5.45	5.49	5.28	5.61	5.97	6.00	6.25	6.20	5.91	6.05	6.04	5.80%	6.00%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	4.86	4.87	4.88	4.87	4.84	4.87	4.89	4.90	4.91	4.92	4.93	4.95	4.89%	4.93%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.41	5.46	5.33	5.14	5.42	5.75	5.48	5.65	5.63	5.55	5.63	5.71	5.51%	5.63%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	5.74	5.84	5.78	5.65	5.89	6.25	6.13	6.40	6.25	6.43	6.58	6.44	6.12%	6.48%
Transcont'l Gas PipeLine	7.08	893570BL4	Deb	07/15/2026	BBB	5.47	5.48	5.46	5.35	5.60	5.81	5.86	6.02	5.92	5.86	5.99	6.09	5.74%	5.98%
Transcont'l Gas PipeLine	7.25	893570BM2	Deb	12/01/2026	BBB	5.19	5.21	5.19	5.08	5.33	5.48	5.56	5.71	5.62	5.56	5.69	5.82	5.45%	5.69%
Transcont'l Gas PipeLine	6.4	893570BW0	Sr Nt	4/15/2016	BBB	5.54	5.55	5.57	5.58	5.59	5.64	5.64	5.69	5.67	5.67	5.70	5.73	5.63%	5.70%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	7.05	7.08	7.07	7.00	7.25	7.51	7.57	7.73	7.63	7.20	7.14	7.25	7.29%	7.20%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	6.50	6.51	6.50	6.43	6.61	6.67	6.59	6.73	6.64	6.60	6.67	6.80	6.60%	6.69%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	6.24	6.29	6.27	6.19	6.45	6.53	6.60	6.75	6.65	6.60	6.63	6.74	6.50%	6.66%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	6.54	6.55	6.55	6.41	6.70	7.02	6.82	6.99	6.90	6.83	6.91	7.25	6.79%	7.00%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.90	5.88	5.77	5.65	5.94	6.21	6.19	6.42	6.40	6.29	6.27	6.16	6.09%	6.24%
Valero Energy Corp. (New)	4.75	91913YAG5	Nts	06/15/2013	BBB	4.66	4.68	4.70	4.72	4.74								4.70%	
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	BBB	4.54	4.55	4.56	4.57	4.59	4.61	4.63	4.64	4.65	4.66	4.68	4.70	4.62%	4.68%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.57	5.46	5.45	5.26	5.47	5.82	5.86	6.22	6.04	5.79	5.80	5.80	5.71%	5.80%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	5.18	5.15	5.13	5.14	5.21	5.33	5.32	5.39	5.35	5.34	5.33	5.37	5.27%	5.35%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	6.01	6.01	6.03	6.03	6.09	6.23	6.24	6.25	6.22	6.22	6.22	6.28	6.15%	6.24%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.01	6.06	6.03	5.91	6.19	6.48	6.50	6.62	6.53	6.47	6.59	6.83	6.35%	6.63%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.26	6.33	6.25	5.99	6.42	6.89	7.03	7.26	7.20	7.07	7.27	7.52	6.79%	7.29%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.46	6.53	6.45	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.24	6.30	6.26	6.11	6.44	6.78	6.80	6.74	6.65	6.57	6.63	6.83	6.53%	6.68%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.09	6.15	6.11	5.96	6.28	6.62	6.64	6.60	6.50	6.42	6.54	6.78	6.39%	6.58%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	6.09	6.17	5.91	5.76	5.92	6.21	6.23	6.36	6.32	6.18	6.24	6.41	6.15%	6.28%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	5.17	5.17	5.17	5.17	5.22	5.29	5.25	5.30	5.29	5.28	5.28	5.34	5.24%	5.30%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.25	5.24	5.27	5.04	5.29	5.71	5.50	5.67	5.59	5.45	5.56	5.74	5.44%	5.58%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BBB-	5.00	5.00	4.93	4.92	4.92	5.02	4.99	5.03	5.00	5.02	5.07	5.05	5.00%	5.05%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BBB-	5.20	5.20	5.22	5.19	5.21	5.27	5.27	5.34	5.25	5.26	5.26	5.30	5.25%	5.27%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	4.74	4.73	4.73	4.73	4.80	4.86	4.86	4.90	4.86	4.73	4.74	4.79	4.79%	4.75%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	5.99	6.01	5.99	5.88	6.07	6.49	6.51	6.63	6.54	6.50	6.61	6.69	6.33%	6.60%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	5.45	5.47	5.48	5.50	5.52	5.55	5.56	5.57	5.59	5.60	5.63	5.64	5.55%	5.62%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	5.30	5.33	5.32	5.27	5.36	5.44	5.41	5.48	5.41	5.39	5.42	5.50	5.39%	5.44%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.75	5.80	5.82	5.58	5.81	6.19	6.11	6.28	6.22	6.02	6.13	6.14	5.99%	6.10%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.98	5.92	5.89	5.75	6.06	6.39	6.41	6.03	5.94	5.87	6.04	6.32	6.05%	6.08%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.93	6.01	6.02	5.85	6.10	6.34	6.10	6.28	6.23	6.11	6.19	6.29	6.12%	6.20%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	5.63	5.61	5.57	5.43	5.63	5.88	5.75	5.92	5.93	5.85	5.81	5.98	5.75%	5.88%
Panhandle East'n P.L.	6.05	698465BJ9	Sr Nts 'B'	08/15/2013	BBB-	5.89	5.91	5.93	5.96	5.99	6.00	6.04						5.96%	
Southern Natural Gas	8	843452AZ6	Nts	03/01/2032	BBB-	5.61	5.67	5.67	5.45	5.67	6.04	6.11	6.16	6.19	6.20	6.23	6.25	5.94%	6.23%
Southern Union Co.	7.6	844030AA4	Sr Nts	02/01/2024	BBB-	6.02	5.99	5.97	5.81	6.03	6.20	6.28	6.43	6.42	6.34	6.39	6.48	6.20%	6.40%
Southern Union Co.	8.25	844030AC0	Sr Nts	11/15/2029	BBB-	6.56	6.49	6.48	6.32	6.48	6.65	6.76	6.91	6.84	6.79	6.91	7.00	6.68%	6.90%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	6.26	6.32	6.23	6.09	6.40	6.73	6.75	6.46	6.37	6.30	6.44	6.54	6.41%	6.43%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.46	6.53	6.45	6.18	6.61	7.09	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	6.10	6.13	6.12	6.10	6.22	6.38	6.37	6.34	6.29	6.28	6.27	6.28	6.24%	6.28%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	6.02	6.08	5.97	5.82	5.93	6.25	6.27	6.04	5.95	5.88	5.97	6.16	6.03%	6.00%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	6.27	6.28	6.31	6.29	6.39	6.55	6.51	6.62	6.55	6.53	6.57	6.61	6.46%	6.57%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	6.06	6.13	6.12	5.99	6.18	6.53	6.51	6.77	6.77	6.72	6.79	7.09	6.47%	6.87%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	6.17	6.20	6.23	6.07	6.30	6.64	6.56	6.86	6.83	6.80	6.86	7.22	6.56%	6.96%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	6.13	6.19	6.16	6.06	6.26	6.51	6.50	6.65	6.60	6.56	6.65	6.82	6.42%	6.68%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	6.42	6.45	6.47	6.26	6.55	6.91	6.87	7.13	7.17	7.04	7.10	7.49	6.82%	7.21%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	5.69	5.67	5.64	5.63	5.70	5.82	5.83	5.87	5.82	5.81	5.79	5.87	5.76%	5.82%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	5.66	5.66	5.67	5.66	5.70	5.82	5.76	5.83	5.76	5.74	5.76	5.83	5.74%	5.78%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	5.64	5.63	5.66	5.48	5.76	6.11	6.26	6.21	6.23	6.17	6.31	6.34	5.98%	6.27%
El Paso Natural Gas	8.62	283695AZ7	Deb	01/15/2022	BB	6.34	6.34	6.29	6.17	6.36	6.71	6.74	6.78	6.77	6.73	6.72	6.86	6.57%	6.77%
El Paso Natural Gas	7.5	283695BE3	Deb	11/15/2026	BB	5.50	5.49	5.47	5.41	5.66	6.04	5.91	6.00	5.98	5.90	5.98	6.18	5.79%	6.02%
El Paso Natural Gas	8.38	283695BK9	Sr Sub Nts	06/15/2032	BB	5.93	5.93	5.92	5.73	5.96	6.37	6.27	6.46	6.42	6.43	6.43	6.52	6.20%	6.46%
KN Energy	6.5	482620AN1	Deb	09/01/2013	BB	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50					6.50%	
KN Energy	6.67	482620AS0	Deb	11/01/2027	BB	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02%	7.02%
KN Energy	7.25	482620AW1	Sr Deb	03/01/2028	BB	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07%	7.07%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	4.83	4.84	4.85	4.86	4.87	4.89	4.91	4.91	4.93	4.90	4.93	4.94	4.89%	4.92%
Range Resources Corp.	7.5	75281AAH2	Sr Sub Nts	10/01/2017	BB	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23%	7.23%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.89	6.95	6.98	6.99	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.98%	7.00%
Tennessee GasPipeline	7	880451AS8	Deb	03/15/2027	BB	5.21	5.23	5.21	5.10	5.42	5.72	5.69	5.84	5.73	5.65	5.81	5.95	5.55%	5.80%
Tennessee GasPipeline	7.5	880451AT6	Deb	04/01/2017	BB	6.10	6.11	6.12	6.11	6.19	6.31	6.30	6.37	6.34	6.34	6.38	6.44	6.26%	6.39%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	5.38	5.38	5.41	5.24	5.51	5.85	5.96	5.94	5.86	5.77	5.90	6.00	5.68%	5.89%
Tennessee GasPipeline	7	880451AV1	Deb	10/15/2028	BB	5.16	5.20	5.18	5.06	5.38	5.72	5.69	5.85	5.74	5.59	5.78	5.94	5.52%	5.77%
Tennessee GasPipeline	8.38	880451AW9	Nts	06/15/2032	BB	5.90	5.93	5.92	5.73	5.96	6.37	6.20	6.39	6.35	6.37	6.36	6.49	6.16%	6.41%
Whiting Petroleum Corp.	7.25	966387AC6	Sr Sub Nts	05/01/2013	BB	7.12	7.12	7.12	7.12									7.12%	
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	5.90	5.90	5.90	5.80	5.90	6.07	5.93	5.90	5.86	5.79	5.77	5.76	5.87%	5.77%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	6.25	6.26	6.27	6.01	6.11	6.39	6.22	6.36	6.33	6.09	6.11	6.08	6.21%	6.09%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Cor	11/15/2035	BB-	2.78	2.75	2.74	2.74	2.69	2.75	2.73	2.67	2.64	2.58	2.61	2.62	2.69%	2.60%
Chesapeake Energy Corp.	7.62	165167BY2	Sr Nts	07/15/2013	BB-	7.43	7.44	7.49	7.53	7.58	7.63							7.52%	
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Cor	5/15/2037	BB-	2.61	2.61	2.61	2.59	2.50	2.61	2.60	2.55	2.52	2.46	2.44	2.47	2.55%	2.46%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv I	5/15/2037	BB-	2.67	2.65	2.64	2.64	2.52	2.62	2.63	2.60	2.55	2.50	2.47	2.48	2.58%	2.48%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Cor	12/15/2038	BB-	2.60	2.56	2.54	2.54	2.41	2.50	2.58	2.46	2.46	2.38	2.40	2.41	2.49%	2.40%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	6.50	6.44	6.41	6.26	6.29	6.47	6.41	6.41	6.40	6.26	6.30	6.27	6.37%	6.28%
Plains Exploration & Production Comp	7	726505AC4	SrNts	03/15/2017	BB-	6.76	6.76	6.76	6.76	6.76								6.76%	
Plains Exploration & Production Comp	7.75	726505AD2	SrNts	06/15/2015	BB-	7.60	7.60	7.60	7.60	7.60								7.60%	
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.91	6.95	6.96	6.95	6.98	7.16	7.00	7.05	7.00	6.94	6.92	6.98	6.98%	6.95%
Whiting Petroleum Corp.	7	966387AE2	Sr Sub Nts	02/01/2014	BB-	6.66	6.71	6.73	6.73	6.79	6.86	6.86	6.84	6.87	6.88	6.91	6.91	6.81%	6.90%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	6.27	7.78%	7.37%
Stone Energy Corp.	6.75	861642AG1	Sr Sub Nts	12/15/2014	CCC+	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75%	6.75%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	8.45	8.63	8.27	7.50	7.12	8.33	8.38	7.85	7.51	7.47	7.28	7.28	7.84%	7.34%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	8.45	8.63	8.27	7.50	7.12	8.33	8.38	7.85	7.51	7.47	7.28	7.28	7.84%	7.34%
Cimarex Energy Co.	7.12	171798AA9	SrNts	05/01/2017	NR	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88%	6.88%
Colorado Interstate Gas	5.95	196522AH9	Sr Nts	03/15/2015	NR	5.42	5.43	5.45	5.47	5.49	5.52	5.53	5.56	5.57	5.59	5.61	5.63	5.52%	5.61%
Delta Natural Gas Co., Inc.	5.75	247748AG1	InsurQtrly Nts	04/01/2021	NR	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75%	5.75%
Delta Petroleum Corp.	7	247907AC2	Sr Nts	04/01/2015	NR	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67%	11.67%
Denbury Resources	7.5	24823UAE8	Sr Sub Nt	4/1/2013	NR	7.49	7.49	7.49										7.49%	
Denbury Resources	7.5	24823UAF5	Gtd Sr Sub Nt	12/15/2015	NR	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23%	7.23%
Encore Acquisition	6	29255WAG5	Sr Sub Nt	7/15/2015	NR	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94%	5.94%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Ferrellgas,L.P./Finance	6.75	315292AD4	SrNts	05/01/2014	NR	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72%	6.72%
Forest Oil Corp.	7.75	346091AU5	Sr Nts	05/01/2014	NR	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65%	7.65%
Houston Exploration Co. (The)	7	442120AE1	Sr Sub Nts	06/15/2013	NR	7.00	7.00	7.00	7.00	7.00								7.00%	
Mariner Energy, Inc.	7.5	56845TAE7	Sr Nts	04/15/2013	NR	7.22	7.22	7.22										7.22%	
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02%	7.02%
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.55	6.55	6.55	6.49	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55%	6.55%
Offshore Logistics, Inc.	6.12	676255AL6	SrNts	06/15/2013	NR	6.06	6.06	6.06	6.06	6.06								6.06%	
ONEOK, Inc.	6.4	682680AD5	Sr InsurNts	02/01/2019	NR	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40%	6.40%
Piedmont Natural Gas Co., Inc.	6.25	720186AF2	InsurQtrly Nts	06/01/2036	NR	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	5.61	5.60	5.56	5.44	5.65	5.92	5.94	6.09	5.98	5.84	5.89	5.98	5.79%	5.90%
Range Resources Corp.	7.38	75281AAB5	Sr Sub Nts	07/15/2013	NR	7.30	7.30	7.30	7.30	7.30	7.30							7.30%	
Range Resources Corp.	7.5	75281AAG4	Sr Sub Nts	05/15/2016	NR	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23%	7.23%
Rentech, Inc.	4	760112AA0	Sr Nt Conv	4/15/2013	NR	4.06	4.06											4.06%	
Southern Natural Gas	7.35	843452AY9	Nts	02/15/2031	NR	5.58	5.58	5.57	5.43	5.66	5.93	6.03	6.17	6.14	6.08	6.08	6.16	5.87%	6.11%
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	5.12	5.10	5.12	5.08	5.16	5.24	5.31	5.37	5.33	5.33	5.21	5.28	5.22%	5.27%
Tesoro Corp.	6.62	881609AS0	Sr Nt	11/1/2015	NR	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.46	6.56	6.55%	6.53%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.27	7.29	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30%	7.30%
			Counts of data			217	216	214	208	207	200	198	197	196	194	193	191	217	194

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.96%	5.00%
AA's	6.04%	6.29%
A's	5.85%	6.00%
BBB's	5.86%	6.05%
BB's	5.88%	5.70%
B's	7.78%	7.37%
CCC's	7.48%	7.15%
NR's	6.69%	6.78%
ALL	5.94%	6.05%
BBB- & Above	5.80%	5.98%
BB- & Above	5.82%	5.94%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.25	98385XAC0	Sr Nts	04/15/2013	AAA	0.71	0.60											0.66%	
XTO Energy Inc.	4.9	98385XAD8	Sr Nts	02/01/2014	AAA	0.41	0.40	0.38	0.45	0.57	0.54	0.54	0.57	0.69	0.40	0.68		0.51%	0.54%
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	0.67	0.65	0.64	0.47	0.57	0.67	0.64	0.71	0.60	0.50	0.40	0.48	0.58%	0.46%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	0.80	0.78	0.66	0.57	0.77	1.06	0.98	1.19	0.94	0.83	0.76	0.95	0.86%	0.85%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	3.68	3.72	3.70	3.45	3.82	4.25	4.33	4.61	4.51	4.37	4.56	4.66	4.14%	4.53%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	1.02	1.00	0.96	0.87	1.23	1.65	1.62	1.91	1.34	1.31	1.45	1.79	1.35%	1.52%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	3.67	3.71	3.69	3.49	3.86	4.30	4.35	4.58	4.43	4.32	4.51	4.59	4.13%	4.47%
XTO Energy Inc.	4.62	98385XAN6	Sr Nts	06/15/2013	AAA	0.66	0.65	0.60	0.72									0.66%	
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	1.24	1.22	1.18	1.03	1.39	1.85	1.71	1.93	1.72	1.47	1.59	1.96	1.52%	1.67%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	3.77	3.81	3.77	3.53	3.92	4.30	4.33	4.56	4.46	4.35	4.51	4.66	4.16%	4.51%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	3.23	2.96	2.92	2.76	3.04	3.49	3.51	3.80	3.44	3.34	3.49	3.80	3.32%	3.54%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	3.06	2.98	2.93	2.69	3.16	3.56	3.60	3.86	3.63	3.51	3.75	3.96	3.39%	3.74%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	4.27	4.31	3.99	3.67	3.99	4.30	4.35	4.58	4.42	4.74	4.76	4.84	4.35%	4.78%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	4.25	4.31	4.29	4.05	4.37	4.68	4.73	4.96	4.80	4.71	4.90	4.89	4.58%	4.83%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	4.20	3.87	3.82	3.58	3.90	4.21	4.26	4.49	4.33	4.77	4.87	4.95	4.27%	4.86%
Northwest Natural Gas	9.05	66765RAA4	Sec M-T Nts A	08/13/2021	A+	3.24	3.26	3.16	2.92	3.36	3.71	3.75	3.71	3.51	3.39	3.63	3.85	3.46%	3.62%
Northwest Natural Gas	8.26	66765RAT3	Sec M-T Nts B	09/21/2014	A+	1.12	1.10	1.03	1.04	1.10	1.09	1.06	1.11	1.14	1.03	1.11	1.13	1.09%	1.09%
Northwest Natural Gas	7	66765RAY2	Sec M-T Nts B	08/01/2017	A+	2.09	2.07	1.98	1.88	2.19	2.55	2.49	2.53	2.26	2.15	2.23	2.59	2.25%	2.32%
Northwest Natural Gas	7.63	66765RBF2	Sec M-T Nts B	12/09/2019	A+	2.78	2.76	2.67	2.57	2.88	3.24	3.18	3.23	2.95	2.85	2.92	3.28	2.94%	3.02%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	3.89	3.91	3.76	3.52	4.06	4.52	4.59	4.90	4.71	4.48	4.49	4.80	4.30%	4.59%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	5.02	5.06	5.09	4.85	5.12	5.50	5.58	5.68	5.56	5.42	5.61	5.74	5.35%	5.59%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	4.97	5.01	5.09	4.85	5.12	5.50	5.58	5.68	5.56	5.42	5.61	5.74	5.34%	5.59%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	3.79	3.81	3.56	3.32	3.71	4.17	4.24	4.60	4.41	4.40	4.49	4.60	4.09%	4.50%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	4.97	5.01	4.94	4.70	5.02	5.40	5.48	5.68	5.56	5.42	5.61	5.74	5.29%	5.59%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	4.09	4.11	3.17	2.89	3.43	3.91	3.94	4.22	4.03	3.90	4.16	4.50	3.86%	4.19%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	4.19	4.21	3.73	3.49	4.02	4.51	4.18	4.46	4.27	4.14	4.40	4.60	4.18%	4.38%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	4.24	4.26	4.08	3.84	4.37	4.93	4.70	4.98	4.87	4.55	4.79	5.00	4.55%	4.78%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	4.59	4.63	4.64	4.40	4.43	4.83	4.87	5.12	5.00	4.90	4.96	4.91	4.77%	4.92%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	4.17	4.21	4.21	3.97	4.39	4.80	4.55	4.80	4.59	4.49	4.70	4.89	4.48%	4.69%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	3.81	3.87	4.04	3.70	4.13	4.56	4.30	4.58	4.54	4.37	4.39	4.52	4.23%	4.43%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.02	3.96	4.01	3.81	4.24	4.66	4.47	4.72	4.59	4.49	4.70	4.89	4.38%	4.69%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	3.89	3.93	3.99	3.75	4.21	4.62	4.45	4.73	4.56	4.45	4.66	4.79	4.34%	4.63%
Consolidated Nat Gas	6.62	209615BN2	Deb	12/01/2013	A	1.26	1.24	1.26	0.86	0.95	0.80	0.85	0.75	1.21	0.73			0.99%	0.73%
Louisiana Land/Exp	7.625	546268AF0	Deb	04/15/2013	A	0.97	0.95											0.96%	
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	4.54	4.56	3.19	2.95	3.48	3.97	4.00	4.28	4.09	3.80	4.01	4.25	3.93%	4.02%
Michigan Consol Gas	8.25	594457BD4	1st	05/01/2014	A	1.17	1.15	1.13	1.16	1.24	1.16	0.88	0.60	0.78	1.01	1.24	0.69	1.02%	0.98%
Michigan Consol Gas	5.7	594457BT9	Sr Nts	03/15/2033	A	4.62	4.66	4.49	4.25	4.64	4.90	5.00	5.23	5.11	5.02	5.21	5.34	4.87%	5.19%
Michigan Consol Gas	5	594457BU6	Sr Nts'E'	10/01/2019	A	2.63	2.61	2.57	2.47	2.53	2.90	2.84	3.13	2.87	2.77	2.84	3.23	2.78%	2.95%
Northern IllinoisGas	6.58	665228BQ4	1st	02/15/2028	A	4.38	4.40	4.29	4.05	4.49	4.84	4.88	5.14	4.94	4.82	5.06	5.30	4.72%	5.06%
Northern IllinoisGas	7.2	665228BV3	1st	05/15/2016	A	1.68	1.66	1.59	1.54	1.69	1.85	1.75	1.96	1.80	1.73	1.72	1.87	1.74%	1.77%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	2.33	2.31	2.23	2.13	2.49	2.80	2.77	3.06	2.80	2.52	2.56	2.93	2.58%	2.67%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	4.88	4.81	4.76	4.12	4.61	5.05	5.12	5.40	5.21	5.10	5.44	5.58	5.01%	5.37%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nt 144a	02/15/2029	A	4.97	5.03	5.01	4.40	4.77	5.12	5.20	5.45	5.33	5.25	5.39	5.54	5.12%	5.39%
Occidental Pete Corp Med Term	8.75	67461FED5	'N Tranche # Tr 001	1/15/2023	A	3.94	3.98	3.93	3.67	4.16	4.59	4.66	4.94	4.75	4.50	4.74	5.00	4.41%	4.75%
Occidental Petro	8.75	67461FED5	Sr Nts	01/15/2023	A	3.94	3.98	3.93	3.67	4.16	4.59	4.66	4.94	4.75	4.50	4.74	5.00	4.41%	4.75%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	1.64	1.62	1.60	1.50	1.99	2.42	2.36	2.45	2.07	1.96	2.05	2.23	1.99%	2.08%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	4.27	4.31	4.31	4.07	4.43	4.83	4.87	5.12	5.00	4.84	4.61	4.74	4.62%	4.73%
Piedmont Natural Gas Co., Inc.	5	720186AD7	Nts'E'	12/19/2013	A	1.33	1.31	1.19	1.18	1.21	1.14	1.53	1.30	1.50	1.26			1.30%	1.26%
Piedmont Natural Gas Co., Inc.	6	720186AE5	Nts'E'	12/19/2033	A	4.87	4.36	4.34	4.10	4.34	4.60	4.65	4.83	4.70	4.61	4.76	4.89	4.59%	4.75%
Piedmont Natural Gas	7.95	72018QAG6	M-T Nts'C'	09/14/2029	A	4.77	4.66	4.54	4.30	4.29	4.55	4.60	4.83	4.95	4.86	5.03	5.16	4.71%	5.02%
Western Atlas Inc	8.55	957674AD6	Deb	06/15/2024	A	3.83	3.85	3.66	3.42	3.94	4.34	4.38	4.33	4.14	4.03	4.21	4.30	4.04%	4.18%
ANR Pipeline	7.38	001814AQ5	Deb	02/15/2024	A-	3.81	3.83	3.78	3.81	4.30	4.76	4.80	5.06	4.42	4.24	4.50	4.75	4.34%	4.50%
ANR Pipeline	9.62	001814AR3	Deb	11/01/2021	A-	3.09	3.08	3.01	2.70	3.19	3.74	3.80	3.99	3.87	3.65	3.86	4.30	3.52%	3.94%
ANR Pipeline	7	001814AS1	Deb	06/01/2025	A-	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05				4.05%	
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	4.16	4.28	4.23	3.97	4.53	5.02	4.85	5.03	4.73	4.61	4.87	4.95	4.60%	4.81%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	4.06	4.18	4.13	3.92	4.38	4.87	4.80	5.03	4.73	4.61	4.87	4.95	4.54%	4.81%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.43	5.57	5.55	5.33	5.70	6.11	6.01	6.23	6.11	6.00	6.21	6.16	5.87%	6.12%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	4.97	5.16	5.14	4.93	5.28	5.69	5.60	5.80	5.51	5.40	5.61	5.64	5.39%	5.55%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	2.39	2.42	2.38	2.13	2.39	2.79	2.63	2.83	2.52	2.43	2.31	2.75	2.50%	2.50%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	2.56	2.59	2.55	2.37	2.73	2.99	2.93	3.08	2.76	2.68	2.55	2.99	2.73%	2.74%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.41	4.61	4.59	4.32	4.71	5.18	5.00	5.30	5.20	4.94	5.06	5.01	4.86%	5.00%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	1.29	1.37	1.33	1.22	1.54	1.90	1.59	1.91	1.53	1.44	1.31	1.44	1.49%	1.40%
Atmos Energy Corp.	6.75	049560AA3	Deb	07/15/2028	A-	4.42	4.44	4.39	4.12	4.61	4.96	5.10	5.36	5.16	5.05	5.29	5.55	4.87%	5.30%
Atmos Energy Corp.	4.95	049560AF2	Sr Nts	10/15/2014	A-	0.91	0.89	0.88	0.71	0.77	0.85	0.81	0.87	0.93	0.79	0.77	0.73	0.83%	0.76%
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	4.37	4.41	4.39	4.15	4.54	4.80	5.00	5.23	5.11	5.02	5.21	5.29	4.79%	5.17%
Atmos Energy Corp.	6.35	049560AH8	Sr Nts	06/15/2017	A-	1.59	1.57	1.51	1.39	1.66	2.02	1.96	2.25	2.00	1.89	1.97	2.38	1.85%	2.08%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	1.39	1.37	1.28	1.07	1.41	1.89	1.79	2.08	1.68	1.57	1.61	1.84	1.58%	1.67%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	4.38	4.40	4.34	4.10	4.06	4.46	4.55	4.81	4.62	4.50	4.74	5.10	4.51%	4.78%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.02	5.06	5.04	4.70	5.09	5.40	5.20	5.38	5.26	5.07	5.26	5.39	5.16%	5.24%
KeySpan Corp.	4.65	49337WAG5	Nts	04/01/2013	A-	0.54	0.46											0.50%	
KeySpan Corp.	5.88	49337WAH3	Nts	04/01/2033	A-	4.92	4.96	4.94	4.55	4.94	5.25	5.25	5.48	5.36	5.22	5.34	5.47	5.14%	5.34%
Southwest Gas Corp.	8	844895AL6	Deb	08/01/2026	A-	4.19	4.21	4.11	3.87	4.31	4.66	4.70	4.96	4.76	4.50	4.69	4.85	4.48%	4.68%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	4.59	4.71	4.76	4.51	5.00	5.38	5.22	5.48	5.36	5.17	5.34	5.34	5.07%	5.28%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.37	5.41	5.39	5.24	5.49	5.76	5.60	5.83	5.70	5.61	5.80	5.89	5.59%	5.77%
Consolidated Nat Gas	6.88	209615BQ5	Deb	10/15/2026	BBB+	5.19	5.21	4.17	3.93	4.36	4.71	4.75	5.01	4.82	4.70	4.94	5.20	4.75%	4.95%
Consolidated Nat Gas	6.8	209615BS1	Deb	12/15/2027	BBB+	5.19	5.21	4.17	3.93	4.36	4.71	4.75	5.01	4.82	4.70	4.94	5.20	4.75%	4.95%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	4.45	4.73	4.90	4.59	4.94	5.38	5.20	5.47	5.33	5.19	5.34	5.34	5.07%	5.29%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	4.66	4.41	4.36	4.01	4.58	5.33	5.40	5.67	5.41	5.40	5.64	5.30	5.01%	5.45%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	0.87	0.87	0.86	0.76	0.86	0.99	0.87	0.90	0.70	0.62	0.69	0.61	0.80%	0.64%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.09	4.74	4.51	4.87	5.40	5.10	5.32	5.26	5.22	5.26	5.26	5.09%	5.25%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	1.15	0.88	0.87	0.86	0.98	1.07	0.86	0.96	0.91	0.87	0.86	0.90	0.93%	0.88%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	4.72	4.78	4.66	4.43	4.85	5.35	5.19	5.38	5.26	5.12	5.33	5.29	5.03%	5.25%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	2.98	3.13	3.04	2.96	3.36	3.84	3.80	4.23	3.94	3.84	3.89	3.37	3.53%	3.70%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	4.75	5.21	5.24	4.81	5.08	5.55	5.30	5.63	5.46	5.17	5.39	5.28	5.24%	5.28%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	4.73	5.31	5.24	4.85	5.15	5.57	5.22	5.61	5.51	5.22	5.44	5.34	5.27%	5.33%
Enbridge Energy Partners, L.P.	4.75	29250RAC0	Sr Nts 'B'	06/01/2013	BBB	1.49	1.48	1.36	0.94									1.32%	
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.24	5.28	5.23	5.10	5.49	5.80	5.85	6.03	5.83	5.72	5.88	5.94	5.62%	5.85%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	1.86	1.67	1.77	1.51	1.63	1.94	1.83	1.94	1.72	1.73	1.70	1.82	1.76%	1.75%
Energen Corp.	5	29265NAQ1	Nts	10/01/2013	BBB	2.42	2.40	2.43	2.42	2.46	2.38	2.41	2.30					2.40%	
Equitable Resources, Inc.	7.75	294549AE0	Deb	07/15/2026	BBB	4.79	4.81	5.31	5.07	5.46	5.81	5.85	6.11	5.92	5.80	6.04	6.25	5.60%	6.03%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	4.98	5.01	4.99	4.71	5.18	5.80	5.63	5.81	5.76	5.56	5.79	5.83	5.42%	5.73%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.08	5.01	4.99	4.71	5.18	5.76	5.56	5.79	5.73	5.57	5.74	5.81	5.41%	5.71%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.01	5.05	5.09	4.81	5.24	5.73	5.53	5.85	5.81	5.64	5.82	5.77	5.45%	5.74%
Kinder Morgan Energy Partners, L.P.	5	494550AR7	Sr Nts	12/15/2013	BBB	0.82	0.55	0.53	0.55	0.66	0.74	0.77	0.78	0.92	0.42			0.67%	0.42%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	1.84	1.72	1.63	1.49	1.87	2.31	1.88	2.09	1.84	1.64	1.72	1.94	1.83%	1.77%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.11	5.09	5.06	4.74	5.21	5.69	5.48	5.84	5.71	5.54	5.73	5.74	5.41%	5.67%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.03	5.11	5.13	4.75	5.24	5.83	5.48	5.83	5.94	5.59	5.64	5.79	5.45%	5.67%
Lakehead Pipe Line Co	7	511546AA1	Sr Nts	10/01/2018	BBB	3.24	3.22	3.08	2.98	2.75	3.15	3.14	3.40	3.14	2.94	3.01	3.25	3.11%	3.07%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nts	10/01/2028	BBB	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64%	4.64%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	4.45	4.74	4.79	4.50	4.81	5.23	5.35	5.42	5.21	5.11	5.21	5.29	5.01%	5.20%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	5.42	5.41	5.39	5.35	5.65	6.08	6.05	6.28	6.19	6.05	6.21	6.34	5.87%	6.20%
National Fuel Gas Co.	5.25	636180BE0	Nts	03/01/2013	BBB	0.62	3.42											2.02%	
Northwest Pipeline	7.12	667748AF4	Deb	12/01/2025	BBB	4.19	4.21	4.16	3.92	4.41	4.81	4.54	4.78	4.57	4.45	4.69	4.85	4.47%	4.66%
Northwest Pipeline	7	667748AM9	Sr Nts	06/15/2016	BBB	1.51	1.29	1.27	1.22	1.37	1.58	1.53	1.76	1.55	1.18	1.17	1.27	1.39%	1.21%
ONEOK, Inc.	6.5	682680AA1	Sr InsurNts	09/30/2028	BBB	6.49	6.49	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48%	6.48%
ONEOK, Inc.	6.88	682680AB9	Deb	09/30/2028	BBB	5.07	5.09	5.01	4.77	5.00	5.58	5.80	6.12	5.91	5.80	6.04	6.30	5.54%	6.05%
ONEOK, Inc.	5.2	682680AM5	Nts	06/15/2015	BBB	1.62	1.60	1.17	1.15	1.25	1.27	1.45	1.62	1.54	1.35	1.20	1.29	1.38%	1.28%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BBB	5.17	5.26	5.17	4.90	5.29	5.65	6.30	6.76	6.71	6.59	6.66	6.56	5.92%	6.60%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	1.56	1.54	1.57	1.48	1.32	1.74	1.63	1.71	1.70	1.68	1.66	1.56	1.60%	1.63%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	4.97	5.04	5.09	4.80	5.26	5.75	5.80	6.13	6.06	5.67	5.86	5.84	5.52%	5.79%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	1.79	1.77	1.76	1.54	1.06	1.24	1.27	1.23	1.23	1.14	1.05	1.04	1.34%	1.08%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	4.96	5.03	4.84	4.57	4.97	5.43	5.05	5.29	5.26	5.13	5.26	5.36	5.10%	5.25%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	4.74	4.91	4.81	4.56	4.98	5.61	5.40	5.86	5.59	5.90	6.16	5.90	5.37%	5.99%
Transcont'l Gas PipeLine	7.08	893570BL4	Deb	07/15/2026	BBB	4.19	4.21	4.16	3.92	4.41	4.81	4.90	5.18	4.99	4.87	5.11	5.30	4.67%	5.09%
Transcont'l Gas PipeLine	7.25	893570BM2	Deb	12/01/2026	BBB	3.59	3.61	3.56	3.32	3.81	4.11	4.25	4.53	4.34	4.22	4.46	4.70	4.04%	4.46%
Transcont'l Gas PipeLine	6.4	893570BW0	Sr Nt	4/15/2016	BBB	1.46	1.44	1.42	1.37	1.27	1.48	1.33	1.56	1.30	1.13	1.16	1.26	1.35%	1.18%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	4.92	4.96	4.91	4.72	5.25	5.76	5.87	6.17	5.96	5.00	4.84	5.05	5.28%	4.96%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	4.64	4.66	4.61	4.42	4.80	4.92	4.70	5.00	4.79	4.66	4.79	5.05	4.75%	4.83%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	4.49	4.56	4.51	4.32	4.85	5.02	5.13	5.43	5.22	5.09	5.14	5.35	4.93%	5.19%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	5.67	5.68	5.66	5.45	5.89	6.36	6.05	6.30	6.16	6.04	6.16	6.66	6.01%	6.29%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.25	5.21	5.04	4.85	5.29	5.68	5.65	6.00	5.96	5.79	5.76	5.59	5.51%	5.71%
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	BBB	0.92	0.87	0.63	0.64	0.76	0.94	0.92	0.99	0.63	0.47	0.71	0.62	0.76%	0.60%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.24	5.08	5.06	4.80	5.09	5.57	5.62	6.11	5.86	5.52	5.54	5.54	5.42%	5.53%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	1.79	1.55	1.41	1.38	1.66	2.21	2.07	2.38	2.08	1.94	1.80	1.91	1.85%	1.88%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	1.89	1.79	1.78	1.68	1.89	2.50	2.43	2.37	2.10	1.99	1.86	2.09	2.03%	1.98%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	4.96	5.06	4.99	4.73	5.28	5.84	5.87	6.08	5.93	5.79	6.03	6.47	5.59%	6.10%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.25	6.32	6.24	5.98	6.41	6.88	7.03	7.26	7.20	7.06	7.27	7.52	6.79%	7.28%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	5.77	5.87	5.80	5.54	6.09	6.65	6.68	6.59	6.42	6.29	6.39	6.73	6.24%	6.47%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	5.74	5.84	5.77	5.51	6.06	6.62	6.65	6.59	6.42	6.29	6.49	6.88	6.24%	6.55%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	5.49	5.61	5.18	4.92	5.18	5.65	5.69	5.90	5.82	5.58	5.69	5.96	5.56%	5.74%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	1.64	1.61	1.46	1.38	1.57	1.95	1.61	1.84	1.69	1.43	1.33	1.62	1.59%	1.46%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	4.82	4.80	4.84	4.51	4.87	5.45	5.16	5.40	5.29	5.08	5.24	5.49	5.08%	5.27%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BBB-	2.84	2.82	2.33	2.23	2.19	2.69	2.44	2.67	2.42	2.47	2.74	2.49	2.53%	2.57%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BBB-	2.28	2.26	2.27	2.01	2.03	2.33	2.24	2.64	1.99	1.93	1.85	2.03	2.16%	1.94%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	3.14	3.09	3.05	2.98	3.34	3.68	3.65	3.83	3.57	2.72	2.74	3.03	3.24%	2.83%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	4.44	4.46	4.41	4.12	4.56	5.51	5.55	5.81	5.60	5.49	5.73	5.90	5.13%	5.71%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	1.36	1.39	1.25	1.24	1.27	1.37	1.29	1.21	1.18	1.04	1.10	0.96	1.22%	1.03%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	2.12	2.18	2.08	1.73	2.14	2.50	2.27	2.57	2.06	1.87	1.94	2.37	2.15%	2.06%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.47	5.53	5.56	5.23	5.55	6.05	5.95	6.18	6.09	5.82	5.98	5.99	5.78%	5.93%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.24	5.14	5.07	4.81	5.36	5.92	5.95	5.28	5.13	4.99	5.29	5.78	5.33%	5.35%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.12	5.24	5.24	4.98	5.36	5.71	5.35	5.63	5.54	5.34	5.46	5.61	5.38%	5.47%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	4.32	4.28	4.17	3.85	4.29	4.82	4.50	4.86	4.89	4.70	4.60	4.95	4.52%	4.75%
Panhandle East'n P.L.	6.05	698465BJ9	Sr Nts 'B'	08/15/2013	BBB-	1.12	1.11	1.10	1.22	1.36	0.79							1.12%	
Southern Natural Gas	8	843452AZ6	Nts	03/01/2032	BBB-	4.62	4.71	4.69	4.35	4.69	5.25	5.35	5.43	5.46	5.47	5.51	5.54	5.09%	5.51%
Southern Union Co.	7.6	844030AA4	Sr Nts	02/01/2024	BBB-	4.54	4.46	4.41	4.05	4.51	4.86	5.00	5.31	5.27	5.10	5.19	5.37	4.84%	5.22%
Southern Union Co.	8.25	844030AC0	Sr Nts	11/15/2029	BBB-	5.82	5.71	5.69	5.43	5.67	5.93	6.10	6.33	6.21	6.12	6.31	6.44	5.98%	6.29%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	5.44	5.54	5.37	5.11	5.66	6.22	6.25	5.73	5.58	5.44	5.68	5.85	5.66%	5.66%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	3.80	3.86	3.76	3.64	4.06	4.63	4.55	4.40	4.18	4.06	3.99	3.98	4.08%	4.01%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	5.34	5.44	5.24	4.98	5.17	5.70	5.73	5.33	5.18	5.04	5.19	5.52	5.32%	5.25%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	3.84	3.82	3.88	3.78	4.04	4.50	4.34	4.66	4.40	4.30	4.37	4.48	4.20%	4.38%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	5.42	5.51	5.49	5.30	5.59	6.10	6.08	6.46	6.46	6.37	6.49	6.92	6.02%	6.59%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	5.52	5.56	5.59	5.35	5.69	6.20	6.07	6.51	6.46	6.42	6.51	7.02	6.08%	6.65%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	3.94	4.06	3.96	3.67	4.16	4.76	4.70	5.04	4.91	4.78	4.99	5.40	4.53%	5.06%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	5.62	5.66	5.69	5.38	5.79	6.30	6.25	6.61	6.66	6.47	6.56	7.09	6.17%	6.71%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	2.63	2.49	2.32	2.20	2.44	2.85	2.82	2.93	2.66	2.57	2.39	2.67	2.58%	2.54%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	2.22	2.12	2.08	1.98	2.09	2.64	2.24	2.48	2.03	1.82	1.83	2.10	2.14%	1.92%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	5.27	5.26	5.29	5.05	5.43	5.90	6.10	6.03	6.06	5.97	6.16	6.19	5.73%	6.11%
El Paso Natural Gas	8.62	283695AZ7	Deb	01/15/2022	BB	3.84	3.81	3.66	3.32	3.76	4.56	4.60	4.66	4.62	4.50	4.44	4.75	4.21%	4.56%
El Paso Natural Gas	7.5	283695BE3	Deb	11/15/2026	BB	4.04	4.01	3.96	3.82	4.31	5.01	4.75	4.91	4.87	4.70	4.84	5.20	4.54%	4.91%
El Paso Natural Gas	8.38	283695BK9	Sr Sub Nts	06/15/2032	BB	5.02	5.01	4.99	4.70	5.04	5.65	5.50	5.78	5.71	5.72	5.71	5.84	5.39%	5.76%
KN Energy	6.5	482620AN1	Deb	09/01/2013	BB	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50					6.50%	
KN Energy	6.67	482620AS0	Deb	11/01/2027	BB	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20%	7.20%
KN Energy	7.25	482620AW1	Sr Deb	03/01/2028	BB	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98%	6.98%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	1.97	1.95	1.94	1.87	1.87	2.00	2.10	1.97	2.04	1.40	1.55	1.50	1.85%	1.48%
Range Resources Corp.	7.5	75281AAH2	Sr Sub Nts	10/01/2017	BB	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59%	6.59%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.09	6.27	6.37	6.39	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.35%	6.38%
Tennessee GasPipeline	7	880451AS8	Deb	03/15/2027	BB	3.84	3.86	3.81	3.57	4.21	4.76	4.70	4.96	4.77	4.60	4.89	5.15	4.43%	4.88%
Tennessee GasPipeline	7.5	880451AT6	Deb	04/01/2017	BB	1.79	1.72	1.68	1.53	1.80	2.25	2.09	2.33	2.08	1.97	2.05	2.24	1.96%	2.09%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	4.72	4.71	4.74	4.50	4.89	5.35	5.50	5.48	5.36	5.22	5.41	5.54	5.12%	5.39%
Tennessee GasPipeline	7	880451AV1	Deb	10/15/2028	BB	3.94	4.01	3.96	3.72	4.31	4.91	4.85	5.11	4.92	4.65	4.99	5.25	4.55%	4.96%
Tennessee GasPipeline	8.38	880451AW9	Nts	06/15/2032	BB	4.97	5.01	4.99	4.70	5.04	5.65	5.40	5.68	5.61	5.62	5.61	5.79	5.34%	5.67%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	4.06	4.03	3.95	3.46	3.89	4.61	3.93	3.75	3.51	3.05	2.91	2.77	3.66%	2.91%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	5.29	5.31	5.34	4.61	4.85	5.61	5.12	5.51	5.42	4.72	4.76	4.64	5.10%	4.71%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Cor	11/15/2035	BB-	2.82	2.75	2.74	2.73	2.63	2.74	2.72	2.59	2.50	2.36	2.43	2.46	2.62%	2.42%
Chesapeake Energy Corp.	7.62	165167BY2	Sr Nts	07/15/2013	BB-	2.11	1.38	1.68	1.57	3.41								2.03%	
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Cor	5/15/2037	BB-	2.74	2.75	2.75	2.70	2.50	2.74	2.74	2.61	2.54	2.41	2.38	2.43	2.61%	2.41%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv I	5/15/2037	BB-	2.88	2.82	2.80	2.80	2.56	2.78	2.79	2.74	2.62	2.50	2.44	2.47	2.68%	2.47%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Cor	12/15/2038	BB-	3.01	2.92	2.89	2.88	2.62	2.80	2.97	2.73	2.73	2.55	2.59	2.62	2.78%	2.59%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	4.96	4.75	4.63	4.08	4.14	4.73	4.49	4.46	4.37	3.83	3.94	3.78	4.35%	3.85%
Plains Exploration & Production Company	7	726505AC4	SrNts	03/15/2017	BB-	6.17	6.17	6.17	6.17	6.17	6.17							6.17%	
Plains Exploration & Production Company	7.75	726505AD2	SrNts	06/15/2015	BB-	7.00	7.00	7.00	7.00	7.00								7.00%	
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.31	6.44	6.49	6.41	6.54	7.27	6.59	6.81	6.57	6.29	6.18	6.46	6.53%	6.31%
Whiting Petroleum Corp.	7	966387AE2	Sr Sub Nts	02/01/2014	BB-	1.94	2.33	2.17	1.62	2.42	3.56	2.96	1.62	1.51	0.55			2.07%	0.55%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25%	7.25%
Stone Energy Corp.	6.75	861642AG1	Sr Sub Nts	12/15/2014	CCC+	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75%	6.75%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	13.37	14.31	12.82	9.10	7.11	13.58	14.04	11.34	9.52	9.29	8.19	8.23	10.91%	8.57%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	13.37	14.31	12.82	9.10	7.11	13.58	14.04	11.34	9.52	9.29	8.19	8.23	10.91%	8.57%
Cimarex Energy Co.	7.12	171798AA9	SrNts	05/01/2017	NR	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27%	6.27%
Colorado Interstate Gas	5.95	196522AH9	Sr Nts	03/15/2015	NR	1.27	1.25	1.24	1.23	1.27	1.35	1.30	1.37	1.35	1.25	1.26	1.25	1.28%	1.25%
Delta Natural Gas Co., Inc.	5.75	247748AG1	InsurQtrly Nts	04/01/2021	NR	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76%	5.76%
Delta Petroleum Corp.	7	247907AC2	Sr Nts	04/01/2015	NR	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59	28.59%	28.59%
Denbury Resources	7.5	24823UAE8	Sr Sub Nt	4/1/2013	NR	7.43	7.43	7.43										7.43%	
Denbury Resources	7.5	24823UAF5	Gtd Sr Sub Nt	12/15/2015	NR	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59%	6.59%
Encore Acquisition	6	29255WAG5	Sr Sub Nt	7/15/2015	NR	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77%	5.77%
Ferrellgas,L.P./Finance	6.75	315292AD4	SrNts	05/01/2014	NR	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56%	6.56%
Forest Oil Corp.	7.75	346091AU5	Sr Nts	05/01/2014	NR	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38%	7.38%
Houston Exploration Co. (The)	7	442120AE1	Sr Sub Nts	06/15/2013	NR	7.00	7.00	7.00	7.00	7.00								7.00%	
Mariner Energy, Inc.	7.5	56845TAE7	Sr Nts	04/15/2013	NR	5.40	5.40	5.40										5.40%	

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21%	5.21%
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03%	6.03%
Offshore Logistics, Inc.	6.12	676255AL6	SrNts	06/15/2013	NR	5.74	5.74	5.74	5.74	5.74								5.74%	
ONEOK, Inc.	6.4	682680AD5	Sr InsurNts	02/01/2019	NR	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39	6.39%	6.39%
Piedmont Natural Gas Co., Inc.	6.25	720186AF2	InsurQtrly Nts	06/01/2036	NR	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	4.61	4.58	4.50	4.27	4.65	5.12	5.14	5.40	5.20	4.95	5.03	5.19	4.89%	5.06%
Range Resources Corp.	7.38	75281AAB5	Sr Sub Nts	07/15/2013	NR	7.00	7.00	7.00	7.00	7.00	7.00							7.00%	
Range Resources Corp.	7.5	75281AAG4	Sr Sub Nts	05/15/2016	NR	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59%	6.59%
Rentech, Inc.	4	760112AA0	Sr Nt Conv	4/15/2013	NR	11.37	15.06											13.22%	
Southern Natural Gas	7.35	843452AY9	Nts	02/15/2031	NR	4.72	4.71	4.69	4.45	4.83	5.25	5.40	5.63	5.56	5.47	5.46	5.59	5.15%	5.51%
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	2.48	2.32	2.38	2.08	2.44	2.90	3.22	3.51	3.25	3.15	2.35	2.74	2.74%	2.75%
Tesoro Corp.	6.62	881609AS0	Sr Nt	11/1/2015	NR	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.24	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27%	7.27%
			Counts of data			214	214	209	207	205	201	198	198	196	195	191	190	214	195

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	1.86%	2.32%
AA's	3.98%	4.35%
A's	3.69%	3.98%
BBB's	4.30%	4.59%
BB's	4.45%	4.23%
B's	7.25%	7.25%
CCC's	9.52%	7.96%
NR's	7.11%	6.97%
ALL	4.44%	4.56%
BBB- & Above	3.91%	4.24%
BB- & Above	3.99%	4.23%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YR PLUS - BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	3.68	3.72	3.70	3.45	3.82	4.25	4.33	4.61	4.51	4.37	4.56	4.66	4.14%	4.53%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	3.67	3.71	3.69	3.49	3.86	4.30	4.35	4.58	4.43	4.32	4.51	4.59	4.13%	4.47%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	3.77	3.81	3.77	3.53	3.92	4.30	4.33	4.56	4.46	4.35	4.51	4.66	4.16%	4.51%
Michigan Consol Gas	5.7	594457BT9	Sr Nts	03/15/2033	A	4.62	4.66	4.49	4.25	4.64	4.90	5.00	5.23	5.11	5.02	5.21	5.34	4.87%	5.19%
Piedmont Natural Gas Co., Inc.	6	720186AE5	Nts'E'	12/19/2033	A	4.87	4.36	4.34	4.10	4.34	4.60	4.65	4.83	4.70	4.61	4.76	4.89	4.59%	4.75%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.43	5.57	5.55	5.33	5.70	6.11	6.01	6.23	6.11	6.00	6.21	6.16	5.87%	6.12%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	4.97	5.16	5.14	4.93	5.28	5.69	5.60	5.80	5.51	5.40	5.61	5.64	5.39%	5.55%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.41	4.61	4.59	4.32	4.71	5.18	5.00	5.30	5.20	4.94	5.06	5.01	4.86%	5.00%
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	4.37	4.41	4.39	4.15	4.54	4.80	5.00	5.23	5.11	5.02	5.21	5.29	4.79%	5.17%
KeySpan Corp.	5.88	49337WAH3	Nts	04/01/2033	A-	4.92	4.96	4.94	4.55	4.94	5.25	5.25	5.48	5.36	5.22	5.34	5.47	5.14%	5.34%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	4.59	4.71	4.76	4.51	5.00	5.38	5.22	5.48	5.36	5.17	5.34	5.34	5.07%	5.28%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.37	5.41	5.39	5.24	5.49	5.76	5.60	5.83	5.70	5.61	5.80	5.89	5.59%	5.77%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.09	4.74	4.51	4.87	5.40	5.10	5.32	5.26	5.22	5.26	5.26	5.09%	5.25%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	4.72	4.78	4.66	4.43	4.85	5.35	5.19	5.38	5.26	5.12	5.33	5.29	5.03%	5.25%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.24	5.28	5.23	5.10	5.49	5.80	5.85	6.03	5.83	5.72	5.88	5.94	5.62%	5.85%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.01	5.05	5.09	4.81	5.24	5.73	5.53	5.85	5.81	5.64	5.82	5.77	5.45%	5.74%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.11	5.09	5.06	4.74	5.21	5.69	5.48	5.84	5.71	5.54	5.73	5.74	5.41%	5.67%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.03	5.11	5.13	4.75	5.24	5.83	5.48	5.83	5.94	5.59	5.64	5.79	5.45%	5.67%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BBB	5.17	5.26	5.17	4.90	5.29	5.65	6.30	6.76	6.71	6.59	6.66	6.56	5.92%	6.60%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	4.97	5.04	5.09	4.80	5.26	5.75	5.80	6.13	6.06	5.67	5.86	5.84	5.52%	5.79%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	4.96	5.03	4.84	4.57	4.97	5.43	5.05	5.29	5.26	5.13	5.26	5.36	5.10%	5.25%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.24	5.08	5.06	4.80	5.09	5.57	5.62	6.11	5.86	5.52	5.54	5.54	5.42%	5.53%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.25	6.32	6.24	5.98	6.41	6.88	7.03	7.26	7.20	7.06	7.27	7.52	6.79%	7.28%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	4.82	4.80	4.84	4.51	4.87	5.45	5.16	5.40	5.29	5.08	5.24	5.49	5.08%	5.27%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.47	5.53	5.56	5.23	5.55	6.05	5.95	6.18	6.09	5.82	5.98	5.99	5.78%	5.93%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	5.27	5.26	5.29	5.05	5.43	5.90	6.10	6.03	6.06	5.97	6.16	6.19	5.73%	6.11%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	4.72	4.71	4.74	4.50	4.89	5.35	5.50	5.48	5.36	5.22	5.41	5.54	5.12%	5.39%
Chesapeake Energy Corp.	2.75	165167BW6	ntingent Sr Nt Co	11/15/2035	BB-	2.82	2.75	2.74	2.73	2.63	2.74	2.72	2.59	2.50	2.36	2.43	2.46	2.62%	2.42%
Chesapeake Energy Corp.	2.5	165167BZ9	ntingent Sr Nt Co	5/15/2037	BB-	2.74	2.75	2.75	2.70	2.50	2.74	2.74	2.61	2.54	2.41	2.38	2.43	2.61%	2.41%
Chesapeake Energy Corp.	2.5	165167CA3	Contingent Conv	5/15/2037	BB-	2.88	2.82	2.80	2.80	2.56	2.78	2.79	2.74	2.62	2.50	2.44	2.47	2.68%	2.47%
Chesapeake Energy Corp.	2.25	165167CB1	ntingent Sr Nt Co	12/15/2038	BB-	3.01	2.92	2.89	2.88	2.62	2.80	2.97	2.73	2.73	2.55	2.59	2.62	2.78%	2.59%
Piedmont Natural Gas Co., Inc.	6.25	720186AF2	InsurQtrly Nts	06/01/2036	NR	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.24	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27%	7.27%
			Counts of data			36	36	36	36	36	36	36	36	36	36	36	36	36	36

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.14%	4.50%
AA's	----	----
A's	5.07%	5.31%
BBB's	5.65%	5.92%
BB's	3.59%	3.56%
B's	----	----
CCC's	----	----
NR's	6.76%	6.76%
ALL	4.97%	5.17%
BBB- & Above	5.14%	5.41%
BB- & Above	4.87%	5.08%

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Liquid Pipelines

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Liquid Pipelines
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	B++	B+	Median	
3.85%	2.90%	4.56%	3.96%	Yahoo
3.53%	2.66%	4.40%	4.21%	Value Line
3.69%	2.78%	4.48%	4.08%	Average of E/Ps

Inverse of P/E Ratios:

1.90%	2.22%	1.57%	1.76%	Yahoo
4.37%	4.31%	4.38%	4.59%	Value Line
3.13%	3.27%	2.98%	3.17%	Average of Inverse of the P/E
5.22%	5.35%	5.12%	5.26%	Inverse of median P/E, Value Line
3.41%	3.02%	3.73%	3.63%	Average of all above except median P/E
3.77%	3.49%	4.01%	3.95%	Mean =
3.85%	2.90%	4.40%	4.21%	Median =

Equity Measure NUOI = 5.30%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.95%	5.98%	ALL
	5.80%	5.97%	BBB- & Above
	5.81%	5.90%	BB- & Above
Mean =	5.85%	5.95%	
Median =	5.81%	5.97%	

Debt Measure = 6.00%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	71.00%	x	5.30%	=	3.76%
Debt	29.00%	x	6.00%	=	1.74%
	100.00%				5.50%
Direct Cap Rate NUOI =					**5.75%**

Gross Cash Flow / Price:

All	B++	B+	Median	
6.48%	5.02%	6.84%	6.18%	Value Line

Equity Measure GCF = 6.84%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	71.00%	x	6.84%	=	4.86%
Debt	29.00%	x	6.00%	=	1.74%
	100.00%				6.60%
Direct Cap Rate GCF =					**6.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Liquid Pipelines
2014 Assessment Year

Equity Measures Calculated:		**All**
Dividend Growth Model		14.00%
Capital Asset Pricing Model		8.61%
	Mean =	11.31%
	Median =	11.31%
	Equity Measure FCF =	**9.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	4.33%	4.35%	5.15%	5.33%
BBB- & Above	3.91%	4.24%	5.49%	5.74%
BB- & Above	4.00%	4.18%	5.07%	5.26%
Mean =	4.08%	4.26%	5.24%	5.44%
Median =	4.00%	4.24%	5.15%	5.33%

Debt Measure = 5.50%

Yield Cap Rate Free Cash Flow - Liquid Pipelines						
Equity	71.00%	x	9.00%	=	6.39%	
Debt	29.00%	x	5.50%	=	1.60%	
	100.00%				7.99%	
Weighted Average Cost of Capital (WACC) =						**8.00%**

Where Assumed Growth Rate = Inflation **Growth = 1.75%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Liquid Pipelines
2014 Assessment Year

Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares	(YAHOO) Avg. Price Common	(VL) Book Value Per Share	Mkt. Value Common ExD	(VL) Book Value Common	(VL) Book Value Preferred	(VL) Book Value Debt	Mkt/Book Debt Ratio	Mkt. Value Pref. & Debt	(YAHOO) EPS last 12mo
Sunoco Logistics Partners L.P.	SXL	B++	103,800	74.83	49.86	7,767,354	5,175,000	0	1,732,000	1.00	1,732,000	2.96
Enbridge Energy Partners LP	EEP	B++	303,200	29.30	13.71	8,883,760	4,155,400	0	5,819,700	1.00	5,819,700	(0.16)
Magellan Midstream Partners LP	MMP	B++	226,200	62.70	6.70	14,182,740	1,515,700	0	2,393,400	1.00	2,393,400	2.40
Nustar Energy LP	NS	B++	77,900	49.90	32.28	3,887,210	2,514,400	0	2,124,600	1.00	2,124,600	0.46
Buckeye	BPL	B+	90,400	71.01	26.24	6,419,304	2,372,300	0	2,735,200	1.00	2,735,200	2.67
Enterprise Products	EPD	B+	898,800	65.58	14.67	58,943,304	13,187,700	0	14,655,200	1.00	14,655,200	2.75
Kinder Morgan Egy Ptnrs L.P.	KMP	B+	373,200	79.31	22.68	29,598,492	8,464,000	2,860,000	16,175,000	1.00	19,035,000	3.63
Plains All American PL LP	PAA	B+	335,300	51.14	21.31	17,147,242	7,146,000	0	6,320,000	1.00	6,320,000	2.91

SUMS & AVGS - ALL COMPANIES	146,829,406	44,530,500	2,860,000	51,955,100	54,815,100
SUMS & AVGS - B++ COMPANIES	34,721,064	13,360,500	0	12,069,700	12,069,700
SUMS & AVGS - B+ COMPANIES	112,108,342	31,170,000	2,860,000	39,885,400	42,745,400
MEDIAN - ALL COMPANIES					

** All **Negative** values left out of calculations*

	INDUSTRY MARKET STRUCTURE					
	ALL COMPANIES		B COMPANIES		B++ COMPANIES	
EQUITY	72.00%	146,829,406	71.00%	112,108,342	74.00%	34,721,064
DEBT	28.00%	57,675,100	29.00%	45,605,400	26.00%	12,069,700
TOTAL	100.00%	204,504,506	100.00%	157,713,742	100.00%	46,790,764

Notes/Rational for Changes to Guideline Companies
2014
No Changes were made to the Guide line companies

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Liquid Pipelines
2014 Assessment Year

Company	Ticker Symbol	(YAHOO) E/P M/E	(VL) EPS	(VL) E/P O/E	(VL) CF/S	(VL) CF/P Q/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/S	(VL) P/E	(VL) Inverse of P/E 1/U	(VL) Median P/E	(VL) Inverse of Med P/E 1/U	(VL) Beta
Sunoco Logistics Partners L.P.	SXL	3.96%	3.33	4.45%			64.01	1.56%					0.80
Enbridge Energy Partners LP	EEP	(0.55%)	0.04	0.14%			29.80	3.36%			22.00	4.55%	0.90
Magellan Midstream Partners LP	MMP	3.83%	2.55	4.07%	3.15	5.02%	54.18	1.85%	23.19	4.31%	16.00	6.25%	0.80
Nustar Energy LP	NS	0.92%	0.99	1.98%			46.88	2.13%			19.00	5.26%	0.85
Buckeye	BPL	3.76%	3.10	4.37%	4.20	5.91%	63.87	1.57%	21.79	4.59%	16.00	6.25%	0.75
Enterprise Products	EPD	4.19%	2.85	4.35%	4.05	6.18%	60.08	1.66%	21.68	4.61%	22.00	4.55%	0.80
Kinder Morgan Egy Ptnrs L.P.	KMP	4.58%	2.40	3.03%	5.75	7.25%	84.00	1.19%	32.82	3.05%	29.00	3.45%	0.75
Plains All American PL LP	PAA	5.69%	3.00	5.87%	4.10	8.02%	53.27	1.88%	18.92	5.29%	16.00	6.25%	0.75

SUMS & AVGS - ALL COMPANIES	3.85%	3.53%	6.48%	1.90%	4.37%	5.22%	0.80
SUMS & AVGS - B++ COMPANIES	2.90%	2.66%	5.02%	2.22%	4.31%	5.35%	0.84
SUMS & AVGS - B+ COMPANIES	4.56%	4.40%	6.84%	1.57%	4.38%	5.12%	0.76
MEDIAN - ALL COMPANIES	3.96%	4.21%	6.18%	1.76%	4.59%	5.26%	0.80

** All **Negative** values left out of calculations*

Industry Beta Conclusion = 0.84

Notes/Rational for Changes to Guideline Companies
2014
No Changes were made to the Guide line companies

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Liquid Pipelines
2014 Assessment Year

$$K_E = R_F + \beta\ (R_M - R_F)$$

	Liquids
K_E = Cost of Equity	**8.61%**
R_F = Risk Free Rate	3.96%
β= Beta	0.84
R_M = Market Rate of Return	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premium	2/28/13 until furth	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%
	Mean =	10.20%
	Median =	9.80%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013
Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014
U.S. Treasury Securities December 31, 2013

	1 Year	R_f =	0.12%
	10 Year	R_f =	3.03%
	30 Year	R_f =	3.96%

Federal Reserve Statistical Release
Treasury constant Maturities, December 31, 2013
Market yield on U.S. Treasury securities, Annual Averages

	1 year constant maturity, quoted on investment basis	R_f =	0.13%
	10-year constant maturity, quoted on investment basis	R_f =	3.04%
	30-year constant maturity, quoted on investment basis	R_f =	3.96%
		Mean =	2.15%
U.S. Treasury Securities Long-Term December 31, 2013		Median =	3.03%
20 year constant maturity	R_f = **3.72%**	Weighted Mean =	2.75%
30 year constant maturity	R_f = **3.96%**		
		R_f =	**3.96%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Liquid Pipelines
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity **Po=** Current Price Per Share
D1= Expected Dividends **G=** Sustainable Growth

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth	Ke 1 Year
Sunoco Logistics Partners L.P.	SXL	74.83			21.50%	
Enbridge Energy Partners LP	EEP	29.30			3.00%	
Magellan Midstream Partners LP	MMP	62.70	2.36	3.76%	13.00%	16.76%
Nustar Energy LP	NS	49.90			0.50%	
Buckeye	BPL	71.01	4.28	6.03%	1.50%	7.53%
Enterprise Products	EPD	65.58	2.92	4.45%	9.50%	13.95%
Kinder Morgan Egy Ptnrs L.P.	KMP	79.31	5.60	7.06%	7.00%	14.06%
Plains All American PL LP	PAA	51.14	2.55	4.99%	9.00%	13.99%

Weighted Mean	13.98%
Mean	13.26%
Median	13.99%

Cost of Equity, (K_E) = 14.00%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Liquid Pipelines
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
BPL	Buckeye	high	$ 55.30	$ 56.14	$ 61.32	$ 63.33	$ 70.24	$ 70.50	$ 73.44	$ 72.25	$ 71.13	$ 68.50	$ 69.70	$ 72.47	$ 71.01	$67.18	$63.87	25.80	2.67
		low	$ 45.72	$ 52.01	$ 55.60	$ 58.33	$ 61.15	$ 64.07	$ 69.51	$ 65.46	$ 64.19	$ 62.00	$ 65.11	$ 65.30					
COP	ConocoPhillips Inc	high	$ 62.05	$ 58.84	$ 61.19	$ 60.70	$ 64.77	$ 62.57	$ 66.25	$ 67.91	$ 71.09	$ 74.59	$ 74.07	$ 73.49	$ 70.65	$71.91	$64.42	9.60	7.38
		low	$ 57.81	$ 56.78	$ 57.25	$ 56.38	$ 59.90	$ 58.71	$ 60.73	$ 65.29	$ 66.51	$ 69.32	$ 71.76	$ 68.23					
CVX	ChevronTexaco Corp	high	$ 117.50	$ 117.89	$ 121.56	$ 122.01	$ 127.40	$ 124.12	$ 127.83	$ 126.66	$ 126.43	$ 122.01	$124.19	$ 125.65	$ 124.91	$120.26	$119.81	11.00	11.09
		low	$ 108.74	$ 113.50	$ 115.95	$ 114.12	$ 120.05	$ 116.02	$ 118.00	$ 117.22	$ 119.01	$ 114.44	$117.00	$ 118.25					
EEP	Enbridge Energy Partners LP	high	$ 30.68	$ 30.19	$ 30.25	$ 30.42	$ 31.17	$ 30.64	$ 33.49	$ 31.78	$ 30.48	$ 31.30	$ 30.96	$ 30.56	$ 29.30	$29.84	$29.80	(184.28)	(0.16)
		low	$ 28.41	$ 27.01	$ 27.44	$ 29.10	$ 28.52	$ 28.01	$ 30.50	$ 29.00	$ 28.97	$ 29.05	$ 28.74	$ 28.41					
EPD	Enterprise Products	high	$ 56.83	$ 57.69	$ 60.34	$ 62.47	$ 63.56	$ 62.36	$ 65.59	$ 63.25	$ 62.35	$ 64.80	$ 63.76	$ 66.92	$ 65.58	$62.66	$60.08	23.22	2.75
		low	$ 51.01	$ 54.30	$ 55.31	$ 58.60	$ 59.34	$ 56.11	$ 61.07	$ 58.12	$ 57.65	$ 59.13	$ 60.57	$ 60.77					
HEP	Holly Energy Part. LP	high	$ 72.26	$ 41.80	$ 44.90	$ 40.74	$ 39.38	$ 38.75	$ 40.00	$ 38.53	$ 35.88	$ 34.32	$ 32.83	$ 33.37	$ 31.84	$31.99	$37.84	29.68	1.07
		low	$ 35.00	$ 35.13	$ 39.36	$ 38.90	$ 35.03	$ 35.30	$ 37.51	$ 35.14	$ 32.54	$ 31.69	$ 29.55	$ 30.15					
KMP	Kinder Morgan Egy Ptnrs L.P.	high	$ 89.89	$ 89.39	$ 89.77	$ 92.99	$ 89.89	$ 85.88	$ 88.08	$ 83.92	$ 82.39	$ 84.50	$ 82.45	$ 81.91	$ 79.31	$80.81	$84.00	21.91	3.63
		low	$ 80.83	$ 85.61	$ 83.70	$ 86.69	$ 83.26	$ 77.71	$ 82.12	$ 81.06	$ 77.91	$ 78.77	$ 80.10	$ 77.13					
MMP	Magellan Midstream Partners LP	high	$ 50.63	$ 51.74	$ 53.91	$ 56.29	$ 54.70	$ 54.75	$ 56.45	$ 56.78	$ 57.18	$ 60.59	$ 62.64	$ 63.86	$ 62.70	$59.86	$54.18	25.41	2.40
		low	$ 44.00	$ 47.22	$ 48.36	$ 50.01	$ 51.20	$ 48.90	$ 53.70	$ 53.39	$ 51.93	$ 55.30	$ 58.66	$ 58.11					
NS	Nustar Energy LP	high	$ 51.92	$ 51.77	$ 53.45	$ 54.95	$ 51.62	$ 47.33	$ 46.52	$ 45.25	$ 41.97	$ 45.19	$ 53.69	$ 53.20	$ 49.90	$46.92	$46.88	110.01	0.46
		low	$ 43.40	$ 49.45	$ 46.54	$ 49.65	$ 46.28	$ 42.31	$ 43.80	$ 41.21	$ 36.15	$ 39.52	$ 41.92	$ 48.01					
PAA	Plains All American PL LP	high	$ 53.02	$ 55.16	$ 57.17	$ 58.40	$ 59.52	$ 57.41	$ 57.72	$ 56.58	$ 53.66	$ 53.74	$ 53.05	$ 52.40	$ 51.14	$51.05	$53.27	17.12	2.91
		low	$ 45.95	$ 51.85	$ 53.31	$ 54.42	$ 55.58	$ 50.15	$ 52.98	$ 50.32	$ 48.86	$ 49.72	$ 50.15	$ 47.26					
SXL	Sunoco Logistics Partners L.P.	high	$ 60.83	$ 63.17	$ 68.44	$ 65.76	$ 64.31	$ 65.60	$ 65.50	$ 67.43	$ 68.21	$ 71.61	$ 71.24	$ 76.07	$ 74.83	$69.67	$64.01	24.17	2.96
		low	$ 50.33	$ 58.92	$ 61.08	$ 60.56	$ 59.50	$ 57.75	$ 60.51	$ 58.59	$ 61.77	$ 64.81	$ 67.29	$ 67.00					
TOT	Total SA	high	$ 55.35	$ 55.20	$ 51.62	$ 50.39	$ 52.05	$ 51.57	$ 53.47	$ 57.07	$ 59.25	$ 62.45	$ 61.01	$ 61.50	$ 61.27	$59.48	$53.64	11.14	5.28
		low	$ 51.15	$ 48.56	$ 47.50	$ 45.93	$ 49.36	$ 46.79	$ 47.69	$ 52.95	$ 54.54	$ 57.61	$ 58.15	$ 56.17					
TSO	Tesoro Corp.	high	$ 49.19	$ 57.04	$ 59.90	$ 58.45	$ 65.75	$ 62.79	$ 57.30	$ 57.99	$ 47.64	$ 50.77	$ 59.54	$ 59.57	$ 58.50	$52.08	$52.50	19.04	3.00
		low	$ 39.85	$ 48.66	$ 55.05	$ 47.98	$ 50.77	$ 50.72	$ 49.26	$ 45.53	$ 43.65	$ 40.90	$ 47.05	$ 54.66					
VLO	Valero Energy Corp.	high	$ 44.40	$ 47.85	$ 48.97	$ 45.53	$ 42.70	$ 40.86	$ 36.33	$ 37.50	$ 37.28	$ 42.15	$ 46.37	$ 50.54	$ 50.40	$42.63	$40.20	9.56	4.97
		low	$ 34.05	$ 43.51	$ 42.51	$ 37.67	$ 35.81	$ 33.27	$ 33.00	$ 34.11	$ 33.70	$ 33.20	$ 39.01	$ 44.53					
WMB	Williams Cos	high	$ 35.45	$ 36.22	$ 38.00	$ 38.57	$ 38.20	$ 35.37	$ 34.76	$ 36.77	$ 36.94	$ 37.47	$ 36.23	$ 38.68	$ 38.57	$35.88	$35.37	42.24	0.86
		low	$ 33.10	$ 33.09	$ 33.34	$ 36.11	$ 35.02	$ 31.25	$ 32.36	$ 34.02	$ 34.95	$ 34.67	$ 34.22	$ 33.98					
XOM	Exxon Mobil	high	$ 91.93	$ 90.50	$ 90.98	$ 90.99	$ 93.50	$ 92.27	$ 95.49	$ 93.10	$ 89.87	$ 90.96	$ 96.00	$ 101.74	$ 100.49	$92.45	$90.36	34.76	2.80
		low	$ 87.24	$ 87.61	$ 87.90	$ 85.02	$ 87.48	$ 88.02	$ 89.96	$ 86.39	$ 85.61	$ 84.79	$ 88.27	$ 92.92					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.25	98385XAC0	Sr Nts	04/15/2013	AAA	6.17	6.20	6.24										6.20%	
XTO Energy Inc.	4.9	98385XAD8	Sr Nts	02/01/2014	AAA	4.68	4.70	4.72	4.74	4.76	4.77	4.79	4.81	4.83	4.84	4.86	4.88	4.78%	4.86%
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	4.77	4.78	4.80	4.80	4.82	4.85	4.86	4.89	4.89	4.90	4.91	4.94	4.85%	4.92%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	4.90	4.91	4.92	4.92	4.97	5.02	5.03	5.07	5.06	5.06	5.07	5.11	5.00%	5.08%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.44	4.46	4.45	4.30	4.53	4.81	4.86	5.05	4.98	4.90	5.02	5.09	4.74%	5.00%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	5.08	5.09	5.10	5.10	5.19	5.29	5.30	5.37	5.28	5.29	5.33	5.41	5.24%	5.34%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.51	4.54	4.53	4.41	4.65	4.94	4.98	5.13	5.04	4.97	5.10	5.15	4.83%	5.07%
XTO Energy Inc.	4.62	98385XAN6	Sr Nts	06/15/2013	AAA	4.55	4.57	4.58	4.60	4.62	4.62							4.59%	
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	4.50	4.51	4.51	4.49	4.58	4.69	4.67	4.73	4.70	4.66	4.69	4.78	4.63%	4.71%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.48	4.51	4.49	4.33	4.59	4.85	4.87	5.02	4.96	4.89	5.00	5.10	4.76%	5.00%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	6.90	6.82	6.83	6.79	6.92	7.10	7.13	7.26	7.15	7.14	7.22	7.35	7.05%	7.24%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	6.18	6.16	6.16	6.08	6.28	6.45	6.49	6.61	6.53	6.50	6.61	6.71	6.40%	6.61%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	5.53	5.56	5.37	5.19	5.38	5.58	5.62	5.76	5.67	5.88	5.89	5.95	5.62%	5.91%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	5.49	5.54	5.53	5.39	5.59	5.79	5.83	5.98	5.88	5.83	5.96	5.96	5.73%	5.92%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	5.32	5.13	5.10	4.96	5.16	5.36	5.39	5.53	5.44	5.73	5.79	5.85	5.40%	5.79%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	6.64	6.66	6.62	6.54	6.77	6.97	7.02	7.16	7.09	7.01	7.03	7.17	6.89%	7.07%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	6.11	6.15	6.17	6.02	6.20	6.45	6.51	6.58	6.51	6.42	6.55	6.64	6.36%	6.54%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	6.09	6.12	6.18	6.02	6.21	6.46	6.52	6.59	6.52	6.43	6.56	6.65	6.36%	6.55%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	6.17	6.19	6.09	6.01	6.18	6.38	6.43	6.59	6.52	6.52	6.57	6.63	6.36%	6.57%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	5.98	6.01	5.97	5.82	6.03	6.29	6.35	6.48	6.41	6.32	6.45	6.54	6.22%	6.44%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	6.69	6.71	6.33	6.24	6.47	6.68	6.71	6.84	6.78	6.74	6.86	7.02	6.67%	6.87%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	5.95	5.97	5.74	5.64	5.90	6.15	6.00	6.14	6.05	6.00	6.14	6.25	5.99%	6.13%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	5.45	5.46	5.38	5.27	5.53	5.82	5.71	5.85	5.80	5.65	5.77	5.88	5.63%	5.77%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	5.61	5.64	5.65	5.51	5.54	5.77	5.80	5.95	5.88	5.83	5.87	5.84	5.74%	5.85%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	5.18	5.21	5.22	5.08	5.33	5.59	5.44	5.59	5.47	5.42	5.54	5.67	5.40%	5.54%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	5.05	5.08	5.18	5.00	5.24	5.49	5.34	5.50	5.49	5.40	5.41	5.49	5.31%	5.43%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.70	4.67	4.70	4.59	4.84	5.10	4.99	5.14	5.06	5.01	5.13	5.25	4.93%	5.13%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	5.02	5.05	5.09	4.95	5.23	5.48	5.38	5.55	5.46	5.40	5.52	5.61	5.31%	5.51%
Diamond Offshore Drilling, Inc.	5.15	25271CAG7	Sr Nts	09/01/2014	A	4.80	4.82	4.84	4.86	4.88	4.89	4.91	4.93	4.95	4.95	4.97	5.00	4.90%	4.97%
Diamond Offshore Drilling, Inc.	4.88	25271CAJ1	Sr Nts	07/01/2015	A	4.43	4.44	4.46	4.47	4.50	4.52	4.52	4.53	4.54	4.55	4.56	4.58	4.51%	4.56%
Louisiana Land/Exp	7.625	546268AF0	Deb	04/15/2013	A	7.52	7.55	7.61										7.56%	
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	6.05	6.07	5.46	5.37	5.60	5.83	5.85	5.99	5.91	5.79	5.89	6.01	5.82%	5.90%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	6.53	6.55	6.54	6.54	6.68	6.80	6.82	6.94	6.87	6.81	6.84	6.99	6.74%	6.88%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	5.77	5.74	5.71	5.37	5.64	5.89	5.94	6.10	5.99	5.94	6.13	6.22	5.87%	6.10%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	4/1/2028	A	5.77	5.74	5.71	5.37	5.64	5.89	5.94	6.10	5.99	5.94	6.13	6.22	5.87%	6.10%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nts	02/15/2029	A	6.12	6.16	6.15	5.79	6.02	6.24	6.29	6.44	6.38	6.34	6.42	6.52	6.24%	6.43%
Occidental Pete Corp Med Term	8.75	67461FED5	TN Tranche # Tr 001	1/15/2023	A	6.28	6.31	6.30	6.20	6.43	6.63	6.68	6.82	6.74	6.64	6.76	6.89	6.56%	6.76%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	5.27	5.28	5.29	5.29	5.42	5.54	5.54	5.57	5.50	5.49	5.53	5.58	5.44%	5.53%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	5.32	5.34	5.35	5.22	5.42	5.66	5.68	5.83	5.76	5.68	5.55	5.63	5.54%	5.62%
ANR Pipeline	7.38	001814AQ5	Deb	2/15/2024	A-	5.59	5.61	5.59	5.62	5.84	6.06	6.09	6.22	5.92	5.85	5.98	6.10	5.87%	5.98%
ANR Pipeline	9.62	001814AR3	Deb	11/1/2021	A-	6.42	6.44	6.42	6.32	6.54	6.78	6.83	6.93	6.89	6.82	6.92	7.12	6.70%	6.95%
ANR Pipeline	7	001814AS1	Deb	6/1/2025	A-	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42				5.42%	
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	5.68	5.75	5.73	5.61	5.90	6.16	6.08	6.18	6.02	5.97	6.11	6.16	5.95%	6.08%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	5.70	5.77	5.75	5.65	5.89	6.16	6.13	6.26	6.10	6.05	6.19	6.24	5.99%	6.16%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.45	5.59	5.57	5.35	5.71	6.12	6.02	6.23	6.12	6.01	6.21	6.17	5.88%	6.13%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.29	5.44	5.43	5.26	5.54	5.89	5.81	5.98	5.74	5.65	5.82	5.85	5.64%	5.77%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	5.75	5.77	5.78	5.74	5.82	5.93	5.91	5.97	5.91	5.91	5.90	6.01	5.87%	5.94%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	5.87	5.90	5.90	5.86	5.99	6.08	6.08	6.14	6.06	6.06	6.04	6.18	6.01%	6.09%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.86	5.00	4.99	4.81	5.07	5.40	5.27	5.48	5.42	5.24	5.32	5.29	5.18%	5.28%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	4.82	4.84	4.85	4.85	4.92	4.99	4.95	5.01	4.97	4.97	4.97	5.00	4.93%	4.98%
Apache Corp.	5.25	037411AT2	Nts	04/15/2013	A-	5.20	5.21	5.25										5.22%	
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	4.89	4.90	4.90	4.87	4.95	5.06	5.05	5.12	5.06	5.06	5.08	5.13	5.01%	5.09%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	5.32	5.33	5.31	5.18	5.17	5.38	5.44	5.58	5.48	5.42	5.55	5.75	5.41%	5.57%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.18	5.26	5.30	5.14	5.45	5.71	5.60	5.77	5.70	5.58	5.69	5.69	5.51%	5.65%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.49	5.67	5.78	5.59	5.82	6.11	5.99	6.17	6.09	6.00	6.10	6.10	5.91%	6.07%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.67	5.54	5.52	5.33	5.64	6.07	6.11	6.27	6.13	6.12	6.26	6.07	5.89%	6.15%
Enterprise Products Oper	6.375	293791AD1	Sr Nts 'B'	02/01/2013	BBB+	6.38												6.38%	
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	5.18	5.20	5.22	5.23	5.26	5.28	5.29	5.32	5.32	5.34	5.36	5.38	5.28%	5.36%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.48	5.53	5.30	5.14	5.38	5.75	5.54	5.69	5.66	5.63	5.66	5.66	5.54%	5.65%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	4.63	4.62	4.63	4.65	4.67	4.69	4.69	4.71	4.72	4.74	4.75	4.77	4.69%	4.75%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.04	5.08	5.01	4.86	5.13	5.47	5.36	5.49	5.41	5.32	5.46	5.43	5.26%	5.40%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	6.53	6.60	6.59	6.59	6.72	6.88	6.88	7.02	6.96	6.95	6.98	6.86	6.80%	6.93%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	5.80	6.09	6.11	5.85	6.02	6.32	6.16	6.37	6.27	6.10	6.24	6.17	6.13%	6.17%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.55	5.92	5.88	5.63	5.83	6.11	5.88	6.13	6.07	5.89	6.03	5.97	5.91%	5.96%
Diamond Shamrock	8.75	252747AD2	Deb	06/15/2015	BBB	7.71	7.72	7.76	7.80	7.85	7.90	7.94	7.98	7.97	8.00	8.03	8.07	7.89%	8.03%
Diamond Shamrock	7.65	252747AF7	Deb	07/01/2026	BBB	5.66	5.66	5.64	5.54	5.83	6.13	5.99	6.14	6.06	5.99	6.13	6.25	5.92%	6.12%
Enbridge Energy Partners, L.P.	4.75	29250RAC0	Sr Nts 'B'	06/01/2013	BBB	4.69	4.71	4.72	4.73	4.75								4.72%	
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.47	5.50	5.47	5.38	5.64	5.85	5.88	6.00	5.87	5.80	5.90	5.94	5.73%	5.88%
Enbridge Energy Partners, L.P.	5.35	29250RAF3	Fixed Rt Sr Gbl Nts	12/15/2014	BBB	4.95	4.96	4.98	5.00	5.02	5.05	5.06	5.07	5.07	5.09	5.11	5.12	5.04%	5.11%
Enbridge Energy Partners, L.P.	6.3	29250RAG1	Fixed Rt Sr Gbl Nts	12/15/2034	BBB	5.56	5.60	5.61	5.48	5.75	5.98	5.97	6.10	6.04	5.96	6.07	6.11	5.85%	6.05%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	5.11	5.09	5.12	5.09	5.13	5.19	5.19	5.22	5.20	5.22	5.23	5.26	5.17%	5.24%
Energen Corp.	5	29265NAQ1	Nts	10/01/2013	BBB	4.91	4.92	4.93	4.94	4.95	4.96	4.97	4.98	5.00				4.95%	
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	5.75	5.77	5.77	5.59	5.89	6.30	6.18	6.30	6.27	6.15	6.30	6.33	6.05%	6.26%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.85	5.81	5.80	5.62	5.93	6.32	6.19	6.34	6.31	6.21	6.32	6.37	6.09%	6.30%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.65	5.68	5.71	5.53	5.82	6.16	6.02	6.24	6.22	6.10	6.22	6.19	5.96%	6.17%
Kinder Morgan Energy Partners, L.P.	5	494550AR7	Sr Nts	12/15/2013	BBB	4.82	4.82	4.84	4.86	4.88	4.90	4.92	4.93	4.95	4.97	4.99	5.41	4.94%	5.12%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	5.17	5.16	5.16	5.15	5.23	5.32	5.26	5.31	5.29	5.27	5.30	5.35	5.25%	5.31%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.46	5.45	5.43	5.20	5.53	5.89	5.73	5.99	5.90	5.78	5.92	5.93	5.68%	5.88%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.47	5.53	5.55	5.27	5.63	6.07	5.81	6.07	6.16	5.90	5.93	6.04	5.79%	5.96%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/1/2018	BBB	5.86	5.87	5.84	5.83	5.78	5.90	5.91	5.99	5.94	5.90	5.94	6.01	5.90%	5.95%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nt	10/1/2028	BBB	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58%	5.58%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	5.23	5.41	5.45	5.27	5.46	5.73	5.81	5.86	5.73	5.67	5.73	5.79	5.60%	5.73%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.00	6.00	5.99	5.96	6.15	6.42	6.40	6.55	6.50	6.41	6.51	6.59	6.29%	6.50%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	5.28	5.29	5.32	5.32	5.31	5.39	5.40	5.42	5.44	5.45	5.47	5.47	5.38%	5.46%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.40	5.45	5.49	5.28	5.61	5.97	6.00	6.25	6.20	5.91	6.05	6.04	5.80%	6.00%
Plains All Amern Pipeline L P	5.88	72650RAF9	Sr Nt	08/15/2016	BBB	5.28	5.29	5.30	5.27	5.32	5.38	5.25	5.29	5.29	5.29	5.29	5.33	5.30%	5.30%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	4.86	4.87	4.88	4.87	4.84	4.87	4.89	4.90	4.91	4.92	4.93	4.95	4.89%	4.93%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.41	5.46	5.33	5.14	5.42	5.75	5.48	5.65	5.63	5.55	5.63	5.71	5.51%	5.63%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	5.74	5.84	5.78	5.65	5.89	6.25	6.13	6.40	6.25	6.43	6.58	6.44	6.12%	6.48%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	7.05	7.08	7.07	7.00	7.25	7.51	7.57	7.73	7.63	7.20	7.14	7.25	7.29%	7.20%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	6.50	6.51	6.50	6.43	6.61	6.67	6.59	6.73	6.64	6.60	6.67	6.80	6.60%	6.69%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	6.24	6.29	6.27	6.19	6.45	6.53	6.60	6.75	6.65	6.60	6.63	6.74	6.50%	6.66%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	6.54	6.55	6.55	6.41	6.70	7.02	6.82	6.99	6.90	6.83	6.91	7.25	6.79%	7.00%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.90	5.88	5.77	5.65	5.94	6.21	6.19	6.42	6.40	6.29	6.27	6.16	6.09%	6.24%
Valero Energy Corp. (New)	4.75	91913YAG5	Nts	06/15/2013	BBB	4.66	4.68	4.70	4.72	4.74	4.62	4.63						4.68%	
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	BBB	4.54	4.55	4.56	4.57	4.59	4.61	4.63	4.64	4.65	4.66	4.68	4.70	4.62%	4.68%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.57	5.46	5.45	5.26	5.47	5.82	5.86	6.22	6.04	5.79	5.80	5.80	5.71%	5.80%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	5.18	5.15	5.13	5.14	5.21	5.33	5.32	5.39	5.35	5.34	5.33	5.37	5.27%	5.35%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	6.01	6.01	6.03	6.03	6.09	6.23	6.24	6.25	6.22	6.22	6.22	6.28	6.15%	6.24%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.01	6.06	6.03	5.91	6.19	6.48	6.50	6.62	6.53	6.47	6.59	6.83	6.35%	6.63%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.26	6.33	6.25	5.99	6.42	6.89	7.03	7.26	7.20	7.07	7.27	7.52	6.79%	7.29%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.46	6.53	6.45	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.24	6.30	6.26	6.11	6.44	6.78	6.80	6.74	6.65	6.57	6.63	6.83	6.53%	6.68%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.09	6.15	6.11	5.96	6.28	6.62	6.64	6.60	6.50	6.42	6.54	6.78	6.39%	6.58%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	6.09	6.17	5.91	5.76	5.92	6.21	6.23	6.36	6.32	6.18	6.24	6.41	6.15%	6.28%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	5.17	5.17	5.17	5.17	5.22	5.29	5.25	5.30	5.29	5.28	5.28	5.34	5.24%	5.30%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.25	5.24	5.27	5.04	5.29	5.71	5.50	5.67	5.59	5.45	5.56	5.74	5.44%	5.58%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BBB-	5.00	5.00	4.93	4.92	4.92	5.02	4.99	5.03	5.00	5.02	5.07	5.05	5.00%	5.05%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BBB-	5.20	5.20	5.22	5.19	5.21	5.27	5.27	5.34	5.25	5.26	5.26	5.30	5.25%	5.27%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	4.74	4.73	4.73	4.73	4.80	4.86	4.86	4.90	4.86	4.73	4.74	4.79	4.79%	4.75%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	5.99	6.01	5.99	5.88	6.07	6.49	6.51	6.63	6.54	6.50	6.61	6.69	6.33%	6.60%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	5.45	5.47	5.48	5.50	5.52	5.55	5.56	5.57	5.59	5.60	5.63	5.64	5.55%	5.62%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	5.30	5.33	5.32	5.27	5.36	5.44	5.41	5.48	5.41	5.39	5.42	5.50	5.39%	5.44%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.75	5.80	5.82	5.58	5.81	6.19	6.11	6.28	6.22	6.02	6.13	6.14	5.99%	6.10%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg R	08/01/2066	BBB-	7.30	7.37	7.29	7.29	7.27	7.44	7.51	7.52	7.58	7.58	7.59	7.55	7.44%	7.57%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.98	5.92	5.89	5.75	6.06	6.39	6.41	6.03	5.94	5.87	6.04	6.32	6.05%	6.08%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.93	6.01	6.02	5.85	6.10	6.34	6.10	6.28	6.23	6.11	6.19	6.29	6.12%	6.20%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	5.63	5.61	5.57	5.43	5.63	5.88	5.75	5.92	5.93	5.85	5.81	5.98	5.75%	5.88%
Sunoco Logistics Ptns Operatio	6.12	86765BAE9	Sr Nt	05/15/2016	BBB-	5.48	5.49	5.50	5.51	5.56	5.60	5.61	5.66	5.65	5.65	5.66	5.69	5.59%	5.67%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	6.26	6.32	6.23	6.09	6.40	6.73	6.75	6.46	6.37	6.30	6.44	6.54	6.41%	6.43%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.46	6.53	6.45	6.18	6.61	7.09	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	6.10	6.13	6.12	6.10	6.22	6.38	6.37	6.34	6.29	6.28	6.27	6.28	6.24%	6.28%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	6.02	6.08	5.97	5.82	5.93	6.25	6.27	6.04	5.95	5.88	5.97	6.16	6.03%	6.00%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	6.27	6.28	6.31	6.29	6.39	6.55	6.51	6.62	6.55	6.53	6.57	6.61	6.46%	6.57%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	6.06	6.13	6.12	5.99	6.18	6.53	6.51	6.77	6.77	6.72	6.79	7.09	6.47%	6.87%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	6.17	6.20	6.23	6.07	6.30	6.64	6.56	6.86	6.83	6.80	6.86	7.22	6.56%	6.96%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	6.13	6.19	6.16	6.06	6.26	6.51	6.50	6.65	6.60	6.56	6.65	6.82	6.42%	6.68%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	6.42	6.45	6.47	6.26	6.55	6.91	6.87	7.13	7.17	7.04	7.10	7.49	6.82%	7.21%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	5.69	5.67	5.64	5.63	5.70	5.82	5.83	5.87	5.82	5.81	5.79	5.87	5.76%	5.82%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	5.66	5.66	5.67	5.66	5.70	5.82	5.76	5.83	5.76	5.74	5.76	5.83	5.74%	5.78%
KN Energy	6.5	482620AN1	Deb	09/01/2013	BB	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50					6.50%	
KN Energy	6.67	482620AS0	Deb	11/01/2027	BB	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02%	7.02%
KN Energy	7.25	482620AW1	Sr Deb	03/01/2028	BB	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07%	7.07%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	4.83	4.84	4.85	4.86	4.87	4.89	4.91	4.91	4.93	4.90	4.93	4.94	4.89%	4.92%
Kinder Morgan Fin Co Ulc	5.7	49455WAD8	Gtd Nts	01/05/2016	BB	5.19	5.22	5.24	5.21	5.23	5.32	5.28	5.30	5.29	5.28	5.30	5.30	5.26%	5.29%
Range Resources Corp.	7.5	75281AAH2	Sr Sub Nts	10/01/2017	BB	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23%	7.23%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.89	6.95	6.98	6.99	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.98%	7.00%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	5.90	5.90	5.90	5.80	5.90	6.07	5.93	5.90	5.86	5.79	5.77	5.76	5.87%	5.77%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	6.25	6.26	6.27	6.01	6.11	6.39	6.22	6.36	6.33	6.09	6.11	6.08	6.21%	6.09%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Cor	11/15/2035	BB-	2.78	2.75	2.74	2.74	2.69	2.75	2.73	2.67	2.64	2.58	2.61	2.62	2.69%	2.60%
Chesapeake Energy Corp.	7.62	165167BY2	Sr Nts	07/15/2013	BB-	7.43	7.44	7.49	7.53	7.58	7.63							7.52%	
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Cor	5/15/2037	BB-	2.61	2.61	2.61	2.59	2.50	2.61	2.60	2.55	2.52	2.46	2.44	2.47	2.55%	2.46%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv I	5/15/2037	BB-	2.67	2.65	2.64	2.64	2.52	2.62	2.63	2.60	2.55	2.50	2.47	2.48	2.58%	2.48%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Cor	12/15/2038	BB-	2.60	2.56	2.54	2.54	2.41	2.50	2.58	2.46	2.46	2.38	2.40	2.41	2.49%	2.40%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	6.50	6.44	6.41	6.26	6.29	6.47	6.41	6.41	6.40	6.26	6.30	6.27	6.37%	6.28%
Plains Exploration & Production Comp	7	726505AC4	SrNts	03/15/2017	BB-	6.76	6.76	6.76	6.76	6.76								6.76%	
Plains Exploration & Production Comp	7.75	726505AD2	SrNts	06/15/2015	BB-	7.60	7.60	7.60	7.60	7.60								7.60%	
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.91	6.95	6.96	6.95	6.98	7.16	7.00	7.05	7.00	6.94	6.92	6.98	6.98%	6.95%
Whiting Petroleum Corp.	7.25	966387AC6	Sr Sub Nts	05/01/2013	BB-	7.12	7.12	7.12	7.12									7.12%	
Whiting Petroleum Corp.	7	966387AE2	Sr Sub Nts	02/01/2014	BB-	6.66	6.71	6.73	6.73	6.79	6.86	6.86	6.84	6.87	6.88	6.91	6.91	6.81%	6.90%
Parker Drilling Co.	9.62	701081AM3	Nt	10/1/2013	B+	9.33	9.33	9.33	9.33	9.33	9.33	9.33	9.33	9.33				9.33%	
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.92	7.95	7.92	0.00	0.00	6.60%	2.64%
Ferrellgas Partners L.P.	6.5		Sr Nts	05/15/2021	B-	6.44	6.41	6.30	6.18	6.16	6.50	6.44	6.50	6.52	6.42	6.39	6.37	6.39%	6.39%
Stone Energy Corp.	6.75	861642AG1	Sr Sub Nts	12/15/2014	CCC+	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75%	6.75%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	8.45	8.63	8.27	7.50	7.12	8.33	8.38	7.85	7.51	7.47	7.28	7.28	7.84%	7.34%
Cimarex Energy Co.	7.12	171798AA9	SrNts	05/01/2017	NR	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88%	6.88%
Delta Petroleum Corp.	7	247907AC2	Sr Nts	04/01/2015	NR	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67	11.67%	11.67%
Encore Acquisition	6	29255WAG5	Sr Sub Nt	7/15/2015	NR	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94%	5.94%
Ferrellgas Partners L.P.	6.75	31529MAA6	Sr Nts	05/15/2014	NR	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72%	6.72%
Forest Oil Corp.	7.75	346091AU5	Sr Nts	05/01/2014	NR	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65	7.65%	7.65%
Houston Exploration Co. (The)	7	442120AE1	Sr Sub Nts	06/15/2013	NR	7.00	7.00	7.00	7.00	7.00								7.00%	
Mariner Energy, Inc.	7.5	56845TAE7	Sr Nts	04/15/2013	NR	7.22	7.22	7.22										7.22%	
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02	7.02%	7.02%
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.82	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55				6.58%	
Offshore Logistics, Inc.	6.12	676255AL6	SrNts	06/15/2013	NR	6.06	6.06	6.06	6.06	6.06								6.06%	
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	5.61	5.60	5.56	5.44	5.65	5.92	5.94	6.09	5.98	5.84	5.89	5.98	5.79%	5.90%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nt	6/15/2028	NR	5.61	5.60	5.56	5.44	5.65	5.92	5.94	6.09	5.98	5.84	5.89	5.98	5.79%	5.90%
Range Resources Corp.	7.38	75281AAB5	Sr Sub Nts	07/15/2013	NR	7.30	7.30	7.30	7.30	7.30	7.30	7.00						7.26%	
Range Resources Corp.	7.5	75281AAG4	Sr Sub Nts	05/15/2016	NR	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23%	7.23%
Rentech, Inc.	4	760112AA0	Sr Nt Conv	4/15/2013	NR	4.06	4.06											4.06%	

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	5.12	5.10	5.12	5.08	5.16	5.24	5.31	5.37	5.33	5.33	5.21	5.28	5.22%	5.27%
Tesoro Corp.	6.62	881609AS0	Sr Nt	11/1/2015	NR	6.56	6.56	6.56	6.58	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56%	6.56%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.27	7.29	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30%	7.30%
Cimarex Energy Co.	5.875		SrNts	05/01/2022	NR	5.49	5.50	5.48	5.69	5.49	5.73	5.68	5.79	5.82	5.52	5.57	5.56	5.61%	5.55%
			Counts of data			174	173	172	168	167	162	160	158	157	153	153	153	174	153

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.96%	5.00%
AA's	6.04%	6.29%
A's	5.82%	5.95%
BBB's	5.89%	6.07%
BB's	5.82%	5.42%
B's	7.44%	4.52%
CCC's	7.29%	7.05%
NR's	6.71%	6.89%
ALL	5.95%	5.98%
BBB- & Above	5.80%	5.97%
BB- & Above	5.81%	5.90%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.25	98385XAC0	Sr Nts	04/15/2013	AAA	0.71	0.60											0.66%	
XTO Energy Inc.	4.9	98385XAD8	Sr Nts	02/01/2014	AAA	0.41	0.40	0.38	0.45	0.57	0.54	0.54	0.57	0.69	0.40	0.68		0.51%	0.54%
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	0.67	0.65	0.64	0.47	0.57	0.67	0.64	0.71	0.60	0.50	0.40	0.48	0.58%	0.46%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	0.80	0.78	0.66	0.57	0.77	1.06	0.98	1.19	0.94	0.83	0.76	0.95	0.86%	0.85%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	3.68	3.72	3.70	3.45	3.82	4.25	4.33	4.61	4.51	4.37	4.56	4.66	4.14%	4.53%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	1.02	1.00	0.96	0.87	1.23	1.65	1.62	1.91	1.34	1.31	1.45	1.79	1.35%	1.52%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	3.67	3.71	3.69	3.49	3.86	4.30	4.35	4.58	4.43	4.32	4.51	4.59	4.13%	4.47%
XTO Energy Inc.	4.62	98385XAN6	Sr Nts	06/15/2013	AAA	0.66	0.65	0.60	0.72									0.66%	
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	1.24	1.22	1.18	1.03	1.39	1.85	1.71	1.93	1.72	1.47	1.59	1.96	1.52%	1.67%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	3.77	3.81	3.77	3.53	3.92	4.30	4.33	4.56	4.46	4.35	4.51	4.66	4.16%	4.51%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	3.23	2.96	2.92	2.76	3.04	3.49	3.51	3.80	3.44	3.34	3.49	3.80	3.32%	3.54%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	3.06	2.98	2.93	2.69	3.16	3.56	3.60	3.86	3.63	3.51	3.75	3.96	3.39%	3.74%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	4.27	4.31	3.99	3.67	3.99	4.30	4.35	4.58	4.42	4.74	4.76	4.84	4.35%	4.78%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	4.25	4.31	4.29	4.05	4.37	4.68	4.73	4.96	4.80	4.71	4.90	4.89	4.58%	4.83%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	4.20	3.87	3.82	3.58	3.90	4.21	4.26	4.49	4.33	4.77	4.87	4.95	4.27%	4.86%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	3.89	3.91	3.76	3.52	4.06	4.52	4.59	4.90	4.71	4.48	4.49	4.80	4.30%	4.59%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	5.02	5.06	5.09	4.85	5.12	5.50	5.58	5.68	5.56	5.42	5.61	5.74	5.35%	5.59%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	4.97	5.01	5.09	4.85	5.12	5.50	5.58	5.68	5.56	5.42	5.61	5.74	5.34%	5.59%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	3.79	3.81	3.56	3.32	3.71	4.17	4.24	4.60	4.41	4.40	4.49	4.60	4.09%	4.50%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	4.97	5.01	4.94	4.70	5.02	5.40	5.48	5.68	5.56	5.42	5.61	5.74	5.29%	5.59%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	4.09	4.11	3.17	2.89	3.43	3.91	3.94	4.22	4.03	3.90	4.16	4.50	3.86%	4.19%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	4.19	4.21	3.73	3.49	4.02	4.51	4.18	4.46	4.27	4.14	4.40	4.60	4.18%	4.38%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	4.24	4.26	4.08	3.84	4.37	4.93	4.70	4.98	4.87	4.55	4.79	5.00	4.55%	4.78%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	4.59	4.63	4.64	4.40	4.43	4.83	4.87	5.12	5.00	4.90	4.96	4.91	4.77%	4.92%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	4.17	4.21	4.21	3.97	4.39	4.80	4.55	4.80	4.59	4.49	4.70	4.89	4.48%	4.69%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	3.81	3.87	4.04	3.70	4.13	4.56	4.30	4.58	4.54	4.37	4.39	4.52	4.23%	4.43%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.02	3.96	4.01	3.81	4.24	4.66	4.47	4.72	4.59	4.49	4.70	4.89	4.38%	4.69%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	3.89	3.93	3.99	3.75	4.21	4.62	4.45	4.73	4.56	4.45	4.66	4.79	4.34%	4.63%
Diamond Offshore Drilling, Inc.	5.15	25271CAG7	Sr Nts	09/01/2014	A	0.56	0.65	0.64	0.68	0.71	0.78	0.74	0.76	0.78	0.50	0.55	0.67	0.67%	0.57%
Diamond Offshore Drilling, Inc.	4.88	25271CAJ1	Sr Nts	07/01/2015	A	0.76	0.74	0.73	0.72	0.85	0.93	0.80	0.72	0.70	0.65	0.59	0.64	0.74%	0.63%
Louisiana Land/Exp	7.625	546268AF0	Deb	04/15/2013	A	0.97	0.95											0.96%	
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	4.54	4.56	3.19	2.95	3.48	3.97	4.00	4.28	4.09	3.80	4.01	4.25	3.93%	4.02%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	2.33	2.31	2.23	2.13	2.49	2.80	2.77	3.06	2.80	2.52	2.56	2.93	2.58%	2.67%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	4.88	4.81	4.76	4.12	4.61	5.05	5.12	5.40	5.21	5.10	5.44	5.58	5.01%	5.37%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	4/1/2028	A	4.88	4.81	4.76	4.12	4.61	5.05	5.12	5.40	5.21	5.10	5.44	5.58	5.01%	5.37%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nts	02/15/2029	A	4.97	5.03	5.01	4.40	4.77	5.12	5.20	5.45	5.33	5.25	5.39	5.54	5.12%	5.39%
Occidental Pete Corp Med Term	8.75	67461FED5	'N Tranche # Tr 001	1/15/2023	A	3.94	3.98	3.93	3.67	4.16	4.59	4.66	4.94	4.75	4.50	4.74	5.00	4.41%	4.75%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	1.64	1.62	1.60	1.50	1.99	2.42	2.36	2.45	2.07	1.96	2.05	2.23	1.99%	2.08%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	4.27	4.31	4.31	4.07	4.43	4.83	4.87	5.12	5.00	4.84	4.61	4.74	4.62%	4.73%
ANR Pipeline	7.38	001814AQ5	Deb	2/15/2024	A-	3.81	3.83	3.78	3.81	4.30	4.76	4.80	5.06	4.42	4.24	4.50	4.75	4.34%	4.50%
ANR Pipeline	9.62	001814AR3	Deb	11/1/2021	A-	3.09	3.08	3.01	2.70	3.19	3.74	3.80	3.99	3.87	3.65	3.86	4.30	3.52%	3.94%
ANR Pipeline	7	001814AS1	Deb	6/1/2025	A-	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05				4.05%	
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	4.16	4.28	4.23	3.97	4.53	5.02	4.85	5.03	4.73	4.61	4.87	4.95	4.60%	4.81%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	4.06	4.18	4.13	3.92	4.38	4.87	4.80	5.03	4.73	4.61	4.87	4.95	4.54%	4.81%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.43	5.57	5.55	5.33	5.70	6.11	6.01	6.23	6.11	6.00	6.21	6.16	5.87%	6.12%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	4.97	5.16	5.14	4.93	5.28	5.69	5.60	5.80	5.51	5.40	5.61	5.64	5.39%	5.55%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	2.39	2.42	2.38	2.13	2.39	2.79	2.63	2.83	2.52	2.43	2.31	2.75	2.50%	2.50%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	2.56	2.59	2.55	2.37	2.73	2.99	2.93	3.08	2.76	2.68	2.55	2.99	2.73%	2.74%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.41	4.61	4.59	4.32	4.71	5.18	5.00	5.30	5.20	4.94	5.06	5.01	4.86%	5.00%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	1.29	1.37	1.33	1.22	1.54	1.90	1.59	1.91	1.53	1.44	1.31	1.44	1.49%	1.40%
Apache Corp.	5.25	037411AT2	Nts	04/15/2013	A-	0.64	0.60											0.62%	
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	1.39	1.37	1.28	1.07	1.41	1.89	1.79	2.08	1.68	1.57	1.61	1.84	1.58%	1.67%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	4.38	4.40	4.34	4.10	4.06	4.46	4.55	4.81	4.62	4.50	4.74	5.10	4.51%	4.78%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	4.59	4.71	4.76	4.51	5.00	5.38	5.22	5.48	5.36	5.17	5.34	5.34	5.07%	5.28%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	4.45	4.73	4.90	4.59	4.94	5.38	5.20	5.47	5.33	5.19	5.34	5.34	5.07%	5.29%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	4.66	4.41	4.36	4.01	4.58	5.33	5.40	5.67	5.41	5.40	5.64	5.30	5.01%	5.45%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	0.87	0.87	0.86	0.76	0.86	0.99	0.87	0.90	0.70	0.62	0.69	0.61	0.80%	0.64%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.09	4.74	4.51	4.87	5.40	5.10	5.32	5.26	5.22	5.26	5.26	5.09%	5.25%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	1.15	0.88	0.87	0.86	0.98	1.07	0.86	0.96	0.91	0.87	0.86	0.90	0.93%	0.88%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	4.72	4.78	4.66	4.43	4.85	5.35	5.19	5.38	5.26	5.12	5.33	5.29	5.03%	5.25%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	2.98	3.13	3.04	2.96	3.36	3.84	3.80	4.23	3.94	3.84	3.89	3.37	3.53%	3.70%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	4.75	5.21	5.24	4.81	5.08	5.55	5.30	5.63	5.46	5.17	5.39	5.28	5.24%	5.28%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	4.73	5.31	5.24	4.85	5.15	5.57	5.22	5.61	5.51	5.22	5.44	5.34	5.27%	5.33%
Diamond Shamrock	8.75	252747AD2	Deb	06/15/2015	BBB	2.83	2.78	2.77	2.81	2.92	3.13	3.10	3.19	2.93	2.84	2.81	2.81	2.91%	2.82%
Diamond Shamrock	7.65	252747AF7	Deb	07/01/2026	BBB	4.19	4.18	4.13	3.92	4.48	5.04	4.75	5.03	4.87	4.72	4.99	5.20	4.63%	4.97%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Enbridge Energy Partners, L.P.	4.75	29250RAC0	Sr Nts 'B'	06/01/2013	BBB	1.49	1.48	1.36	0.94									1.32%	
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.24	5.28	5.23	5.10	5.49	5.80	5.85	6.03	5.83	5.72	5.88	5.94	5.62%	5.85%
Enbridge Energy Partners, L.P.	5.35	29250RAF3	Fixed Rt Sr Gbl Nts	12/15/2014	BBB	1.02	1.00	1.00	1.03	1.12	1.25	1.20	1.17	0.91	0.80	0.85	0.79	1.01%	0.81%
Enbridge Energy Partners, L.P.	6.3	29250RAG1	Fixed Rt Sr Gbl Nts	12/15/2034	BBB	5.27	5.33	5.33	5.15	5.54	5.85	5.85	6.03	5.94	5.82	5.98	6.04	5.68%	5.95%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	1.86	1.67	1.77	1.51	1.63	1.94	1.83	1.94	1.72	1.73	1.70	1.82	1.76%	1.75%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	4.98	5.01	4.99	4.71	5.18	5.80	5.63	5.81	5.76	5.56	5.79	5.83	5.42%	5.73%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.08	5.01	4.99	4.71	5.18	5.76	5.56	5.79	5.73	5.57	5.74	5.81	5.41%	5.71%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.01	5.05	5.09	4.81	5.24	5.73	5.53	5.85	5.81	5.64	5.82	5.77	5.45%	5.74%
Kinder Morgan Energy Partners, L.P.	5	494550AR7	Sr Nts	12/15/2013	BBB	0.82	0.55	0.53	0.55	0.66	0.74	0.77	0.78	0.92	0.42			0.67%	0.42%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	1.84	1.72	1.63	1.49	1.87	2.31	1.88	2.09	1.84	1.64	1.72	1.94	1.83%	1.77%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.11	5.09	5.06	4.74	5.21	5.69	5.48	5.84	5.71	5.54	5.73	5.74	5.41%	5.67%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.03	5.11	5.13	4.75	5.24	5.83	5.48	5.83	5.94	5.59	5.64	5.79	5.45%	5.67%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/1/2018	BBB	3.24	3.22	3.08	2.98	2.75	3.15	3.14	3.40	3.14	2.94	3.01	3.25	3.11%	3.07%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nt	10/1/2028	BBB	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64%	4.64%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	4.45	4.74	4.79	4.50	4.81	5.23	5.35	5.42	5.21	5.11	5.21	5.29	5.01%	5.20%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	5.42	5.41	5.39	5.35	5.65	6.08	6.05	6.28	6.19	6.05	6.21	6.34	5.87%	6.20%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	1.56	1.54	1.57	1.48	1.32	1.74	1.63	1.71	1.70	1.68	1.66	1.56	1.60%	1.63%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	4.97	5.04	5.09	4.80	5.26	5.75	5.80	6.13	6.06	5.67	5.86	5.84	5.52%	5.79%
Plains All Amern Pipeline L P	5.88	72650RAF9	Sr Nt	08/15/2016	BBB	2.56	2.54	2.52	2.28	2.51	2.84	1.83	2.07	1.94	1.84	1.71	1.87	2.21%	1.81%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	1.79	1.77	1.76	1.54	1.06	1.24	1.27	1.23	1.23	1.14	1.05	1.04	1.34%	1.08%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	4.96	5.03	4.84	4.57	4.97	5.43	5.05	5.29	5.26	5.13	5.26	5.36	5.10%	5.25%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	4.74	4.91	4.81	4.56	4.98	5.61	5.40	5.86	5.59	5.90	6.16	5.90	5.37%	5.99%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	4.92	4.96	4.91	4.72	5.25	5.76	5.87	6.17	5.96	5.00	4.84	5.05	5.28%	4.96%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	4.64	4.66	4.61	4.42	4.80	4.92	4.70	5.00	4.79	4.66	4.79	5.05	4.75%	4.83%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	4.49	4.56	4.51	4.32	4.85	5.02	5.13	5.43	5.22	5.09	5.14	5.35	4.93%	5.19%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	5.67	5.68	5.66	5.45	5.89	6.36	6.05	6.30	6.16	6.04	6.16	6.66	6.01%	6.29%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.25	5.21	5.04	4.85	5.29	5.68	5.65	6.00	5.96	5.79	5.76	5.59	5.51%	5.71%
Valero Energy Corp. (New)	4.75	91913YAG5	Nts	06/15/2013	BBB	0.16	0.12	0.05	0.50									0.21%	
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	BBB	0.92	0.87	0.63	0.64	0.76	0.94	0.92	0.99	0.63	0.47	0.71	0.62	0.76%	0.60%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.24	5.08	5.06	4.80	5.09	5.57	5.62	6.11	5.86	5.52	5.54	5.54	5.42%	5.53%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	1.79	1.55	1.41	1.38	1.66	2.21	2.07	2.38	2.08	1.94	1.80	1.91	1.85%	1.88%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	1.89	1.79	1.78	1.68	1.89	2.50	2.43	2.37	2.10	1.99	1.86	2.09	2.03%	1.98%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	4.96	5.06	4.99	4.73	5.28	5.84	5.87	6.08	5.93	5.79	6.03	6.47	5.59%	6.10%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.25	6.32	6.24	5.98	6.41	6.88	7.03	7.26	7.20	7.06	7.27	7.52	6.79%	7.28%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	5.77	5.87	5.80	5.54	6.09	6.65	6.68	6.59	6.42	6.29	6.39	6.73	6.24%	6.47%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	5.74	5.84	5.77	5.51	6.06	6.62	6.65	6.59	6.42	6.29	6.49	6.88	6.24%	6.55%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	5.49	5.61	5.18	4.92	5.18	5.65	5.69	5.90	5.82	5.58	5.69	5.96	5.56%	5.74%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	1.64	1.61	1.46	1.38	1.57	1.95	1.61	1.84	1.69	1.43	1.33	1.62	1.59%	1.46%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	4.82	4.80	4.84	4.51	4.87	5.45	5.16	5.40	5.29	5.08	5.24	5.49	5.08%	5.27%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BBB-	2.84	2.82	2.33	2.23	2.19	2.69	2.44	2.67	2.42	2.47	2.74	2.49	2.53%	2.57%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BBB-	2.28	2.26	2.27	2.01	2.03	2.33	2.24	2.64	1.99	1.93	1.85	2.03	2.16%	1.94%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	3.14	3.09	3.05	2.98	3.34	3.68	3.65	3.83	3.57	2.72	2.74	3.03	3.24%	2.83%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	4.44	4.46	4.41	4.12	4.56	5.51	5.55	5.81	5.60	5.49	5.73	5.90	5.13%	5.71%
Energen Corp.	5	29265NAQ1	Nts	10/01/2013	BBB-	2.42	2.40	2.43	2.42	2.46	2.38	2.41	2.30					2.40%	
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	1.36	1.39	1.25	1.24	1.27	1.37	1.29	1.21	1.18	1.04	1.10	0.96	1.22%	1.03%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	2.12	2.18	2.08	1.73	2.14	2.50	2.27	2.57	2.06	1.87	1.94	2.37	2.15%	2.06%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.47	5.53	5.56	5.23	5.55	6.05	5.95	6.18	6.09	5.82	5.98	5.99	5.78%	5.93%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg Ra	08/01/2066	BBB-	7.28	7.35	7.26	7.26	7.25	7.42	7.49	7.51	7.57	7.57	7.58	7.54	7.42%	7.56%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.24	5.14	5.07	4.81	5.36	5.92	5.95	5.28	5.13	4.99	5.29	5.78	5.33%	5.35%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.12	5.24	5.24	4.98	5.36	5.71	5.35	5.63	5.54	5.34	5.46	5.61	5.38%	5.47%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	4.32	4.28	4.17	3.85	4.29	4.82	4.50	4.86	4.89	4.70	4.60	4.95	4.52%	4.75%
Sunoco Logistics Ptns Operatio	6.12	86765BAE9	Sr Nt	05/15/2016	BBB-	2.42	2.40	2.38	2.36	2.56	2.77	2.71	2.95	2.84	2.73	2.66	2.82	2.63%	2.74%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	5.44	5.54	5.37	5.11	5.66	6.22	6.25	5.73	5.58	5.44	5.68	5.85	5.66%	5.66%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	3.80	3.86	3.76	3.64	4.06	4.63	4.55	4.40	4.18	4.06	3.99	3.98	4.08%	4.01%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	5.34	5.44	5.24	4.98	5.17	5.70	5.73	5.33	5.18	5.04	5.19	5.52	5.32%	5.25%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	3.84	3.82	3.88	3.78	4.04	4.50	4.34	4.66	4.40	4.30	4.37	4.48	4.20%	4.38%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	5.42	5.51	5.49	5.30	5.59	6.10	6.08	6.46	6.46	6.37	6.49	6.92	6.02%	6.59%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	5.52	5.56	5.59	5.35	5.69	6.20	6.07	6.51	6.46	6.42	6.51	7.02	6.08%	6.65%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	3.94	4.06	3.96	3.67	4.16	4.76	4.70	5.04	4.91	4.78	4.99	5.40	4.53%	5.06%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	5.62	5.66	5.69	5.38	5.79	6.30	6.25	6.61	6.66	6.47	6.56	7.09	6.17%	6.71%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	2.63	2.49	2.32	2.20	2.44	2.85	2.82	2.93	2.66	2.57	2.39	2.67	2.58%	2.54%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	2.22	2.12	2.08	1.98	2.09	2.64	2.24	2.48	2.03	1.82	1.83	2.10	2.14%	1.92%
KN Energy	6.5	482620AN1	Deb	09/01/2013	BB	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50					6.50%	

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
KN Energy	6.67	482620AS0	Deb	11/01/2027	BB	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20%	7.20%
KN Energy	7.25	482620AW1	Sr Deb	03/01/2028	BB	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98	6.98%	6.98%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	1.97	1.95	1.94	1.87	1.87	2.00	2.10	1.97	2.04	1.40	1.55	1.50	1.85%	1.48%
Kinder Morgan Fin Co Ulc	5.7	49455WAD8	Gtd Nts	01/05/2016	BB	2.28	2.40	2.42	2.13	2.17	2.80	2.35	2.41	2.20	2.00	2.01	1.94	2.26%	1.98%
Range Resources Corp.	7.38	75281AAB5	Sr Sub Nts	07/15/2013	BB	7.00	7.00	7.00	7.00	7.00	7.00							7.00%	
Range Resources Corp.	7.5	75281AAH2	Sr Sub Nts	10/01/2017	BB	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59%	6.59%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.09	6.27	6.37	6.39	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.35%	6.38%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	4.06	4.03	3.95	3.46	3.89	4.61	3.93	3.75	3.51	3.05	2.91	2.77	3.66%	2.91%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	5.29	5.31	5.34	4.61	4.85	5.61	5.12	5.51	5.42	4.72	4.76	4.64	5.10%	4.71%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Cor	11/15/2035	BB-	2.82	2.75	2.74	2.73	2.63	2.74	2.72	2.59	2.50	2.36	2.43	2.46	2.62%	2.42%
Chesapeake Energy Corp.	7.62	165167BY2	Sr Nts	07/15/2013	BB-	2.11	1.38	1.68	1.57	3.41								2.03%	
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Cor	5/15/2037	BB-	2.74	2.75	2.75	2.70	2.50	2.74	2.74	2.61	2.54	2.41	2.38	2.43	2.61%	2.41%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv I	5/15/2037	BB-	2.88	2.82	2.80	2.80	2.56	2.78	2.79	2.74	2.62	2.50	2.44	2.47	2.68%	2.47%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Cor	12/15/2038	BB-	3.01	2.92	2.89	2.88	2.62	2.80	2.97	2.73	2.73	2.55	2.59	2.62	2.78%	2.59%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	4.96	4.75	4.63	4.08	4.14	4.73	4.49	4.46	4.37	3.83	3.94	3.78	4.35%	3.85%
Plains Exploration & Production Company	7	726505AC4	SrNts	03/15/2017	BB-	6.17	6.17	6.17	6.17	6.17								6.17%	
Plains Exploration & Production Company	7.75	726505AD2	SrNts	06/15/2015	BB-	7.00	7.00	7.00	7.00	7.00								7.00%	
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.31	6.44	6.49	6.41	6.54	7.27	6.59	6.81	6.57	6.29	6.18	6.46	6.53%	6.31%
Whiting Petroleum Corp.	7.25	966387AC6	Sr Sub Nts	05/01/2013	BB-	6.57	6.57	6.57	6.57									6.57%	
Whiting Petroleum Corp.	7	966387AE2	Sr Sub Nts	02/01/2014	BB-	1.94	2.33	2.17	1.62	2.42	3.56	2.96	1.62	1.51	0.55			2.07%	0.55%
Parker Drilling Co.	9.62	701081AM3	Nt	10/01/2013	B+	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37				8.37%	
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	0.00	6.65%	4.83%
Ferrellgas Partners L.P.	6.5		Sr Nts	05/15/2021	B-	6.34	6.27	5.98	5.66	5.64	6.49	6.34	6.49	6.54	6.30	6.19	6.15	6.20%	6.21%
Stone Energy Corp.	6.75	861642AG1	Sr Sub Nts	12/15/2014	CCC+	6.75	6.75	6.75	6.75									6.75%	
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	13.37	14.31	12.82	9.10	7.11	13.58	14.04	11.34	9.52	9.29	8.19	8.23	10.91%	8.57%
Cimarex Energy Co.	7.12	171798AA9	SrNts	05/01/2017	NR	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27%	6.27%
Encore Acquisition	6	29255WAG5	Sr Sub Nt	7/15/2015	NR	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77%	5.77%
Ferrellgas Partners L.P.	6.75	31529MAA6	Sr Nts	05/15/2014	NR	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56%	6.56%
Forest Oil Corp.	7.75	346091AU5	Sr Nts	05/01/2014	NR	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38%	7.38%
Houston Exploration Co. (The)	7	442120AE1	Sr Sub Nts	06/15/2013	NR	7.00	7.00	7.00	7.00	7.00								7.00%	
Mariner Energy, Inc.	7.5	56845TAE7	Sr Nts	04/15/2013	NR	5.40	5.40	5.40										5.40%	
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21	5.21%	5.21%
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03					6.03%	
Offshore Logistics, Inc.	6.12	676255AL6	SrNts	06/15/2013	NR	5.74	5.74	5.74	5.74	5.74								5.74%	
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	4.61	4.58	4.50	4.27	4.65	5.12	5.14	5.40	5.20	4.95	5.03	5.19	4.89%	5.06%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nt	6/15/2028	NR	4.61	4.58	4.50	4.27	4.65	5.12	5.14	5.40	5.20	4.95	5.03	5.19	4.89%	5.06%
Range Resources Corp.	7.5	75281AAG4	Sr Sub Nts	05/15/2016	NR	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59	6.59%	6.59%
Rentech, Inc.	4	760112AA0	Sr Nt Conv	4/15/2013	NR	11.37	15.06											13.22%	
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	2.48	2.32	2.38	2.08	2.44	2.90	3.22	3.51	3.25	3.15	2.35	2.74	2.74%	2.75%
Tesoro Corp.	6.62	881609AS0	Sr Nt	11/1/2015	NR	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.24	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27%	7.27%
Cimarex Energy Co.	5.875		SrNts	05/01/2022	NR	4.90	4.93	4.86	4.64	4.90	5.51	5.37	5.66	5.73	4.95	5.03	4.98	5.12%	4.99%
			Counts of data			172	172	168	167	162	157	156	156	153	151	149	148	172	151

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	1.86%	2.32%
AA's	3.98%	4.35%
A's	3.81%	4.17%
BBB's	4.23%	4.49%
BB's	4.50%	3.72%
B's	7.07%	5.52%
CCC's	8.83%	8.57%
NR's	6.25%	5.76%
ALL	4.33%	4.35%
BBB- & Above	3.91%	4.24%
BB- & Above	4.00%	4.18%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YR PLUS - BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	3.68	3.72	3.70	3.45	3.82	4.25	4.33	4.61	4.51	4.37	4.56	4.66	4.14%	4.53%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	3.67	3.71	3.69	3.49	3.86	4.30	4.35	4.58	4.43	4.32	4.51	4.59	4.13%	4.47%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	3.77	3.81	3.77	3.53	3.92	4.30	4.33	4.56	4.46	4.35	4.51	4.66	4.16%	4.51%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.43	5.57	5.55	5.33	5.70	6.11	6.01	6.23	6.11	6.00	6.21	6.16	5.87%	6.12%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	4.97	5.16	5.14	4.93	5.28	5.69	5.60	5.80	5.51	5.40	5.61	5.64	5.39%	5.55%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.41	4.61	4.59	4.32	4.71	5.18	5.00	5.30	5.20	4.94	5.06	5.01	4.86%	5.00%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	4.59	4.71	4.76	4.51	5.00	5.38	5.22	5.48	5.36	5.17	5.34	5.34	5.07%	5.28%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.09	4.74	4.51	4.87	5.40	5.10	5.32	5.26	5.22	5.26	5.26	5.09%	5.25%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	4.72	4.78	4.66	4.43	4.85	5.35	5.19	5.38	5.26	5.12	5.33	5.29	5.03%	5.25%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.24	5.28	5.23	5.10	5.49	5.80	5.85	6.03	5.83	5.72	5.88	5.94	5.62%	5.85%
Enbridge Energy Partners, L.P.	6.3	29250RAG1	ixed Rt Sr Gbl Nt	12/15/2034	BBB	5.27	5.33	5.33	5.15	5.54	5.85	5.85	6.03	5.94	5.82	5.98	6.04	5.68%	5.95%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.01	5.05	5.09	4.81	5.24	5.73	5.53	5.85	5.81	5.64	5.82	5.77	5.45%	5.74%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.11	5.09	5.06	4.74	5.21	5.69	5.48	5.84	5.71	5.54	5.73	5.74	5.41%	5.67%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.03	5.11	5.13	4.75	5.24	5.83	5.48	5.83	5.94	5.59	5.64	5.79	5.45%	5.67%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	4.97	5.04	5.09	4.80	5.26	5.75	5.80	6.13	6.06	5.67	5.86	5.84	5.52%	5.79%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	4.96	5.03	4.84	4.57	4.97	5.43	5.05	5.29	5.26	5.13	5.26	5.36	5.10%	5.25%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.24	5.08	5.06	4.80	5.09	5.57	5.62	6.11	5.86	5.52	5.54	5.54	5.42%	5.53%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.25	6.32	6.24	5.98	6.41	6.88	7.03	7.26	7.20	7.06	7.27	7.52	6.79%	7.28%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	4.82	4.80	4.84	4.51	4.87	5.45	5.16	5.40	5.29	5.08	5.24	5.49	5.08%	5.27%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.47	5.53	5.56	5.23	5.55	6.05	5.95	6.18	6.09	5.82	5.98	5.99	5.78%	5.93%
Enterprise Prods Oper L P	8.38	293791AV1	ub Nt Fixed/fltg F	08/01/2066	BBB-	7.28	7.35	7.26	7.26	7.25	7.42	7.49	7.51	7.57	7.57	7.58	7.54	7.42%	7.56%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.45	6.52	6.44	6.18	6.61	7.08	7.10	7.26	7.20	7.06	7.27	7.52	6.89%	7.28%
Chesapeake Energy Corp.	2.75	165167BW6	ntingent Sr Nt Co	11/15/2035	BB-	2.82	2.75	2.74	2.73	2.63	2.74	2.72	2.59	2.50	2.36	2.43	2.46	2.62%	2.42%
Chesapeake Energy Corp.	2.5	165167BZ9	ntingent Sr Nt Co	5/15/2037	BB-	2.74	2.75	2.75	2.70	2.50	2.74	2.74	2.61	2.54	2.41	2.38	2.43	2.61%	2.41%
Chesapeake Energy Corp.	2.5	165167CA3	Contingent Conv	5/15/2037	BB-	2.88	2.82	2.80	2.80	2.56	2.78	2.79	2.74	2.62	2.50	2.44	2.47	2.68%	2.47%
Chesapeake Energy Corp.	2.25	165167CB1	ntingent Sr Nt Co	12/15/2038	BB-	3.01	2.92	2.89	2.88	2.62	2.80	2.97	2.73	2.73	2.55	2.59	2.62	2.78%	2.59%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.24	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27%	7.27%
			Counts of data			25	25	25	25	25	25	25	25	25	25	25	25	25	25

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AAA's	4.14%	4.50%
AA's	---	---
A's	5.37%	5.56%
BBB's	5.75%	5.99%
BB's	2.67%	2.47%
B's	---	---
CCC's	---	---
NR's	7.27%	7.27%
ALL	5.15%	5.33%
BBB- & Above	5.49%	5.74%
BB- & Above	5.07%	5.26%

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Railroads

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Class I Railroads
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

ALL	Median	
4.99%	5.57%	Yahoo
5.02%	5.13%	Value Line
5.01%	5.35%	Average of E/Ps

Inverse of P/E Ratios:

5.10%	5.68%	Yahoo
5.44%	5.81%	Value Line
5.27%	5.74%	Average of Inverse of the P/E
6.45%	6.67%	Inverse of median P/E, Value Line
5.14%	5.55%	Average of all above except median P/E
Mean = 5.40%	5.77%	
Median = 5.10%	5.68%	

Equity Measure NUOI = 6.40%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.50%	5.67%	ALL
	5.43%	5.60%	BBB- & Above
	5.45%	5.62%	BB- & Above
Mean =	5.46%	5.63%	
Median =	5.45%	5.62%	

Debt Measure = 5.70%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	85.00%	x	6.40%	=	5.44%	
Debt	15.00%	x	5.70%	=	0.86%	
	100%				6.30%	
Direct Cap Rate NUOI				=		**6.50%**

Gross Cash Flow / Price:

Mean	Median	
6.79%	6.85%	Value Line

Equity Measure Gross = 7.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	85.00%	x	7.00%	=	5.95%	
Debt	15.00%	x	5.70%	=	0.86%	
	100%				6.81%	
Direct Cap Rate GCF				=		**7.00%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Class III Railroads
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

ALL	Median	
4.99%	4.99%	Yahoo
4.58%	4.58%	Value Line
4.78%	4.78%	Average of E/Ps

Inverse of P/E Ratios:

5.07%	5.07%	Yahoo
4.73%	4.73%	Value Line
4.90%	4.90%	Average of Inverse of the P/E
5.56%	5.56%	Inverse of median P/E, Value Line
4.84%	4.84%	Average of all above except median P/E
Mean = 4.98%	4.98%	
Median = 4.99%	4.99%	

Equity Measure NUOI = 5.60%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.50%	5.67%	ALL
	5.43%	5.60%	BBB- & Above
	5.45%	5.62%	BB- & Above
Mean =	5.46%	5.63%	
Median =	5.45%	5.62%	

Debt Measure = 5.90%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	68.00%	x	5.60%	=	3.81%	
Debt	32.00%	x	5.90%	=	1.89%	
	100%				5.70%	
			Direct Cap Rate NUOI	=		**5.75%**

Gross Cash Flow / Price:

Mean	Median	
6.82%	6.82%	Value Line

Equity Measure Gross = 6.90%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	68.00%	x	6.90%	=	4.69%	
Debt	32.00%	x	5.90%	=	1.89%	
	100%				6.58%	
Direct Cap Rate GCF				=		**6.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Railroads
2014 Assessment Year

Equity Measures Calculated:

	Class I	Class III
Dividend Growth Model	18.50%	
Capital Asset Pricing Model	10.61%	11.16%
Mean =	14.55%	11.16%

Equity Measure FCF = **10.75%** **11.16%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		20 YEAR PLUS DEBT	
	Annual	4th Qtr	Annual	4th Qtr
ALL	3.90%	4.15%	5.05%	5.33%
BBB- & Above	3.83%	4.09%	5.05%	5.33%
BB- & Above	3.87%	4.12%	---	---
Mean =	3.87%	4.12%	5.05%	5.33%
Median =	3.87%	4.12%	5.05%	5.33%

Debt Measure = **5.35%**

CLASS I

Yield Cap Rate Free Cash Flow						
Equity	85.00%	x	10.75%	=	9.14%	
Debt	15.00%	x	5.35%	=	0.80%	
	100.00%				9.94%	
Weighted Average Cost of Capital (WACC) =						**10.00%**

CLASS III

Yield Cap Rate Free Cash Flow						
Equity	68.00%	x	11.16%	=	7.59%	
Debt	32.00%	x	5.35%	=	1.71%	
	100.00%				9.30%	
Weighted Average Cost of Capital (WACC) =						**10.25%**

Where Assumed Growth Rate = Inflation **Growth =** **1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Railroads
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common 4th Quarter	(VL) Book Value Per Share H/D	Mkt. Value Common DxE	(VL) Book Value Common (000)	(VL) Book Value Preferred (000)	Mkt. Value Preferred (000) IxL	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Debt (000) KxL
Can. National Railway	CNI	A	856,800	57.02	12.988	48,854,736	11,128,000	0	0	6,386,000	1.00	6,386,000
Union Pacific	UNP	A+	469,500	168.00	42.337	78,876,000	19,877,000	0	0	8,801,000	1.00	8,801,000
Kansas City South'n	KSU	A	110,100	123.83	28.070	13,633,683	3,090,500	6,100	6,100	1,547,600	1.00	1,547,600
Norfolk Southern	NSC	A	314,000	92.28	31.083	28,975,920	9,760,000	0	0	8,432,000	1.00	8,432,000
CSX Corp.	CSX	B++	1,020,500	28.77	8.821	29,359,785	9,002,000	0	0	9,052,000	1.00	9,052,000
Can. Pacific Railway	CP	B++	173,900	151.32	29.603	26,314,548	5,148,000	0	0	4,682,000	1.00	4,682,000
Genesee & Wyoming	GWR	B+	47,100	96.05	31.739	4,523,955	1,494,900	399,500	399,500	1,770,600	1.00	1,770,600
SUMS & AVERAGES - ALL						230,538,627	59,500,400	405,600	405,600	40,671,200		40,671,200
CLASS I SUMS & AVERAGES - ALL						226,014,672	58,005,500	6,100	6,100	38,900,600		38,900,600
CLASS I MEDIAN VALUE												
CLASS III SUMS & AVERAGES - ALL						4,523,955	1,494,900	399,500	399,500	1,770,600		1,770,600

** All **Negative** values left out of calculations*

INDUSTRY MARKET STRUCTURE						
	CLASS I RAILROADS		CLASS III RAILROADS		ALL RAILROADS	
COMMON	85.00%	226,014,672	68.00%	4,523,955	85.00%	230,538,627
DEBT	15.00%	38,906,700	32.00%	2,170,100	15.00%	41,076,800
TOTAL	100.00%	264,921,372	100.00%	6,694,055	100.00%	271,615,427

2014 Notes/Rational for Changes to Guideline Companies
Genesee & Wyoming acquired Rail America on Jan. 11, 2013

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Railroads
2014 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Company	Ticker Symbol	(YAHOO) EPS ltst 12mo	(YAHOO) E/P N/E	(VL) EPS	(VL) E/P P/E	(VL) CF/S	(VL) CF/P R/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/T	(VL) P/E	(VL) Inverse of P/E 1/V	(VL) Median P/E	(VL) Inverse of Median P/E 1/X	(VL) Beta
Can. National Railway	CNI	3.15	5.52%	2.63	4.61%	4.25	7.45%	17.80	5.62%	17.78	5.62%	15.00	6.67%	1.10
Union Pacific	UNP	9.42	5.61%	9.50	5.65%		0.00%	17.42	5.74%	16.69	5.99%	15.00	6.67%	1.15
Kansas City South'n	KSU	3.18	2.57%	3.95	3.19%	3.95	3.19%	37.76	2.65%	28.73	3.48%	26.00	3.85%	1.25
Norfolk Southern	NSC	6.04	6.55%	5.60	6.07%		0.00%	14.88	6.72%	15.80	6.33%	13.00	7.69%	1.15
CSX Corp.	CSX	1.83	6.36%	1.85	6.43%	2.95	10.25%	15.25	6.56%	15.12	6.61%	14.00	7.14%	1.25
Can. Pacific Railway	CP	5.06	3.34%	6.30	4.16%	9.45	6.25%	30.16	3.32%	21.79	4.59%	15.00	6.67%	1.25
Genesee & Wyoming	GWR	4.79	4.99%	4.40	4.58%	6.55	6.82%	19.73	5.07%	21.15	4.73%	18.00	5.56%	1.30
SUMS & AVERAGES - ALL			4.99%		4.96%		6.79%		5.10%		5.34%		6.32%	1.21
CLASS I SUMS & AVERAGES - ALL			4.99%		5.02%		6.79%		5.10%		5.44%		6.45%	1.19
CLASS I MEDIAN VALUE			5.57%		5.13%		6.85%		5.68%		5.81%		6.67%	1.20
CLASS III SUMS & AVERAGES - ALI			4.99%		4.58%		6.82%		5.07%		4.73%		5.56%	1.30

Class I Industry Beta = 1.20
Class III Industry Beta = 1.30

** All **Negative** values left out of calculations*

2014 Notes/Rational for Changes to Gui
Genesee & Wyoming acquired Rail A

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Railroads
2014 Assessment Year

$$K_E = R_F + \beta\ (R_M - R_F)$$

	Class I	Class III
K_E = Cost of Equity	**10.61%**	**11.16%**
R_F = Risk Free Rate	3.96%	3.96%
β= Beta	1.20	1.30
R_M = Market Rate of Return	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied premium	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied premium	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premiun	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%	9.00%
	Mean =	10.20%	10.20%
	Median =	9.80%	9.80%
	R_M=	9.50%	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013
Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014
U.S. Treasury Securities December 31, 2013

	1 Year	R_f =	0.12%
	10 Year	R_f =	3.03%
	30 Year	R_f =	3.96%

Federal Reserve Statistical Release
Treasury constant Maturities, December 31, 2013
Market yield on U.S. Treasury securities, Annual Averages

	1 year constant maturity, quoted on investment basis	R_f =	0.13%
	10-year constant maturity, quoted on investment basis	R_f =	3.04%
	30-year constant maturity, quoted on investment basis	R_f =	3.96%
		Mean =	2.15%
		Median =	3.03%
		Weighted Mean =	2.75%

U.S. Treasury Securities Long-Term December 31, 2013

20 year constant maturity	R_f =	**3.72%**
30 year constant maturity	R_f =	**3.96%**

R_f = **3.96%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Railroads
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

CLASS I RAILROADS

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke 1 Year
Can. National Railway	CNI	57.02	0.90	1.58%	13.50%	15.08%
Can. Pacific Railway	CP	151.32	1.44	0.95%	16.00%	16.95%
CSX Corp.	CSX	28.77	0.64	2.22%	16.50%	18.72%
Kansas City South'n	KSU	123.83	0.94	0.76%	35.50%	36.26%
Norfolk Southern	NSC	92.28	2.10	2.28%	9.00%	11.28%
Union Pacific	**UNP**	**168.00**	**3.16**	**1.88%**	**14.00%**	**15.88%**

Weighted Mean= 18.89%
Median= 16.42%
Mean= 19.03%

Cost of Equity, (K_E) = 18.50%

CLASS III RAILROADS

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke 1 Year
Genesee & Wyoming	GWR	96.05	Nil		NiL	
RailAmerica Inc.	RA					

Weighted Mean=
Median=
Mean=

Cost of Equity, (K_E) = N/A

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Railroads
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
CNI	Can. National Railway	high	$ 48.02	$ 50.95	$ 51.85	$ 50.27	$ 52.22	$ 51.62	$ 51.19	$ 50.66	$ 51.37	$ 55.98	$ 57.05	$ 58.40	$ 57.02	$50.56	17.80	3.15
	Stock Split 2:1 Dec 2013	low	$ 45.67	$ 47.27	$ 48.08	$ 46.91	$ 48.19	$ 46.48	$ 48.28	$ 46.71	$ 46.91	$ 50.64	$ 55.06	$ 53.75				
CP	Can. Pacific Railway	high	$ 118.07	$ 122.22	$ 130.81	$ 130.68	$ 139.99	$ 133.50	$ 129.79	$ 126.22	$ 129.81	$ 145.41	$155.30	$ 156.96	$ 151.32	$127.96	30.16	5.06
		low	$ 103.82	$ 112.51	$ 120.60	$ 115.60	$ 121.66	$ 113.82	$ 118.30	$ 115.54	$ 116.51	$ 122.50	$143.31	$ 148.22				
CSX	CSX Corp.	high	$ 22.67	$ 23.10	$ 24.67	$ 24.69	$ 26.36	$ 25.44	$ 25.79	$ 26.68	$ 26.90	$ 26.85	$ 27.53	$ 28.80	$ 28.77	$24.73	15.25	1.83
		low	$ 20.01	$ 21.45	$ 22.62	$ 23.26	$ 24.03	$ 22.40	$ 22.89	$ 24.46	$ 24.68	$ 25.04	$ 26.06	$ 27.02				
GBX	Greenbrier Cos Inc.	high	$ 19.94	$ 22.71	$ 22.98	$ 23.64	$ 25.24	$ 25.33	$ 24.75	$ 24.05	$ 25.50	$ 28.00	$ 33.20	$ 33.57	$ 32.84	$23.95	(145.52)	(0.22)
		low	$ 15.77	$ 19.39	$ 19.85	$ 20.05	$ 21.46	$ 22.05	$ 21.10	$ 22.20	$ 22.57	$ 23.60	$ 27.37	$ 30.46				
GWR	Genesee & Wyoming	high	$ 86.31	$ 90.81	$ 94.80	$ 93.27	$ 93.61	$ 91.96	$ 94.54	$ 95.00	$ 95.61	$ 102.20	$100.23	$ 97.45	$ 96.05	$89.91	19.73	4.79
		low	$ 78.11	$ 83.71	$ 87.08	$ 79.22	$ 81.39	$ 81.72	$ 83.94	$ 83.16	$ 87.14	$ 90.82	$ 94.15	$ 91.59				
KSU	Kansas City South'n	high	$ 95.13	$ 107.32	$ 112.25	$ 111.16	$ 118.88	$ 112.45	$ 118.68	$ 112.05	$ 113.24	$ 124.55	$125.96	$ 124.10	$ 123.83	$109.18	37.76	3.18
		low	$ 84.52	$ 93.45	$ 99.76	$ 100.35	$ 103.57	$ 102.03	$ 107.19	$ 104.02	$ 105.24	$ 107.84	$120.60	$ 116.05				
NSC	Norfolk Southern	high	$ 71.24	$ 73.79	$ 77.42	$ 78.08	$ 81.00	$ 78.36	$ 78.20	$ 76.55	$ 78.91	$ 88.99	$ 88.42	$ 93.17	$ 92.28	$76.98	14.88	6.04
		low	$ 62.65	$ 68.18	$ 72.21	$ 72.26	$ 74.89	$ 70.27	$ 71.51	$ 71.86	$ 71.88	$ 76.08	$ 85.00	$ 86.55				
UNP	Union Pacific	high	$ 136.19	$ 138.51	$ 143.00	$ 149.27	$ 161.00	$ 159.21	$ 165.18	$ 164.55	$ 161.91	$ 158.07	$163.22	$ 168.24	$ 168.00	$150.47	17.42	9.42
		low	$ 127.32	$ 131.51	$ 135.50	$ 135.75	$ 145.39	$ 148.45	$ 153.66	$ 152.04	$ 152.62	$ 149.23	$151.43	$ 160.02				
RA	RailAmerica Inc.	high	Acquired by Genesee & Wyoming on Jan 11, 2013															
		low																
PRRR	Pioneer Railcorp	high	$ 6.77	$ 7.05	$ 7.00	$ 7.60	$ 6.60	$ 6.25	$ 6.65	$ 6.58	$ 7.95	$ 10.25	$ 9.96	$ 10.25	$ 10.25	$7.14	31.05	0.31
		low	$ 4.80	$ 5.76	$ 6.51	$ 6.53	$ 6.08	$ 6.11	$ 6.00	$ 6.05	$ 6.00	$ 7.25	$ 8.26	$ 9.00				
PWX	Providence & Worcester R	high	$ 16.93	$ 16.43	$ 16.13	$ 16.49	$ 16.95	$ 16.95	$ 17.69	$ 19.15	$ 20.60	$ 22.00	$ 21.24	$ 20.27	$ 19.55	$17.30	55.33	0.35
		low	$ 13.56	$ 14.34	$ 14.56	$ 14.55	$ 15.36	$ 15.18	$ 15.21	$ 17.10	$ 17.00	$ 19.14	$ 20.01	$ 18.46				

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Canadian Pac Ry Co	4	136447AW9	Perpetual Cons D	1/1/2022	AA-	5.42	5.38	5.28	5.05	5.36	5.33	5.27	5.24	5.36	5.33	5.00	5.35	5.28%	5.23%
Canadian National Railway Company	7.62	136375AY8	Deb	5/15/2023	A	5.58	5.61	5.61	5.56	5.69	5.89	5.96	6.09	6.03	6.00	6.02	6.14	5.85%	6.05%
Canadian National Railway Company	6.8	136375BA9	Nt	7/15/2018	A	5.43	5.43	5.44	5.42	5.51	5.64	5.57	5.66	5.62	5.60	5.62	5.71	5.55%	5.64%
Canadian National Railway Company	6.9	136375BD3	Nt	7/15/2028	A	5.11	5.14	5.10	4.87	5.15	5.38	5.29	5.32	5.41	5.18	5.29	5.42	5.22%	5.30%
Canadian National Railway Company	6.71	136375BE1	Puttable Reset Se	7/15/2036	A	4.77	4.77	4.74	4.64	4.87	5.12	5.17	5.33	5.27	5.22	5.24	5.27	5.03%	5.24%
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	4.54	4.61	4.47	4.28	4.25	4.34	4.58	4.58	5.17	4.91	4.87	4.87	4.62%	4.88%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	4.83	4.83	4.47	4.28	4.25	4.34	4.58	4.58	5.17	4.91	4.87	4.87	4.67%	4.88%
Union Pacific Corp.	7	907818AZ1	Deb	02/01/2016	A	5.98	5.99	6.01	6.03	6.08	6.14	6.12	6.17	6.17	6.19	6.21	6.26	6.11%	6.22%
Union Pacific Corp.	7	907818AZ1	Deb	2/1/2016	A	5.98	5.99	6.01	6.03	6.08	6.14	6.12	6.17	6.17	6.19	6.21	6.26	6.11%	6.22%
Union Pacific Corp.	7.12	907818BY3	Deb	02/01/2028	A	5.33	5.35	5.37	5.24	5.45	5.64	5.58	5.64	5.52	5.39	5.54	5.66	5.48%	5.53%
Union Pacific Corp.	6.62	907818CF3	Deb	02/01/2029	A	5.10	4.97	4.97	4.88	5.12	5.33	5.35	5.49	5.41	5.37	5.48	5.51	5.25%	5.45%
Union Pacific Corp.	5.38	907818CT3	Nts	05/01/2014	A	5.08	5.10	5.11	5.13	5.15	5.16	5.18	5.20	5.23	5.24	5.27	5.29	5.18%	5.27%
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	4.93	4.96	4.95	4.73	4.99	5.23	5.16	5.37	5.29	5.22	5.41	5.52	5.15%	5.38%
Union Pacific Corp.	4.88	907818CV8	Sr Nt	1/15/2015	A	4.52	4.53	4.54	4.55	4.57	4.59	4.60	4.61	4.62	4.63	4.65	4.66	4.59%	4.65%
Union Pacific Corp.	5.65	907818CW6	Nts	05/01/2017	A	4.84	4.85	4.84	4.84	4.92	5.01	4.97	5.03	5.00	5.00	4.96	5.02	4.94%	4.99%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	4.82	4.85	4.86	4.70	4.96	5.24	5.10	5.33	5.22	5.20	5.33	5.45	5.09%	5.33%
Burlington Northern	8.75	121897WQ1	Deb	02/25/2022	BBB+	6.20	6.24	6.24	6.14	6.35	6.53	6.50	6.62	6.55	6.52	6.63	6.73	6.44%	6.63%
Burlington NorthernR.R.	3.8	121899CC0	Con Mtg L	01/01/2020	BBB+	3.72	3.72	3.71	3.66	3.75	3.84	3.82	3.88	3.84	3.82	3.87	3.90	3.79%	3.86%
Burlington NorthernR.R.	6.55	121899CD8	Con Mtg K	01/01/2020	BBB+	5.65	5.66	5.51	5.45	5.61	5.78	5.82	5.91	5.79	5.77	5.85	5.84	5.72%	5.82%
Burlington NorthernR.R.	6.55	121899CE6	Con Mtg O	01/01/2020	BBB+	5.65	5.66	5.51	5.45	5.61	5.78	5.82	5.91	5.79	5.77	5.85	5.84	5.72%	5.82%
Burlington NorthernR.R.	8.15	121899CF3	Con Mtg N	01/01/2020	BBB+	6.52	6.54	6.54	6.46	6.61	6.76	6.81	6.91	6.79	6.76	6.86	6.92	6.71%	6.85%
Burlington NorthernR.R.	8.15	121899CG1	Con Mtg P	01/01/2020	BBB+	6.52	6.54	6.54	6.46	6.61	6.76	6.81	6.91	6.79	6.76	6.86	6.92	6.71%	6.85%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	4.58	4.61	4.47	4.28	4.25	4.48	4.56	4.73	4.55	4.48	4.62	4.69	4.53%	4.60%
Burlington Northn Santa Fe Cor	6.1	12189QAA8	MTN Ser A	02/27/2027	BBB+	5.15	5.16	5.17	4.95	5.21	5.45	5.41	5.58	5.48	5.40	5.53	5.66	5.35%	5.53%
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	5.21	5.24	5.25	5.08	5.32	5.59	5.56	5.72	5.64	5.56	5.65	5.69	5.46%	5.63%
Burlington Northern Santa Fe Corp.	7	12189TAA2	Deb	12/15/2025	BBB+	5.20	5.22	5.21	5.10	5.35	5.58	5.55	5.71	5.62	5.48	5.57	5.69	5.44%	5.58%
Burlington Northern Santa Fe Corp.	6.88	12189TAB0	Deb	02/15/2016	BBB+	5.96	5.98	6.00	6.01	5.97	6.02	6.03	6.08	6.09	6.09	6.12	6.17	6.04%	6.13%
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	5.32	5.35	5.36	5.16	5.43	5.71	5.74	5.94	5.86	5.74	5.79	5.81	5.60%	5.78%
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.34	5.38	5.41	5.17	5.52	5.90	5.84	6.16	6.05	5.93	6.06	6.18	5.75%	6.06%
Burlington Northern Santa Fe Corp.	6.88	12189TAG9	Deb	12/01/2027	BBB+	5.44	5.46	5.46	5.00	5.24	5.50	5.46	5.63	5.51	5.45	5.59	5.73	5.46%	5.59%
Burlington Northern Santa Fe Corp.	6.7	12189TAJ3	Deb	08/01/2028	BBB+	5.41	5.42	5.43	5.03	5.31	5.57	5.53	5.71	5.60	5.51	5.66	5.80	5.50%	5.66%
Burlington Northern Santa Fe Corp.	7.08	12189TAK0	Deb	05/13/2029	BBB+	5.68	5.59	5.55	5.39	5.62	5.85	5.84	5.94	5.88	5.81	5.91	5.98	5.75%	5.90%
Burlington Northern Santa Fe	6.75	12189TAN4	Deb	03/15/2029	BBB+	5.59	5.50	5.46	5.30	5.52	5.75	5.71	5.87	5.81	5.71	5.81	5.88	5.66%	5.80%
Burlington Northern Santa Fe Corp.	8.12	12189TAQ7	Deb	04/15/2020	BBB+	6.19	6.11	6.12	6.06	6.23	6.40	6.43	6.46	6.41	6.38	6.46	6.50	6.31%	6.45%
Burlington Northern Santa Fe Corp.	7.95	12189TAR5	Deb	08/15/2030	BBB+	5.73	5.76	5.74	5.57	5.81	6.05	6.01	6.19	6.05	5.97	6.04	6.09	5.92%	6.03%
Burlington Northern Santa Fe Corp.	4.3	12189TAV6	Nts	07/01/2013	BBB+	4.23	4.24	4.25	4.27									4.25%	
Burlington Northern Santa Fe	4.88	12189TAW4	Fixed Rt Sr Nt	01/15/2015	BBB+	4.52	4.53	4.54	4.54	4.57	4.58	4.60	4.62	4.63	4.63	4.65	4.67	4.59%	4.65%
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	4.96	4.99	5.01	4.85	5.08	5.39	5.37	5.47	5.43	5.28	5.41	5.49	5.23%	5.39%
Burlington Northern Santa Fe	5.65	12189TAY0	Deb	05/01/2017	BBB+	4.81	4.81	4.82	4.82	4.90	4.97	4.98	5.01	4.96	4.94	4.96	5.03	4.92%	4.98%
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	4.88	4.91	4.90	4.75	5.03	5.34	5.19	5.42	5.40	5.30	5.42	5.40	5.16%	5.37%
CSX Corp.	8.62	126408AM5	Deb	05/15/2022	BBB+	6.33	6.35	6.34	6.26	6.44	6.65	6.66	6.81	6.73	6.67	6.81	6.93	6.58%	6.80%
CSX Corp.	8.1	126408AQ6	Deb	09/15/2022	BBB+	6.12	6.14	6.11	6.03	6.23	6.44	6.44	6.59	6.51	6.41	6.55	6.66	6.35%	6.54%
CSX Corp.	5.3	126408GF4	Nts	02/15/2014	BBB+	5.06	5.07	5.09	5.11	5.13	5.15	5.17	5.19	5.21	5.23	5.25	5.27	5.16%	5.25%
CSX Corp.	5.6	126408GJ6	Nts	05/01/2017	BBB+	4.82	4.83	4.81	4.80	4.88	4.97	4.97	5.03	5.00	4.98	4.94	4.98	4.92%	4.97%
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	4.98	5.01	5.05	4.87	5.10	5.36	5.28	5.46	5.38	5.31	5.42	5.50	5.23%	5.41%
Norfolk Southern Corp.	7.7	655844AE8	Nts	05/15/2017	BBB+	6.14	6.12	6.14	6.16	6.27	6.38	6.40	6.40	6.37	6.38	6.41	6.48	6.30%	6.42%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	5.01	5.04	5.03	4.83	5.22	5.51	5.46	5.62	5.60	5.54	5.65	5.73	5.35%	5.64%
Norfolk Southern Corp.	7.8	655844AJ7	Nts	05/15/2027	BBB+	5.64	5.65	5.65	5.56	5.85	6.10	5.92	6.07	6.02	5.93	6.04	6.14	5.88%	6.04%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.22	5.14	5.12	4.93	5.33	5.69	5.66	5.89	5.72	5.64	5.82	5.95	5.51%	5.80%
Norfolk Southern Corp.	7.25	655844AQ1	Sr Nts	02/15/2031	BBB+	5.28	5.26	5.25	5.12	5.38	5.61	5.64	5.79	5.75	5.70	5.83	5.82	5.54%	5.78%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	5.00	5.02	4.95	4.76	5.12	5.52	5.52	5.63	5.53	5.45	5.49	5.64	5.30%	5.53%
Norfolk Southern Corp.	5.59	655844AW8	Nts	05/17/2025	BBB+	4.62	4.64	4.60	4.54	4.76	4.96	4.99	5.11	4.93	4.90	5.02	5.11	4.85%	5.01%
Norfolk Southern Corp.	5.64	655844AX6	Nts	05/17/2029	BBB+	4.78	4.81	4.83	4.71	4.92	5.12	5.15	5.28	5.14	5.07	5.17	5.21	5.02%	5.15%
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	4.96	4.99	5.03	4.87	5.10	5.34	5.29	5.42	5.34	5.29	5.39	5.47	5.21%	5.38%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Csx Corp MTN BE	6.8	12641LBU6	MTN Ser C	12/1/2028	BBB	5.23	5.25	5.23	5.18	5.46	5.72	5.72	5.82	5.70	5.60	5.68	5.83	5.54%	5.70%
Kansas City Southern	7	485170AF1	Deb	12/15/2025	BB-	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28%	6.28%
Consolidated Rail	9.75	209864AT4	Deb	06/15/2020	NR	7.46	7.48	7.48	7.31	7.52	7.70	7.76	7.88	7.64	7.61	7.72	7.84	7.62%	7.72%
Missouri Pacific RR.	4.75	606198LF4	GenIncA	01/01/2020	NR	4.79	4.79	5.26	5.10	5.10			4.35	4.35	5.16	5.16	5.16	4.92%	5.16%
Missouri Pacific RR.	4.75	606198LG2	GenIncB	01/01/2030	NR	4.89	5.00	5.26	5.10	4.94	4.80	4.80	5.27	4.80	5.27	5.27	5.48	5.07%	5.34%
Missouri Pacific RR.	5	606198LH0	IncDeb	01/01/2045	NR	5.81	5.68	5.49	5.88	5.37	5.88	5.50	5.98	6.02	6.01	6.02	6.06	5.81%	6.03%
Norfolk Southern Corp.	9	655844AA6	Nts	03/01/2021	NR	6.83	6.70	6.69	6.60	6.81	7.01	7.05	7.17	7.13	7.14	7.23	7.35	6.98%	7.24%
			Counts of data			61	61	61	61	60	59	59	60	60	60	60	60	61	60

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AA's	5.28%	5.23%
A's	5.26%	5.40%
BBB's	5.51%	5.69%
BB's	6.28%	6.28%
NR's	6.08%	6.30%
ALL	5.50%	5.67%
BBB- & Above	5.43%	5.60%
BB- & Above	5.45%	5.62%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Canadian Pac Ry Co	4	136447AW9	Perpetual Cons D	1/1/2022	AA-	8.21	8.11	7.90	7.29	8.18	8.11	8.00	7.94	8.31	8.26	7.31	8.39	8.00%	7.99%
Canadian National Railway Compar	7.62	136375AY8	Deb	5/15/2023	A	3.40	3.44	3.41	3.27	3.56	3.99	4.13	4.42	4.25	4.16	4.19	4.45	3.89%	4.27%
Canadian National Railway Compar	6.8	136375BA9	Nt	7/15/2018	A	1.95	1.88	1.82	1.72	1.99	2.48	2.13	2.44	2.20	2.02	2.05	2.39	2.09%	2.15%
Canadian National Railway Compar	6.9	136375BD3	Nt	7/15/2028	A	3.87	3.91	3.83	3.38	3.91	4.34	4.16	4.20	4.36	3.92	4.12	4.34	4.03%	4.13%
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	5.12	5.21	5.04	4.80	4.77	4.89	5.18	5.18	5.89	5.60	5.55	5.55	5.23%	5.57%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	5.47	5.48	5.04	4.80	4.77	4.89	5.18	5.18	5.89	5.60	5.55	5.55	5.28%	5.57%
Union Pacific Corp.	7	907818AZ1	Deb	02/01/2016	A	1.20	1.18	1.12	1.07	1.27	1.48	1.19	1.34	1.23	1.13	1.12	1.27	1.22%	1.17%
Union Pacific Corp.	7	907818AZ1	Deb	2/1/2016	A	1.20	1.18	1.12	1.07	1.27	1.48	1.19	1.34	1.23	1.13	1.12	1.27	1.22%	1.17%
Union Pacific Corp.	7.12	907818BY3	Deb	02/01/2028	A	4.11	4.13	4.16	3.89	4.28	4.62	4.50	4.61	4.39	4.12	4.39	4.60	4.32%	4.37%
Union Pacific Corp.	6.62	907818CF3	Deb	02/01/2029	A	4.07	3.81	3.81	3.64	4.08	4.44	4.48	4.73	4.58	4.49	4.69	4.74	4.30%	4.64%
Union Pacific Corp.	5.38	907818CT3	Nts	05/01/2014	A	0.84	0.80	0.63	0.59	0.68	0.57	0.55	0.51	0.72	0.59	0.77	0.81	0.67%	0.72%
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	4.32	4.36	4.34	3.99	4.40	4.76	4.65	4.98	4.85	4.74	5.03	5.19	4.63%	4.99%
Union Pacific Corp.	4.88	907818CV8	Sr Nt	1/15/2015	A	0.85	0.83	0.79	0.78	0.84	0.92	0.87	0.83	0.73	0.65	0.58	0.56	0.77%	0.60%
Union Pacific Corp.	5.65	907818CW6	Nts	05/01/2017	A	1.59	1.57	1.46	1.36	1.75	2.17	1.89	2.18	1.95	1.82	1.48	1.80	1.75%	1.70%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	4.31	4.35	4.36	4.12	4.51	4.90	4.70	5.03	4.88	4.84	5.03	5.19	4.69%	5.02%
Burlington Northern	8.75	121897WQ1	Deb	02/25/2022	BBB+	3.44	3.51	3.46	3.18	3.67	4.07	3.95	4.21	4.02	3.90	4.14	4.35	3.83%	4.13%
Burlington NorthernR.R.	3.8	121899CC0	Con Mtg L	01/01/2020	BBB+	3.46	3.48	3.43	3.17	3.61	4.01	3.93	4.20	4.01	3.90	4.14	4.30	3.80%	4.11%
Burlington NorthernR.R.	6.55	121899CD8	Con Mtg K	01/01/2020	BBB+	3.90	3.91	3.41	3.17	3.66	4.21	4.30	4.56	4.17	4.05	4.29	4.25	3.99%	4.20%
Burlington NorthernR.R.	6.55	121899CE6	Con Mtg O	01/01/2020	BBB+	3.90	3.91	3.41	3.17	3.66	4.21	4.30	4.56	4.17	4.05	4.29	4.25	3.99%	4.20%
Burlington NorthernR.R.	8.15	121899CF3	Con Mtg N	01/01/2020	BBB+	4.00	4.02	3.96	3.71	4.09	4.49	4.59	4.85	4.45	4.33	4.58	4.74	4.32%	4.55%
Burlington NorthernR.R.	8.15	121899CG1	Con Mtg P	01/01/2020	BBB+	4.00	4.02	3.96	3.71	4.09	4.49	4.59	4.85	4.45	4.33	4.58	4.74	4.32%	4.55%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	5.13	5.17	5.00	4.75	4.71	5.02	5.12	5.34	5.12	5.03	5.21	5.30	5.08%	5.18%
Burlington Northn Santa Fe Cor	6.1	12189QAA8	MTN Ser A	02/27/2027	BBB+	4.34	4.36	4.36	3.92	4.43	4.90	4.82	5.13	4.93	4.77	5.04	5.28	4.69%	5.03%
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	4.77	4.81	4.81	4.57	4.91	5.29	5.25	5.47	5.35	5.24	5.36	5.42	5.10%	5.34%
Burlington Northern Santa Fe Corp.	7	12189TAA2	Deb	12/15/2025	BBB+	3.62	3.64	3.61	3.37	3.88	4.35	4.27	4.58	4.39	4.08	4.26	4.50	4.05%	4.28%
Burlington Northern Santa Fe Corp.	6.88	12189TAB0	Deb	02/15/2016	BBB+	1.70	1.68	1.67	1.62	1.21	1.42	1.32	1.49	1.36	1.20	1.22	1.42	1.44%	1.28%
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	4.67	4.71	4.72	4.43	4.82	5.20	5.25	5.53	5.41	5.24	5.31	5.33	5.05%	5.29%
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.32	5.36	5.39	5.15	5.51	5.89	5.83	6.16	6.04	5.92	6.06	6.17	5.73%	6.05%
Burlington Northern Santa Fe Corp.	6.88	12189TAG9	Deb	12/01/2027	BBB+	4.44	4.46	4.46	3.57	4.03	4.50	4.42	4.73	4.50	4.37	4.64	4.88	4.42%	4.63%
Burlington Northern Santa Fe Corp.	6.7	12189TAJ3	Deb	08/01/2028	BBB+	4.54	4.56	4.56	3.82	4.33	4.80	4.72	5.03	4.84	4.67	4.94	5.18	4.67%	4.93%
Burlington Northern Santa Fe	6.75	12189TAN4	Deb	03/15/2029	BBB+	4.87	4.71	4.64	4.35	4.74	5.12	5.05	5.33	5.21	5.04	5.21	5.32	4.97%	5.19%
Burlington Northern Santa Fe Corp.	8.12	12189TAQ7	Deb	04/15/2020	BBB+	3.24	2.96	2.96	2.74	3.18	3.63	3.66	3.71	3.52	3.39	3.59	3.64	3.35%	3.54%
Burlington Northern Santa Fe Corp.	7.95	12189TAR5	Deb	08/15/2030	BBB+	4.69	4.73	4.69	4.40	4.79	5.17	5.10	5.38	5.14	5.00	5.11	5.19	4.95%	5.10%
Burlington Northern Santa Fe Corp.	4.3	12189TAV6	Nts	07/01/2013	BBB+	0.50	0.50	0.39	0.58									0.49%	
Burlington Northern Santa Fe	4.88	12189TAW4	Fixed Rt Sr Nt	01/15/2015	BBB+	0.87	0.85	0.79	0.63	0.74	0.82	0.76	0.92	0.91	0.62	0.66	0.75	0.78%	0.68%
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	4.47	4.51	4.54	4.30	4.64	5.08	5.06	5.20	5.14	4.92	5.11	5.22	4.85%	5.08%
Burlington Northern Santa Fe	5.65	12189TAY0	Deb	05/01/2017	BBB+	1.44	1.34	1.33	1.23	1.61	1.99	1.93	2.03	1.68	1.47	1.48	1.87	1.62%	1.61%
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	4.39	4.43	4.42	4.20	4.61	5.04	4.83	5.16	5.13	4.98	5.16	5.12	4.79%	5.09%
CSX Corp.	8.62	126408AM5	Deb	05/15/2022	BBB+	3.94	3.96	3.91	3.67	4.08	4.53	4.52	4.83	4.64	4.48	4.77	5.01	4.36%	4.75%
CSX Corp.	8.1	126408AQ6	Deb	09/15/2022	BBB+	4.02	4.04	3.96	3.72	4.18	4.63	4.62	4.93	4.74	4.48	4.77	5.01	4.43%	4.75%
CSX Corp.	5.3	126408GF4	Nts	02/15/2014	BBB+	0.72	0.65	0.68	0.70	0.74	0.79	0.74	0.82	0.95	0.75	0.91	0.84	0.77%	0.83%
CSX Corp.	5.6	126408GJ6	Nts	05/01/2017	BBB+	1.66	1.64	1.48	1.33	1.71	2.15	2.07	2.41	2.16	1.95	1.60	1.79	1.83%	1.78%
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	4.54	4.58	4.64	4.37	4.71	5.07	4.97	5.22	5.10	5.00	5.16	5.27	4.89%	5.14%
Norfolk Southern Corp.	7.7	655844AE8	Nts	05/15/2017	BBB+	1.57	1.41	1.37	1.33	1.72	2.13	2.10	2.01	1.78	1.67	1.70	1.94	1.73%	1.77%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	4.32	4.36	4.34	4.04	4.61	5.03	4.95	5.18	5.15	5.06	5.21	5.31	4.80%	5.19%
Norfolk Southern Corp.	7.8	655844AJ7	Nts	05/15/2027	BBB+	4.20	4.22	4.21	4.02	4.55	5.00	4.65	4.91	4.82	4.65	4.84	5.00	4.59%	4.83%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.19	5.11	5.09	4.90	5.31	5.67	5.65	5.88	5.71	5.62	5.81	5.94	5.49%	5.79%
Norfolk Southern Corp.	7.25	655844AQ1	Sr Nts	02/15/2031	BBB+	4.27	4.22	4.20	3.98	4.41	4.77	4.83	5.06	4.99	4.90	5.11	5.09	4.65%	5.03%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	4.99	5.01	4.94	4.75	5.11	5.51	5.52	5.63	5.53	5.44	5.49	5.64	5.30%	5.52%
Norfolk Southern Corp.	5.59	655844AW8	Nts	05/17/2025	BBB+	3.49	3.51	3.41	3.25	3.78	4.23	4.28	4.54	4.14	4.05	4.34	4.53	3.96%	4.31%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Norfolk Southern Corp.	5.64	655844AX6	Nts	05/17/2029	BBB+	4.12	4.16	4.19	3.97	4.36	4.72	4.78	5.01	4.76	4.61	4.80	4.87	4.53%	4.76%
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	4.54	4.58	4.64	4.40	4.74	5.08	5.02	5.21	5.09	5.00	5.16	5.27	4.89%	5.14%
Csx Corp MTN BE	6.8	12641LBU6	MTN Ser C	12/1/2028	BBB	4.19	4.21	4.17	4.07	4.58	5.03	5.02	5.18	4.98	4.80	4.94	5.18	4.70%	4.97%
Kansas City Southern	7	485170AF1	Deb	12/15/2025	BB-	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78%	5.78%
Consolidated Rail	9.75	209864AT4	Deb	06/15/2020	NR	4.76	4.78	4.73	4.27	4.76	5.16	5.26	5.51	4.87	4.75	4.99	5.25	4.92%	5.00%
Norfolk Southern Corp.	9	655844AA6	Nts	03/01/2021	NR	4.32	3.96	3.91	3.62	4.13	4.58	4.63	4.89	4.77	4.75	4.94	5.20	4.48%	4.96%
			Counts of data			56	56	56	56	55	55	55	55	55	55	55	55	56	55

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AA's	8.00%	7.99%
A's	3.15%	3.29%
BBB's	3.98%	4.29%
BB's	5.78%	5.78%
NR's	4.70%	4.98%
ALL	3.90%	4.15%
BBB- & Above	3.83%	4.09%
BB- & Above	3.87%	4.12%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YR PLUS - BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	5.12	5.21	5.04	4.80	4.77	4.89	5.18	5.18	5.89	5.60	5.55	5.55	5.23%	5.57%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	5.47	5.48	5.04	4.80	4.77	4.89	5.18	5.18	5.89	5.60	5.55	5.55	5.28%	5.57%
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	4.32	4.36	4.34	3.99	4.40	4.76	4.65	4.98	4.85	4.74	5.03	5.19	4.63%	4.99%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	4.31	4.35	4.36	4.12	4.51	4.90	4.70	5.03	4.88	4.84	5.03	5.19	4.69%	5.02%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	5.13	5.17	5.00	4.75	4.71	5.02	5.12	5.34	5.12	5.03	5.21	5.30	5.08%	5.18%
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	4.77	4.81	4.81	4.57	4.91	5.29	5.25	5.47	5.35	5.24	5.36	5.42	5.10%	5.34%
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	4.67	4.71	4.72	4.43	4.82	5.20	5.25	5.53	5.41	5.24	5.31	5.33	5.05%	5.29%
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.32	5.36	5.39	5.15	5.51	5.89	5.83	6.16	6.04	5.92	6.06	6.17	5.73%	6.05%
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	4.47	4.51	4.54	4.30	4.64	5.08	5.06	5.20	5.14	4.92	5.11	5.22	4.85%	5.08%
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	4.39	4.43	4.42	4.20	4.61	5.04	4.83	5.16	5.13	4.98	5.16	5.12	4.79%	5.09%
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	4.54	4.58	4.64	4.37	4.71	5.07	4.97	5.22	5.10	5.00	5.16	5.27	4.89%	5.14%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	4.32	4.36	4.34	4.04	4.61	5.03	4.95	5.18	5.15	5.06	5.21	5.31	4.80%	5.19%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.19	5.11	5.09	4.90	5.31	5.67	5.65	5.88	5.71	5.62	5.81	5.94	5.49%	5.79%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	4.99	5.01	4.94	4.75	5.11	5.51	5.52	5.63	5.53	5.44	5.49	5.64	5.30%	5.52%
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	4.54	4.58	4.64	4.40	4.74	5.08	5.02	5.21	5.09	5.00	5.16	5.27	4.89%	5.14%
			Counts of data			14	14	14	14	14	14	14	14	14	14	14	14	14	14

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
AA's	---	---
A's	4.96%	5.29%
BBB's	5.09%	5.35%
BB's	---	---
NR's	---	---
ALL	5.05%	5.33%
BBB- & Above	5.05%	5.33%
BB- & Above	---	---

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Telecommunications

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study

Industry: Telecommunications, Telephone Exchange Carriers

2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	B & Above	Local	
21.00%	2.36%	2.89%	Yahoo
6.46%	6.01%	5.12%	Value Line
13.73%	4.19%	4.01%	Average of E/Ps

Inverse of P/E Ratios:

15.95%	8.57%	15.29%	Yahoo
5.01%	6.34%	4.69%	Value Line
10.48%	7.46%	9.99%	Average of Inverse of the P/E
6.32%	6.49%	5.91%	Inverse of median P/E, Value Line
12.11%	5.82%	7.00%	Average of all above except median P/E
Mean = 10.95%	5.96%	6.78%	
Median = 6.46%	6.34%	5.12%	

Equity Measure NUOI = 6.70%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.33%	6.45%	ALL
	6.01%	6.21%	BBB- & Above
	6.15%	6.35%	BB- & Above
Mean =	6.16%	6.34%	
Median =	6.15%	6.35%	

Debt Measure = 6.30%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	70.00%	x	6.70%	=	4.69%
Debt	30.00%	x	6.30%	=	1.89%
	100.00%				6.58%
Direct Cap Rate NUIO =					**6.75%**

Gross Cash Flow / Price:

All	B & Above	Local	
32.45%	25.09%	30.62%	Value Line

Equity Measure Gross = 25.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	70.00%	x	25.00%	=	17.50%
Debt	30.00%	x	6.30%	=	1.89%
	100.00%				19.39%
Direct Cap Rate GCF =					**19.50%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Telecommunications - Wireless
2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	Wireless	Mixed	Median	
24.77%	3.27%	39.11%	3.76%	Yahoo
6.17%	3.06%	8.25%	5.80%	Value Line
15.47%	3.16%	23.68%	4.78%	Average of E/Ps

Inverse of P/E Ratios:

13.52%	10.87%	17.05%	3.93%	Yahoo
5.45%	----	5.45%	6.18%	Value Line
9.48%	5.43%	11.25%	5.05%	Average of Inverse of the P/E
5.33%	3.52%	7.14%	5.42%	Inverse of median P/E, Value Line
12.48%	4.30%	17.46%	4.92%	Average of all above except median P/E
Mean = 11.05%	5.18%	15.40%	5.02%	
Median = 6.17%	3.39%	8.25%	5.42%	

Equity Measure NUOI = 5.90%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.33%	6.45%	ALL
	6.01%	6.21%	BBB- & Above
	6.15%	6.35%	BB- & Above
Mean =	6.16%	6.34%	
Median =	6.15%	6.35%	

Debt Measure = 6.35%

Industry Market Capital Structure			NUOI Rate		
Equity	74.00%	x	5.90%	=	4.37%
Debt	26.00%	x	6.35%	=	1.65%
	100.00%				6.02%
Direct Cap Rate NUIO =					**6.25%**

Gross Cash Flow / Price:

All	Wireless	Mixed	Median	
25.40%	18.29%	34.89%	17.15%	Value Line

Equity Measure Gross = 18.30%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	74.00%	x	18.30%	=	13.54%
Debt	26.00%	x	6.35%	=	1.65%
	100.00%				15.19%
Direct Cap Rate GCF =					**15.25%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study

Industry: Telecommunications with significant portion of Cable TV Service

2014 Assessment Year

Equity Measures Calculated:

E/P estimates:

All	B & Above	
9.02%	10.50%	Yahoo
4.65%	5.03%	Value Line
6.84%	7.77%	Average of E/Ps

Inverse of P/E Ratios:

22.46%	10.45%	Yahoo
4.64%	6.04%	Value Line
13.55%	8.25%	Average of Inverse of the P/E
4.53%	5.05%	Inverse of median P/E, Value Line
10.19%	8.01%	Average of all above except median P/E
Mean = 9.06%	7.42%	
Median = 4.65%	6.04%	

Equity Measure NUOI = 6.50%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.98%	6.27%	ALL
	5.76%	5.95%	BBB- & Above
	6.01%	6.21%	BB- & Above
Mean =	5.92%	6.14%	
Median =	5.98%	6.21%	

Debt Measure = 6.25%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	67.00%	x	6.50%	=	4.36%	
Debt	33.00%	x	6.25%	=	2.06%	
	100.00%				6.42%	
Direct Cap Rate NUIO =						**6.50%**

Gross Cash Flow / Price:

All	B & Above	
22.28%	15.19%	Value Line

Equity Measure Gross = 20.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	67.00%	x	20.00%	=	13.40%	
Debt	33.00%	x	6.25%	=	2.06%	
	100.00%				15.46%	
Direct Cap Rate GCF =						**15.50%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Telecommunications
2014 Assessment Year

Equity Measures Calculated:		**Exchange Carriers**	**Wireless Carriers**
Dividend Growth Model		8.75%	7.00%
Capital Asset Pricing Model		8.67%	10.05%
	Mean =	8.71%	8.53%
	Median =	8.71%	8.53%
	Equity Measure FCF =	**8.75%**	**8.50%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	4.77%	5.23%	5.92%	6.24%
BBB- & Above	4.21%	4.80%	5.83%	6.16%
BB- & Above	4.50%	5.06%	5.90%	6.23%
Mean =	4.49%	5.03%	5.89%	6.21%
Median =	4.50%	5.06%	5.90%	6.23%

Debt Measure = 6.25%

Yield Cap Rate Free Cash Flow - Telecommunications, Exchange Carriers						
Equity	70.00%	x	8.75%	=	6.13%	
Debt	30.00%	x	6.25%	=	1.88%	
	100.00%				8.00%	
Weighted Average Cost of Capital (WACC) =						**8.25%**

Yield Cap Rate Free Cash Flow - Telecommunications, Wireless Carriers						
Equity	74.00%	x	8.50%	=	6.29%	
Debt	26.00%	x	6.25%	=	1.63%	
	100.00%				7.92%	
Weighted Average Cost of Capital (WACC) =						**8.00%**

Where Assumed Growth Rate = Inflation **Growth = 1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Telecommunications with significant portion of Cable TV Service
2014 Assessment Year

Equity Measures Calculated:	**Cable TV**
Dividend Growth Model	8.30%
Capital Asset Pricing Model	9.22%
Mean =	8.76%
Median =	8.76%
Equity Measure FCF =	**9.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.81%	4.11%	5.37%	5.63%
BBB- & Above	3.03%	3.31%	4.94%	5.19%
B- & Above	3.66%	3.97%	5.37%	5.63%
Mean =	3.50%	3.80%	5.23%	5.48%
Median =	3.66%	3.97%	5.37%	5.63%

Debt Measure = 5.50%

Yield Cap Rate Free Cash Flow - Telecommunications, Cable TV						
Equity	67.00%	x	9.00%	=	6.03%	
Debt	33.00%	x	5.50%	=	1.82%	
	100.00%				7.85%	
Weighted Average Cost of Capital (WACC) =						**8.00%**

Where Assumed Growth Rate = Inflation **Growth = 1.50%**

see appendix for calculation 2.32%

US Inflation Calculator 12/31/2013 1.50%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Exchange Carriers
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L
Company	Ticker Symbol A	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common	(VL) Book Value Per Share	Mkt. Value Common DxE	(VL) Book Value Common (000) FxD	(VL) Book Value Preferred (000)	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Pref. & Debt
AT&T Inc**	**T**	**A++**	**5,581,400**	**34.70**	**16.61**	**193,674,580**	**92,707,054**	**0**	**66,358,000**	**1.00**	**66,358,000**
Verizon Communications**	**VZ**	**A++**	**2,858,300**	**48.61**	**11.60**	**138,941,963**	**33,156,280**	**0**	**47,618,000**	**1.00**	**47,618,000**
CenturyLink Inc	**CTL**	**B+**	**625,700**	**31.85**	**30.83**	**19,928,545**	**19,290,331**	**0**	**19,400,000**	**1.00**	**19,400,000**
Frontier Communications	**FTR**	**B**	**998,400**	**4.65**	**4.13**	**4,642,560**	**4,123,392**	**0**	**8,381,900**	**1.00**	**8,381,900**
Windstream Corportation	WIN	**B**	**588,200**	7.98	**1.88**	4,693,836	1,105,816	**0**	**8,114,900**	1.00	8,114,900
Hickory Tech Corp	HTCO	**C++**	**13,500**	12.83	**3.61**	173,205	48,735	**0**	**135,100**	1.00	135,100
Alaska Communic Sys Grp**	ALSK	**C+**	**45,800**	2.12	**(0.76)**	97,096	(34,808)	**0**	**533,800**	1.00	533,800
Cincinnati Bell	CBB	**C+**	**202,700**	3.56	**(4.08)**	721,612	(827,016)	**129,400**	**2,676,000**	1.00	2,805,400

SUMS & AVERAGES	All	362,873,397	150,431,608	129,400	153,217,700	153,347,100
Cos. with positive per share- price, book value, and cash flow.	B and Above	361,881,484	150,382,873	0	149,872,800	149,872,800
Local Carriers - CTL, FTR, HTCO, WIN, and CBB	Local Carriers	30,159,758	24,568,274	129,400	38,707,900	38,837,300
Include only AT&T, Verizon and Alaska	Mixed Carriers	332,713,639	125,863,334	0	114,509,800	114,509,800

* All **Negative** values left out of calculations

** 2012 Wireless & Wireline contributions:
AT&T Corp., 47% Wireless, 52% Wireline
Verizon Com., 60% Wireless, 40% Wireline
Alaska Com. SyS, Grp., 59% Wireless, 41% Wireline

INDUSTRY MARKET STRUCTURES								
	ALL COMPANIES		**B & ABOVE**		**LOCAL ONLY**		**MIXED**	
COMMON	70.00%	362,873,397	71.00%	361,881,484	44.00%	30,159,758	74.00%	332,713,639
DEBT	30.00%	153,347,100	29.00%	149,872,800	56.00%	38,837,300	26.00%	114,509,800
TOTAL	100.00%	516,220,497	100.00%	511,754,284	100.00%	68,997,058	100.00%	447,223,439

Notes/Rational for Changes to Guideline Companies
No Changes for 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Exchange Carriers
2014 Assessment Year

A	B	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Company	Ticker Symbol A	(YAHOO) EPS	(YAHOO) E/P M/E	(VL) EPS	(VL) E/P O/E	(VL) CF/S	(VL) CF/P Q/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/S	(VL) P/E	(VL) Inverse of P/E 1/U	(VL) Median P/E	(VL) Inverse of Median P/E 1/X	(VL) Beta
AT&T Inc**	**T**	**1.37**	**3.95%**	**2.48**	**7.15%**	**5.95**	**17.15%**	**35.39**	**2.83%**	**13.58**	**7.36%**	**14.00**	**7.14%**	**0.70**
Verizon Communications**	**VZ**	**0.77**	**1.58%**	**2.82**	**5.80%**	**8.15**	**16.77%**	**48.55**	**2.06%**	**16.19**	**6.18%**	**14.00**	**7.14%**	**0.65**
CenturyLink Inc	**CTL**	**(0.40)**	**(1.26%)**	**2.68**	**8.41%**	**10.45**	**32.81%**	**34.84**	**2.87%**	**12.23**	**8.18%**	**13.00**	**7.69%**	**0.75**
Frontier Communications	**FTR**	**0.06**	**1.29%**	**0.23**	**4.95%**	**1.45**	**31.18%**	**4.31**	**23.21%**	**18.56**	**5.39%**	**25.00**	**4.00%**	**0.90**
Windstream Corportation	WIN	0.21	2.63%	**0.30**	3.76%	2.20	27.57%	8.41	11.89%	**21.65**	4.62%			**0.90**
Hickory Tech Corp	HTCO	0.61	4.75%	**0.43**	3.35%			10.88	9.19%			**15.00**	**6.67%**	**0.65**
Alaska Communic Sys Grp**	ALSK	2.37	111.79%	**0.25**	11.79%	1.50	70.75%	2.16	46.28%	**35.67**	2.80%			**0.85**
Cincinnati Bell	CBB	(0.24)	(6.74%)	**0.00**	0.00%	1.10	30.90%	3.41	29.29%	**175.00**	0.57%	**19.00**	**5.26%**	**1.05**

SUMS & AVERAGES	All	21.00%	6.46%	32.45%	15.95%	5.01%	6.32%	0.81
Cos. with positive per share- price, book value, and cash flow.	B and Above	2.36%	6.01%	25.09%	8.57%	6.34%	6.49%	0.78
Local Carriers - CTL, FTR, HTCO, WIN, and CBB	Local Carriers	2.89%	5.12%	30.62%	15.29%	4.69%	5.91%	0.85
Include only AT&T, Verizon and Alaska	Mixed Carriers	39.11%	8.25%	34.89%	17.05%	5.45%	7.14%	0.73

* All **Negative** values left out of calculations

** 2012 Wireless & Wireline contributions:
AT&T Corp., 47% Wireless, 52% Wireline
Verizon Com., 60% Wireless, 40% Wireline
Alaska Com. SyS, Grp., 59% Wireless, 41% Wireline

Beta of Exchange Carriers = 0.85

Notes/Rational for Changes to Guideline Companies
No Changes for 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Wireless
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L
Company	Ticker Symbol	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common	(VL) Book Value Per Share	Mkt. Value Common (000) DxE	(VL) Book Value Common (000) FxD	(VL) Book Value Preferred (000)	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Pref. & Debt
AT&T Inc**	T	**A++**	5,581,400	34.70	16.61	193,674,580	92,707,054	0	66,358,000	1.00	66,358,000
Verizon Communications**	VZ	**A++**	2,858,300	48.61	11.60	138,941,963	33,156,280	0	47,618,000	1.00	47,618,000
Alaska Communic Sys Grp**	ALSK	**C+**	45,800	2.12	(0.76)	97,096	(34,808)	0	533,800	1.00	533,800
U.S. Cellular	USM	**B+**	83,900	41.82	45.24	3,508,698	3,795,636	0	878,900	1.00	878,900
Telephone & Data Sys	TDS	**B**	107,900	25.78	37.16	2,781,662	4,009,564	800	1,721,600	1.00	1,722,400
Sprint Nextel Corp	S	**C++**	3,010,000	10.75	2.35	32,357,500	7,073,500	0	23,962,000	1.00	23,962,000
Leap Wireless	LEAP	**C**	79,200	17.40	5.47	1,378,080	433,224	0	3,298,500	1.00	3,298,500

SUMS & AVERAGES	All Comp	372,739,579	141,175,258	800	144,370,800	144,371,600
Cos. with positive per share- price, book value, and cash flow.	All Wireless	40,025,940	15,311,924	800	29,861,000	29,861,800
	Mixed	332,713,639	125,863,334	-	114,509,800	114,509,800

All Wireless excludes AT&T, Verizon and Alaska

* All **Negative** values left out of calculations

INDUSTRY MARKET STRUCTURE						
	All Companies		**All Wireless**		**Mixed**	
COMMON	72.00%	372,739,579	57.00%	40,025,940	74.00%	332,713,639
DEBT	28.00%	144,371,600	43.00%	29,861,800	26.00%	114,509,800
TOTAL	100.00%	517,111,179	100.00%	69,887,740	100.00%	447,223,439

Notes/Rational for Changes to Guideline Companies
No Changes for TY 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Wireless
2014 Assessment Year

A	B	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Company	Ticker Symbol	(YAHOO) EPS	(YAHOO) E/P M/E	(VL) EPS	(VL) E/P O/E	(VL) CF/S	(VL) CF/P Q/E	(YAHOO) P/E	(YAHOO) Inverse of P/E 1/S	(VL) P/E	(VL) Inverse of P/E 1/U	(VL) Median P/E	(VL) Inverse of Median P/E 1/X	(VL) Beta
AT&T Inc**	T	1.37	3.95%	2.48	7.15%	**5.95**	17.15%	35.39	2.83%	13.58	7.36%	14.00	7.14%	0.70
Verizon Communications**	VZ	0.77	1.58%	2.82	5.80%	**8.15**	16.77%	48.55	2.06%	16.19	6.18%	14.00	7.14%	0.65
Alaska Communic Sys Grp**	ALSK	2.37	111.79%	0.25	11.79%	**1.50**	70.75%	2.16	46.28%	35.67	2.80%			0.85
U.S. Cellular	USM	1.16	2.77%	1.10	2.63%	10.40	24.87%	40.09	2.49%			30.00	3.33%	1.00
Telephone & Data Sys	TDS	0.97	3.76%	0.90	3.49%	9.85	38.21%	25.47	3.93%			27.00	3.70%	1.05
Sprint Nextel Corp	S	(1.05)	(9.77%)	(1.00)	(9.30%)	0.65	6.05%	3.61	27.72%					1.05
Leap Wireless	LEAP	(6.86)	(39.43%)	(6.55)	(37.64%)	0.70	4.02%	10.72	9.33%					1.45

SUMS & AVERAGES	All Comp	24.77%	6.17%	25.40%	13.52%	5.45%	5.33%	0.96
Cos. with positive per share- price, book value, and cash flow.	All Wireless	3.27%	3.06%	18.29%	10.87%	----	3.52%	1.14
	Mixed	39.11%	8.25%	34.89%	17.05%	5.45%	7.14%	0.73
All Wireless excludes AT&T, Verizon and Alaska	All Median	3.76%	5.80%	17.15%	3.93%	6.18%	5.42%	1.00

Beta of Wireless Industry = 1.10

* All **Negative** values left out of calculations

Notes/Rational for Changes to Guideline Companies
No Changes for TY 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications with significant portion of Cable TV Service
2014 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L
Company	Ticker Symbol A	(VL) Financial Strength	(VL) Shares (000)	(YAHOO) Avg. Price Common	(VL) Book Value Per Share	Mkt. Value Common DxE	(VL) Book Value Common (000) FxD	(VL) Book Value Preferred (000)	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Pref. & Debt
CenturyLink Inc	**CTL**	**B+**	**625,700**	**31.85**	**30.83**	**19,928,545**	**19,290,331**	**0**	**19,400,000**	**1.00**	**19,400,000**
Time Warner Cable	TWC	B++	297,700	135.50	24.45	40,338,350	7,278,765	0	25,171,000	1.00	25,171,000
Comcast Corp.	CMCSA	A	2,630,000	51.97	18.77	136,681,100	49,365,100	0	38,082,000	1.00	38,082,000
Charter Communications	**CHTR**	**B**	**101,200**	**136.76**	**1.47**	**13,840,112**	**148,764**	**0**	**12,808,000**	**1.00**	**12,808,000**
Frontier Communications	**FTR**	**B**	**998,400**	**4.65**	**4.13**	**4,642,560**	**4,123,392**	**0**	**8,381,900**	**1.00**	**8,381,900**
Crown Media Holdings Inc Cl A	CRWN	B	359,700	3.53	0.92	1,269,741	330,924	0	477,900	1.00	477,900
Hawaiian Telcom Holdco Inc	HCOM	**B**	10,300	29.37	26.90	302,511	277,070	0	292,400	1.00	292,400
Consol. Communic.	CNSL	C++	39,900	19.26	3.31	768,474	132,069	0	1,208,200	1.00	1,208,200
General Communications	GNCMA	C++	41,500	8.80	3.79	365,200	157,285	0	949,700	1.00	949,700
Cablevision Sys. 'A'	CVC	C+	264,700	17.93	(21.30)	4,746,071	(5,638,110)	0	10,578,000	1.00	10,578,000
Cincinnati Bell	CBB	**C+**	**202,700**	3.56	**(4.08)**	721,612	(827,016)	**129,400**	**2,676,000**	1.00	2,805,400
FairPoint Communications Inc.	FRP	**C+**	26,300	11.31	(12.09)	297,453	(317,967)	0	948,500	1.00	948,500
MDU Communications Inc	MDTV		5,700	0.01	(2.23)	57	(12,711)	0	0	1.00	0

SUMS & AVERAGES	All	223,901,786	81,103,700	120,973,600	121,103,000
Cos. with positive per share- price, book value, and cash flow.	B and Above	215,430,667	80,814,346	104,613,200	104,613,200

* All **Negative** values left out of calculations

INDUSTRY MARKET STRUCTURES				
	ALL COMPANIES		B & ABOVE	
COMMON	65.00%	223,901,786	67.00%	215,430,667
DEBT	35.00%	121,103,000	33.00%	104,613,200
TOTAL	100.00%	345,004,786	100.00%	320,043,867

Notes/Rational for Changes to Guideline Companies
New for 2013

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications with significant portion of Cable TV Service
2014 Assessment Year

M	N	O	P	Q	R	S	T	U	V	W	X	Y
(YAHOO) EPS	(YAHOO) E/P	(VL) EPS	(VL) E/P	(VL) CF/S	(VL) CF/P	(YAHOO) P/E	(YAHOO) Inverse of P/E	(VL) P/E	(VL) Inverse of P/E	(VL) Median P/E	(VL) Inverse of Median P/E	(VL) Beta
	M/E		O/E		Q/E		1/S		1/U		1/X	
(0.40)	**(1.26%)**	**2.68**	**8.41%**	**2.68**	**8.41%**	**34.84**	**2.87%**	**12.23**	**8.18%**	**13.00**	**7.69%**	**0.75**
6.49	4.79%	6.70	4.94%	18.70	13.80%	107.12	0.93%	18.41	5.43%			1.00
2.40	4.62%	2.50	4.81%	5.90	11.35%	43.18	2.32%	19.36	5.17%	**29.00**	3.45%	1.00
(2.46)	**(1.80%)**	**(1.15)**	**(0.84%)**	**15.35**	**11.22%**	**114.44**	**0.87%**					**0.90**
0.06	**1.29%**	**0.23**	**4.95%**	**1.45**	**31.18%**	**4.31**	**23.21%**	**18.56**	**5.39%**	**25.00**	**4.00%**	**0.90**
0.31	8.78%	0.12	3.40%			2.57	38.92%					1.15
9.70	33.03%	1.08	3.68%			24.66	4.06%					0.90
0.74	3.84%	0.95	4.93%	4.45	23.10%	17.66	5.66%	20.30	4.93%			0.80
0.41	4.66%	0.35	3.98%	3.95	44.89%	9.13	10.95%	35.09	2.85%	**45.00**	2.22%	1.15
2.00	11.15%	0.50	2.79%	4.60	25.66%	16.07	6.22%	21.67	4.61%			1.40
(0.24)	(6.74%)			1.10	30.90%	3.41	29.29%	**175.00**	0.57%	**19.00**	**5.26%**	**1.05**
(5.04)	(44.56%)	(4.99)	(44.12%)			8.86	11.28%					1.45
(0.65)	(6,500.00%)	(1.02)	(10,200.00%)			0.64	155.44%					0.75
All	9.02%		4.65%		22.28%		22.46%		4.64%		4.53%	1.02
B and Above	10.50%		5.03%		15.19%		10.45%		6.04%		5.05%	0.94

Beta of Exchange Carriers = 0.95

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Telecommunications
2014 Assessment Year

$$K_E = R_F + \beta (R_M - R_F)$$

	Exchange Carriers	Wireless Carriers	Telecom w/ Cable
K_E = Cost of Equity	**8.67%**	**10.05%**	**9.22%**
R_F = Risk Free Rate	3.96%	3.96%	3.96%
β= Beta	0.85	1.10	0.95
R_M = Market Rate of Return	9.50%	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	5.54%	5.54%	5.54%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied premium	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied premium	5.78%
Duff & Phelps	March 20, 2013 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2013 Not updated for 2014

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	11.80%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	9.80%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	9.00%
	Mean =	10.20%
	Median =	9.80%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2013-26 Table 2 December 9, 2013
Rev Rule 2012-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.25%
	Mid Term - AFR	R_f =	1.57%
	Long Term - AFR	R_f =	3.32%

The ValueLine Investment Survey January 10, 2014
U.S. Treasury Securities December 31, 2013

1 Year	R_f =	0.12%
10 Year	R_f =	3.03%
30 Year	R_f =	3.96%

Federal Reserve Statistical Release
Treasury constant Maturities, December 31, 2013
Market yield on U.S. Treasury securities, Annual Averages

1 year constant maturity, quoted on investment basis	R_f =	0.13%
10-year constant maturity, quoted on investment basis	R_f =	3.04%
30-year constant maturity, quoted on investment basis	R_f =	3.96%
	Mean =	2.15%
	Median =	3.03%
	Weighted Mean =	2.75%

U.S. Treasury Securities Long-Term December 31, 2013

20 year constant maturity	R_f =	**3.72%**
30 year constant maturity	R_f =	**3.96%**
	R_f =	**3.96%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Major Exchange Carriers:

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke
AT&T Inc.	T	34.70	1.84	5.30%	4.00%	9.30%
Verizon Communications	VZ	48.61	2.12	4.36%	2.00%	6.36%
CenturyLink Inc.	CTL	31.85	2.16	6.78%	(5.00%)	6.78%
Alaska Communic Sys Grp	ALSK	2.12	Nil		NMF	
Frontier Communications	FTR	4.65	0.40	8.60%	(8.50%)	8.60%
Hickory Tech Corp	HTCO	12.83			*3.50%*	
Windstream Corportation	WIN	7.98	1.00	12.53%	Nil	12.53%
Cincinnati Bell	CBB	3.56	Nil		Nil	

Mean = 8.72%
Median = 8.60%

Estimated Cost of Equity = 8.75%

Wireless Sector:

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke
AT&T Inc.	T	34.70	1.84	5.30%	4.00%	9.30%
Alaska Communic Sys Grp	ALSK	2.12	Nil		NMF	
Leap Wireless	LEAP	17.40	Nil		Nil	
Verizon Communications	VZ	48.61	2.12	4.36%	*2.00%*	6.36%
Sprint Nextel Corp	S	10.75	0.65		Nil	
Telephone & Data Sys	TDS	25.78	0.53	2.06%	*4.00%*	6.06%
U.S. Cellular	USM	41.82	Nil		Nil	

Mean = 7.24%
Median = 6.36%

** AT&T Corp, Verizon Communications, and Alaska Communications

NOTAdjusted for Wireline and Wireless Contributions

Estimated Cost of Equity = 7.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications with significant portion of Cable TV Service
2014 Assessment Year

$$K_E = D1 / P_O + G_A$$

KE= Cost of Equity
D1= Expected Dividends
Po= Current Price Per Share
G= Sustainable Growth

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke
Cablevision Sys. 'A'	CVC	17.93	0.60	3.35%	2.50%	5.85%
CenturyLink Inc.	CTL	31.85	2.16	6.78%	(5.00%)	6.78%
Frontier Communications	FTR	4.65	0.40	8.60%	(8.50%)	
Cincinnati Bell	CBB	3.56				
Consol. Communic.	CNSL	19.26	1.55	8.05%	*Nil*	8.05%
FairPoint Communications Inc.	FRP	11.31				
Hawaiian Telcom Holdco Inc	HCOM	29.37				
Gen'l Communic. 'A'	GNCMA	11.15	Nil		Nil	
Time Warner Cable	TWC	135.50	2.70	1.99%	6.50%	8.49%
Comcast Corp.	CMCSA	51.97	0.78	1.50%	11.00%	12.50%
Charter Communications	CHTR	136.76	Nil		Nil	
Crown Media Holdings Inc Cl A	CRWN	3.53				
MDU Communications Inc	MDTV	0.01				

Mean = 8.33%
Median = 8.05%

Estimated Cost of Equity = 8.30%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
ALSK	Alaska Communic Sys Grp	high	$ 2.07	$ 1.80	$ 1.93	$ 1.70	$ 1.97	$ 1.83	$ 3.28	$ 3.90	$ 3.12	$ 2.72	$ 2.82	$ 2.38	$ 2.12	$2.34	$2.16	0.92	2.37
		low	$ 1.75	$ 1.57	$ 1.55	$ 1.60	$ 1.62	$ 1.63	$ 1.67	$ 2.35	$ 2.46	$ 2.28	$ 1.86	$ 2.00					
AMT	American Tower Corp	high	$ 79.98	$ 78.31	$ 79.35	$ 84.29	$ 85.26	$ 79.05	$ 78.33	$ 72.51	$ 75.99	$ 81.36	$ 80.43	$ 80.13	$ 79.82	$77.56	$76.27	52.99	1.47
		low	$ 75.37	$ 72.56	$ 73.91	$ 76.60	$ 77.84	$ 69.54	$ 69.74	$ 67.89	$ 68.69	$ 71.55	$ 76.22	$ 75.65					
CBB	Cincinnati Bell	high	$ 5.64	$ 4.93	$ 3.43	$ 3.64	$ 3.70	$ 3.49	$ 3.55	$ 3.66	$ 3.12	$ 3.17	$ 3.25	$ 3.65	$ 3.56	$3.09	$3.41	(13.96)	(0.24)
		low	$ 4.62	$ 3.06	$ 2.84	$ 3.09	$ 3.21	$ 2.83	$ 3.00	$ 2.95	$ 2.64	$ 2.62	$ 2.80	$ 3.05					
CHTR	Charter Communications	high	$ 82.82	$ 89.14	$106.29	$106.98	$ 116.42	$128.57	$ 130.59	$ 137.29	$136.32	$ 144.02	$ 139.14	$136.76	$136.76	$133.66	$114.44	(53.47)	(2.46)
		low	$ 76.28	$ 76.19	$ 85.74	$ 99.41	$ 100.48	$109.63	$ 121.40	$ 119.06	$122.05	$ 130.06	$ 125.68	$126.31					
CLWR	Clearwire Corp.	high			Acquired by Sprint														
		low																	
CMCSA	Comcast Corp.	high	$ 40.28	$ 42.00	$ 42.01	$ 42.61	$ 43.74	$ 41.99	$ 45.63	$ 46.33	$ 45.31	$ 48.35	$ 50.75	$ 52.09	$ 51.97	$48.35	$43.18	20.90	2.40
		low	$ 37.21	$ 37.81	$ 39.46	$ 39.66	$ 40.15	$ 38.75	$ 40.26	$ 41.06	$ 42.09	$ 44.09	$ 46.58	$ 48.21					
CNSL	Consol. Communic.	high	$ 17.50	$ 17.54	$ 17.96	$ 18.48	$ 19.10	$ 17.82	$ 18.59	$ 18.05	$ 17.89	$ 18.81	$ 19.49	$ 19.89	$ 19.26	$18.70	$17.66	25.94	0.74
		low	$ 16.27	$ 16.40	$ 15.83	$ 16.83	$ 17.00	$ 16.31	$ 17.04	$ 16.52	$ 16.51	$ 17.16	$ 18.33	$ 18.50					
CRWN	Crown Media Holdings Inc Cl A	high	$ 2.10	$ 2.06	$ 2.15	$ 2.09	$ 2.09	$ 2.66	$ 3.04	$ 3.15	$ 3.30	$ 3.38	$ 3.38	$ 3.63	$ 3.53	$3.28	$2.57	11.08	0.31
		low	$ 1.79	$ 1.83	$ 1.89	$ 1.91	$ 2.02	$ 1.85	$ 2.40	$ 2.66	$ 3.00	$ 3.04	$ 3.00	$ 3.24					
CVC	Cablevision Sys. 'A'	high	$ 15.96	$ 15.55	$ 15.07	$ 15.21	$ 16.01	$ 17.01	$ 19.48	$ 20.16	$ 18.13	$ 17.11	$ 16.91	$ 18.05	$ 17.93	$16.32	$16.07	8.48	2.00
		low	$ 14.55	$ 13.68	$ 13.62	$ 14.00	$ 14.16	$ 13.88	$ 17.25	$ 17.28	$ 16.70	$ 15.36	$ 14.65	$ 15.86					
CTL	CenturyLink Inc	high	$ 40.88	$ 42.01	$ 35.84	$ 37.90	$ 38.40	$ 36.59	$ 36.49	$ 36.45	$ 33.34	$ 34.18	$ 34.06	$ 32.10	$ 31.85	$31.97	$34.84	(77.54)	(0.40)
		low	$ 39.42	$ 32.05	$ 34.00	$ 34.66	$ 34.13	$ 33.83	$ 34.90	$ 32.26	$ 31.21	$ 31.01	$ 30.54	$ 29.93					
DY	Dycom Industries	high	$ 21.75	$ 22.23	$ 21.65	$ 19.76	$ 23.65	$ 24.17	$ 26.91	$ 27.38	$ 28.64	$ 31.75	$ 30.45	$ 28.95	$ 27.79	$28.49	$23.94	22.45	1.24
		low	$ 18.62	$ 19.75	$ 19.50	$ 17.87	$ 17.99	$ 21.86	$ 23.11	$ 23.69	$ 25.10	$ 26.88	$ 26.17	$ 26.72					
FRP	FairPoint Communications Inc	high	$ 10.04	$ 9.73	$ 8.53	$ 8.40	$ 9.12	$ 8.85	$ 9.17	$ 9.99	$ 9.80	$ 9.80	$ 9.69	$ 11.71	$ 11.31	$9.72	$8.86	(2.05)	(5.04)
		low	$ 8.09	$ 8.17	$ 6.96	$ 6.77	$ 7.66	$ 7.67	$ 7.99	$ 8.50	$ 9.01	$ 9.24	$ 8.94	$ 8.92					
FTR	Frontier Communications	high	$ 4.62	$ 4.68	$ 4.24	$ 4.24	$ 4.43	$ 4.27	$ 4.40	$ 4.76	$ 4.56	$ 4.50	$ 5.02	$ 4.94	$ 4.65	$4.56	$4.31	77.75	0.06
		low	$ 4.30	$ 3.89	$ 3.71	$ 3.82	$ 3.97	$ 3.80	$ 3.91	$ 4.33	$ 4.09	$ 4.16	$ 4.36	$ 4.39					
GNCMA	Gen'l Communic. 'A'	high	$ 9.95	$ 8.79	$ 9.28	$ 10.00	$ 9.94	$ 9.03	$ 9.58	$ 9.75	$ 9.63	$ 10.08	$ 10.09	$ 11.33	$ 11.15	$9.79	$9.13	24.93	0.41
		low	$ 8.04	$ 7.93	$ 8.10	$ 8.63	$ 8.65	$ 7.67	$ 7.89	$ 8.67	$ 8.94	$ 8.75	$ 9.37	$ 9.11					
HCOM	Hawaiian Telcom Holdco Inc	high	$ 20.47	$ 20.16	$ 23.46	$ 25.08	$ 25.90	$ 26.80	$ 28.29	$ 28.00	$ 27.47	$ 27.98	$ 30.61	$ 30.32	$ 29.37	$27.94	$24.66	2.96	9.70
		low	$ 18.65	$ 19.26	$ 19.27	$ 22.75	$ 23.15	$ 22.51	$ 24.62	$ 24.30	$ 24.04	$ 25.27	$ 26.42	$ 27.01					
HTCO	Hickory Tech Corp	high	$ 10.00	$ 9.91	$ 10.49	$ 10.48	$ 10.83	$ 10.81	$ 11.55	$ 11.54	$ 11.47	$ 13.95	$ 13.75	$ 13.70	$ 12.83	$12.69	$10.88	20.64	0.61
		low	$ 9.46	$ 9.36	$ 9.29	$ 9.65	$ 10.00	$ 10.06	$ 10.26	$ 9.93	$ 9.95	$ 10.90	$ 12.33	$ 11.48					
IDT	IDT Corp	high	$ 10.57	$ 11.02	$ 12.18	$ 14.94	$ 18.68	$ 21.24	$ 20.87	$ 19.44	$ 18.48	$ 22.73	$ 22.92	$ 22.17	$ 17.87	$20.42	$16.32	(93.98)	(0.21)
		low	$ 9.41	$ 10.04	$ 9.81	$ 11.56	$ 13.77	$ 17.09	$ 17.73	$ 16.34	$ 15.92	$ 16.90	$ 20.50	$ 17.30					
LEAP	Leap Wireless	high	$ 7.17	$ 6.75	$ 5.93	$ 6.28	$ 6.25	$ 6.74	$ 17.51	$ 16.91	$ 15.96	$ 16.29	$ 16.65	$ 17.45	$ 17.40	$16.42	$10.72	(2.48)	(6.86)
		low	$ 5.51	$ 5.28	$ 5.15	$ 5.31	$ 5.48	$ 5.45	$ 6.58	$ 15.16	$ 15.26	$ 15.60	$ 16.02	$ 16.51					

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications
2014 Assessment Year

Ticker	Company		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
LVLT	Level 3 Communications	high	$ 24.92	$ 25.26	$ 22.24	$ 21.88	$ 24.76	$ 22.77	$ 22.62	$ 23.49	$ 27.87	$ 30.68	$ 31.15	$ 33.35	$ 33.17	$29.91	$24.19	(64.32)	(0.49)
		low	$ 23.07	$ 19.90	$ 19.51	$ 19.12	$ 20.10	$ 19.71	$ 20.14	$ 21.34	$ 22.41	$ 25.99	$ 28.58	$ 29.68					
MDTV	MDU Communications Inc	high	$ 1.28	$ 1.29	$ 1.33	$ 1.40	$ 1.20	$ 1.14	$ 0.79	$ 0.35	$ 0.58	$ 0.10	$ 0.11	$ 0.07	$ 0.01	$0.06	$0.64	(0.06)	(0.65)
		low	$ 0.95	$ 0.90	$ 0.76	$ 1.01	$ 0.89	$ 0.61	$ 0.16	$ 0.30	$ 0.12	$ 0.04	$ 0.05	$ 0.01					
PGI	Premiere Global Services	high	$ 10.18	$ 10.95	$ 11.93	$ 11.69	$ 12.45	$ 12.74	$ 12.34	$ 11.12	$ 10.45	$ 10.14	$ 9.55	$ 11.75	$ 11.59	$9.71	$10.46	16.91	0.62
		low	$ 8.90	$ 8.91	$ 10.34	$ 9.56	$ 10.58	$ 11.58	$ 10.00	$ 9.64	$ 9.50	$ 8.83	$ 8.77	$ 9.22					
S	Sprint Nextel Corp	high	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.14	$ 7.26	$ 6.87	$ 7.00	$ 8.75	$ 11.47	$ 10.75	$7.95	$3.61	(9.18)	(1.05)
		low	$ -	$ -	$ -	$ -	$ -	$ -	$ 5.61	$ 6.00	$ 6.02	$ 5.92	$ 6.73	$ 7.81					
T	AT&T Corp	high	$ 35.50	$ 36.25	$ 36.87	$ 39.00	$ 37.97	$ 36.39	$ 36.31	$ 35.85	$ 35.01	$ 36.49	$ 36.80	$ 35.30	$ 34.70	$34.97	$35.39	25.15	1.37
		low	$ 32.76	$ 35.00	$ 35.63	$ 36.63	$ 34.98	$ 34.10	$ 34.93	$ 33.19	$ 33.21	$ 33.09	$ 34.56	$ 33.60					
TDS	Telephone & Data Sys	high	$ 25.44	$ 26.17	$ 22.88	$ 22.47	$ 24.87	$ 24.74	$ 27.72	$ 29.63	$ 29.83	$ 31.52	$ 31.20	$ 28.03	$ 25.78	$28.48	$25.47	26.93	0.97
		low	$ 22.07	$ 22.76	$ 20.79	$ 20.57	$ 21.94	$ 21.71	$ 23.21	$ 26.34	$ 27.27	$ 28.15	$ 27.73	$ 24.22					
TWC	Time Warner Cable	high	$102.00	$ 90.67	$ 96.45	$ 97.79	$ 99.43	$113.06	$ 119.46	$ 120.93	$116.00	$ 124.00	$ 139.17	$139.85	$135.50	$126.43	$107.12	20.77	6.49
		low	$ 88.28	$ 84.57	$ 86.08	$ 89.81	$ 93.48	$ 92.87	$ 107.80	$ 106.01	$107.63	$ 108.88	$ 116.98	$129.69					
USM	U.S. Cellular	high	$ 38.24	$ 39.74	$ 36.84	$ 38.49	$ 41.33	$ 40.73	$ 41.24	$ 44.35	$ 45.91	$ 48.98	$ 47.71	$ 44.53	$ 41.82	$44.69	$40.09	36.12	1.16
		low	$ 34.69	$ 36.41	$ 35.36	$ 35.79	$ 37.00	$ 32.25	$ 34.22	$ 39.54	$ 41.93	$ 43.65	$ 43.97	$ 39.27					
VOD	Vodafone Grp	high	$ 27.50	$ 27.65	$ 28.73	$ 30.80	$ 30.75	$ 30.02	$ 30.19	$ 32.37	$ 35.19	$ 37.90	$ 37.87	$ 39.44	$ 39.31	$37.01	$30.93	5.71	6.66
		low	$ 25.28	$ 24.42	$ 25.02	$ 27.81	$ 28.88	$ 27.02	$ 28.47	$ 29.02	$ 31.10	$ 34.10	$ 36.14	$ 36.58					
VG	Vonage Holdings Corp	high	$ 2.62	$ 2.84	$ 2.92	$ 3.15	$ 3.03	$ 2.97	$ 3.46	$ 3.39	$ 3.21	$ 3.74	$ 3.93	$ 3.40	$ 3.33	$3.38	$3.00	24.92	0.13
		low	$ 2.30	$ 2.41	$ 2.55	$ 2.76	$ 2.65	$ 2.65	$ 2.73	$ 3.10	$ 2.99	$ 3.02	$ 3.09	$ 3.08					
VMED	Virgin Media	high				Not Found in Yahoo			Merged with Liberty Global										
		low																	
VZ	Verizon Communications	high	$ 44.87	$ 46.93	$ 49.59	$ 54.31	$ 53.97	$ 51.69	$ 51.94	$ 50.44	$ 48.89	$ 51.49	$ 51.46	$ 49.79	$ 48.61	$49.26	$48.55	63.14	0.77
		low	$ 41.50	$ 44.02	$ 46.11	$ 48.66	$ 48.47	$ 47.77	$ 49.19	$ 46.25	$ 45.08	$ 46.03	$ 49.36	$ 47.45					
WIN	Windstream Corportation	high	$ 10.00	$ 9.90	$ 8.96	$ 8.88	$ 8.85	$ 8.39	$ 8.46	$ 8.72	$ 8.75	$ 8.65	$ 8.75	$ 8.44	$ 7.98	$8.26	$8.41	38.88	0.21
		low	$ 8.49	$ 8.35	$ 7.87	$ 7.91	$ 7.89	$ 7.50	$ 7.50	$ 7.98	$ 7.98	$ 7.99	$ 7.82	$ 7.89					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/2031	A	6.28	6.31	6.31	6.15	6.41	6.59	7.08	6.93	7.02	6.97	6.89	6.98	6.66%	6.95%
AT&T Corp.	6.5	001957AW9	Nts	03/15/2029	A-	5.39	5.42	5.41	5.26	5.48	5.63	5.83	5.96	5.96	5.73	5.84	5.92	5.65%	5.83%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/2031	A-	5.41	5.50	5.46	5.30	5.50	5.70	5.74	5.88	5.86	5.83	5.97	6.01	5.68%	5.94%
AT&T Corp.	6.5	001957BJ7	Nts	03/15/2013	A-	6.46	6.49											6.48%	
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	5.22	5.31	5.35	5.17	5.44	5.72	5.81	5.88	5.99	5.92	5.94	5.86	5.63%	5.91%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	5.15	5.24	5.29	5.08	5.33	5.73	5.61	5.76	5.87	5.87	5.86	5.77	5.55%	5.83%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	5.09	5.18	5.24	5.01	5.28	5.68	5.56	5.73	5.82	5.81	5.82	5.70	5.49%	5.78%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/2018	A-	4.65	4.66	4.68	4.65	4.69	4.81	4.77	4.85	4.84	4.81	4.83	4.88	4.76%	4.84%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/2018	A-	4.69	4.70	4.71	4.68	4.73	4.84	4.80	4.89	4.90	4.85	4.88	4.93	4.80%	4.89%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	5.11	5.19	5.25	5.04	5.29	5.70	5.57	5.75	5.84	5.84	5.90	5.74	5.52%	5.83%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/2031	A-	5.55	5.62	5.63	5.48	5.70	5.93	6.03	6.15	6.34	6.16	6.19	6.18	5.91%	6.18%
AT&T Broadband	8.38	00209TAA3	Nts	03/15/2013	A-	8.29	8.36											8.33%	
AT&T Broadband	9.46	00209TAB1	Nts	11/15/2022	A-	6.33	6.26	6.25	6.12	6.36	6.62	6.64	6.78	6.73	6.63	6.76	6.82	6.53%	6.74%
ALLTEL Corp	6.5	020039AD5	Deb	11/1/2013	A-	6.23	6.24	6.27	6.31	6.34	6.37	6.40	6.43	6.47	6.50			6.36%	6.50%
ALLTEL Corp	7	020039AE3	Deb	3/15/2016	A-	5.93	5.94	5.97	5.99	6.04	6.09	6.11	6.17	6.17	6.19	6.19	6.23	6.09%	6.20%
ALLTEL Corp	6.8	020039AJ2	Deb	5/1/2029	A-	5.03	5.06	5.05	5.20	5.42	5.61	5.60	5.74	5.94	5.71	5.84	5.87	5.51%	5.81%
ALLTEL Corp	7.88	020039DC4	Sr Nt	7/1/2032	A-	5.10	5.16	5.37	5.30	5.57	5.83	5.80	6.01	6.11	5.92	6.04	6.04	5.69%	6.00%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	5.00	5.23	5.35	5.05	5.54	5.85	5.74	6.05	5.93	5.76	5.86	5.89	5.60%	5.84%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/2026	A-	5.66	5.67	5.64	5.49	5.75	5.97	6.02	6.16	6.08	6.02	6.14	6.29	5.91%	6.15%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/2030	A-	6.10	6.13	6.12	5.94	6.16	6.36	6.40	6.54	6.54	6.52	6.64	6.70	6.35%	6.62%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/2031	A-	5.65	5.74	5.70	5.61	5.83	6.04	6.11	6.22	6.15	6.09	6.14	6.17	5.95%	6.13%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.60	5.59	5.62	5.45	5.68	6.01	6.01	6.12	6.09	5.99	6.02	6.11	5.86%	6.04%
BellSouth Corp.	5.2	079860AG7	Nts	09/15/2014	A-	4.85	4.86	4.87	4.89	4.91	4.94	4.95	4.96	4.98	4.99	5.01	5.03	4.94%	5.01%
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.49	5.41	5.40	5.30	5.53	5.75	5.82	5.95	5.90	5.82	5.86	5.96	5.68%	5.88%
BellSouth Corp	5.2	079860AL6	Nt	12/15/2016	A-	4.55	4.56	4.57	4.56	4.59	4.64	4.63	4.67	4.66	4.67	4.68	4.70	4.62%	4.68%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/2025	A-	5.63	5.65	5.66	5.55	5.70	5.90	6.03	6.17	6.09	6.04	6.16	6.30	5.91%	6.17%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	5.70	5.73	5.72	5.43	5.76	6.02	6.19	6.39	6.29	6.21	6.37	6.49	6.03%	6.36%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.91	5.95	5.98	5.74	6.12	6.44	6.47	6.70	6.66	6.58	6.76	6.89	6.35%	6.74%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.91	5.95	5.98	5.74	6.12	6.44	6.47	6.70	6.66	6.58	6.76	6.89	6.35%	6.74%
BellSouthTelecommunications	6.3	079867AQ0	AmortizingDeb	12/15/2015	A-	5.97	5.99	6.01	6.03	6.06	6.08	6.07	6.10	5.93	5.95	5.98	6.00	6.01%	5.98%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/2028	A-	5.43	5.43	5.32	5.13	5.29	5.51	5.69	5.87	5.84	5.72	5.80	5.90	5.58%	5.81%
Cingular Wireless LLC	7.12	17248RAJ5	Sr Nt	12/15/2031	A-	5.30	5.26	5.25	5.11	5.35	5.54	5.62	5.83	5.85	5.74	5.86	5.85	5.55%	5.82%
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/2026	A-	5.66	5.68	5.66	5.54	5.67	5.88	5.96	6.11	6.06	6.18	6.34	6.49	5.94%	6.34%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/2022	A-	5.83	5.85	5.84	5.90	6.10	6.27	6.32	6.44	6.43	6.33	6.44	6.55	6.19%	6.44%
Pacific Bell	7.125	694032AT0	Deb	03/15/2026	A-	5.43	5.42	5.40	5.39	5.56	5.79	5.85	5.99	5.92	5.87	5.99	5.95	5.71%	5.94%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.08	7.10	7.05	7.09	7.12	7.14	7.16	7.17	7.17	7.17	7.17	7.17	7.13%	7.17%
SBCCommunications	5.62	78387GAL7	GlobalNts	06/15/2016	A-	4.91	4.91	4.92	4.93	4.97	5.02	5.00	5.05	5.05	5.04	5.06	5.09	5.00%	5.06%
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	5.19	5.28	5.27	5.08	5.34	5.60	5.57	5.79	5.85	5.81	5.85	5.74	5.53%	5.80%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	5.19	5.28	5.27	5.08	5.34	5.60	5.57	5.79	5.85	5.81	5.85	5.74	5.53%	5.80%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	5.11	5.20	5.21	5.00	5.25	5.51	5.48	5.71	5.73	5.73	5.77	5.65	5.45%	5.72%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/2015	A-	6.12	6.14	6.16	6.18	6.22	6.29	6.32	6.35	6.38	6.37	6.39	6.42	6.28%	6.39%
TCI Communications	8.75	872287AC1	Sr Deb	08/01/2015	A-	7.37	7.38	7.40	7.44	7.50	7.55	7.59	7.63	7.67	7.67	7.72	7.78	7.56%	7.72%
TCI Communications	7.875	872287AF4	Sr Deb	02/15/2026	A-	5.74	5.72	5.72	5.52	5.78	5.97	5.93	6.11	6.02	5.89	5.99	6.07	5.87%	5.98%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/2028	A-	5.53	5.39	5.34	5.14	5.42	5.70	5.52	5.71	5.61	5.54	5.68	5.79	5.53%	5.67%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/2022	A-	7.06	7.06	7.05	6.92	7.17	7.41	7.40	7.57	7.31	7.26	7.38	7.46	7.25%	7.37%
Telefonos de Mexico, S.A.B. de C	5.5	879403AS2	Sr Nt	1/27/2015	A-	5.07	5.08	5.16	5.12	5.16	5.25	5.18	5.23	5.21	5.21	5.22	5.27	5.18%	5.23%
Verizon New England	4.75	92344RAB8	Deb 'C'	10/01/2013	A-	4.61	4.63	4.64	4.66	4.68	4.69	4.71	4.73	4.75				4.68%	
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/2032	A-	4.86	5.13	5.15	5.08	5.31	5.61	5.64	5.82	5.61	5.60	5.72	5.71	5.44%	5.68%
Vodafone Group plc	5.38	92857WAD2	Nt	1/30/2015	A-	4.92	4.94	4.96	4.97	5.00	5.03	5.04	5.06	5.07	5.08	5.10	5.12	5.02%	5.10%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	7/15/2018	A-	4.02	4.03	4.04	4.01	4.08	4.18	4.19	4.24	4.18	4.14	4.15	4.20	4.12%	4.16%
Vodafone Group plc	5	92857WAG5	Gbl Nt	9/15/2015	A-	4.51	4.52	4.54	4.56	4.57	4.60	4.61	4.63	4.63	4.64	4.66	4.67	4.60%	4.66%
Vodafone Group Plc	5.75	92857WAK6	Notes	03/15/2016	A-	5.02	5.03	5.05	5.06	5.11	5.17	5.16	5.19	5.19	5.20	5.20	5.23	5.13%	5.21%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/2017	A-	4.81	4.83	4.85	4.84	4.92	5.02	5.00	5.06	5.00	4.99	4.98	5.02	4.94%	5.00%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/2037	A-	4.75	5.13	5.15	4.97	5.16	5.62	5.59	5.79	5.60	5.51	5.66	5.67	5.38%	5.61%
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/2026	A-	5.99	6.02	6.01	5.87	6.09	6.27	6.32	6.45	6.41	6.36	6.46	6.54	6.23%	6.45%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Vodafone Group plc	5	92857WAF7	Nt	12/16/2013	A-	4.81	4.82	4.84	4.86	4.88	4.89	4.91	4.93	4.95	4.97			4.89%	4.97%
Bell Atlantic-PA	6	07786DAA4	Deb	12/1/2028	BBB+	5.23	5.39	5.36	5.23	5.51	5.71	5.77	5.83	6.16	5.82	5.93	6.09	5.67%	5.95%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/2030	BBB+	6.23	6.26	6.26	6.10	6.36	6.54	6.60	6.76	6.92	6.80	6.93	7.02	6.57%	6.92%
Bell Tel. of Penna	8.75	078167BA0	Deb	8/15/2031	BBB+	6.31	6.34	6.33	6.18	6.44	6.62	6.69	6.85	6.61	6.85	6.98	7.08	6.61%	6.97%
Chesapeake Pot.Tel Md	8	165069AP0	Deb	10/15/2029	BBB+	6.21	6.24	6.23	6.09	6.33	6.51	6.64	6.78	6.97	6.76	6.88	6.92	6.55%	6.85%
Chesapeake Pot.Tel Md	8.3	165069AQ8	Deb	08/01/2031	BBB+	6.36	6.39	6.38	6.22	6.48	6.67	6.91	6.96	7.03	6.97	7.10	7.12	6.72%	7.06%
Chesapeake Pot.Tel Md	7.15	165069AS4	Deb	05/01/2023	BBB+	7.06	7.08	7.11	7.12	7.13	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.13%	7.15%
Chesapeake&Pot.Tel VA	8.38	165087AL1	Forty Yr Deb	10/01/2029	BBB+	6.24	6.27	6.26	6.11	6.36	6.53	6.99	6.95	7.07	6.86	6.98	7.07	6.64%	6.97%
Chesapeake&Pot.Tel VA	7.88	165087AN7	Deb	1/15/2022	BBB+	6.00	6.02	6.01	5.94	6.14	6.30	6.39	6.51	6.56	6.52	6.63	6.75	6.31%	6.63%
GTE California	6.75	362311AG7	Deb 'F'	05/15/2027	BBB+	5.81	5.71	5.69	5.67	5.94	6.14	6.20	6.35	6.38	6.11	6.25	6.40	6.05%	6.25%
GTE Corp	8.75	362320AT0	Deb	11/01/2021	BBB+	6.32	6.42	6.41	6.26	6.51	6.66	6.55	6.67	6.79	6.67	6.79	6.91	6.58%	6.79%
GTE Corp	6.84	362320AZ6	Deb	04/15/2018	BBB+	5.51	5.52	5.54	5.53	5.63	5.74	5.70	5.80	5.85	5.78	5.81	5.87	5.69%	5.82%
GTE Corp	6.94	362320BA0	Deb	04/15/2028	BBB+	5.33	5.38	5.44	5.24	5.47	5.76	5.73	5.88	5.98	5.90	6.04	6.11	5.69%	6.02%
GTE Florida	6.86	362333AH9	Deb 'E'	02/01/2028	BBB+	5.79	5.81	5.81	5.68	5.96	6.16	6.18	6.33	6.44	6.37	6.51	6.52	6.13%	6.47%
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/2029	BBB+	6.05	6.08	6.07	5.99	6.16	6.33	6.43	6.59	6.74	6.59	6.65	6.70	6.37%	6.65%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/2029	BBB+	6.08	6.11	6.10	6.10	6.35	6.52	6.64	6.79	6.90	6.78	6.90	6.79	6.51%	6.82%
New Jersey Bell Tel	8	645767AY0	Deb	06/01/2022	BBB+	6.00	6.02	6.01	5.92	6.26	6.42	6.47	6.59	6.64	6.60	6.71	6.62	6.36%	6.64%
New York Telephone Co	7	650094BT1	Deb	05/01/2013	BBB+	6.89	6.91	6.95	6.95	7.00								6.94%	
New York Telephone Co	7	650094BV6	Deb	06/15/2013	BBB+	6.84	6.86	6.90	6.94	6.99								6.91%	
New York Telephone Co	6.7	650094CA1	Deb	11/01/2023	BBB+	6.44	6.46	6.48	6.51	6.55	6.57	6.60	6.63	6.67	6.68	6.70	6.70	6.58%	6.69%
New York Telephone Co	7	650094CB9	Deb	12/01/2033	BBB+	6.75	6.77	6.79	6.81	6.84	6.86	6.89	6.95	6.97	6.98	7.00	7.90	6.96%	7.29%
New York Telephone Co	6.5	650094CJ2	Deb	04/15/2028	BBB+	5.82	5.84	5.81	5.67	5.95	6.06	6.11	6.27	6.36	6.29	6.43	6.59	6.10%	6.44%
Verizon Communications Inc.	5.55	92343VAC8	Nts	02/15/2016	BBB+	4.88	4.89	4.91	4.92	4.96	5.02	5.00	5.03	5.04	5.04	5.05	5.07	4.98%	5.05%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	4.95	5.04	5.19	5.06	5.27	5.54	5.47	5.63	5.77	5.67	5.73	5.63	5.41%	5.68%
Verizon Communications Inc.	5.5	92343VAG9	Nts	04/01/2017	BBB+	4.71	4.72	4.73	4.72	4.80	4.88	4.86	4.90	4.88	4.87	4.88	4.87	4.82%	4.87%
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/2032	BBB+	5.42	5.35	5.53	5.62	5.80	6.09	6.01	6.16	6.31	6.16	6.22	6.05	5.89%	6.14%
Verizon Global Fndg	4.375	92344GAV8	Nts	06/01/2013	BBB+	4.31	4.32	4.34	4.36	4.38								4.34%	
Verizon Global Fndg	4.9	92344GAW6	Nts	09/15/2015	BBB+	4.43	4.43	4.45	4.47	4.49	4.51	4.51	4.53	4.55	4.56	4.57	4.58	4.51%	4.57%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	4.85	4.89	5.08	4.95	5.16	5.41	5.38	5.55	5.62	5.56	5.60	5.51	5.30%	5.56%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/2033	BBB+	5.06	5.02	5.01	4.89	5.13	5.30	5.36	5.51	5.60	5.50	5.48	5.40	5.27%	5.46%
VerizonNY	7.38	92344XAB5	Sr Deb Ser B	4/1/2032	BBB+	5.73	5.79	5.88	5.67	5.85	6.11	6.09	6.52	6.44	6.47	6.50	6.50	6.13%	6.49%
Carolina Tel. & Tel	6.75	144195AN4	Deb	08/15/2013	BBB-	6.62	6.63	6.65	6.68	6.70	6.71	6.74						6.68%	
Centel Capital	9	15133KAC7	Deb	10/15/2019	BBB-	7.36	7.46	7.27	7.25	7.39	7.49	7.46	7.58	7.46	7.41	7.43	7.59	7.43%	7.48%
Mountain States Tel&Tel	7.38	624284BD6	Deb	05/01/2030	BBB-	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49	7.49%	7.49%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/2030	BBB-	7.54	7.17	7.16	6.99	7.15	7.34	7.12	7.26	7.18	7.25	7.38	7.47	7.25%	7.37%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	6.82	6.86	6.89	6.94	6.92	6.96	7.00	7.02	7.07	7.09	7.12	7.14	6.99%	7.12%
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	6.75	6.76	6.79	6.81	6.82	6.88	6.90	6.93	6.94	6.96	7.00	7.04	6.88%	7.00%
Qwest Corp	3.56	74913GAN5	Nt Fltg Rate	6/15/2013	BBB-	3.53	3.54	3.51	3.52									3.53%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	5.58	5.57	5.58	5.60	5.63	5.75	5.74	5.79	5.76	5.78	5.75	5.75	5.69%	5.76%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	5.62	5.58	5.53	5.40	5.64	5.96	6.07	6.22	6.14	6.10	6.18	6.36	5.90%	6.21%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/2033	BBB-	6.38	6.31	6.33	6.17	6.47	6.87	6.81	6.98	6.89	6.83	6.98	7.06	6.67%	6.96%
U S WESTCommunications	7.5	912920AB1	Deb	06/15/2023	BBB-	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47%	7.47%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/2033	BBB-	6.84	6.89	6.93	6.82	6.87	6.99	6.96	7.06	7.07	7.08	7.23	7.16	6.99%	7.16%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	6.86	7.00	6.98	6.95	6.95	6.98	7.01	7.35	7.24	7.34	7.51	7.57	7.15%	7.47%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/2025	BBB-	6.28	6.29	6.34	6.23	6.23	6.50	6.44	6.59	6.48	6.77	6.79	6.80	6.48%	6.79%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/2026	BBB-	7.13	7.12	7.14	7.11	7.08	7.20	7.12	7.27	7.19	7.15	7.15	7.14	7.15%	7.15%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	6.86	7.03	7.10	6.93	6.93	7.19	7.16	7.67	7.30	7.35	7.41	7.48	7.20%	7.41%
United Tel Co(Florida)	6.875	913026AS9	1st FF	07/15/2013	BBB-	6.74	6.75	6.77	6.80	6.83	6.86							6.79%	
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/2025	BBB-	6.97	6.84	6.82	6.70	7.36	7.56	7.31	7.46	7.35	7.30	7.43	7.58	7.22%	7.44%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/2023	BBB-	6.50	6.42	6.40	6.29	6.80	6.98	6.55	6.68	6.59	6.47	6.58	6.71	6.58%	6.59%
Aliant Communications	6.75	016090AA0	Nts	04/01/2028	BB+	6.67	6.46	6.54	6.73	6.88	7.10	7.03	7.15	7.10	7.12	7.10	7.14	6.92%	7.12%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	6.84	6.92	7.03	6.82	6.76	6.99	7.05	7.23	7.38	7.32	7.25	7.40	7.08%	7.32%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	6.69	6.87	6.96	6.67	6.72	6.94	7.18	7.45	7.51	7.47	7.49	7.47	7.12%	7.48%
CenturyLink, Inc.	5	156700AJ5	Fixed Rt Sr Nt	02/15/2015	BB	4.69	4.75	4.73	4.72	4.78	4.80	4.79	4.78	4.79	4.78	4.80	4.81	4.77%	4.80%
CenturyTel, Inc.	5.5	156700AK2	SrNts'O'	04/01/2013	BB	5.46	5.47	5.50										5.48%	
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts	04/01/2017	BB	5.43	5.51	5.54	5.39	5.44	5.51	5.52	5.60	5.56	5.49	5.49	5.44	5.49%	5.47%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.28	7.49	7.56	7.26	7.37	7.59	7.59	7.86	7.84	7.89	7.86	7.89	7.62%	7.88%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	6.06	6.16	6.16	6.16	6.17	6.24	6.28	6.29	6.29	6.31	6.32	6.33	6.23%	6.32%
Qwest Communications Internatio	7.5	749121BR9	Sr Nts'B'	02/15/2014	BB	7.50	7.50	7.50	7.50	7.48	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50%	7.50%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/2031	BB	7.51	7.50	7.63	7.45	7.43	7.78	7.71	8.15	8.07	8.01	8.11	8.09	7.79%	8.07%
Qwest Cap Fdg Inc	7.62	74913EAQ3	Nts 144a	8/3/2021	BB	6.95	7.00	7.07	6.68	6.71	6.93	6.93	7.40	7.40	7.20	7.19	7.26	7.06%	7.22%
Qwest Cap Funding	7.62	74913EAQ3	Nts	08/03/2021	BB	6.95	7.00	7.07	6.68	6.71	6.93	6.93	7.40	7.40	7.20	7.19	7.26	7.06%	7.22%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/2028	BB	6.76	6.88	7.14	6.88	6.84	7.12	7.12	7.57	7.66	7.49	7.51	7.49	7.21%	7.50%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/2018	BB	5.70	5.77	5.80	5.75	5.75	5.85	5.89	6.01	6.06	5.99	5.99	5.99	5.88%	5.99%

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Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/2023	BB-	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98%	8.98%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>	12/01/2028	BB-	6.52	6.49	6.59	6.39	6.56	6.52	6.63	6.73	6.92	6.94	6.96	7.05	6.69%	6.98%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.20	8.76	8.63	8.63	8.69	9.13	9.06	9.19	9.18	8.69	8.93	9.16	8.85%	8.93%
GTE North Inc	6.73	362337AK3	Deb 'G'	02/15/2028	BB-	7.19	7.04	7.00	6.91	6.87	7.09	7.12	7.00	7.42	7.31	7.69	7.64	7.19%	7.55%
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/2022	BB-	7.58	7.61	7.45	7.40	7.03	7.41	7.70	8.00	8.00	7.83	7.78	7.78	7.63%	7.80%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	5.51	5.56	5.53	5.52	5.55	5.67	5.62	5.66	5.64	5.55	5.51	5.49	5.57%	5.52%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	5.51	5.56	5.53	5.52	5.55	5.67	5.62	5.66	5.64	5.55	5.51	5.49	5.57%	5.52%
Sprint Capital	6.88	852060AD4	Nts	11/15/2028	B+	6.57	6.87	6.74	6.72	6.87	6.92	7.37	7.66	7.59	7.29	7.23	7.29	7.09%	7.27%
Sprint Capital	6.9	852060AG7	Nts	05/01/2019	B+	6.27	6.38	6.30	6.35	6.37	6.50	6.50	6.73	6.66	6.43	6.35	6.31	6.43%	6.36%
Sprint Capital	8.75	852060AT9	Nts	03/15/2032	B+	7.15	7.49	7.35	7.39	7.51	7.70	8.17	8.57	8.55	8.12	8.13	8.15	7.86%	8.13%
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93%	6.93%
Windstream Corp.	8.12	97381WAC8	SrNts	08/01/2013	B	7.85	7.90	7.95	8.00	8.06	8.08							7.97%	
Windstream Corp.	7	97381WAF1	SrNts	03/15/2019	B	6.82	6.86	6.84	6.83	6.86	6.91	6.91	6.83	6.84				6.86%	
Centennial Com/Cell Op/PR	8.12	151352AB7	Sr Nts	02/01/2014	NR	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81	7.81%	7.81%
Centennial Commun/Oper Co	10.12	15135EAB1	GtdSr Nts	06/15/2013	NR	9.81	9.81	9.81	9.81	9.81								9.81%	
Cincinnati Bell Tel	8.38	171871AE6	Sr Sub Nts	01/15/2014	NR	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	7.74	8.12%	8.01%
Level 3 Finan	12.25	527298AF0	SrNts	03/15/2013	NR	11.56	11.56											11.56%	
Level 3 Finan	9.25	527298AM5	SrNts	11/01/2014	NR	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04%	9.04%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.34	6.35	6.38	6.38	6.42	6.44	6.47	6.50	6.53	6.55	6.55	6.55	6.46%	6.55%
Qwest Communications Internatio	7.5	749121BV0	Sr Nts'B'	02/15/2014	NR	7.50	7.50	7.42	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.49%	7.50%
Southwest'n Bell Tel	7.375	845335BX5	Deb	07/15/2027	NR	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18%	7.18%
Southwest'n Bell Tel	7	845335BZ0	Deb	11/15/2027	NR	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84%	6.84%
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/2022	NR	7.00	7.00	6.98	6.85	7.10	7.34	7.33	7.51	7.19	7.14	7.29	7.41	7.18%	7.28%
Tele-Communications(Old)	7.88	879240AX7	Sr Deb	08/01/2013	NR	7.59	7.63	7.67	7.73	7.78	7.82	7.88						7.73%	
Verizon Virginia	4.625	92345NAA8	Deb 'A'	03/15/2013	NR	4.58	4.58											4.58%	
			Counts of data			144	144	140	139	138	134	132	130	130	128	126	126	144	128

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	5.75%	5.90%
BBB's	6.31%	6.58%
BB's	6.92%	7.08%
B's	7.19%	7.17%
NR's	7.82%	7.53%
ALL	6.33%	6.45%
BBB- & Above	6.01%	6.21%
BB- & Above	6.15%	6.35%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications with significant portion of Cable TV Service
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Comcast Cable Commun	8.88	20029PAG4	Sr Nt - Exchange	5/1/2017	A-	6.91	6.91	6.88	6.87	6.94	7.08	7.08	7.15	7.11	7.11	7.13	7.22	7.03%	7.15%
Comcast Cable Commun	8.5	20029PAH2	Sr Nt - Exchange	5/1/2027	A-	6.05	6.04	6.03	5.86	6.07	6.37	6.25	6.38	6.23	6.15	6.33	6.47	6.19%	6.32%
Comcast Cable Commun	7.12	20029PAN9	Sr Nt	6/15/2013	A-	6.95	6.98	7.02	7.06									7.00%	
Comcast Corp.	6.5	20030NAB7	Nt	1/15/2015	A-	5.85	5.86	5.88	5.91	5.94	5.97	5.99	6.02	6.04	6.06	6.09	6.13	5.98%	6.09%
Comcast Corp.	7.05	20030NAC5	Sr Nt	3/15/2033	A-	5.39	5.38	5.32	5.06	5.32	5.62	5.59	5.80	5.69	5.60	5.78	5.82	5.53%	5.73%
Comcast Corp.	5.3	20030NAE1	Sr Nt	1/15/2014	A-	5.07	5.08	5.10	5.12	5.15	5.16	5.18	5.20	5.22	5.24	5.27	5.29	5.17%	5.27%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr N	6/15/2035	A-	4.96	4.86	4.84	4.63	4.91	5.19	5.10	5.27	5.14	5.04	5.29	5.30	5.04%	5.21%
Comcast Corp.	4.95	20030NAG6	Gtd Fixed Rt Sr N	6/15/2016	A-	4.41	4.40	4.39	4.39	4.43	4.48	4.46	4.49	4.48	4.48	4.50	4.53	4.45%	4.50%
Comcast Corp.	5.9	20030NAL5	Gtd Nt	3/15/2016	A-	5.15	5.15	5.15	5.16	5.20	5.24	5.24	5.27	5.27	5.28	5.30	5.34	5.23%	5.31%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	5.20	5.06	5.07	4.82	5.12	5.50	5.35	5.52	5.38	5.29	5.57	5.55	5.29%	5.47%
Comcast Corp.	6.5	20030NAP6	Nts	1/15/2017	A-	5.44	5.43	5.43	5.41	5.50	5.59	5.57	5.62	5.59	5.59	5.62	5.67	5.54%	5.63%
Comcast Corp.	5.88	20030NAR2	Nt	2/15/2018	A-	4.92	4.88	4.87	4.85	4.92	5.04	5.01	5.08	5.03	5.01	5.04	5.12	4.98%	5.06%
Comcast Corp.	6.3	20030NAU5	Sr Nts	11/15/2017	A-	5.19	5.17	5.17	5.14	5.23	5.35	5.30	5.37	5.34	5.33	5.35	5.40	5.28%	5.36%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	5.31	5.18	5.19	4.95	5.24	5.60	5.46	5.64	5.51	5.38	5.70	5.65	5.40%	5.58%
AOL Time Warner	7.62	00184AAC9	Deb	4/15/2031	BBB	5.61	5.63	5.64	5.39	5.63	6.06	5.88	6.14	6.10	6.01	6.12	6.02	5.85%	6.05%
Time Warner Cos Inc	9.15	887315AM1	Deb Dtd 02/04/19	2/1/2023	BBB	6.29	6.34	6.31	6.18	6.42	6.70	6.71	6.97	6.89	6.80	6.79	6.90	6.61%	6.83%
Time Warner Cos Inc	6.88	887315AY5	Deb	6/15/2018	BBB	5.52	5.52	5.51	5.49	5.61	5.72	5.65	5.77	5.71	5.69	5.70	5.78	5.64%	5.72%
Time Warner Cos Inc	8.05	887315BA6	Deb	1/15/2016	BBB	6.86	6.89	6.92	6.93	7.00	7.01	7.01	7.09	7.09	7.10	7.13	7.11	7.01%	7.11%
Time Warner Cos Inc	6.85	887315BB4	Deb	1/15/2026	BBB	5.62	5.65	5.66	5.53	5.79	6.08	6.02	6.24	6.14	6.03	6.15	6.22	5.93%	6.13%
Time Warner Cos Inc	7.57	887315BH1	Deb	2/1/2024	BBB	5.66	5.71	5.64	5.56	5.77	6.08	6.01	6.23	6.14	6.04	6.10	6.18	5.93%	6.11%
Time Warner Cos Inc	7.25	887315BJ7	Deb	10/15/2017	BBB	5.82	5.83	5.84	5.82	5.93	6.05	5.99	6.05	6.03	6.02	6.06	6.08	5.96%	6.05%
Time Warner Cos Inc	6.95	887315BM0	Gtd Deb	1/15/2028	BBB	5.46	5.40	5.40	5.27	5.50	5.80	5.74	5.91	5.80	5.68	5.74	5.89	5.63%	5.77%
Time Warner Cos Inc	6.62	887315BN8	Deb	5/15/2029	BBB	5.32	5.34	5.34	5.18	5.44	5.73	5.65	5.88	5.80	5.73	5.75	5.77	5.58%	5.75%
Time Warner Inc.	5.88	887317AC9	Nt	11/15/2016	BBB	5.02	5.04	5.05	5.04	5.09	5.16	5.12	5.19	5.18	5.18	5.18	5.20	5.12%	5.19%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	5.34	5.38	5.40	5.16	5.48	5.82	5.57	5.93	5.80	5.70	5.83	5.75	5.60%	5.76%
Time Warner Entertainment	8.38	88731EAF7	Sr Deb	3/15/2023	BBB	5.94	6.12	6.14	6.02	6.27	6.55	7.22	7.33	7.17	7.11	7.24	7.28	6.70%	7.21%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	6.82	6.86	6.89	6.94	6.92	6.96	7.00	7.02	7.07	7.09	7.12	7.14	6.99%	7.12%
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	6.75	6.76	6.79	6.81	6.82	6.88	6.90	6.93	6.94	6.96	7.00	7.04	6.88%	7.00%
Qwest Corp	3.56	74913GAN5	Nt Fltg Rate	6/15/2013	BBB-	3.53	3.54	3.51	3.52									3.53%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	5.58	5.57	5.58	5.60	5.63	5.75	5.74	5.79	5.76	5.78	5.75	5.75	5.69%	5.76%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	5.62	5.58	5.53	5.40	5.64	5.96	6.07	6.22	6.14	6.10	6.18	6.36	5.90%	6.21%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	6.84	6.92	7.03	6.82	6.76	6.99	7.05	7.23	7.38	7.32	7.25	7.40	7.08%	7.32%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	6.69	6.87	6.96	6.67	6.72	6.94	7.18	7.45	7.51	7.47	7.49	7.47	7.12%	7.48%
CenturyTel, Inc.	5	156700AJ5	Sr Nts'M'	02/15/2015	BB	4.69	4.75	4.73	4.72	4.78	4.80	4.79	4.78	4.79	4.78	4.80	4.81	4.77%	4.80%
CenturyTel, Inc.	5.5	156700AK2	SrNts'O'	04/01/2013	BB	5.46	5.47											5.47%	
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts S	04/01/2017	BB	5.43	5.51	5.54	5.39	5.44	5.51	5.52	5.60	5.56	5.49	5.49	5.44	5.49%	5.47%
CenturyTel, Inc.	6	156700AL0	SrNts'N'	04/01/2017	BB	5.43	5.51	5.54	5.39	5.44	5.51	5.52	5.60	5.56	5.49	5.49	5.44	5.49%	5.47%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.28	7.49	7.56	7.26	7.37	7.59	7.59	7.86	7.84	7.89	7.86	7.89	7.62%	7.88%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	6.06	6.16	6.16	6.16	6.17	6.24	6.28	6.29	6.29	6.31	6.32	6.33	6.23%	6.32%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/2023	BB-	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98%	8.98%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>G	12/01/2028	BB-	6.52	6.49	6.59	6.39	6.56	6.52	6.63	6.73	6.92	6.94	6.96	7.05	6.69%	6.98%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.20	8.76	8.63	8.63	8.69	9.13	9.06	9.19	9.18	8.69	8.93	9.16	8.85%	8.93%
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93%	6.93%
Cincinnati Bell Tel	8.38	171871AE6	Sr Sub Nts	01/15/2014	NR	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	8.15	7.74	8.12%	8.01%
Time Warner Telecom	2.38	887319AC5	Sr Deb Conv	4/1/2026	NR	1.61	1.73	1.78	1.65	1.55	1.59	1.50						1.63%	
			Counts of data			45	45	44	44	42	42	42	41	41	41	41	41	45	41

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	5.58%	5.59%
BBB's	5.91%	6.24%
BB's	6.71%	6.96%
B's	6.93%	6.93%
NR's	4.87%	8.01%
ALL	5.98%	6.27%
BBB- & Above	5.76%	5.95%
BB- & Above	6.01%	6.21%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/2031	A	5.47	5.51	5.49	5.25	5.64	5.90	6.60	6.38	6.51	6.42	6.31	6.44	5.99%	6.39%
AT&T Corp.	6.5	001957AW9	Nts	03/15/2029	A-	4.67	4.71	4.69	4.42	4.81	5.07	5.40	5.63	5.61	5.22	5.41	5.54	5.10%	5.39%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/2031	A-	4.27	4.41	4.34	4.06	4.39	4.70	4.75	4.98	4.93	4.87	5.09	5.14	4.66%	5.03%
AT&T Corp.	6.5	001957BJ7	Nts	03/15/2013	A-	1.62												1.62%	
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	4.65	4.78	4.84	4.57	4.96	5.35	5.48	5.58	5.73	5.62	5.66	5.54	5.23%	5.61%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	4.69	4.81	4.88	4.58	4.94	5.49	5.32	5.53	5.68	5.67	5.66	5.54	5.23%	5.62%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	4.67	4.81	4.88	4.56	4.94	5.49	5.32	5.56	5.67	5.65	5.67	5.50	5.23%	5.61%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/2018	A-	1.71	1.70	1.72	1.51	1.68	2.22	1.97	2.31	2.22	2.00	2.06	2.26	1.95%	2.11%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/2018	A-	1.74	1.75	1.75	1.53	1.74	2.20	1.98	2.34	2.34	2.04	2.12	2.31	1.99%	2.16%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	4.69	4.80	4.88	4.58	4.93	5.49	5.32	5.56	5.67	5.67	5.76	5.54	5.24%	5.66%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/2031	A-	4.17	4.28	4.28	4.04	4.39	4.75	4.90	5.08	5.36	5.08	5.11	5.09	4.71%	5.09%
AT&T Broadband	8.38	00209TAA3	Nts	03/15/2013	A-	0.50												0.50%	
AT&T Broadband	9.46	00209TAB1	Nts	11/15/2022	A-	3.47	3.28	3.22	2.88	3.41	3.96	3.96	4.24	4.10	3.85	4.09	4.20	3.72%	4.05%
ALLTEL Corp	6.5	020039AD5	Deb	11/1/2013	A-	0.74	0.46	0.47	0.53	0.74	0.65	0.76	0.51	1.55				0.71%	
ALLTEL Corp	7	020039AE3	Deb	3/15/2016	A-	1.13	1.09	1.07	1.07	1.22	1.43	1.39	1.59	1.48	1.40	1.22	1.36	1.29%	1.33%
ALLTEL Corp	6.8	020039AJ2	Deb	5/1/2029	A-	3.87	3.91	3.89	4.15	4.54	4.87	4.84	5.08	5.41	5.02	5.24	5.29	4.68%	5.18%
ALLTEL Corp	7.88	020039DC4	Sr Nt	7/1/2032	A-	3.87	3.96	4.29	4.18	4.59	5.00	4.95	5.27	5.41	5.11	5.29	5.29	4.77%	5.23%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	4.42	4.76	4.93	4.49	5.21	5.65	5.50	5.93	5.76	5.52	5.66	5.70	5.29%	5.63%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/2026	A-	5.34	5.36	5.31	5.02	5.51	5.91	6.00	6.27	6.11	6.00	6.24	6.50	5.80%	6.25%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/2030	A-	5.27	5.31	5.29	5.00	5.34	5.65	5.70	5.93	5.91	5.87	6.06	6.14	5.62%	6.02%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/2031	A-	5.07	5.21	5.14	5.00	5.34	5.65	5.76	5.93	5.81	5.72	5.80	5.84	5.52%	5.79%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.22	5.21	5.24	5.00	5.34	5.80	5.80	5.96	5.91	5.77	5.81	5.94	5.58%	5.84%
BellSouth Corp.	5.2	079860AG7	Nts	09/15/2014	A-	0.77	0.74	0.67	0.68	0.71	0.90	0.86	0.59	0.65	0.53	0.63	0.56	0.69%	0.57%
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.27	5.16	5.14	4.99	5.34	5.65	5.75	5.93	5.86	5.75	5.81	5.94	5.55%	5.83%
BellSouth Corp	5.2	079860AL6	Nt	12/15/2016	A-	1.41	1.44	1.42	1.26	1.36	1.64	1.50	1.69	1.49	1.48	1.45	1.54	1.47%	1.49%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/2025	A-	4.47	4.49	4.51	4.27	4.56	4.96	5.20	5.46	5.32	5.20	5.44	5.70	4.97%	5.45%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	5.67	5.71	5.69	5.35	5.74	6.05	6.25	6.48	6.36	6.27	6.46	6.59	6.05%	6.44%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.90	5.94	5.97	5.73	6.12	6.43	6.47	6.70	6.66	6.57	6.76	6.89	6.35%	6.74%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.90	5.94	5.97	5.73	6.12	6.43	6.47	6.70	6.66	6.57	6.76	6.89	6.35%	6.74%
BellSouthTelecommunications	6.3	079867AQ0	AmortizingDeb	12/15/2015	A-	4.37	4.49	4.61	4.73	4.88	5.01	4.38	4.60	3.12	3.33	3.51	5.54	4.38%	4.13%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/2028	A-	4.77	4.76	4.56	4.20	4.49	4.89	5.20	5.51	5.46	5.25	5.39	5.55	5.00%	5.40%
Cingular Wireless LLC	7.12	17248RAJ5	Sr Nt	12/15/2031	A-	4.41	4.34	4.32	4.08	4.47	4.78	4.90	5.23	5.26	5.07	5.26	5.24	4.78%	5.19%
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/2026	A-	4.44	4.46	4.41	4.17	4.41	4.81	4.95	5.21	5.12	5.34	5.62	5.88	4.90%	5.61%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/2022	A-	3.34	3.36	3.31	3.42	3.91	4.31	4.40	4.66	4.62	4.35	4.59	4.85	4.09%	4.60%
Pacific Bell	7.125	694032AT0	Deb	03/15/2026	A-	4.04	4.01	3.96	3.92	4.26	4.71	4.80	5.06	4.93	4.81	5.04	4.95	4.54%	4.93%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.05	7.06	7.00	7.05	7.09	7.11	7.13	7.15	7.15	7.15	7.15	7.15	7.10%	7.15%
SBCCommunications	5.62	78387GAL7	GlobalNts	06/15/2016	A-	1.21	1.14	1.12	1.06	1.22	1.48	1.20	1.48	1.38	1.15	1.16	1.32	1.24%	1.21%
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	4.65	4.78	4.76	4.47	4.87	5.25	5.20	5.53	5.61	5.55	5.61	5.44	5.14%	5.53%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	4.65	4.78	4.76	4.47	4.87	5.25	5.20	5.53	5.61	5.55	5.61	5.44	5.14%	5.53%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	4.65	4.78	4.79	4.47	4.86	5.24	5.20	5.53	5.56	5.55	5.61	5.44	5.14%	5.53%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/2015	A-	1.02	0.95	0.89	0.88	0.92	1.35	1.35	1.42	1.41	1.10	0.96	1.02	1.11%	1.03%
TCI Communications	8.75	872287AC1	Sr Deb	08/01/2015	A-	1.15	1.03	0.87	0.86	0.98	1.10	1.02	1.08	1.03	0.72	0.78	0.80	0.95%	0.77%
TCI Communications	7.875	872287AF4	Sr Deb	02/15/2026	A-	4.15	4.11	4.08	3.67	4.18	4.53	4.44	4.78	4.59	4.32	4.50	4.65	4.33%	4.49%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/2028	A-	4.47	4.21	4.10	3.72	4.23	4.75	4.40	4.74	4.55	4.41	4.67	4.85	4.43%	4.64%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/2022	A-	4.36	4.32	4.26	3.94	4.45	4.94	4.88	5.22	4.62	4.47	4.71	4.85	4.59%	4.68%
Tele-Communications(Old)	7.88	879240AX7	Sr Deb	08/01/2013	A-	0.62	0.50	0.41	0.63	0.98	0.46							0.60%	
Telefonos de Mexico, S.A.B. de C.	5.5	879403AS2	Sr Nt	1/27/2015	A-	1.29	1.22	1.86	1.25	1.48	2.46	1.45	1.93	1.41	1.05	0.99	1.57	1.50%	1.20%
Verizon New England	4.75	92344RAB8	Deb 'C'	10/01/2013	A-	0.44	0.47	0.46	0.51	0.59	0.42	0.61	0.36					0.48%	
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/2032	A-	4.12	4.56	4.59	4.47	4.84	5.30	5.35	5.63	5.29	5.27	5.46	5.44	5.03%	5.39%
Vodafone Group plc	5.38	92857WAD2	Nt	1/30/2015	A-	0.79	0.83	0.79	0.74	0.84	1.09	1.03	1.02	0.86	0.83	0.77	0.81	0.87%	0.80%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	7/15/2018	A-	1.75	1.77	1.76	1.56	1.92	2.41	2.44	2.65	2.27	2.03	2.02	2.29	2.07%	2.11%
Vodafone Group plc	5	92857WAF7	Nt	12/16/2013	A-	0.55	0.50	0.48	0.55	0.55	0.65	0.68	0.72	0.61	0.76			0.61%	0.76%
Vodafone Group plc	5	92857WAG5	Gbl Nt	9/15/2015	A-	0.84	0.86	0.89	0.93	0.86	1.08	1.07	1.15	0.99	0.95	0.92	0.92	0.96%	0.93%
Vodafone Group Plc	5.75	92857WAK6	Notes	03/15/2016	A-	1.08	1.01	1.02	0.97	1.17	1.56	1.37	1.51	1.30	1.25	1.11	1.25	1.22%	1.20%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/2017	A-	1.37	1.44	1.45	1.32	1.70	2.21	2.05	2.33	1.88	1.74	1.55	1.75	1.73%	1.68%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/2037	A-	4.20	4.75	4.78	4.52	4.79	5.44	5.40	5.68	5.41	5.27	5.49	5.50	5.10%	5.42%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/2026	A-	5.72	5.76	5.74	5.50	5.89	6.20	6.30	6.53	6.46	6.37	6.56	6.69	6.14%	6.54%
Bell Atlantic-PA	6	07786DAA4	Deb	12/1/2028	BBB+	4.68	4.96	4.91	4.67	5.16	5.51	5.60	5.72	6.27	5.69	5.89	6.15	5.43%	5.91%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/2030	BBB+	5.37	5.41	5.39	5.15	5.54	5.80	5.90	6.13	6.36	6.17	6.36	6.49	5.84%	6.34%
Bell Tel. of Penna	8.75	078167BA0	Deb	8/15/2031	BBB+	5.42	5.46	5.44	5.20	5.59	5.85	5.95	6.18	5.81	6.16	6.35	6.48	5.82%	6.33%
Chesapeake Pot.Tel Md	8	165069AP0	Deb	10/15/2029	BBB+	5.37	5.41	5.39	5.15	5.54	5.80	6.00	6.23	6.51	6.17	6.36	6.42	5.86%	6.32%
Chesapeake Pot.Tel Md	8.3	165069AQ8	Deb	8/1/2031	BBB+	5.62	5.66	5.64	5.40	5.79	6.05	6.40	6.48	6.56	6.47	6.66	6.69	6.12%	6.61%
Chesapeake Pot.Tel Md	7.15	165069AS4	Deb	5/1/2023	BBB+	6.97	7.02	7.08	7.09	7.11	7.14	7.15	7.15	7.15	7.15	7.15	0.00	6.51%	4.77%
Chesapeake&Pot.Tel VA	8.38	165087AL1	Forty Yr Deb	10/1/2029	BBB+	5.26	5.30	5.28	5.04	5.43	5.69	6.40	6.33	6.51	6.17	6.36	6.49	5.86%	6.34%
Chesapeake&Pot.Tel VA	7.88	165087AN7	Deb	1/15/2022	BBB+	3.74	3.76	3.71	3.50	3.99	4.34	4.55	4.81	4.92	4.80	5.04	5.30	4.37%	5.05%
GTE California	6.75	362311AG7	Deb 'F'	05/15/2027	BBB+	5.14	4.96	4.91	4.87	5.36	5.71	5.80	6.06	6.11	5.64	5.88	6.15	5.55%	5.89%
GTE Corp	8.75	362320AT0	Deb	11/01/2021	BBB+	3.59	3.80	3.75	3.35	3.91	4.26	3.95	4.21	4.47	4.15	4.39	4.65	4.04%	4.40%
GTE Corp	6.84	362320AZ6	Deb	04/15/2018	BBB+	1.94	1.92	1.93	1.83	2.19	2.60	2.34	2.71	2.87	2.47	2.54	2.74	2.34%	2.58%
GTE Corp	6.94	362320BA0	Deb	04/15/2028	BBB+	4.22	4.31	4.41	4.04	4.46	4.98	4.90	5.16	5.33	5.20	5.44	5.55	4.83%	5.40%
GTE Florida	6.86	362333AH9	Deb 'E'	02/01/2028	BBB+	5.09	5.11	5.11	4.87	5.36	5.71	5.73	5.99	6.16	6.05	6.29	6.30	5.65%	6.21%
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/2029	BBB+	5.17	5.21	5.19	5.05	5.32	5.58	5.73	5.98	6.21	5.97	6.06	6.14	5.63%	6.06%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/2029	BBB+	5.22	5.26	5.24	5.24	5.63	5.89	6.08	6.31	6.46	6.27	6.46	6.29	5.86%	6.34%
New Jersey Bell Tel	8	645767AY0	Deb	06/01/2022	BBB+	3.74	3.76	3.71	3.47	4.26	4.61	4.70	4.96	5.07	4.95	5.19	4.95	4.45%	5.03%
New York Telephone Co	7	650094BT1	Deb	05/01/2013	BBB+	1.04	0.44	0.26										0.58%	
New York Telephone Co	7	650094BV6	Deb	06/15/2013	BBB+	1.06	0.45	0.39	0.85									0.69%	
New York Telephone Co	6.7	650094CA1	Deb	11/01/2023	BBB+	6.18	6.23	6.27	6.33	6.39	6.44	6.51	6.56	6.63	6.66	6.69	6.71	6.47%	6.69%
New York Telephone Co	7	650094CB9	Deb	12/01/2033	BBB+	6.67	6.69	6.72	6.75	6.79	6.82	6.85	6.94	6.96	6.97	6.99	7.00	6.85%	6.99%
New York Telephone Co	6.5	650094CJ2	Deb	04/15/2028	BBB+	5.38	5.40	5.34	5.10	5.59	5.76	5.85	6.12	6.26	6.15	6.39	6.65	5.83%	6.40%
Verizon Communications Inc.	5.55	92343VAC8	Nts	02/15/2016	BBB+	1.01	0.99	1.02	0.96	1.15	1.49	1.18	1.33	1.29	1.13	1.04	1.07	1.14%	1.08%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	4.46	4.59	4.80	4.62	4.92	5.29	5.20	5.43	5.61	5.47	5.56	5.42	5.11%	5.48%
Verizon Communications Inc.	5.5	92343VAG9	Nts	04/01/2017	BBB+	1.37	1.37	1.36	1.21	1.56	1.98	1.79	1.98	1.80	1.62	1.61	1.47	1.59%	1.57%
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/2032	BBB+	4.42	4.31	4.58	4.73	4.99	5.43	5.30	5.53	5.75	5.52	5.61	5.34	5.13%	5.49%
Verizon Global Fndg	4.375	92344GAV8	Nts	06/01/2013	BBB+	0.34	0.33	0.35	0.74									0.44%	
Verizon Global Fndg	4.9	92344GAW6	Nts	09/15/2015	BBB+	0.82	0.70	0.79	0.85	0.91	1.00	0.85	0.92	1.04	0.93	0.87	0.86	0.88%	0.89%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	4.40	4.46	4.74	4.55	4.86	5.23	5.18	5.43	5.53	5.44	5.50	5.36	5.06%	5.43%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/2033	BBB+	5.02	4.96	4.94	4.75	5.14	5.40	5.50	5.73	5.86	5.70	5.69	5.56	5.35%	5.65%
VerizonNY	7.38	92344XAB5	Sr Deb Ser B	4/1/2032	BBB+	5.02	5.11	5.24	4.92	5.19	5.58	5.55	6.18	6.06	6.10	6.14	6.14	5.60%	6.13%
Carolina Tel. & Tel	6.75	144195AN4	Deb	08/15/2013	BBB-	3.12	3.11	3.11	3.18	3.29	3.03							3.14%	
Centel Capital	9	15133KAC7	Deb	10/15/2019	BBB-	5.04	5.27	4.73	4.63	4.99	5.20	5.09	5.38	5.02	4.82	4.84	5.23	5.02%	4.96%
Mountain States Tel&Tel	7.38	624284BD6	Deb	05/01/2030	BBB-	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52%	7.52%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/2030	BBB-	7.46	6.94	6.92	6.68	6.91	7.17	6.85	7.05	6.94	7.03	7.22	7.35	7.04%	7.20%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	1.47	1.60	1.58	1.74	1.16	1.30	1.35	1.29	1.51	1.28	1.23	0.84	1.36%	1.12%
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	2.02	1.93	1.92	1.91	1.77	2.00	1.95	1.97	1.79	1.73	1.74	1.83	1.88%	1.77%
Qwest Corp	3.56	74913GAN5	Nt Fltg Rate	6/15/2013	BBB-	1.84	2.45	1.75	1.24									1.82%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	2.49	2.37	2.33	2.38	2.46	3.00	2.84	3.03	2.81	2.86	2.61	2.50	2.64%	2.66%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	4.99	4.91	4.81	4.57	5.01	5.56	5.76	6.02	5.86	5.80	5.94	6.25	5.46%	6.00%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/2033	BBB-	6.27	6.16	6.19	5.97	6.39	6.92	6.85	7.08	6.96	6.87	7.08	7.19	6.66%	7.05%
U S WESTCommunications	7.5	912920AB1	Deb	06/15/2023	BBB-	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	7.45	0.00	6.83%	4.97%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/2033	BBB-	6.83	6.89	6.95	6.80	6.87	7.03	6.99	7.13	7.13	7.15	7.35	7.25	7.03%	7.25%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	6.82	6.98	6.96	6.92	6.92	6.96	6.99	7.38	7.25	7.37	7.56	7.63	7.15%	7.52%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/2025	BBB-	5.54	5.54	5.64	5.42	5.41	5.91	5.80	6.06	5.86	6.40	6.43	6.44	5.87%	6.42%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/2026	BBB-	7.08	7.08	7.11	7.06	7.01	7.19	7.07	7.32	7.19	7.12	7.12	7.10	7.12%	7.11%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	6.75	6.98	7.07	6.85	6.85	7.18	7.14	7.78	7.31	7.37	7.46	7.54	7.19%	7.46%
United Tel Co(Florida)	6.875	913026AS9	1st FF	07/15/2013	BBB-	2.52	2.05	2.03	2.21	2.46								2.25%	
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/2025	BBB-	5.99	5.74	5.69	5.45	6.66	7.01	6.55	6.81	6.62	6.50	6.74	7.00	6.40%	6.75%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/2023	BBB-	5.89	5.71	5.66	5.42	6.48	6.83	5.95	6.21	6.02	5.75	5.99	6.25	6.01%	6.00%
Aliant Communications	6.75	016090AA0	Nts	04/01/2028	BB+	6.62	6.29	6.41	6.72	6.96	7.30	7.19	7.38	7.31	7.34	7.31	7.37	7.02%	7.34%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	6.59	6.72	6.91	6.55	6.43	6.83	6.95	7.26	7.51	7.42	7.29	7.55	7.00%	7.42%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	6.59	6.86	7.01	6.55	6.63	6.98	7.35	7.77	7.87	7.81	7.85	7.82	7.26%	7.83%
CenturyLink, Inc.	5	156700AJ5	Fixed Rt Sr Nt S	02/15/2015	BB	1.72	2.30	1.99	1.72	2.29	2.48	2.18	1.86	1.87	1.46	1.64	1.61	1.93%	1.57%
CenturyTel, Inc.	5.5	156700AK2	SrNts'O'	04/01/2013	BB	1.34	1.59											1.47%	
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts	04/01/2017	BB	3.29	3.66	3.78	2.93	3.13	3.49	3.50	3.89	3.62	3.12	3.06	2.68	3.35%	2.95%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.12	7.38	7.46	7.10	7.24	7.50	7.50	7.83	7.81	7.87	7.83	7.87	7.54%	7.86%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	1.86	2.33	2.17	2.06	2.03	2.33	2.43	2.39	2.25	2.21	2.15	2.07	2.19%	2.14%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Qwest Communications Internatior	7.5	749121BR9	Sr Nts'B'	02/15/2014	BB	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50%	7.50%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/2031	BB	7.42	7.41	7.59	7.35	7.31	7.80	7.69	8.29	8.18	8.10	8.24	8.21	7.80%	8.18%
Qwest Cap Fdg Inc	7.62	74913EAQ3	Nts 144a	8/3/2021	BB	6.14	6.26	6.41	5.47	5.53	6.04	6.03	7.12	7.11	6.64	6.61	6.77	6.34%	6.67%
Qwest Cap Funding	7.62	74913EAQ3	Nts	08/03/2021	BB	6.14	6.26	6.41	5.47	5.53	6.04	6.03	7.12	7.11	6.64	6.61	6.77	6.34%	6.67%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/2028	BB	6.69	6.88	7.28	6.88	6.82	7.26	7.26	7.94	8.07	7.82	7.86	7.83	7.38%	7.84%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/2018	BB	3.79	4.02	4.08	3.87	3.83	4.19	4.31	4.74	4.88	4.59	4.56	4.53	4.28%	4.56%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/2023	BB-	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84%	9.84%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>(	12/01/2028	BB-	6.65	6.60	6.76	6.45	6.71	6.66	6.82	6.99	7.28	7.32	7.35	7.50	6.92%	7.39%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	7.98	8.71	8.53	8.53	8.61	9.16	9.08	9.24	9.22	8.60	8.91	9.20	8.81%	8.90%
GTE North Inc	6.73	362337AK3	Deb 'G'	02/15/2028	BB-	7.44	7.21	7.16	7.02	6.95	7.31	7.35	7.17	7.81	7.65	8.24	8.17	7.46%	8.02%
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/2022	BB-	6.09	6.13	5.80	5.65	4.83	5.64	6.23	6.83	6.82	6.45	6.32	6.30	6.09%	6.36%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	3.53	3.76	3.54	3.45	3.54	4.18	3.86	4.01	3.88	3.23	2.93	2.72	3.55%	2.96%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	3.53	3.76	3.54	3.45	3.54	4.18	3.86	4.01	3.88	3.23	2.93	2.72	3.55%	2.96%
Sprint Capital	6.88	852060AD4	Nts	11/15/2028	B+	6.41	6.87	6.66	6.64	6.87	6.95	7.62	8.05	7.96	7.51	7.43	7.52	7.21%	7.49%
Sprint Capital	6.9	852060AG7	Nts	05/01/2019	B+	5.01	5.35	5.06	5.20	5.25	5.67	5.66	6.36	6.14	5.36	5.08	4.90	5.42%	5.11%
Sprint Capital	8.75	852060AT9	Nts	03/15/2032	B+	6.67	7.12	6.93	6.99	7.13	7.40	8.01	8.53	8.50	7.93	7.96	7.98	7.60%	7.96%
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45%	6.45%
Windstream Corp.	8.12	97381WAC8	SrNts	08/01/2013	B	1.35	1.64	1.68	1.92	3.50	2.72							2.14%	
Windstream Corp.	7	97381WAF1	SrNts	03/15/2019	B	6.47	6.59	6.53	6.50	6.57	6.72	6.72	6.48	6.50				6.56%	
Centennial Com/Cell Op/PR	8.12	151352AB7	Sr Nts	02/01/2014	NR	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95%	6.95%
Centennial Commun/Oper Co	10.12	15135EAB1	GtdSr Nts	06/15/2013	NR	9.02	9.02	9.02	9.02	9.02								9.02%	
Cincinnati Bell Tel	8.38	171871AE6	Sr Sub Nts	01/15/2014	NR	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54%	7.54%
Level 3 Finan	12.25	527298AF0	SrNts	03/15/2013	NR	9.84	9.84											9.84%	
Level 3 Finan	9.25	527298AM5	SrNts	11/01/2014	NR	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35%	8.35%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.24	6.26	6.29	6.30	6.35	6.38	6.42	6.46	6.50	6.52	6.52	6.52	6.40%	6.52%
Qwest Communications Internatior	7.5	749121BV0	Sr Nts'B'	02/15/2014	NR	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50%	7.50%
Southwest'n Bell Tel	7.375	845335BX5	Deb	07/15/2027	NR	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09%	7.09%
Southwest'n Bell Tel	7	845335BZ0	Deb	11/15/2027	NR	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77%	6.77%
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/2022	NR	4.47	4.43	4.37	4.05	4.56	5.05	4.99	5.33	4.62	4.47	4.78	5.00	4.68%	4.75%
			Counts of data			144	142	140	139	136	134	131	131	130	128	127	127	144	128

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	3.77%	4.30%
BBB's	4.76%	5.42%
BB's	5.89%	6.25%
B's	5.90%	6.75%
NR's	7.41%	6.93%
ALL	4.77%	5.23%
BBB- & Above	4.21%	4.80%
BB- & Above	4.50%	5.06%

**Investment Grade (BBB- & Above)*

Industry: Telecommunications with significant portion of Cable TV Service

Support for Debt Rating
Industry: Telecommunications, Cable TV
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Comcast Cable Commun	8.88	20029PAG4	Sr Nt - Exchange	5/1/2017	A-	1.90	1.80	1.54	1.36	1.52	2.01	1.86	2.06	1.75	1.60	1.51	1.79	1.73%	1.63%
Comcast Cable Commun	8.5	20029PAH2	Sr Nt - Exchange	5/1/2027	A-	4.60	4.56	4.53	4.22	4.58	5.10	4.87	5.10	4.82	4.66	4.97	5.21	4.77%	4.95%
Comcast Cable Commun	7.12	20029PAN9	Sr Nt	6/15/2013	A-	0.60	0.48	0.36	0.68									0.53%	
Comcast Corp.	6.5	20030NAB7	Nt	1/15/2015	A-	0.85	0.73	0.67	0.63	0.67	0.81	0.71	0.76	0.69	0.59	0.60	0.66	0.70%	0.62%
Comcast Corp.	7.05	20030NAC5	Sr Nt	3/15/2033	A-	4.68	4.65	4.55	4.13	4.54	5.01	4.95	5.28	5.10	4.96	5.23	5.29	4.86%	5.16%
Comcast Corp.	5.3	20030NAE1	Sr Nt	1/15/2014	A-	0.55	0.43	0.38	0.51	0.60	0.66	0.63	0.65	0.56	0.29	1.25		0.59%	0.77%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr	6/15/2035	A-	4.65	4.49	4.45	4.13	4.56	4.98	4.85	5.11	4.91	4.74	5.13	5.14	4.76%	5.00%
Comcast Corp.	4.95	20030NAG6	Gtd Fixed Rt Sr	6/15/2016	A-	1.25	1.13	0.96	0.87	1.08	1.39	1.10	1.28	1.05	0.95	0.99	1.14	1.10%	1.03%
Comcast Corp.	5.9	20030NAL5	Gtd Nt	3/15/2016	A-	1.18	1.06	0.95	0.85	0.99	1.24	1.03	1.18	1.05	0.89	0.93	1.09	1.04%	0.97%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	4.76	4.55	4.57	4.20	4.64	5.18	4.97	5.21	5.00	4.86	5.27	5.24	4.87%	5.12%
Comcast Corp.	6.5	20030NAP6	Nts	1/15/2017	A-	1.43	1.30	1.19	0.98	1.37	1.78	1.54	1.74	1.45	1.31	1.40	1.57	1.42%	1.43%
Comcast Corp.	5.88	20030NAR2	Nt	2/15/2018	A-	1.86	1.60	1.49	1.32	1.60	2.10	1.89	2.20	1.86	1.73	1.81	2.13	1.80%	1.89%
Comcast Corp.	6.3	20030NAU5	Sr Nts	11/15/2017	A-	1.64	1.52	1.40	1.21	1.54	2.04	1.74	2.02	1.78	1.64	1.69	1.87	1.67%	1.73%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	4.79	4.61	4.62	4.27	4.68	5.19	4.99	5.25	5.06	4.86	5.31	5.24	4.91%	5.14%
AOL Time Warner	7.62	00184AAC9	Deb	4/15/2031	BBB	4.67	4.70	4.71	4.30	4.68	5.36	5.07	5.48	5.41	5.25	5.42	5.26	5.03%	5.31%
Time Warner Cos Inc	9.15	887315AM1	Deb Dtd 02/04/1	2/1/2023	BBB	3.68	3.76	3.66	3.34	3.85	4.44	4.43	4.96	4.77	4.55	4.49	4.69	4.22%	4.58%
Time Warner Cos Inc	6.88	887315AY5	Deb	6/15/2018	BBB	2.03	1.97	1.87	1.73	2.13	2.53	2.19	2.62	2.30	2.12	2.11	2.38	2.17%	2.20%
Time Warner Cos Inc	8.05	887315BA6	Deb	1/15/2016	BBB	2.03	2.02	2.02	1.95	2.17	2.09	1.88	2.18	2.03	1.87	1.86	1.48	1.97%	1.74%
Time Warner Cos Inc	6.85	887315BB4	Deb	1/15/2026	BBB	4.60	4.65	4.65	4.39	4.90	5.44	5.32	5.74	5.55	5.33	5.55	5.68	5.15%	5.52%
Time Warner Cos Inc	7.57	887315BH1	Deb	2/1/2024	BBB	3.79	3.89	3.71	3.50	3.96	4.62	4.46	4.91	4.72	4.47	4.59	4.75	4.28%	4.60%
Time Warner Cos Inc	7.25	887315BJ7	Deb	10/15/2017	BBB	1.78	1.77	1.73	1.55	1.93	2.41	2.04	2.23	2.05	1.89	1.97	1.96	1.94%	1.94%
Time Warner Cos Inc	6.95	887315BM0	Gtd Deb	1/15/2028	BBB	4.43	4.31	4.31	4.05	4.48	5.02	4.90	5.20	5.01	4.78	4.88	5.13	4.71%	4.93%
Time Warner Cos Inc	6.62	887315BN8	Deb	5/15/2029	BBB	4.48	4.52	4.51	4.23	4.68	5.17	5.03	5.43	5.28	5.15	5.18	5.21	4.91%	5.18%
Time Warner Inc.	5.88	887317AC9	Nt	11/15/2016	BBB	1.31	1.30	1.27	1.11	1.33	1.69	1.34	1.67	1.50	1.36	1.25	1.31	1.37%	1.31%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	4.94	4.99	5.02	4.68	5.13	5.59	5.25	5.75	5.57	5.42	5.61	5.49	5.29%	5.51%
Time Warner Entertainment	8.38	88731EAF7	Sr Deb	3/15/2023	BBB	3.54	3.91	3.94	3.63	4.18	4.77	6.15	6.36	6.02	5.88	6.14	6.20	5.06%	6.07%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	1.47	1.60	1.58	1.74	1.16	1.30	1.35	1.29	1.51	1.28	1.23	0.84	1.36%	1.12%
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	2.02	1.93	1.92	1.91	1.77	2.00	1.95	1.97	1.79	1.73	1.74	1.83	1.88%	1.77%
Qwest Corp	3.56	74913GAN5	Nt Fltg Rate	6/15/2013	BBB-	1.84	2.45	1.75	1.24									1.82%	
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	2.49	2.37	2.33	2.38	2.46	3.00	2.84	3.03	2.81	2.86	2.61	2.50	2.64%	2.66%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	4.99	4.91	4.81	4.57	5.01	5.56	5.76	6.02	5.86	5.80	5.94	6.25	5.46%	6.00%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	6.59	6.72	6.91	6.55	6.43	6.83	6.95	7.26	7.51	7.42	7.29	7.55	7.00%	7.42%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	6.59	6.86	7.01	6.55	6.63	6.98	7.35	7.77	7.87	7.81	7.85	7.82	7.26%	7.83%
CenturyTel, Inc.	5	156700AJ5	Sr Nts'M'	02/15/2015	BB	1.72	2.30	1.99	1.72	2.29	2.48	2.18	1.86	1.87	1.46	1.64	1.61	1.93%	1.57%
CenturyTel, Inc.	5.5	156700AK2	SrNts'O'	04/01/2013	BB	1.34	1.59											1.47%	
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts	04/01/2017	BB	3.29	3.66	3.78	2.93	3.13	3.49	3.50	3.89	3.62	3.12	3.06	2.68	3.35%	2.95%
CenturyTel, Inc.	6	156700AL0	SrNts'N'	04/01/2017	BB	3.29	3.66	3.78	2.93	3.13	3.49	3.50	3.89	3.62	3.12	3.06	2.68	3.35%	2.95%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.12	7.38	7.46	7.10	7.24	7.50	7.50	7.83	7.81	7.87	7.83	7.87	7.54%	7.86%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	1.86	2.33	2.17	2.06	2.03	2.33	2.43	2.39	2.25	2.21	2.15	2.07	2.19%	2.14%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/2023	BB-	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84%	9.84%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>(	12/01/2028	BB-	6.65	6.60	6.76	6.45	6.71	6.66	6.82	6.99	7.28	7.32	7.35	7.50	6.92%	7.39%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	7.98	8.71	8.53	8.53	8.61	9.16	9.08	9.24	9.22	8.60	8.91	9.20	8.81%	8.90%
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45%	6.45%
Cincinnati Bell Tel	8.38	171871AE6	Sr Sub Nts	01/15/2014	NR	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54%	7.54%
			Counts of data			45	45	44	44	42	42	42	42	42	42	42	41	45	42

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	2.48%	2.73%
BBB's	3.48%	3.78%
BB's	5.42%	5.89%
B's	6.45%	6.45%
NR's	7.54%	7.54%
ALL	3.81%	4.11%
BBB- & Above	3.03%	3.31%
BB- & Above	3.66%	3.97%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
20 YEAR PLUS - BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	4.65	4.78	4.84	4.57	4.96	5.35	5.48	5.58	5.73	5.62	5.66	5.54	5.23%	5.61%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	4.69	4.81	4.88	4.58	4.94	5.49	5.32	5.53	5.68	5.67	5.66	5.54	5.23%	5.62%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	4.67	4.81	4.88	4.56	4.94	5.49	5.32	5.56	5.67	5.65	5.67	5.50	5.23%	5.61%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	4.69	4.80	4.88	4.58	4.93	5.49	5.32	5.56	5.67	5.67	5.76	5.54	5.24%	5.66%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	4.42	4.76	4.93	4.49	5.21	5.65	5.50	5.93	5.76	5.52	5.66	5.70	5.29%	5.63%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.22	5.21	5.24	5.00	5.34	5.80	5.80	5.96	5.91	5.77	5.81	5.94	5.58%	5.84%
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.27	5.16	5.14	4.99	5.34	5.65	5.75	5.93	5.86	5.75	5.81	5.94	5.55%	5.83%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	5.67	5.71	5.69	5.35	5.74	6.05	6.25	6.48	6.36	6.27	6.46	6.59	6.05%	6.44%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.90	5.94	5.97	5.73	6.12	6.43	6.47	6.70	6.66	6.57	6.76	6.89	6.35%	6.74%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	5.90	5.94	5.97	5.73	6.12	6.43	6.47	6.70	6.66	6.57	6.76	6.89	6.35%	6.74%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.05	7.06	7.00	7.05	7.09	7.11	7.13	7.15	7.15	7.15	7.15	7.15	7.10%	7.15%
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	4.65	4.78	4.76	4.47	4.87	5.25	5.20	5.53	5.61	5.55	5.61	5.44	5.14%	5.53%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	4.65	4.78	4.76	4.47	4.87	5.25	5.20	5.53	5.61	5.55	5.61	5.44	5.14%	5.53%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	4.65	4.78	4.79	4.47	4.86	5.24	5.20	5.53	5.56	5.55	5.61	5.44	5.14%	5.53%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/2037	A-	4.20	4.75	4.78	4.52	4.79	5.44	5.40	5.68	5.41	5.27	5.49	5.50	5.10%	5.42%
New York Telephone Co	7	650094CB9	Deb	12/01/2033	BBB+	6.67	6.69	6.72	6.75	6.79	6.82	6.85	6.94	6.96	6.97	6.99	7.00	6.85%	6.99%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	4.46	4.59	4.80	4.62	4.92	5.29	5.20	5.43	5.61	5.47	5.56	5.42	5.11%	5.48%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	4.40	4.46	4.74	4.55	4.86	5.23	5.18	5.43	5.53	5.44	5.50	5.36	5.06%	5.43%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/2033	BBB+	5.02	4.96	4.94	4.75	5.14	5.40	5.50	5.73	5.86	5.70	5.69	5.56	5.35%	5.65%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/2033	BBB-	6.27	6.16	6.19	5.97	6.39	6.92	6.85	7.08	6.96	6.87	7.08	7.19	6.66%	7.05%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/2033	BBB-	6.83	6.89	6.95	6.80	6.87	7.03	6.99	7.13	7.13	7.15	7.35	7.25	7.03%	7.25%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	6.82	6.98	6.96	6.92	6.92	6.96	6.99	7.38	7.25	7.37	7.56	7.63	7.15%	7.52%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	6.75	6.98	7.07	6.85	6.85	7.18	7.14	7.78	7.31	7.37	7.46	7.54	7.19%	7.46%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.12	7.38	7.46	7.10	7.24	7.50	7.50	7.83	7.81	7.87	7.83	7.87	7.54%	7.86%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.24	6.26	6.29	6.30	6.35	6.38	6.42	6.46	6.50	6.52	6.52	6.52	6.40%	6.52%
			Counts of data			26	26	26	26	26	26	26	26	26	26	26	26	26	26

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	5.58%	5.93%
BBB's	6.30%	6.60%
BB's	7.54%	7.86%
B's	----	----
NR's	6.40%	6.52%
ALL	5.92%	6.24%
BBB- & Above	5.83%	6.16%
BB- & Above	5.90%	6.23%

**Investment Grade (BBB- & Above)*

Industry: Telecommunications with significant portion of Cable TV Service

Support for Debt Rating
Industry: Telecommunications, Cable TV
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Avg Full Year	Avg 4th QTR
Comcast Corp.	7.05	20030NAC5	Sr Nt	3/15/2033	A-	4.68	4.65	4.55	4.13	4.54	5.01	4.95	5.28	5.10	4.96	5.23	5.29	4.86%	5.16%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr I	6/15/2035	A-	4.65	4.49	4.45	4.13	4.56	4.98	4.85	5.11	4.91	4.74	5.13	5.14	4.76%	5.00%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	4.76	4.55	4.57	4.20	4.64	5.18	4.97	5.21	5.00	4.86	5.27	5.24	4.87%	5.12%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	4.79	4.61	4.62	4.27	4.68	5.19	4.99	5.25	5.06	4.86	5.31	5.24	4.91%	5.14%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	4.94	4.99	5.02	4.68	5.13	5.59	5.25	5.75	5.57	5.42	5.61	5.49	5.29%	5.51%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.12	7.38	7.46	7.10	7.24	7.50	7.50	7.83	7.81	7.87	7.83	7.87	7.54%	7.86%
			Counts of data			6	6	6	6	6	6	6	6	6	6	6	6	6	6

NOTES:
Data downloaded from the S&P website and missing data supplemented from month end Bond Guides when available.
means the data was not available in S&P Guide
means issuance matured or called

	Annual	4th Qtr
A's	4.85%	5.11%
BBB's	5.29%	5.51%
BB's	7.54%	7.86%
B's	----	----
NR's	----	----
ALL	5.37%	5.63%
BBB- & Above	4.94%	5.19%
BB- & Above	5.37%	5.63%

**Investment Grade (BBB- & Above)*

2014 Capitalization Rate Study

Appendix and Supporting Documents

Table Showing The Implied Risk Premium Using Macroeconomic Data
This type of calculation can also be found in Chapter 9 of Ibbotson's (MorningStar) SBBI, Supply Side Model

3 Stage Dividend Growth Model

Assumptions:

Stages	**Years**		**Growth**	**Model 1**				**Model 2**			
1st Stage	1-5 years		Constant @:	13.00%				12.10%			*S & P GICS Composite 1500 Valuations as of 12/31/13 Monthly Investment Review, January 2014*
2nd Stage	6-15 years		Linear from:	12.32%	to	5.57%	OR	11.39%	to	4.28%	*Linear from 1st Stage to 3rd Stage*
				Real Growth				Inflation			
3rd Stage	15 years -perpetuity	GDP Growth:	Real and Inflation	2.00%		3.20%	+	2.28%	to	2.37%	*Inflation Range = Federal Reserve, Treasuries Inflation - Indexed*
		GDP Growth*:	Real + Inflation	5.57%			TO	4.28%			**GDP Growth = Real growth + Inflation*
											First Quarter 2013 Survey of Professional Forecasters - Philadelphia Federal Reserve Release Date 2/15/2013
											Livingston Survey Release Date December 12, 2013

Model 1

Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
		Expected	1st Stage Growth Rates					2nd Stage Growth Rates										
Starting Industry	**Start Price**	**Dividends**	13.000%	13.000%	13.000%	13.000%	13.000%	12.32%	11.649%	10.974%	10.298%	9.623%	8.947%	8.272%	7.596%	6.921%	6.245%	5.570%
S & P 500	$ (1,848.36)	$ 38.82	$ 43.87	$ 49.57	$ 56.01	$ 63.29	$ 71.52	$ 80.34	$ 89.70	$ 99.54	$ 109.79	$120.36	$ 131.12	$ 141.97	$ 152.76	$ 163.33	$ 173.53	$ 183.19
Implied Market Return =		9.25%																

Model 2

Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
		Expected	1st Stage Growth Rates					2nd Stage Growth Rates										
Starting Industry	**Start Price**	**Dividends**	12.100%	12.100%	12.100%	12.100%	12.100%	11.39%	10.678%	9.967%	9.256%	8.545%	7.835%	7.124%	6.413%	5.702%	4.991%	4.280%
S & P 500	$ (1,848.36)	$ 38.82	$ 43.52	$ 48.78	$ 54.69	$ 61.30	$ 68.72	$ 76.55	$ 84.72	$ 93.16	$ 101.79	$110.49	$ 119.14	$ 127.63	$ 135.81	$ 143.56	$ 150.72	$ 157.17
Implied Market Return =		8.09%																

Conclusions:

Implied Market Rate Range =	**8.09%**	**to**	**9.25%**

Mean	***8.67%***
Median	***8.67%***
Market Rate Used	**9.00%**

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%
$193.40	$204.17	$215.54	$227.55	$240.22	$253.60	$267.73	$282.64	$298.38	$315.00	$332.55	$351.07	$370.63	$391.27	$413.06	$436.07	$460.36	$486.00	$513.07	$541.65	$571.82	$603.67	$637.30

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
$163.90	$170.92	$178.23	$185.86	$193.81	$202.11	$210.76	$219.78	$229.19	$239.00	$249.23	$259.89	$271.02	$282.62	$294.71	$307.33	$320.48	$334.20	$348.50	$363.41	$378.97	$395.19	$412.10

2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072
5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%
$672.79	$710.27	$749.83	$791.60	$ 835.69	$ 882.24	$ 931.38	$ 983.25	$1,038.02	$1,095.84	$1,156.88	$1,221.31	$1,289.34	$1,361.16	$1,436.97	$1,517.01	$1,601.51	$1,690.72	$1,784.89

2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072
4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
$429.74	$448.13	$467.31	$487.31	$ 508.17	$ 529.92	$ 552.60	$ 576.25	$ 600.92	$ 626.64	$ 653.46	$ 681.42	$ 710.59	$ 741.00	$ 772.72	$ 805.79	$ 840.28	$ 876.24	$ 913.75

2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091
3rd Stage Growth Rates																		
5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%
$1,884.31	$1,989.26	$2,100.07	$2,217.04	$2,340.53	$2,470.90	$2,608.52	$2,753.82	$2,907.21	$3,069.14	$3,240.09	$3,420.56	$3,611.09	$3,812.22	$4,024.57	$4,248.73	$4,485.39	$4,735.22	$4,998.98

2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091
3rd Stage Growth Rates																		
4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
$ 952.85	$ 993.64	$1,036.16	$1,080.51	$1,126.76	$1,174.98	$1,225.27	$1,277.71	$1,332.40	$1,389.43	$1,448.89	$1,510.91	$1,575.57	$1,643.01	$1,713.33	$1,786.66	$1,863.13	$1,942.87	$2,026.02

2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108
5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%
$5,277.42	$5,571.37	$ 5,881.70	$ 6,209.31	$ 6,555.17	$ 6,920.29	$ 7,305.75	$ 7,712.68	$ 8,142.28	$ 8,595.80	$ 9,074.59	$ 9,580.04	$10,113.65	$10,676.98	$11,271.69	$11,899.52	$12,562.32

2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108
4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
$2,112.74	$2,203.16	$ 2,297.46	$ 2,395.79	$ 2,498.33	$ 2,605.26	$ 2,716.76	$ 2,833.04	$ 2,954.29	$ 3,080.74	$ 3,212.59	$ 3,350.09	$ 3,493.48	$ 3,643.00	$ 3,798.92	$ 3,961.51	$ 4,131.06

2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125
5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%	5.570%
$13,262.04	$14,000.74	$14,780.58	$15,603.86	$16,473.00	$17,390.54	$18,359.19	$19,381.80	$20,461.37	$21,601.07	$22,804.25	$24,074.44	$25,415.39	$26,831.03	$28,325.51	$29,903.24	$31,568.86

2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125
4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
$ 4,307.87	$ 4,492.25	$ 4,684.52	$ 4,885.02	$ 5,094.09	$ 5,312.12	$ 5,539.48	$ 5,776.57	$ 6,023.81	$ 6,281.63	$ 6,550.48	$ 6,830.84	$ 7,123.20	$ 7,428.07	$ 7,745.99	$ 8,077.52	$ 8,423.24

2126	2127	2128	2129	2130
5.570%	5.570%	5.570%	5.570%	5.570%
$ 33,327.24	$ 35,183.57	$ 37,143.29	$ 39,212.17	$ 41,396.29

2126	2127	2128	2129	2130
4.280%	4.280%	4.280%	4.280%	4.280%
$ 8,783.76	$ 9,159.70	$ 9,551.74	$ 9,960.55	$ 10,386.86

FEDERAL RESERVE statistical release

H.15 (519) SELECTED INTEREST RATES

For use at 2:30 p.m. Eastern Time

Yields in percent per annum

January 6, 2014

Instruments	2013 Dec 30	2013 Dec 31	2014 Jan 1*	2014 Jan 2	2014 Jan 3	Week Ending Jan 3	Week Ending Dec 27	2013 Dec
Federal funds (effective)[1 2 3]	0.08	0.07	0.07	0.08	0.08	0.08	0.09	0.09
Commercial Paper[3 4 5 6]								
Nonfinancial								
1-month	n.a.	0.03		0.05	0.06	0.05	0.05	0.06
2-month	0.07	n.a.		0.06	0.07	0.07	0.08	0.07
3-month	0.09	n.a.		0.09	0.09	0.09	0.09	0.09
Financial								
1-month	0.06	0.08		0.05	0.05	0.06	0.07	0.07
2-month	0.07	n.a.		0.09	0.10	0.09	0.10	0.10
3-month	0.14	0.14		0.14	0.14	0.14	0.13	0.14
Eurodollar deposits (London)[3 7]								
1-month	0.20	0.20		0.20	0.20	0.20	0.20	0.20
3-month	0.27	0.27		0.27	0.27	0.27	0.27	0.27
6-month	0.42	0.42		0.42	0.42	0.42	0.42	0.42
Bank prime loan[2 3 8]	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Discount window primary credit[2 9]	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
U.S. government securities								
Treasury bills (secondary market)[3 4]								
4-week	0.01	0.01		0.01	0.01	0.01	0.01	0.02
3-month	0.07	0.07		0.07	0.07	0.07	0.07	0.07
6-month	0.10	0.10		0.09	0.10	0.10	0.09	0.10
1-year	0.12	0.12		0.12	0.12	0.12	0.12	0.13
Treasury constant maturities								
Nominal[10]								
1-month	0.01	0.01		0.01	0.02	0.01	0.01	0.02
3-month	0.07	0.07		0.07	0.07	0.07	0.07	0.07
6-month	0.10	0.10		0.09	0.10	0.10	0.09	0.10
1-year	0.13	0.13		0.13	0.13	0.13	0.13	0.13
2-year	0.39	0.38		0.39	0.41	0.39	0.40	0.34
3-year	0.77	0.78		0.76	0.80	0.78	0.79	0.69
5-year	1.71	1.75		1.72	1.73	1.73	1.72	1.58
7-year	2.40	2.45		2.41	2.42	2.42	2.42	2.29
10-year	2.99	3.04		3.00	3.01	3.01	2.99	2.90
20-year	3.66	3.72		3.68	3.69	3.69	3.66	3.63
30-year	3.90	3.96		3.92	3.93	3.93	3.90	3.89
Inflation indexed[11]								
5-year	0.07	0.06		0.01	0.04	0.05	0.04	-0.09
7-year	0.62	0.61		0.57	0.60	0.60	0.59	0.47
10-year	0.76	0.80		0.74	0.75	0.76	0.79	0.74
20-year	1.31	1.36		1.30	1.29	1.32	1.34	1.32
30-year	1.59	1.64		1.58	1.57	1.60	1.61	1.61
Inflation-indexed long-term average[12]	1.27	1.31		1.26	1.25	1.27	1.29	1.27
Interest rate swaps[13]								
1-year	0.31	0.31		0.31	0.31	0.31	0.31	0.29
2-year	0.48	0.49		0.49	0.49	0.49	0.49	0.43
3-year	0.86	0.87		0.87	0.88	0.87	0.87	0.77
4-year	1.32	1.33		1.34	1.34	1.33	1.33	1.20
5-year	1.76	1.78		1.78	1.78	1.77	1.77	1.64
7-year	2.43	2.47		2.46	2.46	2.45	2.44	2.33
10-year	3.03	3.09		3.07	3.07	3.06	3.03	2.95
30-year	3.85	3.91		3.90	3.91	3.89	3.85	3.81
Corporate bonds								
Moody's seasoned								
Aaa[14]	4.53	4.57		4.55	4.56	4.55	4.56	4.62
Baa	5.34	5.37		5.34	5.35	5.35	5.35	5.38
State & local bonds[15]				4.75		4.75	4.73	4.73
Conventional mortgages[16]				4.53		4.53	4.48	4.46

See overleaf for footnotes.

* Markets closed.

n.a. Not available.

Footnotes

1. The daily effective federal funds rate is a weighted average of rates on brokered trades.
2. Weekly figures are averages of 7 calendar days ending on Wednesday of the current week; monthly figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. On a discount basis.
5. Interest rates interpolated from data on certain commercial paper trades settled by The Depository Trust Company. The trades represent sales of commercial paper by dealers or direct issuers to investors (that is, the offer side). The 1-, 2-, and 3-month rates are equivalent to the 30-, 60-, and 90-day dates reported on the Board's Commercial Paper Web page (www.federalreserve.gov/releases/cp/).
6. Financial paper that is insured by the FDIC's Temporary Liquidity Guarantee Program is not excluded from relevant indexes, nor is any financial or nonfinancial commercial paper that may be directly or indirectly affected by one or more of the Federal Reserve's liquidity facilities. Thus the rates published after September 19, 2008, likely reflect the direct or indirect effects of the new temporary programs and, accordingly, likely are not comparable for some purposes to rates published prior to that period.
7. Source: Bloomberg and CTRB ICAP Fixed Income & Money Market Products.
8. Rate posted by a majority of top 25 (by assets in domestic offices) insured U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans.
9. The rate charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program, which became effective January 9, 2003. This rate replaces that for adjustment credit, which was discontinued after January 8, 2003. For further information, see www.federalreserve.gov/boarddocs/press/bcreg/2002/200210312/default.htm. The rate reported is that for the Federal Reserve Bank of New York. Historical series for the rate on adjustment credit as well as the rate on primary credit are available at www.federalreserve.gov/releases/h15/data.htm.
10. Yields on actively traded non-inflation-indexed issues adjusted to constant maturities. The 30-year Treasury constant maturity series was discontinued on February 18, 2002, and reintroduced on February 9, 2006. From February 18, 2002, to February 9, 2006, the U.S. Treasury published a factor for adjusting the daily nominal 20-year constant maturity in order to estimate a 30-year nominal rate. The historical adjustment factor can be found at www.treasury.gov/resource-center/data-chart-center/interest-rates/. Source: U.S. Treasury.
11. Yields on Treasury inflation protected securities (TIPS) adjusted to constant maturities. Source: U.S. Treasury. Additional information on both nominal and inflation-indexed yields may be found at www.treasury.gov/resource-center/data-chart-center/interest-rates/.
12. Based on the unweighted average bid yields for all TIPS with remaining terms to maturity of more than 10 years.
13. International Swaps and Derivatives Association (ISDA®) mid-market par swap rates. Rates are for a Fixed Rate Payer in return for receiving three month LIBOR, and are based on rates collected at 11:00 a.m. Eastern time by ICAP plc and published on Thomson Reuters Page ISDAFIX®1. ISDAFIX is a registered service mark of ISDA®. Source: Thomson Reuters.
14. Moody's Aaa rates through December 6, 2001, are averages of Aaa utility and Aaa industrial bond rates. As of December 7, 2001, these rates are averages of Aaa industrial bonds only.
15. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality; Thursday quotations.
16. Contract interest rates on commitments for 30-year fixed-rate first mortgages. Source: Primary Mortgage Market Survey® data provided by Freddie Mac.

Note: Weekly and monthly figures on this release, as well as annual figures available on the Board's historical H.15 web site (see below), are averages of business days unless otherwise noted.

Current and historical H.15 data are available on the Federal Reserve Board's web site (www.federalreserve.gov/). For information about individual copies or subscriptions, contact Publications Services at the Federal Reserve Board (phone 202-452-3244, fax 202-728-5886).

Description of the Treasury Nominal and Inflation-Indexed Constant Maturity Series

Yields on Treasury nominal securities at "constant maturity" are interpolated by the U.S. Treasury from the daily yield curve for non-inflation-indexed Treasury securities. This curve, which relates the yield on a security to its time to maturity, is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The constant maturity yield values are read from the yield curve at fixed maturities, currently 1, 3, and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10-year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity. Similarly, yields on inflation-indexed securities at "constant maturity" are interpolated from the daily yield curve for Treasury inflation protected securities in the over-the-counter market. The inflation-indexed constant maturity yields are read from this yield curve at fixed maturities, currently 5, 7, 10, 20, and 30 years.

SURVEY OF PROFESSIONAL FORECASTERS

Release Date: February 14, 2014

FIRST QUARTER 2014

Forecasters Predict Higher Growth and Lower Unemployment over the Next Three Years

The outlook for growth in the U.S. economy over the next three years looks stronger than that of three months ago, according to 45 forecasters surveyed by the Federal Reserve Bank of Philadelphia. On an annual-average over annual-average basis, the forecasters predict faster real GDP growth in 2014, 2015, and 2016. The forecasters see real GDP growing 2.8 percent in 2014, up from their prediction of 2.6 percent in the last survey. The forecasters predict real GDP will grow 3.1 percent in 2015, higher than their prediction of 2.8 percent in the last survey. For 2016, the forecast for real GDP growth, at 3.1 percent, is 0.4 percentage point higher than the last survey.

A brighter outlook for the unemployment rate accompanies the more positive outlook for growth. The forecasters predict that the unemployment rate will be an annual average of 6.5 percent in 2014, before falling to 6.1 percent in 2015, 5.7 percent in 2016, and 5.5 percent in 2017. The projections for 2014, 2015, and 2016 are below those of the last survey.

On the jobs front, the forecasters see little change in job growth in 2014. The forecasters' projections for the annual-average level of nonfarm payroll employment suggest job gains at a monthly rate of 187,700 in 2014 and 206,900 in 2015, as the table below shows. (These annual-average estimates are computed as the year-to-year change in the annual-average level of nonfarm payroll employment, converted to a monthly rate.)

Median Forecasts for Selected Variables in the Current and Previous Surveys

	Real GDP (%)		*Unemployment Rate (%)*		*Payrolls (000s/month)*	
	Previous	*New*	*Previous*	*New*	*Previous*	*New*
Quarterly Data:						
2014:Q1	2.5	2.0	7.1	6.7	187.0	177.4
2014:Q2	2.9	3.0	7.0	6.6	193.5	193.5
2014:Q3	2.9	2.8	6.9	6.4	201.8	195.2
2014:Q4	2.9	2.7	6.8	6.3	202.1	215.0
2015:Q1	N.A.	3.2	N.A.	6.2	N.A.	201.0
Annual Data (projections are based on annual-average levels):						
2014	2.6	2.8	7.0	6.5	189.9	187.7
2015	2.8	3.1	6.4	6.1	N.A.	206.9
2016	2.7	3.1	6.0	5.7	N.A.	N.A.
2017	N.A.	2.4	N.A.	5.5	N.A.	N.A.

A Note to Users of the Data for Density Projections and Long-Term Forecasts for the Rate on 10-Year Constant Maturity Treasury Bonds

We made two permanent changes to the survey's design. First, we changed the definitions of the bins for the density questions on unemployment and GDP inflation. For unemployment, we shaved 2 percentage points from the endpoints of each bin. For GDP inflation, we defined the endpoints of each bin to correspond with those of core CPI inflation and core PCE inflation.

Second, we changed the phrasing of the question for the long-term (10-year annual-average) rate on 10-year constant maturity Treasury bonds. This question, which appears only in first-quarter surveys, has always been ambiguous. In previous first-quarter surveys, we asked for the return on 10-year Treasury bonds over the next 10 years. It was never clear whether we meant the return to buying a 10-year Treasury bond on the survey date and holding it until maturity or whether we meant the average return from buying a 10-year constant maturity Treasury bond each quarter (or month or day) over the next 10 years and holding the bonds until they mature. We have changed the question to emphasize the latter: We now ask for the yield on 10-year constant maturity Treasury bonds, and we make it clear to the panelists that we mean the average yield in the current year and the following nine years. This adjustment to the way we now ask the question might or might not change the panelists' responses compared with the way they would have answered had we not changed the question.

We caution users of the data against comparing the *long-term* (10-year annual-average) forecasts for 10-year Treasury bonds in this survey with those of previous first-quarter surveys. Note that we have not changed the questions on *short-term* projections for 10-year Treasury rates that appear in each quarterly survey. Thus, the short-term projections in this survey are comparable with those of all previous surveys.

For additional information, please contact:

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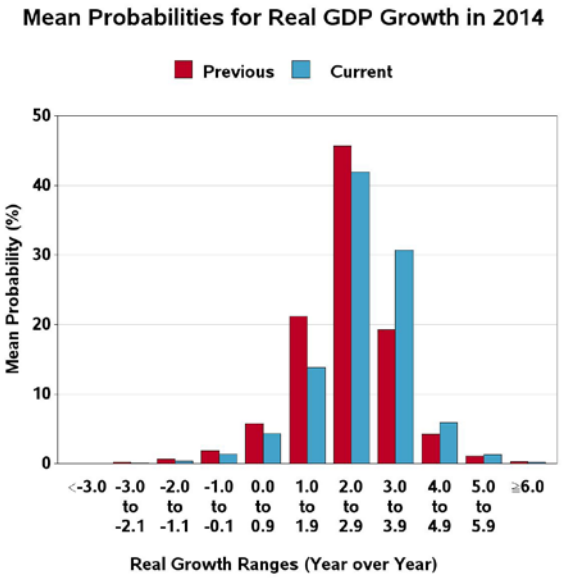
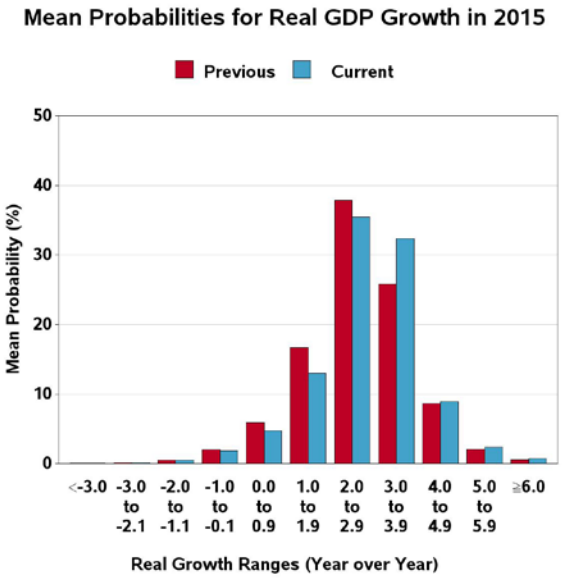
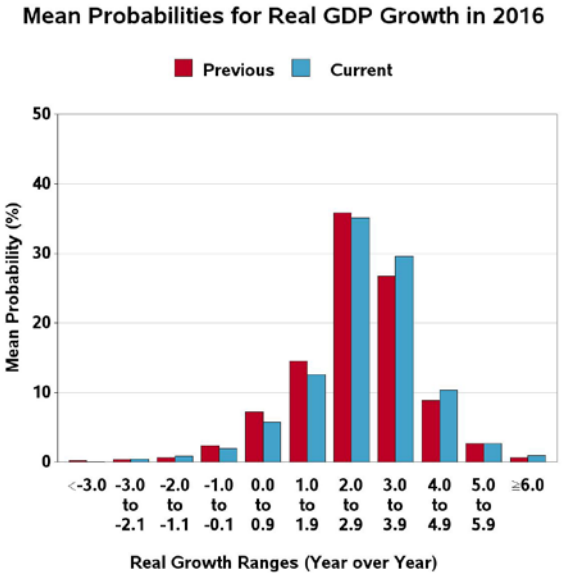
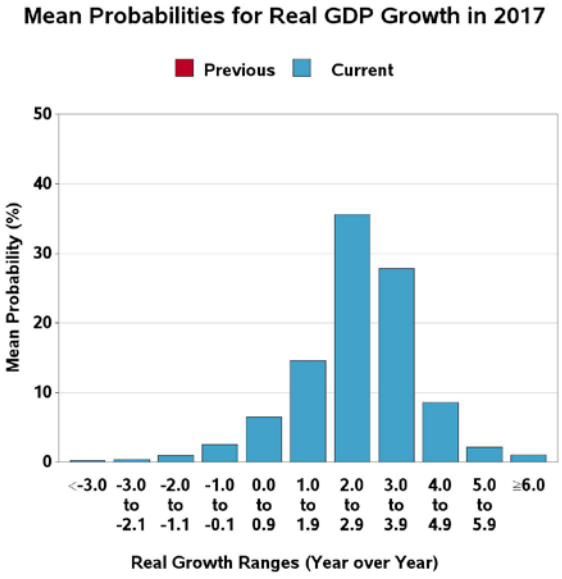
The charts below provide some insight into the degree of uncertainty the forecasters have about their projections for the rate of growth in the annual-average level of real GDP. Each chart (except the chart for 2017) presents the forecasters' previous and current estimates of the probability that growth will fall into each of 11 ranges. The forecasters have shifted the distributions of density to the right for 2014, 2015, and 2016, indicating their expectations for higher real GDP growth compared with their previous estimates.

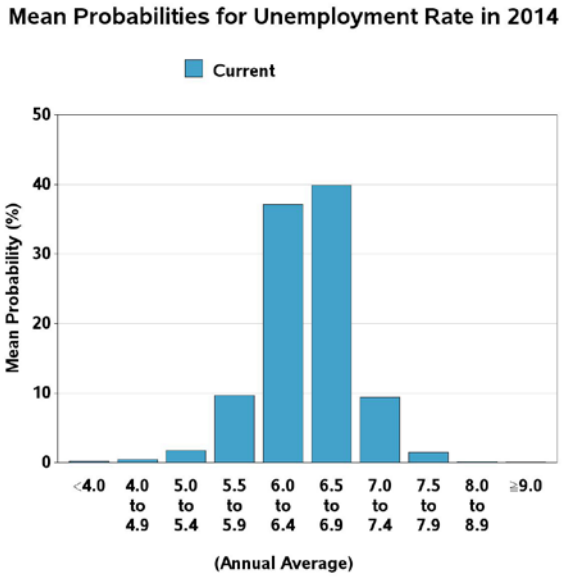


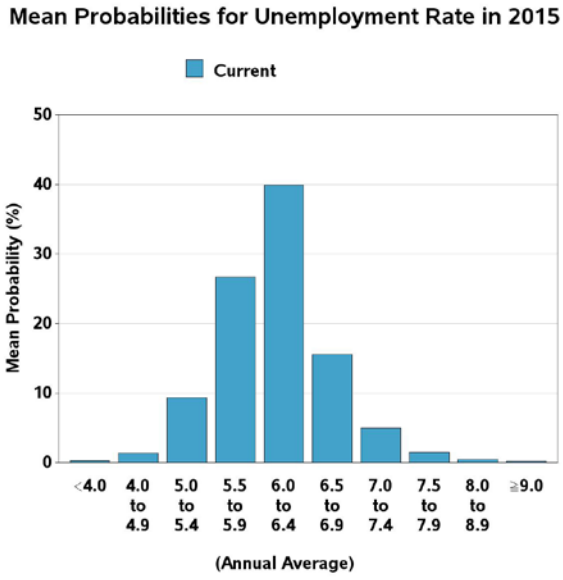


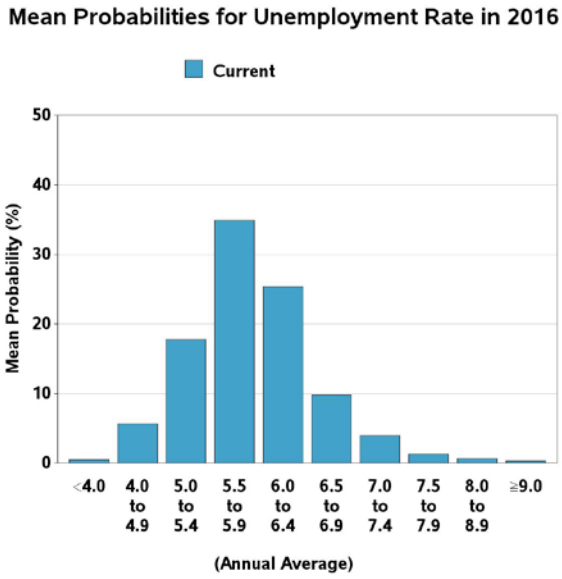


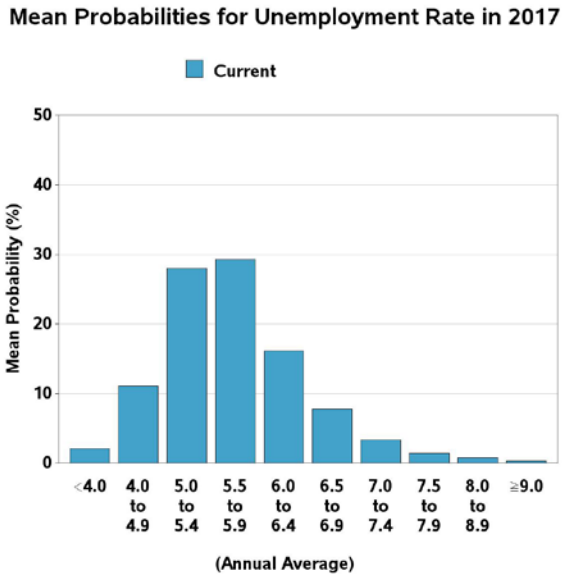


The forecasters' density projections for unemployment, shown below, shed light on uncertainty about the labor market over the next four years. Each chart for unemployment presents the forecasters' current estimates of the probability that unemployment will fall into each of 10 ranges. The forecasters estimate a near-40 percent chance that unemployment will average 6.0 to 6.4 percent in 2014 and 2015. They see a 35 percent chance of unemployment averaging 5.5 to 5.9 percent in 2016 and a substantial chance that unemployment will be below 5.5 percent in 2017.









Forecasters See Lower Inflation

The forecasters expect current-quarter headline CPI inflation to average 1.7 percent, lower than the last survey's estimate of 1.8 percent. The forecasters predict current-quarter headline PCE inflation of 1.3 percent, lower than the prediction of 1.8 percent from the survey of three months ago.

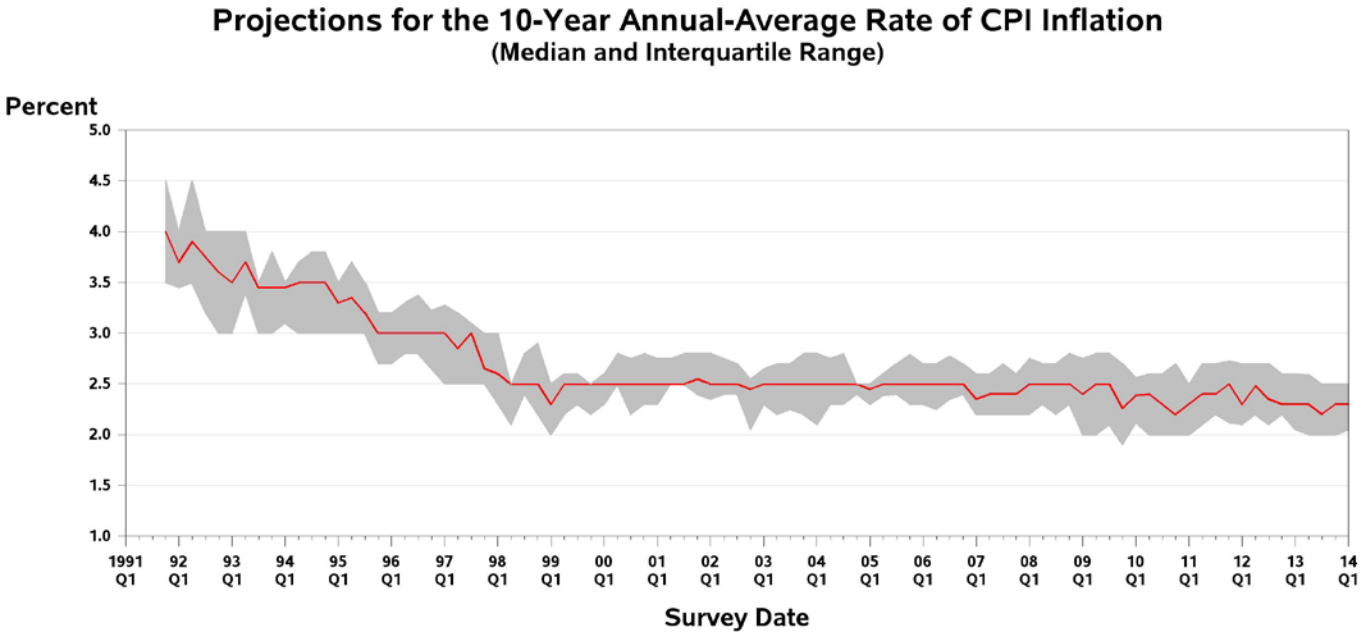
The forecasters also see lower headline and core measures of CPI and PCE inflation during the next two years. Measured on a fourth-quarter over fourth-quarter basis, headline CPI inflation is expected to average 1.8 percent in 2014, down from 2.0 percent in the last survey, and 2.0 percent in 2015, down 0.2 percentage point from the previous estimate. Forecasters expect fourth-quarter over fourth-quarter headline PCE inflation to average 1.6 percent in 2014, down from 1.9 percent in the last survey, and 1.8 percent in 2015, down 0.1 percentage point from the previous estimate.

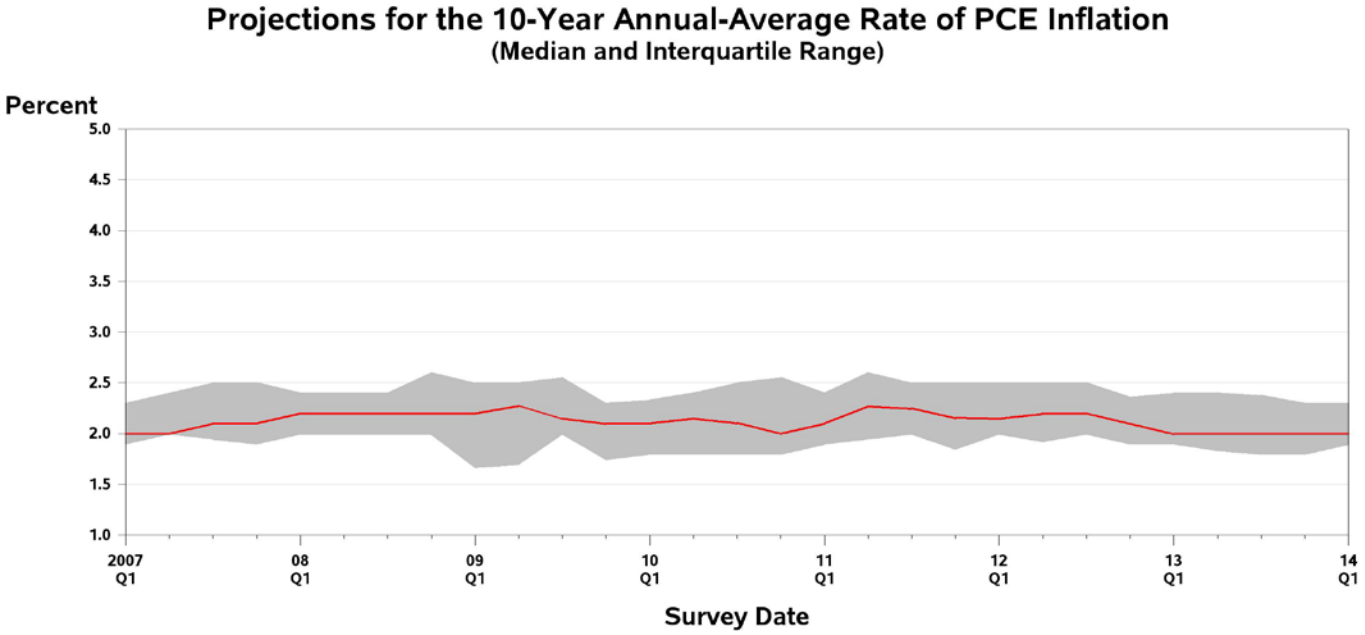
Over the next 10 years, 2014 to 2023, the forecasters expect headline CPI inflation to average 2.3 percent at an annual rate. The corresponding estimate for 10-year annual-average PCE inflation is 2.0 percent.

Median Short-Run and Long-Run Projections for Inflation (Annualized Percentage Points)

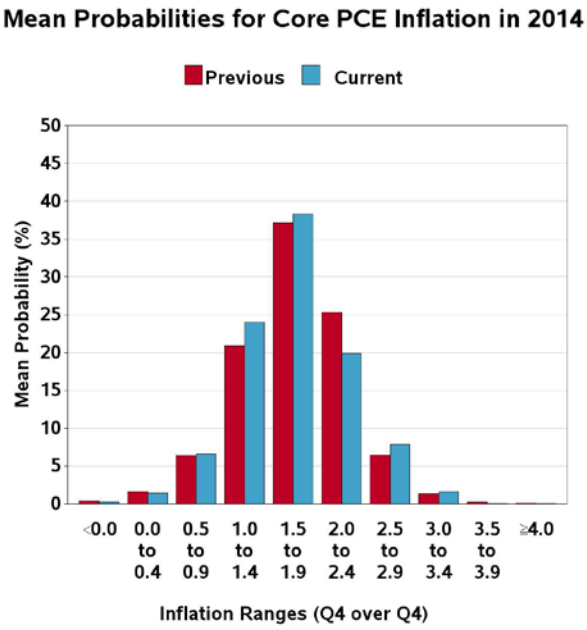
	Headline CPI		Core CPI		Headline PCE		Core PCE	
	Previous	Current	Previous	Current	Previous	Current	Previous	Current
Quarterly								
2014:Q1	1.8	1.7	1.9	1.8	1.8	1.3	1.7	1.5
2014:Q2	2.0	1.7	1.9	1.8	1.9	1.5	1.8	1.5
2014:Q3	2.0	1.9	2.0	1.9	1.9	1.7	1.7	1.6
2014:Q4	2.1	2.0	2.0	1.9	1.9	1.7	1.8	1.7
2015:Q1	N.A.	2.0	N.A.	2.1	N.A.	1.8	N.A.	1.8
Q4/Q4 Annual Averages								
2014	2.0	1.8	2.0	1.9	1.9	1.6	1.7	1.6
2015	2.2	2.0	2.1	2.0	1.9	1.8	1.9	1.8
2016	N.A.	2.1	N.A.	2.1	N.A.	2.0	N.A.	1.9
Long-Term Annual Averages								
2013-2017	2.1	N.A.	N.A.	N.A.	1.8	N.A.	N.A.	N.A.
2014-2018	N.A.	2.1	N.A.	N.A.	N.A.	1.9	N.A.	N.A.
2013-2022	2.3	N.A.	N.A.	N.A.	2.0	N.A.	N.A.	N.A.
2014-2023	N.A.	2.3	N.A.	N.A.	N.A.	2.0	N.A.	N.A.

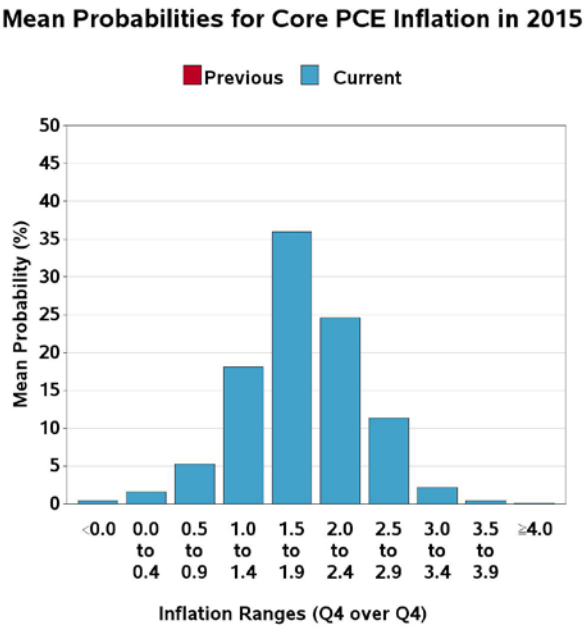
The charts below show the median projections (the red line) and the associated interquartile ranges (the gray area around the red line) for 10-year annual-average CPI and PCE inflation. The top panel shows the unchanged long-term projection for CPI inflation, at 2.3 percent. The bottom panel highlights the unchanged 10-year forecast for PCE inflation, at 2.0 percent.





The figures below show the probabilities that the forecasters are assigning to the possibility that fourth-quarter over fourth-quarter core PCE inflation in 2014 and 2015 will fall into each of 10 ranges. For 2014, the forecasters assign a higher chance than previously noted that core PCE inflation will fall in the range of 1.0 to 1.9 percent (and a lower probability that inflation will fall in the range of 2.0 to 2.4 percent).





Risk of a Negative Quarter Remains Low

For the current quarter, the forecasters predict an 11.2 percent chance of negative growth. As the table below shows, the forecasters have kept their risk estimates for a downturn in the following quarters nearly unchanged, compared with their previous estimates.

Risk of a Negative Quarter (%)
Survey Means

Quarterly Data:	*Previous*	*New*
2014: Q1	11.1	11.2
2014: Q2	11.6	9.3
2014: Q3	11.7	10.6
2014: Q4	12.2	11.4
2015: Q1	N.A.	11.7

Forecasters State Their Views on House Prices

In this survey, a special question asked panelists to provide their forecasts for fourth-quarter over fourth-quarter growth in house prices, as measured by a number of alternative indices. The panelists were allowed to choose from a provided list of indices or to write in their own index. For each index of their choosing, the panelists provided forecasts for growth in 2014 and 2015.

Twenty-three panelists answered the special question. Some panelists provided projections for more than one index. The table below provides a summary of the forecasters' responses. The number of responses (N) is low for each index. The median estimates for the six house-price indices listed in the table below range from 2.1 percent to 7.0 percent in 2014 and from 2.7 percent to 4.9 percent in 2015.

Projections for Growth in Various Indices of House Prices
Q4/Q4, Percentage Points

Index	2014 (Q4/Q4 Percent Change)			2015 (Q4/Q4 Percent Change)		
	N	Mean	Median	N	Mean	Median
S&P/Case-Shiller: U.S. National	6	5.6	5.9	6	4.4	4.9
S&P/Case-Shiller: Composite 20	6	4.8	4.5	6	3.5	3.2
FHFA: U.S. Total	6	7.2	6.3	6	3.1	2.7
FHFA: Purchase Only	5	5.1	5.8	5	2.7	2.9
CoreLogic: National HPI, incl. Distressed Sales (Single Family Combined)	6	6.4	7.0	6	4.8	4.8
NAR Median: Total Existing	1	2.1	2.1	1	2.8	2.8

Forecasters See Little Reason to Revise Long-Run Estimates of Growth in Output and Productivity

In the first-quarter surveys, the forecasters provide their long-run projections for an expanded set of variables, including growth in output and productivity, as well as returns on financial assets.

As the table below shows, the forecasters have slightly increased their estimates for the annual-average rate of growth in real GDP over the next 10 years. Currently, the forecasters expect real GDP to grow at an annual-average rate of 2.6 percent over the next 10 years, up from 2.5 percent in the first-quarter survey of 2013.

The forecasters' current projection for 10-year annual-average productivity growth is 1.80 percent, the same rate they predicted in last year's first-quarter survey. Stocks are seen returning 6.00 percent annually over the next 10 years, while Treasury bills will return 2.50 percent annually over the same period.

Median Long-Term (10-Year) Forecasts (%)

	First Quarter 2013	*Current Survey*
Real GDP Growth	2.50	2.60
Productivity Growth	1.80	1.80
Stock Returns (S&P 500)	6.13	6.00
Rate on 10-Year Treasury Bonds	N.A.	4.35
Bill Returns (3-Month)	2.40	2.50

The Federal Reserve Bank of Philadelphia thanks the following forecasters for their participation in recent surveys:

Lewis Alexander, Nomura Securities; **Scott Anderson**, Bank of the West (BNP Paribas Group); **Robert J. Barbera**, Johns Hopkins University Center for Financial Economics; **Peter Bernstein**, RCF Economic and Financial Consulting, Inc.; **Christine Chmura, Ph.D.** and **Xiaobing Shuai, Ph.D.**, Chmura Economics & Analytics; **Gary Ciminero, CFA**, GLC Financial Economics; **Julia Coronado**, BNP Paribas; **David Crowe**, National Association of Home Builders; **Nathaniel Curtis**, Navigant; **Rajeev Dhawan**, Georgia State University; **Shawn Dubravac**, Consumer Electronics Association; **Gregory Daco**, Oxford Economics USA, Inc.; **Michael R. Englund**, Action Economics, LLC; **Timothy Gill**, NEMA; **Matthew Hall** and **Daniil Manaenkov**, RSQE, University of Michigan; **James Glassman**, JPMorgan Chase & Co.; **Jan Hatzius**, Goldman Sachs; **Peter Hooper**, Deutsche Bank Securities, Inc.; **IHS Global Insight**; **Fred Joutz**, Benchmark Forecasts and Research Program on Forecasting, George Washington University; **Sam Kahan**, Kahan Consulting Ltd. (ACT Research LLC); **N. Karp**, BBVA Compass; **Walter Kemmsies**, Moffatt & Nichol; **Jack Kleinhenz,** Kleinhenz & Associates, Inc.; **Thomas Lam**, OSK-DMG/RHB; **L. Douglas Lee**, Economics from Washington; **Allan R. Leslie**, Economic Consultant; **John Lonski**, Moody's Capital Markets Group; **Macroeconomic Advisers, LLC**; **Dean Maki**, Barclays Capital; **Jim Meil** and **Arun Raha**, Eaton Corporation; **Anthony Metz**, Pareto Optimal Economics; **Michael Moran**, Daiwa Capital Markets America; **Joel L. Naroff**, Naroff Economic Advisors; **Michael P. Niemira**, International Council of Shopping Centers; **Luca Noto**, Anima Sgr; **Brendon Ogmundson**, BC Real Estate Association; **Martin A. Regalia**, U.S. Chamber of Commerce; **Philip Rothman**, East Carolina University; **Chris Rupkey**, Bank of Tokyo-Mitsubishi UFJ; **John Silvia**, Wells Fargo; **Allen Sinai**, Decision Economics, Inc.; **Tara M. Sinclair**, Research Program on Forecasting, George Washington University; **Sean M. Snaith, Ph.D.**, University of Central Florida; **Neal Soss**, Credit Suisse; **Stephen Stanley**, Pierpont Securities; **Charles Steindel**, New Jersey Department of the Treasury; **Susan M. Sterne**, Economic Analysis Associates, Inc.; **Thomas Kevin Swift**, American Chemistry Council; **Richard Yamarone**, Bloomberg, LP; **Mark Zandi**, Moody's Analytics.

This is a partial list of participants. We also thank those who wish to remain anonymous.

SUMMARY TABLE
SURVEY OF PROFESSIONAL FORECASTERS
MAJOR MACROECONOMIC INDICATORS

	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2014 (YEAR-OVER-YEAR)	2015 (YEAR-OVER-YEAR)	2016 (YEAR-OVER-YEAR)	2017 (YEAR-OVER-YEAR)
PERCENT GROWTH AT ANNUAL RATES									
1. REAL GDP (BILLIONS, CHAIN WEIGHTED)	2.0	3.0	2.8	2.7	3.2	2.8	3.1	3.1	2.4
2. GDP PRICE INDEX (PERCENT CHANGE)	1.7	1.6	1.9	1.9	2.0	1.6	2.0	N.A.	N.A.
3. NOMINAL GDP ($ BILLIONS)	3.5	4.4	4.4	4.8	4.9	4.4	4.8	N.A.	N.A.
4. NONFARM PAYROLL EMPLOYMENT									
(PERCENT CHANGE)	1.6	1.7	1.7	1.9	1.7	1.7	1.8	N.A.	N.A.
(AVG MONTHLY CHANGE)	177.4	193.5	195.2	215.0	201.0	187.7	206.9	N.A.	N.A.
VARIABLES IN LEVELS									
5. UNEMPLOYMENT RATE (PERCENT)	6.7	6.6	6.4	6.3	6.2	6.5	6.1	5.7	5.5
6. 3-MONTH TREASURY BILL (PERCENT)	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.5	2.8
7. 10-YEAR TREASURY BOND (PERCENT)	2.8	3.0	3.1	3.3	3.4	3.1	3.6	4.1	4.4

	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2014 (Q4-OVER-Q4)	2015 (Q4-OVER-Q4)	2016 (Q4-OVER-Q4)
INFLATION INDICATORS								
8. CPI (ANNUAL RATE)	1.7	1.7	1.9	2.0	2.0	1.8	2.0	2.1
9. CORE CPI (ANNUAL RATE)	1.8	1.8	1.9	1.9	2.1	1.9	2.0	2.1
10. PCE (ANNUAL RATE)	1.3	1.5	1.7	1.7	1.8	1.6	1.8	2.0
11. CORE PCE (ANNUAL RATE)	1.5	1.5	1.6	1.7	1.8	1.6	1.8	1.9

THE FIGURES ON EACH LINE ARE MEDIANS OF 45 INDIVIDUAL FORECASTERS.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

SURVEY OF PROFESSIONAL FORECASTERS

First Quarter 2014

Tables

Note: Data in these tables listed as "actual" are the data that were available to the forecasters when they were sent the survey questionnaire on January 30; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before February 10, 2014.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORECASTERS	ACTUAL 2013 Q4	FORECAST 2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	ACTUAL 2013 ANNUAL	FORECAST 2014 ANNUAL	2015 ANNUAL	2016 ANNUAL	2017 ANNUAL
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	43	17103	17249	17437	17625	17834	18048	16803	17542	18392	N.A.	N.A.
2. GDP PRICE INDEX (2009=100)	42	107.02	107.48	107.91	108.41	108.91	109.46	106.47	108.17	110.31	N.A.	N.A.
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	23	N.A.	1738.0	1759.0	1791.9	1793.6	1825.7	N.A.	1776.3	1871.7	N.A.	N.A.
4. UNEMPLOYMENT RATE (PERCENT)	44	7.0	6.7	6.6	6.4	6.3	6.2	7.4	6.5	6.1	5.7	5.5
5. NONFARM PAYROLL EMPLOYMENT (THOUSANDS)	38	136747	137279	137860	138445	139090	139693	135927	138180	140663	N.A.	N.A.
6. INDUSTRIAL PRODUCTION (2007=100)	38	101.2	102.1	102.9	103.6	104.4	105.4	99.6	103.3	106.5	N.A.	N.A.
7. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	40	1.00	1.02	1.08	1.13	1.18	1.22	0.93	1.11	1.26	N.A.	N.A.
8. 3-MONTH TREASURY BILL RATE (PERCENT)	42	0.06	0.07	0.08	0.10	0.10	0.12	0.06	0.09	0.35	1.50	2.78
9. AAA CORPORATE BOND YIELD (PERCENT)	33	4.59	4.60	4.70	4.80	4.89	4.97	4.24	4.73	5.08	N.A.	N.A.
10. BAA CORPORATE BOND YIELD (PERCENT)	32	5.36	5.35	5.47	5.60	5.75	5.83	5.10	5.52	6.00	N.A.	N.A.
11. 10-YEAR TREASURY BOND YIELD (PERCENT)	43	2.75	2.84	3.00	3.12	3.25	3.40	2.35	3.06	3.58	4.05	4.43
12. REAL GDP (BILLIONS, CHAIN WEIGHTED)	43	15966	16045	16164	16276	16386	16517	15767	16216	16721	17247	17665
13. TOTAL CONSUMPTION EXPENDITURE (BILLIONS, CHAIN WEIGHTED)	41	10832.8	10900.9	10967.4	11043.4	11113.8	11186.4	10728.2	11007.8	11306.8	N.A.	N.A.
14. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	39	2013.5	2038.0	2066.8	2096.5	2126.3	2157.5	1982.1	2080.7	2207.0	N.A.	N.A.
15. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	39	486.5	498.2	513.5	528.5	546.9	565.2	486.0	521.5	578.3	N.A.	N.A.
16. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	38	1125.2	1130.4	1131.3	1133.0	1134.2	1133.5	1157.5	1132.7	1133.7	N.A.	N.A.
17. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	38	1745.4	1748.9	1751.6	1755.0	1759.5	1764.6	1739.7	1753.4	1772.1	N.A.	N.A.
18. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	39	127.2	90.0	74.5	65.0	57.1	60.3	85.4	72.8	61.3	N.A.	N.A.
19. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	39	-370.1	-370.0	-370.5	-370.0	-373.0	-378.7	-409.1	-373.8	-381.4	N.A.	N.A.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA. SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE TWO
MAJOR MACROECONOMIC INDICATORS
PERCENTAGE CHANGES AT ANNUAL RATES

	NUMBER OF FORECASTERS	Q4 2013 TO Q1 2014	Q1 2014 TO Q2 2014	Q2 2014 TO Q3 2014	Q3 2014 TO Q4 2014	Q4 2014 TO Q1 2015	2013 TO 2014	2014 TO 2015	2015 TO 2016	2016 TO 2017
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	43	3.5	4.4	4.4	4.8	4.9	4.4	4.8	N.A.	N.A.
2. GDP PRICE INDEX (2009=100)	42	1.7	1.6	1.9	1.9	2.0	1.6	2.0	N.A.	N.A.
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	23	0.0	4.9	7.7	0.4	7.3	5.6	5.4	N.A.	N.A.
4. UNEMPLOYMENT RATE (PERCENT)	44	-0.3	-0.1	-0.2	-0.1	-0.1	-0.9	-0.4	-0.3	-0.2
5. NONFARM PAYROLL EMPLOYMENT										
(PERCENT CHANGE)	38	1.6	1.7	1.7	1.9	1.7	1.7	1.8	N.A.	N.A.
(AVG MONTHLY CHANGE)	38	177.4	193.5	195.2	215.0	201.0	187.7	206.9	N.A.	N.A.
6. INDUSTRIAL PRODUCTION (2007=100)	38	3.8	2.8	3.1	3.1	3.6	3.7	3.1	N.A.	N.A.
7. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	40	8.8	24.3	20.8	18.7	15.1	19.2	13.9	N.A.	N.A.
8. 3-MONTH TREASURY BILL RATE (PERCENT)	42	0.01	0.01	0.02	0.01	0.02	0.03	0.26	1.15	1.28
9. AAA CORPORATE BOND YIELD (PERCENT)	33	0.01	0.10	0.10	0.09	0.08	0.49	0.35	N.A.	N.A.
10. BAA CORPORATE BOND YIELD (PERCENT)	32	-0.01	0.12	0.13	0.15	0.08	0.42	0.48	N.A.	N.A.
11. 10-YEAR TREASURY BOND YIELD (PERCENT)	43	0.09	0.16	0.12	0.13	0.15	0.71	0.52	0.47	0.38
12. REAL GDP (BILLIONS, CHAIN WEIGHTED)	43	2.0	3.0	2.8	2.7	3.2	2.8	3.1	3.1	2.4
13. TOTAL CONSUMPTION EXPENDITURE (BILLIONS, CHAIN WEIGHTED)	41	2.5	2.5	2.8	2.6	2.6	2.6	2.7	N.A.	N.A.
14. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	39	5.0	5.8	5.9	5.8	6.0	5.0	6.1	N.A.	N.A.
15. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	39	10.0	12.8	12.2	14.7	14.0	7.3	10.9	N.A.	N.A.
16. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	38	1.8	0.3	0.6	0.4	-0.2	-2.1	0.1	N.A.	N.A.
17. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	38	0.8	0.6	0.8	1.0	1.2	0.8	1.1	N.A.	N.A.
18. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	39	-37.2	-15.5	-9.5	-7.9	3.2	-12.6	-11.5	N.A.	N.A.
19. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	39	0.1	-0.5	0.5	-3.0	-5.7	35.4	-7.6	N.A.	N.A.

NOTE: FIGURES FOR UNEMPLOYMENT RATE, TREASURY BILL RATE, AAA CORPORATE BOND YIELD, BAA CORPORATE BOND YIELD, AND 10-YEAR TREASURY BOND YIELD ARE CHANGES IN THESE RATES, IN PERCENTAGE POINTS.
FIGURES FOR CHANGE IN PRIVATE INVENTORIES AND NET EXPORTS ARE CHANGES IN BILLIONS OF CHAIN-WEIGHTED DOLLARS.
ALL OTHERS ARE PERCENTAGE CHANGES AT ANNUAL RATES.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA. SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE THREE
MAJOR PRICE INDICATORS
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORECASTERS	ACTUAL	FORECAST(Q/Q)					ACTUAL	FORECAST(Q4/Q4)		
		2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2013 ANNUAL	2014 ANNUAL	2015 ANNUAL	2016 ANNUAL
1. CONSUMER PRICE INDEX (ANNUAL RATE)	44	0.9	1.7	1.7	1.9	2.0	2.0	1.2	1.8	2.0	2.1
2. CORE CONSUMER PRICE INDEX (ANNUAL RATE)	40	1.6	1.8	1.8	1.9	1.9	2.1	1.7	1.9	2.0	2.1
3. PCE PRICE INDEX (ANNUAL RATE)	38	0.7	1.3	1.5	1.7	1.7	1.8	0.9	1.6	1.8	2.0
4. CORE PCE PRICE INDEX (ANNUAL RATE)	39	1.1	1.5	1.5	1.6	1.7	1.8	1.1	1.6	1.8	1.9

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA. SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE FOUR
ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	Q4 2013 TO Q1 2014	Q1 2014 TO Q2 2014	Q2 2014 TO Q3 2014	Q3 2014 TO Q4 2014	Q4 2014 TO Q1 2015
			NUMBER OF FORECASTERS		
10 OR LESS	26	30	26	24	24
11 TO 20	9	6	13	13	11
21 TO 30	4	5	2	4	4
31 TO 40	1	0	0	0	2
41 TO 50	0	0	0	0	0
51 TO 60	1	0	0	0	0
61 TO 70	0	0	0	0	0
71 TO 80	0	0	0	0	0
81 TO 90	0	0	0	0	0
91 AND OVER	0	0	0	0	0
NOT REPORTING	4	4	4	4	4
MEAN AND MEDIAN					
MEDIAN PROBABILITY	10.00	7.84	8.00	8.90	8.00
MEAN PROBABILITY	11.17	9.30	10.55	11.37	11.71

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 41.
SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE FIVE
MEAN PROBABILITIES

MEAN PROBABILITY ATTACHED TO POSSIBLE
CIVILIAN UNEMPLOYMENT RATES:
(ANNUAL AVERAGE)

	2014	2015	2016	2017
9.0 PERCENT OR MORE	0.03	0.16	0.24	0.29
8.0 TO 8.9 PERCENT	0.11	0.40	0.62	0.78
7.5 TO 7.9 PERCENT	1.50	1.49	1.30	1.40
7.0 TO 7.4 PERCENT	9.41	4.94	3.96	3.31
6.5 TO 6.9 PERCENT	39.85	15.54	9.78	7.76
6.0 TO 6.4 PERCENT	37.12	39.90	25.37	16.14
5.5 TO 5.9 PERCENT	9.61	26.66	34.91	29.24
5.0 TO 5.4 PERCENT	1.73	9.32	17.76	27.97
4.0 TO 4.9 PERCENT	0.44	1.34	5.61	11.03
LESS THAN 4.0 PERCENT	0.20	0.26	0.45	2.06

MEAN PROBABILITY ATTACHED TO POSSIBLE
PERCENT CHANGES IN REAL GDP:
(ANNUAL-AVERAGE OVER ANNUAL-AVERAGE)

	2013-2014	2014-2015	2015-2016	2016-2017
6.0 OR MORE	0.18	0.69	0.88	0.96
5.0 TO 5.9	1.30	2.37	2.61	2.15
4.0 TO 4.9	5.86	8.94	10.34	8.54
3.0 TO 3.9	30.72	32.40	29.54	27.80
2.0 TO 2.9	41.97	35.44	35.09	35.58
1.0 TO 1.9	13.83	12.99	12.61	14.58
0.0 TO 0.9	4.34	4.70	5.74	6.44
-1.0 TO -0.1	1.38	1.87	1.90	2.49
-2.0 TO -1.1	0.34	0.47	0.81	0.92
-3.0 TO -2.1	0.07	0.11	0.41	0.35
LESS THAN -3.0	0.00	0.03	0.06	0.18

MEAN PROBABILITY ATTACHED TO POSSIBLE
PERCENT CHANGES IN GDP PRICE INDEX:
(ANNUAL-AVERAGE OVER ANNUAL-AVERAGE)

	2013-2014	2014-2015
4.0 OR MORE	0.33	0.42
3.5 TO 3.9	0.43	0.70
3.0 TO 3.4	1.37	2.20
2.5 TO 2.9	5.10	10.84
2.0 TO 2.4	21.56	29.64
1.5 TO 1.9	39.08	33.97
1.0 TO 1.4	22.61	13.81
0.5 TO 0.9	6.44	5.60
0.0 TO 0.4	2.50	2.15
WILL DECLINE	0.60	0.65

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE SIX
MEAN PROBABILITY OF CORE CPI AND CORE PCE INFLATION (Q4/Q4)

MEAN PROBABILITY ATTACHED TO CORE CPI INFLATION:

	13Q4 TO 14Q4	14Q4 TO 15Q4
4 PERCENT OR MORE	0.22	0.61
3.5 TO 3.9 PERCENT	0.42	0.97
3.0 TO 3.4 PERCENT	2.29	3.16
2.5 TO 2.9 PERCENT	9.24	15.08
2.0 TO 2.4 PERCENT	27.24	30.11
1.5 TO 1.9 PERCENT	40.91	33.85
1.0 TO 1.4 PERCENT	14.31	10.77
0.5 TO 0.9 PERCENT	3.77	3.79
0.0 TO 0.4 PERCENT	1.17	1.10
WILL DECLINE	0.41	0.56

MEAN PROBABILITY ATTACHED TO CORE PCE INFLATION:

	13Q4 TO 14Q4	14Q4 TO 15Q4
4 PERCENT OR MORE	0.03	0.10
3.5 TO 3.9 PERCENT	0.06	0.46
3.0 TO 3.4 PERCENT	1.61	2.15
2.5 TO 2.9 PERCENT	7.84	11.33
2.0 TO 2.4 PERCENT	19.88	24.62
1.5 TO 1.9 PERCENT	38.34	36.00
1.0 TO 1.4 PERCENT	23.98	18.11
0.5 TO 0.9 PERCENT	6.60	5.26
0.0 TO 0.4 PERCENT	1.42	1.55
WILL DECLINE	0.24	0.42

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

TABLE SEVEN
LONG-TERM (5-YEAR AND 10-YEAR) FORECASTS

ANNUAL AVERAGE OVER THE NEXT 5 YEARS: 2014-2018

CPI INFLATION RATE		PCE INFLATION RATE	
MINIMUM	0.81	MINIMUM	0.72
LOWER QUARTILE	2.00	LOWER QUARTILE	1.80
MEDIAN	2.10	MEDIAN	1.90
UPPER QUARTILE	2.32	UPPER QUARTILE	2.20
MAXIMUM	3.00	MAXIMUM	2.60
MEAN	2.14	MEAN	1.91
STD. DEVIATION	0.37	STD. DEVIATION	0.34
N	40	N	37
MISSING	5	MISSING	8

ANNUAL AVERAGE OVER THE NEXT 10 YEARS: 2014-2023

CPI INFLATION RATE		PCE INFLATION RATE	
MINIMUM	1.21	MINIMUM	1.08
LOWER QUARTILE	2.05	LOWER QUARTILE	1.90
MEDIAN	2.30	MEDIAN	2.00
UPPER QUARTILE	2.50	UPPER QUARTILE	2.30
MAXIMUM	3.40	MAXIMUM	2.90
MEAN	2.29	MEAN	2.06
STD. DEVIATION	0.39	STD. DEVIATION	0.37
N	40	N	37
MISSING	5	MISSING	8

REAL GDP GROWTH RATE		PRODUCTIVITY GROWTH RATE	
MINIMUM	1.75	MINIMUM	1.00
LOWER QUARTILE	2.40	LOWER QUARTILE	1.50
MEDIAN	2.60	MEDIAN	1.80
UPPER QUARTILE	2.80	UPPER QUARTILE	2.00
MAXIMUM	3.50	MAXIMUM	2.40
MEAN	2.57	MEAN	1.76
STD. DEVIATION	0.39	STD. DEVIATION	0.37
N	38	N	29
MISSING	7	MISSING	16

STOCK RETURNS (S&P 500)		BOND RETURNS (10-YEAR)		BILL RETURNS (3-MONTH)	
MINIMUM	2.70	MINIMUM	2.70	MINIMUM	0.10
LOWER QUARTILE	5.00	LOWER QUARTILE	4.00	LOWER QUARTILE	1.92
MEDIAN	6.00	MEDIAN	4.35	MEDIAN	2.50
UPPER QUARTILE	7.20	UPPER QUARTILE	4.70	UPPER QUARTILE	2.88
MAXIMUM	12.00	MAXIMUM	5.30	MAXIMUM	4.20
MEAN	6.43	MEAN	4.25	MEAN	2.37
STD. DEVIATION	2.07	STD. DEVIATION	0.64	STD. DEVIATION	0.85
N	27	N	33	N	32
MISSING	18	MISSING	12	MISSING	13

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2014.

THE LIVINGSTON SURVEY

Release Date: December 12, 2013

DECEMBER 2013

Forecasters Cut Predictions for Growth Early Next Year but Shave Their Estimates for Unemployment

The 33 participants in the December Livingston Survey predict sustained output growth through the end of 2014. The forecasters, who are surveyed by the Federal Reserve Bank of Philadelphia twice a year, project that the economy's output (real GDP) will grow at an annual rate of 2.4 percent for the second half of 2013. They predict that the growth rate of economic output will increase to 2.5 percent (annual rate) in the first half of 2014 and 2.8 percent (annual rate) in the second half of 2014. The current projection for growth in the second half of 2013 increased 0.1 percentage point from the survey of six months ago, while the forecast for the first half of 2014 decreased 0.3 percentage point.

Projections for the unemployment rate have been revised downward. The forecasters predict that the unemployment rate will be 7.2 percent in December 2013 and 7.0 percent in June 2014. The current projections for December 2013 and June 2014 are down 0.2 percentage point from the last survey. The unemployment rate is then expected to fall to 6.7 percent in December 2014.

	Growth Rate of Real GDP (%)			*Unemployment Rate (%)*	
	Previous	*New*		*Previous*	*New*
Half-year data:					
2013 Q2 to 2013 Q4	2.3	2.4	December 2013	7.4	7.2
2013 Q4 to 2014 Q2	2.8	2.5	June 2014	7.2	7.0
2014 Q2 to 2014 Q4	N.A.	2.8	December 2014	N.A.	6.7

Forecasters Trim Their Estimates for 2014 CPI Inflation

On an annual-average over annual-average basis, CPI inflation is expected to be 1.5 percent in 2013 and 1.8 percent in 2014. The 2014 projection is down 0.2 percentage point from the estimate in the June survey. PPI inflation is expected to be 1.3 percent in 2013 and 1.5 percent in 2014. These projections are unchanged from those of the last survey.

	CPI Inflation (%)		*PPI Inflation (%)*	
	Previous	*New*	*Previous*	*New*
Annual average data:				
2012 to 2013	1.5	1.5	1.3	1.3
2013 to 2014	2.0	1.8	1.5	1.5
2014 to 2015	N.A.	2.1	N.A.	1.6

RESEARCH DEPARTMENT FEDERAL RESERVE BANK OF PHILADELPHIA
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Long-Term Interest Rates Revised Upward

The forecast for the interest rate on three-month Treasury bills is lower than that of six months ago, while the rate on 10-year Treasury bonds is higher. At the end of June 2014, the interest rate on three-month Treasury bills is predicted to be 0.09 percent, revised down from 0.14 percent in the survey of six months ago. The forecasters predict that the rate will then rise to 0.15 percent at the end of 2014, and then to 0.75 percent at the end of 2015. The interest rate on 10-year Treasury bonds is predicted to reach 3.01 percent at the end of June 2014, up from the previous estimate of 2.38 percent. According to the forecasters, it will then rise to 3.25 percent at the end of 2014, and to 3.88 percent at the end of 2015.

	3-Month Treasury Bill Interest Rate		*10-Year Treasury Bond Interest Rate*	
	Previous	*New*	*Previous*	*New*
Dec. 31, 2013	0.10	0.06	2.20	2.78
June 30, 2014	0.14	0.09	2.38	3.01
Dec. 31, 2014	0.20	0.15	2.65	3.25
Dec. 31, 2015	N.A.	0.75	N.A.	3.88

2013 Livingston Survey Participants

S. Anderson	**Bank of the West**	**K. Mayland**	**Clear View Economics**
B.Bovino	**Standard & Poor's**	**G. Mokrzan**	**Huntington National Bank**
J. Butkiewicz	**University of Delaware**	**M. Moran**	**Daiwa Capital Markets America**
R. Chase	**Economic & Policy Resources Inc**	**J. Mueller**	**LBMC, LLC**
C. Chrappa	**Independent Equipment Company**	**F. Nothaft**	**Federal Home Loan Mortgage Corp.**
D. Crowe	**National Association of Home Builders**	**M. Regalia**	**U.S. Chamber of Commerce**
R. Dhawan	**Georgia State University**	**C. Rupkey**	**Bank of Tokyo-Mitsubishi UFJ**
M. Englund	**Action Economics, LLC**	**J. Silvia**	**Wells Fargo Securities, LLC**
K. Goldstein/B. Ark	**Conference Board**	**A. Sinai**	**Decision Economics, Inc.**
P. Hooper	**Deutsche Bank Securities Inc.**	**J. Smith**	**Parsec Financial Management, Inc.**
B. Horrigan	**Loomis Sayles & Co.**	**S. Snaith**	**University of Central Florida**
S. Kahan	**Kahan Consulting Ltd.**	**S. Stanley**	**Pierpont Securities**
D. Knop	**Independent Economist**	**D. Torgerson**	**USDA**
T. Lam	**OSK-DMG**	**B. Wesbury/R. Stein**	**First Trust Advisors, L.P.**
E. Leamer/D. Shulman	**University of California, Los Angeles**	**R. Yamarone**	**Bloomberg, LP**
J. Lonski	**Moody's Capital Markets Group**	**L. Yun**	**National Association of Realtors**
D. Maki	**Barclays Capital**		

Outlook for Long-Term Inflation Revised Downward
The panelists project lower long-term inflation, but their projection for long-term output growth is unchanged. The forecasters now predict that inflation (measured by the consumer price index) will grow 2.35 percent annually over the next 10 years, which is lower than the forecast of 2.50 percent in the survey of six months ago. Real GDP growth is expected to average 2.60 percent over the next 10 years, the same estimate as in the previous survey.

Stock Prices Are Projected to Rise
The forecasters predict the S&P 500 index will finish 2013 at a level of 1800.7, an upward revision from the previous estimate of 1667.8. The forecasters project an increase in stock prices over the next two years, with the index rising to 1841.1 by the end of June 2014, and then to 1875.0 by the end of 2014, above the previous estimates of 1713.1 and 1750.0, respectively.

	Stock Prices (end of period) S&P 500 Index	
	Previous	*New*
Dec. 31, 2013	1667.8	1800.7
June 30, 2014	1713.1	1841.1
Dec. 31, 2014	1750.0	1875.0
Dec. 31, 2015	N.A.	1948.5

Technical Notes
This news release reports the median value across the 33 forecasters on the survey's panel.

Special Note: Housing Starts
Due to delays in the release of historical data caused by the federal government shutdown, for the projections for housing starts, we used monthly historical values through August 2013, which were the only data available at the time we conducted the survey. (Normally, monthly historical values through October would be used to generate the projections for December's Livingston Survey.)

In the .XLS files that contain this survey's responses, the *BasePeriod* value (for October 2013) is based on the panelists' projections and not a historical value.

The Philadelphia Fed's Livingston Survey is the oldest continuous survey of economists' expectations. The survey was started in 1946 by the late columnist Joseph A. Livingston. It summarizes the forecasts of economists from industry, government, banking, and academia. It is published twice a year, in June and December.

To subscribe to the survey, go to http://www.philadelphiafed.org/philscriber/user/dsp_content.cfm.

LIVINGSTON SURVEY
MAJOR MACROECONOMIC INDICATORS, 2013-2015

QUARTERLY INDICATORS (percentage changes at annual rates)	Q2 2013 TO Q4 2013	Q4 2013 TO Q2 2014	Q2 2014 TO Q4 2014	2012 TO 2013	2013 TO 2014	2014 TO 2015
Real Gross Domestic Product	2.4	2.5	2.8	1.7	2.5	2.9
Nominal Gross Domestic Product	3.9	4.4	4.7	3.2	4.2	4.8
Nonresidential Fixed Investment	3.2	4.6	5.1	2.3	4.4	5.6
Corporate Profits After Taxes	5.6	4.5	4.9	6.3	5.2	4.8

MONTHLY INDICATORS (percentage changes at annual rates)	JUN 2013 TO DEC 2013	DEC 2013 TO JUN 2014	JUN 2014 TO DEC 2014	2012 TO 2013	2013 TO 2014	2014 TO 2015
Industrial Production	2.6	3.1	3.2	2.4	2.9	3.7
Producer Prices - Finished Goods	1.1	1.7	2.0	1.3	1.5	1.6
Consumer Price Index (CPI-U)	1.4	1.8	2.0	1.5	1.8	2.1
Average Weekly Earnings in Mfg.	1.7	2.6	2.9	1.6	2.4	2.6
Retail Trade	3.4	4.8	5.0	4.3	4.2	5.0

(levels of variables)	DEC 2013	JUN 2014	DEC 2014	2013	2014	2015
Total Private Housing Starts (annual rate, millions)	0.960	1.100	1.207	0.917	1.109	1.283
Unemployment Rate (percent)	7.2	7.0	6.7	7.4	6.9	6.4
Automobile Sales (incl. foreign) (annual rate, millions)	7.6	7.8	8.0	7.6	7.9	8.1

FINANCIAL INDICATORS (levels of variables at end of month)	DEC 2013	JUN 2014	DEC 2014	DEC 2015
Prime Interest Rate	3.25	3.25	3.25	4.00
10-Year Treasury Note Yield	2.78	3.01	3.25	3.88
3-Month Treasury Bill Rate	0.06	0.09	0.15	0.75
Stock Prices (S&P500)	1800.7	1841.1	1875.0	1948.5

LONG-TERM OUTLOOK
Average Annual Growth Rate for the Next 10 Years

Real GDP	2.6
Consumer Price Index	2.3

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2013

LIVINGSTON SURVEY

December 2013

Tables

Note: Data in these tables listed as "actual" are the data that were available to the forecasters when they were sent the survey questionnaire on Nov 26; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before December 5.

Special Note: Housing Starts
Due to delays in the release of historical data caused by the federal government shutdown, for the projections for housing starts, we used monthly historical values through August 2013, which were the only data available at the time we conducted the survey. (Normally, monthly historical values through October would be used to generate the projections for December's Livingston Survey.)

In the .XLS files that contain this survey's responses, the *BasePeriod* value (for October 2013) is based on the panelists' projections and not a historical value.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS, 2013-2015
MEDIANS OF FORECASTER PREDICTIONS

QUARTERLY INDICATORS	NUMBER OF FORE-CASTERS	ACTUAL 2013 Q2	FORECASTS 2013 Q4	FORECASTS 2014 Q2	FORECASTS 2014 Q4	ACTUAL 2012	FORECASTS 2013	FORECASTS 2014	FORECASTS 2015
1. Real Gross Domestic Product (billions, chain weighted)	33	15679.7	15868.5	16065.5	16286.6	15470.7	15730.5	16126.8	16595.7
2. Nominal Gross Domestic Product ($ billions)	33	16661.0	16986.8	17354.7	17757.0	16244.6	16760.2	17465.8	18310.0
3. Nonresidential Fixed Investment (billions, chain weighted)	31	1971.3	2003.0	2048.6	2100.0	1931.8	1977.0	2063.4	2178.9
4. Corporate Profits After Taxes ($ billions)	22	1669.2	1715.7	1753.8	1796.5	1574.7	1674.1	1760.9	1845.9
MONTHLY INDICATORS		ACTUAL JUN 2013	FORECASTS DEC 2013	FORECASTS JUN 2014	FORECASTS DEC 2014	ACTUAL 2012	FORECASTS 2013	FORECASTS 2014	FORECASTS 2015
5. Industrial Production (2007=100)	30	99.2	100.5	102.0	103.6	97.1	99.4	102.3	106.1
6. Total Private Housing Starts (annual rate, millions)	31	0.835	0.960	1.100	1.207	0.783	0.917	1.109	1.283
7. Producer Prices - Finished Goods (index level)	28	196.9	197.9	199.6	201.6	194.5	197.0	200.0	203.1
8. Consumer Price Index (CPI-U) (index level)	32	232.9	234.6	236.7	239.1	229.6	233.0	237.1	242.0
9. Unemployment Rate (percent)	32	7.6	7.2	7.0	6.7	8.1	7.4	6.9	6.4
10. Average Weekly Earnings in Mfg. ($)	14	808.9	815.7	826.0	837.9	794.8	807.5	826.9	848.5
11. Retail Trade ($ billions)	21	423.8	431.0	441.2	452.2	406.3	423.7	441.6	463.5
12. Automobile Sales (incl. foreign) (annual rate, millions)	24	7.7	7.6	7.8	8.0	7.2	7.6	7.9	8.1

TABLE ONE (CONTINUED)

INTEREST RATES & STOCK PRICES (end of period)		ACTUAL JUN 2013	FORECASTS DEC 2013	JUN 2014	DEC 2014	DEC 2015
13. Prime Interest Rate (percent)	32	3.25	3.25	3.25	3.25	4.00
14. 10-Year Treasury Note Yield (percent)	32	2.52	2.78	3.01	3.25	3.88
15. 3-Month Treasury Bill Rate (percent)	32	0.04	0.06	0.09	0.15	0.75
16. Stock Prices (S&P500) (index level)	21	1606.3	1800.7	1841.1	1875.0	1948.5

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2013

TABLE TWO
MAJOR MACROECONOMIC INDICATORS, 2013-2015
PERCENTAGE CHANGES AT ANNUAL RATES

QUARTERLY INDICATORS	NUMBER OF FORE-CASTERS	Q2 2013 TO Q4 2013	Q4 2013 TO Q2 2014	Q2 2014 TO Q4 2014	2012 TO 2013	2013 TO 2014	2014 TO 2015
1. Real Gross Domestic Product	33	2.4	2.5	2.8	1.7	2.5	2.9
2. Nominal Gross Domestic Product	33	3.9	4.4	4.7	3.2	4.2	4.8
3. Nonresidential Fixed Investment	31	3.2	4.6	5.1	2.3	4.4	5.6
4. Corporate Profits After Taxes	22	5.6	4.5	4.9	6.3	5.2	4.8
MONTHLY INDICATORS		JUN 2013 TO DEC 2013	DEC 2013 TO JUN 2014	JUN 2014 TO DEC 2014	2012 TO 2013	2013 TO 2014	2014 TO 2015
5. Industrial Production	30	2.6	3.1	3.2	2.4	2.9	3.7
6. Total Private Housing Starts	31	0.125	0.140	0.107	0.134	0.191	0.174
7. Producer Prices - Finished Goods	28	1.1	1.7	2.0	1.3	1.5	1.6
8. Consumer Price Index (CPI-U)	32	1.4	1.8	2.0	1.5	1.8	2.1
9. Unemployment Rate	32	-0.4	-0.2	-0.3	-0.7	-0.5	-0.5
10. Average Weekly Earnings in Mfg.	14	1.7	2.6	2.9	1.6	2.4	2.6
11. Retail Trade	21	3.4	4.8	5.0	4.3	4.2	5.0
12. Automobile Sales (incl. foreign)	24	-0.1	0.2	0.2	0.4	0.3	0.2

INTEREST RATES & STOCK PRICES		JUN 2013 TO DEC 2013	DEC 2013 TO JUN 2014	JUN 2014 TO DEC 2014	DEC 2014 TO DEC 2015
13. Prime Interest Rate	32	0.00	0.00	0.00	0.75
14. 10-Year Treasury Note Yield	32	0.26	0.23	0.24	0.63
15. 3-Month Treasury Bill Rate	32	0.02	0.03	0.06	0.60
16. Stock Prices (S&P500)	21	25.7	4.5	3.7	3.9

Note: Figures for housing starts, unemployment rate, auto sales, prime interest rate, 10-year Treasury bond, and 90-day Treasury bill are changes in levels. All others are percentage changes at annual rates.

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2013

TABLE THREE
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI Inflation Rate

STATISTIC	
Minimum	1.20
Lower Quartile	2.00
Median	2.35
Upper Quartile	2.50
Maximum	3.30
Mean	2.30
Std. Deviation	0.44
N	31
Missing	2

SERIES: Real GDP

STATISTIC	
Minimum	2.00
Lower Quartile	2.40
Median	2.60
Upper Quartile	2.70
Maximum	3.20
Mean	2.55
Std. Deviation	0.30
N	31
Missing	2

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2013

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H.15 Selected Interest Rates for Feb 10, 2014

Series Description	Market yield on U.S. Treasury securities at 1-year constant maturity, quoted on investment basis	Market yield on U.S. Treasury securities at 5-year constant maturity, quoted on investment basis	Market yield on U.S. Treasury securities at 5-year constant maturity, quoted on investment basis, inflation-	Market yield on U.S. Treasury securities at 10-year constant maturity, quoted on investment basis	Market yield on U.S. Treasury securities at 10-year constant maturity, quoted on investment basis, inflation-	Market yield on U.S. Treasury securities at 20-year constant maturity, quoted on investment basis	Market yield on U.S. Treasury securities at 20-year constant maturity, quoted on investment basis, inflation-indexed					
Unit:	Percent: Per Y	Percent: Per Yea	Percent: Per	Percent: Per '	Percent: Per	Percent:_Per_Year	Percent:_Per_Year					
Multiplier:	1	1	1	1	1	1	1					
Currency:	NA	NA	NA	NA	NA	NA	NA					
Unique Identifier:	H15/H15/RIFLG	H15/H15/RIFLGF	H15/H15/RIFI	H15/H15/RIFL	H15/H15/RIF	H15/H15/RIFLGFC	H15/H15/RIFLGFCY20_XII_N.WF					
Time Period	RIFLGFCY01_N	RIFLGFCY05_N.V	RIFLGFCY05	RIFLGFCY10_	RIFLGFCY10	RIFLGFCY20_N.WI	RIFLGFCY20_XII	Inflation on 10 year	Average	Inflation on 20 year	Average	Used in 3 stage growth Model
2013-01-04	0.15	0.78	-1.34	1.87	-0.6	2.64	0.24	2.47	2.277308	2.4	2.367115	
2013-01-11	0.14	0.79	-1.38	1.9	-0.62	2.67	0.18	2.52		2.49		
2013-01-18	0.14	0.77	-1.41	1.87	-0.65	2.63	0.16	2.52		2.47		
2013-01-25	0.15	0.79	-1.41	1.9	-0.63	2.66	0.19	2.53		2.47		
2013-02-01	0.15	0.89	-1.4	2.02	-0.55	2.79	0.23	2.57		2.56		
2013-02-08	0.15	0.85	-1.44	2	-0.57	2.8	0.2	2.57		2.6		
2013-02-15	0.15	0.88	-1.35	2.01	-0.56	2.81	0.21	2.57		2.6		
2013-02-22	0.17	0.87	-1.33	2	-0.54	2.8	0.21	2.54		2.59		
2013-03-01	0.17	0.77	-1.41	1.88	-0.63	2.7	0.12	2.51		2.58		Average of 10 & 20 year
2013-03-08	0.15	0.82	-1.41	1.96	-0.59	2.78	0.17	2.55		2.61		2.322212
2013-03-15	0.15	0.88	-1.41	2.04	-0.52	2.86	0.25	2.56		2.61		
2013-03-22	0.15	0.8	-1.44	1.94	-0.59	2.77	0.2	2.53		2.57		
2013-03-29	0.14	0.78	-1.45	1.9	-0.62	2.73	0.17	2.52		2.56		
2013-04-05	0.13	0.73	-1.44	1.81	-0.67	2.64	0.09	2.48		2.55		
2013-04-12	0.12	0.72	-1.39	1.79	-0.66	2.58	0.08	2.45		2.5		
2013-04-19	0.12	0.71	-1.3	1.73	-0.62	2.51	0.08	2.35		2.43		
2013-04-26	0.12	0.7	-1.38	1.73	-0.65	2.5	0.03	2.38		2.47		
2013-05-03	0.11	0.68	-1.35	1.7	-0.62	2.49	0.07	2.32		2.42		
2013-05-10	0.11	0.76	-1.28	1.83	-0.49	2.63	0.23	2.32		2.4		
2013-05-17	0.12	0.83	-1.17	1.93	-0.37	2.74	0.34	2.3		2.4		
2013-05-24	0.12	0.88	-1.08	1.99	-0.28	2.8	0.43	2.27		2.37		
2013-05-31	0.14	1.03	-0.87	2.14	-0.09	2.93	0.59	2.23		2.34		
2013-06-07	0.14	1.04	-0.85	2.12	-0.04	2.93	0.68	2.16		2.25		
2013-06-14	0.14	1.11	-0.71	2.2	0.14	3	0.94	2.06		2.06		
2013-06-21	0.13	1.22	-0.55	2.33	0.33	3.11	1.14	2		1.97		
2013-06-28	0.16	1.44	-0.24	2.55	0.58	3.26	1.16	1.97		2.1		
2013-07-05	0.15	1.45	-0.38	2.56	0.52	3.25	1.12	2.04		2.13		
2013-07-12	0.13	1.48	-0.38	2.64	0.58	3.36	1.18	2.06		2.18		
2013-07-19	0.11	1.35	-0.54	2.54	0.39	3.28	1.03	2.15		2.25		
2013-07-26	0.11	1.36	-0.51	2.57	0.38	3.3	1.05	2.19		2.25		
2013-08-02	0.11	1.4	-0.47	2.64	0.44	3.38	1.08	2.2		2.3		
2013-08-09	0.12	1.38	-0.54	2.62	0.37	3.39	1	2.25		2.39		
2013-08-16	0.12	1.5	-0.36	2.73	0.53	3.5	1.15	2.2		2.35		
2013-08-23	0.14	1.64	-0.14	2.86	0.73	3.61	1.31	2.13		2.3		
2013-08-30	0.13	1.6	-0.22	2.76	0.63	3.48	1.18	2.13		2.3		
2013-09-06	0.15	1.76	0.03	2.92	0.85	3.59	1.35	2.07		2.24		
2013-09-13	0.13	1.73	-0.01	2.92	0.82	3.61	1.33	2.1		2.28		
2013-09-20	0.11	1.54	-0.28	2.79	0.6	3.53	1.21	2.19		2.32		
2013-09-27	0.1	1.43	-0.35	2.66	0.46	3.41	1.07	2.2		2.34		
2013-10-04	0.11	1.39	-0.38	2.64	0.45	3.42	1.07	2.19		2.35		
2013-10-11	0.14	1.43	-0.36	2.68	0.48	3.43	1.08	2.2		2.35		
2013-10-18	0.14	1.39	-0.39	2.66	0.48	3.41	1.1	2.18		2.31		
2013-10-25	0.11	1.32	-0.45	2.55	0.37	3.32	1.01	2.18		2.31		
2013-11-01	0.11	1.32	-0.44	2.57	0.39	3.34	1.02	2.18		2.32		
2013-11-08	0.11	1.36	-0.38	2.68	0.52	3.46	1.16	2.16		2.3		
2013-11-15	0.13	1.4	-0.4	2.74	0.56	3.53	1.21	2.18		2.32		
2013-11-22	0.13	1.37	-0.4	2.74	0.56	3.54	1.23	2.18		2.31		
2013-11-29	0.13	1.36	-0.36	2.74	0.57	3.52	1.21	2.17		2.31		
2013-12-06	0.13	1.46	-0.21	2.84	0.71	3.61	1.32	2.13		2.29		
2013-12-13	0.14	1.51	-0.13	2.86	0.72	3.6	1.31	2.14		2.29		
2013-12-20	0.13	1.58	-0.1	2.89	0.72	3.61	1.3	2.17		2.31		
2013-12-27	0.13	1.72	0.04	2.99	0.79	3.66	1.34	2.2		2.32		
2014-01-03	0.13	1.73	0.05	3.01	0.76	3.69	1.32	2.25		2.37		
2014-01-10	0.13	1.71	-0.07	2.96	0.68	3.63	1.22	2.28		2.41		
2014-01-17	0.11	1.65	-0.08	2.86	0.6	3.53	1.15	2.26		2.38		
2014-01-24	0.11	1.65	-0.08	2.82	0.62	3.47	1.14	2.2		2.33		
2014-01-31	0.11	1.55	-0.17	2.73	0.58	3.39	1.11	2.15		2.28		
2014-02-07	0.12	1.48	-0.29	2.68	0.53	3.37	1.1	2.15		2.27		

Aswath Damodaran

Cost of Capital

23-Jan-14

Industry Name	Number of Firms	Beta	Cost of Equity	E/(D+E)	Std Dev in Stock	Cost of Debt	Tax Rate	After-tax Cost of Debt	D/(D+E)	Cost of Capital
Advertising	65	1.03	8.19%	65.55%	113.36%	7.04%	6.04%	6.62%	34.45%	7.64%
Aerospace/Defense	95	1.01	8.08%	84.04%	88.97%	5.54%	15.03%	4.71%	15.96%	7.54%
Air Transport	25	0.94	7.73%	47.74%	92.87%	6.04%	13.79%	5.21%	52.26%	6.41%
Apparel	70	1.15	8.77%	82.42%	94.86%	6.04%	10.29%	5.42%	17.58%	8.18%
Auto & Truck	26	1.28	9.42%	50.62%	103.75%	7.04%	4.71%	6.71%	49.38%	8.08%
Auto Parts	75	1.46	10.35%	75.76%	102.64%	7.04%	9.43%	6.38%	24.24%	9.38%
Bank	7	0.72	6.62%	54.29%	41.40%	4.04%	22.17%	3.14%	45.71%	5.03%
Banks (Regional)	721	0.58	5.96%	58.14%	70.20%	5.04%	18.00%	4.13%	41.86%	5.19%
Beverage	47	1.42	10.16%	81.86%	109.89%	7.04%	3.95%	6.76%	18.14%	9.54%
Beverage (Alcoholic)	19	1.14	8.74%	78.40%	97.07%	6.04%	10.72%	5.39%	21.60%	8.01%
Biotechnology	349	1.12	8.62%	91.61%	133.64%	7.04%	1.13%	6.96%	8.39%	8.48%
Broadcasting	30	1.53	10.70%	67.35%	110.90%	7.04%	13.21%	6.11%	32.65%	9.20%
Brokerage & Investment Banking	49	1.11	8.58%	19.98%	87.95%	5.54%	13.44%	4.80%	80.02%	5.55%
Building Materials	37	1.27	9.40%	76.89%	85.47%	5.54%	16.33%	4.64%	23.11%	8.30%
Business & Consumer Services	179	0.90	7.53%	77.38%	89.91%	5.54%	13.41%	4.80%	22.62%	6.91%
Cable TV	16	0.97	7.91%	67.01%	86.81%	5.54%	15.00%	4.71%	32.99%	6.86%
Chemical (Basic)	47	1.01	8.10%	77.12%	108.14%	7.04%	6.27%	6.60%	22.88%	7.76%
Chemical (Diversified)	10	1.42	10.12%	74.97%	64.97%	4.54%	25.03%	3.40%	25.03%	8.44%
Chemical (Specialty)	100	1.01	8.11%	85.99%	85.18%	5.54%	12.74%	4.83%	14.01%	7.65%
Coal & Related Energy	45	1.28	9.42%	53.58%	120.20%	7.04%	2.44%	6.87%	46.42%	8.24%
Computer Services	129	0.92	7.65%	83.00%	96.81%	6.04%	9.94%	5.44%	17.00%	7.27%
Computer Software	273	1.07	8.38%	92.01%	100.31%	7.04%	6.16%	6.61%	7.99%	8.24%
Computers/Peripherals	66	1.15	8.79%	91.89%	111.60%	7.04%	5.66%	6.64%	8.11%	8.61%
Construction	18	0.96	7.84%	76.65%	94.83%	6.04%	9.82%	5.45%	23.35%	7.28%
Diversified	20	0.77	6.89%	51.42%	58.91%	4.54%	12.60%	3.97%	48.58%	5.47%
Educational Services	40	1.24	9.22%	71.93%	120.83%	7.04%	11.84%	6.21%	28.07%	8.37%
Electrical Equipment	135	1.14	8.75%	87.92%	109.94%	7.04%	7.49%	6.51%	12.08%	8.48%
Electronics	191	1.02	8.16%	86.20%	111.11%	7.04%	7.52%	6.51%	13.80%	7.94%
Electronics (Consumer & Office)	26	1.37	9.88%	71.27%	101.29%	7.04%	8.97%	6.41%	28.73%	8.88%
Engineering	56	1.20	9.04%	81.49%	89.28%	5.54%	14.86%	4.72%	18.51%	8.24%
Entertainment	85	1.19	8.98%	79.38%	102.02%	7.04%	4.85%	6.70%	20.62%	8.51%
Environmental & Waste Services	108	1.13	8.71%	69.64%	118.46%	7.04%	5.02%	6.69%	30.36%	8.10%
Farming/Agriculture	29	0.79	7.01%	70.86%	84.88%	5.54%	9.01%	5.04%	29.14%	6.44%
Financial Svcs.	76	0.99	7.97%	49.48%	79.79%	5.04%	18.37%	4.11%	50.52%	6.02%
Financial Svcs. (Non-bank & Insurance)	17	1.05	8.29%	23.18%	66.66%	5.04%	9.77%	4.55%	76.82%	5.41%
Food Processing	97	0.85	7.30%	78.17%	86.41%	5.54%	14.00%	4.76%	21.83%	6.74%
Food Wholesalers	18	1.18	8.92%	85.63%	91.05%	6.04%	10.69%	5.39%	14.37%	8.41%
Furn/Home Furnishings	36	1.24	9.25%	78.33%	100.03%	7.04%	10.03%	6.33%	21.67%	8.62%
Healthcare Equipment	193	0.85	7.31%	85.28%	105.14%	7.04%	5.80%	6.63%	14.72%	7.21%
Healthcare Facilities	47	1.13	8.68%	45.27%	90.96%	6.04%	13.49%	5.23%	54.73%	6.79%
Healthcare Products	58	1.00	8.06%	83.47%	100.72%	7.04%	8.76%	6.42%	16.53%	7.79%
Healthcare Services	126	0.83	7.20%	78.17%	91.19%	6.04%	13.77%	5.21%	21.83%	6.77%
Heathcare Information and Technology	125	0.99	8.00%	87.32%	112.18%	7.04%	6.09%	6.61%	12.68%	7.83%

Aswath Damodaran

Cost of Capital

23-Jan-14

Industry Name	Number of Firms	Beta	Cost of Equity	E/(D+E)	Std Dev in Stock	Cost of Debt	Tax Rate	After-tax Cost of Debt	D/(D+E)	Cost of Capital
Heavy Construction	46	1.67	11.39%	63.98%	89.60%	5.54%	19.40%	4.47%	36.02%	8.89%
Homebuilding	32	1.71	11.61%	63.85%	105.53%	7.04%	6.68%	6.57%	36.15%	9.78%
Hotel/Gaming	89	1.27	9.41%	65.65%	99.66%	6.04%	10.48%	5.41%	34.35%	8.03%
Household Products	139	1.00	8.06%	83.80%	106.72%	7.04%	9.51%	6.37%	16.20%	7.79%
Information Services	71	0.84	7.26%	90.39%	66.77%	5.04%	17.05%	4.18%	9.61%	6.96%
Insurance (General)	26	0.92	7.64%	68.43%	55.60%	4.54%	19.19%	3.67%	31.57%	6.38%
Insurance (Life)	27	1.21	9.09%	60.00%	57.69%	4.54%	17.82%	3.73%	40.00%	6.95%
Insurance (Prop/Cas.)	53	0.76	6.86%	74.09%	65.78%	5.04%	19.42%	4.06%	25.91%	6.13%
Internet software and services	330	1.05	8.27%	96.00%	120.28%	7.04%	4.59%	6.72%	4.00%	8.20%
Investment Co.	65	0.82	7.12%	48.92%	76.57%	5.04%	6.62%	4.71%	51.08%	5.89%
Machinery	141	1.04	8.25%	85.11%	78.89%	5.04%	13.02%	4.38%	14.89%	7.68%
Metals & Mining	134	1.26	9.34%	67.47%	127.20%	7.04%	1.90%	6.91%	32.53%	8.55%
Office Equipment & Services	30	1.14	8.76%	64.48%	81.92%	5.54%	12.81%	4.83%	35.52%	7.37%
Oil/Gas (Integrated)	8	1.00	8.06%	92.13%	52.52%	4.54%	20.55%	3.61%	7.87%	7.71%
Oil/Gas (Production and Exploration)	411	1.24	9.24%	39.04%	112.16%	7.04%	6.29%	6.60%	60.96%	7.63%
Oil/Gas Distribution	80	0.82	7.12%	65.82%	63.33%	4.54%	4.18%	4.35%	34.18%	6.18%
Oilfield Svcs/Equip.	163	1.30	9.56%	83.14%	101.55%	7.04%	10.73%	6.28%	16.86%	9.01%
Packaging & Container	24	0.99	7.97%	67.03%	56.60%	4.54%	21.28%	3.57%	32.97%	6.52%
Paper/Forest Products	21	1.34	9.72%	65.79%	75.10%	5.04%	8.20%	4.63%	34.21%	7.98%
Pharma & Drugs	138	1.10	8.56%	87.82%	117.64%	7.04%	4.30%	6.74%	12.18%	8.33%
Power	106	0.68	6.43%	54.02%	55.54%	4.54%	16.03%	3.81%	45.98%	5.23%
Precious Metals	166	1.33	9.71%	72.98%	140.33%	7.04%	0.82%	6.98%	27.02%	8.97%
Publshing & Newspapers	52	1.08	8.45%	73.09%	88.39%	5.54%	13.92%	4.77%	26.91%	7.46%
R.E.I.T.	46	0.78	6.95%	14.93%	56.02%	4.54%	2.48%	4.43%	85.07%	4.80%
Railroad	10	1.08	8.43%	80.85%	67.40%	5.04%	20.51%	4.01%	19.15%	7.59%
Real Estate (Development)	22	0.99	7.99%	80.06%	94.11%	6.04%	3.00%	5.86%	19.94%	7.57%
Real Estate (General/Diversified)	11	0.72	6.63%	85.25%	74.92%	5.04%	8.72%	4.60%	14.75%	6.33%
Real Estate (Operations & Services)	47	1.40	10.05%	62.67%	101.66%	7.04%	8.56%	6.44%	37.33%	8.70%
Recreation	70	1.30	9.56%	79.92%	97.36%	6.04%	8.81%	5.51%	20.08%	8.75%
Reinsurance	3	0.56	5.85%	72.20%	37.61%	4.04%	13.34%	3.50%	27.80%	5.20%
Restaurant	84	0.86	7.32%	78.39%	78.32%	5.04%	15.17%	4.28%	21.61%	6.66%
Retail (Automotive)	30	1.15	8.80%	63.49%	84.47%	5.54%	19.23%	4.47%	36.51%	7.22%
Retail (Building Supply)	7	1.07	8.38%	81.85%	97.40%	6.04%	21.97%	4.71%	18.15%	7.72%
Retail (Distributors)	87	1.00	8.04%	69.53%	85.26%	5.54%	16.18%	4.64%	30.47%	7.00%
Retail (General)	21	0.98	7.94%	73.74%	77.55%	5.04%	25.03%	3.78%	26.26%	6.84%
Retail (Grocery and Food)	21	0.81	7.11%	63.75%	79.40%	5.04%	22.83%	3.89%	36.25%	5.94%
Retail (Internet)	47	1.03	8.19%	95.18%	114.31%	7.04%	9.80%	6.35%	4.82%	8.10%
Retail (Special Lines)	137	0.99	7.97%	72.57%	91.79%	6.04%	18.90%	4.90%	27.43%	7.13%
Rubber& Tires	4	1.27	9.38%	47.67%	106.10%	7.04%	15.21%	5.97%	52.33%	7.59%
Semiconductor	104	1.19	9.01%	88.48%	95.41%	6.04%	7.30%	5.60%	11.52%	8.61%
Semiconductor Equip	51	1.25	9.31%	85.49%	101.14%	7.04%	5.13%	6.68%	14.51%	8.93%
Shipbuilding & Marine	14	1.50	10.52%	60.48%	117.34%	7.04%	4.99%	6.69%	39.52%	9.01%
Shoe	14	0.83	7.19%	92.69%	78.29%	5.04%	19.82%	4.04%	7.31%	6.96%
Steel	37	1.19	8.99%	68.54%	83.60%	5.54%	14.13%	4.76%	31.46%	7.66%
Telecom (Wireless)	28	0.68	6.44%	48.75%	96.71%	6.04%	11.54%	5.34%	51.25%	5.88%
Telecom. Equipment	131	1.14	8.76%	90.28%	106.61%	7.04%	6.90%	6.55%	9.72%	8.55%
Telecom. Services	82	0.94	7.74%	58.40%	98.32%	6.04%	8.40%	5.53%	41.60%	6.82%
Thrift	223	0.53	5.70%	1.84%	69.10%	5.04%	18.93%	4.09%	98.16%	4.12%

Aswath Damodaran

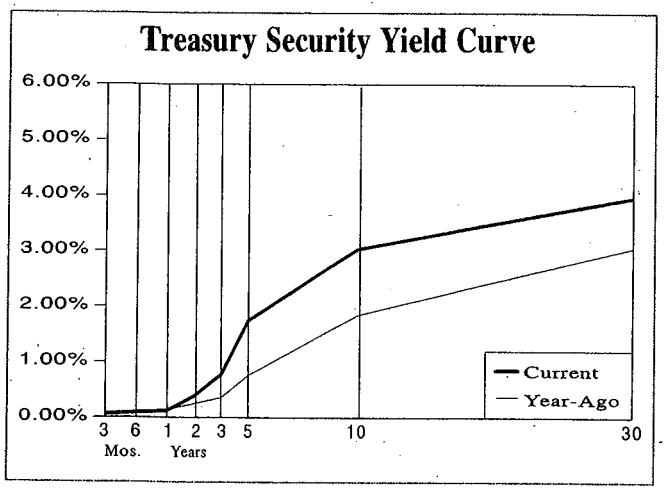
Cost of Capital

23-Jan-14

Industry Name	Number of Firms	Beta	Cost of Equity	E/(D+E)	Std Dev in Stock	Cost of Debt	Tax Rate	After-tax Cost of Debt	D/(D+E)	Cost of Capital
Tobacco	12	0.94	7.73%	82.76%	58.61%	4.54%	14.23%	3.89%	17.24%	7.07%
Transportation	22	1.01	8.07%	82.81%	75.94%	5.04%	21.21%	3.97%	17.19%	7.37%
Trucking	28	1.17	8.87%	56.03%	82.51%	5.54%	27.93%	3.99%	43.97%	6.73%
Utility (General)	20	0.56	5.84%	59.05%	33.80%	4.04%	29.93%	2.83%	40.95%	4.61%
Utility (Water)	20	0.75	6.78%	63.33%	77.13%	5.04%	14.52%	4.31%	36.67%	5.87%
Total Market	**7766**	**1.01**	**8.07%**	**57.38%**	**94.94%**	**6.04%**	**10.32%**	**5.42%**	**42.62%**	**6.94%**

Selected Yields

	Recent (12/31/13)	3 Months Ago (10/02/13)	Year Ago (1/02/13)
TAXABLE			
Market Rates			
Discount Rate	0.75	0.75	0.75
Federal Funds	0.00-0.25	0.00-0.25	0.00-0.25
Prime Rate	3.25	3.25	3.25
30-day CP (A1/P1)	0.09	0.13	0.25
3-month LIBOR	0.25	0.24	0.31
Bank CDs			
6-month	0.07	0.07	0.10
1-year	0.09	0.09	0.13
5-year	0.53	0.58	0.70
U.S. Treasury Securities			
3-month	0.06	0.01	0.07
6-month	0.09	0.04	0.11
1-year	0.12	0.09	0.14
5-year	1.75	1.39	0.76
10-year	3.03	2.63	1.84
10-year (inflation-protected)	0.77	0.41	-0.69
30-year	3.96	3.71	3.05
30-year Zero	4.24	3.99	3.29



	Recent (12/31/13)	3 Months Ago (10/02/13)	Year Ago (1/02/13)
Mortgage-Backed Securities			
GNMA 5.5%	2.15	2.45	1.75
FHLMC 5.5% (Gold)	2.20	2.66	2.12
FNMA 5.5%	1.99	2.39	1.81
FNMA ARM	1.94	2.11	2.16
Corporate Bonds			
Financial (10-year) A	4.30	4.07	3.10
Industrial (25/30-year) A	4.82	4.70	3.99
Utility (25/30-year) A	4.75	4.61	4.03
Utility (25/30-year) Baa/BBB	5.12	5.26	4.35
Foreign Bonds (10-Year)			
Canada	2.76	2.55	1.87
Germany	1.93	1.81	1.44
Japan	0.74	0.64	0.79
United Kingdom	3.02	2.71	1.99
Preferred Stocks			
Utility A	6.31	6.05	5.64
Financial BBB	6.60	6.51	6.01
Financial Adjustable A	5.48	5.48	5.48
TAX-EXEMPT			
Bond Buyer Indexes			
20-Bond Index (GOs)	4.73	4.53	3.58
25-Bond Index (Revs)	5.33	5.17	4.28
General Obligation Bonds (GOs)			
1-year Aaa	0.15	0.20	0.21
1-year A	0.77	0.85	0.83
5-year Aaa	1.35	1.40	0.90
5-year A	2.18	2.20	1.83
10-year Aaa	2.94	2.84	1.97
10-year A	3.67	3.68	2.87
25/30-year Aaa	4.38	4.24	3.16
25/30-year A	5.87	5.86	4.85
Revenue Bonds (Revs) (25/30-Year)			
Education AA	5.17	5.10	4.23
Electric AA	5.25	5.18	4.33
Housing AA	5.63	5.44	4.64
Hospital AA	5.34	5.21	4.50
Toll Road Aaa	4.87	5.02	4.42

Source: Bloomberg Finance L.P.

Federal Reserve Data

BANK RESERVES

(Two-Week Period; in Millions, Not Seasonally Adjusted)

	Recent Levels			Average Levels Over the Last...		
	12/25/13	12/11/13	Change	12 Wks.	26 Wks.	52 Wks.
Excess Reserves	2428716	2440755	-12039	2355559	2222117	1964535
Borrowed Reserves	181	168	13	208	270	364
Net Free/Borrowed Reserves	2428535	2440587	-12052	2355351	2221847	1964170

MONEY SUPPLY

(One-Week Period; in Billions, Seasonally Adjusted)

	Recent Levels			Ann'l Growth Rates Over the Last...		
	12/16/13	12/9/13	Change	3 Mos.	6 Mos.	12 Mos.
M1 (Currency+demand deposits)	2635.4	2626.6	8.8	11.4%	7.7%	8.5%
M2 (M1+savings+small time deposits)	10976.7	10971.7	5.0	7.1%	7.3%	5.5%

Source: United States Federal Reserve Bank

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REV. RUL. 2013–26 TABLE 2

Adjusted AFR for December 2013

Period for Compounding

	Annual	*Semiannual*	*Quarterly*	*Monthly*
Short-term adjusted AFR	.25%	.25%	.25%	.25%
Mid-term adjusted AFR	1.57%	1.56%	1.56%	1.55%
Long-term adjusted AFR	3.32%	3.29%	3.28%	3.27%

REV. RUL. 2013–26 TABLE 3

Rates Under Section 382 for December 2013

Adjusted federal long-term rate for the current month	3.32%
Long-term tax-exempt rate for ownership changes during the current month (the highest of the adjusted federal long-term rates for the current month and the prior two months.)	3.50%

REV. RUL. 2013–26 TABLE 4

Appropriate Percentages Under Section 42(b)(1) for December 2013

Note: Under section 42(b)(2), the applicable percentage for non-federally subsidized new buildings placed in service after July 30, 2008, with respect to housing credit dollar amount allocations made before January 1, 2014, shall not be less than 9%.

Appropriate percentage for the 70% present value low-income housing credit	7.57%
Appropriate percentage for the 30% present value low-income housing credit	3.25%

REV. RUL. 2013–26 TABLE 5

Rate Under Section 7520 for December 2013

Applicable federal rate for determining the present value of an annuity, an interest for life or a term of years, or a remainder or reversionary interest	2.0%

REV. RUL. 2013–26 TABLE 6

Rates Under Sections 846 and 807

Applicable rate of interest for 2014 for purposes of sections 846 and 807	1.79%

Section 1288.—Treatment of Original Issue Discount on Tax-Exempt Obligations

The adjusted applicable federal short-term, mid-term, and long-term rates are set forth for the month of December 2013. See Rev. Rul. 2013–26, page 628.

Section 3402.—Income Tax Collected at Source

Dividends and other distributions made by an Alaska Native Corporation to its shareholders are eligible for voluntary withholding under section 3402(p)(3)(B) of the Internal Revenue Code (Code) and § 31.3402(p)-1T of the Employment Tax Regulations. See Notice 2013–77 on page 632.

Section 3402.—Income Tax Collected at Source

Temporary and proposed regulations under section 3402(p)(3) relating to voluntary withholding agreements allow the Secretary to issue guidance in the Internal Revenue Bulletin to describe payments for which the Secretary finds that income tax withholding under a voluntary withholding agreement would be appropriate. The proposed regulations also clarify that existing regulations under section 3402(p) apply to voluntary withholding agreements between employers and employees. See T.D. 9646 on page 630 and REG–146620–13 on page 674.

U.S. DEPARTMENT OF THE TREASURY

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Daily Treasury Yield Curve Rates Go

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Date	1 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
12/02/13	0.02	0.05	0.10	0.13	0.30	0.59	1.43	2.16	2.81	3.58	3.86
12/03/13	0.04	0.06	0.10	0.13	0.28	0.58	1.40	2.13	2.79	3.56	3.84
12/04/13	0.04	0.06	0.10	0.14	0.30	0.60	1.45	2.19	2.84	3.63	3.90
12/05/13	0.02	0.06	0.10	0.13	0.30	0.61	1.49	2.23	2.88	3.65	3.92
12/06/13	0.03	0.06	0.10	0.13	0.30	0.64	1.51	2.23	2.88	3.63	3.90
12/09/13	0.04	0.07	0.10	0.13	0.30	0.64	1.50	2.23	2.86	3.61	3.88
12/10/13	0.03	0.07	0.10	0.14	0.30	0.62	1.46	2.17	2.81	3.56	3.83
12/11/13	0.02	0.07	0.10	0.13	0.31	0.63	1.50	2.21	2.86	3.61	3.87
12/12/13	0.01	0.07	0.09	0.14	0.34	0.67	1.55	2.26	2.89	3.63	3.91
12/13/13	0.02	0.07	0.09	0.14	0.34	0.68	1.55	2.25	2.88	3.61	3.88
12/16/13	0.02	0.07	0.09	0.13	0.34	0.68	1.55	2.26	2.89	3.63	3.90
12/17/13	0.02	0.07	0.09	0.14	0.34	0.65	1.52	2.22	2.85	3.60	3.88
12/18/13	0.01	0.07	0.10	0.13	0.32	0.64	1.55	2.26	2.89	3.63	3.90
12/19/13	0.01	0.06	0.09	0.13	0.35	0.70	1.63	2.35	2.94	3.64	3.91
12/20/13	0.02	0.07	0.09	0.13	0.37	0.74	1.66	2.33	2.89	3.57	3.82
12/23/13	0.01	0.07	0.09	0.14	0.38	0.77	1.68	2.37	2.94	3.60	3.85
12/24/13	0.01	0.07	0.09	0.14	0.38	0.80	1.73	2.43	2.99	3.66	3.90
12/26/13	0.00	0.07	0.09	0.13	0.42	0.81	1.74	2.43	3.00	3.68	3.92
12/27/13	0.01	0.07	0.09	0.12	0.40	0.79	1.74	2.44	3.02	3.70	3.94
12/30/13	0.01	0.07	0.10	0.13	0.39	0.77	1.71	2.40	2.99	3.66	3.90
12/31/13	0.01	0.07	0.10	0.13	0.38	0.78	1.75	2.45	3.04	3.72	3.96

* 30-year Treasury constant maturity series was discontinued on February 18, 2002 and reintroduced on February 9, 2006. From February 18, 2002 to February 8, 2006, Treasury published alternatives to a 30-year rate. See Long-Term Average Rate for more information.

Treasury discontinued the 20-year constant maturity series at the end of calendar year 1986 and reinstated that series on October 1, 1993. As a result, there are no 20-year rates available for the time period January 1, 1987 through September 30, 1993.

Treasury Yield Curve Rates. These rates are commonly referred to as "Constant Maturity Treasury" rates, or CMTs. Yields are interpolated by the Treasury from the daily yield curve. This curve, which relates the yield on a security to its time to maturity is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The yield values are read from the yield curve at fixed maturities, currently 1, 3 and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10 year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity.

Treasury Yield Curve Methodology. The Treasury yield curve is estimated daily using a cubic spline model. Inputs to the model are primarily bid-side yields for on-the-run Treasury securities. See our Treasury Yield Curve Methodology page for details.

Negative Yields and Nominal Constant Maturity Treasury Series Rates (CMTs). Current financial market conditions, in conjunction with extraordinary low levels of interest rates, have resulted in negative yields for some Treasury securities trading in the secondary market. Negative yields for Treasury securities most often reflect highly technical factors in Treasury markets related to the cash and repurchase agreement markets, and are at times unrelated to the time value of money.

As such, Treasury will restrict the use of negative input yields for securities used in deriving interest rates for the Treasury nominal Constant Maturity Treasury series (CMTs). Any CMT input points with negative yields will be reset to zero percent prior to use as inputs in the CMT derivation. This decision is consistent with Treasury not accepting negative yields in Treasury nominal security auctions.

In addition, given that CMTs are used in many statutorily and regulatory determined loan and credit programs as well as for setting interest rates on non-marketable government securities, establishing a floor of zero more accurately reflects borrowing costs related to various programs.

For more information regarding these statistics contact the Office of Debt Management by email at debt.management@do.treas.gov.

S&P GICS Composite 1500 Valuations as of 12/31/13

	Earnings % Change		P/E Ratios			P/Es Rel. to the S&P 1500			Proj. 5-Yr %	2014e P/E to	Div'd
	2013e	2014e	2013e	2014e	5 Yr Avg	2013e	2014e	5 Yr Avg	G. Rate	G. Rate	Yield
S&P GICS Composite 1500	**11.1**	**14.5**	**17.8**	**15.5**	**18.2**	**1.0**	**1.0**	**1.0**	**12.3**	**1.3**	**1.9**
S&P 500	10.8	13.3	17.2	15.2	17.6	1.0	1.0	1.0	12.1	1.3	2.0
S&P 400	11.8	22.3	22.0	18.0	22.5	1.2	1.2	1.2	13.0	1.4	1.4
S&P 600	20.7	35.1	25.5	18.9	25.8	1.4	1.2	1.4	15.0	1.3	1.2
Consumer Discretionary	**13.8**	**16.8**	**21.3**	**18.3**	**22.4**	**1.2**	**1.2**	**1.2**	**17.3**	**1.1**	**1.3**
Advertising	4.0	14.7	21.4	18.6	20.7	1.2	1.2	1.1	9.1	2.1	1.8
Apparel Retail	3.1	17.4	19.5	16.6	20.3	1.1	1.1	1.1	12.6	1.3	1.3
Apparel, Accessories & Luxury Goods	2.0	19.4	23.3	19.5	22.9	1.3	1.3	1.3	16.7	1.2	0.9
Auto Parts & Equipment	41.3	11.5	16.6	14.9	19.2	0.9	1.0	1.1	15.3	1.0	1.4
Automobile Manufacturers	11.8	8.4	10.4	9.6	9.6	0.6	0.6	0.5	12.9	0.7	1.5
Automotive Retail	19.1	10.2	18.7	16.9	20.9	1.1	1.1	1.2	15.2	1.1	0.1
Broadcasting	21.7	18.0	22.9	19.4	25.4	1.3	1.3	1.4	16.8	1.2	0.5
Cable & Satellite	13.6	14.6	19.1	16.7	21.0	1.1	1.1	1.2	14.2	1.2	1.3
Casinos & Gaming	46.4	28.5	26.1	20.3	28.9	1.5	1.3	1.6	25.5	0.8	2.7
Computer & Electronics Retail	3.2	20.6	15.5	12.9	13.6	0.9	0.8	0.7	9.9	1.3	2.0
Consumer Electronics	5.3	10.7	19.9	18.0	21.0	1.1	1.2	1.2	13.3	1.4	2.6
Department Stores	(11.3)	21.7	23.1	18.9	19.4	1.3	1.2	1.1	9.2	2.1	1.9
Distributors	11.3	17.0	23.1	19.7	24.2	1.3	1.3	1.3	14.6	1.3	1.4
Education Services	(31.2)	(11.0)	14.8	16.7	9.4	0.8	1.1	0.5	10.3	1.6	0.6
Footwear	1.6	15.2	25.4	22.1	25.9	1.4	1.4	1.4	14.0	1.6	1.1
General Merchandise Stores	(9.1)	24.0	18.1	14.6	16.0	1.0	0.9	0.9	12.5	1.2	1.5
Home Furnishings	24.3	24.2	22.8	18.4	25.6	1.3	1.2	1.4	26.6	0.7	1.0
Home Improvement Retail	25.2	18.5	22.3	18.8	25.3	1.3	1.2	1.4	17.3	1.1	1.7
Homebuilding	123.5	27.5	17.7	13.9	30.7	1.0	0.9	1.7	18.3	0.8	0.5
Homefurnishing Retail	10.6	10.5	16.8	15.2	18.1	0.9	1.0	1.0	13.3	1.1	0.5
Hotels, Resorts & Cruise Lines	1.4	23.3	24.3	19.7	22.6	1.4	1.3	1.2	15.3	1.3	1.8
Household Appliances	71.4	(2.5)	13.0	13.4	16.2	0.7	0.9	0.9	27.7	0.5	1.3
Housewares & Specialties	13.1	10.7	17.3	15.6	19.3	1.0	1.0	1.1	11.0	1.4	1.4
Internet Retail	45.6	64.1	86.8	52.9	83.9	4.9	3.4	4.6	38.4	1.4	0.0
Leisure Facilities	5.4	10.6	18.8	17.0	19.3	1.1	1.1	1.1	13.1	1.3	0.2
Leisure Products	19.2	12.1	19.2	17.1	21.8	1.1	1.1	1.2	12.1	1.4	2.2
Motorcycle Manufacturers	16.2	18.9	21.1	17.7	22.4	1.2	1.1	1.2	13.8	1.3	1.2
Movies & Entertainment	13.2	15.0	20.6	17.9	22.1	1.2	1.2	1.2	15.0	1.2	1.2
Publishing	17.9	(10.7)	16.9	19.0	20.6	1.0	1.2	1.1	8.1	2.3	1.5
Restaurants	5.1	13.4	22.9	20.2	23.1	1.3	1.3	1.3	12.9	1.6	2.2
Specialized Consumer Services	15.0	12.8	19.9	17.6	20.0	1.1	1.1	1.1	12.9	1.4	2.0
Specialty Stores	6.6	22.0	21.8	17.9	21.4	1.2	1.2	1.2	19.5	0.9	1.1
Tires & Rubber	31.9	7.2	9.1	8.5	10.5	0.5	0.5	0.6	41.1	0.2	0.8
Consumer Staples	**5.0**	**10.4**	**18.8**	**17.1**	**19.1**	**1.1**	**1.1**	**1.1**	**9.7**	**1.8**	**2.6**
Agricultural Products	2.4	35.0	17.0	12.6	15.0	1.0	0.8	0.8	12.4	1.0	2.0
Brewers	9.8	10.0	16.6	15.1	16.9	0.9	1.0	0.9	6.8	2.2	1.8
Distillers & Vintners	10.8	16.8	25.5	21.8	23.1	1.4	1.4	1.3	12.5	1.7	1.0
Drug Retail	20.7	17.1	18.8	16.1	20.5	1.1	1.0	1.1	12.9	1.2	1.8
Food Distributors	(5.1)	13.7	21.9	19.2	19.8	1.2	1.2	1.1	9.0	2.1	2.6
Food Retail	(6.0)	25.4	21.9	17.5	20.0	1.2	1.1	1.1	13.6	1.3	1.4
Household Products	2.1	10.4	20.0	18.1	19.8	1.1	1.2	1.1	8.9	2.0	2.8
Hypermarkets & Super Centers	6.1	7.6	17.0	15.8	17.9	1.0	1.0	1.0	9.7	1.6	2.0
Packaged Foods & Meats	2.7	10.1	20.2	18.3	20.7	1.1	1.2	1.1	9.9	1.8	2.2
Personal Products	11.7	14.7	23.2	20.2	22.1	1.3	1.3	1.2	12.7	1.6	1.1
Soft Drinks	1.1	10.5	19.7	17.8	19.3	1.1	1.1	1.1	8.7	2.1	2.6
Tobacco	9.5	2.7	15.6	15.2	16.8	0.9	1.0	0.9	8.3	1.8	4.6
Energy	**1.2**	**14.9**	**15.1**	**13.1**	**14.0**	**0.8**	**0.8**	**0.8**	**12.5**	**1.1**	**2.1**
Coal & Consumable Fuels	NM	NM	NM	NM	30.1	NM	NM	1.7	10.1	NM	1.3
Integrated Oil & Gas	(9.5)	3.0	12.4	12.0	11.3	0.7	0.8	0.6	8.2	1.5	2.7
Oil & Gas Drilling	13.8	27.4	12.7	9.9	12.8	0.7	0.6	0.7	15.4	0.6	3.2
Oil & Gas Equipment & Services	5.7	26.3	18.3	14.5	17.7	1.0	0.9	1.0	18.0	0.8	1.1
Oil & Gas Exploration & Production	126.0	22.0	18.2	14.9	21.5	1.0	1.0	1.2	15.9	0.9	1.4
Oil & Gas Refining & Marketing	(28.1)	42.5	14.2	9.9	11.6	0.8	0.6	0.6	8.2	1.2	2.3
Oil & Gas Storage & Transport	(12.0)	38.2	35.1	25.4	27.4	2.0	1.6	1.5	20.0	1.3	4.1
Financials	**24.5**	**6.3**	**14.9**	**14.0**	**17.0**	**0.8**	**0.9**	**0.9**	**10.1**	**1.4**	**1.9**
Asset Management & Custody Banks	16.2	12.6	17.6	15.6	19.0	1.0	1.0	1.0	13.9	1.1	2.0
Consumer Finance	19.5	0.5	13.1	13.0	15.0	0.7	0.8	0.8	10.6	1.2	1.3
Diversified Banks	9.5	2.9	12.1	11.8	13.3	0.7	0.8	0.7	7.2	1.6	2.5
Diversified REITs	14.2	24.4	63.9	51.4	60.4	3.6	3.3	3.3	5.9	8.6	3.9
Industrial REITs	NM	(42.7)	53.7	93.8	NM	3.0	6.0	NM	4.9	19.2	3.1

Investment cornerstones for 2014: Validating the rally

2014 should see moderate growth and moderate returns, but there are credible upside- and downside-risk scenarios that require careful monitoring.

Expectations for 2014:

- Equities to modestly outperform fixed income and cash
- U.S. economic growth of 2.9%
- Jobs gains that average 230,000 per month
- Modest inflation of just 1.9%
- U.S. Federal Reserve (Fed) tapering to begin in the first half, but no rise in the Fed funds rate until late 2015
- U.S. 10-year treasury yield at 3.2% by year end
- Single-digit growth in corporate earnings to drive U.S. equity returns. Price/Earnings (P/E) multiples to remain broadly unchanged.
- Our target for the U.S. large-cap Russell 1000® Index at year-end 2014 is 1,060, while for the S&P500® Index it is 1,900.

The squeeze play continues

In last year's annual outlook, we argued that investors would be squeezed out of safe-haven assets and forced further up the risk curve. In our view, the combination of low interest rates, low inflation, moderate economic growth, and moderately attractive equity market valuations would leave few viable alternatives. We got the direction right, but the magnitude outstripped our expectations. As you will see in the chart on the next page, investors fleeing bonds is an example of what helped propel the Russell Global Index to gain around 20% in 2013 while global fixed income seems likely to deliver a small negative return.

We think global equities will outperform cash and fixed income over 2014, but there are a couple of risky scenarios we'll be on the alert for.

The forces behind the squeeze play are still in place—ultra-expansionary monetary policy, low risk-free returns, low inflation, and moderate corporate profit growth. The differences heading into 2014 are that equity markets are now less attractively valued after 2013's big gains and the Fed is likely to start winding down its Quantitative Easing (QE) program at some stage during the year.

We think global equities will outperform cash and fixed income over 2014, but there are a couple of risky scenarios we'll be on the alert for. One is that global equity markets move into speculative overdrive. Asset markets have a history of overshooting, and global equity markets could become outright expensive if confidence in the economic outlook takes hold.

The alternative scenario is that economic growth disappoints and investors conclude that monetary policy has reached its limits. The equity market gains in 2013 largely reflect confidence that the global economy, and in particular the United States, is returning to more normal growth rates. U.S. economic growth of between 2.5%–3.0% in 2014 is needed to validate the market gains of 2013. GDP growth that significantly disappoints expectations could see equity markets give up a large portion of their 2013 gains.

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End Date: Dec 31 2013

- (•) Daily
- ( ) Weekly
- ( ) Monthly
- ( ) Dividends Only

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Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Dec 31, 2013	1,842.61	1,849.44	1,842.41	1,848.36	2,312,840,000	1,848.36
Dec 30, 2013	1,841.47	1,842.47	1,838.77	1,841.07	0	1,841.07
Dec 27, 2013	1,842.97	1,844.89	1,839.81	1,841.40	2,052,920,000	1,841.40
Dec 26, 2013	1,834.96	1,842.84	1,834.96	1,842.02	1,982,270,000	1,842.02

* Close price adjusted for dividends and splits.

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Currency in USD.

[redacted]

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Fundamental company data provided by Capital IQ. Historical chart data and daily updates provided by Commodity Systems, Inc. (CSI). International historical chart data, daily updates, fund summary, fund performance, dividend data and Morningstar Index data provided by Morningstar, Inc.

DUFF&PHELPS

Table: Equity Risk Premium

March 20, 2013

Duff & Phelps Recommended Equity Risk Premium (ERP) and Corresponding Risk-Free Rates (R_f); January 2008–Present

For additional information, please visit www.DuffandPhelps.com/CostofCapital

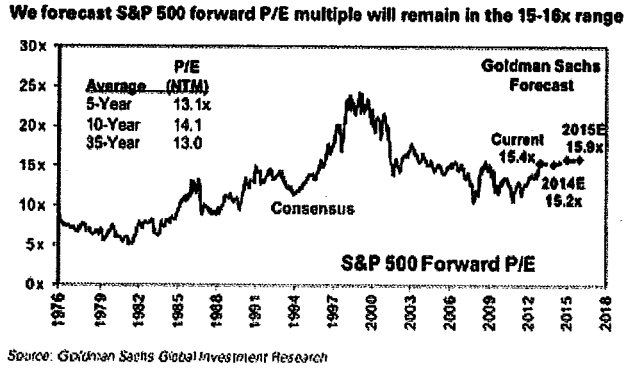
	Duff & Phelps Recommended ERP	*Risk Free Rate*
Current ERP Guidance ✓ February 28, 2013 – UNTIL FURTHER NOTICE	5.0%	4.0% Normalized 20-year Treasury yield *
Year-end 2012 Guidance ⊙ December 31, 2012	5.5%	4.0% Normalized 20-year Treasury yield *
Change in ERP Guidance January 15, 2012 – February 27, 2013	5.5%	4.0% Normalized 20-year Treasury yield *
Change in ERP Guidance September 30, 2011 – January 14, 2012	6.0%	4.0% Normalized 20-year Treasury yield *
July 2011 – September 29, 2011	5.5%	4.0% Normalized 20-year Treasury yield *
June 1, 2011 – June 30, 2011	5.5%	Spot 20-year Treasury Yield
May 1, 2011 – May 31, 2011	5.5%	4.0% Normalized 20-year Treasury yield *
December 1, 2010 – April 30, 2011	5.5%	Spot 20-year Treasury Yield
June 1, 2010 – November 30, 2010	5.5%	4.0% Normalized 20-year Treasury yield *
Change in ERP Guidance December 1, 2009 – May 31, 2010	5.5%	Spot 20-year Treasury Yield
June 1, 2009 – November 30, 2009	6.0%	Spot 20-year Treasury Yield
November 1, 2008 – May 31, 2009	6.0%	4.5% Normalized 20-year Treasury yield *
Change in ERP Guidance October 27, 2008 – October 31, 2008	6.0%	Spot 20-year Treasury Yield
January 1, 2008 – October 26, 2008	5.0%	Spot 20-year Treasury Yield

* Normalized in this context means that in months where the risk-free rate is deemed to be abnormally low, a proxy for a longer-term sustainable risk-free rate is used.

MarketWatch

November 21, 2013, 5:00 AM ET

Goldman: S&P 500 could drop 10% sometime during 2014



Source: Goldman Sachs Global Investment Research

Goldman Sachs has released its its top ten market themes for 2014. It's calling for U.S. growth to accelerate to 3% and another "solid year" for equities, notably in developed markets, with some caveats of course.

In a separate note released Wednesday, Goldman's David Kostin and other strategist laid out their S&P 500 SPX forecasts for next year, reiterating an end-2014 target of 1,900, a gain of 6% — its fair value estimate. (Note, that's a little more sunshiny than that 12-month S&P target of 1,840 from Morgan Stanley, aka Bob Marley.)

Here are the caveats though. Goldman says given the big run in the S&P 500 — some 26% year-to-date — the index could fall 6% in the next three months and 11% over the next 12 months, to levels of 1,700 and 1,600, respectively. And the investment banks sees a *67% probability* of a 10% drop at some point in 2014.

While multiple expansion was the name of the game for stocks in 2013, next year's returns will depend on earnings and money flow rather than further valuation re-rating, says Goldman. And valuation is the biggest wildcard. Goldman says its year-end 2014 price target reflects a slight multiple contraction to a p/e of 15.2 forward EPS.

Durability of the expansion matters, says Goldman, and if above-trend growth continues past 2014, the output gap will narrow and the cost of equity will fall, with both trends supporting a higher P/E multiple. Goldman sees forward P/E for the S&P 500 of 16 times, with the index reaching 2,100 by the end of 2015 and 2,200 by the end of 2016.

So where to go with all that? Here is Goldman's four recommended strategies for next year:

Growth over value. Russell 1000 Growth RUI should beat Russell 1000 Value as slowing earnings growth, falling equity risk premium and higher bond yields will benefit growth.
Firms investing in capital expenditure. Companies that have under-invested in recent years, but have high return on invested capital that Goldman thinks will spend more in 2014 should create a platform for future growth.
Companies with high buyback yields. Goldman's sector-neutral basket of 50 stocks with the highest share-repurchase yield should benefit as firms return more cash to shareholders.
Stocks with high operating leverage. Economic growth will boost sales and firms with a high degree of operating leverage will benefit most in terms of a lift to EPS.

As for sectors, Goldman is re-shuffling its pro-cyclical sector allocation, recommending overweights in IT, consumer discretionary, industrials vs. underweights in consumer staples, utilities and telecom services. Financials, materials, energy and health care are market weights.

Here's more tidbits from Goldman's crystal ball on the S&P 500:

Operating EPS forecasts for the S&P: $108/2013, $116/2014, $125/2015, $132/2016, $138/2017. Technology will generate 40% of S&P 500 EPS in 2014.
Revenue forecast for the S&P : Up 5% in both 2014 and 2015, in-line with consensus. Every 100 basis point shift in 2014 U.S. GDP translates into a swing of roughly $5 per share in 2014 EPS.
Margins: Will return to the previous high of 8.9% in 2014, 9% in 2015. Goldman says its profit-margin forecast is the "greatest investable gap relative to consensus expectations." Bottom-up consensus sees margins establishing a record high of 9.5% in 2014 and 10.1% in 2015. Every 50 basis point swing in net margins equals around $5 per share shift in 2014 EPS.

And show me the money?

$150 billion to flow into U.S. stocks in 2014, from individuals, investors and companies.
Net household outflows will total $430 billion next year as direct ownership of stocks falls, but $130 billion is expected to flow into ETFs next year.
Net equity inflows of $225 billion from mutual, pension funds and life insurers.
International investment outflows of $25 billion, following on from what was seen in 2013. U.S. investors are expected to buy $200 billion of non-U.S. stocks during 2014.
Total capital usage by S&P 500 firms will rise 18% to $2.2 trillion in 2014, and allocate 55% of capital spending for growth and return 45% to shareholders via buybacks and dividends.

– Barbara Kollmeyer

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US Inflation Calculator

Easily calculate how the buying power of the US dollar has changed from 1913-2013; get inflation rates, and inflation news.

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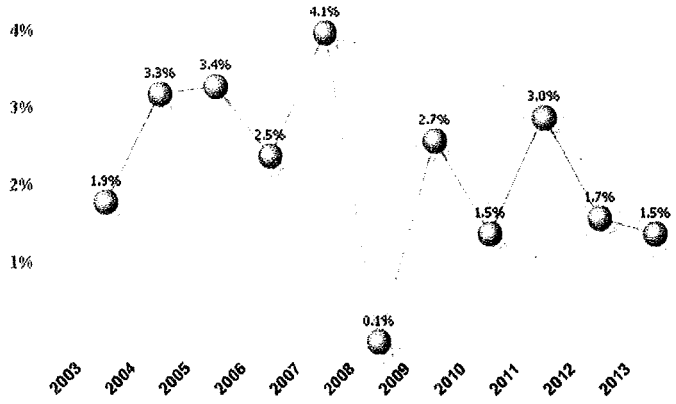
Current US Inflation Rates: 2003-2014

The latest annual inflation rate for the United States is 1.5% through the 12 months ended December 2013, as published by the US government on January 16, 2014. The next inflation update is scheduled for release on February 20, 2014 at 8:30 a.m. ET. This upcoming data update will offer the inflation rate over the 12 months ended January 2014.

The chart, graph and table below displays annual US inflation rates from 2003-2013. Rates of inflation are calculated using the Current Consumer Price Index published monthly by the Bureau of Labor Statistics (BLS). For 2013, the most recent monthly data (12-month based) is used in the chart and graph.

Historical inflation rates are available from 1914-2013. If you would like to calculate rates between different dates, the US Inflation Calculator will do that quickly.

Inflation Rates Graph (2003-2013)



Annual Inflation Rates Chart (2003-2013)

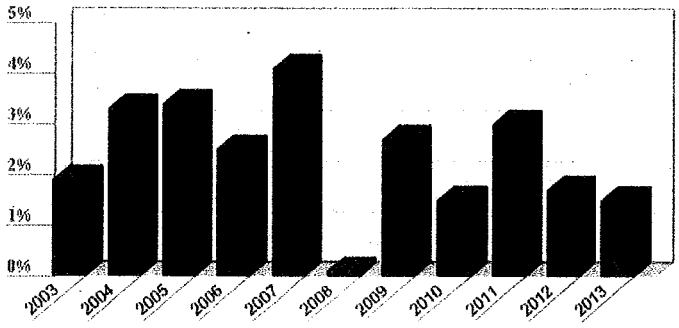


Table of Inflation Rates by Month and Year (1999-2013)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2014													
2013	1.6	2.0	1.5	1.1	1.4	1.8	2.0	1.5	1.2	1.0	1.2	1.5	1.5
2012	2.9	2.9	2.7	2.3	1.7	1.7	1.4	1.7	2.0	2.2	1.8	1.7	2.1
2011	1.6	2.1	2.7	3.2	3.6	3.6	3.6	3.8	3.9	3.5	3.4	3.0	3.2
2010	2.6	2.1	2.3	2.2	2.0	1.1	1.2	1.1	1.1	1.2	1.1	1.5	1.6
2009	0	0.2	-0.4	-0.7	-1.3	-1.4	-2.1	-1.5	-1.3	-0.2	1.8	2.7	-0.4
2008	4.3	4	4	3.9	4.2	5.0	5.6	5.4	4.9	3.7	1.1	0.1	3.8
2007	2.1	2.4	2.8	2.6	2.7	2.7	2.4	2	2.8	3.5	4.3	4.1	2.8
2006	4	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	1.3	2	2.5	3.2
2005	3	3	3.1	3.5	2.8	2.5	3.2	3.6	4.7	4.3	3.5	3.4	3.4
2004	1.9	1.7	1.7	2.3	3.1	3.3	3	2.7	2.5	3.2	3.5	3.3	2.7
2003	2.6	3	3	2.2	2.1	2.1	2.1	2.2	2.3	2	1.8	1.9	2.3
2002	1.1	1.1	1.5	1.6	1.2	1.1	1.5	1.8	1.5	2	2.2	2.4	1.6
2001	3.7	3.5	2.9	3.3	3.6	3.2	2.7	2.7	2.6	2.1	1.9	1.6	2.8
2000	2.7	3.2	3.8	3.1	3.2	3.7	3.7	3.4	3.5	3.4	3.4	3.4	3.4
1999	1.7	1.6	1.7	2.3	2.1	2	2.1	2.3	2.6	2.6	2.6	2.7	2.2

· Resource Links

- Bureau of Labor Statistics
- Coin Melt Value Calculator
- Gas Prices & Inflation
- Reserve Monetary Policy
- Reuters Inflation News
- Silver Coins Calculators

· 2 Years of Archives

- January 2014
- December 2013
- November 2013
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- May 2013
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- January 2013
- December 2012
- November 2012
- October 2012
- September 2012
- August 2012
- July 2012
- June 2012
- May 2012
- April 2012
- March 2012
- February 2012

Try Inflation Calculator!

· Current CPI and Inflation Rate

Inflation Rate 1.5%

Consumer Price Index (CPI) 233.049

(Released on Jan 16, 2014 for December 2013)

· Recent Posts

- US Annual Inflation in 2013 Increases 1.5%
- US Inflation Unchanged in November 2013, Annual Inflation Rate Rises
- US Inflation in October 2013 Retreats, 12-Month Inflation Rate Eases
- US Inflation Up 0.2% in September 2013, Annual Inflation Rate at 1.2%
- US Inflation Edges Up in August 2013, Inflation Rate at 1.5%
- US Inflation Eases in July 2013, Yet Annual Inflation Rate at 2%
- US Inflation Jumps in June 2013, Annual Inflation Rate Hits 1.8%
- US Inflation Climbs 0.1% in May 2013, Annual Inflation Rate at 1.4%
- US Inflation Falls for Second Month in April 2013
- US Inflation Eases as Consumer Prices Retreat in March 2013
- US Inflation Spikes as Consumer Prices Jump in February 2013
- US Inflation Eases, Consumer Prices Flat in January 2013
- US Inflation Slowed in 2012, Consumer Prices Muted

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Cost of Capital

As the economic recovery slowly moves along, companies are still confronted with difficulties in estimating their cost of capital (expected rate of return on equity capital and overall capital). The steep decline and recovery has impacted companies differently if their capital structures contain conservative amounts of debt compared to companies with large amounts of debt. The methods commonly used to estimate the cost of capital in more stable economic times, are still providing faulty estimates even today. The information below provides much more detail on these topics. In order for our clients to stay abreast of the latest thinking on this topic, check back for periodic updates.

5.0%

DUFF & PHELPS U.S. EQUITY RISK PREMIUM (ERP)

Last change: February 28, 2013

Learn More

Duff & Phelps Decreases U.S. Equity Risk Premium Recommendation to 5.0%

(TABLE) Duff & Phelps Recommended ERP and Risk-Free Rates Over Time

Risk Premium Report and Calculator

2013 Duff & Phelps Risk Premium Report

The 2013 Duff & Phelps Risk Premium Report is available for purchase through Business Valuation Resources (BVR) and ValueSource.

Webcast Replay: Using the 2011 Duff & Phelps Risk Premium Report

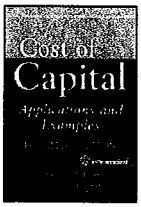
The Risk Premium Calculator

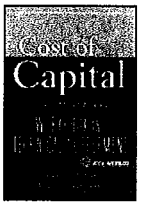
The Duff & Phelps Risk Premium Calculator is a web-based resource for calculating cost of equity, a key input in computing a discount rate.

Webcast Replay: Introducing the Duff & Phelps Risk Premium Calculator

Publications

The following books were co-authored by Roger Grabowski, Managing Director at Duff & Phelps:





Click here for a book review of Cost of Capital: Applications and Examples, 4th Edition that appeared in The Value Examiner.

Click here for a book review of Cost of Capital in Litigation: Applications and Examples, 4th Edition that appeared in Financial Valuation.

Expertise

Client Alert: Duff & Phelps Updates Recommended Equity Risk Premium to 5.0%

Duff & Phelps regularly reviews fluctuations in global economic and financial conditions that warrant periodic reassessments of the recommended ERP. Based upon current market conditions, Duff & Phelps recommends a U.S. ERP of 5.0% when developing discount rates as of February 28, 2013 and thereafter.

Duff & Phelps Updated Recommended Equity Risk Premium to 5.5% as of Jan 15, 2012

Duff & Phelps regularly reviews fluctuations in global economic and financial conditions that warrant periodic reassessments of the recommended ERP. Based upon market conditions as of January 15, 2012 and thereafter, Duff & Phelps recommends a U.S. ERP of 5.5% when developing discount rates.

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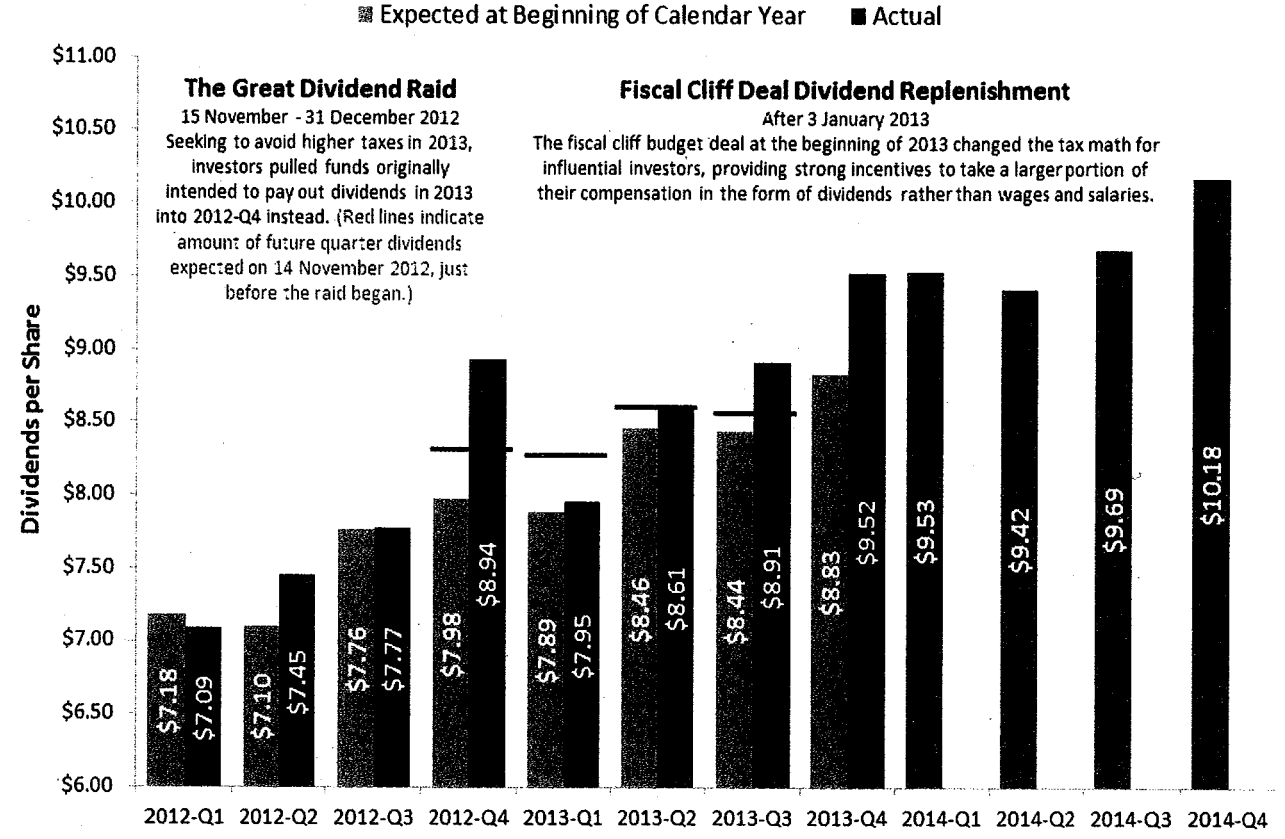

Sources: IndexArb (2012-2013), CBOE (2014), Standard & Poor

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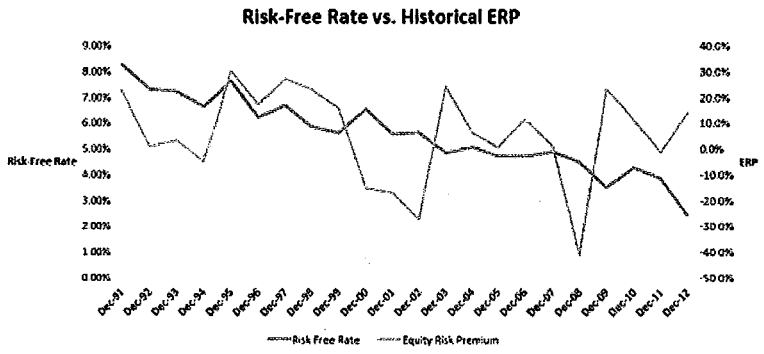
Equity Risk Premium Quarterly - January 2014

The equity risk premium ("ERP") is the extra return over the expected yield on risk-free securities that investors expect to receive from an investment in a diversified portfolio of common stocks.[1] It can also be thought to measure what investors demand over and above the risk-free rate for investing in equities as a class or the market price for taking on average equity risk.[2]

In recent years, US risk-free rates have reached levels near historic lows due to the perceived low risk of US treasuries relative to the sovereign debt of other developed nations. Additionally, the Federal Reserve and other Central Banks around the world have undertaken quantitative easing and other efforts to lower interest rates in response to economic conditions. As a result,the capital asset pricing model ("CAPM"), which utilizes the ERP to calculate a cost of equity, has implied a below-average cost of equity when the market may have exhibited higher risk. Yields on US Treasury bonds, which were being manipulated by government intervention, were the primary driver for the implied below-average cost of equity However, in the past several months, US Treasury yields have been returning to normal levels. The Federal Reserve's market interventions remain ambiguous at best, but it is certain th interest rates are currently on the rise. The Fed has begun its tapering plan by slowly winding down its bond buying program. Yields on the 10-year US Treasury bond have risen 114 basis points from January 2, 2013, to January 2, 2014. Yields on the 20-year US Treasury bond have risen more than 105 basis points over the same period to 3.68%.

Research has shown that the ERP is cyclical during business cycles and that the ERP can fluctuate within its historic range based on current and forecasted economic conditions. The ERP tends to move in the opposite direction of the economy, so when the business cycle is at its peak, the ERP will be at the lower end of its historical range; conversely, during economic troughs, the ERP will be at the higher end of the range.[1] The historical risk-free rate and ERP are presented in the following chart.



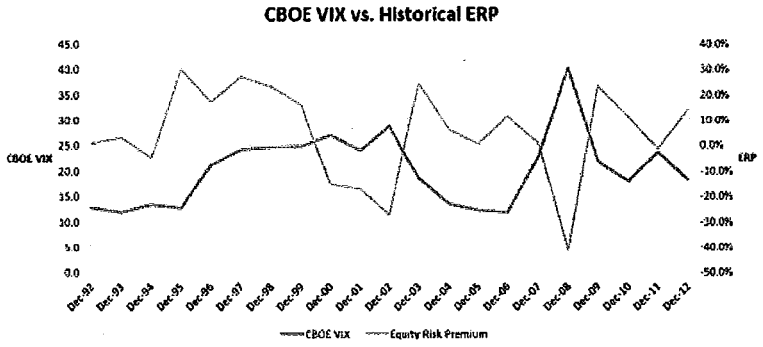
There is no single universally accepted methodology for estimating the ERP; thus, there is wide diversity in practice among academics and financial advisors with regard to recommende ERP estimates.

American Appraisal researched and analyzed various economic and market factors in order to determine where the current ERP should fall within a range of historical ERP. To determin which indicators were most relevant to the ERP, correlations were calculated for these indicators relative to the historical ERP. Long-term correlations greater than +/- 0.5 were considered meaningful.

Based on our research and analysis, American Appraisal utilizes a 6.0% US ERP combined with the actual risk-free rate as of January 2014, which is consistent with our conclusion for the prior quarter. Additional details of the factors we reviewed follow.

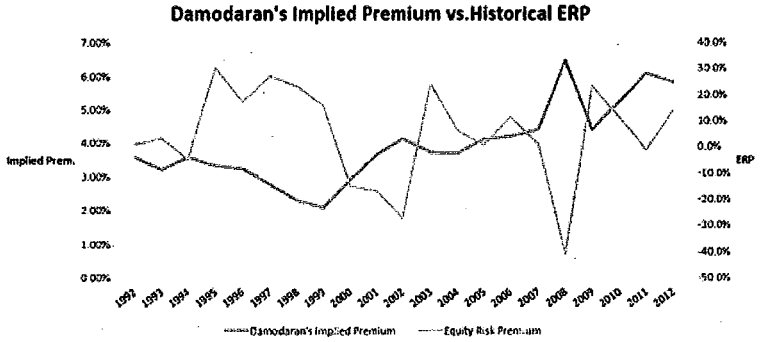
Economic/Market Indicators

The factors determined to display moderate or strong correlations with historical ERPs are the CBOE Volatility Index ("VIX"), Damodaran's implied premium, and Moody's Aaa and Baa 2 -year corporate credit spreads. VIX is the ticker symbol for the Chicago Board Options Exchange ("CBOE") Volatility Index, which numerically expresses the market's expectations of 30-day volatility; it is constructed by using the implied volatilities of a wide range of S&P 500 Index options. The results are meant to be forward-looking and are calculated by using both cal and put options. The VIX is a widely used measure of market risk and often is referred to as the investor fear gauge. There are three variations of the volatility indexes: (1) the VIX, whicl tracks the S&P 500; (2) the VXN, which tracks the Nasdaq 100; and (3) the VXD, which tracks the Dow Jones Industrial Average.



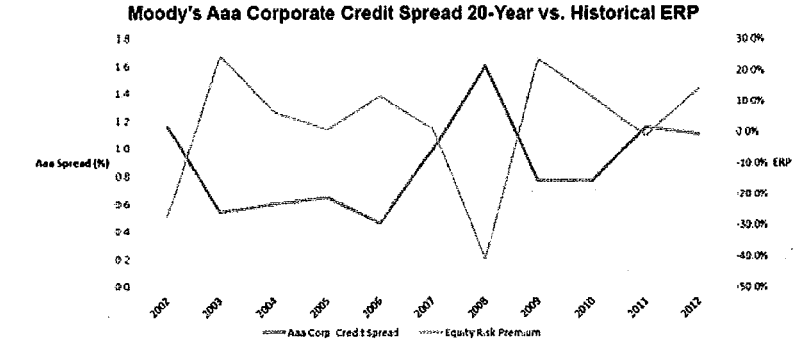
1992-2012 Correlation (20 year):	-0.51
2002-2012 Correlation (10 year):	-0.77

Damodaran's implied premium, developed by Aswath Damodaran, Professor of Finance at the Stern School of Business at New York University, is a forward-looking approach to calculating anexpected ERP. It is based on using current market data to calculate an implied or residualized ERP.[3]



1992-2012 Correlation (20 year):	-0.41
2002-2012 Correlation (10 year):	-0.47

Moody's Aaa corporate credit spreads are calculated based on the difference in Aaa corporate yields vs. US treasuries with similar maturities.



2002-2012 Correlation (10 year):	-0.77

Economic Indicators

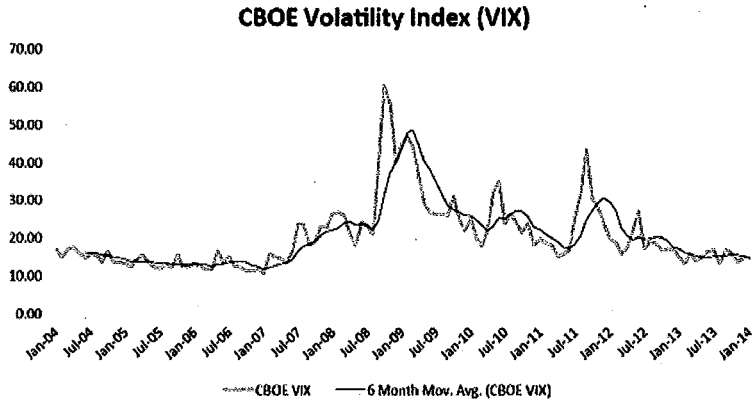
As described previously, the VIX, Damodaran's implied premium, and Moody's Aaa and Baa 20- year corporate credit spreads display meaningful correlations with historical ERPs. Each of the factors is briefly discussed as follows:

Damodaran's Implied Premium

The six-month moving average trendline suggests that the implied premium has steadily trended down from 7.0% toward 6.0%, and has dropped sharply - to slightly below 5% - over the past quarter.

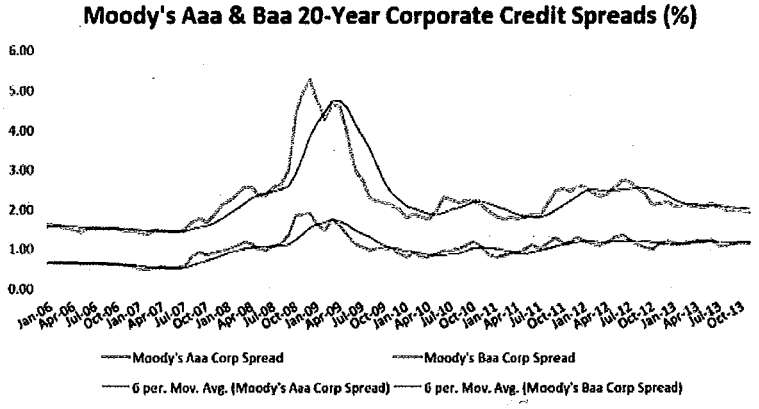
CBOE Volatility Index (VIX)

The VIX appears to be trending around its historical average (near 20), but has fluctuated considerably over the past few years, spiking to over 40 in 2011. Since the first quarter of 2012 the six-month trendline has dipped down below 20. Further, throughout the second half of 2012 and 2013, the actual index has also fallen below 20 and is trending toward 15. The index is only slightly above the near-record lows observed in 2007.



Moody's Aaa and Baa Corporate Credit Spreads (20-year)

Credit spreads have climbed slowly since January 2011. In 2012, Aaa and Baa spreads fell, rose, fell, and rose again, while their six-month moving averages remained relatively flat. The rise in spreads since 2011 may be a signal of increased risk or could be the effect of global risk in Europe causing flight to quality and creating anomalies in the US treasury markets. The most recent monthly data continues to indicate a narrowing of credit spreads, which appeared to stabilize in 2013.

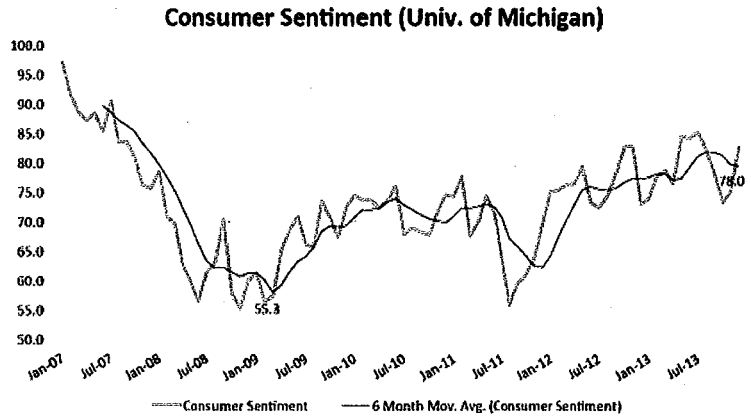


Additional Economic Indicators

In addition to the economic and market factors that display meaningful correlations with historical ERPs, the following economic indicators are monitored on a frequent basis to determine the current status of the US economy and help establish where the current ERP falls within the historical range.

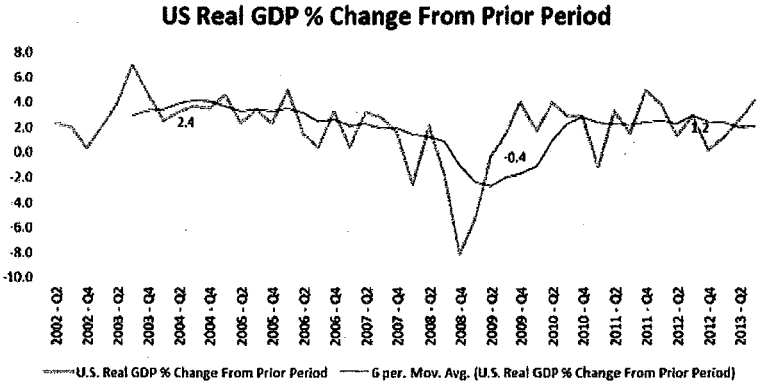
Consumer Sentiment

Consumer sentiment trends, as tracked by the University of Michigan, indicate improving consumer sentiment, which is typically preceded by positive economic trends. The survey has indicated that consumer sentiment increased in May and June 2013 to its most recent highs, but August and September 2013 showed declines, which may be attributable to the turmoil in Congress. Overall consumer sentiment has been trending positive since early 2012.



US Real GDP

The six-month moving average trendline for US real GDP indicates a relatively flat economy with slower growth trending toward 2.0%. However, during the fourth quarter of 2012, US re GDP dipped below its six-month moving average trendline to near 0%. Economists were generally surprised by the contraction in economic growth, which many attributed to the decline in government spending, particularly military spending. Economic growth bounced back from the fourth-quarter 2012 decline and returned closer to the trending average of 2.0% in 2013 The third quarter of 2013 showed a significant jump in economic activity, as GDP increased to 4%. This is considered a coincident indicator by economists and is neither leading nor lagging.



Conclusion

As the ERP is cyclical and can fluctuate within its historical range based on current and economic conditions, please consult with your American Appraisal valuation advisor when developing a weighted average cost of capital or, more specifically, the cost of equity for your business.

Sources

1 Shannon Pratt and Roger Grabowski, *Cost of Capital: Applications and Examples*, fourth edition (New York: John Wiley & Sons, 2010), pages 115, 137.
2 Aswath Damodaran, "Risk Premiums: Looking backwards and forwards..." (presentation, October 2011).
3 Aswath Damodaran, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications - The 2013 Edition* (paper, updated March 2013).

This newsletter is provided for general informational purposes only and is based upon the information available as of the time it was written. This ERP Quarterly newsletter is also intended for US-based companies and may not be appropriate for companies with a significant share of revenues originating outside the United States.

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