Montana Department of
REVENUE

Capitalization Rate Study

Centrally Assessed Properties
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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.

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.

Montana Department of Revenue

Mike Kadas
Director

2015 Capitalization Rate Study
Business Tax & Valuation Bureau
Centrally Assessed Properties

Steve Bullock
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2015 Capitalization Rate Study

Scheduled Airlines

Montana Department of
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2015 Capitalization Rate Study

Electric Utilities

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Electric Utilities - Regulated
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	Western	
	5.71%	5.67%	Yahoo
	5.76%	5.80%	Value Line
	5.73%	5.73%	Average of E/Ps
Inverse of P/E Ratios:			
	2.67%	2.56%	Yahoo
	5.54%	5.49%	Value Line
	4.11%	4.02%	Average of Inverse of the P/E
	6.70%	6.56%	Inverse of median P/E, Value Line
	4.92%	4.88%	Average of all above except median P/E
Mean =	5.27%	5.21%	
Median =	5.71%	5.67%	

Equity Measure NUOI = 5.80%

Debt Measures Calculated, Current Yield:

	Annual	4th Qtr	
	5.36%	5.19%	ALL
	5.21%	5.10%	BBB- & Above
	5.25%	5.13%	BB- & Above
Mean =	5.27%	5.14%	
Median =	5.25%	5.13%	

Debt Measure = 5.40%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate					
Equity	64.00%	x	5.80%	=	3.71%
Debt	36.00%	x	5.40%	=	1.94%
	100.00%				5.66%
Direct Cap Rate NUOI =					**5.75%**

Gross Cash Flow / Price:

All	Western	
12.20%	12.12%	Value Line

Equity Measure Gross = 12.25%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)					
Equity	64.00%	x	12.25%	=	7.84%
Debt	36.00%	x	5.40%	=	1.94%
	100.00%				9.78%
Direct Cap Rate GCF =					**10.00%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Electric Utility - Exempt Wholesale Generators
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	B++	
	4.43%	4.78%	Yahoo
	5.29%	6.29%	Value Line
	4.86%	5.53%	Average of E/Ps
Inverse of P/E Ratios:			
	2.98%	2.74%	Yahoo
	6.54%	6.18%	Value Line
	4.76%	4.46%	Average of Inverse of the P/E
	6.88%	6.90%	Inverse of median P/E, Value Line
	4.81%	5.00%	Average of all above except median P/E
Mean =	5.23%	5.38%	
Median =	5.29%	6.18%	

Equity Measure NUOI = 6.50%

Debt Measures Calculated, Current Yield:

	Annual	4th Qtr	
	5.36%	5.19%	ALL
	5.21%	5.10%	BBB- & Above
	5.25%	5.13%	BB- & Above
Mean =	5.27%	5.14%	
Median =	5.25%	5.13%	

Debt Measure = 5.40%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	57.00%	x	6.50%	=	3.71%	
Debt	43.00%	x	5.40%	=	2.32%	
	100.00%				6.03%	
Direct Cap Rate NUOI =						**6.25%**

Gross Cash Flow / Price:

All	B++	
14.03%	12.76%	Value Line

Equity Measure Gross = 14.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	57.00%	x	14.00%	=	7.98%	
Debt	43.00%	x	5.40%	=	2.32%	
	100.00%				10.30%	
Direct Cap Rate GCF =						**10.50%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Electric Utilities
2015 Assessment Year

Equity Measures Calculated:		**All**	**Western**	**Wholesale Generators**
Dividend Growth Model - Dividends		9.10%	9.00%	10.00%
Dividend Growth Model - Earnings		9.50%	9.25%	10.00%
Dividend Growth Model - Plowback		7.25%	7.00%	8.00%
Capital Asset Pricing Model		8.15%	8.02%	7.81%
	Mean =	8.50%	8.32%	8.95%
	Equity Measure FCF =	**8.50%**	**8.30%**	**9.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.72%	3.47%	4.67%	4.41%
BBB- & Above	3.41%	3.32%	4.56%	4.34%
BB- & Above	3.44%	3.34%	4.56%	4.34%
Mean =	3.52%	3.38%	4.60%	4.36%
Median =	3.44%	3.34%	4.56%	4.34%
			Debt Measure =	**4.60%**

Yield Cap Rate Free Cash Flow - Electric Utilities						
Equity	64.00%	x	8.30%	=	5.31%	
Debt	36.00%	x	4.60%	* (1 - 0.35) =	1.08%	
	100.00%				6.39%	
Weighted Average Cost of Capital (WACC) =						**6.50%**

Yield Cap Rate Free Cash Flow - Wholesale Generators						
Equity	57.00%	x	9.00%	=	5.13%	
Debt	43.00%	x	4.60%	* (1 - 0.35) =	1.29%	
	100.00%				6.42%	
Weighted Average Cost of Capital (WACC) =						**6.50%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Electric Utilities - Regulated
2015 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+**	**188,800**	**23.50**	**15.05**	**4,436,800**	**2,840,900**	**15,000**	**15,000**	**1,842,300**	**1.00**	**1,842,300**
Alliant Energy	LNT	A	110,900	66.42	29.59	7,365,978	3,281,400	201,800	201,800	2,977,800	1.00	2,977,800
OGE Energy	OGE	A+	198,500	35.22	15.30	6,991,170	3,037,100	0	0	2,300,100	1.00	2,300,100
Avista Corp.	**AVA**	**A**	**60,100**	**35.35**	**21.60**	**2,124,535**	**1,298,300**	**0**	**0**	**1,371,400**	**1.00**	**1,371,400**
Pinnacle West Capital	PNW	A+	110,200	68.31	38.06	7,527,762	4,194,500	0	0	2,796,500	1.00	2,796,500
Xcel Energy Inc.	XEL	B++	498,000	35.92	19.21	17,888,160	9,566,000	0	0	10,910,800	1.00	10,910,800
Portland General	**POR**	**B++**	**78,100**	**37.83**	**23.29**	**2,954,523**	**1,819,000**	**0**	**0**	**1,916,000**	**1.00**	**1,916,000**
IDACORP Inc.	**IDA**	**B++**	**50,200**	**66.19**	**36.87**	**3,322,738**	**1,850,700**	**0**	**0**	**1,615,300**	**1.00**	**1,615,300**
NorthWestern Corp.	**NWE**	**B+**	**38,700**	**56.58**	**26.63**	**2,189,646**	**1,030,700**	**0**	**0**	**1,185,000**	**1.00**	**1,185,000**
Black Hills	**BKH**	**B+**	**44,500**	**53.04**	**29.39**	**2,360,280**	**1,307,700**	**0**	**0**	**1,396,900**	**1.00**	**1,396,900**
G't Plains Energy	GXP	B+	153,900	28.41	22.58	4,372,299	3,474,400	39,000	39,000	3,515,700	1.00	3,515,700
PNM Resources	PNM	B	79,700	29.63	20.85	2,361,511	1,662,000	11,500	11,500	1,670,400	1.00	1,670,400
Sums & Avgs - All Companies						63,895,402	35,362,700	267,300	267,300	33,498,200		33,498,200
Sums & Avgs - B++ & Above Companies						52,611,666	27,887,900	216,800	216,800	25,730,200		25,730,200
Sums & Avgs - B+ & Above Companies						61,533,891	33,700,700	255,800	255,800	31,827,800		31,827,800
Sums & Avgs - Western Companies						40,729,155	22,728,900	11,500	11,500	22,862,300		22,862,300
'AVA, BKH, IDA, NWE, PNM, PNW, POR, UNS, & NVE												

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	65.00%	63,895,402	67.00%	52,611,666	66.00%	61,533,891	64.00%	40,729,155
DEBT	35.00%	33,765,500	33.00%	25,947,000	34.00%	32,083,600	36.00%	22,873,800
TOTAL	100.00%	$97,660,902	100.00%	78,558,666	100.00%	93,617,491	100.00%	$63,602,955

Notes/Rational for Changes to Guideline Companies

2014 - NV Energy was removed from guideline companies after becoming a wholly -owned subsidiary of MidAmerican Energy Holdings Company (Berkshire Hathaway Energy) on December 19, 2013

UNS Energy was removed from the guideline companies after being acquired by Fortis Inc. on August 12, 2014.

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Electric Utilities - Regulated
2015 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
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	(VL) Est. Tax Rate
MDU Resources Group	**MDU**	**1.59**	**6.77%**	**1.40**	**5.96%**	**3.60**	**15.32%**	**30.85**	**3.24%**	**15.74**	**6.35%**	**15.00**	**6.67%**	**GASDIVRS**	**0.95**	**33.00%**
Alliant Energy	LNT	3.51	5.28%	3.78	5.69%	6.85	10.31%	57.68	1.73%	19.49	5.13%	14.00	7.14%	UTILCENT	0.80	20.00%
OGE Energy	OGE	1.97	5.59%	1.89	5.37%	3.30	9.37%	35.98	2.78%	18.05	5.54%	14.00	7.14%	UTILCENT	0.90	32.50%
Avista Corp.	**AVA**	**3.13**	**8.85%**	**2.23**	**6.31%**	**4.50**	**12.73%**	**31.75**	**3.15%**	**17.28**	**5.79%**	**16.00**	**6.25%**	**UTILWEST**	**0.80**	36.50%
Pinnacle West Capital	PNW	3.75	5.49%	3.73	5.46%	8.35	12.22%	56.69	1.76%	18.08	5.53%	15.00	6.67%	UTILWEST	0.70	35.00%
Xcel Energy Inc.	XEL	1.94	5.40%	2.14	5.96%	4.15	11.55%	31.30	3.20%	18.04	5.54%	14.00	7.14%	UTILWEST	0.65	35.00%
Portland General	**POR**	**2.21**	**5.84%**	**2.38**	**6.29%**	**6.00**	**15.86%**	**33.37**	**3.00%**	**16.97**	**5.89%**	**NA**		**UTILWEST**	**0.80**	**24.00%**
IDACORP Inc.	**IDA**	**3.71**	**5.61%**	**3.77**	**5.70%**	**6.25**	**9.44%**	**56.52**	**1.77%**	**18.80**	**5.32%**	**14.00**	**7.14%**	**UTILWEST**	**0.80**	**25.00%**
NorthWestern Corp.	**NWE**	**2.81**	**4.97%**	**3.24**	**5.73%**	**6.10**	**10.78%**	**48.48**	**2.06%**	**18.58**	**5.38%**	**NA**		**UTILWEST**	**0.70**	**17.00%**
Black Hills	**BKH**	**2.54**	**4.79%**	**3.12**	**5.88%**	**6.40**	**12.07%**	**55.05**	**1.82%**	**18.73**	**5.34%**	**17.00**	**5.88%**	**UTILWEST**	**0.90**	**34.50%**
G't Plains Energy	GXP	1.55	5.46%	1.61	5.67%	4.10	14.43%	25.85	3.87%	17.89	5.59%	15.00	6.67%	UTILCENT	0.85	34.00%
PNM Resources	PNM	1.31	4.42%	1.50	5.06%	3.65	12.32%	27.00	3.70%	19.61	5.10%	16.00	6.25%	UTILWEST	0.85	35.00%

Sums & Avgs - All Companies	5.71%	5.76%	12.20%	2.67%	5.54%	6.70%	0.81	30.13%
Sums & Avgs - B++ & Above Companies	6.10%	5.84%	12.10%	2.58%	5.64%	6.88%	0.80	30.13%
Sums & Avgs - B+ & Above Companies	5.82%	5.82%	12.19%	2.58%	5.58%	6.74%	0.80	29.68%
Sums & Avgs - Western Companies	5.67%	5.80%	12.12%	2.56%	5.49%	6.56%	0.78	30.25%
'AVA, BKH, IDA, NWE, PNM, PNW, POR, UNS, &								

Beta of Industry = 0.80
Beta of Western Sector = 0.78

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

Notes/Rational for Changes to Guideline Companies
2014 - NV Energy was removed from guideline comp
UNS Energy was removed from the guideline companies a

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Exempt Wholesale Generators
2015 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	244,500	108.91	45.02	26,628,903	11,008,000	20,000	20,000	11,253,000	1.00	11,253,000
Duke Energy Corporation	DUK	A	706,000	81.15	58.54	57,288,370	41,330,000	0	0	38,152,000	1.00	38,152,000
Southern Company	SO	A	887,100	47.31	21.43	41,968,701	19,008,000	1,131,000	1,131,000	21,344,000	1.00	21,344,000
Ameren Corporation	AEE	B++	242,600	42.89	26.97	10,405,923	6,544,000	142,000	142,000	5,504,000	1.00	5,504,000
PPL Corp	PPL	B++	630,300	35.16	19.78	22,160,298	12,466,000	0	0	20,592,000	1.00	20,592,000
Dynegy	DYN		100,200	30.63	22.06	3,068,792	2,210,000	0	0	1,979,000	1.00	1,979,000
NRG Energy	NRG	B+	322,400	29.84	31.70	9,620,416	10,220,000	249,000	249,000	15,767,000	1.00	15,767,000
AES Corp	AES	B	719,900	13.56	6.01	9,761,844	4,330,000	0	0	18,869,000	1.00	18,869,000
Sums & Avgs - All Companies						180,903,246	107,116,000	1,542,000	1,542,000	133,460,000		133,460,000
Summs & Avgs - A Companies						125,885,974	71,346,000	1,151,000	1,151,000	70,749,000		70,749,000
Sums & Avgs - B++ Companies						32,566,220	19,010,000	142,000	142,000	26,096,000		26,096,000

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%	180,903,246	55.00%	32,566,220	64.00%	125,885,974
DEBT	43.00%	135,002,000	45.00%	26,238,000	36.00%	71,900,000
TOTAL	100.00%	315,905,246	100.00%	58,804,220	100.00%	197,785,974

Notes/Rational for Changes to Guideline Companies
2015 Cap Rate Study

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Exempt Wholesale Generators
2015 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
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	Est. Tax Rate
Sempra	SRE	4.57	4.20%	4.51	4.14%	9.44	8.67%	100.92	0.99%	23.77	4.21%	12.00	8.33%	UTILWEST	0.75	32.0%
Duke Energy Corporation	DUK	3.49	4.30%	4.40	5.42%	8.85	10.91%	73.99	1.35%	19.63	5.09%			UTILEAST	0.60	34.5%
Southern Company	SO	2.34	4.95%	2.93	6.19%	5.50	11.63%	44.34	2.26%	18.14	5.51%	16.00	6.25%	UTILEAST	0.55	35.5%
Ameren Corporation	AEE	2.34	5.46%	2.52	5.88%	5.70	13.29%	40.15	2.49%	19.54	5.12%	15.00	6.67%	UTILCENT	0.75	38.5%
PPL Corp	PPL	1.44	4.10%	2.36	6.71%	4.30	12.23%	33.44	2.99%	13.82	7.24%	14.00	7.14%	UTILEAST	0.60	33.0%
Dynegy	DYN	(2.60)	(8.49%)	(0.63)	(2.06%)			28.62	3.49%					POWER		
NRG Energy	NRG	(0.88)	(2.95%)	0.20	0.67%	5.00	16.76%	31.14	3.21%	12.72	7.86%	15.00	6.67%	POWER	0.90	30.0%
AES Corp	AES	0.49	3.61%	1.09	8.04%	3.35	24.71%	14.22	7.03%	9.31	10.74%	16.00	6.25%	POWER	1.15	25.0%
Sums & Avgs - All Companies			4.43%		5.29%		14.03%		2.98%		6.54%		6.88%		0.76	32.8%
Summs & Avgs - A Companies			4.48%		5.25%		10.40%		1.53%		4.94%		7.29%		0.63	34.0%
Sums & Avgs - B++ Companies			4.78%		6.29%		12.76%		2.74%		6.18%		6.90%		0.68	35.8%

These companies have significant amounts of non-utility generation

Beta of Industry = 0.75

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

Notes/Rational for Changes to Guideline Companie
2015 Cap Rate Study

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)
Industry: Electric Utilities
2015 Assessment Year

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

	Electric Utilities	Western Utilities	Wholesale Generators
K_E = Cost of Equity	**8.15%**	**8.02%**	**7.81%**
R_F = Risk Free Rate	2.75%	2.75%	2.75%
β= Beta	0.80	0.78	0.75
R_M = Market Rate of Return	9.50%	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	6.75%	6.75%	6.75%

Equity 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/	1/1/2015 implied premium	5.78%
Duff & Phelps	February 6, 2015 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2014 Not updated for 2015

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	12.10%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	10.10%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	8.50%
	Mean =	10.23%
	Median =	10.10%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2014-31 Table 2 December 8, 2014

Rev Rule 2014-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.34%
	Mid Term - AFR	R_f =	1.28%
	Long Term - AFR	R_f =	2.68%

The ValueLine Investment Survey January 9, 2015

U.S. Treasury Securities December 30, 2014

1 Year	R_f =	0.20%
10 Year	R_f =	2.19%
30 Year	R_f =	2.76%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2014

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

1 year constant maturity, quoted on investment basis	R_f =	0.25%
10-year constant maturity, quoted on investment basis	R_f =	2.17%
20-year constant maturity, quoted on investment basis	R_f =	2.47%
30-year constant maturity, quoted on investment basis	R_f =	2.75%
	Mean =	1.71%
	Median =	2.18%
	Weighted Mean =	2.08%
	R_f =	**2.75%**

U.S. Treasury Securities Long-Term December 31, 2014

20 year constant maturity	R_f = **2.47%**
30 year constant maturity	R_f = **2.75%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2015 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	66.42	2.20	3.31%	4.50%	7.81%
Avista Corp	**AVA**	**35.35**	**1.32**	**3.73%**	**4.50%**	**8.23%**
Black Hills Corp	**BKH**	**53.04**	**1.60**	**3.02%**	**3.50%**	**6.52%**
Great Plains Energy	GXP	28.41	1.00	3.52%	5.50%	9.02%
Idacorp Inc	**IDA**	**66.19**	**1.90**	**2.87%**	**8.00%**	**10.87%**
MDU Resources Group	**MDU**	**23.50**	**0.73**	**3.11%**	**4.00%**	**7.11%**
NorthWestern Corp	**NWE**	**56.58**	**1.92**	**3.39%**	**6.50%**	**9.89%**
OGE Energy	OGE	35.22	1.05	2.98%	9.50%	12.48%
PNM Resources	**PNM**	**29.63**	**0.80**	**2.70%**	**12.00%**	**14.70%**
Pinnacle West Capital	**PNW**	**68.31**	**2.44**	**3.57%**	**3.00%**	**6.57%**
Portland General Electric	**POR**	**37.83**	**1.14**	**3.01%**	**4.50%**	**7.51%**
Xcel Energy	**XEL**	**35.92**	**1.26**	**3.51%**	**5.00%**	**8.51%**

***Bold** denotes primarly western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey	Weighted Mean=	9.11%
	Mean=	9.10%
	Median=	8.37%
	Cost of Equity - All, (K_E) =	**9.10%**
Western Companies Only	Weighted Mean=	9.11%
AVA, BKH, IDA,PNM	Mean=	9.10%
PNW, POR, NVE, XEL,UNS	Median=	8.37%
	Cost of Equity - Western, (K_E) =	**9.00%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2015 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	66.42	2.20	3.31%	6.00%	9.31%
Avista Corp	**AVA**	**35.35**	**1.32**	**3.73%**	**5.50%**	**9.23%**
Black Hills Corp	**BKH**	**53.04**	**1.60**	**3.02%**	**9.50%**	**12.52%**
Great Plains Energy	GXP	28.41	1.00	3.52%	6.00%	9.52%
Idacorp Inc	**IDA**	**66.19**	**1.90**	**2.87%**	**1.50%**	**4.37%**
MDU Resources Group	**MDU**	**23.50**	**0.73**	**3.11%**	**9.50%**	**12.61%**
NorthWestern Corp	**NWE**	**56.58**	**1.92**	**3.39%**	**6.50%**	**9.89%**
OGE Energy	OGE	35.22	1.05	2.98%	5.50%	8.48%
PNM Resources	**PNM**	**29.63**	**0.80**	**2.70%**	**11.00%**	**13.70%**
Pinnacle West Capital	**PNW**	**68.31**	**2.44**	**3.57%**	**4.00%**	**7.57%**
Portland General Electric	**POR**	**37.83**	**1.14**	**3.01%**	**5.00%**	**8.01%**
Xcel Energy	**XEL**	**35.92**	**1.26**	**3.51%**	**5.50%**	**9.01%**

***Bold** denotes primarily western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey	Weighted Mean=	9.54%
	Mean=	9.52%
	Median=	9.27%
	Cost of Equity - All, (K_E) =	**9.50%**
Western Companies Only	Weighted Mean=	9.30%
AVA, BKH, IDA,PNM	Mean=	9.29%
PNW, POR, NVE, XEL,UNS	Median=	9.12%
	Cost of Equity - Western, (K_E) =	**9.25%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Regulated
2015 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	66.42	2.20	3.31%	39.00%	11.50%	4.49%	7.80%
Avista Corp	**AVA**	**35.35**	1.32	**3.73%**	**35.00%**	**8.00%**	2.80%	**6.53%**
Black Hills Corp	**BKH**	**53.04**	1.60	**3.02%**	**45.00%**	**9.00%**	4.05%	**7.07%**
Great Plains Energy	GXP	28.41	1.00	3.52%	38.00%	7.00%	2.66%	6.18%
Idacorp Inc	**IDA**	**66.19**	1.90	**2.87%**	**47.00%**	**9.00%**	4.23%	**7.10%**
MDU Resources Group	MDU	23.50	0.73	3.11%	58.00%	10.50%	6.09%	9.20%
NorthWestern Corp	**NWE**	**56.58**	1.92	**3.39%**	**40.00%**	**9.50%**	3.80%	**7.19%**
OGE Energy	OGE	35.22	1.05	2.98%	50.00%	12.00%	6.00%	8.98%
PNM Resources	**PNM**	**29.63**	0.80	**2.70%**	**49.00%**	**7.00%**	3.43%	**6.13%**
Pinnacle West Capital	**PNW**	**68.31**	2.44	**3.57%**	**37.00%**	**9.50%**	3.52%	**7.09%**
Portland General Electric	**POR**	**37.83**	1.14	**3.01%**	**51.00%**	**8.50%**	4.34%	**7.35%**
Xcel Energy	**XEL**	**35.92**	1.26	**3.51%**	**39.00%**	**10.00%**	3.90%	**7.41%**

***Bold** denotes primarly western operations*

**MDU Not Adjusted for Electric & Natural Gas Contributions

All Companies In Survey

Weighted Mean=	7.34%
Mean=	7.34%
Median=	7.15%
Cost of Equity - All, (K_E) =	**7.25%**

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

Weighted Mean=	6.99%
Mean=	6.98%
Median=	7.09%
Cost of Equity - Western, (K_E) =	**7.00%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2015 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	26.95		0.00%	18.00%	18.00%
Ameren Corporation	AEE	46.13	1.65	3.58%	2.00%	5.58%
Dynegy	DYN	30.35				
Southern Co	SO	49.11	2.15	4.38%	2.00%	6.38%
Duke Energy	DUK	83.54	3.21	3.84%	2.00%	5.84%
PPL Corp	PPL	36.33	1.51	4.16%	2.00%	6.16%
Sempra	SRE	111.36	2.76	2.48%	6.00%	8.48%
AES Corp	AES	13.77	0.24	1.74%	27.50%	29.24%
		49.693	1.920	3.36%	8.50%	12.36%

All Companies In Survey

Weighted Mean=	12.36%
Mean =	11.38%
Median =	6.38%

Cost of Equity, (K_E) = 10.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2015 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	26.95	0.00	0.00%	27.00%	27.00%
Ameren Corporation	AEE	46.13	1.65	3.58%	4.50%	8.08%
Dynegy	DYN	30.35				
Southern Co	SO	49.11	2.15	4.38%	3.50%	7.88%
Duke Energy	DUK	83.54	3.21	3.84%	5.00%	8.84%
PPL Corp	PPL	36.33	1.51	4.16%	Nil	4.16%
Sempra	SRE	111.36	2.76	2.48%	6.00%	8.48%
AES Corp	AES	13.77	0.24	1.74%	10.50%	12.24%
		49.693	1.920	3.36%	9.42%	13.28%

Weighted Mean=	13.28%
Mean =	10.95%
Median =	8.48%

Cost of Equity, (K_E) = 10.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Electric Utilities - Exempt Wholesale Generators
2015 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	26.95	0.00	0.00%	66.00%	4.50%	2.97%	2.97%
Ameren Corporation	AEE	46.13	1.65	3.58%	36.00%	9.00%	3.24%	6.82%
Dynegy	DYN	30.35						
Southern Co	SO	49.11	2.15	4.38%	26.00%	13.00%	3.38%	7.76%
Duke Energy	DUK	83.54	3.21	3.84%	31.00%	8.00%	2.48%	6.32%
PPL Corp	PPL	36.33	1.51	4.16%	36.00%	11.00%	3.96%	8.12%
Sempra	SRE	111.36	2.76	2.48%	43.00%	10.00%	4.30%	6.78%
AES Corp	AES	13.77	0.24	1.74%	83.00%	21.50%	17.85%	19.59%
All Companies		49.693	1.65	2.88%			6.10%	9.41%

***Bold** denotes primarly western operations*

All Companies In Survey

Weighted Mean=	9.41%
Mean=	8.34%
Median=	6.82%

Cost of Equity - All, (K_E) = 8.00%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
AEE	Ameren Corporation	high	$ 37.94	$ 42.24	$ 41.47	$ 41.92	$ 41.62	$ 40.99	$ 40.96	$ 39.99	$ 40.31	$ 42.71	$ 44.22	$ 48.14	$ 46.13	$42.89	$40.15	19.29274	2.34
		low	$ 35.22	$ 36.74	$ 39.30	$ 39.41	$ 37.94	$ 37.67	$ 38.44	$ 36.65	$ 37.53	$ 38.25	$ 41.89	$ 42.15					
AES	AES Corp.	high	$ 14.80	$ 14.94	$ 14.44	$ 14.64	$ 14.77	$ 15.65	$ 15.64	$ 15.21	$ 15.21	$ 14.45	$ 14.25	$ 14.49	$ 13.77	$13.56	$14.22	27.82653	0.49
		low	$ 13.42	$ 13.57	$ 13.53	$ 14.01	$ 13.42	$ 13.96	$ 14.58	$ 14.01	$ 14.05	$ 12.38	$ 13.01	$ 12.78					
AVA	Avista Corp.	high	$ 29.00	$ 30.25	$ 30.83	$ 32.37	$ 32.94	$ 33.58	$ 33.60	$ 32.47	$ 32.88	$ 35.96	$ 35.98	$ 37.37	$ 35.35	$34.38	$31.75	11.27316	3.13
		low	$ 27.71	$ 28.00	$ 29.03	$ 30.02	$ 30.90	$ 30.38	$ 31.02	$ 30.35	$ 30.45	$ 30.55	$ 33.19	$ 33.20					
BKH	Black Hills	high	$ 57.58	$ 57.36	$ 59.05	$ 59.08	$ 60.38	$ 61.41	$ 62.13	$ 53.89	$ 54.05	$ 55.11	$ 57.17	$ 55.59	$ 53.04	$53.06	$55.05	20.75	2.54
		low	$ 51.09	$ 51.95	$ 55.20	$ 56.46	$ 55.23	$ 57.02	$ 52.70	$ 50.39	$ 47.87	$ 47.11	$ 53.57	$ 49.82					
CMS	CMS Energy Corp.	high	$ 27.81	$ 28.83	$ 29.44	$ 30.53	$ 30.43	$ 31.23	$ 31.20	$ 30.54	$ 30.83	$ 32.91	$ 33.46	$ 36.87	$ 34.75	$32.95	$30.06	19.78977	1.76
		low	$ 25.95	$ 26.82	$ 27.62	$ 28.93	$ 28.70	$ 28.97	$ 28.87	$ 27.90	$ 29.15	$ 29.59	$ 32.05	$ 32.79					
CNL	Cleco Corp.	high	$ 27.81	$ 28.83	$ 29.44	$ 30.53	$ 30.43	$ 31.23	$ 31.20	$ 30.54	$ 30.83	$ 32.91	$ 33.46	$ 36.87	$ 34.75	$32.95	$30.06	13.29389	2.62
		low	$ 25.95	$ 26.82	$ 27.62	$ 28.93	$ 28.70	$ 28.97	$ 28.87	$ 27.90	$ 29.15	$ 29.59	$ 32.05	$ 32.79					
CNP	CenterPoint Energy	high	$ 23.87	$ 24.70	$ 24.27	$ 24.96	$ 25.55	$ 25.75	$ 25.62	$ 24.91	$ 25.09	$ 24.84	$ 25.56	$ 24.38	$ 23.43	$23.52	$23.99	18.02756	1.27
		low	$ 22.69	$ 22.62	$ 22.94	$ 23.19	$ 23.39	$ 23.60	$ 24.30	$ 23.47	$ 23.73	$ 21.07	$ 23.85	$ 21.41					
CPN	Calpine Corp	high	$ 19.83	$ 20.92	$ 21.06	$ 23.28	$ 23.51	$ 24.24	$ 23.90	$ 23.79	$ 24.04	$ 22.92	$ 24.37	$ 22.90	$ 22.13	$22.10	$21.81	14.13487	1.52
		low	$ 18.46	$ 18.52	$ 18.77	$ 20.48	$ 21.96	$ 23.30	$ 21.92	$ 21.27	$ 21.51	$ 19.60	$ 22.76	$ 20.07					
CPST	Capstone Turbine	high	$ 1.80	$ 1.96	$ 2.60	$ 2.32	$ 1.88	$ 1.62	$ 1.53	$ 1.42	$ 1.26	$ 1.08	$ 1.04	$ 0.86	$ 0.74	$0.84	$1.40	-12.75	(0.06)
		low	$ 1.26	$ 1.42	$ 1.60	$ 1.91	$ 1.28	$ 1.40	$ 1.28	$ 1.11	$ 1.03	$ 0.56	$ 0.82	$ 0.67					
D	Dominion Resources	high	$ 68.47	$ 72.22	$ 71.52	$ 73.75	$ 73.00	$ 71.70	$ 71.62	$ 70.38	$ 71.33	$ 72.24	$ 74.59	$ 80.89	$ 76.90	$72.66	$69.97	29.61673	2.57
		low	$ 63.14	$ 65.06	$ 67.59	$ 68.79	$ 68.18	$ 67.06	$ 67.58	$ 64.71	$ 67.29	$ 65.53	$ 71.34	$ 71.34					
DTE	DTE Energy	high	$ 68.34	$ 72.95	$ 74.61	$ 78.70	$ 79.45	$ 78.20	$ 78.10	$ 78.26	$ 78.89	$ 82.33	$ 84.42	$ 90.77	$ 86.37	$82.26	$75.94	20.9122	4.10
		low	$ 64.84	$ 66.78	$ 69.58	$ 73.65	$ 73.99	$ 72.76	$ 73.74	$ 71.60	$ 74.62	$ 75.76	$ 79.54	$ 80.71					
DUK	Duke Energy	high	$ 70.68	$ 72.67	$ 71.36	$ 75.13	$ 74.78	$ 74.39	$ 74.48	$ 74.00	$ 75.21	$ 82.68	$ 83.90	$ 87.29	$ 83.54	$81.15	$73.99	23.98997	3.49
		low	$ 67.05	$ 69.18	$ 68.10	$ 70.11	$ 69.73	$ 68.81	$ 70.81	$ 69.48	$ 72.95	$ 74.33	$ 78.51	$ 80.16					
DYN	Dynegy Inc.	high	$ 21.46	$ 25.25	$ 25.12	$ 28.61	$ 33.79	$ 36.57	$ 34.99	$ 36.45	$ 33.01	$ 32.28	$ 35.00	$ 33.24	$ 30.35	$30.63	$28.62	NA	(2.60)
		low	$ 19.40	$ 19.80	$ 22.69	$ 24.58	$ 28.13	$ 33.24	$ 26.17	$ 25.30	$ 28.46	$ 25.36	$ 30.36	$ 27.52					
EDE	Empire Dist. Elec.	high	$ 23.29	$ 24.11	$ 24.50	$ 24.86	$ 24.42	$ 25.71	$ 25.87	$ 26.00	$ 25.95	$ 29.24	$ 28.87	$ 31.20	$ 29.74	$28.05	$25.15	17.86585	1.64
		low	$ 22.04	$ 22.29	$ 23.28	$ 23.77	$ 23.23	$ 23.56	$ 24.36	$ 24.02	$ 24.00	$ 24.09	$ 27.52	$ 27.40					
EE	El Paso Electric	high	$ 36.67	$ 37.16	$ 36.06	$ 38.25	$ 38.42	$ 40.33	$ 40.43	$ 39.42	$ 39.41	$ 38.26	$ 39.63	$ 42.17	$ 40.06	$38.26	$37.23	18.02283	2.19
		low	$ 34.28	$ 34.55	$ 33.44	$ 35.44	$ 35.21	$ 36.67	$ 36.81	$ 35.39	$ 36.05	$ 35.34	$ 37.37	$ 36.77					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
EIX	Edison Int'l	high	$ 48.42	$ 52.80	$ 56.61	$ 57.70	$ 57.22	$ 58.24	$ 58.11	$ 59.18	$ 59.54	$ 62.90	$ 63.66	$ 68.74	$ 65.48	$62.56	$56.33	14.48458	4.54
		low	$ 44.74	$ 47.21	$ 50.55	$ 55.58	$ 53.63	$ 53.78	$ 54.72	$ 54.32	$ 54.12	$ 55.88	$ 61.39	$ 62.78					
ETR	Entergy Corp.	high	$ 63.49	$ 65.34	$ 67.02	$ 73.92	$ 75.69	$ 82.30	$ 82.48	$ 77.45	$ 78.37	$ 84.58	$ 84.44	$ 92.02	$ 87.48	$83.30	$74.25	16.15955	5.39
		low	$ 60.40	$ 61.67	$ 61.82	$ 66.41	$ 71.68	$ 75.42	$ 72.81	$ 70.70	$ 75.29	$ 76.51	$ 80.04	$ 82.18					
GXP	G't Plains Energy	high	$ 24.86	$ 26.40	$ 27.19	$ 27.52	$ 27.28	$ 27.05	$ 26.95	$ 25.91	$ 25.80	$ 27.00	$ 27.38	$ 29.46	$ 28.41	$26.59	$25.85	17.87097	1.55
		low	$ 23.75	$ 24.00	$ 25.63	$ 26.19	$ 24.97	$ 24.72	$ 24.71	$ 24.09	$ 23.91	$ 24.11	$ 25.63	$ 25.94					
HE	Hawaiian Elec.	high	$ 26.80	$ 26.66	$ 25.65	$ 25.39	$ 24.40	$ 25.65	$ 25.38	$ 25.41	$ 26.89	$ 28.27	$ 28.49	$ 35.00	$ 33.48	$28.62	$25.83	18.09064	1.71
		low	$ 25.38	$ 25.01	$ 24.39	$ 23.46	$ 23.04	$ 23.63	$ 23.44	$ 22.71	$ 24.91	$ 26.04	$ 27.04	$ 26.87					
IDA	IDACORP Inc.	high	$ 53.20	$ 56.65	$ 56.42	$ 56.49	$ 56.37	$ 57.86	$ 58.79	$ 56.80	$ 56.97	$ 64.12	$ 63.52	$ 70.05	$ 66.19	$62.16	$56.52	17.70889	3.71
		low	$ 50.69	$ 50.21	$ 53.66	$ 54.25	$ 52.91	$ 53.78	$ 53.55	$ 51.70	$ 53.20	$ 53.39	$ 60.55	$ 61.35					
LNT	Alliant Energy	high	$ 52.19	$ 54.45	$ 56.99	$ 58.79	$ 60.12	$ 60.88	$ 60.89	$ 58.51	$ 59.36	$ 62.30	$ 63.73	$ 69.78	$ 66.42	$62.41	$57.68	18.76353	3.51
		low	$ 50.00	$ 50.38	$ 52.99	$ 55.47	$ 56.09	$ 56.55	$ 56.50	$ 55.04	$ 54.69	$ 55.38	$ 61.35	$ 61.94					
MDU	MDU Resources Group	high	$ 32.16	$ 35.10	$ 34.59	$ 35.99	$ 36.05	$ 35.12	$ 35.41	$ 31.61	$ 31.73	$ 28.50	$ 28.51	$ 24.58	$ 23.50	$25.40	$30.85	14.43711	1.59
		low	$ 29.62	$ 30.39	$ 32.61	$ 33.83	$ 32.93	$ 32.45	$ 31.51	$ 29.60	$ 27.35	$ 24.99	$ 24.47	$ 21.33					
NI	NiSource Inc	high	$ 34.68	$ 36.82	$ 35.83	$ 36.53	$ 37.67	$ 39.69	$ 39.70	$ 39.81	$ 41.70	$ 42.50	$ 42.77	$ 44.91	$ 42.42	$41.20	$37.79	25.07485	1.67
		low	$ 32.11	$ 33.25	$ 33.95	$ 34.36	$ 35.76	$ 36.18	$ 37.31	$ 36.00	$ 38.41	$ 37.58	$ 40.59	$ 38.84					
NRG	NRG Energy	high	$ 29.30	$ 29.33	$ 32.04	$ 33.45	$ 35.70	$ 38.09	$ 37.39	$ 31.23	$ 31.29	$ 31.97	$ 33.92	$ 31.27	$ 26.95	$29.84	$31.14	-32.40909	(0.88)
		low	$ 26.57	$ 27.08	$ 28.43	$ 31.50	$ 32.83	$ 35.51	$ 30.27	$ 28.97	$ 29.40	$ 26.43	$ 29.68	$ 25.77					
NWE	NorthWestern Corp.	high	$ 45.38	$ 47.05	$ 47.86	$ 48.93	$ 48.49	$ 52.49	$ 52.70	$ 48.76	$ 49.55	$ 53.45	$ 54.42	$ 58.70	$ 56.58	$52.52	$48.48	19.70107	2.81
		low	$ 42.64	$ 43.92	$ 44.77	$ 46.60	$ 45.49	$ 47.28	$ 46.21	$ 45.24	$ 45.12	$ 45.14	$ 51.40	$ 52.02					
OGE	OGE Energy	high	$ 34.52	$ 37.29	$ 36.92	$ 37.44	$ 37.40	$ 39.10	$ 39.28	$ 37.60	$ 37.76	$ 37.56	$ 37.90	$ 36.70	$ 35.22	$35.62	$35.98	17.65228	1.97
		low	$ 33.11	$ 32.91	$ 35.18	$ 34.93	$ 35.05	$ 35.32	$ 35.95	$ 34.88	$ 35.15	$ 33.06	$ 35.64	$ 32.85					
OTTR	Otter Tail Corp.	high	$ 29.24	$ 30.98	$ 31.72	$ 31.08	$ 29.52	$ 30.30	$ 30.43	$ 28.91	$ 28.70	$ 31.20	$ 31.40	$ 32.72	$ 30.96	$29.82	$29.18	15.75258	1.94
		low	$ 27.74	$ 26.96	$ 29.65	$ 28.95	$ 27.19	$ 28.26	$ 27.90	$ 27.16	$ 26.67	$ 26.53	$ 28.66	$ 28.40					
PCG	PG&E Corp.	high	$ 42.39	$ 44.45	$ 44.97	$ 46.11	$ 45.99	$ 48.64	$ 48.09	$ 46.48	$ 48.24	$ 50.36	$ 51.46	$ 55.24	$ 53.24	$49.99	$45.79	17.56355	2.99
		low	$ 39.42	$ 40.92	$ 41.57	$ 42.30	$ 42.85	$ 45.27	$ 44.65	$ 42.92	$ 43.76	$ 44.17	$ 48.92	$ 49.79					
PNM	PNM Resources	high	$ 25.33	$ 26.43	$ 27.25	$ 28.50	$ 29.22	$ 29.33	$ 29.94	$ 26.25	$ 26.97	$ 29.33	$ 29.62	$ 31.60	$ 29.63	$28.49	$27.00	22.5229	1.31
		low	$ 23.53	$ 23.70	$ 25.46	$ 26.70	$ 26.19	$ 27.60	$ 25.64	$ 24.26	$ 24.76	$ 24.81	$ 28.19	$ 27.41					
PNW	Pinnacle West Capital	high	$ 53.81	$ 55.99	$ 55.78	$ 57.31	$ 57.09	$ 58.06	$ 57.95	$ 56.97	$ 57.74	$ 61.56	$ 63.50	$ 71.11	$ 68.31	$62.33	$56.69	17.828	3.75
		low	$ 51.37	$ 51.15	$ 53.29	$ 53.71	$ 53.81	$ 53.04	$ 53.29	$ 52.13	$ 54.13	$ 54.59	$ 60.61	$ 62.60					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Electric Utilities
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
POR	Portland General	high	$ 30.39	$ 32.28	$ 32.75	$ 33.84	$ 33.57	$ 34.69	$ 34.74	$ 34.47	$ 34.55	$ 36.86	$ 37.29	$ 40.31	$ 37.83	$36.42	$33.37	17.38009	2.21
		low	$ 29.13	$ 28.98	$ 31.18	$ 32.01	$ 32.46	$ 32.15	$ 31.93	$ 31.41	$ 31.70	$ 32.07	$ 35.50	$ 36.51					
PPL	PPL Corp.	high	$ 30.63	$ 32.32	$ 33.24	$ 33.94	$ 35.12	$ 35.56	$ 35.52	$ 34.64	$ 34.72	$ 35.02	$ 36.81	$ 38.14	$ 36.33	$35.16	$33.44	25.08681	1.44
		low	$ 29.40	$ 30.04	$ 31.19	$ 32.32	$ 33.00	$ 33.17	$ 32.65	$ 31.79	$ 32.41	$ 32.09	$ 34.78	$ 34.11					
SCG	SCANA Corp.	high	$ 47.39	$ 49.98	$ 51.39	$ 53.71	$ 53.83	$ 53.88	$ 53.89	$ 51.94	$ 52.23	$ 55.25	$ 57.39	$ 63.41	$ 60.40	$55.78	$51.70	15.75594	3.79
		low	$ 45.58	$ 45.77	$ 48.18	$ 50.35	$ 50.44	$ 49.51	$ 50.78	$ 48.53	$ 48.81	$ 47.77	$ 54.83	$ 56.02					
SO	Southern Co.	high	$ 41.87	$ 42.74	$ 44.00	$ 46.81	$ 45.45	$ 45.58	$ 45.47	$ 44.40	$ 44.82	$ 47.69	$ 47.97	$ 51.28	$ 49.11	$47.31	$44.34	21.01496	2.34
		low	$ 40.27	$ 40.70	$ 41.59	$ 43.18	$ 42.55	$ 42.78	$ 43.22	$ 41.87	$ 43.04	$ 43.55	$ 46.30	$ 47.07					
SRE	Sempra Energy	high	$ 93.53	$ 95.84	$ 97.48	$ 99.81	$ 100.69	$ 105.25	$ 104.60	$ 106.09	$ 107.81	$111.36	$ 114.50	$ 116.30	$ 111.36	$108.91	$100.92	24.1849	4.57
		low	$ 86.73	$ 89.87	$ 92.81	$ 95.15	$ 96.58	$ 98.32	$ 99.60	$ 96.13	$ 102.34	$ 98.34	$ 108.22	$ 104.75					
TE	TECO Energy	high	$ 17.31	$ 16.98	$ 17.23	$ 18.45	$ 18.11	$ 18.53	$ 18.48	$ 18.10	$ 18.14	$ 19.87	$ 20.17	$ 21.29	$ 20.49	$19.45	$17.87	27.14865	0.74
		low	$ 16.20	$ 16.12	$ 16.20	$ 16.93	$ 16.90	$ 17.11	$ 17.42	$ 16.91	$ 16.98	$ 17.35	$ 19.12	$ 18.89					
VVC	Vectren Corp.	high	$ 37.00	$ 38.59	$ 39.59	$ 41.14	$ 41.00	$ 42.52	$ 42.74	$ 41.25	$ 41.89	$ 45.28	$ 45.96	$ 48.28	$ 46.23	$44.28	$40.25	23.51546	1.94
		low	$ 34.60	$ 35.08	$ 36.77	$ 38.62	$ 38.20	$ 39.01	$ 38.06	$ 35.11	$ 39.09	$ 39.67	$ 43.50	$ 42.96					
XEL	Xcel Energy Inc.	high	$ 29.02	$ 30.33	$ 30.77	$ 32.18	$ 32.37	$ 32.29	$ 32.26	$ 32.06	$ 32.48	$ 33.76	$ 34.10	$ 37.58	$ 35.92	$33.68	$31.30	18.31701	1.94
		low	$ 27.27	$ 28.21	$ 29.40	$ 30.10	$ 29.83	$ 30.05	$ 30.73	$ 29.60	$ 30.12	$ 30.18	$ 32.95	$ 33.49					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	4.38	880591DY5	Global Pwr Bonds'05B	6/15/2015	AAA	4.14	4.16	4.17	4.17	4.19	4.21	4.22	4.24	4.24	4.27	4.27	4.29	4.21%	4.28%
Tennessee Valley Authority	4.88	880591DS8	Global Pwr Bonds'01D	12/15/2016	AAA	4.37	4.38	4.41	4.41	4.19	4.44	4.46	4.46	4.47	4.49	4.49	4.51	4.42%	4.50%
Tennessee Valley Authority	6.25	880591CU4	Pwr Bonds '97E	12/15/2017	AAA	5.26	5.28	5.24	5.33	5.31	5.35	5.38	6.38	5.41	5.42	5.41	5.45	5.44%	5.43%
Tennessee Valley Authority	6.75	880591CJ9	Global Pwr Bonds'95E	11/1/2025	AAA	5.19	5.19	5.21	5.21	5.02	5.05	5.05	4.96	5.07	5.03	4.98	4.97	5.08%	4.99%
Tennessee Valley Authority	7.125	880591DM1	Global Pwr Bonds '00G	5/1/2030	AAA	5.22	5.25	5.24	5.24	6.02	5.03	5.04	4.93	5.06	4.98	4.90	4.81	5.14%	4.90%
Tennessee Valley Authority	4.7	880591DV1	Pwr Bonds\03 B"	7/15/2033	AAA	4.45	4.41	4.41	4.41	4.18	4.20	4.16	4.05	4.20	4.13	4.06	3.92	4.22%	4.04%
Madison Gas & Elec Co MTN BE	7.12	5574A0AB3	Tranche # Tr 00002	4/1/2032	AA-	5.53	5.56	5.46	5.47	5.33	5.36	5.29	5.21	5.37	5.24	5.16	5.09	5.34%	5.16%
Madison Gas & Electric	7.7	557497AL8	1st	2/15/2028	AA-	7.59	7.59	7.59	7.80	7.60	7.60	7.59	7.60	7.59	7.59	7.59	7.60	7.61%	7.59%
Alabama Power Co.	5.2	010392ER5	Sr Nts'FF'	1/15/2016	A	4.80	4.81	4.84	4.83	4.84	4.87	4.89	4.90	4.91	4.94	4.94	4.98	4.88%	4.95%
Alabama Power Co.	5.55	010392EW4	Sr Nts'07A	2/1/2017	A	5.00	5.01	5.05	4.98	4.98	5.00	5.03	5.04	5.05	5.07	5.07	5.11	5.03%	5.08%
Alabama Power Co.	5.5	010392DZ8	Sr Nts 'Q'	10/15/2017	A	4.87	4.88	4.86	4.98	4.98	5.00	5.03	5.04	4.92	4.93	4.93	4.97	4.95%	4.94%
Alabama Power Co.	5.12	010392EK0	Sr Nts 'Z'	2/15/2019	A	4.56	4.56	4.61	4.61	4.51	4.54	4.57	4.55	4.59	4.57	4.57	4.60	4.57%	4.58%
Alabama Power Co.	5.88	010392EB0	Sr Nts 'S'	12/1/2022	A	4.97	4.97	4.97	4.83	4.81	4.83	4.85	4.80	4.89	4.83	4.81	4.81	4.86%	4.82%
Alabama Power Co.	5.7	010392EC8	Sr Nts 'T'	2/15/2033	A	4.94	4.92	4.84	4.79	4.71	4.73	4.72	4.59	4.78	4.63	4.55	4.57	4.73%	4.58%
Alabama Power Co.	5.6	010392EE4	Sr Nts'V'	3/15/2033	A	4.98	5.00	4.92	4.87	4.79	4.80	4.27	4.70	4.86	4.71	4.63	4.53	4.76%	4.62%
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.98	5.02	4.92	4.87	4.76	4.79	4.77	4.64	4.82	4.72	4.63	4.61	4.79%	4.65%
Connecticut Lt & Pwr	5	207597DT9	1st & Ref '05A	4/1/2015	A	4.75	4.77	4.79	4.79	4.82	4.84	4.85	4.87	4.88	4.91	4.92	4.94	4.84%	4.92%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	5.07	5.09	5.00	5.01	4.80	4.81	4.80	4.66	4.83	4.69	4.61	4.50	4.82%	4.60%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	5.05	5.07	4.98	4.99	4.74	4.75	4.75	4.61	4.78	4.64	4.56	4.45	4.78%	4.55%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.85	4.87	4.77	4.79	4.64	4.65	4.64	4.49	4.67	4.53	4.44	4.36	4.64%	4.44%
Detroit Edison Co.	5.4	250847DV9	Sr Nts'D'	8/1/2014	A	5.27	5.29	5.31	5.32	5.36	5.38	5.40						5.33%	
Detroit Edison Co.	4.8	250847DX5	Sr(Sec)Nts'AR'	2/15/2015	A	4.62	4.63	4.65	4.66	4.66	4.67	4.70	4.71	4.70	4.70	4.71	4.71	4.68%	4.71%
Detroit Edison Co.	6.35	250847DU1	Sr Nts	10/15/2032	A	5.30	5.33	5.24	5.25	5.08	5.10	5.08	4.95	5.11	4.96	4.88	4.78	5.09%	4.87%
Duke Energy Corp.	5.3	264399EM4	1st & Ref	10/1/2015	A	4.91	4.92	4.95	4.96	4.98	5.00	5.02	5.04	5.05	5.08	5.10	5.12	5.01%	5.10%
Florida Power & Light	5.85	341081EP8	1st	2/1/2033	A	4.99	5.02	4.90	4.91	4.75	4.77	4.76	4.63	4.87	4.71	4.64	4.56	4.79%	4.64%
Florida Power & Light	5.95	341081ER4	1st	10/1/2033	A	4.87	4.93	4.84	4.85	4.75	4.72	4.67	4.55	4.82	4.69	4.56	4.51	4.73%	4.59%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.78	4.78	4.71	4.72	4.58	4.60	4.58	4.54	4.71	4.52	4.52	4.54	4.63%	4.53%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.78	4.78	4.71	4.72	4.58	4.60	4.58	4.54	4.71	4.52	4.52	4.54	4.63%	4.53%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	4.57	4.59	4.50	4.52	4.37	4.38	4.39	4.25	4.42	4.29	4.30	4.29	4.41%	4.29%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.74	4.73	4.67	4.69	4.54	4.55	4.56	4.42	4.60	4.47	4.42	4.43	4.57%	4.44%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.97	5.00	4.91	4.93	4.73	4.75	4.75	4.81	4.89	4.69	4.60	4.49	4.79%	4.59%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.82	4.81	4.75	4.76	4.57	4.57	4.55	4.46	4.71	4.56	4.51	4.39	4.62%	4.49%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.87	4.86	4.87	4.88	4.82	4.64	4.69	4.55	4.73	4.59	4.50	4.47	4.71%	4.52%
Florida Power Corp.	5.8	341099CG2	1st Mtg Bd	9/15/2017	A	5.10	5.03	5.08	5.09	4.78	5.07	5.12	5.12	5.14	5.15	5.16	5.18	5.09%	5.16%
Florida Power Corp.	5.9	341099CB3	1st	3/1/2033	A	5.16	5.18	5.03	5.05	4.90	4.92	4.67	4.55	4.93	4.78	4.70	4.60	4.87%	4.69%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	5.04	5.01	4.93	5.00	4.95	4.77	4.78	4.67	4.86	4.71	4.70	4.58	4.83%	4.66%
Georgia Power Co.	5.25	373334GA3	Sr Nt Ser Z	12/15/2015	A	4.84	4.85	4.88	4.88	4.91	4.93	4.95	4.97	4.95	4.98	5.01	5.04	4.93%	5.01%
Georgia Power Co.	5.7	373334GE5	Sr Nts'07B	6/1/2017	A	4.99	5.00	5.03	5.03	5.05	5.06	5.09	5.09	5.11	5.13	5.13	5.17	5.07%	5.14%
Georgia Power Co.	5.75	373334FS5	Sr Nts 'N'	4/15/2023	A	5.04	5.08	5.08	5.09	4.99	5.00	5.03	4.96	5.05	4.97	4.93	4.93	5.01%	4.94%
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.59	5.57	5.65	5.65	5.67	5.01	5.65	5.66	5.67	5.70	5.71	5.73	5.61%	5.71%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	5.02	5.04	4.93	4.95	4.70	4.72	4.70	4.66	4.80	4.64	4.63	4.52	4.78%	4.60%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	5.02	5.04	4.93	4.95	4.70	4.72	4.70	4.66	4.80	4.64	4.63	4.52	4.78%	4.60%
Gulf Power Co.	5.3	402479BX6	Sr Nts'M'	12/1/2016	A	4.80	4.75	4.78	4.79	4.81	4.83	4.84	4.86	4.87	4.87	4.87	4.90	4.83%	4.88%
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.39	5.40	5.42	5.43	5.45	5.47	5.47	5.49	5.50	5.52	5.52	5.54	5.47%	5.53%
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.87	4.89	4.81	4.82	4.66	4.68	4.62	4.53	4.79	4.65	4.55	4.51	4.70%	4.57%
MidAmerican Energy Co.	5.95	595620AG0	Sr Nts	7/15/2017	A	5.15	5.17	5.22					4.53	5.27	5.28	5.31	5.35	5.16%	5.31%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	5.20	5.21	5.24	5.24			5.23		5.25	5.28	5.28	5.30	5.25%	5.29%
Nevada Power	5.88	641423BK3	Gen & Ref'L'	1/15/2015	A	5.59	5.61	5.64	5.64	5.69	5.71	5.74	5.76	5.77	5.82	5.83	5.87	5.72%	5.84%
Nevada Power	6.75	641423BU1	& Refunding Mtg Nt Ser	7/1/2037	A	5.23	5.23	5.13	5.14	4.95	4.93	4.92	4.83	5.01	4.92	4.86	4.77	4.99%	4.85%
Northern IllinoisGas	7.2	665228BV3	1st	5/15/2016	A	6.42	6.44	6.48	6.49	6.53	6.56	6.60	6.61	6.63	6.67	6.68	6.72	6.57%	6.69%
Northern IllinoisGas	6.58	665228BQ4	1st	2/15/2028	A	5.70	5.70	5.68	5.69	5.56	5.59	5.62	5.51	5.63	5.53	5.47	5.45	5.59%	5.48%
Northern Sts Pwr (Minn)	7.125	665772BN8	1st Mtg Bd	7/1/2025	A	5.49	5.45	5.41	5.42	5.29	5.33	5.35	5.27	5.38	5.30	5.25	5.38	5.36%	5.31%
Northern Sts Pwr (Minn)	6.5	665772BQ1	1st Mtg Bd	3/1/2028	A	5.37	5.51	5.42	5.43	5.10	5.13	5.16	5.05	5.18	5.08	5.03	5.01	5.21%	5.04%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st Mtg Bd	7/15/2035	A	4.70	4.72	4.63	4.64	4.49	4.50	4.49	4.35	4.53	4.40	4.42	4.32	4.52%	4.38%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	4.99	5.01	4.93										4.98%	
Northern Sts Pwr (Minn)	6.2	665772CC1	1st Mtg	7/1/2037	A	4.98	4.93	4.92	4.94	4.74	4.78	4.75	4.60	4.78	4.69	4.66	4.54	4.78%	4.63%
Oncor Electric Delivery	6.38	68233DAL1	Sr Sec Nts	1/15/2015	A	6.05	6.07	6.10	6.11	6.15	6.19	6.21	6.24	6.26	6.31	6.33	5.70	6.14%	6.11%
Oncor Electric Delivery	7	68233DAR8	Deb	9/1/2022	A	5.73	5.68	5.62	5.63	5.47	5.48	5.45	5.44	5.57	5.53	5.53	5.53	5.56%	5.53%
Oncor Electric Delivery	7	68233DAT4	Sr Sec Nts	5/1/2032	A	5.56	5.59	5.40	5.42	5.12	5.48	5.05	4.97	5.20	5.12	5.08	4.99	5.25%	5.06%
Oncor Electric Delivery	7.25	68233DAP2	Sr Sec Nts	1/15/2033	A	5.58	5.61	5.44	5.45	5.15	5.16	5.08	5.00	5.22	5.12	5.04	5.03	5.24%	5.06%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
PacifiCorp	4.95	695114BY3	1st	8/15/2014	A	4.83	4.84	4.87	4.87	4.90	4.92	4.94						4.88%	
PacifiCorp	7.7	695114BT4	1st	11/15/2031	A	5.63	5.60	5.43	5.45	5.31	5.32	5.27	5.18	5.34	5.22	5.15	5.19	5.34%	5.19%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	5.19	5.22	5.12	5.14	4.79	4.89	4.83	4.74	4.91	4.78	4.69	4.59	4.91%	4.69%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.76	4.78	4.69	4.71	4.55	4.51	4.51	4.41	4.58	4.48	4.40	4.36	4.56%	4.41%
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.97	4.99	4.91	4.93	4.76	4.78	4.78	4.62	4.80	4.70	4.61	4.61	4.79%	4.64%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.83	4.85	4.77	4.79	4.61	4.65	4.61	4.52	4.72	4.60	4.57	4.48	4.67%	4.55%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	5.25	5.21	5.12	5.13	4.92	4.93	4.92	4.78	4.95	4.79	4.70	4.60	4.94%	4.70%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	5.13	5.09	4.99	5.01	4.74	4.75	4.74	4.60	4.77	4.66	4.57	4.46	4.79%	4.56%
Progress Energy, Inc.	5.15	144141CW6	1st	4/1/2015	A	4.88	4.90	4.91						5.02	5.05	5.06	5.09	4.99%	5.07%
Progress Energy, Inc.	5.25	144141CX4	1st	12/15/2015	A	4.83	4.84	4.87						4.97	5.00	5.00	5.02	4.93%	5.01%
Progress Energy, Inc.	8.62	144141BP2	1st	9/15/2021	A	6.54	6.55	6.56										6.55%	
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.98	5.00	4.91						4.85	4.72	4.82	4.68	4.85%	4.74%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.98	4.99	4.88						4.89	4.75	4.77	4.55	4.83%	4.69%
Public Serv, New Hamp.	5.25	744482BG4	1st 'L'	7/15/2014	A	5.15	5.17	5.19	5.19	5.23	5.24							5.20%	
Sierra Pacific Power	6.75	826418BE4	n & Refunding Mtg Nt Se	7/1/2037	A	5.30	5.26	5.16	5.18	5.01	5.03	4.97	4.87	5.05	4.91	4.82	4.88	5.04%	4.87%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	5.18	5.21	5.11	5.13	4.96	4.98	4.92	4.82	5.00	4.86	4.77	4.66	4.97%	4.76%
South Carolina Electric & Gas Co.	5.25	837004BY5	1st	11/1/2018	A	4.59	4.56	4.61	4.61	4.57	4.60	4.63	4.63	4.66	4.63	4.62	4.65	4.61%	4.63%
South Carolina Electric & Gas Co.	6.62	837004BV1	1st	2/1/2032	A	5.17	5.19	5.19	5.21	4.95	4.97	4.96	4.84	5.08	4.96	4.88	4.79	5.02%	4.88%
South Carolina Electric & Gas Co.	5.8	837004BW9	1st	1/15/2033	A	4.98	5.06	5.03	5.05	4.90	4.92	4.91	4.77	4.94	4.78	4.70	4.60	4.89%	4.69%
South Carolina Electric & Gas Co.	5.3	837004BX7	1st	5/15/2033	A	4.72	4.74	4.71	4.73	4.58	4.60	4.59	4.46	4.61	4.61	4.53	4.43	4.61%	4.52%
South Carolina Electric & Gas Co.	5.25	837004BZ2	1st	3/1/2035	A	4.89	4.91	4.82	4.84	4.68	4.70	4.68	4.54	4.71	4.58	4.49	4.39	4.69%	4.49%
Southern California Edison Co.	5	842400EY5	1st & Ref'05A	1/15/2016	A	4.61	4.62	4.63	4.64	4.66	4.68	4.71	4.72	4.73	4.75	4.76	4.78	4.69%	4.76%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	4.92	4.96	4.87	4.89	4.74	4.76	4.75	4.64	4.80	4.70	4.65	4.62	4.78%	4.66%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.73	4.73	4.69	4.71	4.52	4.54	4.53	4.42	4.62	4.54	4.45	4.41	4.57%	4.47%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.84	4.81	4.77	4.79	4.61	4.65	4.65	4.51	4.71	4.58	4.49	4.38	4.65%	4.48%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.83	4.87	4.79	4.81	4.64	4.66	4.64	4.51	4.76	4.58	4.50	4.47	4.67%	4.52%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.83	4.82	4.79	4.80	4.60	4.63	3.59	4.46	4.68	4.53	4.58	4.46	4.56%	4.52%
Southern Indiana Gas & El	8.88	843163AP1	1st	6/1/2016	A	7.67	7.69	7.75				7.90						7.75%	
Southern Indiana Gas & El	6.72	843163AX4	Sr Nts	8/1/2029	A	5.77	5.77	5.77				5.42						5.68%	
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	5.39	5.41	5.32	5.33	5.18	5.20	5.13	5.04	5.21	5.08	4.99	4.88	5.18%	4.98%
Wisconsin Public Service	7.125	976843AX0	1st	7/1/2023	A	7.10	7.10	7.10	7.11	7.11	7.10	7.10	7.11	7.10	7.10	7.10	7.10	7.10%	7.10%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.93	4.95	4.85	4.87	4.71	4.73	4.71	4.57	4.74	4.60	4.52	4.40	4.72%	4.51%
Arizona Public Service	5.8	040555CG7	Nts	6/30/2014	A-	5.68	5.70	5.72	5.72	5.78								5.72%	
Arizona Public Service	4.65	040555CE2	Nts	5/15/2015	A-	4.43	4.44	4.45	4.46	4.47	4.49	4.51	4.62	4.53	4.55	4.56	4.58	4.51%	4.56%
Arizona Public Service	6.25	040555CJ1	Nt	8/1/2016	A-	5.53	5.55	5.57	5.58	5.59	5.62	5.66	5.67	5.68	5.73	5.74	5.76	5.64%	5.74%
Arizona Public Service	5.625	040555CF9	Nts	5/15/2033	A-	5.25	5.28	5.18	5.20	5.05	5.06	5.05	4.91	5.08	4.92	4.83	4.73	5.05%	4.83%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.87	4.89	4.80	4.81	4.66	4.68	4.66	4.53	4.73	4.59	4.51	4.40	4.68%	4.50%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	5.38	5.41	5.31	5.32	5.16	5.18	5.17	5.06	5.24	5.07	4.98	4.86	5.18%	4.97%
Avista Corp.	5.45	05379BAH0	1st Mtg Bd	12/1/2019	A-	4.89	4.89	4.94	4.95	4.80	4.83	4.87	4.84	4.88	4.85	4.84	4.87	4.87%	4.85%
Avista Corp.	5.45	05379BAH0	1st	12/1/2019	A-	4.89	4.89	4.94	4.95	4.80	4.83	4.87	4.84	4.88	4.85	4.84	4.87	4.87%	4.85%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	5.36	5.39	5.29	5.31	5.08	5.10	5.08	4.94	5.11	4.97	4.88	4.77	5.11%	4.87%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	5.20	5.22	5.12	5.14	4.90	4.92	4.85	4.76	4.94	4.79	4.70	4.58	4.93%	4.69%
CenterPoint Energy Houston	5.6	15189XAH1	Gen Mtge'L2'	7/1/2023	A-	4.97	4.97	4.97	4.98	4.89	4.92	4.90	4.86	4.95	4.88	4.84	4.83	4.91%	4.85%
CenterPoint Energy Houston	6.95	15189XAD0	Gen Mtge'K2'	3/15/2033	A-	5.23	5.25	5.20	5.22	5.04	5.09	5.08	4.91	5.12	4.99	4.91	4.98	5.09%	4.96%
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	5.38	5.35	5.30	5.32	5.03	5.05	5.03	5.10	5.29	5.14	5.05	4.93	5.16%	5.04%
Commonwealth Edison	4.7	202795HH6	1st Ser 101	4/15/2015	A-	4.48	4.49	4.51	4.52	4.53	4.54	4.96	4.58	4.58	4.61	4.62	4.64	4.59%	4.62%
Commonwealth Edison	5.95	202795HN3	1st Ser 104	8/15/2016	A-	5.31	5.31	5.34	5.35	5.36	5.39	5.41	5.42	5.44	5.47	5.48	5.51	5.40%	5.49%
Commonwealth Edison	5.875	202795HG8	1st Ser 100	2/1/2033	A-	5.00	5.02	4.94	5.10	4.95	4.97	4.00	4.82	4.83	4.72	4.64	4.68	4.81%	4.68%
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.94	4.96	4.85	4.86	4.89	4.73	4.71	4.59	4.79	4.68	4.59	4.52	4.76%	4.60%
Connecticut Lt & Pwr	5.38	207597DW2	1st & Ref'07A	3/1/2017	A-	4.88	4.89	4.89	4.89	4.90	4.89	4.89	4.89	4.91	4.92	4.92	4.95	4.90%	4.93%
Connecticut Lt & Pwr	7.875	207597CZ6	1st & Ref D	10/1/2024	A-	6.17	6.18	6.18	6.19	6.04	6.07	6.10	6.01	6.12	6.03	5.98	5.97	6.09%	5.99%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	5.08	5.10	5.00	5.02	4.86	4.85	4.83	4.69	4.87	4.83	4.74	4.63	4.88%	4.73%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	5.08	5.10	5.00	5.02	4.79	4.81	4.79	4.65	4.83	4.68	4.59	4.48	4.82%	4.58%
Consolidated Edison, Inc.	5.38	209111EK5	Deb'05C	12/15/2015	A-	4.95	4.96	4.98	4.99	5.00	5.03	5.05	5.06	5.08	5.10	5.12	5.14	5.04%	5.12%
Consolidated Edison, Inc.	5.5	209111EN9	Deb'06C	9/15/2016	A-	4.93	4.93	4.96	4.97	4.98	5.00	5.03	5.04	5.05	5.07	5.09	5.11	5.01%	5.09%
Consolidated Edison, Inc.	5.3	209111EP4	Deb'06D	12/1/2016	A-	4.74	4.75	4.78	4.79	4.78	4.80	4.83	4.83	4.84	4.87	4.87	4.90	4.82%	4.88%
Consolidated Edison, Inc.	5.88	209111EB5	Deb '03A	4/1/2033	A-	5.15	5.16	5.07	5.09	4.94	4.96	4.96	4.83	4.99	4.83	4.75	4.65	4.95%	4.74%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.99	5.01	4.92	4.93	4.77	4.78	4.96	4.82	4.99	4.82	4.74	4.64	4.86%	4.73%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.74	4.76	4.67	4.69	4.58	4.60	4.00	4.54	4.70	4.58	4.49	4.38	4.56%	4.48%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.92	4.94	4.94	4.96	4.80	4.82	4.60	4.54	4.86	4.57	4.50	4.64	4.76%	4.57%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.91	4.95	4.88	4.90	4.73	4.75	4.75	4.75	4.90	4.77	4.68	4.57	4.80%	4.67%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	5.05	5.08	4.95	4.97	4.81	4.84	4.85	4.78	4.99	4.87	4.78	4.68	4.89%	4.78%
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.86	4.89	4.83	4.85	4.89	4.70	4.90	4.60	4.77	4.63	4.75	4.63	4.78%	4.67%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.99	5.02	4.95	4.96	4.80	4.85	4.86	4.84	5.02	4.85	4.88	4.76	4.90%	4.83%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Consumers Energy Co.	5.5	210518CE4	1st 'P'	8/15/2016	A-	4.93	4.94	4.96	4.97	4.99	5.01		5.04	5.05	5.08	5.10	5.12	5.02%	5.10%
Consumers Energy Co.	5.65	210518CL8	1st	4/15/2020	A-	4.84	4.83	4.87	4.88	4.80	4.84	4.86	4.83	4.87	4.86	4.87	4.91	4.86%	4.88%
Entergy Arkansas	5.66	29364DAL4	1st	2/1/2025	A-	5.48	5.49	5.51	5.50	5.51	5.53	5.54	5.57	5.57	5.61	5.62	5.64	5.55%	5.62%
Entergy Arkansas	6.38	29364DAK6	1st	11/1/2034	A-	6.37	6.37	6.37	6.38	6.38	6.38	6.37	6.38	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	6.18	6.18	6.18	6.17	5.70	6.17	6.17	6.17	6.17	6.13%	6.17%
Entergy Mississippi	4.95	29364NAK4	1st	6/1/2018	A-	4.96	4.96	4.94	4.95	4.95	4.95	4.95	4.95					4.95%	
Entergy Mississippi	6.25	29364NAL2	1st	4/1/2034	A-	6.04	6.05	6.06	6.06	6.06	6.06	6.06	6.07	6.06	6.07	6.07	6.07	6.06%	6.07%
Entergy New Orleans	5.6	29364PAK9	1st	9/1/2024	A-	5.59	5.59	5.59				5.59		5.62	5.59	5.59	5.59	5.59%	5.59%
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%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	5.23	5.25	5.16						5.02	4.86	4.78	4.67	5.00%	4.77%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.94	4.96	4.81						4.73	4.59	4.60	4.48	4.73%	4.56%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.96	4.99	4.89				4.70		4.78	4.64	4.55	4.44	4.74%	4.54%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	1/4/1900	A-	4.97	4.99	4.88	4.90	4.69				4.72	4.58	4.49	4.39	4.73%	4.49%
Idaho Pwr	6	45138LAL7	Sec M-T Nts'D'	11/15/2032	A-	5.17	5.19	5.09	5.10	4.91	4.93	4.92	4.79	4.95	4.82	4.74	4.64	4.94%	4.73%
Idaho Pwr	5.5	45138LAN3	Sec M-T Nts 'E'	4/1/2033	A-	5.03	5.05	4.95	4.96	4.77	4.79	4.77	4.64	4.80	4.67	4.59	4.49	4.79%	4.58%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	5.05	5.07	4.96	4.98	4.77	4.80	4.76	4.65	4.81	4.67	4.59	4.49	4.80%	4.58%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	5.15	5.18	5.07	5.09	4.88	4.90	4.89	4.75	4.92	4.78	4.70	4.59	4.91%	4.69%
Idaho Pwr Co 1st Mtg Secd MTN	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	5.21	5.23	5.12	5.10					4.95	4.81	4.71	4.60	4.97%	4.71%
Interstate Pwr & Lt	5.5	461070AE4	Sr Deb	7/15/2025	A-	5.08	5.09	5.08	5.09	4.96	4.76	4.74	4.70	4.80	4.71	4.66	4.65	4.86%	4.67%
Interstate Pwr & Lt	6.45	461070AC8	Sr Deb	10/15/2033	A-	5.33	5.36	5.27	5.28	5.13	5.15	5.14	5.00	5.17	5.04	4.95	4.85	5.14%	4.95%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	5.28	5.30	5.21	5.23	5.07	5.09	5.08	4.94	5.11	4.98	4.89	4.78	5.08%	4.88%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	5.22	5.25	5.15		5.19				5.03	4.90	4.82	4.91	5.06%	4.88%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	6.01	6.03	5.95	5.96	5.82	5.83	5.83	5.70	5.87	5.71	5.63	5.80	5.85%	5.71%
KeySpan Corp.	5.88	49337WAH3	Nts	4/1/2033	A-	5.40	5.42	5.33	5.34	5.19	5.21	5.13	5.00	5.16	5.09	5.01	4.96	5.19%	5.02%
Oklahoma Gas & Elec Co	5.15	678858BG5	Sr Nts	1/15/2016	A-	4.77	4.78	4.81	4.82	4.94	4.86	4.88	4.89	4.90	4.92	4.93	4.95	4.87%	4.93%
Oklahoma Gas & Elec Co	6.5	678858BB6	Fixed Rt Sr Nt	7/15/2017	A-	5.71	5.72	5.78	5.78	5.79	5.82	5.85	5.85	5.88	5.89	5.88	5.93	5.82%	5.90%
Oklahoma Gas & Elec Co	6.65	678858AZ4	Sr Nts	7/15/2027	A-	5.61	5.62	5.61	5.62	5.49	5.50	5.53	5.42	5.55	5.45	5.39	5.38	5.51%	5.41%
Oklahoma Gas & Elec Co	6.5	678858BC4	Sr Nt	4/15/2028	A-	5.63	5.64	5.63	5.64	5.50	5.51	5.54	5.43	5.55	5.31	5.25	5.23	5.49%	5.26%
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	5.16	5.19	5.09	5.10	4.94	4.93	4.91	4.77	4.94	4.80	4.72	4.60	4.93%	4.71%
Portland Gen Elec Co MTN-book	9.31	73651HAV3	1st Mortgage MTN	8/11/2021	A-	6.83	6.84	6.84	6.86	6.79	6.83	6.87	6.81	6.90	6.86	6.83	6.87	6.84%	6.85%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	5.21	4.99	4.89	4.90	4.70	4.72	4.70	4.55	4.73	4.59	4.50	4.38	4.74%	4.49%
Public Service Electric and Gas Co.	5	74456QAN6	Sec M-T Nts'D'	8/15/2014	A-	4.87	4.89	4.91	4.92	4.95	4.97	4.99						4.93%	
Public Service Electric and Gas Co.	6.75	744567EP9	1st & Ref VV	1/1/2016	A-	6.06	6.08	6.12	6.13	6.18	6.19	6.22	6.24	6.26	6.31	6.32	6.36	6.21%	6.33%
Public Service Electric and Gas Co.	9.25	744567CN6	1st & Ref CC	6/1/2021	A-	6.92	6.93	6.95	6.96	6.62	6.67	6.70	6.64	6.74	6.69	6.66	7.03	6.79%	6.79%
Public Service Electric and Gas Co.	8	744567BA5	1st & Ref	6/1/2037	A-	6.10	6.13	6.02	6.04	5.83	5.85	5.83	5.68	5.87	5.72	5.62	5.49	5.85%	5.61%
Public Service Electric and Gas Co.	5	744567BB3	1st & Ref	7/1/2037	A-	5.21	4.99	4.89	4.90	4.70	4.72	4.70	4.55	4.73	4.59	4.50	4.38	4.74%	4.49%
Public Svc Co New Hampshire Fo	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	5.19	5.21	5.11	5.13	4.64	4.86	4.84	4.70	4.87	4.74	4.65	4.54	4.87%	4.64%
Public Svc Elec Gas Co Secd MT	7.04	74456QAG1	MTN Tranche # Tr 00007	11/6/2020	A-	5.91	5.91	5.98				6.00		6.05	6.02	6.00	6.04	5.99%	6.02%
Public Svc Elec Gas Co Secd MT	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.70	4.72	4.63	4.64	4.49	4.51	4.50	4.36	4.53	4.39	4.31	4.21	4.50%	4.30%
Public Svc Elec Gas Co Secd MT	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.80	4.84	4.75	4.76	4.60	4.63	4.60	4.46	4.63	4.50	4.52	4.41	4.63%	4.48%
Public Svc Elec Gas Co Secd MT	5.8	74456QAR7	ecured Mtn Series E Not	5/1/2037	A-	4.85	4.88	4.78	4.80	4.63	4.67	4.61	4.55	4.72	4.58	4.50	4.48	4.67%	4.52%
Puget Sound Energy	5.2	745332BV7	Sr(Sec)Nts	10/1/2015	A-	4.84	4.86	4.88	4.89	4.92	4.94	4.93	4.95	4.96	4.99	5.00	5.02	4.93%	5.00%
Puget Sound Energy	6.74	74531EAB8	Sr M-T Nts 'A'	6/15/2018	A-	5.72	5.64	5.70	5.71	5.70	5.73	5.75	5.77	5.80	5.80	5.79	5.83	5.75%	5.81%
Puget Sound Energy	7	74531EAC6	Sr M-T Nts 'B'	3/9/2029	A-	5.63	5.63	5.61	5.63	5.49	5.53	5.50	5.44	5.57	5.47	5.40	5.39	5.52%	5.42%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.80	4.86	4.76	4.78	4.63	4.64	4.58	4.49	4.66	4.59	4.53	4.45	4.65%	4.52%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	5.23	5.25	5.09	5.10	4.93	4.95	4.89	4.79	4.97	4.83	4.75	4.63	4.95%	4.74%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	5.07	5.10	4.93	4.95	4.76	4.78	4.71	6.66	4.88	4.75	4.66	4.64	4.99%	4.68%
Puget Sound Pwr & Lt	7.02	74531EAA0	Sr M-T Nts'A'	12/1/2027	A-	5.41	5.42	5.41	5.42	5.23	5.26	5.24	5.19	5.39	5.30	5.24	5.23	5.31%	5.26%
Southwestern Public Serv	5.6	845743BK8	Sr Nts'E'	10/1/2016	A-	5.09	5.10	5.13	5.13	5.15	5.18	5.20	5.09	5.12	5.14	5.15	5.18	5.14%	5.16%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	5.22	5.15	5.04	5.06	4.82	4.88	4.85	4.77	4.98	4.87	4.78	4.64	4.92%	4.76%
Virginia Electric & Power Co.	5.25	927804EW0	Sr Nts 'C'	12/15/2015	A-	4.87	4.88	4.89	4.90	4.92	4.95	4.97	4.98	4.99	5.00	5.01	5.04	4.95%	5.02%
Virginia Electric & Power Co.	5.4	927804EZ3	Sr Nts'A'	1/15/2016	A-	4.94	4.95	4.98	4.99	5.02	5.03	5.06	5.07	5.08	5.11	5.13	5.15	5.04%	5.13%
Virginia Electric & Power Co.	5.95	927804FC3	Sr Nt 2007 Ser B	9/15/2017	A-	5.13	5.14	5.19	5.19	5.17	5.18	5.22	5.23	5.25	5.27	5.28	5.33	5.22%	5.29%
Virginia Electric & Power Co.	5.4	927804FF6	Sr Nt 2008 Ser A	4/30/2018	A-	4.73	4.72	4.75						4.81	4.80	4.79	4.83	4.78%	4.81%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.97	5.04	4.88	4.90	4.76	4.77	4.78	4.65	4.80	4.72	4.64	4.60	4.79%	4.65%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.94	5.01	4.89	4.91	4.72	4.74	4.75	4.66	4.84	4.70	4.62	4.56	4.78%	4.63%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	5.09	5.08	4.98	4.99	4.80	4.80	4.79	4.69	4.88	4.77	4.68	4.57	4.84%	4.67%
Washington Water Power	7.39	94068VAF0	Secd Med-term Nt	5/11/2018	A-	6.42	6.42	6.48	6.49	6.42	6.46	6.48	6.49	6.53	6.52	6.51	6.55	6.48%	6.53%
Washington Water Power	7.53	94068VAA1	Secd MTN	5/5/2023	A-	6.19	6.19	6.19						6.19	6.11	6.07	6.06	6.14%	6.08%
Westar Energy, Inc.	6	95709TAA8	1st Mtg Bd	7/1/2014	A-	5.86	5.88	5.91	5.92	5.00	6.00							5.76%	
Westar Energy, Inc.	5.15	95709TAB6	1st Mtg Bd	1/1/2017	A-	4.77	4.77	4.81	4.81	.5.97	4.83	4.85	4.85	4.87	4.87	4.87	4.90	4.43%	4.88%
Westar Energy, Inc.	5.1	95709TAD2	Fixed Rt 1st Mtg Bd	7/15/2020	A-	4.52	4.48	4.53	5.86	4.45	4.48	4.50	4.46	4.49	4.49	4.49	4.51	4.61%	4.50%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.87	5.84	5.86	5.00	5.88	5.89	5.98	5.95	5.98	5.97	5.96	5.95	5.84%	5.96%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.79	5.73	5.75	5.75	5.76	5.78	5.78	6.02	6.01	5.77	5.78	5.79	5.81%	5.78%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Wisconsin Electric Power	6.5	976656BP2	Deb	6/1/2028	A-	5.23	5.23	5.20	5.21	5.09	5.12	5.15	5.04	5.17	5.07	5.01	5.00	5.13%	5.03%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	4.87	4.89	4.76	4.77	4.62	4.64	4.62	4.48	4.65	4.51	4.43	4.32	4.63%	4.42%
Wisconsin Electric Power Company	6.875	976656BL1	Deb	12/1/2095	A-	5.59	5.55	5.25	5.27	5.18	5.10	5.08	4.85	5.12	5.00	4.86	4.70	5.13%	4.85%
AmerenEnergy Generating	5.4	02360FAC0	Sr Sec Nts	2/1/2016	BBB+	4.99	5.00	5.00	5.01	5.03	5.05	5.07	5.08	5.09	5.12	5.13	5.15	5.06%	5.13%
AmerenEnergy Generating	5.1	02360FAA4	Sr Sec Nts	10/1/2019	BBB+	4.51	4.51	4.53	4.54	4.51	4.54	4.51	4.49	4.52	4.50	4.49	4.52	4.51%	4.50%
AmerenEnergy Generating	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.72	4.74	4.64	4.66	4.52	4.54	4.52	4.52	4.70	4.56	4.47	4.37	4.58%	4.47%
CenterPoint Energy, Inc.	6.85	15189TAG2	Sr Nts'B'	6/1/2015	BBB+	6.34	6.35	6.39	6.40	6.46	6.49	6.53	6.56	6.57	6.62	6.64	6.68	6.50%	6.65%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nt	2/1/2017	BBB+	5.31	5.28	5.32	5.32	5.30	5.33	5.36	5.37	5.39	5.40	5.41	5.45	5.35%	5.42%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nts	2/1/2017	BBB+	5.31	5.28	5.32	5.32	5.30	5.33	5.36	5.37	5.39	5.40	5.41	5.45	5.35%	5.42%
Central Illinois Light	6.2	153645AX4	Sr Secd Nt 144a	6/15/2016	BBB+	5.50	5.50	5.50	5.5	5.5	5.5	5.5	5.50	5.49	5.49	5.49	5.49	5.50%	5.49%
Central Illinois Light	6.7	153645BA3	Sr Secd Nt 144a	6/15/2036	BBB+	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.22	6.21	6.21	6.21	6.21	6.22%	6.21%
Cincinnati Gas & Electric Co.	6.9	172070BT0	Deb	6/1/2025	BBB+	5.64	5.64	5.64	5.65	5.46	5.49	5.48	5.39	5.50	5.40	5.36	5.35	5.50%	5.37%
Cleco Power LLC	4.95	185508AD0	Nts	7/15/2015	BBB+	4.72	4.73	4.75	4.75	4.77	4.79	4.81	4.61	4.82	4.84	4.84	4.86	4.77%	4.85%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	5.46	5.48	5.38	5.40	5.24	5.26	5.18	5.09	5.27	5.22	5.13	5.02	5.26%	5.12%
Consumers Energy Co.	5.15	210518CG9	1st	2/15/2017	BBB+	4.62	4.63	4.64	4.65	4.66	4.68	4.70	4.69	4.71	4.73	4.73	4.77	4.68%	4.74%
Consumers Energy Co.	6.875	210518AT3	Sr Nts 'B'	3/1/2018	BBB+	5.83	5.83	5.86	5.87	5.86	5.90	5.94	5.22	5.97	5.97	5.96	6.00	5.85%	5.98%
Consumers Energy Co.	5.65	210518CQ7	1st	9/15/2018	BBB+	4.86	4.86	4.92	4.92	4.89	4.92	4.92	4.93	4.96	4.93	4.92	4.96	4.92%	4.94%
Consumers Energy Co.	6.12	210518CR5	1st	3/15/2019	BBB+	5.15	5.15	5.20	5.21	5.15	5.18	6.23	5.22	5.25	5.24	5.24	5.28	5.29%	5.25%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	5.08	5.11	5.01	5.03	4.87	4.89	4.87	4.73	4.90	4.77	4.68	4.57	4.88%	4.67%
Delmarva Pwr & Light	5	247109BH3	Nt	11/15/2014	BBB+	4.83	4.85	4.87	4.87	4.91	4.92	4.94	4.96	4.96	4.99			4.91%	4.99%
Delmarva Pwr & Light	5	247109BJ9	Fixed Rt Nt	6/1/2015	BBB+	4.75	4.76	4.78	4.79	4.82	4.83	4.85	4.86	4.87	4.89	4.88	4.91	4.83%	4.89%
Dominion Resources	7.82	257469AC0	Remkt Nts 'E'	9/15/2014	BBB+	6.91	6.94	6.99	6.99	7.07								6.98%	
Dominion Resources	6.75	257469AG1	Sr Nts 'E'	12/15/2032	BBB+	5.63	5.66	5.56	5.58	5.43	5.38	5.37	5.23	5.40	5.24	5.16	5.05	5.39%	5.15%
Dominion Resources, Inc. (Va.)	5.15	25746UAW9	Sr Nts '05C	7/15/2015	BBB+	4.84	4.85	4.87	4.88	4.90	4.92	4.94	4.96	4.96	5.00	5.00	5.01	4.93%	5.00%
Dominion Resources, Inc. (Va.)	5.6	25746UBB4	SrNts'06A	11/15/2016	BBB+	5.02	5.02	5.06	5.06	5.06	5.06	5.09	5.10	5.11	5.13	5.14	5.16	5.08%	5.14%
Dominion Resources, Inc. (Va.)	6	25746UBC2	Sr Nts '07A	11/30/2017	BBB+	5.22	5.23	5.26	5.26	5.22	5.24	5.25	5.26	5.28	5.33	5.33		5.26%	5.33%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Fixed Rt Sr Nt 2005 Ser I	6/15/2035	BBB+	5.21	5.24	5.10	5.12	4.96	4.82	4.95	4.84	5.01	4.87	4.79	4.68	4.97%	4.78%
Duke Energy Corp.	6	264399DK9	Sr Nts 'A'	12/1/2028	BBB+	5.02	5.03	4.97	4.98	4.85	4.89	4.91	4.81	4.86	4.82	4.84	4.78	4.90%	4.81%
Duke Energy Corp.	6.45	264399ED4	Sr Nts	10/15/2032	BBB+	5.24	5.23	5.15	5.16	5.02	5.01	5.02	4.89	5.07	4.95	4.87	4.77	5.03%	4.86%
Empire District Electric Co. (The)	7.2	291641AS7	1st	12/1/2016	BBB+	6.23	6.25	6.29	6.30	6.33	6.37	6.39	6.42	6.44	6.48	6.48	6.53	6.38%	6.50%
Enersis S.A.	7.4	29274FAB0	Nt	12/1/2016	BBB+	6.48	6.48	6.54						6.59	6.67	6.68	6.75	6.60%	6.70%
Exelon Corp.	5.62	30161NAC5	Fixed Rt Sr Nt	6/15/2035	BBB+	5.42	5.39	5.22	5.24	5.02	5.00	5.01	4.87	5.04	4.97	4.88	4.81	5.07%	4.89%
Florida Pwr	6.75	34110QAL2	Nts	2/1/2028	BBB+	5.68	5.68	5.67	5.69	5.55	5.59	5.61	4.77	5.63	5.53	5.47	5.45	5.53%	5.48%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	5.18	5.18	5.10	5.00	4.92	4.94	4.94	4.80	5.03	4.90	4.91	4.88	4.98%	4.90%
MidAmerican Funding	6.93	59562HAJ7	Sr Sec Bonds	3/1/2029	BBB+	5.56	5.58	5.55	5.56	5.28	5.31	5.31	5.25	5.37	5.30	5.23	5.22	5.38%	5.25%
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	5.61	5.60	5.64	5.64		5.69	5.71	5.73	5.74	5.77	5.79	5.83	5.70%	5.80%
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	5.61	5.60	5.64	5.64		5.69	5.71	5.73	5.74	5.77	5.79	5.83	5.70%	5.80%
Potomac Edison Co.	5.35	737662BP0	1st	11/15/2014	BBB+	5.16	5.18	5.19										5.18%	
Potomac Edison Co.	5.12	737662BR6	1st	8/15/2015	BBB+	4.84	4.85	4.88										4.86%	
PSEG Power LLC	5.5	69362BAN2	Sr Nts	12/1/2015	BBB+	5.08	5.10	5.11	5.12	5.13	5.16	5.18	5.20	5.21	5.24	5.25	5.28	5.17%	5.26%
PSEG Power LLC	8.62	69362BAJ1	Sr Nts	4/15/2031	BBB+	6.11	6.18	6.08	6.09	5.97	5.99	6.00	5.90	6.07	5.97	5.92	5.86	6.01%	5.92%
PSI Energy	6.05	693627AZ4	Deb	6/15/2016	BBB+	5.45	5.42	5.45	5.46	5.48	5.51	5.54	5.55	5.56	5.60	5.60	5.64	5.52%	5.61%
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	5.18	5.20	5.08	5.10	4.94	4.97	4.96	4.81	5.09	4.95	4.86	4.75	4.99%	4.85%
Public Svc No Car	6.99	744516AA3	Sr Deb	1/15/2026	BBB+	5.82	5.83	5.82	5.64	5.72	5.75	5.66	5.61	5.73	5.62	5.57	5.56	5.69%	5.58%
Public Svc No Car	7.45	744516AB1	Sr Deb	12/15/2026	BBB+	6.00	6.00	6.00	6.01	5.88	5.92	5.81	5.76	5.88	5.79	5.73	5.72	5.88%	5.75%
Southern California Edison Co.	6.65	842400EB5	Nts	4/1/2029	BBB+	5.37	5.40	5.40	5.41	5.14	5.18	5.20	5.09	5.22	5.12	5.05	5.09	5.22%	5.09%
Southern Power Co	4.88	843646AF7	Sr Nt	7/15/2015	BBB+	4.60	4.61	4.63	4.64	4.66	4.66	4.67	4.70	4.70	4.73	4.74	4.77	4.68%	4.75%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	6.05	6.05	6.08	6.09	6.09	6.11	6.12	6.13	6.13	6.14	6.14	6.16	6.11%	6.15%
Tampa Electric Co.	6.1	875127AX0	Fixed Rt	5/15/2018	BBB+	5.22	5.23	5.28	5.29	5.27	5.27	5.31	5.30	5.33	5.32	5.32	5.35	5.29%	5.33%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	5.22	5.25	5.15	5.17	5.01	4.83	4.95	4.80	4.98	4.84	4.75	4.71	4.97%	4.77%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	5.04	5.05	4.95	4.97	4.81	4.83	4.77	4.74	4.87	4.75	4.71	4.59	4.84%	4.68%
Union Electric	5.5	906548CC4	Sr Sec Nts	5/15/2014	BBB+	5.42	5.44	5.46	5.47	4.90	4.91	4.93						5.22%	
Union Electric	4.75	906548BZ4	Sr Sec Nts	4/1/2015	BBB+	4.52	4.53	4.55	4.56	4.60	4.61	4.63	4.63	4.64	4.67	4.68	4.70	4.61%	4.68%
Union Electric	6.4	906548CE0	Sr Sec Nts	6/15/2017	BBB+	5.52	5.53	5.58	5.59	5.61	5.63	5.65	5.67	5.70	5.71	5.71	5.75	5.64%	5.72%
Union Electric	6	906548CF7	Sr Sec Nts	4/1/2018	BBB+	5.28	5.29	5.34	5.34	5.33	5.38	5.37	5.36	5.39	5.38	5.37	5.41	5.35%	5.39%
Union Electric	6.7	906548CG5	Sr Sec Nts	2/1/2019	BBB+	5.53	5.53	5.59	5.60	5.55	5.59	5.63	5.61	5.64	5.63	5.67	5.71	5.61%	5.67%
Union Electric	5	906548CD2	Sr Sec Nts	2/1/2020	BBB+	4.63	4.62	4.67	4.68	4.61	4.84	4.67	4.65	4.68	4.65	4.45	4.48	4.64%	4.53%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	5.08	5.10	5.01	5.02	4.87	4.89	4.67	4.73	4.90	4.74	4.66	4.55	4.85%	4.65%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	5.17	5.20	5.10	5.12	4.93	4.98	4.95	4.88	5.05	4.92	4.91	4.80	5.00%	4.88%
Appalachian Power	4.95	037735CB1	Sr Nts'I'	2/1/2015	BBB	4.76	4.76	4.78	4.58	4.80	4.80	4.80	4.80					4.76%	
Appalachian Power	5	037735CD7	Sr Nts'K'	6/1/2017	BBB	4.56	4.57	4.58	4.58	4.53	4.54	4.57	4.57	4.59	4.59	4.59	4.65	4.58%	4.61%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	5.29	5.17	5.07	5.09	4.93	4.82	4.81	4.75	4.92	4.89	4.80	4.72	4.94%	4.80%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	5.46	5.45	5.24	5.26	5.10	5.04	5.03	4.88	5.06	5.06	5.00	4.94	5.13%	5.00%
Appalachian Power Co.	5.95	037735BZ9	Sr Nts'H'	5/15/2033	BBB	5.52	5.54	5.24	5.25	5.10	5.12	5.11	4.97	5.14	4.97	4.89	4.79	5.14%	4.88%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

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Cleveland Electric Illuminating Co.	7.88	186108BU9	Sec Nts 'D'	11/1/2017	BBB	6.55	6.54	6.57	6.57	6.54	6.57	6.62	6.62	6.65	6.70	6.70	6.78	6.62%	6.73%
Commonwealth Edison	6.95	202795GX2	Nts	7/15/2018	BBB	5.86	5.86	5.92	5.93	5.84	5.88	5.92	5.91	5.96	5.98	5.97	6.01	5.92%	5.99%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	anced Jr Sub Nt 2006 S	6/30/2066	BBB	6.89	6.91	6.88	6.88	6.92	6.93	6.94	6.93	6.96	7.01	7.09	7.10	6.95%	7.07%
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	ub Nt 2006 Ser B Enhar	9/30/2066	BBB	2.73	2.75	2.75	2.79	2.79		2.74	2.74	2.74	2.69	2.69	2.71	2.74%	2.70%
DTE Energy Co.	6.35	233331AM9	Sr Nt 2006 Ser B	6/1/2016	BBB	5.69	5.70	5.71	5.71	5.74	5.75	5.78	5.80	5.82	5.87	5.86	5.91	5.78%	5.88%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	5.58	5.45	5.33	5.35	5.15	5.10	5.09	4.94	5.12	4.98	4.90	4.79	5.15%	4.89%
Empire District Elec	6.7	29164RAA9	Sr Nts	11/15/2033	BBB	5.72	5.75	5.65	5.67	5.48	65.50	5.50	5.36	5.53	5.36	5.28	5.17	10.50%	5.27%
Empire District Electric Co. (The)	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.44	5.48	5.37	5.39	5.23	5.24	5.25	5.10	5.28	5.19	5.10	4.98	5.25%	5.09%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	5.93	5.92	5.80						5.60	5.43	5.42	5.30	5.63%	5.38%
Energy East Corp.	6.75	29266MAE9	Nts	9/15/2033	BBB	6.15	6.17	6.07	6.09	5.92	5.90	5.74	5.64	5.82	5.65	5.56	5.44	5.85%	5.55%
Enersis S.A.	6.6	29274FAC8	Nt	12/1/2026	BBB									6.27	6.27	6.27	6.27	6.27%	6.27%
Indiana Mich Pwr	5.65	454889AL0	Sr Nts'G'	12/1/2015	BBB	5.28	5.29	5.32	5.33	5.35	5.37	5.29	5.40	5.41	5.43	5.44	5.46	5.36%	5.44%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	5.33	5.39	5.21	5.23	4.98	5.00	4.99	4.84	5.02	4.96	4.92	4.81	5.06%	4.90%
Kansas City Power & Light	5.85	485134BJ8	Sr Nt	6/15/2017	BBB	5.23	5.24	5.29	5.29	5.18	5.20	5.23	5.24	5.26	5.27	5.27	5.31	5.25%	5.28%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	5.26	5.28	5.19	5.20	5.04	5.06	5.00	4.86	5.04	4.90	4.81	4.70	5.03%	4.80%
Kentucky Power	5.62	491386AL2	Sr Nts'D'	12/1/2032	BBB	5.58	5.60	5.50	5.52	5.10	5.12	5.10	4.97	5.13	4.97	4.89	4.79	5.19%	4.88%
Ohio Power Co.	6	677415CL3	Sr Nts'K'	6/1/2016	BBB	5.37	5.39	5.42	5.43	5.44	5.47	5.50	5.51	5.52	5.56	5.58	5.62	5.48%	5.59%
Ohio Power Co.	6.6	677415CF6	Sr Nts 'G'	2/15/2033	BBB	5.39	5.38	5.33	5.34	5.30	5.12	5.10	5.01	5.21	5.08	5.00	4.96	5.19%	5.01%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	5.15	5.16	5.14	5.28	4.91	5.04	4.91	4.98	4.99	4.87	4.83	4.75	5.00%	4.82%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	5.06	5.05	5.02	5.38	4.82	5.14	5.14	5.07	4.92	4.78	4.84	4.74	5.00%	4.79%
Pepco Holdings, Inc.	6.12	713291AP7	Nts	6/1/2017	BBB	5.65	5.65	5.70	5.70	5.70	5.72	5.74	5.75	5.76	5.77	5.76	5.79	5.72%	5.77%
PPL Energy Supply	6.2	69352JAH0	Sr Nts	5/15/2016	BBB	5.61	5.62	5.62	5.62	5.75	5.77	5.81	5.84	5.83	5.92	5.94	5.96	5.77%	5.94%
PPL Energy Supply	6.5	69352JAL1	Sr Nts	5/1/2018	BBB	5.78	5.76	5.78	5.79	5.80	5.83	6.03	5.97	5.99	6.02	6.01	6.19	5.91%	6.07%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	5.41	5.41	5.34	5.34	5.38	5.42	5.47	5.47	5.48	5.55	5.56	5.57	5.45%	5.56%
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	6.15	6.34	6.19	6.19	6.19	6.08	6.11	6.20	6.29	6.08	6.35	6.81	6.25%	6.41%
Progress Energy, Inc.	5.62	743263AL9	Sr Nts	1/15/2016	BBB	5.17	5.17	5.20										5.18%	
Progress Energy, Inc.	7.75	743263AE5	Sr Nts	3/1/2031	BBB	5.78	5.84	5.66										5.76%	
Progress Energy, Inc.	7	743263AG0	Sr Nts	10/30/2031	BBB	5.55	5.61	5.43										5.53%	
Public Serv, New Mexico	7.5	744499AN4	Sr Unsec Nts 'B'	8/1/2018	BBB	6.41	6.42	6.48	6.49	6.47	6.43	6.40	6.41	6.45	6.44	6.43	6.48	6.44%	6.45%
Public Service Co. of Oklahoma	6.15	744533BH2	Sr Nts'F'	8/1/2016	BBB	5.58	5.59	5.56	5.57	5.56	5.59	5.61	5.62	5.63	5.66	5.67	5.73	5.61%	5.69%
Public Service Co. of Oklahoma	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	5.52	5.43	5.33	5.35	5.08	5.10	5.03	4.95	5.13	5.07	5.04	4.92	5.16%	5.01%
Southwest'n Elec Power	5.38	845437BE1	Sr Nts	4/15/2015	BBB	5.11	5.13	5.15	5.15	5.19	5.20	5.22	5.24	5.25	5.27	5.28	5.30	5.21%	5.28%
Southwest'n Elec Power	4.9	845437BG6	Sr Nt Ser D	7/1/2015	BBB	4.66	4.67	4.69	4.70	4.71	4.73	4.74	4.76	4.76	4.78	4.79	4.81	4.73%	4.79%
Southwest'n Elec Power	5.55	845437BH4	Sr Nt Ser E	1/15/2017	BBB	5.04	5.00	5.05	5.05	5.00	5.02	5.05	5.04	5.06	5.10	5.11	5.14	5.06%	5.12%
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	6.10	6.11	6.06	6.07	6.04	6.05	6.06	6.02	6.03	6.12	6.12	6.21	6.08%	6.15%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	6.05	6.11	6.04	6.05	6.06	5.95	5.99	5.96	5.97	6.11	6.01	6.09	6.03%	6.07%
Cleveland Elec. Illum	5.7	186108CF1	Sr Nts	4/1/2017	BBB-	5.26	5.27	5.31	5.31	5.19	5.22	5.24	5.24	5.26	5.24	5.25	5.28	5.26%	5.26%
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.63	5.61	5.48	5.50	5.22	5.24	5.23	5.03	5.22	5.18	5.12	5.11	5.30%	5.14%
CMS Energy Corp.	6.88	125896AZ3	Sr Nts	12/15/2015	BBB-	6.21	6.24	6.24	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25%	6.25%
CMS Energy Corp.	6.55	125896BA7	Sr Nts	7/17/2017	BBB-	5.70	5.65	5.70	5.70	5.71	5.73	5.77	6.78	5.78	5.81	5.80	5.86	5.83%	5.82%
Constellation Energy Group, Inc.	4.55	210371AK6	Nts	6/15/2015	BBB-	4.33	4.34	4.35	4.36	4.38	4.39	4.40	4.42	4.42	4.45	4.45	4.47	4.40%	4.46%
Constellation Energy Group, Inc.	7.6	210371AF7	Nts	4/1/2032	BBB-	6.16	6.19	6.03	6.05	5.70	5.70	5.69	5.55	5.81	5.71	5.57	5.47	5.80%	5.58%
Duquesne Light Holdings, Inc.	5.5	266233AA3	Sr Nts	8/15/2015	BBB-	5.16	5.17	5.20	5.21	5.21	5.23	5.25	5.27	5.28	5.32	5.33	5.35	5.25%	5.33%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.82	5.56	5.56	5.58	5.72	5.30	5.23	5.14	5.32	5.24	5.15	5.04	5.39%	5.14%
Exelon Corp.	4.9	30161NAD3	Fixed Rt Sr Nt	6/15/2015	BBB-	4.65	4.66	4.68	4.68	4.70	4.71	4.73	4.74	4.75	4.78	4.79	4.81	4.72%	4.79%
Hawaiian Elec Indus	6.51	41987QAX1	M-T Nts'C'	5/5/2014	BBB-	6.41	6.44	6.47	6.48									6.45%	
NiSource Finance	5.25	65473QAQ6	Gtd Nt	9/15/2017	BBB-	4.68	4.69	4.72	4.72	4.70	4.71	4.74	4.73	4.75	4.75	4.76	4.80	4.73%	4.77%
NiSource Finance	5.45	65473QAR4	Gtd Nt	9/15/2020	BBB-	4.80	4.79	4.85	4.86	4.77	4.76	4.81	4.79	4.82	4.79	4.78	4.84	4.81%	4.80%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	5.58	5.61	5.47	5.49	5.30	5.32	5.31	5.17	5.36	5.29	5.20	5.08	5.35%	5.19%
Pennsylvania Electric	6.625	708696BM0	Sr Nts 'C'	4/1/2019	BBB-	5.85	5.82	5.88	5.88	5.85	5.74	5.76	5.76	5.81	5.79	5.78	5.81	5.81%	5.79%
FirstEnergy Corp.	7.38	337932AC1	Sr Nt Ser C	11/15/2031	BB+	6.48	6.44	6.40	6.42	6.27	6.24	6.26	6.07	6.29	6.19	6.09	6.09	6.27%	6.12%
El Paso Energy Corp MTN BE	8.05	28368EAA4	MTN	10/15/2030	BB	7.72	7.75	7.57	7.55	7.44	7.39	7.28	6.56	6.65	6.59	6.50	6.57	7.13%	6.55%
El Paso Energy Corp MTN BE	7.75	28368EAE6	MTN-tranche # Tr 00005	1/15/2032	BB	7.53	7.42	7.26	7.25	7.11	7.08	7.01	6.19	6.25	6.20	6.19	6.30	6.82%	6.23%
AES Corp. (The)	7.750	00130HBC8	Sr Nts	3/1/2014	BB-	7.73	7.72											7.73%	
AmerenEnergy Generating	7.95	02360XAJ6	Sr Nts 'F'	6/1/2032	BB-	10.19	9.69	9.52	9.44	8.46	7.83	8.07	7.99	7.95	8.11	8.13	9.08	8.71%	8.44%
TXU Corp.	5.55	873168AL2	Sr Nts'P'	11/15/2014	D	14.80	17.34	16.81	15.86	10.78	7.35	7.11	6.24	6.30	6.93			10.95%	6.93%
TXU Corp.	6.5	873168AN8	Sr Nts'Q'	11/15/2024	D	21.66	25.49	19.69	18.57	12.62	8.61	8.33	7.30	7.38	8.12	8.12	8.33	12.85%	8.19%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	21.83	25.69	19.84	18.71	12.72	6.88	8.39	7.36	7.44	8.18	8.18	8.39	12.80%	8.25%
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	6.80	6.80	6.80	6.80	6.81%	6.80%
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	4.73	4.73	4.73	4.73	4.74%	4.73%
Consolidated Edison, Inc.	4.7	209111EE9	Deb'04A	2/1/2014	NR	4.7												4.70%	
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	5.6	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	5.7	5.70	5.70	5.70	5.70	5.70	5.70%	5.70%

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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%
Madison Gas & Elec Co MTN BE	5.26	5574A0AC1	MTN	9/29/2017	NR							4.58		4.58	4.58	4.58	4.58	4.58%	4.58%
MDU Resources Group, Inc.	5.98	552690AF6	Sr Sec Nt	12/15/2033	NR	5.92	5.95	5.83	5.85	5.65	5.67	5.47	5.32	5.49	5.42	5.33	5.26	5.60%	5.34%
MidAmerican Energy Hldg	5	59562VAK3	Sr Nts	2/15/2014	NR	4.99												4.99%	
NorthWestern Corp.	5.88	668074AM9	Sr Secd Nt 144a	11/1/2014	NR	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.71	5.72	5.72		5.72%	5.72%
NRG Energy, Inc.	7.25	629377AT9	SrNts	2/1/2014	NR	7.10												7.10%	
NRG Energy, Inc.	7.38	629377AX0	SrNts	1/15/2017	NR	7.56					7.55							7.56%	
Ohio Power Co.	6.38	677415CJ8	Sr Nts 'I'	7/15/2033	NR	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.37	6.37	6.37	6.37	6.38%	6.37%
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%
Pacific Gas & Electric Co.	4.8	694308GD3	1st	3/1/2014	NR	4.78	4.80											4.79%	
Penna P&L	7.375	709051CD6	1st	3/1/2014	NR	7.32												7.32%	
Potomac Electric Power	4.65	737679CX6	Sr Nts	4/15/2014	NR	4.61	4.62	4.64	4.64									4.63%	
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%
Public Serv, Colorado	5.5	744448BX8	1st Coll Tr Ser 15	4/1/2014	NR	5.45	5.47	5.50	5.50									5.48%	
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%
Sierra Pacific Resources	8.625	826428AH7	Sr Nts	3/15/2014	NR	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	3.88	5.92	5.92	5.92	5.91	5.91	5.91	5.91	5.75%	5.91%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	4.87	4.86	4.84	4.81	4.58	4.80	4.59	4.43	4.60	4.47	4.38	4.28	4.63%	4.38%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	4.86	4.81	4.81	4.81	4.56	4.55	4.52	4.40	4.60	4.45	4.38	4.31	4.59%	4.38%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	4.94	4.92	4.87	4.87	4.59	4.59	4.57	4.44	4.61	4.51	4.42	4.31	4.64%	4.41%
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	5.61	5.59	5.58	5.58	6.44	5.44	5.49	5.45	5.50	5.37	5.34	5.38	5.56%	5.36%
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	7.48	7.48	7.48	7.48	7.49%	7.48%
			Counts of data			338	333	330	305	298	297	302	292	310	310	308	306	340	310

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	4.75%	4.69%
AA's	4.78%	4.60%
A's	5.10%	4.97%
BBB+'s	5.31%	5.26%
BBB's	5.51%	5.37%
BB's	7.33%	6.84%
B's	----	----
CC's	----	----
D	12.20%	7.79%
NR's	5.82%	5.65%
ALL	5.36%	5.19%
BBB- & Above	5.21%	5.10%
BB- & Above	5.25%	5.13%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Tennessee Valley Authority	4.38	880591DY5	Global Pwr Bonds'05B	6/15/2015	AAA	0.02	0.02	0.02	0.02	0.08	0.33	0.73	1.08	1.23	0.24	0.21	0.40	0.37%	0.28%
Tennessee Valley Authority	4.88	880591DS8	Global Pwr Bonds'01D	12/15/2016	AAA	0.93	1.00	1.24	1.35	1.32	1.50	0.18	0.27	0.42	0.78	0.73	0.80	0.88%	0.77%
Tennessee Valley Authority	6.25	880591CU4	Pwr Bonds '97E	12/15/2017	AAA	1.39	1.46	1.73	1.80	1.63	1.86	0.79	0.80	0.97	1.22	1.07	1.21	1.33%	1.17%
Tennessee Valley Authority	6.75	880591CJ9	Global Pwr Bonds'95E	11/1/2025	AAA	3.61	3.63	3.67	3.44	3.02	3.10	3.10	2.88	3.14	3.05	2.93	2.90	3.21%	2.96%
Tennessee Valley Authority	7.125	880591DM1	Global Pwr Bonds '00G	5/1/2030	AAA	4.00	4.05	4.05	3.93	3.61	3.63	3.66	3.46	3.70	3.49	3.35	3.15	3.67%	3.33%
Tennessee Valley Authority	4.7	880591DV1	Pwr Bonds\03 B"	7/15/2033	AAA	4.27	4.20	4.20	4.01	3.78	3.81	3.73	3.54	3.83	3.68	3.54	3.26	3.82%	3.49%
Madison Gas & Elec Co MTN E	7.12	5574A0AB3	Tranche # Tr 00002	4/1/2032	AA-	4.75	4.78	4.61	4.51	4.39	4.42	4.31	4.17	4.46	4.20	4.05	3.91	4.38%	4.05%
Madison Gas & Electric	7.7	557497AL8	1st	2/15/2028	AA-	7.54	7.54	7.54	7.54	7.54	7.54	7.53	7.54	7.54	7.53	7.53	7.55	7.54%	7.54%
Alabama Power Co.	5.2	010392ER5	Sr Nts'FF'	1/15/2016	A	0.92	0.89	1.02	1.30	1.41	1.71	0.02	0.02	0.02	0.72	0.69	0.98	0.81%	0.80%
Alabama Power Co.	5.55	010392EW4	Sr Nts'07A	2/1/2017	A	1.83	1.79	2.02	1.58	0.96	1.77	1.97	0.41	0.65	1.25	1.17	1.34	1.40%	1.25%
Alabama Power Co.	5.5	010392DZ8	Sr Nts 'Q'	10/15/2017	A	1.91	1.88	1.68	2.00	1.61	1.77	1.97	1.41	1.52	1.49	1.44	1.61	1.69%	1.51%
Alabama Power Co.	5.12	010392EK0	Sr Nts 'Z'	2/15/2019	A	2.51	2.48	2.67	2.71	2.22	2.37	2.52	2.44	2.07	2.15	2.15	2.26	2.38%	2.19%
Alabama Power Co.	5.88	010392EB0	Sr Nts 'S'	12/1/2022	A	3.46	3.46	3.44	3.10	3.02	2.80	2.88	2.73	3.00	2.87	2.78	2.76	3.03%	2.80%
Alabama Power Co.	5.7	010392EC8	Sr Nts 'T'	2/15/2033	A	4.50	4.46	4.31	4.23	4.10	4.12	4.10	3.88	4.17	3.91	3.77	3.81	4.11%	3.83%
Alabama Power Co.	5.6	010392EE4	Sr Nts'V'	3/15/2033	A	4.62	4.65	4.50	4.42	4.27	4.29	4.27	4.14	4.41	4.13	3.98	3.79	4.29%	3.97%
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.55	4.60	4.45	4.37	4.20	4.79	4.22	4.00	4.31	4.14	3.99	3.96	4.30%	4.03%
Connecticut Lt & Pwr	5	207597DT9	1st & Ref '05A	4/1/2015	A	0.60	0.57	0.63	0.96	1.30	1.67	1.96	2.32	2.54	0.52	0.57	0.72	1.20%	0.60%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	4.80	4.83	4.68	4.49	4.34	4.39	4.32	4.12	4.41	4.18	4.03	3.84	4.37%	4.02%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	4.85	4.88	4.73	4.66	4.37	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.40%	4.02%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.49	4.52	4.37	4.27	4.12	4.17	4.15	3.90	4.19	3.98	3.83	3.69	4.14%	3.83%
Detroit Edison Co.	5.4	250847DV9	Sr Nts'D'	8/1/2014	A	0.76	0.72	0.90										0.79%	
Detroit Edison Co.	4.8	250847DX5	Sr(Sec)Nts'AR'	2/15/2015	A	1.21	1.17	1.24	1.95	1.77	2.06	1.19	1.19	1.19	1.19	1.18	1.19	1.38%	1.19%
Detroit Edison Co.	6.35	250847DU1	Sr Nts	10/15/2032	A	4.75	4.78	4.63	4.56	4.32	4.34	4.32	4.10	4.39	4.13	3.98	3.79	4.34%	3.97%
Duke Energy Corp.	5.3	264399EM4	1st & Ref	10/1/2015	A	0.55	0.56	0.69	0.02	0.02	0.02	0.02	0.05	0.44	0.49	0.62	0.71	0.35%	0.61%
Florida Power & Light	5.85	341081EP8	1st	2/1/2033	A	4.50	4.53	4.33	4.22	4.07	4.12	4.07	3.81	4.24	3.98	3.84	3.70	4.12%	3.84%
Florida Power & Light	5.95	341081ER4	1st	10/1/2033	A	4.28	4.36	4.21	4.10	3.95	3.98	3.89	3.66	4.14	3.93	3.69	3.60	3.98%	3.74%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.30	4.30	4.18	4.10	3.95	3.98	3.95	3.88	4.17	3.83	3.83	3.85	4.03%	3.84%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.30	4.30	4.18	4.10	3.95	3.98	3.95	3.88	4.17	3.83	3.83	3.85	4.03%	3.84%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	4.35	4.38	4.23	4.15	4.00	4.03	4.03	3.81	4.09	3.86	3.88	3.86	4.06%	3.87%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.40	4.37	4.28	4.18	3.95	4.07	4.07	3.85	4.14	3.93	3.84	3.86	4.08%	3.88%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.45	4.48	4.34	4.22	4.05	4.07	4.07	3.85	4.29	3.96	3.82	3.63	4.10%	3.80%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.45	4.43	4.33	4.24	4.05	4.05	4.03	3.83	4.24	4.01	3.94	3.73	4.11%	3.89%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.45	4.43	4.44	4.24	4.05	4.07	4.17	3.93	4.22	3.99	3.84	3.79	4.14%	3.87%
Florida Power Corp.	5.8	341099CG2	1st Mtg Bd	9/15/2017	A	1.91	1.41	1.64	0.80	0.71	0.94	1.24	1.27	1.45	1.34	1.32	1.35	1.28%	1.34%
Florida Power Corp.	5.9	341099CB3	1st	3/1/2033	A	4.75	4.78	4.53	4.44	3.95	3.98	3.89	3.66	4.31	4.08	3.93	3.74	4.17%	3.92%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	4.55	4.50	4.38	4.27	4.37	4.10	4.37	3.95	4.24	4.01	4.00	3.80	4.21%	3.94%
Georgia Power Co.	5.25	373334GA3	Sr Nt Ser Z	12/15/2015	A	0.71	0.68	0.81	1.58	1.69	1.93	0.02	0.02	0.02	0.39	0.70	0.92	0.79%	0.67%
Georgia Power Co.	5.7	373334GE5	Sr Nts'07B	6/1/2017	A	1.38	1.34	1.45	1.28	1.29	1.36	1.58	1.61	1.77	1.30	1.22	1.39	1.41%	1.30%
Georgia Power Co.	5.75	373334FS5	Sr Nts 'N'	4/15/2023	A	3.93	4.03	4.01	3.95	3.71	3.78	3.85	3.63	3.90	3.59	3.47	3.42	3.77%	3.49%
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.50	5.48	5.58	5.59	5.61	5.54	5.59	5.61	5.61	5.66	5.67	5.70	5.60%	5.68%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	4.75	4.78	4.61	4.44	4.24	4.29	4.27	4.20	4.39	4.15	4.13	3.95	4.35%	4.08%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	4.75	4.78	4.61	4.44	4.24	4.29	4.27	4.20	4.39	4.15	4.13	3.95	4.35%	4.08%
Gulf Power Co.	5.3	402479BX6	Sr Nts'M'	12/1/2016	A	1.57	1.11	1.22	1.74	1.78	0.44	0.66	0.74	0.90	0.98	0.94	1.04	1.09%	0.99%
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.28	5.29	5.32	5.34	5.34	5.37	5.39	5.42	5.44	5.45	5.46	5.49	5.38%	5.47%
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.45	4.48	4.35	4.28	4.10	4.12	4.05	3.88	4.29	4.08	3.93	3.85	4.16%	3.95%
MidAmerican Energy Co.	5.95	595620AG0	Sr Nts	7/15/2017	A	1.37	1.40	1.60				5.59		1.53	1.18	1.29	1.47	1.93%	1.31%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	5.11	5.12	5.16				5.14		5.19	5.22	5.22	5.26	5.18%	5.23%
Nevada Power	5.88	641423BK3	Gen & Ref'L'	1/15/2015	A	0.55	0.54	0.64	2.11	2.50	2.84				0.71	0.91		1.35%	0.81%
Nevada Power	6.75	641423BU1	Gen & Refunding Mtg Nt S	7/1/2037	A	4.70	4.68	4.53	4.39	4.24	4.22	4.20	4.05	4.34	4.19	4.10	3.95	4.30%	4.08%
Northern IllinoisGas	7.2	665228BV3	1st	5/15/2016	A	1.82	1.79	1.90	1.79	1.91	2.18	1.91	2.60	2.78	1.89	1.85	1.94	2.03%	1.89%
Northern IllinoisGas	6.58	665228BQ4	1st	2/15/2028	A	5.03	5.03	4.99	4.93	4.76	4.81	4.74	4.66	4.83	4.65	4.53	4.48	4.79%	4.55%
Northern Sts Pwr (Minn)	7.125	665772BN8	1st Mtg Bd	7/1/2025	A	3.88	3.77	3.66	3.49	3.32	3.39	3.46	3.26	3.51	3.27	3.15	3.44	3.47%	3.29%
Northern Sts Pwr (Minn)	6.5	665772BQ1	1st Mtg Bd	3/1/2028	A	4.48	4.73	4.56	4.20	3.90	3.98	4.03	3.63	3.95	3.81	3.69	3.64	4.05%	3.71%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st Mtg Bd	7/15/2035	A	4.40	4.43	4.28	4.20	4.03	4.06	4.04	3.81	4.12	3.89	3.92	3.74	4.08%	3.85%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	4.45	4.48	4.35										4.43%	
Northern Sts Pwr (Minn)	6.2	665772CC1	1st Mtg	7/1/2037	A	4.50	4.42	4.40	4.24	4.10	4.15	4.12	3.88	4.17	4.02	3.97	3.78	4.15%	3.92%
Oncor Electric Delivery	6.38	68233DAL1	Sr Sec Nts	1/15/2015	A	0.89	0.84	0.87	2.22	2.70	2.22	0.58		2.22	0.70	1.00	2.22	1.50%	1.31%
Oncor Electric Delivery	7	68233DAR8	Deb	9/1/2022	A	3.93	3.80	3.61	4.44	3.02	3.02	3.01	2.91	3.31	3.14	3.13	3.08	3.37%	3.12%
Oncor Electric Delivery	7	68233DAT4	Sr Sec Nts	5/1/2032	A	4.85	4.88	4.58	4.44	4.07	4.05	3.95	3.83	4.22	4.05	3.98	3.80	4.23%	3.94%
Oncor Electric Delivery	7.25	68233DAP2	Sr Sec Nts	1/15/2033	A	4.83	4.86	4.58	4.51	4.12	4.12	3.97	3.76	4.14	4.01	3.87	3.83	4.22%	3.90%
PacifiCorp	4.95	695114BY3	1st	8/15/2014	A	0.40	0.47	0.63										0.50%	
PacifiCorp	7.7	695114BT4	1st	11/15/2031	A	4.65	4.58	4.30	4.24	4.12	4.03	3.98	3.78	4.07	3.88	3.73	3.80	4.10%	3.80%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	4.85	4.88	4.73	4.64	4.17	4.34	4.25	4.10	4.36	4.15	4.01	3.82	4.36%	3.99%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.50	4.53	4.38	4.29	4.15	4.07	4.08	3.90	4.19	4.02	3.88	3.80	4.15%	3.90%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.48	4.51	4.39	4.27	4.12	4.15	4.12	3.90	4.19	4.03	3.89	3.88	4.16%	3.93%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.43	4.46	4.33	4.46	4.32	4.12	4.07	3.93	4.24	4.04	3.99	3.84	4.19%	3.96%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	5.00	4.93	4.78	4.68	4.44	4.49	4.46	4.22	4.51	4.23	4.08	3.89	4.48%	4.07%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	5.00	4.93	4.78	4.58	4.37	4.39	4.37	4.15	4.42	4.23	4.09	3.90	4.43%	4.07%
Progress Energy, Inc.	5.15	144141CW6	1st	4/1/2015	A	0.56	0.49	0.39						2.62	0.42	0.47	0.72	0.81%	0.54%
Progress Energy, Inc.	5.25	144141CX4	1st	12/15/2015	A	0.59	0.56	0.69				0.62		0.02	0.77	0.59	0.62	0.56%	0.66%
Progress Energy, Inc.	8.62	144141BP2	1st	9/15/2021	A	3.78	3.78	3.76										3.77%	
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.62	4.65	4.50						4.41	4.18	4.34	4.10	4.40%	4.21%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.50	4.50	4.34				4.05		4.36	4.12	4.14	3.80	4.23%	4.02%
Public Serv, New Hamp.	5.25	744482BG4	1st 'L'	7/15/2014	A	1.24	1.21	1.39										1.28%	
Sierra Pacific Power	6.75	826418BE4	Gen & Refunding Mtg Nt S	7/1/2037	A	4.80	4.73	4.58	4.49	4.34	4.37	4.28	4.12	4.41	4.18	4.03	4.13	4.37%	4.11%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	4.75	4.78	4.63	4.54	4.39	4.42	4.33	4.17	4.46	4.23	4.08	3.89	4.39%	4.07%
South Carolina Electric & Gas	5.25	837004BY5	1st	11/1/2018	A	2.06	1.88	2.07	2.19	1.39	1.56	1.78	1.76	1.97	1.77	1.68	1.78	1.82%	1.74%
South Carolina Electric & Gas	6.62	837004BV1	1st	2/1/2032	A	4.35	4.38	4.38	4.31	3.98	4.00	3.98	3.66	4.12	3.93	3.79	3.60	4.04%	3.77%
South Carolina Electric & Gas	5.8	837004BW9	1st	1/15/2033	A	4.50	4.63	4.58	4.51	4.37	4.39	4.32	4.10	4.39	4.13	3.98	3.79	4.31%	3.97%
South Carolina Electric & Gas	5.3	837004BX7	1st	5/15/2033	A	4.35	4.38	4.33	4.24	4.10	4.12	4.10	3.88	4.17	4.13	3.99	3.80	4.13%	3.97%
South Carolina Electric & Gas	5.25	837004BZ2	1st	3/1/2035	A	4.70	4.73	4.58	4.49	4.35	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.35%	4.02%
Southern California Edison Co.	5	842400EY5	1st & Ref'05A	1/15/2016	A	0.71	0.61	0.63	1.24	1.33	1.55	0.02	0.02	0.02	0.59	0.55	0.69	0.66%	0.61%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	4.34	4.40	4.26	4.20	4.05	4.07	4.12	3.81	4.09	3.93	3.84	3.78	4.07%	3.85%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.40	4.40	4.33	4.24	4.00	4.07	4.05	3.88	4.19	4.06	3.92	3.84	4.12%	3.94%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.50	4.44	4.38	4.27	4.12	4.20	4.15	3.90	4.26	4.05	3.91	3.72	4.16%	3.89%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.44	4.51	4.38	4.29	4.15	4.17	4.15	3.90	4.29	4.02	3.88	3.83	4.17%	3.91%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.50	4.48	4.43	4.34	4.15	4.20	4.10	3.88	4.24	4.01	4.09	3.89	4.19%	4.00%
Southern Indiana Gas & El	8.88	843163AP1	1st	6/1/2016	A	1.96	1.93	2.04										1.98%	
Southern Indiana Gas & El	6.72	843163AX4	Sr Nts	8/1/2029	A	5.17	5.17	5.15										5.16%	
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	5.00	5.03	4.88	4.78	4.64	4.66	4.58	4.42	4.70	4.48	4.33	4.14	4.64%	4.32%
Wisconsin Public Service	7.125	976843AX0	1st	7/1/2023	A	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.07	7.07	7.07	7.07	7.08%	7.07%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.65	4.68	4.53	4.46	4.32	4.32	4.29	4.05	4.34	4.13	3.98	3.79	4.30%	3.97%
Arizona Public Service	5.8	040555CG7	Nts	6/30/2014	A-	0.77	0.74	0.57										0.69%	
Arizona Public Service	4.65	040555CE2	Nts	5/15/2015	A-	0.86	0.84	0.75	0.80	0.64	0.99	1.40	1.79	2.01	0.68	0.70	0.83	1.02%	0.74%
Arizona Public Service	6.25	040555CJ1	Nt	8/1/2016	A-	1.03	1.00	1.03	0.44	0.36	0.63	0.90	1.04	1.21	0.92	0.94	0.94	0.87%	0.93%
Arizona Public Service	5.625	040555CF9	Nts	5/15/2033	A-	5.05	5.08	4.93	4.86	4.71	4.73	4.71	4.46	4.75	4.48	4.33	4.14	4.69%	4.32%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.55	4.58	4.43	4.34	4.20	4.22	4.20	3.98	4.31	4.08	3.94	3.75	4.22%	3.92%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	4.84	4.87	4.72	4.61	4.46	4.51	4.49	4.32	4.58	4.33	4.19	4.00	4.49%	4.17%
Avista Corp.	5.45	05379BAH0	1st Mtg Bd	12/1/2019	A-	3.31	3.28	3.47	3.54	2.94	2.66	2.83	2.73	2.92	2.85	2.76	2.86	3.01%	2.82%
Avista Corp.	5.45	05379BAH0	1st	12/1/2019	A-	3.31	3.28	3.47	3.54	2.94	2.66	2.83	2.73	2.92	2.85	2.76	2.86	3.01%	2.82%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	5.00	5.03	4.88	4.81	4.56	4.56	4.54	4.29	4.58	4.38	4.23	4.04	4.58%	4.22%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	5.00	5.03	4.88	4.78	4.54	4.56	4.48	4.32	4.61	4.38	4.23	4.04	4.57%	4.22%
CenterPoint Energy Houston	5.6	15189XAH1	Gen Mtge'L2'	7/1/2023	A-	3.98	3.98	3.96	3.85	3.68	3.76	3.81	3.61	3.85	3.59	3.47	3.42	3.75%	3.49%
CenterPoint Energy Houston	6.95	15189XAD0	Gen Mtge'K2'	3/15/2033	A-	4.39	4.42	4.33	4.20	4.05	4.15	4.12	3.83	4.19	3.93	3.79	3.90	4.11%	3.87%
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	5.05	5.01	4.93	4.78	4.54	4.56	4.54	4.59	4.87	4.69	4.54	4.35	4.70%	4.53%
Commonwealth Edison	4.7	202795HH6	1st Ser 101	4/15/2015	A-	0.73	0.70	0.86	0.64	0.99	1.23	1.67	1.99	2.06	0.58	0.61	0.71	1.06%	0.63%
Commonwealth Edison	5.95	202795HN3	1st Ser 104	8/15/2016	A-	1.14	1.06	1.10	0.35	0.44	0.71	0.85	1.04	1.21	0.95	0.95	1.04	0.90%	0.98%
Commonwealth Edison	5.875	202795HG8	1st Ser 100	2/1/2033	A-	4.50	4.53	4.38	4.56	4.42	4.44	4.42	4.12	4.17	3.98	3.84	3.90	4.27%	3.91%
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.50	4.53	4.35	4.26	4.10	4.17	4.12	3.95	4.26	4.06	3.92	3.80	4.17%	3.93%
Connecticut Lt & Pwr	5.38	207597DW2	1st & Ref'07A	3/1/2017	A-	2.01	1.97	1.92	2.02	2.05	1.95	1.93	1.95	0.63	1.35	1.26	1.43	1.71%	1.35%
Connecticut Lt & Pwr	7.875	207597CZ6	1st & Ref D	10/1/2024	A-	4.58	4.58	4.56	4.27	4.10	4.17	4.24	4.05	4.31	4.09	3.96	3.92	4.24%	3.99%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	4.55	4.58	4.43	4.34	4.20	4.17	4.15	3.93	4.22	4.13	3.99	3.80	4.21%	3.97%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	4.80	4.83	4.68	4.49	4.34	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.37%	4.02%
Consolidated Edison, Inc.	5.38	209111EK5	Deb'05C	12/15/2015	A-	0.79	0.76	0.82	1.63	1.58	1.83	0.73	0.02	0.02	0.59	0.60	0.74	0.84%	0.64%
Consolidated Edison, Inc.	5.5	209111EN9	Deb'06C	9/15/2016	A-	1.07	0.96	1.08	0.27	0.23	0.49	0.73	0.83	1.02	0.92	0.98	1.03	0.80%	0.98%
Consolidated Edison, Inc.	5.3	209111EP4	Deb'06D	12/1/2016	A-	1.10	1.07	1.19	1.71	1.54	0.10	0.39	0.44	0.60	0.95	0.91	1.01	0.92%	0.96%
Consolidated Edison, Inc.	5.88	209111EB5	Deb '03A	4/1/2033	A-	4.75	4.76	4.61	4.53	4.39	4.42	4.42	4.29	4.47	4.19	4.04	3.86	4.39%	4.03%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.60	4.63	4.48	4.37	4.22	4.27	4.54	4.27	4.56	4.31	4.16	3.98	4.37%	4.15%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.43	4.46	4.32	4.32	4.17	4.20	4.20	4.10	4.34	4.14	4.00	3.81	4.21%	3.98%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.75	4.78	4.78	4.68	4.54	4.59	4.69	4.10	4.63	4.17	4.06	4.29	4.51%	4.17%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.48	4.53	4.43	4.34	4.17	4.22	4.22	4.22	4.45	4.23	4.09	3.90	4.27%	4.07%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	4.57	4.60	4.41	4.32	4.17	4.22	4.22	4.12	4.46	4.25	4.11	3.94	4.28%	4.10%
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.48	4.53	4.43	4.37	4.22	4.20	4.51	4.29	4.31	4.11	4.29	4.10	4.32%	4.17%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.48	4.53	4.41	4.32	4.17	4.24	4.24	4.22	4.51	4.24	4.29	4.10	4.31%	4.21%
Consumers Energy Co.	5.5	210518CE4	1st 'P'	8/15/2016	A-	0.94	0.91	0.95	0.32	0.39	0.56		0.88	1.02	0.82	0.93	0.94	0.79%	0.90%
Consumers Energy Co.	5.65	210518CL8	1st	4/15/2020	A-	2.70	2.67	2.77	2.59	2.46	5.65	2.66	2.54	2.73	2.46	2.49	2.60	2.86%	2.52%
Entergy Arkansas	5.66	29364DAL4	1st	2/1/2025	A-	5.26	5.28	5.33	5.29	5.32	5.37	5.39	5.44	5.46	5.54	5.57	5.62	5.41%	5.58%
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	6.36	6.37	6.37	6.37	6.37%	6.37%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
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-	5.01	5.02	4.92	4.95	4.96	4.95	4.95	4.95					4.96%	
Entergy Mississippi	6.25	29364NAL2	1st	4/1/2034	A-	5.96	5.97	5.97	5.98	5.98	5.98	5.97	5.99	5.99	5.99	5.99	5.99	5.98%	5.99%
Entergy New Orleans	5.6	29364PAK9	1st	9/1/2024	A-	5.59	5.59	5.59				5.59		5.66	5.59	5.59	5.59	5.60%	5.59%
Entergy New Orleans	5.65	29364PAJ2	1st	9/10/2029	A-	5.64	5.64	5.64				5.64		5.63	5.64	5.64	5.64	5.64%	5.64%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	4.90	4.93	4.78						4.56	4.28	4.13	3.94	4.50%	4.12%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.50	4.52	4.29			4.68			4.14	3.93	3.93	3.74	4.22%	3.87%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.65	4.68	4.53				4.23		4.36	4.13	3.98	3.79	4.29%	3.97%
Idaho Pwr	6	45138LAL7	Sec M-T Nts'D'	11/15/2032	A-	4.70	4.73	4.56	4.42	4.27	4.24	4.22	4.00	4.29	4.07	3.92	3.73	4.26%	3.91%
Idaho Pwr	5.5	45138LAN3	Sec M-T Nts 'E'	4/1/2033	A-	4.75	4.78	4.61	4.44	4.29	4.34	4.32	4.07	4.36	4.12	3.97	3.78	4.32%	3.96%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	4.80	4.83	4.66	4.49	4.34	4.39	4.37	4.12	4.41	4.17	4.02	3.83	4.37%	4.01%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	4.80	4.83	4.66	4.49	4.34	4.37	4.37	4.12	4.39	4.17	4.02	3.83	4.37%	4.01%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	8/15/2035	A-	4.80	4.83	4.66	4.49	4.34	4.37	4.34	4.12	4.39	4.17	4.02	3.83	4.36%	4.01%
Idaho Pwr Co 1st Mtg Secd MT	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	4.80	4.83	4.66						4.41	4.17	4.02	3.83	4.39%	4.01%
Interstate Pwr & Lt	5.5	461070AE4	Sr Deb	7/15/2025	A-	4.58	4.58	4.56	4.42	4.24	3.76	3.71	3.59	3.85	3.59	3.47	3.42	3.98%	3.49%
Interstate Pwr & Lt	6.45	461070AC8	Sr Deb	10/15/2033	A-	4.80	4.83	4.68	4.61	4.42	4.45	4.44	4.20	4.48	4.28	4.13	3.94	4.44%	4.12%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	4.80	4.83	4.68	4.59	4.44	4.49	4.46	4.22	4.51	4.28	4.13	3.94	4.45%	4.12%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	4.95	4.98	4.83						4.65	4.43	4.29	4.44	4.65%	4.39%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.05	5.08	4.93	4.88	4.73	4.66	4.66	4.42	4.70	4.48	4.33	4.61	4.71%	4.47%
KeySpan Corp.	5.88	49337WAH3	Nts	4/1/2033	A-	5.15	5.18	5.03	4.95	4.81	4.83	4.71	4.49	4.75	4.63	4.49	4.40	4.79%	4.51%
Oklahoma Gas & Elec Co	5.15	678858BG5	Sr Nts	1/15/2016	A-	1.12	1.09	1.22	1.76	1.85	2.06	0.02	0.02	0.08	1.20	1.16	1.26	1.07%	1.21%
Oklahoma Gas & Elec Co	6.5	678858BB6	Fixed Rt Sr Nt	7/15/2017	A-	2.36	2.32	2.55	2.23	2.24	2.39	2.60	2.61	2.79	2.49	2.40	2.57	2.46%	2.49%
Oklahoma Gas & Elec Co	6.65	678858AZ4	Sr Nts	7/15/2027	A-	4.78	4.78	4.76	4.66	4.49	4.49	4.54	4.34	4.58	4.37	4.25	4.20	4.52%	4.27%
Oklahoma Gas & Elec Co	6.5	678858BC4	Sr Nt	4/15/2028	A-	4.98	4.98	4.96	4.71	4.71	4.72	4.76	4.56	4.80	4.29	4.17	4.12	4.65%	4.19%
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	4.90	4.93	4.78	4.71	4.56	4.54	4.49	4.24	4.53	4.33	4.18	3.99	4.52%	4.17%
Penna P&L	7.375	709051CD6	1st	3/1/2014	A-	0.22												0.22%	
Portland Gen Elec Co MTN-bo	9.31	73651HAV3	1st Mortgage MTN	8/11/2021	A-	3.73	3.73	3.69	3.44	3.29	6.37	3.49	3.34	3.61	3.37	3.26	3.30	3.72%	3.31%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	5.30	4.98	4.83	4.76	4.55	4.59	4.55	4.32	4.61	4.38	4.23	4.04	4.60%	4.22%
Public Service Electric and Gas	5	74456QAN6	Sec M-T Nts'D'	8/15/2014	A-	0.44	0.26	0.43										0.38%	
Public Service Electric and Gas	6.75	744567EP9	1st & Ref VV	1/1/2016	A-	0.79	0.76	0.90	1.80	1.96	2.05	0.02	0.02	0.02	0.61	0.58	0.66	0.85%	0.62%
Public Service Electric and Gas	9.25	744567CN6	1st & Ref CC	6/1/2021	A-	3.93	3.93	3.91	3.78	2.90	3.02	3.12	2.95	3.24	2.83	2.71	3.69	3.33%	3.08%
Public Service Electric and Gas	8	744567BA5	1st & Ref	6/1/2037	A-	5.60	5.63	5.48	5.39	5.20	5.22	5.20	4.96	5.24	5.03	4.88	4.69	5.21%	4.87%
Public Service Electric and Gas	5	744567BB3	1st & Ref	7/1/2037	A-	5.30	4.98	4.83	4.76	4.55	4.59	4.55	4.32	4.61	4.38	4.23	4.04	4.60%	4.22%
Public Svc Co New Hampshire	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	5.00	5.03	4.88	4.59	4.44	4.46	4.44	4.22	4.48	4.28	4.13	3.94	4.49%	4.12%
Public Svc Elec Gas Co Secd M	7.04	74456QAG1	MTN Tranche # Tr 00007	11/6/2020	A-	3.81	3.78	3.97						3.95	3.85	3.75	3.86	3.85%	3.82%
Public Svc Elec Gas Co Secd M	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.40	4.43	4.28	4.20	4.05	4.07	4.05	3.83	4.09	3.88	3.73	3.54	4.05%	3.72%
Public Svc Elec Gas Co Secd M	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.40	4.45	4.30	4.22	4.07	4.07	3.99	3.81	4.09	3.89	3.93	3.74	4.08%	3.85%
Public Svc Elec Gas Co Secd M	5.8	74456QAR7	Secured Mtn Series E Not	5/1/2037	A-	4.45	4.48	4.33	4.24	4.10	4.15	4.05	3.95	4.24	4.00	3.86	3.83	4.14%	3.90%
Puget Sound Energy	5.2	745332BV7	Sr(Sec)Nts	10/1/2015	A-	0.85	0.82	0.95	0.02	0.02	4.12	0.67	0.30	0.57	0.65	0.62	0.70	0.86%	0.66%
Puget Sound Energy	6.74	74531EAB8	Sr M-T Nts 'A'	6/15/2018	A-	2.46	2.02	2.20	2.02	1.93	2.12	2.13	2.29	2.47	2.05	1.97	2.07	2.14%	2.03%
Puget Sound Energy	7	74531EAC6	Sr M-T Nts 'B'	3/9/2029	A-	4.73	4.73	4.69	4.64	4.44	4.51	4.44	4.34	4.61	4.35	4.23	4.18	4.49%	4.25%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.45	4.53	4.38	4.29	4.15	4.17	4.08	3.93	4.22	4.07	3.98	3.83	4.17%	3.96%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	4.65	4.68	4.43	4.29	4.15	0.02	4.11	3.95	4.24	4.01	3.86	3.67	3.84%	3.85%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	4.60	4.63	4.38	4.24	4.10	4.12	4.03	4.00	4.29	4.07	3.93	3.90	4.19%	3.97%
Puget Sound Pwr & Lt	7.02	74531EAA0	Sr M-T Nts'A'	12/1/2027	A-	4.18	4.18	4.15	4.09	3.81	3.72	3.76	3.67	4.00	3.83	3.71	3.66	3.90%	3.73%
Southwestern Public Serv	5.6	845743BK8	Sr Nts'E'	10/1/2016	A-	1.77	1.74	1.86	1.13	1.19	1.41	1.62	0.56	0.86	0.88	0.84	0.93	1.23%	0.88%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	4.90	4.80	4.63	4.49	4.27	4.37	4.32	4.20	4.51	4.34	4.20	3.98	4.42%	4.17%
Virginia Electric & Power Co.	5.25	927804EW0	Sr Nts 'C'	12/15/2015	A-	1.09	1.06	0.99	1.74	1.85	2.07	0.02	0.02	0.08	0.74	0.71	0.98	0.95%	0.81%
Virginia Electric & Power Co.	5.4	927804EZ3	Sr Nts'A'	1/15/2016	A-	0.64	0.61	0.74	1.39	1.50	1.66	0.02	0.02	0.02	0.60	0.75	0.75	0.73%	0.70%
Virginia Electric & Power Co.	5.95	927804FC3	Sr Nt 2007 Ser B	9/15/2017	A-	1.43	1.39	1.60	0.85	0.86	0.93	1.16	1.22	1.43	1.33	1.32	1.58	1.26%	1.41%
Virginia Electric & Power Co.	5.4	927804FF6	Sr Nt 2008 Ser A	4/30/2018	A-	1.94	1.83	1.94						2.17	1.71	1.62	1.75	1.85%	1.69%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.50	4.60	4.36	4.29	4.17	4.20	4.15	3.95	4.19	4.08	3.94	3.88	4.19%	3.97%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.50	4.60	4.42	4.29	4.15	4.17	4.20	4.05	4.34	4.11	3.98	3.87	4.22%	3.99%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	4.63	4.61	4.45	4.37	4.20	4.16	4.12	3.98	4.26	4.12	3.98	3.79	4.22%	3.96%
Washington Water Power	7.39	94068VAF0	Secd Med-term Nt	5/11/2018	A-	3.56	3.53	3.72	3.63	3.29	3.46	3.40	3.61	3.78	3.33	3.24	3.34	3.49%	3.30%
Washington Water Power	7.53	94068VAA1	Secd MTN	5/5/2023	A-	4.63	4.63	4.61										4.62%	
Westar Energy, Inc.	6	95709TAA8	1st Mtg Bd	7/1/2014	A-	0.36	0.33	0.62										0.44%	
Westar Energy, Inc.	5.15	95709TAB6	1st Mtg Bd	1/1/2017	A-	2.32	2.29	2.50	2.72	2.71	2.83	2.00	2.00	2.20	2.45	2.36	2.53	2.41%	2.45%
Westar Energy, Inc.	5.1	95709TAD2	Fixed Rt 1st Mtg Bd	7/15/2020	A-	2.93	2.73	2.92	2.66	2.44	2.56	2.67	2.49	2.65	2.51	2.50	2.55	2.63%	2.52%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.84	5.80	5.82	5.83	5.86	5.86	5.88	5.95	6.00	5.99	5.97	5.95	5.90%	5.97%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.76	5.68	5.70	5.71	5.71	5.73	5.74	6.08	6.07	5.73	5.74	5.76	5.78%	5.74%
Wisconsin Electric Power	6.5	976656BP2	Deb	6/1/2028	A-	4.23	4.23	4.16	4.07	3.90	3.95	4.00	3.81	4.04	3.82	3.70	3.65	3.96%	3.72%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	4.50	4.53	4.32	4.24	4.10	3.95	4.07	3.83	4.12	3.92	3.77	3.58	4.08%	3.76%
Wisconsin Electric Power Com	6.875	976656BL1	Deb	12/1/2095	A-	5.58	5.53	5.23	5.15	5.15	5.07	5.05	4.83	5.09	4.97	4.83	4.66	5.10%	4.82%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
AmerenEnergy Generating	5.4	02360FAC0	Sr Sec Nts	2/1/2016	BBB+	1.30	1.27	1.03	1.50	1.61	1.84	2.07	0.02	0.02	0.96	0.92	1.02	1.13%	0.97%
AmerenEnergy Generating	5.1	02360FAA4	Sr Sec Nts	10/1/2019	BBB+	2.61	2.58	2.67	2.44	2.29	2.44	2.29	2.18	2.38	2.23	2.14	2.25	2.38%	2.21%
AmerenEnergy Generating	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.45	4.48	4.33	4.27	4.12	4.15	4.12	4.12	4.41	4.18	4.04	3.88	4.21%	4.03%
CenterPoint Energy, Inc.	6.85	15189TAG2	Sr Nts'B'	6/1/2015	BBB+	0.85	0.66	0.74	0.35	0.78	1.25	1.82	2.23	2.54	0.79	0.72	0.90	1.14%	0.80%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nt	2/1/2017	BBB+	1.83	1.54	1.71	1.67	1.74	1.90	2.12	0.46	0.70	1.34	1.29	1.54	1.49%	1.39%
CenterPoint Energy, Inc.	5.95	15189TAN7	Sr Nts	2/1/2017	BBB+	1.83	1.54	1.71	1.67	1.74	1.90	2.12	0.46	0.70	1.34	1.29	1.54	1.49%	1.39%
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+	6.05	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.05	6.05	6.04	6.08%	6.05%
Cincinnati Gas & Electric Co.	6.9	172070BT0	Deb	6/1/2025	BBB+	4.38	4.38	4.36	4.07	3.90	3.98	3.94	3.73	4.00	3.71	3.59	3.54	3.97%	3.61%
Cleco Power LLC	4.95	185508AD0	Nts	7/15/2015	BBB+	1.59	1.56	1.69	1.05	1.21	1.55	1.88	2.06	2.28	1.67	1.63	1.72	1.66%	1.67%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	5.05	5.08	4.93	4.86	4.71	4.00	4.59	4.44	4.73	4.66	4.52	4.34	4.66%	4.51%
Consumers Energy Co.	5.15	210518CG9	1st	2/15/2017	BBB+	1.33	1.29	1.32	1.51	1.54	1.68	1.86	1.78	0.48	1.24	1.15	1.33	1.38%	1.24%
Consumers Energy Co.	6.875	210518AT3	Sr Nts 'B'	3/1/2018	BBB+	2.18	2.14	2.17	2.37	1.54	2.46	2.68	1.44	1.65	1.99	1.90	2.01	2.04%	1.97%
Consumers Energy Co.	5.65	210518CQ7	1st	9/15/2018	BBB+	1.96	1.93	2.15	1.72	1.60	1.77	1.90	1.83	2.04	1.74	1.63	1.77	1.84%	1.71%
Consumers Energy Co.	6.12	210518CR5	1st	3/15/2019	BBB+	2.21	2.19	2.32	2.22	2.12	2.24	2.45	2.39	2.56	1.75	2.01	2.13	2.22%	1.96%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	4.75	4.78	4.63	4.54	4.39	4.42	5.65	4.17	4.44	4.23	4.08	3.89	4.50%	4.07%
Delmarva Pwr & Light	5	247109BH3	Nt	11/15/2014	BBB+	0.78	0.74	0.84	2.71	3.06								1.63%	
Delmarva Pwr & Light	5	247109BJ9	Fixed Rt Nt	6/1/2015	BBB+	1.03	1.00	1.14	0.84	1.15	1.46	1.85	2.13	2.35	1.25	0.48	0.59	1.27%	0.77%
Dominion Resources	7.82	257469AC0	Remkt Nts 'E'	9/15/2014	BBB+	0.69	0.66	0.84										0.73%	
Dominion Resources	6.75	257469AG1	Sr Nts 'E'	12/15/2032	BBB+	5.10	5.13	4.98	4.90	4.76	4.71	4.61	4.39	4.68	4.43	4.28	4.09	4.67%	4.27%
Dominion Resources, Inc. (Va.)	5.15	25746UAW9	Sr Nts '05C	7/15/2015	BBB+	0.79	0.78	0.77	0.02	0.08	0.45	0.84	1.18	1.42	0.74	0.56	0.08	0.64%	0.46%
Dominion Resources, Inc. (Va.)	5.6	25746UBB4	SrNts'06A	11/15/2016	BBB+	1.38	1.33	1.45	2.02	1.83	0.27	0.51	0.61	0.77	1.04	1.07	1.09	1.11%	1.07%
Dominion Resources, Inc. (Va.)	6	25746UBC2	Sr Nts '07A	11/30/2017	BBB+	1.98	1.93	2.03	2.12	2.05	1.07	1.17	1.17	1.36	1.78	1.63		1.66%	1.71%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Fixed Rt Sr Nt 2005 Ser B	6/15/2035	BBB+	4.87	4.91	4.70	4.59	4.46	4.39	4.44	4.27	4.56	4.32	4.18	4.00	4.47%	4.17%
Duke Energy Corp.	6	264399DK9	Sr Nts 'A'	12/1/2028	BBB+	4.23	4.23	4.11	4.07	3.89	3.85	3.90	3.70	3.83	3.75	3.78	3.66	3.92%	3.73%
Duke Energy Corp.	6.45	264399ED4	Sr Nts	10/15/2032	BBB+	4.60	4.58	4.43	4.37	4.17	4.15	4.17	3.95	4.26	4.05	3.91	3.72	4.20%	3.89%
Empire District Electric Co. (Th	7.2	291641AS7	1st	12/1/2016	BBB+	1.59	1.56	1.68	2.37	2.43	0.63	1.70	1.04	1.23	1.67	1.63	1.73	1.61%	1.68%
Enersis S.A.	7.4	29274FAB0	Nt	12/1/2016	BBB+	2.27	2.14	2.35						1.21	1.79	1.96	2.31	2.00%	2.02%
Exelon Corp.	5.62	30161NAC5	Fixed Rt Sr Nt	6/15/2035	BBB+	5.33	5.28	5.03	4.76	4.71	4.68	4.71	4.46	4.75	4.63	4.49	4.37	4.77%	4.50%
Florida Pwr	6.75	34110QAL2	Nts	2/1/2028	BBB+	4.88	4.88	4.86	4.81	4.64	4.68	4.73	4.42	4.68	4.52	4.40	4.35	4.65%	4.42%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	4.78	4.77	4.66	4.51	4.37	4.39	4.39	4.20	4.56	4.33	4.34	4.28	4.47%	4.32%
MidAmerican Funding	6.93	59562HAJ7	Sr Sec Bonds	3/1/2029	BBB+	4.65	4.68	4.62	4.29	4.10	4.15	4.14	4.05	4.15	4.07	3.93	3.91	4.23%	3.97%
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	1.32	1.14	1.22	0.20	0.71	0.85	1.07	1.22	1.37	1.63	1.00	1.26	1.08%	1.30%
National Grid plc	6.3	636274AC6	Nt	8/1/2016	BBB+	1.32	1.14	1.22	0.20	0.71	0.85	1.07	1.22	1.37	1.63	1.00	1.26	1.08%	1.30%
Potomac Edison Co.	5.35	737662BP0	1st	11/15/2014	BBB+	0.84	0.80	0.52										0.72%	
Potomac Edison Co.	5.12	737662BR6	1st	8/15/2015	BBB+	1.34	1.31	1.44										1.36%	
PSEG Power LLC	5.5	69362BAN2	Sr Nts	12/1/2015	BBB+	1.04	1.01	0.99	1.88	1.82	0.02	0.02	0.02	0.02	0.92	0.89	0.94	0.80%	0.92%
PSEG Power LLC	8.62	69362BAJ1	Sr Nts	4/15/2031	BBB+	5.03	5.13	4.95	4.83	4.76	4.78	4.81	4.64	4.92	4.71	4.62	4.50	4.81%	4.61%
PSI Energy	6.05	693627AZ4	Deb	6/15/2016	BBB+	1.37	0.94	1.06	0.68	0.79	1.07	1.32	1.46	1.63	0.96	0.92	1.02	1.10%	0.97%
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	4.77	4.80	4.61	4.54	4.37	4.42	4.39	4.15	4.61	4.38	4.24	4.05	4.44%	4.22%
Public Svc No Car	6.99	744516AA3	Sr Deb	1/15/2026	BBB+	4.78	4.78	4.76	4.72	4.54	4.61	4.37	4.15	4.41	4.24	4.12	4.07	4.46%	4.14%
Public Svc No Car	7.45	744516AB1	Sr Deb	12/15/2026	BBB+	4.90	4.90	4.88	4.86	4.67	4.73	4.46	4.27	4.53	4.37	4.25	4.20	4.59%	4.27%
Southern California Edison Co.	6.65	842400EB5	Nts	4/1/2029	BBB+	4.48	4.53	4.51	4.20	4.66	4.07	4.00	3.93	4.17	3.92	3.78	3.84	4.17%	3.85%
Southern Power Co	4.88	843646AF7	Sr Nt	7/15/2015	BBB+	0.85	0.82	0.86	0.08	0.28	0.30	0.47	1.04	1.23	0.63	0.64	0.81	0.67%	0.69%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	5.94	5.95	5.98	6.00	6.00	6.01	6.03	6.03	6.05	6.06	6.06	6.09	6.02%	6.07%
Tampa Electric Co.	6.1	875127AX0	Fixed Rt	5/15/2018	BBB+	2.01	1.98	2.17	2.10	1.99	1.96	2.17	2.12	2.30	1.82	1.74	1.84	2.02%	1.80%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	4.70	4.73	4.58	4.49	4.34	4.37	4.24	4.03	4.31	4.08	3.93	3.85	4.30%	3.95%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	4.60	4.61	4.46	4.37	4.22	4.24	4.18	4.12	4.34	4.13	4.06	3.87	4.27%	4.02%
Union Electric	5.5	906548CC4	Sr Sec Nts	5/15/2014	BBB+	0.45	0.42	0.90										0.59%	
Union Electric	4.75	906548BZ4	Sr Sec Nts	4/1/2015	BBB+	0.51	0.48	0.54	1.06	1.39	1.72	2.11	2.19	2.42	0.49	0.53	0.67	1.18%	0.56%
Union Electric	6.4	906548CE0	Sr Sec Nts	6/15/2017	BBB+	1.55	1.51	1.74	1.50	1.54	1.69	1.93	1.95	2.14	1.67	1.59	1.68	1.71%	1.65%
Union Electric	6	906548CF7	Sr Sec Nts	4/1/2018	BBB+	2.56	2.53	2.72	2.73	2.63	2.78	2.65	2.78	2.98	2.47	2.38	2.49	2.64%	2.45%
Union Electric	6.7	906548CG5	Sr Sec Nts	2/1/2019	BBB+	2.22	2.19	2.34	2.39	2.28	2.44	2.59	1.66	1.82	2.01	2.15	2.26	2.20%	2.14%
Union Electric	5	906548CD2	Sr Sec Nts	2/1/2020	BBB+	3.52	3.49	3.67	3.59	3.43	3.54	3.68	3.32	3.53	3.45	2.45	2.56	3.35%	2.82%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	4.85	4.88	4.73	4.66	4.51	4.54	4.51	4.28	4.56	4.28	4.13	3.94	4.49%	4.12%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	4.65	4.68	4.53	4.39	4.27	4.32	4.27	4.16	4.44	4.22	4.21	4.02	4.35%	4.15%
Appalachian Power	4.95	037735CB1	Sr Nts'I'	2/1/2015	BBB	0.96	0.74	0.92	1.55	1.82	1.82	1.82	1.82					1.43%	
Appalachian Power	5	037735CD7	Sr Nts'K'	6/1/2017	BBB	2.05	2.01	2.01	1.88	1.41	1.55	1.74	1.79	1.91	1.50	1.41	1.86	1.76%	1.59%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	5.07	4.88	4.73	4.64	4.49	4.32	4.29	4.20	4.48	4.42	4.28	4.15	4.50%	4.28%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	5.10	5.08	4.78	4.68	4.56	4.46	4.44	4.22	4.48	4.47	4.38	4.28	4.58%	4.38%
Appalachian Power Co.	5.95	037735BZ9	Sr Nts'H'	5/15/2033	BBB	5.30	5.33	4.85	4.76	4.81	4.65	4.62	4.39	4.68	4.40	4.25	4.06	4.68%	4.24%
Cleveland Electric Illuminating	7.88	186108BU9	Sec Nts 'D'	11/1/2017	BBB	2.23	2.09	2.12	2.56	0.90	4.71	1.36	1.36	1.58	1.80	1.69	1.98	2.03%	1.82%
Commonwealth Edison	6.95	202795GX2	Nts	7/15/2018	BBB	2.51	2.48	2.67	2.43	1.95	2.15	2.37	2.29	2.56	2.34	2.25	2.35	2.36%	2.31%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	Enhanced Jr Sub Nt 2006	6/30/2066	BBB	6.87	6.89	6.86	6.91	6.91	6.91	6.83	6.91	6.95	6.99	7.08	7.09	6.93%	7.05%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	Jr Sub Nt 2006 Ser B Enh	9/30/2066	BBB	2.79	2.82	2.82	2.85	2.85		2.81	2.80	2.80	2.75	2.75	2.77	2.80%	2.76%
DTE Energy Co.	6.35	233331AM9	Sr Nt 2006 Ser B	6/1/2016	BBB	1.30	1.27	1.12	0.83	0.95		1.35	1.55	1.73	1.13	0.82	1.10	1.20%	1.02%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	5.40	5.20	5.03	5.00	4.76	4.66	4.64	4.42	4.70	4.47	4.34	4.15	4.73%	4.32%
Empire District Elec	6.7	29164RAA9	Sr Nts	11/15/2033	BBB	5.30	5.33	5.18	5.05	4.93	4.90	4.90	4.68	4.97	4.71	4.56	4.38	4.91%	4.55%
Empire District Electric Co. (Th	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.28	5.33	5.18	5.10	4.96	4.98	4.96	4.76	5.02	4.89	4.75	4.56	4.98%	4.73%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	5.65	5.63	5.47				4.93		5.17	4.92	4.90	4.71	5.17%	4.84%
Energy East Corp.	6.75	29266MAE9	Nts	9/15/2033	BBB	5.90	5.93	5.78	5.69	4.93	5.51	5.28	8.22	5.39	5.13	4.98	4.79	5.63%	4.97%
Enersis S.A.	6.6	29274FAC8	Nt	12/1/2026	BBB									6.08	6.08	5.99	5.99	6.04%	6.02%
Indiana Mich Pwr	5.65	454889AL0	Sr Nts'G'	12/1/2015	BBB	1.84	1.81	1.93	2.66	2.74	0.45	0.84	1.04	1.27	1.92	1.89	1.98	1.70%	1.93%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	5.05	5.13	4.88	4.68	4.54	4.56	4.54	4.32	4.58	4.49	4.42	4.24	4.62%	4.38%
Kansas City Power & Light	5.85	485134BJ8	Sr Nt	6/15/2017	BBB	2.23	2.19	2.41	2.22	1.41	1.57	1.78	1.80	1.98	1.55	1.47	1.64	1.85%	1.55%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	4.92	4.95	4.80	4.73	4.59	4.59	4.49	4.27	4.56	4.34	4.19	4.00	4.54%	4.18%
Kentucky Power	5.62	491386AL2	Sr Nts'D'	12/1/2032	BBB	5.55	5.58	5.43	5.34	4.78	4.78	4.76	4.54	4.83	4.56	4.41	4.22	4.90%	4.40%
Ohio Power Co.	6	677415CL3	Sr Nts'K'	6/1/2016	BBB	0.98	0.95	1.03	2.82	0.80	1.07	1.33	1.46	1.64	0.95	1.05	1.17	1.27%	1.06%
Ohio Power Co.	6.6	677415CF6	Sr Nts 'G'	2/15/2033	BBB	4.80	4.77	4.68	4.44	4.29	4.34	4.32	4.15	4.44	4.24	4.10	4.01	4.38%	4.12%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	4.70	4.70	4.68	4.71	4.54	4.27	4.54	4.42	4.39	4.21	4.13	4.00	4.44%	4.11%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	4.75	4.73	4.68	5.10	4.88	4.37	4.86	4.76	4.51	4.31	4.39	4.23	4.63%	4.31%
Pepco Holdings, Inc.	6.12	713291AP7	Nts	6/1/2017	BBB	3.46	3.43	3.64	3.51	3.49	3.61	3.62	3.76	3.90	3.59	3.50	3.67	3.60%	3.59%
PPL Energy Supply	6.2	69352JAH0	Sr Nts	5/15/2016	BBB	1.54	1.48	1.28	1.10	2.12	2.34	2.68	2.95	2.90	3.05	3.14	3.24	2.32%	3.14%
PPL Energy Supply	6.5	69352JAL1	Sr Nts	5/1/2018	BBB	3.36	3.23	3.24	3.17	3.22	3.37	4.34	4.05	4.14	4.06	3.97	4.87	3.75%	4.30%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	5.27	5.25	5.20	5.22	5.22	5.29	5.34	5.37	5.39	5.49	5.49	5.51	5.34%	5.50%
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	6.20	6.45	6.25	6.10	6.25	6.10	6.15	6.27	6.39	6.11	6.47	7.08	6.32%	6.55%
Progress Energy, Inc.	5.62	743263AL9	Sr Nts	1/15/2016	BBB	1.16	0.91	1.04										1.04%	
Progress Energy, Inc.	7.75	743263AE5	Sr Nts	3/1/2031	BBB	4.80	4.90	4.58										4.76%	
Progress Energy, Inc.	7	743263AG0	Sr Nts	10/30/2031	BBB	4.80	4.88	4.58										4.75%	
Public Serv, New Mexico	7.5	744499AN4	Sr Unsec Nts 'B'	8/1/2018	BBB	3.41	3.38	3.57	3.29	3.20	3.00	2.99	2.83	3.12	2.83	2.75	2.85	3.10%	2.81%
Public Service Co. of Oklahom	6.15	744533BH2	Sr Nts'F'	8/1/2016	BBB	1.97	1.94	1.56	1.02	0.82	1.08	1.22	1.33	1.51	1.15	1.11	1.46	1.35%	1.24%
Public Service Co. of Oklahom	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	5.15	5.03	4.88	4.76	4.51	4.51	4.49	4.27	4.56	4.48	4.43	4.24	4.61%	4.38%
Southwest'n Elec Power	5.38	845437BE1	Sr Nts	4/15/2015	BBB	1.18	1.15	1.21	1.36	1.69	2.04	1.20	2.77	2.98	0.83	0.88	1.02	1.53%	0.91%
Southwest'n Elec Power	4.9	845437BG6	Sr Nt Ser D	7/1/2015	BBB	1.29	1.26	1.39	0.72	0.91	1.28	1.29	1.85	2.08	1.27	1.24	1.33	1.33%	1.28%
Southwest'n Elec Power	5.55	845437BH4	Sr Nt Ser E	1/15/2017	BBB	2.04	1.69	1.92	2.10	1.74	1.90	0.55	0.50	0.75	1.45	1.43	1.57	1.47%	1.48%
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	6.09	6.10	6.05	6.03	6.03	6.05	6.06	6.00	6.02	6.12	6.11	6.21	6.07%	6.15%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	6.05	6.10	6.04	6.08	6.05	5.93	5.99	5.95	5.97	6.10	6.01	6.09	6.03%	6.07%
Cleveland Elec. Illum	5.7	186108CF1	Sr Nts	4/1/2017	BBB-	2.96	2.93	3.14	2.24	4.93	2.51	2.61	2.62	2.78	1.97	1.94	2.12	2.73%	2.01%
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.51	5.48	5.30	5.07	4.00	4.95	4.90	4.61	4.90	4.84	4.76	4.74	4.92%	4.78%
CMS Energy Corp.	6.88	125896AZ3	Sr Nts	12/15/2015	BBB-	1.09	1.21	0.94	1.78	1.78	1.78	1.78	1.78	1.77	1.78	1.78	1.78	1.60%	1.78%
CMS Energy Corp.	6.55	125896BA7	Sr Nts	7/17/2017	BBB-	2.10	1.74	1.92	1.56	1.49	1.65	1.86	1.90	1.95	1.67	1.57	1.80	1.77%	1.68%
Constellation Energy Group, In	4.55	210371AK6	Nts	6/15/2015	BBB-	0.98	0.93	0.91	0.40	0.64	0.84	1.21	1.51	1.71	0.81	0.83	0.95	0.98%	0.86%
Constellation Energy Group, In	7.6	210371AF7	Nts	4/1/2032	BBB-	5.55	5.58	5.33	5.25	4.81	4.79	4.78	4.56	4.97	4.78	4.54	4.36	4.94%	4.56%
Duquesne Light Holdings, Inc.	5.5	266233AA3	Sr Nts	8/15/2015	BBB-	1.24	1.21	1.34	0.21	0.02	0.40	0.94		1.37	1.06	1.03	1.11	0.90%	1.07%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.65	5.28	5.28	5.64	5.49	4.87	4.78	4.64	4.90	4.79	4.64	4.45	5.03%	4.63%
Exelon Corp.	4.9	30161NAD3	Fixed Rt Sr Nt	6/15/2015	BBB-	1.09	0.97	1.03	0.47	0.69	0.91	1.23	1.52	1.77	0.76	0.96	0.92	1.03%	0.88%
Hawaiian Elec Indus	6.51	41987QAX1	M-T Nts'C'	5/5/2014	BBB-	1.11	1.07	1.69										1.29%	
NiSource Finance	5.25	65473QAQ6	Gtd Nt	9/15/2017	BBB-	1.78	1.77	1.92	1.36	1.27	1.33	1.51	1.51	1.68	1.46	1.52	1.71	1.57%	1.56%
NiSource Finance	5.45	65473QAR4	Gtd Nt	9/15/2020	BBB-	3.17	3.13	3.33	3.00	2.85	2.80	3.00	2.90	3.04	2.89	2.81	3.06	3.00%	2.92%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	5.13	5.16	4.96	4.81	4.68	4.71	4.68	4.49	4.78	4.67	4.53	4.34	4.75%	4.51%
Pennsylvania Electric	6.625	708696BM0	Sr Nts 'C'	4/1/2019	BBB-	3.81	3.63	3.82	3.81	3.68	3.24	3.15	3.34	3.52	3.09	3.01	3.11	3.43%	3.07%
FirstEnergy Corp.	7.38	337932AC1	Sr Nt Ser C	11/15/2031	BB+	6.10	6.02	5.97	5.90	5.76	5.69	5.71	5.42	5.75	5.61	5.46	5.46	5.74%	5.51%
El Paso Energy Corp MTN BE	8.05	28368EAA4	MTN	10/15/2030	BB	7.60	7.63	7.38	7.20	7.17	7.10	6.95	5.83	5.97	5.90	5.75	5.85	6.69%	5.83%
El Paso Energy Corp MTN BE	7.75	28368EAE6	MTN-tranche # Tr 00005	1/15/2032	BB	7.45	7.30	7.08	6.95	6.86	6.81	6.69	5.44	5.53	5.48	5.47	5.63	6.39%	5.53%
AmerenEnergy Generating	7.95	02360XAJ6	Sr Nts 'F'	6/1/2032	BB-	10.71	10.12	9.92	9.84	8.61	7.78	8.10	8.00	7.95	8.16	8.19	9.42	8.90%	8.59%
NRG Energy, Inc.	7.25	629377AT9	SrNts	2/1/2014	BB-	6.47												6.47%	
TXU Corp.	5.55	873168AL2	Sr Nts'P'	11/15/2014	D	49.99	49.99	49.99	49.99	49.99								49.99%	
TXU Corp.	6.5	873168AN8	Sr Nts'Q'	11/15/2024	D	25.79	30.52	24.36	19.82	16.23	10.59	9.96	8.15	8.32	9.66	9.67	10.06	15.26%	9.80%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	22.43	26.26	20.57	16.66	13.65	10.59	8.91	7.64	7.75	8.67	8.67	8.93	13.39%	8.76%
Allegheny Generating	6.88	017364AG5	Deb	9/1/2023	NR	6.76	6.76	6.76	6.76	6.76	6.76	6.75	6.76	6.75	6.72	6.72	6.72	6.75%	6.72%
American Electric Power Co., I	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	1.53	1.54	1.54	1.54	1.54%	1.54%
CenterPoint Energy, Inc.	2.88	15189TAL1	Sr Nt Conv 144a	1/15/2024	NR	1.54	1.63											1.59%	
Empire District Electric Co. (Th	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	6.17	5.60	5.60	5.60	5.60	5.60		5.65%	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	5.69	5.69	5.67	5.70%	5.68%
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	5.92	5.91	5.91	5.91	5.92%	5.91%
Madison Gas & Elec Co MTN E	5.26	5574A0AC1	MTN	9/29/2017	NR							0.53		1.42	0.11	0.03		0.52%	0.07%
MDU Resources Group, Inc.	5.98	552690AF6	Sr Sec Nt	12/15/2033	NR	5.90	5.93	5.76	5.64	5.49	5.51	5.20	4.95	5.24	5.13	4.99	4.87	5.38%	5.00%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
NorthWestern Corp.	5.88	668074AM9	Sr Secd Nt 144a	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%
NRG Energy, Inc.	7.38	629377AX0	SrNts	1/15/2017	NR	6.56												6.56%	
Ohio Power Co.	6.38	677415CJ8	Sr Nts 'I'	7/15/2033	NR	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.36	6.37	6.37	6.37	6.37%	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	6.50	6.50	6.49	6.55%	6.50%
Pacific Gas & Electric Co.	4.8	694308GD3	1st	3/1/2014	NR	0.44												0.44%	
Potomac Electric Power	4.65	737679CX6	Sr Nts	4/15/2014	NR	0.71	0.68											0.70%	
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	0.87	0.87	0.60	0.59	0.83%	0.69%
Public Serv, Colorado	5.5	744448BX8	1st Coll Tr Ser 15	4/1/2014	NR	0.20	0.13											0.17%	
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	5.48	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%	
Sierra Pacific Resources	6.75	826428AN4	Sr Nts	8/15/2017	NR	6.30	6.30	6.30	6.30	6.30	6.30	6.3	6.30	6.29	5.85	5.83	5.80	6.18%	5.83%
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%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	4.37	4.34	4.29	4.12	3.90	3.93	3.90	3.63	3.92	3.68	3.54	3.35	3.91%	3.52%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	4.37	4.29	4.29	4.07	3.90	3.88	3.83	3.63	3.97	3.70	3.58	3.45	3.91%	3.58%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	4.46	4.44	4.37	4.20	3.93	3.93	3.85	3.83	3.92	3.78	3.64	3.45	3.98%	3.62%
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	7.73	7.72	7.72	7.72	7.73%	7.72%
Tennessee Valley Authority	6.235	880591CF7	Pwr Bonds '95B	7/15/2045	NR	5.49	5.44	5.44	5.39	5.27	5.27	5.32	5.29	5.34	5.18	5.14	5.19	5.31%	5.17%
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	7.46	7.45	7.43	7.43	7.43	7.45%	7.43%
			Counts of data			336	332	328	292	292	289	297	287	306	307	306	302	338	307

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	2.21%	2.00%
AA's	5.96%	5.80%
A's	3.54%	3.43%
BBB+'s	2.79%	2.79%
BBB's	3.48%	3.41%
BB's	6.84%	6.37%
B's	----	----
CC's	----	----
D	26.22%	9.28%
NR's	4.38%	4.70%
ALL	3.72%	3.47%
BBB- & Above	3.41%	3.32%
BB- & Above	3.44%	3.34%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Alabama Power Co.	6.12	010392EZ7	Sr Nts'08A	5/15/2038	A	4.55	4.60	4.45	4.37	4.20	4.79	4.22	4.00	4.31	4.14	3.99	3.96	4.30%	4.03%
Progress Energy, Inc.	5.7	144141CV8	1st	4/1/2035	A	4.62	4.65	4.50						4.41	4.18	4.34	4.10	4.40%	4.21%
Progress Energy, Inc.	6.3	144141CY2	1st	4/1/2038	A	4.50	4.50	4.34				4.05		4.36	4.12	4.14	3.80	4.23%	4.02%
Connecticut Lt & Pwr	5.62	207597DU6	1st & Ref '05B	4/1/2035	A	4.80	4.83	4.68	4.49	4.34	4.39	4.32	4.12	4.41	4.18	4.03	3.84	4.37%	4.02%
Detroit Edison Co	5.45	250847DZ0	Sr(Sec)Nts'BR'	2/15/2035	A	4.85	4.88	4.73	4.66	4.37	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.40%	4.02%
Detroit Edison Co	5.7	250847EA4	Sr(Sec)Nts'E'	10/1/2037	A	4.49	4.52	4.37	4.27	4.12	4.17	4.15	3.90	4.19	3.98	3.83	3.69	4.14%	3.83%
Florida Power & Light	5.625	341081EQ6	1st	4/1/2034	A	4.30	4.30	4.18	4.10	3.95	3.98	3.95	3.88	4.17	3.83	3.83	3.85	4.03%	3.84%
Florida Power & Light	5.62	341081EQ6	First Mtg Bds	4/1/2034	A	4.30	4.30	4.18	4.10	3.95	3.98	3.95	3.88	4.17	3.83	3.83	3.85	4.03%	3.84%
Florida Power & Light	4.95	341081ET0	1st	6/1/2035	A	4.35	4.38	4.23	4.15	4.00	4.03	4.03	3.81	4.09	3.86	3.88	3.86	4.06%	3.87%
Florida Power & Light	5.4	341081EU7	1st Mtg Bd	9/1/2035	A	4.40	4.37	4.28	4.18	3.95	4.07	4.07	3.85	4.14	3.93	3.84	3.86	4.08%	3.88%
Florida Power & Light	5.65	341081EV5	1st	2/1/2037	A	4.45	4.43	4.33	4.24	4.05	4.05	4.03	3.83	4.24	4.01	3.94	3.73	4.11%	3.89%
Florida Power & Light	6.2	341081EX1	1st	6/1/2036	A	4.45	4.48	4.34	4.22	4.05	4.07	4.07	3.85	4.29	3.96	3.82	3.63	4.10%	3.80%
Florida Power & Light	5.85	341081EY9	1st	5/1/2037	A	4.45	4.43	4.44	4.24	4.05	4.07	4.17	3.93	4.22	3.99	3.84	3.79	4.14%	3.87%
Florida Power Corp.	6.35	341099CH0	1st	9/15/2037	A	4.55	4.50	4.38	4.27	4.37	4.10	4.37	3.95	4.24	4.01	4.00	3.80	4.21%	3.94%
Georgia Power Co.	5.8	373334FZ9	Sr Nts'Y'	4/15/2035	A	5.50	5.48	5.58	5.59	5.61	5.54	5.59	5.61	5.61	5.66	5.67	5.70	5.60%	5.68%
Georgia Power Co.	5.65	373334GC9	Sr Nt Ser 2007a	3/1/2037	A	4.75	4.78	4.61	4.44	4.24	4.29	4.27	4.20	4.39	4.15	4.13	3.95	4.35%	4.08%
Georgia Power Co.	5.65	373334GC9	Sr Nts'07A	3/1/2037	A	4.75	4.78	4.61	4.44	4.24	4.29	4.27	4.20	4.39	4.15	4.13	3.95	4.35%	4.08%
Gulf Power Co.	5.65	402479BW8	Sr Nts'L'	9/1/2035	A	5.28	5.29	5.32	5.34	5.34	5.37	5.39	5.42	5.44	5.45	5.46	5.49	5.38%	5.47%
MidAmerican Energy Co	5.8	59562EAH8	MTN-tranche # Tr 00008	10/15/2036	A	4.45	4.48	4.35	4.28	4.10	4.12	4.05	3.88	4.29	4.08	3.93	3.85	4.16%	3.95%
Mississippi Power Co.	5.4	605417BT0	Sr Nts'G'	7/1/2035	A	5.11	5.12	5.16				5.14		5.19	5.22	5.22	5.26	5.18%	5.23%
Nevada Power	6.75	641423BU1	Gen & Refunding Mtg Nt S	7/1/2037	A	4.70	4.68	4.53	4.39	4.24	4.22	4.20	4.05	4.34	4.19	4.10	3.95	4.30%	4.08%
Northern Sts Pwr (Minn)	5.25	665772CA5	1st Mtg Bd	7/15/2035	A	4.40	4.43	4.28	4.20	4.03	4.06	4.04	3.81	4.12	3.89	3.92	3.74	4.08%	3.85%
Northern Sts Pwr (Minn)	6.25	665772CB3	1st Mtg Bd Ser	6/1/2036	A	4.45	4.48	4.35										4.43%	
Northern Sts Pwr (Minn)	6.2	665772CC1	1st Mtg	7/1/2037	A	4.50	4.42	4.40	4.24	4.10	4.15	4.12	3.88	4.17	4.02	3.97	3.78	4.15%	3.92%
PacifiCorp	5.9	695114BX5	1st	8/15/2034	A	4.85	4.88	4.73	4.64	4.17	4.34	4.25	4.10	4.36	4.15	4.01	3.82	4.36%	3.99%
PacifiCorp	5.25	695114BZ0	1st	6/15/2035	A	4.50	4.53	4.38	4.29	4.15	4.07	4.08	3.90	4.19	4.02	3.88	3.80	4.15%	3.90%
PacifiCorp	6.1	695114CB2	1st	8/1/2036	A	4.48	4.51	4.39	4.27	4.12	4.15	4.12	3.90	4.19	4.03	3.89	3.88	4.16%	3.93%
PacifiCorp	5.75	695114CD8	1st	4/1/2037	A	4.43	4.46	4.33	4.46	4.32	4.12	4.07	3.93	4.24	4.04	3.99	3.84	4.19%	3.96%
Potomac Electric Power	5.75	737679CY4	Sr Nts	4/15/2034	A	5.00	4.93	4.78	4.68	4.44	4.49	4.46	4.22	4.51	4.23	4.08	3.89	4.48%	4.07%
Potomac Electric Power	5.4	737679CZ1	Sr Nts	6/1/2035	A	5.00	4.93	4.78	4.58	4.37	4.39	4.37	4.15	4.42	4.23	4.09	3.90	4.43%	4.07%
Sierra Pacific Power	6.75	826418BE4	Gen & Refunding Mtg Nt S	7/1/2037	A	4.80	4.73	4.58	4.49	4.34	4.37	4.28	4.12	4.41	4.18	4.03	4.13	4.37%	4.11%
South Carolina Electric & Gas (	5.25	837004BZ2	1st	3/1/2035	A	4.70	4.73	4.58	4.49	4.35	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.35%	4.02%
South Carolina El & Gas	6.25	837004CA6	1st Mtg Bd	7/1/2036	A	4.75	4.78	4.63	4.54	4.39	4.42	4.33	4.17	4.46	4.23	4.08	3.89	4.39%	4.07%
Southern California Edison Co.	6	842400ES8	1st & Ref '04B	1/15/2034	A	4.34	4.40	4.26	4.20	4.05	4.07	4.12	3.81	4.09	3.93	3.84	3.78	4.07%	3.85%
Southern California Edison Co.	5.55	842400EZ2	1st & Ref'05B	1/15/2036	A	4.50	4.44	4.38	4.27	4.12	4.20	4.15	3.90	4.26	4.05	3.91	3.72	4.16%	3.89%
Southern California Edison Co.	5.35	842400FA6	1st & Ref'05E	7/15/2035	A	4.40	4.40	4.33	4.24	4.00	4.07	4.05	3.88	4.19	4.06	3.92	3.84	4.12%	3.94%
Southern California Edison Co.	5.62	842400FC2	1st & Ref'06A	2/1/2036	A	4.44	4.51	4.38	4.29	4.15	4.17	4.15	3.90	4.29	4.02	3.88	3.83	4.17%	3.91%
Southern California Edison Co.	5.55	842400FF5	1st & Ref'06E	1/15/2037	A	4.50	4.48	4.43	4.34	4.15	4.20	4.10	3.88	4.24	4.01	4.09	3.89	4.19%	4.00%
Wisconsin Power & Light Co.	6.25	976826BD8	Deb	7/31/2034	A	5.00	5.03	4.88	4.78	4.64	4.66	4.58	4.42	4.70	4.48	4.33	4.14	4.64%	4.32%
Wisconsin Public Service	5.55	976843BE1	Sr(Sec)Nts	12/1/2036	A	4.65	4.68	4.53	4.46	4.32	4.32	4.29	4.05	4.34	4.13	3.98	3.79	4.30%	3.97%
Arizona Public Service	5.5	040555CH5	Nts	9/1/2035	A-	4.55	4.58	4.43	4.34	4.20	4.22	4.20	3.98	4.31	4.08	3.94	3.75	4.22%	3.92%
Arizona Public Service	6.88	040555CK8	Nts	8/1/2036	A-	4.84	4.87	4.72	4.61	4.46	4.51	4.49	4.32	4.58	4.33	4.19	4.00	4.49%	4.17%
Avista Corp.	6.25	05379BAK3	1st Mtg Bd	12/1/2035	A-	5.00	5.03	4.88	4.81	4.56	4.56	4.54	4.29	4.58	4.38	4.23	4.04	4.58%	4.22%
Avista Corp.	5.7	05379BAM9	1st Mtg Bd	7/1/2037	A-	5.00	5.03	4.88	4.78	4.54	4.56	4.48	4.32	4.61	4.38	4.23	4.04	4.57%	4.22%
CenterPoint Energy Res	6.25	15189YAD8	Sr Nts	2/1/2037	A-	5.05	5.01	4.93	4.78	4.54	4.56	4.54	4.59	4.87	4.69	4.54	4.35	4.70%	4.53%
Commonwealth Edison	5.9	202795HK9	1st Ser 103	3/15/2036	A-	4.50	4.53	4.35	4.26	4.10	4.17	4.12	3.95	4.26	4.06	3.92	3.80	4.17%	3.93%
Connecticut Lt & Pwr	6.35	207597DV4	1st & Ref'06A	6/1/2036	A-	4.55	4.58	4.43	4.34	4.20	4.17	4.15	3.93	4.22	4.13	3.99	3.80	4.21%	3.97%
Connecticut Lt & Pwr	5.75	207597DX0	1st & Ref'07B	3/1/2037	A-	4.80	4.83	4.68	4.49	4.34	4.39	4.37	4.12	4.39	4.18	4.03	3.84	4.37%	4.02%
Consolidated Edison, Inc.	5.7	209111EF6	Deb'04B	2/1/2034	A-	4.60	4.63	4.48	4.37	4.22	4.27	4.54	4.27	4.56	4.31	4.16	3.98	4.37%	4.15%
Consolidated Edison, Inc.	5.3	209111EH2	Deb '05A	3/1/2035	A-	4.43	4.46	4.32	4.32	4.17	4.20	4.20	4.10	4.34	4.14	4.00	3.81	4.21%	3.98%
Consolidated Edison, Inc.	5.25	209111EJ8	Deb '05B	7/1/2035	A-	4.75	4.78	4.78	4.68	4.54	4.59	4.69	4.10	4.63	4.17	4.06	4.29	4.51%	4.17%
Consolidated Edison, Inc.	5.85	209111EL3	Deb'06A	3/15/2036	A-	4.48	4.53	4.43	4.34	4.17	4.22	4.22	4.22	4.45	4.23	4.09	3.90	4.27%	4.07%
Consolidated Edison, Inc.	6.2	209111EM1	Deb'06B	6/15/2036	A-	4.57	4.60	4.41	4.32	4.17	4.22	4.22	4.12	4.46	4.25	4.11	3.94	4.28%	4.10%
Consolidated Edison, Inc.	5.7	209111EQ2	Deb'06E	12/1/2036	A-	4.48	4.53	4.43	4.37	4.22	4.20	4.51	4.29	4.31	4.11	4.29	4.10	4.32%	4.17%
Consolidated Edison, Inc.	6.3	209111ES8	Deb'07A	8/15/2037	A-	4.48	4.53	4.41	4.32	4.17	4.24	4.24	4.22	4.51	4.24	4.29	4.10	4.31%	4.21%
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	6.36	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-	5.96	5.97	5.97	5.98	5.98	5.98	5.97	5.99	5.99	5.99	5.99	5.99	5.98%	5.99%
Idaho Pwr	5.5	45138LAP8	Sec M-T Nts'E'	3/15/2034	A-	4.80	4.83	4.66	4.49	4.34	4.39	4.37	4.12	4.41	4.17	4.02	3.83	4.37%	4.01%
Idaho Pwr	5.875	45138LAQ6	Sec M-T Nts'E'	8/15/2034	A-	4.80	4.83	4.66	4.49	4.34	4.37	4.37	4.12	4.39	4.17	4.02	3.83	4.37%	4.01%
Idaho Pwr	5.3	45138LAR4	Sec M-T Nts'F'	8/15/2035	A-	4.80	4.83	4.66	4.49	4.34	4.37	4.34	4.12	4.39	4.17	4.02	3.83	4.36%	4.01%
Idaho Pwr Co 1st Mtg Secd MT	6.3	45138LAS2	Secd MTN Ser F	6/15/2037	A-	4.80	4.83	4.66						4.41	4.17	4.02	3.83	4.39%	4.01%
Interstate Pwr & Lt	6.3	461070AD6	Sr Deb	5/1/2034	A-	4.80	4.83	4.68	4.59	4.44	4.49	4.46	4.22	4.51	4.28	4.13	3.94	4.45%	4.12%
KeySpan Corp	5.8	49337WAJ9	Nt	4/1/2035	A-	4.95	4.98	4.83						4.65	4.43	4.29	4.44	4.65%	4.39%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Oklahoma Gas & Elec Co	5.75	678858BF7	Sr Nts	1/15/2036	A-	4.90	4.93	4.78	4.71	4.56	4.54	4.49	4.24	4.53	4.33	4.18	3.99	4.52%	4.17%
Exelon Corp.	5.9	693304AG2	1st Ref Mtg	5/1/2034	A-	4.90	4.93	4.78						4.56	4.28	4.13	3.94	4.50%	4.12%
Exelon Corp.	5.95	693304AH0	1st Ref Mtg	10/1/2036	A-	4.50	4.52	4.29			4.68			4.14	3.93	3.93	3.74	4.22%	3.87%
Exelon Corp.	5.7	693304AJ6	1st Ref Mtg	3/15/2037	A-	4.65	4.68	4.53				4.23		4.36	4.13	3.98	3.79	4.29%	3.97%
Public Svc Co New Hampshire	5.6	744538AA7	1st Mtg Bd	10/5/2035	A-	5.00	5.03	4.88	4.59	4.44	4.46	4.44	4.22	4.48	4.28	4.13	3.94	4.49%	4.12%
Public Service Electric and Gas	8	744567BA5	1st & Ref	6/1/2037	A-	5.60	5.63	5.48	5.39	5.20	5.22	5.20	4.96	5.24	5.03	4.88	4.69	5.21%	4.87%
Public Serv Elec & Gas	5	744567BB3	1st & Ref Mtg	7/1/2037	A-	5.30	4.98	4.83	4.76	4.55	4.59	4.55	4.32	4.61	4.38	4.23	4.04	4.60%	4.22%
Public Service Electric and Gas	5	744567BB3	1st & Ref	7/1/2037	A-	5.30	4.98	4.83	4.76	4.55	4.59	4.55	4.32	4.61	4.38	4.23	4.04	4.60%	4.22%
Public Svc Elec Gas Co Secd N	5.25	74456QAP1	Med Term Notes	7/1/2035	A-	4.40	4.43	4.28	4.20	4.05	4.07	4.05	3.83	4.09	3.88	3.73	3.54	4.05%	3.72%
Public Svc Elec Gas Co Secd N	5.7	74456QAQ9	Secd Mtns, Ser D	12/1/2036	A-	4.40	4.45	4.30	4.22	4.07	4.07	3.99	3.81	4.09	3.89	3.93	3.74	4.08%	3.85%
Public Svc Elec Gas Co Secd N	5.8	74456QAR7	Secured Mtn Series E Not	5/1/2037	A-	4.45	4.48	4.33	4.24	4.10	4.15	4.05	3.95	4.24	4.00	3.86	3.83	4.14%	3.90%
Puget Sound Energy	5.48	745332BU9	Sr Nts	6/1/2035	A-	4.45	4.53	4.38	4.29	4.15	4.17	4.08	3.93	4.22	4.07	3.98	3.83	4.17%	3.96%
Puget Sound Energy	6.72	745332BW5	Sr Nts	6/15/2036	A-	4.65	4.68	4.43	4.29	4.15	0.02	4.11	3.95	4.24	4.01	3.86	3.67	3.84%	3.85%
Puget Sound Energy	6.27	745332BX3	Sr(Sec)Nts	3/15/2037	A-	4.60	4.63	4.38	4.24	4.10	4.12	4.03	4.00	4.29	4.07	3.93	3.90	4.19%	3.97%
Southwestern Public Serv	6	845743BL6	Sr Nts'F'	10/1/2036	A-	4.90	4.80	4.63	4.49	4.27	4.37	4.32	4.20	4.51	4.34	4.20	3.98	4.42%	4.17%
Virginia Electric & Power Co.	6	927804FA7	Sr Nts'B'	1/15/2036	A-	4.50	4.60	4.36	4.29	4.17	4.20	4.15	3.95	4.19	4.08	3.94	3.88	4.19%	3.97%
Virginia Electric & Power Co.	6	927804FB5	Sr Nt 2007 Ser A	5/15/2037	A-	4.50	4.60	4.42	4.29	4.15	4.17	4.20	4.05	4.34	4.11	3.98	3.87	4.22%	3.99%
Virginia Electric & Power Co.	6.35	927804FE9	Sr Nt 2007 Ser D	11/30/2037	A-	4.63	4.61	4.45	4.37	4.20	4.16	4.12	3.98	4.26	4.12	3.98	3.79	4.22%	3.96%
Westar Energy, Inc.	5.95	95709TAC4	1st Mtg Bd	1/1/2035	A-	5.84	5.80	5.82	5.83	5.86	5.86	5.88	5.95	6.00	5.99	5.97	5.95	5.90%	5.97%
Westar Energy, Inc.	5.88	95709TAE0	1st Mtg Bd	7/15/2036	A-	5.76	5.68	5.70	5.71	5.71	5.73	5.74	6.08	6.07	5.73	5.74	5.76	5.78%	5.74%
Wisconsin Electric Power Com	6.875	976656BL1	Deb	12/1/2095	A-	5.58	5.53	5.23	5.15	5.15	5.07	5.05	4.83	5.09	4.97	4.83	4.66	5.10%	4.82%
Wisconsin Electric Power	5.7	976656BZ0	Deb	12/1/2036	A-	4.50	4.53	4.32	4.24	4.10	3.95	4.07	3.83	4.12	3.92	3.77	3.58	4.08%	3.76%
AmerenEnergy Generating	5.3	02360FAB2	Sr Sec Nts	8/1/2037	BBB+	4.45	4.48	4.33	4.27	4.12	4.15	4.12	4.12	4.41	4.18	4.04	3.88	4.21%	4.03%
Central Illinois Light	6.7	153645BA3	Sr Secd Nt 144a	6/15/2036	BBB+	6.05	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.09	6.05	6.05	6.04	6.08%	6.05%
Cleco Power LLC	6.5	185508AE8	Nts	12/1/2035	BBB+	5.05	5.08	4.93	4.86	4.71	4.00	4.59	4.44	4.73	4.66	4.52	4.34	4.66%	4.51%
Consumers Energy Co.	5.8	210518CP9	1st	9/15/2035	BBB+	4.75	4.78	4.63	4.54	4.39	4.42	5.65	4.17	4.44	4.23	4.08	3.89	4.50%	4.07%
Dominion Resources, Inc. (Va.)	5.95	25746UAV1	Fixed Rt Sr Nt 2005 Ser B	6/15/2035	BBB+	4.87	4.91	4.70	4.59	4.46	4.39	4.44	4.27	4.56	4.32	4.18	4.00	4.47%	4.17%
Exelon Corp.	5.62	30161NAC5	Fixed Rt Sr Nt	6/15/2035	BBB+	5.33	5.28	5.03	4.76	4.71	4.68	4.71	4.46	4.75	4.63	4.49	4.37	4.77%	4.50%
MidAmerican Energy Hldg	6.12	59562VAM9	SrBonds	4/1/2036	BBB+	4.78	4.77	4.66	4.51	4.37	4.39	4.39	4.20	4.56	4.33	4.34	4.28	4.47%	4.32%
PSI Energy, Inc.	6.12	693627AY7	Deb	10/15/2035	BBB+	4.77	4.80	4.61	4.54	4.37	4.42	4.39	4.15	4.61	4.38	4.24	4.05	4.44%	4.22%
Southern Power Co	6.38	843646AG5	Sr Nt Ser E	11/15/2036	BBB+	5.94	5.95	5.98	6.00	6.00	6.01	6.03	6.03	6.05	6.06	6.06	6.09	6.02%	6.07%
Tampa Electric Co.	6.55	875127AV4	Nts	5/15/2036	BBB+	4.70	4.73	4.58	4.49	4.34	4.37	4.24	4.03	4.31	4.08	3.93	3.85	4.30%	3.95%
Tampa Electric Co.	6.15	875127AW2	Sr Nts	5/15/2037	BBB+	4.60	4.61	4.46	4.37	4.22	4.24	4.18	4.12	4.34	4.13	4.06	3.87	4.27%	4.02%
Union Electric	5.5	906548BY7	Sr Sec Nts	3/15/2034	BBB+	4.85	4.88	4.73	4.66	4.51	4.54	4.51	4.28	4.56	4.28	4.13	3.94	4.49%	4.12%
Xcel Energy Inc.	6.5	98389BAH3	Sr Nts	7/1/2036	BBB+	4.65	4.68	4.53	4.39	4.27	4.32	4.27	4.16	4.44	4.22	4.21	4.02	4.35%	4.15%
Appalachian Power	5.8	037735CE5	Sr Nts'L'	10/1/2035	BBB	5.07	4.88	4.73	4.64	4.49	4.32	4.29	4.20	4.48	4.42	4.28	4.15	4.50%	4.28%
Appalachian Power	6.38	037735CG0	Sr Nts'N'	4/1/2036	BBB	5.10	5.08	4.78	4.68	4.56	4.46	4.44	4.22	4.48	4.47	4.38	4.28	4.58%	4.38%
Dominion Resources, Inc. (Va.)	7.5	25746UAY5	Enhanced Jr Sub Nt 2006	6/30/2066	BBB	6.87	6.89	6.86	6.91	6.91	6.91	6.83	6.91	6.95	6.99	7.08	7.09	6.93%	7.05%
Dominion Resources, Inc. (Va.)	2.58	25746UAZ2	Jr Sub Nt 2006 Ser B Enh	9/30/2066	BBB	2.79	2.82	2.82	2.85	2.85		2.81	2.80	2.80	2.75	2.75	2.77	2.80%	2.76%
El Paso Electric Co.	6	283677AW2	Sr Nts	5/15/2035	BBB	5.40	5.20	5.03	5.00	4.76	4.66	4.64	4.42	4.70	4.47	4.34	4.15	4.73%	4.32%
Empire District Electric Co. (Th	5.8	291641AZ1	Sr Nts	7/1/2035	BBB	5.28	5.33	5.18	5.10	4.96	4.98	4.96	4.76	5.02	4.89	4.75	4.56	4.98%	4.73%
Energy East	6.75	29266MAF6	Nt	7/15/2036	BBB	5.65	5.63	5.47				4.93		5.17	4.92	4.90	4.71	5.17%	4.84%
Indiana Mich Pwr	6.05	454889AM8	Sr Nts'H'	3/15/2037	BBB	5.05	5.13	4.88	4.68	4.54	4.56	4.54	4.32	4.58	4.49	4.42	4.24	4.62%	4.38%
Kansas City Power & Light	6.05	485134BH2	Sr Nt Ser A	11/15/2035	BBB	4.92	4.95	4.80	4.73	4.59	4.59	4.49	4.27	4.56	4.34	4.19	4.00	4.54%	4.18%
PPL Energy Supply	5.7	69352JAG2	Reset PutSecs	10/15/2035	BBB	5.27	5.25	5.20	5.22	5.22	5.29	5.34	5.37	5.39	5.49	5.49	5.51	5.34%	5.50%
PPL Energy Supply	6	69352JAK3	Sr Nts	12/15/2036	BBB	6.20	6.45	6.25	6.10	6.25	6.10	6.15	6.27	6.39	6.11	6.47	7.08	6.32%	6.55%
Pacific Gas & Electric Co.	6.05	694308GE1	1st	3/1/2034	BBB	4.70	4.70	4.68	4.71	4.54	4.27	4.54	4.42	4.39	4.21	4.13	4.00	4.44%	4.11%
Pacific Gas & Electric Co.	5.8	694308GJ0	Fixed Rt Sr Nt	3/1/2037	BBB	4.75	4.73	4.68	5.10	4.88	4.37	4.86	4.76	4.51	4.31	4.39	4.23	4.63%	4.31%
Public Service Co. of Oklahom	6.62	744533BJ8	Sr Nts 'G'	11/15/2037	BBB	5.15	5.03	4.88	4.76	4.51	4.51	4.49	4.27	4.56	4.48	4.43	4.24	4.61%	4.38%
WPS Resources	6.11	92931BAC0	Jr Sub Nt	12/1/2066	BBB	6.05	6.10	6.04	6.08	6.05	5.93	5.99	5.95	5.97	6.10	6.01	6.09	6.03%	6.07%
Wisconsin Energy Corp.	6.25	976657AH9	2007 Ser A Jr Sub Nt	5/15/2067	BBB	6.09	6.10	6.05	6.03	6.03	6.05	6.06	6.00	6.02	6.12	6.11	6.21	6.07%	6.15%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Electric Utilities
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Cleveland Elec. Illum	5.95	186108CE4	Sr Nts	12/15/2036	BBB-	5.51	5.48	5.30	5.07	4.00	4.95	4.90	4.61	4.90	4.84	4.76	4.74	4.92%	4.78%
Duquesne Light Holdings, Inc.	6.25	266233AB1	Sr Nts	8/15/2035	BBB-	5.65	5.28	5.28	5.64	5.49	4.87	4.78	4.64	4.90	4.79	4.64	4.45	5.03%	4.63%
Ohio Edison Co.	6.88	677347CE4	Sr Nts	7/15/2036	BBB-	5.13	5.16	4.96	4.81	4.68	4.71	4.68	4.49	4.78	4.67	4.53	4.34	4.75%	4.51%
TXU Corp.	6.55	873168AQ1	Sr Nts'R'	11/15/2034	D	22.43	26.26	20.57	16.66	13.65	10.59	8.91	7.64	7.75	8.67	8.67	8.93	13.39%	8.76%
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	7.73	7.72	7.72	7.72	7.73%	7.72%
Tennessee Valley Authority	6.235	880591CF7	Pwr Bonds '95B	7/15/2045	NR	5.49	5.44	5.44	5.39	5.27	5.27	5.32	5.29	5.34	5.18	5.14	5.19	5.31%	5.17%
Tennessee Valley Authority	5.98	880591CK6	Pwr Bonds '96A	4/1/2036	NR	4.37	4.34	4.29	4.12	3.90	3.93	3.90	3.63	3.92	3.68	3.54	3.35	3.91%	3.52%
Tennessee Valley Authority	6.15	880591CP5	Pwr Bonds '98B	1/15/2038	NR	4.46	4.44	4.37	4.20	3.93	3.93	3.85	3.83	3.92	3.78	3.64	3.45	3.98%	3.62%
Tennessee Valley Authority	5.88	880591CS9	Pwr Bonds '97C	4/1/2036	NR	4.37	4.29	4.29	4.07	3.90	3.88	3.83	3.63	3.97	3.70	3.58	3.45	3.91%	3.58%
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	7.46	7.45	7.43	7.43	7.43	7.45%	7.43%
			Counts of data			125	125	125	115	115	115	119	115	124	124	124	124	125	124

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	----	----
AA's	----	----
A's	4.45%	4.20%
BBB+'s	4.69%	4.47%
BBB's	5.00%	4.84%
BB's	----	----
B's	----	----
CC's	----	----
D	13.39%	8.76%
NR's	5.38%	5.17%
ALL	4.67%	4.41%
BBB- & Above	4.56%	4.34%
BB- & Above	4.56%	4.34%

**Investment Grade (BBB- & Above)*

Montana Department of
REVENUE

2015 Capitalization Rate Study

Gas Pipelines

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Gas Pipelines
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	Median	
	4.01%	3.80%	Yahoo
	3.76%	3.68%	Value Line
	3.89%	3.74%	Average of E/Ps
Inverse of P/E Ratios:			
	3.47%	1.93%	Yahoo
	4.05%	3.85%	Value Line
	3.76%	2.89%	Average of Inverse of the P/E
	5.56%	5.41%	Inverse of median P/E, Value Line
	3.82%	3.31%	Average of all above except median P/E
Mean =	4.17%	3.73%	
Median =	4.01%	3.80%	

Equity Measure NUOI = 4.50%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.01%	6.17%	ALL
	5.87%	5.85%	BBB- & Above
	5.84%	5.85%	BB- & Above
Mean =	5.91%	5.96%	
Median =	5.87%	5.85%	

Debt Measure = 6.00%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	65.00%	x	4.50%	=	2.93%	
Debt	35.00%	x	6.00%	=	2.10%	
	100.00%				5.03%	
Direct Cap Rate NUOI =						**5.25%**

Gross Cash Flow / Price:

Mean	Median	
8.72%	8.31%	Value Line

Equity Measure Gross = 8.50%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	65.00%	x	8.50%	=	5.53%	
Debt	35.00%	x	6.00%	=	2.10%	
	100.00%				7.63%	
Direct Cap Rate GCF =						**7.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Gas Pipelines
2015 Assessment Year

Equity Measures Calculated:	**All**
Dividend Growth Model - Dividends	14.00%
Dividend Growth Model - Earnings	15.00%
Dividend Growth Model - Plowback	7.00%
Capital Asset Pricing Model	9.50%
Mean =	11.75%
Median =	11.75%

Equity Measure FCF = 10.50%

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	4.39%	4.42%	5.01%	5.06%
BBB- & Above	3.97%	3.97%	5.14%	5.14%
BB- & Above	4.03%	4.10%	4.91%	4.94%
Mean =	4.13%	4.16%	5.02%	5.05%
Median =	4.03%	4.10%	5.01%	5.06%

Debt Measure = 5.10%

Yield Cap Rate Free Cash Flow - Gas Pipelines						
Equity	65.00%	x	10.50%	=	6.83%	
Debt	35.00%	x	5.10%	* (1 - 0.35) =	1.16%	
	100.00%				7.99%	
Weighted Average Cost of Capital (WACC) =						**8.00%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Gas Pipelines
2015 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	A	284,100	56.97	34.400	16,185,177	9,773,000	0	0	5,178,000	1.00	5,178,000
ONEOK Partners LP	OKS	B++	232,000	39.63	20.791	9,194,160	4,823,600	0	0	6,044,900	1.00	6,044,900
Energy Transfer	ETP	B++	333,800	65.00	34.059	21,697,000	11,369,000	171,000	171,000	16,451,000	1.00	16,451,000
TransCanada P.L.	TRP	A	707,000	49.10	22.220	34,713,700	15,709,300	1,704,200	1,704,200	20,578,500	1.00	20,578,500
Boardwalk	BWP	C++	243,300	17.77	17.057	4,323,441	4,149,900	0	0	3,424,400	1.00	3,424,400
Enterprise Products	EPD	B+	1,871,400	36.12	8.130	67,594,968	15,214,800	0	0	16,226,500	1.00	16,226,500
Kinder Morgan Inc.	KMI	B++	1,030,700	42.31	12.703	43,608,917	13,093,000	0	0	33,887,000	1.00	33,887,000
Williams Ptrs.	WPZ	B++	438,600	44.75	23.128	19,627,350	10,144,000	0	0	9,057,000	1.00	9,057,000
Kinder Morgan Inc.	KMI	B++	1,030,700	42.31	12.703	43,608,917	13,093,000	0	0	33,887,000	1.00	33,887,000
EQT Midstream Partners LP	EQM	NA	47,800	88.00	13.477	4,206,400	644,200	0	0	133,700	1.00	133,700
Western Gas Partners LP	WES	A	117,300	73.05	20.726	8,568,765	2,431,200	0	0	1,418,200	1.00	1,418,200
Access Midstream Partners L.P.	ACMP	B++	189,100	54.20	21.676	10,249,220	4,098,900	0	0	3,249,200	1.00	3,249,200
Markwest Energy Partners LP	MWE	B++	157,800	67.19	25.845	10,602,582	4,078,300	0	0	3,023,100	1.00	3,023,100
Targa Resources Partners LP	NGLS	B++	111,300	47.88	17.932	5,329,044	1,995,800	0	0	2,906,700	1.00	2,906,700
Atlas Energy LP	ATLS	C++	51,400	31.15	7.233	1,601,110	371,800	0	0	2,886,100	1.00	2,886,100
Eagle Rock Energy Partners Ltd	EROC	B	156,600	2.20	3.665	344,520	573,900	0	0	1,252,100	1.00	1,252,100
EnLink Midstream Partners LP	ENLK	B+	91,300	29.01	10.927	2,648,613	997,600	190,100	190,100	1,122,200	1.00	1,122,200
SUMS & AVGS - ALL COMPANIES						304,103,884	112,561,300	2,065,300	2,065,300	160,725,600		160,725,600
SUMS & AVGS - B++ & ABOVE COMPANIES						163,917,190	62,695,600	171,000	171,000	108,505,900		108,505,900
SUMS & AVGS - PRIMARILY GATHERING						39,343,854	14,547,500	190,100	190,100	15,857,600		15,857,600
MEDIAN VALUE - ALL COMPANIES						10,249,220	4,149,900	190,100	190,100	3,424,400		3,424,400

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

INDUSTRY MARKET STRUCTURE						
	ALL COMPANIES		PRIMARILY GATHERING		B++ & ABOVE COMPANIES	
EQUITY	65.00%	304,103,884	71.00%	39,343,854	60.00%	163,917,190
DEBT	35.00%	162,790,900	29.00%	16,047,700	40.00%	108,676,900
TOTAL	100.00%	466,894,784	100.00%	55,391,554	100.00%	272,594,090

Notes/Rational for Changes to Guideline Companies

2015 Guideline Company Changes

El Paso Pipeline acquired by Kinder Morgan Inc. on November 26, 2014

Kinder Morgan Inc. (KMI) took full ownership of Kinder Morgan Energy Partners (KMP) on November 26,2014 added KMI

Crosstex (XTEX) became Enlink Midstream after merging with Devon on March 12, 2014

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Gas Pipelines
2015 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
Company	Ticker Symbol	(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	(VL) Est. Tax Rate
		ltst 12mo	N/E		P/E		R/E		1/T		1/V		1/X		
Spectra Energy Partners, LP	SEP	3.99	7.00%	2.88	5.06%			51.79	1.93%					0.80	
ONEOK Partners LP	OKS	2.32	5.85%	2.27	5.73%			53.22	1.88%			15.00	6.67%	0.75	
Energy Transfer	ETP	0.19	0.29%	2.39	3.68%	5.40	8.31%	57.94	1.73%	25.97	3.85%	19.00	5.26%	0.70	3.50%
TransCanada P.L.	TRP	2.03	4.13%	2.26	4.60%	4.35	8.86%	47.78	2.09%	20.12	4.97%	18.00	5.56%	0.85	25.00%
Boardwalk	BWP	0.87	4.90%	1.19	6.70%	2.10	11.82%	17.83	5.61%	19.51	5.13%			0.60	
Enterprise Products	EPD	1.51	4.18%	1.59	4.40%	2.10	5.81%	58.86	1.70%	21.77	4.59%	21.00	4.76%	0.85	2.00%
Kinder Morgan Inc.	KMI	1.19	2.81%	1.22	2.88%	3.50	8.27%	35.94	2.78%	29.75	3.36%			0.90	18.00%
Williams Ptrs.	WPZ	1.70	3.80%	1.09	2.44%	4.35	9.72%	51.11	1.96%	32.68	3.06%			0.80	0.50%
Kinder Morgan Inc.	KMI	1.19	2.81%	1.22	2.88%	3.50	8.27%	35.94	2.78%	29.75	3.36%			0.90	
EQT Midstream Partners LP	EQM	3.01	3.42%	3.35	3.81%			80.19	1.25%					1.20	
Western Gas Partners LP	WES	2.27	3.11%	2.24	3.07%			69.31	1.44%					0.85	
Access Midstream Partners L.P.	ACMP	0.81	1.49%	1.05	1.94%			59.75	1.67%					0.85	
Markwest Energy Partners LP	MWE	0.51	0.76%	0.83	1.24%			68.71	1.46%					0.85	
Targa Resources Partners LP	NGLS	2.90	6.06%	2.87	5.99%			61.45	1.63%					1.00	
Atlas Energy LP	ATLS	(1.17)	(3.76%)	(0.49)	(1.57%)			41.56	2.41%					1.40	
Eagle Rock Energy Partners Ltd	EROC	0.21	9.55%	(0.01)	(0.45%)			4.29	23.30%					1.05	
EnLink Midstream Partners LP	ENLK	(0.30)	(1.03%)	0.59	2.03%			29.77	3.36%					1.15	
SUMS & AVGS - ALL COMPANIES			4.01%		3.76%		8.72%		3.47%		4.05%		5.56%	0.91	9.80%
SUMS & AVGS - B++ & ABOVE COMPANIES			2.99%		3.35%		8.64%		1.99%		3.41%		5.96%	0.84	7.33%
SUMS & AVGS - PRIMARILY GATHERING			4.19%		2.85%				5.04%					1.02	
MEDIAN VALUE - ALL COMPANIES			3.80%		3.68%		8.31%		1.93%		3.85%		5.41%	0.85	3.50%

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

Industry Beta = 1.00

Notes/Rational for Changes to Guideline Companies
2015 Guideline Company Changes
El Paso Pipeline acquired by Kinder Morgan Inc. on
Kinder Morgan Inc. (KMI) took full ownership of Kind
Crosstex (XTEX) became Enlink Midstream after me

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Gas Pipelines
2015 Assessment Year

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

	Gas Pipelines
K_E = Cost of Equity	**9.50%**
R_F = Risk Free Rate	2.75%
β= Beta	1.00
R_M = Market Rate of Return	9.50%
R_P = Equity Risk Premium (RM - RF)	6.75%

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/	1/1/2015 implied premium	5.78%
Duff & Phelps	February 6, 2015 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2014 Not updated for 2015

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	12.10%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	10.10%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	8.50%
	Mean =	10.23%
	Median =	10.10%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2014-31 Table 2 December 8, 2014

Rev Rule 2014-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.34%
	Mid Term - AFR	R_f =	1.28%
	Long Term - AFR	R_f =	2.68%

The ValueLine Investment Survey January 9, 2015

U.S. Treasury Securities December 30, 2014

1 Year	R_f =	0.20%
10 Year	R_f =	2.19%
30 Year	R_f =	2.76%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2014

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

1 year constant maturity, quoted on investment basis	R_f =	0.25%
10-year constant maturity, quoted on investment basis	R_f =	2.17%
20-year constant maturity, quoted on investment basis	R_f =	2.47%
30-year constant maturity, quoted on investment basis	R_f =	2.75%
	Mean =	1.71%
	Median =	2.18%
	Weighted Mean =	2.08%
	R_f =	**2.75%**

U.S. Treasury Securities Long-Term December 31, 2014

20 year constant maturity	R_f = **2.47%**
30 year constant maturity	R_f = **2.75%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Gas Pipelines
2015 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 (D1)	Dividend Yield (D1/P0)	Dividend Growth	Ke 1 Year
Spectra Energy Partners, LP	SEP	56.97			14.50%	
ONEOK Partners LP	OKS	39.63			6.00%	
Energy Transfer	ETP	65.00	3.90	6.00%	2.00%	8.00%
TransCanada P.L.	TRP	49.10	2.00	4.07%	4.50%	8.57%
EQT Midstream Partners LP	EQM	88.00				
Boardwalk	BWP	17.77	0.40	2.25%	(12.00%)	
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%	16.50%	21.23%
Williams Ptrs.	WPZ	44.75	3.83	8.56%	6.50%	15.06%
Enterprise Products	EPD	36.12	1.53	4.24%	9.50%	13.74%
Western Gas Partners LP	WES	73.05			16.50%	
Access Midstream Partners L.P.	ACMP	54.20			17.00%	
Markwest Energy Partners LP	MWE	67.19			5.00%	
Targa Resources Corp	TRGP	106.05			10.50%	
Atlas Energy LP	ATLS	31.15			56.00%	
Eagle Rock Energy Partners Ltd	EROC	2.20			(16.00%)	
EnLink Midstream Partners LP	ENLK	29.01			3.00%	

Weighted Mean =	13.84%
Weighted Mean =	13.84%
Mean =	13.32%
Median =	13.74%
Cost of Equity, (K_E) =	**14.00%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Gas Pipelines
2015 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Dividend Earnings

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)	Earnings Growth ***	Ke 1 Year
Spectra Energy Partners, LP	SEP	56.97			20.50%	
ONEOK Partners LP	OKS	39.63			4.00%	
Energy Transfer	ETP	65.00	3.90	6.00%	11.50%	17.50%
TransCanada P.L.	TRP	49.10	2.00	4.07%	11.50%	15.57%
EQT Midstream Partners LP	EQM	88.00				
Boardwalk	BWP	17.77	0.40	2.25%	9.00%	11.25%
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%	16.00%	20.73%
Williams Ptrs.	WPZ	44.75	3.83	8.56%	2.50%	11.06%
Enterprise Products	EPD	36.12	1.53	4.24%	10.50%	14.74%
Western Gas Partners LP	WES	73.05				
Access Midstream Partners L.P.	ACMP	54.20				
Markwest Energy Partners LP	MWE	67.19				
Targa Resources Corp	TRGP	106.05				
Atlas Energy LP	ATLS	31.15				
Eagle Rock Energy Partners Ltd	EROC	2.20				
EnLink Midstream Partners LP	ENLK	29.01				

Weighted Mean =	15.23%
Mean =	15.14%
Median =	15.15%
Cost of Equity, (K_E) =	**15.00%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Gas Pipelines
2015 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
Spectra Energy Partners, LP	SEP	56.97						
ONEOK Partners LP	OKS	39.63						
Energy Transfer	ETP	65.00	3.90	6.00%		14.00%		6.00%
TransCanada P.L.	TRP	49.10	2.00	4.07%	20.00%	8.50%	1.70%	5.77%
EQT Midstream Partners LP	EQM	88.00						
Boardwalk	BWP	17.77	0.40	2.25%	58.00%	5.50%	3.19%	5.44%
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%		10.50%		4.73%
Williams Ptrs.	WPZ	44.75	3.83	8.56%		16.50%		8.56%
Enterprise Products	EPD	36.12	1.53	4.24%	7.00%	16.00%	1.12%	5.36%
Western Gas Partners LP	WES	73.05						
Access Midstream Partners L.P.	ACMP	54.20						
Markwest Energy Partners LP	MWE	67.19						
Targa Resources Corp	TRGP	106.05						
Atlas Energy LP	ATLS	31.15						
Eagle Rock Energy Partners Ltd	EROC	2.20						
EnLink Midstream Partners LP	ENLK	29.01						

All Companies In Survey

Weighted Mean=	6.54%
Mean=	6.96%
Median=	6.96%

Cost of Equity - All, (K_E) = 7.00%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Gas Pipelines
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
ACMP	Access Midstream Partners L.P.	high	$ 57.29	$ 59.19	$ 58.45	$ 60.28	$ 63.33	$ 66.71	$ 65.80	$ 64.42	$ 65.90	$ 64.71	$ 66.79	$ 63.15	$ 54.20	$59.38	$59.75	69.23	0.81
		low	$ 53.63	$ 53.84	$ 55.26	$ 56.31	$ 57.87	$ 59.66	$ 59.75	$ 57.78	$ 62.16	$ 51.68	$ 60.94	$ 49.01					
ATLS	Atlas Energy LP	high	$ 48.78	$ 47.72	$ 44.48	$ 44.95	$ 43.72	$ 45.70	$ 48.47	$ 46.98	$ 46.22	$ 43.94	$ 39.20	$ 35.68	$ 31.15	$35.19	$41.56	NA	(1.17)
		low	$ 44.68	$ 40.52	$ 40.13	$ 39.19	$ 38.27	$ 39.82	$ 42.40	$ 41.51	$ 42.86	$ 32.01	$ 35.07	$ 25.24					
BWP	Boardwalk	high	$ 25.83	$ 25.00	$ 13.58	$ 16.85	$ 18.45	$ 19.12	$ 19.85	$ 20.51	$ 19.98	$ 18.70	$ 18.05	$ 18.25	$ 17.77	$16.81	$17.83	19.13	0.87
		low	$ 23.90	$ 12.18	$ 11.99	$ 13.28	$ 15.51	$ 16.66	$ 17.81	$ 18.51	$ 18.18	$ 14.67	$ 16.14	$ 15.03					
CHK	Chesapeake Energy	high	$ 27.55	$ 27.46	$ 26.23	$ 29.48	$ 30.48	$ 31.49	$ 29.92	$ 27.24	$ 27.15	$ 23.21	$ 24.43	$ 20.35	$ 19.47	$20.22	$25.32	22.69	0.81
		low	$ 25.04	$ 23.92	$ 24.24	$ 25.66	$ 27.30	$ 28.66	$ 26.35	$ 25.38	$ 22.77	$ 16.69	$ 20.24	$ 16.41					
DVN	Devon Energy	high	$ 61.99	$ 65.64	$ 66.95	$ 72.41	$ 73.99	$ 80.63	$ 80.01	$ 77.01	$ 75.34	$ 68.80	$ 68.47	$ 62.24	$ 61.21	$60.01	$67.34	10.50	5.43
		low	$ 58.21	$ 57.67	$ 62.37	$ 66.75	$ 69.20	$ 73.56	$ 75.43	$ 71.48	$ 67.58	$ 53.34	$ 55.44	$ 51.76					
EEP	Enbridge Energy Partners LLP	high	$ 29.94	$ 29.63	$ 27.98	$ 30.12	$ 31.40	$ 36.95	$ 37.15	$ 36.57	$ 40.10	$ 39.16	$ 40.81	$ 41.68	$ 39.90	$37.25	$32.99	NA	(0.01)
		low	$ 28.19	$ 26.30	$ 26.45	$ 26.00	$ 29.46	$ 30.76	$ 33.86	$ 31.78	$ 35.67	$ 31.63	$ 34.64	$ 35.56					
ENB.TO	Enbridge Inc.	high	$ 47.71	$ 47.95	$ 50.35	$ 53.00	$ 53.73	$ 52.38	$ 55.50	$ 55.45	$ 56.87	$ 54.27	$ 53.88	$ 65.13	$ 59.74	$53.85	$51.67	61.38	0.95
		low	$ 45.45	$ 45.63	$ 46.42	$ 50.12	$ 50.79	$ 50.15	$ 49.96	$ 52.86	$ 52.54	$ 47.43	$ 50.91	$ 51.50					
ENLC	Enlink Midstream LLC	high	$ 38.68	$ 42.88	$ 41.71	$ 36.85	$ 42.15	$ 42.52	$ 42.10	$ 41.65	$ 41.74	$ 41.52	$ 38.50	$ 36.82	$ 35.56	$35.19	$37.76	29.57	1.10
		low	$ 34.01	$ 34.93	$ 33.31	$ 33.59	$ 34.66	$ 40.40	$ 37.53	$ 36.56	$ 39.86	$ 31.06	$ 35.03	$ 28.23					
ENLK	EnLink Midstream Partners LP	high	$ 29.17	$ 32.62	$ 35.54	$ 32.14	$ 31.69	$ 32.87	$ 32.77	$ 31.15	$ 31.38	$ 32.11	$ 30.50	$ 29.47	$ 29.01	$28.45	$29.77	NA	(0.30)
		low	$ 26.53	$ 26.44	$ 29.10	$ 29.00	$ 28.49	$ 29.92	$ 29.02	$ 27.05	$ 28.83	$ 26.33	$ 27.55	$ 24.71					
EPD	Enterprise Products	high	$ 66.60	$ 68.10	$ 70.99	$ 74.14	$ 75.10	$ 78.52	$ 79.70	$ 79.20	$ 41.38	$ 40.95	$ 40.12	$ 38.75	$ 36.12	$36.41	$58.86	23.00	1.51
		low	$ 63.02	$ 64.44	$ 66.19	$ 69.03	$ 72.45	$ 73.20	$ 74.52	$ 38.72	$ 39.01	$ 31.65	$ 36.25	$ 30.71					
EQM	EQT Midstream Partners LP	high	$ 63.82	$ 67.80	$ 70.89	$ 77.77	$ 82.90	$ 102.51	$ 97.99	$ 98.47	$ 98.68	$ 92.56	$ 91.85	$ 92.44	$ 88.00	$84.69	$80.19	27.87	3.01
		low	$ 57.62	$ 59.85	$ 63.26	$ 69.69	$ 73.23	$ 82.10	$ 84.11	$ 81.58	$ 84.25	$ 72.56	$ 83.40	$ 75.34					
EQT	EQT Corp	high	$ 93.61	$ 102.67	$ 104.72	$ 111.47	$ 111.16	$ 109.97	$ 107.71	$ 99.12	$ 99.20	$ 94.21	$100.65	$ 91.68	$ 75.70	$87.55	$96.30	24.56	3.38
		low	$ 84.25	$ 91.62	$ 94.35	$ 95.78	$ 101.96	$ 102.15	$ 93.76	$ 92.67	$ 89.77	$ 76.20	$ 88.16	$ 74.37					
EROC	Eagle Rock Energy Partners Ltd	high	$ 6.30	$ 5.59	$ 5.65	$ 5.33	$ 4.55	$ 5.25	$ 5.14	$ 4.48	$ 4.62	$ 3.63	$ 3.50	$ 2.90	$ 2.20	$2.86	$4.29	11.14	0.21
		low	$ 5.45	$ 4.78	$ 4.68	$ 3.97	$ 4.02	$ 4.25	$ 4.31	$ 4.05	$ 3.42	$ 2.64	$ 2.73	$ 1.78					
ETP	Energy Transfer	high	$ 57.00	$ 55.95	$ 56.32	$ 57.23	$ 58.20	$ 57.98	$ 59.29	$ 58.63	$ 64.13	$ 67.15	$ 69.66	$ 66.85	$ 65.00	$62.73	$57.94	326.42	0.19
		low	$ 52.49	$ 53.01	$ 53.01	$ 53.62	$ 54.41	$ 55.90	$ 55.65	$ 54.64	$ 56.60	$ 53.12	$ 62.41	$ 57.19					
KMI	Kinder Morgan Inc.	high	$ 36.45	$ 34.19	$ 32.59	$ 33.98	$ 33.98	$ 36.50	$ 38.05	$ 42.49	$ 40.31	$ 39.60	$ 42.41	$ 43.18	$ 42.31	$38.78	$35.94	33.71	1.19
		low	$ 33.60	$ 31.45	$ 30.81	$ 32.21	$ 32.10	$ 33.33	$ 35.20	$ 35.20	$ 37.34	$ 33.25	$ 37.20	$ 37.06					
MWE	Markwest Energy Partners LP	high	$ 70.57	$ 73.42	$ 66.62	$ 66.23	$ 64.85	$ 71.88	$ 76.02	$ 80.02	$ 80.79	$ 77.18	$ 77.31	$ 71.41	$ 67.19	$68.96	$68.71	127.53	0.51
		low	$ 65.76	$ 62.91	$ 61.60	$ 62.64	$ 58.62	$ 61.93	$ 68.99	$ 67.70	$ 74.61	$ 63.46	$ 65.73	$ 58.67					
NFG	Natl Fuel Gas	high	$ 76.13	$ 77.05	$ 75.99	$ 74.02	$ 75.97	$ 78.46	$ 78.79	$ 76.49	$ 77.05	$ 71.35	$ 72.17	$ 72.21	$ 69.53	$68.91	$72.15	19.54	3.52
		low	$ 69.50	$ 73.14	$ 68.12	$ 68.50	$ 72.75	$ 73.61	$ 68.33	$ 65.29	$ 69.00	$ 64.31	$ 68.07	$ 65.33					

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Gas Pipelines
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
NFX	Newfield Exploration Co	high	$ 26.17	$ 28.35	$ 31.75	$ 34.02	$ 36.77	$ 44.26	$ 45.43	$ 44.87	$ 44.66	$ 37.49	$ 35.84	$ 28.60	$ 27.12	$29.51	$33.50	6.57	3.92
		low	$ 23.73	$ 23.57	$ 27.36	$ 30.94	$ 32.72	$ 36.19	$ 40.30	$ 38.80	$ 36.97	$ 25.14	$ 27.06	$ 22.90					
NGLS	Targa Resources Partners LP	high	$ 52.97	$ 56.94	$ 56.49	$ 62.46	$ 68.34	$ 83.49	$ 72.40	$ 74.51	$ 74.51	$ 73.20	$ 62.20	$ 54.50	$ 47.88	$56.37	$61.45	16.32	2.90
		low	$ 49.66	$ 51.27	$ 52.17	$ 57.02	$ 58.92	$ 67.00	$ 66.02	$ 63.87	$ 68.53	$ 53.75	$ 54.41	$ 40.17					
OKE	ONEOK Inc.	high	$ 68.55	$ 61.78	$ 60.48	$ 63.36	$ 65.31	$ 68.14	$ 68.46	$ 70.23	$ 71.19	$ 66.20	$ 59.66	$ 55.26	$ 49.79	$55.09	$61.56	33.54	1.47
		low	$ 61.00	$ 57.91	$ 57.30	$ 58.11	$ 61.50	$ 63.65	$ 64.06	$ 60.89	$ 65.05	$ 52.06	$ 54.01	$ 43.36					
OKS	ONEOK Partners LP	high	$ 53.68	$ 57.84	$ 54.48	$ 57.50	$ 57.48	$ 58.71	$ 59.11	$ 59.53	$ 59.67	$ 56.78	$ 51.77	$ 46.02	$ 39.63	$47.05	$53.22	17.82	2.32
		low	$ 50.00	$ 51.45	$ 52.10	$ 53.46	$ 53.00	$ 54.91	$ 54.95	$ 53.61	$ 53.51	$ 47.01	$ 44.05	$ 36.67					
SE	Spectra Energy Corp.	high	$ 36.35	$ 38.05	$ 37.87	$ 40.14	$ 40.99	$ 42.61	$ 43.12	$ 41.69	$ 42.18	$ 40.00	$ 40.00	$ 37.79	$ 36.30	$37.07	$38.53	23.59	1.49
		low	$ 34.23	$ 34.34	$ 36.09	$ 37.17	$ 38.10	$ 40.60	$ 40.91	$ 39.23	$ 38.55	$ 34.46	$ 37.66	$ 32.50					
SEP	Spectra Energy Partners, LP	high	$ 45.72	$ 51.00	$ 50.07	$ 55.50	$ 57.56	$ 54.00	$ 56.45	$ 57.69	$ 57.28	$ 56.00	$ 58.81	$ 60.07	$ 56.97	$54.16	$51.79	13.81	3.99
		low	$ 41.53	$ 43.00	$ 47.18	$ 48.10	$ 50.19	$ 50.00	$ 51.10	$ 51.01	$ 50.67	$ 47.01	$ 52.91	$ 50.17					
TRGP	Targa Resources Corp	high	$ 91.50	$ 98.64	$ 99.92	$ 110.25	$ 116.20	$ 160.97	$ 145.00	$ 141.33	$ 143.46	$ 139.99	$130.33	$ 113.99	$ 106.05	$115.11	$115.53	43.72	2.31
		low	$ 84.17	$ 87.54	$ 95.79	$ 99.30	$ 105.41	$ 114.33	$ 126.42	$ 127.68	$ 134.15	$ 104.67	$113.69	$ 88.01					
TRP	TransCanada P.L.	high	$ 45.81	$ 45.71	$ 45.65	$ 47.25	$ 47.52	$ 48.13	$ 52.27	$ 54.05	$ 58.40	$ 51.84	$ 51.44	$ 51.06	$ 49.10	$48.28	$47.78	23.51	2.03
		low	$ 42.21	$ 42.73	$ 43.73	$ 44.78	$ 46.17	$ 45.72	$ 47.24	$ 48.78	$ 51.02	$ 43.71	$ 47.21	$ 44.40					
WES	Western Gas Partners LP	high	$ 61.88	$ 64.28	$ 66.50	$ 69.54	$ 72.17	$ 76.57	$ 79.81	$ 78.86	$ 78.04	$ 75.29	$ 73.83	$ 74.12	$ 73.05	$68.98	$69.31	30.26	2.27
		low	$ 58.86	$ 58.50	$ 63.13	$ 65.51	$ 67.20	$ 71.92	$ 73.43	$ 71.15	$ 72.19	$ 60.09	$ 67.29	$ 63.27					
WMB	Williams Cos	high	$ 40.89	$ 42.47	$ 42.94	$ 42.42	$ 47.11	$ 59.68	$ 58.86	$ 59.46	$ 59.77	$ 57.00	$ 56.81	$ 51.72	$ 44.94	$50.74	$48.60	17.27	2.69
		low	$ 37.77	$ 39.29	$ 39.86	$ 39.31	$ 40.92	$ 46.57	$ 55.52	$ 54.28	$ 54.80	$ 46.15	$ 51.52	$ 41.21					
WPZ	Williams Ptrs.	high	$ 51.42	$ 50.76	$ 50.94	$ 52.83	$ 53.64	$ 57.29	$ 54.87	$ 53.22	$ 55.28	$ 53.60	$ 55.14	$ 52.49	$ 44.75	$49.37	$51.11	27.34	1.70
		low	$ 48.78	$ 47.59	$ 49.00	$ 50.38	$ 50.73	$ 52.38	$ 50.29	$ 48.80	$ 52.26	$ 43.89	$ 50.60	$ 40.48					kmi

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	4.95	4.97	5.00	5.02	5.04	5.05	5.07	5.09	5.10	5.13	5.15	5.17	5.06%	5.15%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	5.12	5.14	5.14	5.16	5.17	5.20	5.22	5.24	5.25	5.28	5.29	5.31	5.21%	5.29%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.87	4.86	4.76	4.71	4.62	4.69	4.67	4.49	4.66	4.52	4.44	4.43	4.64%	4.46%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	5.34	5.35	5.39	5.38	5.39	5.42	5.45	5.46	5.48	5.50	5.50	5.55	5.43%	5.52%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.94	4.95	4.83	4.78	4.68	4.70	4.69	4.55	4.72	4.72	4.64	4.60	4.73%	4.65%
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	4.76	4.75	4.80	4.81	4.76	4.79	4.82	4.81	4.84	4.86	4.85	4.88	4.81%	4.86%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.91	4.93	4.82	4.77	4.67	4.69	4.67	4.53	4.73	4.59	4.56	4.52	4.70%	4.56%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	7.31	7.31	7.41	7.38	7.35	7.40	7.43	7.40	7.47	7.47	7.45	7.51	7.41%	7.48%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	6.62	6.63	6.64	6.60	6.55	6.58	6.62	6.56	6.65	6.62	6.59	6.62	6.61%	6.61%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	5.77	5.80	5.71	5.64	5.56	5.58	5.57	5.46	5.66	5.48	5.40	5.31	5.58%	5.40%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	5.78	5.81	5.72	5.66	5.56	5.58	5.57	5.45	5.62	5.50	5.42	5.32	5.58%	5.41%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	5.67	5.69	5.61	5.52	5.38	5.34	5.35	5.22	5.38	5.26	5.18	5.21	5.40%	5.22%
Northwest Natural Gas	9.05	66765RAA4	Sec M-T Nts A	08/13/2021	A+	6.66	6.67	6.68	6.68	6.62	6.66	6.70	6.65	6.74	6.70	6.67	6.71	6.68%	6.69%
Northwest Natural Gas	8.26	66765RAT3	Sec M-T Nts B	09/21/2014	A+	7.89	7.93	7.99	8.04	6.09	8.13	8.19	8.23					7.81%	
Northwest Natural Gas	7	66765RAY2	Sec M-T Nts B	08/01/2017	A+	6.09	6.10	6.16	6.17	6.16	6.20	6.10	6.10	6.13	6.15	6.15	6.20	6.14%	6.17%
Northwest Natural Gas	7.63	66765RBF2	Sec M-T Nts B	12/09/2019	A+	6.15	6.15	6.22	6.23	6.20	6.24	6.29	6.27	6.32	6.30	6.29	6.33	6.25%	6.31%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	7.10	7.07	6.97	6.97	6.90	6.87	6.93	6.94	7.04	6.99	6.96	7.04	6.98%	7.00%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	6.50	6.53	6.39	6.35	6.26	6.28	6.27	6.11	6.28	6.16	6.07	6.07	6.27%	6.10%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	6.51	6.54	6.40	6.36	6.27	6.29	6.28	6.14	6.32	6.19	6.10	6.09	6.29%	6.13%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	6.49	6.49	6.50	6.49	6.43	6.47	6.50	6.27	6.28	6.41	6.47	6.67	6.46%	6.52%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	6.40	6.43	6.33	6.29	6.43	6.22	6.21	5.98	6.16	6.59	6.49	6.42	6.33%	6.50%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	6.92	6.93	6.69	6.69	6.63	6.67	4.47	6.66	6.78	6.80	6.76	6.84	6.57%	6.80%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	6.12	6.12	6.08	6.06	5.98	6.02	6.06	5.49	6.12	6.07	6.07	6.12	6.03%	6.09%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	5.79	5.80	5.77	5.75	5.57	5.60	5.63	5.49	5.67	5.60	5.60	5.65	5.66%	5.62%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	5.63	5.58	5.58	5.55	5.43	5.47	5.49	5.43	5.64	5.57	5.56	5.63	5.55%	5.59%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	5.49	5.52	5.43	5.27	5.19	5.18	5.07	5.05	5.34	5.21	5.21	5.24	5.27%	5.22%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	5.32	5.23	5.20	6.18	3.63	5.08	5.14	5.04	5.23	5.16	5.16	5.22	5.13%	5.18%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	5.08	4.98	4.92	4.85	4.77	4.73	4.72	4.59	4.75	4.77	4.72	4.78	4.81%	4.76%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	5.46	5.46	5.32		5.11	5.13	5.12	5.00	5.28	5.17	5.18	5.21	5.22%	5.19%
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	5.92	5.93	5.90	5.88	5.81	5.85	5.68	5.74	5.87	5.87	5.82	5.90	5.85%	5.86%
Michigan Consol Gas	8.25	594457BD4	1st	05/01/2014	A	8.09	8.13	8.19	8.25									8.17%	
Michigan Consol Gas	5.7	594457BT9	Sr Nts	03/15/2033	A	5.25	4.93	4.85	4.80	4.75	4.77	4.71	4.62	4.78	4.63	4.55	4.45	4.76%	4.54%
Michigan Consol Gas	5	594457BU6	Sr Nts'E'	10/01/2019	A	4.54	4.48	4.53	4.53	4.50	4.53	4.54	4.54	4.58	4.55	4.54	4.57	4.54%	4.55%
Northern IllinoisGas	6.58	665228BQ4	1st	02/15/2028	A	5.70	5.70	5.68	5.65	5.56	5.59	5.62	5.51	5.63	5.53	5.47	5.45	5.59%	5.48%
Northern IllinoisGas	7.2	665228BV3	1st	05/15/2016	A	6.42	6.44	6.48	6.51	6.53	6.56	6.60	6.61	6.63	6.67	6.68	6.72	6.57%	6.69%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	6.95	6.90	6.98	6.97	6.94	7.00	7.06	7.05	7.10	7.10	7.20	7.31	7.05%	7.20%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	6.07	5.80	5.80						5.75	5.65	5.59	5.69	5.76%	5.64%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nt 144a	02/15/2029	A	6.36	6.31	6.22	6.20	6.09	6.13	6.16	6.04	6.18	5.91	5.85	5.96	6.12%	5.91%
Occidental Pete Corp Med Term	8.75	67461FED5	N Tranche # Tr 001	01/15/2023	A	6.66	6.68	6.66	6.52	6.45	6.49	6.52	6.45	6.55	6.49	6.45	6.54	6.54%	6.49%
Occidental Petro	8.75	67461FED5	Sr Nts	01/15/2023	A	6.66	6.68	6.66	6.52	6.45	6.49	6.52	6.45	6.55	6.49	6.45	6.54	6.54%	6.49%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	5.54	5.53	5.60	5.59	5.57	5.58	5.62	5.64	5.68	5.69	5.68	5.76	5.62%	5.71%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	5.51	5.44	5.42	5.39	5.27	5.26	5.34	5.26	5.46	5.39	5.39	5.45	5.38%	5.41%
Piedmont Natural Gas Co., Inc.	6	720186AE5	Nts'E'	12/19/2033	A	5.08	5.10	5.00	4.95	4.86	4.88	4.87	4.74	4.90	4.83	4.75	4.64	4.88%	4.74%
Piedmont Natural Gas	7.95	72018QAG6	M-T Nts'C'	09/14/2029	A	5.97	5.97	5.96	5.93	5.82	5.86	5.92	5.80	5.94	5.83	5.77	5.75	5.88%	5.78%
Western Atlas Inc	8.55	957674AD6	Deb	06/15/2024	A	6.19	6.20	6.20	6.19	6.12	6.16	6.14	6.07	6.21	6.20	6.18	6.33	6.18%	6.24%
ANR Pipeline	7.38	001814AQ5	Deb	02/15/2024	A-	5.97	5.98	5.96	5.94	5.88	5.91	5.91	5.84	5.94	5.88	5.83	5.88	5.91%	5.86%
ANR Pipeline	9.62	001814AR3	Deb	11/01/2021	A-	7.01	7.03	6.98	6.87	6.78	6.85	6.83	6.74	6.84	6.84	6.94	7.02	6.89%	6.93%
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	6.04	5.85	5.80	5.78	5.80	5.73	5.78	5.71	5.82	5.78	5.75	5.94	5.82%	5.82%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	6.12	5.96	5.91	5.89	5.70	5.84	5.58	5.78	5.90	5.86	5.83	6.02	5.87%	5.90%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.91	5.95	5.70	5.63	5.47	5.50	5.58	5.39	5.78	5.88	5.93	6.14	5.74%	5.98%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.64	5.67	5.47	5.41	5.29	5.31	5.39	5.14	5.42	5.53	5.57	5.78	5.47%	5.63%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	5.97	5.98	6.01	6.03	6.07	6.05	6.09	6.08	6.12	6.17	6.17	6.26	6.08%	6.20%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	6.10	6.11	6.12	6.09	6.07	6.11	6.17	6.16	6.21	6.27	6.27	6.38	6.17%	6.31%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	5.16	5.19	5.06	4.98	4.92	4.90	5.02	4.88	5.14	5.23	5.23	5.52	5.10%	5.33%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	5.00	5.00	5.04	5.03	5.04	5.05	5.09	5.10	5.11	5.16	5.16	5.20	5.08%	5.17%
Atmos Energy Corp.	6.75	049560AA3	Deb	07/15/2028	A-	5.82	5.83	5.68	5.66	5.48	5.51	5.54	5.43	5.56	5.46	5.39	5.38	5.56%	5.41%
Atmos Energy Corp.	4.95	049560AF2	Sr Nts	10/15/2014	A-	4.80	4.81	4.83	4.85	4.87	4.89	4.91	4.92	4.93				4.87%	
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	5.30	5.33	5.29	5.24	4.90	4.92	4.90	4.77	4.94	4.80	4.72	4.61	4.98%	4.71%
Atmos Energy Corp.	6.35	049560AH8	Sr Nts	06/15/2017	A-	5.62	5.63	5.58	5.52	5.51	5.53	5.57	5.58	5.60	5.64	5.64	5.68	5.59%	5.65%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	5.11	5.11	5.16	5.17	5.14	5.15	5.18	5.20	5.22	5.24	5.26	5.31	5.19%	5.27%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	5.61	5.61	5.60	5.58	5.30	5.34	5.36	5.26	5.38	5.28	5.23	5.21	5.40%	5.24%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	6.01	6.03	5.95	5.90	5.82	5.83	5.83	5.70	5.87	5.71	5.63	5.80	5.84%	5.71%
KeySpan Corp.	5.88	49337WAH3	Nts	04/01/2033	A-	5.40	5.42	5.33	5.28	5.19	5.21	5.13	5.00	5.16	5.09	5.01	4.96	5.18%	5.02%
Southwest Gas Corp.	8	844895AL6	Deb	08/01/2026	A-	6.05	6.05	5.94	5.92	5.83	5.87	5.90	5.80	5.92	5.82	5.78	5.77	5.89%	5.79%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.57	5.58	5.39						5.24	5.28	5.30	5.49	5.41%	5.36%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.48	5.51	5.39	5.28	5.25	5.25	5.25	5.25	5.25	5.24	5.24	5.24	5.30%	5.24%
Consolidated Nat Gas	6.88	209615BQ5	Deb	10/15/2026	BBB+	5.81	5.89	5.89				5.78						5.84%	
Consolidated Nat Gas	6.8	209615BS1	Deb	12/15/2027	BBB+	5.73	5.81	5.67										5.74%	
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.95	5.86	5.79	5.69	5.61	5.61	5.63	5.50	5.72	5.67	5.70	5.77	5.71%	5.71%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.96	5.96	5.95	5.93	5.83	5.81	5.84	5.73	5.81	6.17	6.11	6.13	5.94%	6.14%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	5.40	5.42	5.45	5.48	5.50	5.52	5.54	5.57	5.58				5.50%	
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.51	5.58	5.38	5.69	5.23	5.22	5.22	5.04	5.22	5.17	5.09	5.25	5.30%	5.17%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	4.77	4.78	4.80	4.82	4.84	4.85	4.87	4.89	4.90	4.93	4.94	4.96	4.86%	4.94%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.29	5.30	5.14	5.09	4.98	4.98	4.97	4.89	5.03	5.00	4.93	5.00	5.05%	4.98%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	6.82	6.82	6.91	6.92	6.90	6.94	7.00	6.92	6.98	7.02	7.01	7.09	6.94%	7.04%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	6.00	6.00	5.98						5.85	5.88	5.87	6.16	5.96%	5.97%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.78	5.85	5.76						5.55	5.58	5.70	5.90	5.73%	5.73%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.75	5.77	5.66	5.59	5.49	5.52	5.46	5.28	5.44	5.27	5.24	5.19	5.47%	5.23%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	5.26	5.27	5.30	5.26	5.28	5.31	5.31	5.32	5.34	5.38	5.39	5.42	5.32%	5.40%
Equitable Resources, Inc.	7.75	294549AE0	Deb	07/15/2026	BBB	6.71	6.72	6.71	6.68	6.59	6.62	6.65	6.54	6.67	6.23	6.18	6.16	6.54%	6.19%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	6.25	6.27	6.08	6.03	5.68	5.90	5.85	5.92	6.17	6.19	6.16		6.05%	6.18%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	6.29	6.31	6.13	6.04	5.95	5.97	6.00	5.99	6.27	6.24	6.16		6.12%	6.20%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	6.11	6.06	5.93	5.88	5.72	5.74	5.79	5.85	6.07	6.02	6.03		5.93%	6.03%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	02/01/2017	BBB	5.36	5.33	5.38	5.37	5.36	5.38	5.41	5.42	5.46	5.50	5.49		5.41%	5.50%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	02/01/2037	BBB	5.83	5.85	5.73	5.62	5.51	5.53	5.62	5.59	5.84	5.84	5.86		5.71%	5.85%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	01/15/2038	BBB	5.96	5.89	5.79	5.73	5.62	5.84	5.73	5.66	5.92	6.14	5.95		5.84%	6.05%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/01/2018	BBB	5.98	5.98	6.04	6.03	6.01	6.04	6.05	6.04	6.07	6.06	6.06	6.12	6.04%	6.08%
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	5.59	5.57	5.48	5.43	5.34	5.35	5.34	5.28	5.44	5.44	5.41	5.62	5.44%	5.49%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.43	6.37	6.09	6.03	5.20	5.85	5.88	5.75	5.89	5.97	5.90	6.10	5.96%	5.99%
Northwest Pipeline	7.12	667748AF4	Deb	12/01/2025	BBB	5.79	5.79	5.79	5.77	5.68	5.72	5.74	5.65	5.77	5.68	5.63	5.65	5.72%	5.65%
Northwest Pipeline	7	667748AM9	Sr Nts	06/15/2016	BBB	6.16	6.18	6.21	6.24	6.26	6.29	6.31	6.33	6.34	6.39	6.40	6.44	6.30%	6.41%
ONEOK, Inc.	6.5	682680AA1	Sr InsurNts	09/30/2028	BBB	6.49	6.49	6.49	6.49	5.95	6.07	6.56	6.55	6.50	6.53	6.49	6.55	6.43%	6.52%
ONEOK, Inc.	6.88	682680AB9	Deb	09/30/2028	BBB	6.18	6.18	6.17	6.05	6.49	6.49	6.21	6.10	6.24	6.13	6.03	6.05	6.19%	6.07%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/01/2016	BBB	5.47	5.46	5.49	5.48	5.49	5.52	5.65	5.56	5.60	5.65	5.66	5.72	5.56%	5.68%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/01/2036	BBB	5.89	5.78	5.64	5.52	5.40	5.40	5.39	5.27	5.51	5.64	5.66	5.78	5.57%	5.69%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	4.95	4.97	5.00	5.02	5.03	5.05	5.07	5.06	5.07	5.10	5.11	5.14	5.05%	5.12%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	05/15/2036	BBB	5.49	5.55	5.42	5.37	5.26	5.25	5.25	5.19	5.41	5.38	5.31	5.38	5.36%	5.36%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	6.30	6.22	6.18						5.85	6.01	6.02	6.23	6.12%	6.09%
Transcont'l Gas PipeLine	7.08	893570BL4	Deb	07/15/2026	BBB	5.96	5.99	6.01	5.98	5.87	5.88	5.90	5.80	5.92	5.83	5.77	5.80	5.89%	5.80%
Transcont'l Gas PipeLine	7.25	893570BM2	Deb	12/01/2026	BBB	5.69	5.80	5.79	5.77	5.66	5.67	5.69	5.59	5.79	5.70	5.65	5.76	5.71%	5.70%
Transcont'l Gas PipeLine	6.4	893570BW0	Sr Nt	04/15/2016	BBB	5.75	5.76	5.80	5.81	5.83	5.88	5.86	5.86	5.91	5.95	5.96	5.99	5.86%	5.97%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	7.02	7.03	6.99	6.99	6.92	6.96	6.99	6.92	7.02	6.99	6.95	7.01	6.98%	6.98%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	6.63	6.63	6.65	6.64	6.34	6.38	6.62	6.32	6.64	6.60	6.54	6.68	6.56%	6.61%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	6.45	6.45	6.43	6.42	6.34	6.59	6.62	6.54	6.43	6.38	6.32	6.45	6.45%	6.38%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	6.72	6.75	6.52	6.48	6.38	6.41	6.40	6.26	6.44	6.40	6.31	6.39	6.46%	6.37%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	6.02	6.00	5.88	5.80	5.65	5.85	5.64	5.84	5.92	5.83	5.80	5.97	5.85%	5.87%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.65	5.67	5.49	5.40	5.30	5.33	5.43	5.27	5.53	5.46	5.39	5.61	5.46%	5.49%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	5.38	5.32	5.34	5.36	5.36	5.36	5.43	5.43	5.47	5.51	5.51	5.57	5.42%	5.53%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	02/01/2017	BBB	6.25	6.27	6.31	6.32	6.31	6.34	6.39	6.40	6.43	6.49	6.48	6.57	6.38%	6.51%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.71	6.69	6.69	6.42	6.33	6.31	6.33	6.16	6.27	6.33	6.33	6.47	6.42%	6.38%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.46	6.39	6.24	6.34	6.31	6.22	6.19	5.98	6.26	6.09	5.94	5.95	6.20%	5.99%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.64	6.49	6.08	6.19	6.09	6.06	5.85	6.13	5.95	5.81	5.82	6.15%	5.86%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.48	6.40	6.40	6.07	5.95	5.92	5.94	5.75	5.87	5.94	5.94	6.20	6.07%	6.03%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.27	6.26	6.25	5.93	5.60	5.77	5.79	5.68	5.80	5.86	5.86	6.02	5.92%	5.91%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	6.26	6.20	6.16	5.92	5.81	5.74	5.65	5.52	5.65	5.72	5.72	5.83	5.85%	5.76%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	5.33	5.32	5.36	5.34	5.35	5.37	5.41	5.42	5.44	5.49	5.50	5.56	5.41%	5.52%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.53	5.52	5.44	5.22	5.12	5.06	5.14	5.03	5.26	5.31	5.21	5.37	5.27%	5.30%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	4.79	4.75	4.78	4.78	4.78	4.80	4.82	4.82	4.83	4.83	4.83	4.86	4.81%	4.84%
Colorado Interstate Gas	6.8	196522AK2	Sr Nt	11/15/2015	BBB-	6.16	6.18	6.21	6.24	6.26	6.30	6.33	6.36	6.38	6.42	6.45	6.49	6.32%	6.45%
Energen Corp MTN BE	7.32	29265AAP1	N Tranche # Tr 00	7/28/2022	BBB-	6.57	6.58	6.57	6.55	6.48	6.51	6.53	6.45	6.55	6.48	6.43	6.42	6.51%	6.44%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	5.66	5.68	5.70	5.56	5.75	5.79	5.80	5.56	5.83	5.88	5.90	5.92	5.75%	5.90%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	5.46	5.46	5.47	5.48	5.47	5.50	5.50	5.51	5.53	5.58	5.58	5.65	5.52%	5.60%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	6.00	5.97	5.85	5.68	5.58	5.58	5.57	5.48	5.70	5.73	5.77	5.88	5.73%	5.79%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg R	08/01/2066	BBB-	7.52	7.49	7.43	7.40	7.41	7.44	7.45	7.50	7.53	7.66	7.67	7.79	7.52%	7.71%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	6.14	6.03	6.03	5.85	5.69	5.59	5.48	5.39	5.51	5.58	5.58	5.73	5.72%	5.63%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	6.17	6.10	6.05	5.73	5.65	5.58	5.62	5.53	5.74	5.77	5.76	5.76	5.79%	5.76%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	5.80	5.79	5.72	5.53	5.42	5.41	5.49	5.43	5.53	5.59	5.59	5.72	5.59%	5.63%
Southern Natural Gas	8	843452AZ6	Nts	03/01/2032	BBB-	6.00	6.06	6.03	5.99	5.86	5.85	5.84	6.02	6.23	6.20	6.16	6.18	6.04%	6.18%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Southern Union Co.	7.6	844030AA4	Sr Nts	02/01/2024	BBB-	6.31	6.31	6.22	6.18	6.11	6.10	6.12	6.04	6.15	6.06	6.01	6.00	6.13%	6.02%
Southern Union Co.	8.25	844030AC0	Sr Nts	11/15/2029	BBB-	6.83	6.83	6.82	6.73	6.55	6.44	6.47	6.34	6.49	6.37	6.30	6.28	6.54%	6.32%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	6.40	6.39	6.39	6.00	5.90	5.83	5.81	5.77	5.89	5.96	5.96	6.11	6.03%	6.01%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.39	6.24	6.08	5.93	5.82	5.72	5.89	5.97	5.79	5.65	5.66	5.99%	5.70%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	6.26	6.25	6.31	6.30	6.27	6.28	6.30	6.20	6.25	6.29	6.30	6.39	6.28%	6.33%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	6.00	5.93	5.93	5.75	5.60	5.57	5.55	5.48	5.61	5.67	5.67	5.83	5.72%	5.72%
Williams Companies, Inc. (The)	7.62	969457AW0	Nts	07/15/2019	BBB-	6.57	6.65	6.72	6.72	6.68	6.58	6.63	6.61	6.66	6.63	6.62	6.68	6.65%	6.64%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	7.02	6.92	6.80	6.55	6.45	6.34	6.48	6.30	6.56	6.56	6.63	7.07	6.64%	6.75%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	7.14	7.06	6.96	6.61	6.52	6.58	6.48	6.41	6.53	6.66	6.57	7.24	6.73%	6.82%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	6.72	6.62	6.62	6.55	6.49	6.34	6.41	6.39	6.47	6.51	6.57	6.82	6.54%	6.63%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	7.44	7.35	7.24	7.04	6.87	6.71	6.84	6.74	7.00	6.99	7.12	7.50	7.07%	7.20%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BB+	5.05	5.08	5.10	5.10	5.10	5.05	5.08	5.07	5.09	5.14	5.13	5.21	5.10%	5.16%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BB+	5.25	5.37	5.40	5.39	5.40	5.35	5.39	5.40	5.41	5.47	5.49	5.53	5.40%	5.50%
ONEOK, Inc.	5.2	682680AM5	Nts	06/15/2015	BB+	4.92	4.90	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91%	4.91%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BB+	6.14	6.32	6.37	6.11	5.97	5.90	5.93	5.79	6.04	6.04	5.95	6.18	6.06%	6.06%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	5.83	5.83	5.87	5.83	5.81	5.82	5.88	5.87	5.92	5.99	6.01	6.14	5.90%	6.05%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	5.78	5.79	5.84	5.86	5.87	5.84	5.88	5.90	5.92	6.01	6.01	6.07	5.90%	6.03%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	6.12	6.14	6.03	5.94	5.83	5.78	5.76	5.59	5.79	6.08	5.97	6.17	5.93%	6.07%
El Paso Natural Gas	8.62	283695AZ7	Deb	01/15/2022	BB	6.76	6.69	6.65	6.63	6.57	5.81	6.64	6.12	6.72	6.73	6.69	6.81	6.57%	6.74%
El Paso Natural Gas	7.5	283695BE3	Deb	11/15/2026	BB	6.06	6.03	5.99	5.96	5.82	5.80	5.76	5.76	5.94	5.95	6.01	6.06	5.93%	6.01%
El Paso Natural Gas	8.38	283695BK9	Sr Sub Nts	06/15/2032	BB	6.23	6.26	6.26	6.63	5.96	5.98	5.97	6.12	6.30	6.32	6.36	6.37	6.23%	6.35%
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	7.01	7.01	7.01	7.01	7.02%	7.01%
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	4.96	4.96	5.00	5.01	5.01	5.04	5.05	5.05	5.06	5.09	5.11	5.12	5.04%	5.11%
Kinder Morgan Fin Co Ulc	5.7	49455WAD8	Gtd Nts	01/05/2016	BB	5.32	5.31	5.35						5.46	5.45	5.44	5.47	5.40%	5.45%
Kinder Morgan Fin Co Ulc	6.4	49455WAF3	Gtd Nt	01/05/2036	BB									7.02	7.02	7.02		7.02%	7.02%
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	7.22	7.22	7.22	7.22	7.23%	7.22%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.99	6.99	6.99	6.99	7.00%	6.99%
Tennessee GasPipeline	7	880451AS8	Deb	03/15/2027	BB	5.81	5.76	5.78	5.66	5.57	5.55	5.58	5.50	5.78	5.74	5.83	5.87	5.70%	5.81%
Tennessee GasPipeline	7.5	880451AT6	Deb	04/01/2017	BB	6.44	6.40	6.43	6.42	6.42	6.43	6.50	6.54	6.57	6.63	6.64	6.71	6.51%	6.66%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	5.79	5.89	5.79	5.73	5.63	5.52	5.53	5.66	5.91	6.02	6.06	6.09	5.80%	6.06%
Tennessee GasPipeline	7	880451AV1	Deb	10/15/2028	BB	5.79	5.74	5.73	5.68	5.52	5.48	5.49	5.45	5.75	5.70	5.77	5.78	5.66%	5.75%
Tennessee GasPipeline	8.38	880451AW9	Nts	06/15/2032	BB	6.30	6.29	6.26	6.18	5.99	5.98	5.91	6.09	6.37	6.31	6.30	6.38	6.20%	6.33%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	5.78	5.75	5.79	5.80	6.76	5.80	6.02	6.24	5.92	5.96	6.00	6.08	5.99%	6.01%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	6.13	6.00	6.07	6.06	5.91	5.93	6.11	5.93	5.99	5.97	6.03	6.36	6.04%	6.12%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Co	11/15/2035	BB-	2.62	2.61	2.64						2.69		2.73	2.75	2.67%	2.74%
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Co	5/15/2037	BB-	2.47	2.47	2.46						2.43	2.51	2.51	2.57	2.49%	2.53%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv	5/15/2037	BB-	2.49	2.49	2.47						2.47	2.53	2.52	2.63	2.51%	2.56%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Co	12/15/2038	BB-	2.41	2.40	2.39						2.34	2.37	2.36	2.50	2.40%	2.41%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	6.27	6.18	6.22	6.24	6.13	6.14	6.39	6.24	6.29	6.33	6.37	6.62	6.29%	6.44%
Plains Exploration & Production Comp	7	726505AC4	SrNts	03/15/2017	BB-						6.76	6.76	6.76	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	4.60	7.60	7.60	7.60	7.60	7.60	7.17%	7.60%
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	7.01	6.98	7.05	7.05	7.05	7.05	7.04	7.02	7.08	7.57	7.91	12.07	7.57%	9.18%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B												7.92	7.92%	7.92%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	7.36	7.32	7.64	7.70	7.83	7.88	8.19	11.05	12.28	35.63	37.50	89.06	19.95%	54.06%
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%
Cimarex Energy Co.	7.12	171798AA9	SrNts	05/01/2017	NR	6.88	6.88	6.88	6.88	5.88	6.88	6.88	6.88	6.87	6.87	6.87	6.87	6.79%	6.87%
Colorado Interstate Gas	5.95	196522AH9	Sr Nts	03/15/2015	NR	5.65	5.66	5.69	5.72	5.74	5.75	5.77	5.80	5.81	5.85	5.86	5.88	5.77%	5.86%
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%	
Denbury Resources	7.5	24823UAF5	Gtd Sr Sub Nt	12/15/2015	NR	7.23	7.23	7.23	7.23	7.23	7.29	7.23	7.23	7.22	7.22	7.22	7.22	7.23%	7.22%
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%
Enterprise Oil Plc	7	293779AC8	Sr Nt	05/01/2018	NR									5.57	5.57			5.57%	5.57%
Ferrellgas,L.P./Finance	6.75	315292AD4	SrNts	05/01/2014	NR	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%	
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	7.01				7.02%	
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55					6.55%	
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%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	5.87	5.84	5.84	5.70	5.61	5.65	5.63	5.52	5.65	5.68	5.67	5.87	5.71%	5.74%
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	7.22	7.22	7.23	7.23	7.23%	7.23%
Southern Natural Gas	7.35	843452AY9	Nts	02/15/2031	NR	5.98	6.01	5.92	5.87	6.79	5.81	5.79	5.86	6.03	6.10	6.01	6.17	6.03%	6.09%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Gas Pipelines
2014 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

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Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	5.23	5.25	5.22	5.19	5.21				5.27	5.29	5.28	5.32	5.25%	5.30%
Tesoro Corp.	6.62	881609AS0	Sr Nt	11/01/2015	NR	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.55	6.55	6.55	6.55	6.56%	6.55%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30%	7.30%
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	NR	4.71	4.73	4.75										4.73%	
			Counts of data			190	190	190	176	174	175	176	175	185	181	180	173	195	183

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	4.94%	4.93%
AA's	6.12%	6.02%
A's	5.87%	5.81%
BBB's	5.93%	5.95%
BB's	5.73%	5.87%
B's	7.92%	7.92%
CCC's	13.35%	30.41%
NR's	6.61%	6.29%
ALL	6.01%	6.17%
BBB- & Above	5.87%	5.85%
BB- & Above	5.84%	5.85%

**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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	0.43	0.40	0.50	0.02	0.03	0.25	0.78	1.10	1.40	0.35	0.35	0.39	0.50%	0.36%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	0.90	0.87	0.67	1.00	0.97	1.24	1.49	1.62	1.77	0.66	0.58	0.61	1.03%	0.62%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.32	4.30	4.14	1.76	3.90	3.83	3.90	3.68	3.97	3.73	3.58	3.56	3.72%	3.62%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	1.27	1.25	1.37	0.78	0.82	1.04	1.24	1.29	1.46	1.18	1.12	1.33	1.18%	1.21%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.27	4.27	4.09	3.98	3.83	3.85	3.63	3.61	3.90	3.88	3.76	3.69	3.90%	3.78%
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	1.81	1.73	1.90	1.76	1.44	1.61	1.83	1.76	1.92	1.71	1.62	1.75	1.74%	1.69%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.37	4.40	4.23	4.14	3.98	4.00	3.98	3.76	4.07	3.85	3.80	3.73	4.03%	3.79%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	3.62	3.59	3.78	3.73	3.59	3.76	3.83	3.73	3.93	3.44	3.35	3.46	3.65%	3.42%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	3.69	3.69	3.67	3.29	3.13	4.24	3.34	3.20	3.43	3.25	3.14	3.18	3.44%	3.19%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	4.55	4.58	4.43	4.34	4.20	4.10	4.10	3.90	4.24	3.95	3.81	3.64	4.15%	3.80%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	4.60	4.63	4.48	4.34	4.20	4.24	4.22	4.03	4.31	4.05	3.91	3.72	4.23%	3.89%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	4.66	4.69	4.54	4.37	4.12	4.05	4.07	3.83	4.12	3.90	3.76	3.80	4.16%	3.82%
Northwest Natural Gas	9.05	66765RAA4	Sec M-T Nts A	08/13/2021	A+	3.58	3.58	3.54	3.29	3.15	3.24	3.34	3.21	3.46	3.23	3.12	3.16	3.33%	3.17%
Northwest Natural Gas	8.26	66765RAT3	Sec M-T Nts B	09/21/2014	A+	1.01	0.98	1.25										1.08%	
Northwest Natural Gas	7	66765RAY2	Sec M-T Nts B	08/01/2017	A+	2.56	2.52	2.73	2.34	2.34	2.51	1.88	1.93	2.12	1.81	1.73	1.90	2.20%	1.81%
Northwest Natural Gas	7.63	66765RBF2	Sec M-T Nts B	12/09/2019	A+	3.11	3.08	3.25	3.42	3.32	2.79	3.00	2.90	3.12	3.12	3.03	3.14	3.11%	3.10%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	4.58	4.48	4.16	4.12	5.10	3.88	4.03	4.05	4.31	3.89	3.76	3.93	4.19%	3.86%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	5.52	5.55	5.33	5.22	5.05	6.12	5.10	4.86	5.12	4.89	4.75	4.72	5.19%	4.79%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	5.52	5.55	5.33	5.22	2.17	5.10	5.07	4.86	5.14	4.93	4.78	4.75	4.87%	4.82%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	4.23	4.21	4.19	4.20	4.05	4.12	4.20	3.17	3.19	3.71	3.82	4.35	3.95%	3.96%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	5.52	5.55	5.40	5.32	5.17	5.22	5.20	4.83	5.02	5.73	5.59	5.46	5.33%	5.59%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	4.22	4.22	3.56	3.22	3.07	3.20	3.27	3.15	3.48	3.50	3.36	3.53	3.48%	3.46%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	4.32	4.32	4.20	4.15	3.98	4.40	4.12	3.88	4.26	4.01	4.00	4.11	4.15%	4.04%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	4.82	4.82	4.76	4.71	4.34	4.05	4.46	4.15	4.39	4.31	4.30	4.41	4.46%	4.34%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	4.53	4.43	4.41	4.34	4.12	4.20	4.24	4.12	4.39	4.31	4.30	4.41	4.32%	4.34%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	4.60	4.64	4.48	4.15	4.00	4.00	3.98	3.78	4.26	4.04	4.04	4.09	4.17%	4.06%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	4.20	4.04	3.97	3.90	3.63	3.71	3.83	5.04	4.00	3.81	3.80	3.91	3.99%	3.84%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.61	4.43	4.32	4.22	4.00	3.98	3.93	3.71	4.00	4.03	3.94	4.05	4.10%	4.01%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	4.54	4.54	4.28	4.10	4.03	3.89	3.88	3.66	4.14	3.97	3.98	4.03	4.09%	3.99%
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	4.03	4.03	3.93	3.95	3.81	3.59	3.68	3.32	3.65	3.70	3.55	3.73	3.75%	3.66%
Michigan Consol Gas	8.25	594457BD4	1st	05/01/2014	A	0.48	0.43	1.45										0.79%	
Michigan Consol Gas	5.7	594457BT9	Sr Nts	03/15/2033	A	5.00	4.48	4.33	4.24	4.15	4.20	4.08	3.93	4.22	3.93	3.78	3.59	4.16%	3.77%
Michigan Consol Gas	5	594457BU6	Sr Nts'E'	10/01/2019	A	3.06	2.78	2.97	2.78	2.61	2.79	2.90	2.80	3.00	2.85	2.76	2.86	2.85%	2.82%
Northern IllinoisGas	6.58	665228BQ4	1st	02/15/2028	A	5.03	5.03	4.99	4.93	4.76	4.81	4.74	4.66	4.83	4.65	4.53	4.48	4.79%	4.55%
Northern IllinoisGas	7.2	665228BV3	1st	05/15/2016	A	1.82	1.79	1.90	1.79	1.91	2.18	1.91	2.60	2.78	1.89	1.85	1.94	2.03%	1.89%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	2.75	2.53	2.69	2.27	2.17	2.35	2.59	2.61	2.70	2.45	2.74	3.02	2.57%	2.74%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	5.31	4.83	4.81						4.70	4.46	4.34	4.52	4.71%	4.44%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nt 144a	02/15/2029	A	5.27	5.18	5.01	4.95	4.78	4.86	4.90	4.68	4.80	4.38	4.25	4.44	4.79%	4.36%
Occidental Pete Corp Med Term	8.75	67461FED5	'N Tranche # Tr 00	1/15/2023	A	4.48	4.50	4.41	4.12	3.98	4.05	3.73	3.54	3.80	3.77	3.64	3.83	3.99%	3.75%
Occidental Petro	8.75	67461FED5	Sr Nts	01/15/2023	A	4.48	4.50	4.41	4.12	3.98	4.05	3.73	3.54	3.80	3.77	3.64	3.83	3.99%	3.75%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	1.96	1.84	2.07	1.68	1.58	1.65	1.88	1.97	2.19	1.88	1.79	2.11	1.88%	1.93%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	4.52	4.38	4.34	4.27	4.03	4.05	4.17	4.03	4.41	4.21	4.20	4.31	4.24%	4.24%
Piedmont Natural Gas Co., Inc.	6	720186AE5	Nts'E'	12/19/2033	A	4.60	4.63	4.46	4.39	4.24	4.27	4.20	3.98	4.26	4.16	4.01	3.82	4.25%	4.00%
Piedmont Natural Gas	7.95	72018QAG6	M-T Nts'C'	09/14/2029	A	4.89	4.89	4.85	4.73	4.54	4.61	4.71	4.49	4.75	4.56	4.44	4.39	4.65%	4.46%
Western Atlas Inc	8.55	957674AD6	Deb	06/15/2024	A	4.03	4.03	4.01	3.88	3.71	4.15	3.76	3.61	3.92	3.80	3.73	4.06	3.89%	3.86%
ANR Pipeline	7.38	001814AQ5	Deb	02/15/2024	A-	4.45	4.45	4.39	4.35	4.22	4.27	4.09	4.09	4.12	4.05	3.93	4.03	4.20%	4.00%
ANR Pipeline	9.62	001814AR3	Deb	11/01/2021	A-	4.00	4.00	3.82	3.73	2.93	3.02	3.06	2.79	3.07	3.11	3.34	3.48	3.36%	3.31%
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	4.70	4.32	4.20	4.15	3.95	5.49	4.12	3.98	4.22	4.03	3.96	4.34	4.29%	4.11%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	4.70	4.38	4.26	4.18	4.00	4.07	4.12	3.96	4.22	4.03	3.96	4.34	4.19%	4.11%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.90	5.93	5.68	5.61	5.44	4.07	5.56	5.37	5.75	5.87	5.92	6.13	5.60%	5.97%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.39	5.42	5.17	5.09	4.83	4.95	5.06	4.73	5.09	5.24	5.28	5.54	5.15%	5.35%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	2.47	2.44	2.51	2.71	2.61	2.78	3.00	1.80	2.07	2.64	2.61	2.99	2.55%	2.75%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	2.67	2.64	2.62	2.24	2.15	2.32	2.52	2.50	2.71	2.64	2.60	2.99	2.55%	2.74%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.82	4.86	4.67	4.56	4.46	4.43	4.56	4.37	4.75	4.90	4.91	5.32	4.72%	5.04%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	1.31	1.22	1.39	1.56	1.61	1.71	0.30	0.41	0.60	1.49	1.40	1.61	1.22%	1.50%
Atmos Energy Corp.	6.75	049560AA3	Deb	07/15/2028	A-	5.18	5.18	4.91	4.82	4.49	4.54	4.59	4.39	4.63	4.42	4.30	4.25	4.64%	4.32%
Atmos Energy Corp.	4.95	049560AF2	Sr Nts	10/15/2014	A-	0.60	0.57	0.63	2.94									1.19%	
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	5.00	5.03	4.98	4.90	4.32	4.37	4.34	4.10	4.39	4.18	4.03	3.84	4.46%	4.02%
Atmos Energy Corp.	6.35	049560AH8	Sr Nts	06/15/2017	A-	2.35	2.31	1.92	1.24	1.12	1.30	1.54	1.58	1.76	1.41	1.32	1.50	1.61%	1.41%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	1.63	1.55	1.78	1.24	1.02	1.07	1.30	1.43	1.60	1.55	1.62	1.83	1.47%	1.67%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	4.83	4.83	4.81	4.73	4.22	4.27	4.32	4.12	4.36	4.12	4.00	3.95	4.38%	4.02%
KeySpan Corp.	8	49337WAC4	Nts	11/15/2030	A-	5.05	5.08	4.93	4.88	4.73	4.66	4.66	4.42	4.70	4.48	4.33	4.61	4.71%	4.47%
KeySpan Corp.	5.88	49337WAH3	Nts	04/01/2033	A-	5.15	5.18	5.03	4.95	4.81	4.83	4.71	4.49	4.75	4.63	4.49	4.40	4.79%	4.51%
Southwest Gas Corp.	8	844895AL6	Deb	08/01/2026	A-	4.58	4.58	4.34	4.20	4.03	4.10	4.17	3.95	4.22	4.02	3.88	3.83	4.16%	3.91%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.15	5.17	4.87						4.61	4.65	4.69	5.00	4.88%	4.78%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.60	5.64	5.46	5.29	5.25	5.25	5.25	5.25	5.24	5.24	5.24	5.24	5.33%	5.24%
Consolidated Nat Gas	6.88	209615BQ5	Deb	10/15/2026	BBB+	4.93	5.08	5.06				4.81						4.97%	
Consolidated Nat Gas	6.8	209615BS1	Deb	12/15/2027	BBB+	4.93	5.08	4.81										4.94%	
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.09	4.95	4.83	4.65	4.51	4.51	4.56	4.34	4.70	4.58	4.63	4.73	4.67%	4.65%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.08	5.08	5.06	5.03	4.86	4.71	4.76	4.54	4.70	5.39	5.29	5.32	4.99%	5.33%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	0.37	0.54	0.64	3.28									1.21%	
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.13	4.83	4.76	4.56	4.54	4.54	4.24	4.53	4.46	4.34	4.59	4.63%	4.46%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	0.57	0.57	0.69	1.23	1.54	1.94	2.37	2.68	1.77	0.74	0.77	1.02	1.32%	0.84%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.08	5.08	4.84	4.76	4.59	4.59	4.59	4.44	4.63	4.61	4.49	4.60	4.69%	4.57%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	3.14	3.09	3.32	3.09	2.98	3.17	3.39	3.10	3.31	3.13	3.05	3.28	3.17%	3.15%
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	4.98	4.98	4.94						4.63	4.69	4.67	5.16	4.86%	4.84%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.03	5.13	4.98						4.61	4.63	4.84	5.15	4.91%	4.87%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.65	5.68	5.52	5.39	5.25	5.29	5.20	4.90	5.17	4.89	4.84	4.75	5.21%	4.83%
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	1.74	1.66	1.77	1.95	2.00	2.17	0.50	0.64	0.81	1.47	1.40	1.55	1.47%	1.47%
Equitable Resources, Inc.	7.75	294549AE0	Deb	07/15/2026	BBB	5.98	5.98	5.96	5.86	5.69	5.75	5.79	2.52	5.84	4.98	4.86	4.81	5.34%	4.88%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	5.70	5.72	5.42	1.93	5.10	5.12	5.05	6.15	5.56	5.57	5.51		5.17%	5.54%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.68	5.70	5.42	5.27	5.12	5.17	5.22	5.20	5.63	5.55	5.43		5.40%	5.49%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.64	5.57	5.37	5.27	5.03	5.05	5.12	5.22	5.56	5.48	5.49		5.35%	5.49%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	1.90	1.64	1.85	1.93	1.85	2.00	2.17	0.56	1.02	1.82	1.71		1.68%	1.77%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.61	5.63	5.46	5.29	5.15	5.17	5.32	5.25	5.59	5.61	5.64		5.43%	5.63%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.67	5.58	5.43	5.34	5.20	5.22	5.32	5.22	5.58	5.90	5.64		5.46%	5.77%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/01/2018	BBB	3.08	2.99	3.19	2.72	2.59	2.76	2.87	2.73	2.92	2.79	2.72	2.92	2.86%	2.81%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nts	10/01/2028	BBB	4.64	4.64	4.64	4.64	4.64	4.54	4.64	4.64	4.63	4.63	4.64	4.64	4.63%	4.64%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	4.98	4.93	4.78	4.70	4.54	4.56	4.54	4.44	4.73	4.68	4.63	4.97	4.71%	4.76%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.07	5.97	5.51	5.39	5.20	5.07	5.12	4.90	5.14	5.25	5.13	5.46	5.35%	5.28%
Northwest Pipeline	7.12	667748AF4	Deb	12/01/2025	BBB	4.58	4.58	4.56	4.54	4.37	4.27	4.34	4.12	4.39	4.22	4.10	4.14	4.35%	4.15%
Northwest Pipeline	7	667748AM9	Sr Nts	06/15/2016	BBB	1.22	1.19	1.23	0.86	1.00	1.29	1.36	1.54	1.74	0.95	0.91	1.04	1.19%	0.97%
ONEOK, Inc.	6.5	682680AA1	Sr InsurNts	09/30/2028	BBB	6.48	6.48	6.48	6.49	5.27	6.49	6.61	6.59	6.51	6.55	6.49	6.59	6.42%	6.54%
ONEOK, Inc.	6.88	682680AB9	Deb	09/30/2028	BBB	5.73	5.73	5.71	5.47	6.49	5.49	5.73	5.55	5.80	5.60	5.43	5.46	5.68%	5.50%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	1.44	1.26	1.33	0.02	0.16	0.41	0.68	0.83	1.15	1.47	1.38	1.83	1.00%	1.56%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.63	5.48	5.28	5.07	4.90	4.90	4.88	4.71	5.07	5.26	5.30	5.46	5.16%	5.34%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	0.93	0.90	1.10	0.62	0.84	1.24	1.65	1.52	1.79	0.57	0.55	0.62	1.03%	0.58%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.05	5.13	4.93	4.83	4.68	4.68	4.66	4.57	4.91	4.85	4.75	4.85	4.82%	4.82%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	5.66	5.52	5.44						4.73	5.05	5.08	5.46	5.28%	5.20%
Transcont'l Gas PipeLine	7.08	893570BL4	Deb	07/15/2026	BBB	5.03	5.08	5.11	5.00	4.78	4.79	4.86	4.64	4.90	4.67	4.55	4.59	4.83%	4.60%
Transcont'l Gas PipeLine	7.25	893570BM2	Deb	12/01/2026	BBB	4.43	4.63	4.61	4.59	4.37	4.22	4.29	4.07	4.51	4.34	4.22	4.45	4.39%	4.34%
Transcont'l Gas PipeLine	6.4	893570BW0	Sr Nt	4/15/2016	BBB	1.21	1.16	1.28	1.24	1.36	0.62	1.66	1.82	2.14	1.06	1.02	1.14	1.31%	1.07%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	4.50	4.48	4.36	4.24	4.09	4.17	4.27	4.07	4.34	4.06	3.93	4.04	4.21%	4.01%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	4.66	4.64	4.66	4.45	4.44	4.36	4.59	4.39	4.31	4.34	4.17	4.48	4.46%	4.33%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	4.71	4.69	4.61	4.62	4.29	4.51	4.44	4.24	4.51	4.31	4.15	4.45	4.46%	4.30%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	5.86	5.89	5.53	5.42	5.27	5.29	5.29	5.07	5.36	5.26	5.12	5.23	5.38%	5.20%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.37	5.33	5.13	4.99	4.76	4.76	4.73	4.73	5.19	5.02	4.97	5.23	5.02%	5.07%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.33	5.35	5.09	4.95	4.81	4.86	5.00	4.76	5.14	5.04	4.93	5.25	5.04%	5.07%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	1.91	1.44	1.47	1.23	1.24	1.36	1.71	1.72	1.99	1.74	1.69	2.01	1.63%	1.81%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	1.77	1.75	1.84	1.35	2.08	2.27	2.51	0.55	0.80	1.87	1.68	2.21	1.72%	1.92%
Williams Ptns L P	7.25	96950HAD2	Fixed Rt Sr Nt	2/1/2017	BBB	1.77	1.75	1.84	1.35	2.08	2.27	2.51	0.55	0.80	1.87	1.68	2.21	1.72%	1.92%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.23	6.20	6.19	5.65	5.47	5.42	5.47	5.34	5.34	5.40	5.40	5.69	5.65%	5.50%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.45	6.38	6.23	6.08	6.30	6.21	6.17	5.98	6.24	6.08	5.93	5.94	6.17%	5.98%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.63	6.48	5.10	6.17	6.08	6.05	5.83	6.12	5.95	5.80	5.81	6.06%	5.85%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.13	6.00	5.99	5.42	5.20	5.05	5.10	4.71	4.97	5.10	5.10	5.58	5.36%	5.26%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.03	6.00	5.99	5.42	5.17	5.12	5.10	4.86	5.12	5.25	5.25	5.53	5.40%	5.34%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	5.71	5.60	5.54	5.10	4.90	4.78	4.64	4.39	4.63	4.70	4.70	4.88	4.96%	4.76%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	1.46	1.26	1.39	0.21	0.29	0.53	0.85	0.97	1.20	1.38	1.34	1.78	1.06%	1.50%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.19	5.17	5.05	5.22	4.56	4.46	4.59	4.42	4.78	4.84	4.69	4.93	4.83%	4.82%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	3.01	2.70	2.81	2.63	2.60	2.71	2.88	2.85	3.00	2.76	2.67	2.89	2.79%	2.77%
Colorado Interstate Gas	6.8	196522AK2	Sr Nt	11/15/2015	BBB-	0.93	0.90	0.95	2.19	2.37	0.02	0.02	0.02	0.25	1.02	1.21	1.44	0.94%	1.22%
Energen Corp MTN BE	7.32	29265AAP1	N Tranche # Tr 000	7/28/2022	BBB-	5.63	5.63	5.59	5.47	5.29	5.37	5.42	5.22	5.47	5.25	5.13	5.08	5.38%	5.15%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	0.88	0.88	0.83	2.33	2.33	3.16	3.28			0.92	1.32		1.77%	1.12%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	2.03	1.94	1.86	2.07	2.00	2.16	2.15	2.24	0.76	1.75	1.65	2.12	1.89%	1.84%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.79	5.75	5.58	5.34	5.17	5.17	5.17	5.03	5.36	5.40	5.46	5.61	5.40%	5.49%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg R	08/01/2066	BBB-	7.51	7.47	7.41	7.37	7.39	7.42	7.42	7.48	7.51	7.65	7.65	7.78	7.51%	7.69%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.45	5.25	5.24	4.93	4.51	4.32	4.10	3.93	4.17	4.30	4.30	4.59	4.59%	4.40%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.42	5.31	5.22	4.64	4.51	4.39	4.46	4.29	4.68	4.72	4.69	4.69	4.75%	4.70%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	4.54	4.51	4.34	3.83	3.58	3.54	3.71	3.59	3.83	3.90	3.90	4.19	3.96%	4.00%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Southern Natural Gas	8	843452AZ6	Nts	03/01/2032	BBB-	5.15	5.23	5.18	5.10	4.90	4.89	4.88	5.15	5.41	5.39	5.34	5.35	5.16%	5.36%
Southern Union Co.	7.6	844030AA4	Sr Nts	02/01/2024	BBB-	4.98	4.98	4.76	4.68	4.51	4.49	4.54	4.10	4.37	4.24	4.12	4.08	4.49%	4.15%
Southern Union Co.	8.25	844030AC0	Sr Nts	11/15/2029	BBB-	6.17	6.17	6.15	6.03	5.73	5.47	5.51	5.29	5.56	5.37	5.25	5.20	5.66%	5.27%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	5.60	5.57	5.56	6.08	4.54	4.38	4.39	4.27	4.51	4.65	4.65	4.94	4.93%	4.75%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.38	6.23	4.86	5.93	5.81	5.71	5.69	5.95	5.78	5.64	5.65	5.86%	5.69%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	3.83	3.77	3.97	3.78	3.67	3.71	3.68	3.34	3.61	3.41	3.39	3.77	3.66%	3.52%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	5.23	5.10	5.09	4.73	4.44	4.39	4.34	4.22	4.46	4.55	4.55	4.84	4.66%	4.65%
Williams Companies, Inc. (The)	7.62	969457AW0	Nts	07/15/2019	BBB-	4.31	4.53	4.72	4.56	4.42	4.05	4.24	4.15	4.34	4.09	4.01	4.18	4.30%	4.09%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	6.82	6.66	6.48	4.46	5.95	5.82	5.81	5.78	6.08	6.10	6.21	6.87	6.09%	6.39%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	6.90	6.78	6.63	4.46	5.95	5.78	5.90	5.78	5.97	6.16	6.02	7.02	6.11%	6.40%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	5.13	4.85	4.81	4.46	5.95	3.86	4.05	4.00	4.24	4.30	4.45	5.11	4.60%	4.62%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	7.02	6.88	6.73	6.44	6.17	5.95	6.15	6.00	6.36	6.34	6.52	7.06	6.47%	6.64%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BB+	2.46	2.57	2.61	2.74	2.74	2.38	2.56	1.21	1.43	2.26	2.17	2.78	2.33%	2.40%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BB+	1.54	2.28	2.45	2.73	2.76	0.85	1.33	1.40	1.56	2.18	2.28	2.46	1.99%	2.31%
ONEOK, Inc.	5.2	682680AM5	Nts	06/15/2015	BB+	1.03	0.50	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14%	0.02%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BB+	6.20	6.43	6.51	6.15	5.95	5.86	5.90	5.70	6.06	6.05	5.93	6.26	6.08%	6.08%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	2.45	2.38	2.47	2.12	2.05	2.10	2.38	2.33	2.62	2.44	2.48	3.09	2.41%	2.67%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	1.73	1.69	1.86	1.97	2.02	1.87	2.12	2.22	2.38	1.98	1.96	2.20	2.00%	2.05%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	5.90	5.93	5.78	5.64	5.49	5.42	5.39	5.18	5.44	5.83	5.69	5.95	5.64%	5.82%
El Paso Natural Gas	8.62	283695AZ7	Deb	01/15/2022	BB	4.48	4.28	4.14	4.15	4.00	4.07	3.70	3.68	3.93	4.06	3.93	4.22	4.05%	4.07%
El Paso Natural Gas	7.5	283695BE3	Deb	11/15/2026	BB	4.98	4.90	4.81	4.78	4.51	4.32	4.24	4.24	4.61	4.65	4.77	4.86	4.64%	4.76%
El Paso Natural Gas	8.38	283695BK9	Sr Sub Nts	06/15/2032	BB	5.40	5.44	5.43	5.32	4.93	4.97	4.95	5.17	5.46	5.48	5.54	5.54	5.30%	5.52%
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	7.19	7.26	7.26	7.26	7.21%	7.26%
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	6.97	6.95	6.95	6.95	6.97%	6.95%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	1.65	1.40	1.86	2.21	2.38	2.96	3.09	3.09		1.78	2.32	1.95	2.24%	2.02%
Kinder Morgan Fin Co Ulc	5.7	49455WAD8	Gtd Nts	01/05/2016	BB	2.01	1.74	1.94						1.38	1.15	1.41	1.61	1.61%	1.39%
Kinder Morgan Fin Co Ulc	6.4	49455WAF3	Gtd Nt	01/05/2036	BB									7.22	7.22	7.22		7.22%	7.22%
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	6.58	6.06	6.03	5.99	6.45%	6.03%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.07	6.05	6.02	6.30%	6.05%
Tennessee GasPipeline	7	880451AS8	Deb	03/15/2027	BB	4.88	4.77	4.81	4.54	4.37	4.34	4.39	4.23	4.78	4.65	4.83	4.89	4.62%	4.79%
Tennessee GasPipeline	7.5	880451AT6	Deb	04/01/2017	BB	2.13	1.79	1.82	1.73	1.71	1.76	2.12	2.36	2.53	1.91	1.86	2.12	1.99%	1.96%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	5.25	5.38	5.23	5.15	5.00	4.83	4.86	5.03	5.39	5.53	5.59	5.62	5.24%	5.58%
Tennessee GasPipeline	7	880451AV1	Deb	10/15/2028	BB	4.98	4.88	4.86	4.78	4.39	4.32	4.34	4.24	4.83	4.75	4.88	4.89	4.68%	4.84%
Tennessee GasPipeline	8.38	880451AW9	Nts	06/15/2032	BB	5.50	5.48	5.43	6.27	4.98	4.97	4.86	5.12	5.56	5.45	5.44	5.55	5.38%	5.48%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	2.80	2.55	2.68	2.27	2.19	2.32	3.63	2.84	3.09	3.07	3.29	3.77	2.88%	3.38%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	4.78	4.35	4.53	4.59	4.15	3.83	4.46	3.83	4.07	4.03	4.21	5.27	4.34%	4.50%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Co	11/15/2035	BB-	2.46	2.44	2.51						2.60		2.71	2.75	2.58%	2.73%
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Co	5/15/2037	BB-	2.43	2.44	2.41						2.36	2.53	2.53	2.67	2.48%	2.58%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv	5/15/2037	BB-	2.49	2.47	2.43						2.43	2.58	2.55	2.81	2.54%	2.65%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Co	12/15/2038	BB-	2.62	2.59	2.59						2.48	2.53	2.51	2.83	2.59%	2.62%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	3.74	3.32	3.42	3.63	3.24	3.23	3.56	2.89	3.17	3.42	3.57	4.59	3.48%	3.86%
Plains Exploration & Production Company	7	726505AC4	SrNts	03/15/2017	BB-						6.17	3.73	6.17	6.17	5.38	5.35	5.29	5.47%	5.34%
Plains Exploration & Production Company	7.75	726505AD2	SrNts	06/15/2015	BB-						7.00	6.17	7.00	7.00	4.40	4.12	3.41	5.59%	3.98%
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.61	6.43	6.76	6.75	6.70	6.75	6.85	6.56	6.93	9.83	11.84	42.19	10.35%	21.29%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B												5.83	5.83%	5.83%
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	6.74	6.57	6.75		6.73%	6.66%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	8.79	8.58	10.95	11.53	12.48	13.62	15.13	34.52	42.18	49.99	49.90	49.99	25.64%	49.96%
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	5.56	5.53	5.47	6.08%	5.52%
Colorado Interstate Gas	5.95	196522AH9	Sr Nts	03/15/2015	NR	1.18	1.15	1.30	1.83	2.12	2.33	2.82	3.21	3.47	1.02	1.08	0.44	1.83%	0.85%
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	5.75	5.74	5.74	5.74	5.75%	5.74%
Delta Petroleum Corp.	7	247907AC2	Sr Nts	04/01/2015	NR	28.59	28.59	28.59	28.59	28.59	28.69	28.59	28.59					28.60%	
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	0.59	6.59	6.58	3.95	3.81	3.47	5.38%	3.74%
Encore Acquisition	6	29255WAG5	Sr Sub Nt	7/15/2015	NR	5.77	5.77	5.77	5.77	5.77	5.72	5.77	5.77	5.77	4.47	4.36	4.10	5.40%	4.31%
Enterprise Oil Plc	7	293779AC8	Sr Nt	05/01/2018	NR									2.36	2.36			2.36%	2.36%
Ferrellgas,L.P./Finance	6.75	315292AD4	SrNts	05/01/2014	NR	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%	
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	5.21	5.21	5.21	5.21	5.21	5.21	6.21	5.21	5.21	5.21			5.31%	5.21%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
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%	
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	0.25	6.25	6.24	6.24			5.65%	6.24%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	4.97	4.92	4.90	4.61	4.44	4.51	4.48	4.27	4.51	4.55	4.53	4.88	4.63%	4.65%
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	6.58	6.59	6.59	6.59	6.59%	6.59%
Southern Natural Gas	7.35	843452AY9	Nts	02/15/2031	NR	5.30	5.33	5.18	5.10	4.95	5.00	4.95	5.07	5.29	5.43	5.29	5.55	5.20%	5.42%
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	2.28	2.34	2.01	1.97			0.93		1.19	1.68	1.52	1.70	1.74%	1.63%
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	6.24	5.55	5.49	5.36	6.05%	5.47%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	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%	7.27%
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	NR	0.46	0.37											0.42%	
			Counts of data			191	191	190	176	171	173	175	172	182	183	181	173	196	185

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	2.30%	2.15%
AA's	4.19%	3.86%
A's	3.70%	3.77%
BBB's	4.31%	4.30%
BB's	4.27%	4.63%
B's	5.83%	5.83%
CCC's	16.19%	28.31%
NR's	6.23%	4.76%
ALL	4.39%	4.42%
BBB- & Above	3.97%	3.97%
BB- & Above	4.03%	4.10%

**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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.32	4.30	4.14	1.76	3.90	3.83	3.90	3.68	3.97	3.73	3.58	3.56	3.72%	3.62%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.27	4.27	4.09	3.98	3.83	3.85	3.63	3.61	3.90	3.88	3.76	3.69	3.90%	3.78%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.37	4.40	4.23	4.14	3.98	4.00	3.98	3.76	4.07	3.85	3.80	3.73	4.03%	3.79%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.90	5.93	5.68	5.61	5.44	4.07	5.56	5.37	5.75	5.87	5.92	6.13	5.60%	5.97%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.39	5.42	5.17	5.09	4.83	4.95	5.06	4.73	5.09	5.24	5.28	5.54	5.15%	5.35%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.82	4.86	4.67	4.56	4.46	4.43	4.56	4.37	4.75	4.90	4.91	5.32	4.72%	5.04%
Atmos Energy Corp.	5.95	049560AG0	Sr Nts	10/15/2034	A-	5.00	5.03	4.98	4.90	4.32	4.37	4.34	4.10	4.39	4.18	4.03	3.84	4.46%	4.02%
Cascade Natural Gas Corp.	5.25	147339AJ4	Nts	02/01/2035	BBB+	5.60	5.64	5.46	5.29	5.25	5.25	5.25	5.25	5.24	5.24	5.24	5.24	5.33%	5.24%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.13	4.83	4.76	4.56	4.54	4.54	4.24	4.53	4.46	4.34	4.59	4.63%	4.46%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.08	5.08	4.84	4.76	4.59	4.59	4.59	4.44	4.63	4.61	4.49	4.60	4.69%	4.57%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.61	5.63	5.46	5.29	5.15	5.17	5.32	5.25	5.59	5.61	5.64		5.43%	5.63%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.67	5.58	5.43	5.34	5.20	5.22	5.32	5.22	5.58	5.90	5.64		5.46%	5.77%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.63	5.48	5.28	5.07	4.90	4.90	4.88	4.71	5.07	5.26	5.30	5.46	5.16%	5.34%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.05	5.13	4.93	4.83	4.68	4.68	4.66	4.57	4.91	4.85	4.75	4.85	4.82%	4.82%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.33	5.35	5.09	4.95	4.81	4.86	5.00	4.76	5.14	5.04	4.93	5.25	5.04%	5.07%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.45	6.38	6.23	6.08	6.30	6.21	6.17	5.98	6.24	6.08	5.93	5.94	6.17%	5.98%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.63	6.48	5.10	6.17	6.08	6.05	5.83	6.12	5.95	5.80	5.81	6.06%	5.85%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.19	5.17	5.05	5.22	4.56	4.46	4.59	4.42	4.78	4.84	4.69	4.93	4.83%	4.82%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.79	5.75	5.58	5.34	5.17	5.17	5.17	5.03	5.36	5.40	5.46	5.61	5.40%	5.49%
Enterprise Prods Oper L P	8.38	293791AV1	ub Nt Fixed/fltg F	08/01/2066	BBB-	7.51	7.47	7.41	7.37	7.39	7.42	7.42	7.48	7.51	7.65	7.65	7.78	7.51%	7.69%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.38	6.23	4.86	5.93	5.81	5.71	5.69	5.95	5.78	5.64	5.65	5.86%	5.69%
ONEOK, Inc.	6	682680AN3	Nts	06/15/2035	BB+	6.20	6.43	6.51	6.15	5.95	5.86	5.90	5.70	6.06	6.05	5.93	6.26	6.08%	6.08%
Colorado Interstate Gas	6.85	196522AE6	Sr Deb	06/15/2037	BB	5.90	5.93	5.78	5.64	5.49	5.42	5.39	5.18	5.44	5.83	5.69	5.95	5.64%	5.82%
Kinder Morgan Fin Co Ulc	6.4	49455WAF3	Gtd Nt	01/05/2036	BB									7.22	7.22	7.22		7.22%	7.22%
Tennessee GasPipeline	7.62	880451AU3	Deb	04/01/2037	BB	5.25	5.38	5.23	5.15	5.00	4.83	4.86	5.03	5.39	5.53	5.59	5.62	5.24%	5.58%
Chesapeake Energy Corp.	2.75	165167BW6	ntingent Sr Nt Co	11/15/2035	BB-	2.46	2.44	2.51						2.60		2.71	2.75	2.58%	2.73%
Chesapeake Energy Corp.	2.5	165167BZ9	ntingent Sr Nt Co	5/15/2037	BB-	2.43	2.44	2.41						2.36	2.53	2.53	2.67	2.48%	2.58%
Chesapeake Energy Corp.	2.5	165167CA3	Contingent Conv	5/15/2037	BB-	2.49	2.47	2.43						2.43	2.58	2.55	2.81	2.54%	2.65%
Chesapeake Energy Corp.	2.25	165167CB1	ntingent Sr Nt Co	12/15/2038	BB-	2.62	2.59	2.59						2.48	2.53	2.51	2.83	2.59%	2.62%
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	0.25	6.25	6.24	6.24			5.65%	6.24%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	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%	7.27%
			Counts of data			30	30	30	26	26	26	26	26	31	30	30	27	31	31

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	3.88%	3.73%
AA's	----	----
A's	4.98%	5.10%
BBB's	5.50%	5.50%
BB's	4.04%	4.17%
B's	----	----
CCC's	----	----
NR's	6.46%	6.76%
ALL	5.01%	5.06%
BBB- & Above	5.14%	5.14%
BB- & Above	4.91%	4.94%

**Investment Grade (BBB- & Above)*

Montana Department of
REVENUE

2015 Capitalization Rate Study

Liquid Pipelines

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Liquid Pipelines
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	B++	B+	Median	
	3.28%	3.65%	3.00%	4.02%	Yahoo
	3.53%	3.16%	3.88%	4.28%	Value Line
	3.40%	3.41%	3.44%	4.15%	Average of E/Ps
Inverse of P/E Ratios:					
	1.88%	2.17%	1.63%	1.70%	Yahoo
	4.46%	3.91%	4.82%	4.59%	Value Line
	3.17%	3.04%	3.23%	3.15%	Average of Inverse of the P/E
	5.45%	5.40%	5.63%	5.44%	Inverse of median P/E, Value Line
	3.29%	3.22%	3.33%	3.65%	Average of all above except median P/E
Mean =	3.72%	3.66%	3.79%	4.01%	
Median =	3.53%	3.65%	3.88%	4.28%	

Equity Measure NUOI = 4.30%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.00%	6.23%	ALL
	5.84%	5.87%	BBB- & Above
	5.76%	5.81%	BB- & Above
Mean =	5.87%	5.97%	
Median =	5.84%	5.87%	

Debt Measure = 6.20%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	79.00%	x	4.30%	=	3.40%	
Debt	21.00%	x	6.20%	=	1.30%	
	100.00%				4.70%	
Direct Cap Rate NUOI =						**4.75%**

Gross Cash Flow / Price:

All	B++	B+	Median	
6.29%	6.71%	6.02%	5.82%	Value Line

Equity Measure GCF = 6.75%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	79.00%	x	6.75%	=	5.33%	
Debt	21.00%	x	6.20%	=	1.30%	
	100.00%				6.63%	
Direct Cap Rate GCF =						**6.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Liquid Pipelines
2015 Assessment Year

Equity Measures Calculated:	**All**
Dividend Growth Model - Dividends	16.00%
Dividend Growth Model - Earnings	16.00%
Dividend Growth Model - Plowback	9.00%
Capital Asset Pricing Model	8.42%
Mean =	12.21%
Median =	12.21%
Equity Measure FCF =	**9.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	4.42%	4.48%	4.87%	4.86%
BBB- & Above	3.96%	3.98%	5.22%	5.20%
BB- & Above	3.99%	4.08%	4.77%	4.75%
Mean =	4.12%	4.18%	4.95%	4.94%
Median =	3.99%	4.08%	4.87%	4.86%

Debt Measure = 5.00%

Yield Cap Rate Free Cash Flow - Liquid Pipelines						
Equity	79.00%	x	9.00%	=	7.11%	
Debt	21.00%	x	5.00%	* (1 - 0.35) =	0.68%	
	100.00%				7.79%	
Weighted Average Cost of Capital (WACC) =						**8.00%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Liquid Pipelines
2015 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**	**(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++	207,700	41.78	25.48	8,677,706	5,292,000	0	2,503,000	1.00	2,503,000	1.68
Enbridge Energy Partners LP	EEP	B++	325,800	39.90	12.95	12,999,420	4,220,300	1,200,000	5,083,400	1.00	6,283,400	(0.01)
Magellan Midstream Partners LP	MMP	B++	226,700	82.66	7.27	18,739,022	1,647,400	0	2,435,300	1.00	2,435,300	3.41
Kinder Morgan Inc.	KMI	B++	1,030,700	42.31	12.70	43,608,917	13,093,000	0	33,887,000	1.00	33,887,000	1.19
Nustar Energy LP	NS	B+	77,900	57.75	23.85	4,498,725	1,858,300	0	2,655,600	1.00	2,655,600	(3.16)
Buckeye	BPL	B+	115,100	75.66	26.64	8,708,466	3,065,700	0	3,092,700	1.00	3,092,700	1.16
Enterprise Products	EPD	B+	1,871,400	36.12	8.13	67,594,968	15,214,800	0	16,226,500	1.00	16,226,500	1.51
Phillips 66 Partners	PSXP	B+	35,200	68.93	16.31	2,426,336	574,100	0	160,000	1.00	160,000	1.27
Plains All American PL LP	PAA	B+	359,100	51.32	21.45	18,429,012	7,703,000	0	6,715,000	1.00	6,715,000	2.28

SUMS & AVGS - ALL COMPANIES	185,682,572	52,668,600	1,200,000	72,758,500	73,958,500
SUMS & AVGS - B++ COMPANIES	84,025,065	24,252,700	1,200,000	43,908,700	45,108,700
SUMS & AVGS - B+ COMPANIES	97,158,782	26,557,600	0	26,194,200	26,194,200
MEDIAN - ALL COMPANIES					

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

	INDUSTRY MARKET STRUCTURE					
	ALL COMPANIES		**B COMPANIES**		**B++ COMPANIES**	
EQUITY	71.00%	185,682,572	79.00%	97,158,782	64.00%	84,025,065
DEBT	29.00%	75,158,500	21.00%	26,194,200	36.00%	46,308,700
TOTAL	100.00%	260,841,072	100.00%	123,352,982	100.00%	130,333,765

Notes/Rational for Changes to Guideline Companies
2015
Kinder Morgan Inc. (KMI) took full ownership of Kinder Morgan Energy Partners (KMP) on November 26,2014 - Replaced KMP with KMI
Added Philips 66 Partners

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Liquid Pipelines
2015 Assessment Year

A	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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**	**(VL) Est. Tax Rate**
Sunoco Logistics Partners L.P.	SXL	4.02%	1.80	4.31%			63.99	1.56%					0.95	
Enbridge Energy Partners LP	EEP	(0.03%)	0.44	1.10%			32.99	3.03%			22.00	4.55%	0.75	
Magellan Midstream Partners LP	MMP	4.13%	3.59	4.34%	4.25	5.14%	76.86	1.30%	22.40	4.46%	16.00	6.25%	0.75	0.5%
Kinder Morgan Inc.	KMI	2.81%	1.22	2.88%	3.50	8.27%	35.94	2.78%	29.75	3.36%			0.90	18.0%
Nustar Energy LP	NS	(5.47%)	2.08	3.60%			57.93	1.73%			20.00	5.00%	0.80	
Buckeye	BPL	1.53%	3.24	4.28%	4.40	5.82%	76.59	1.31%	20.95	4.77%	17.00	5.88%	0.70	
Enterprise Products	EPD	4.18%	1.59	4.40%	2.10	5.81%	58.86	1.70%	21.77	4.59%	21.00	4.76%	0.85	2.0%
Phillips 66 Partners	PSXP	1.84%	1.42	2.06%			58.99	1.70%						
Plains All American PL LP	PAA	4.44%	2.45	4.77%	3.30	6.43%	54.96	1.82%	19.60	5.10%	16.00	6.25%	0.75	2.0%
SUMS & AVGS - ALL COMPANIES		3.28%		3.53%		6.29%		1.88%		4.46%		5.45%	0.81	5.63%
SUMS & AVGS - B++ COMPANIES		3.65%		3.16%		6.71%		2.17%		3.91%		5.40%	0.84	9.25%
SUMS & AVGS - B+ COMPANIES		3.00%		3.88%		6.02%		1.63%		4.82%		5.63%	0.77	2.00%
MEDIAN - ALL COMPANIES		4.02%		4.28%		5.82%		1.70%		4.59%		5.44%	0.78	2.00%

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

Industry Beta Conclusion = 0.84

Notes/Rational for Changes to Guideline Companies
2015
Kinder Morgan Inc. (KMI) took full ownership of Kind
Added Philips 66 Partners

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Liquid Pipelines
2015 Assessment Year

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

	Liquids
K_E = Cost of Equity	**8.42%**
R_F = Risk Free Rate	2.75%
β= Beta	0.84
R_M = Market Rate of Return	9.50%
R_P = Equity Risk Premium (RM - RF)	6.75%

Risk Premium other sources:

Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2014 implied p	4.96%
Dr. Aswath Damodaran	http://pages.stern.nyu.edu/~adamodar/	1/1/2013 implied p	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=	12.10%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	10.10%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	8.50%
	Mean =	10.23%
	Median =	10.10%
R_f = Risk Free Rate	**R_M=**	**9.50%**

Internal Revenue Service, Rev Rule 2014-31 Table 2 December 8, 2014

Rev Rule 2014-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.34%
	Mid Term - AFR	R_f =	1.28%
	Long Term - AFR	R_f =	2.68%

The ValueLine Investment Survey January 9, 2015

U.S. Treasury Securities December 30, 2014

1 Year	R_f =	0.20%
10 Year	R_f =	2.19%
30 Year	R_f =	2.76%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2014

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

1 year constant maturity, quoted on investment basis	R_f =	0.25%
10-year constant maturity, quoted on investment basis	R_f =	2.17%
20-year constant maturity, quoted on investment basis	R_f =	2.47%
30-year constant maturity, quoted on investment basis	R_f =	2.75%
	Mean =	1.71%
	Median =	2.18%
	Weighted Mean =	2.08%
	R_f =	**2.75%**

U.S. Treasury Securities Long-Term December 31, 2014

20 year constant maturity	R_f = **2.47%**
30 year constant maturity	R_f = **2.75%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Liquid Pipelines
2015 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 (D1)	Dividend Yield (D1/P0)	Dividend Growth	Ke 1 Year
Sunoco Logistics Partners L.P.	SXL	41.78			26.00%	
Enbridge Energy Partners LP	EEP	39.90			1.00%	
Magellan Midstream Partners LP	MMP	82.66	2.89	3.50%	13.50%	17.00%
Nustar Energy LP	NS	57.75				
Buckeye	BPL	75.66	4.36	5.76%	1.50%	7.26%
Enterprise Products	EPD	36.12	1.53	4.24%	9.50%	13.74%
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%	16.50%	21.23%
Phillips 66 Partners	PSXP	68.93				
Plains All American PL LP	PAA	51.32	2.80	5.46%	10.50%	15.96%

Weighted Mean	16.14%
Mean	15.04%
Median	15.96%

Cost of Equity, (K_E) = 16.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Liquid Pipelines
2015 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
Sunoco Logistics Partners L.P.	SXL	41.78			(23.50%)	
Enbridge Energy Partners LP	EEP	39.90				
Magellan Midstream Partners LP	MMP	82.66	2.89	3.50%	13.50%	17.00%
Nustar Energy LP	NS	57.75				
Buckeye	BPL	75.66	4.36	5.76%	5.50%	11.26%
Enterprise Products	EPD	36.12	1.53	4.24%	10.50%	14.74%
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%	16.00%	20.73%
Phillips 66 Partners	PSXP	68.93				
Plains All American PL LP	PAA	51.32	2.80	5.46%	9.00%	14.46%

Weighted Mean	10.09%
Mean	15.64%
Median	14.74%

Cost of Equity, (K_E) = 16.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Liquid Pipelines
2015 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
Sunoco Logistics Partners L.P.	SXL	41.78						
Enbridge Energy Partners LP	EEP	39.90						
Magellan Midstream Partners LP	MMP	82.66	2.89	3.50%	22.00%	37.00%	8.14%	11.64%
Nustar Energy LP	NS	57.75						
Buckeye	BPL	75.66	4.36	5.76%	**(18.00%)**	11.50%	(2.07%)	3.69%
Enterprise Products	EPD	36.12	1.53	4.24%	7.00%	16.00%	1.12%	5.36%
Kinder Morgan Inc.	KMI	42.31	2.00	4.73%		10.50%		4.73%
Phillips 66 Partners	PSXP	68.93			50.00%			
Plains All American PL LP	PAA	51.32	2.80	5.46%	100.00%	12.00%	12.00%	17.46%

Weighted Mean=	9.72%
Mean=	8.57%
Median=	5.36%

Cost of Equity - All, (K_E) = 9.00%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Liquid Pipelines
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
BPL	Buckeye	high	$ 73.75	$ 75.83	$ 75.08	$ 79.37	$ 81.15	$ 83.72	$ 84.91	$ 80.74	$ 81.39	$ 79.93	$ 85.14	$ 80.40	$ 75.66	$75.30	$76.59	63.81	1.16
		low	$ 69.19	$ 69.68	$ 72.00	$ 74.50	$ 75.66	$ 77.80	$ 79.64	$ 75.26	$ 76.75	$ 63.77	$ 74.93	$ 67.63					
COP	ConocoPhillips Inc	high	$ 70.92	$ 66.88	$ 70.99	$ 75.34	$ 80.54	$ 86.43	$ 87.09	$ 82.16	$ 81.37	$ 76.52	$ 74.68	$ 71.37	$ 69.06	$68.77	$73.63	8.77	7.54
		low	$ 64.35	$ 62.74	$ 65.98	$ 69.33	$ 74.05	$ 79.05	$ 82.37	$ 78.91	$ 75.92	$ 63.56	$ 65.65	$ 60.84					
CVX	ChevronTexaco Corp	high	$ 125.32	$ 116.74	$ 119.62	$ 127.27	$ 126.78	$ 133.57	$ 135.10	$ 129.53	$ 129.38	$ 120.17	$119.97	$ 114.82	$ 112.18	$111.70	$119.95	9.90	10.86
		low	$ 111.11	$ 109.27	$ 113.68	$ 116.50	$ 121.65	$ 121.72	$ 128.03	$ 124.58	$ 118.66	$ 106.65	$108.43	$ 100.15					
EEP	Enbridge Energy Partners LP	high	$ 29.94	$ 29.63	$ 27.98	$ 30.12	$ 31.40	$ 36.95	$ 37.15	$ 36.57	$ 40.10	$ 39.16	$ 40.81	$ 41.68	$ 39.90	$37.25	$32.99	NA	(0.01)
		low	$ 28.19	$ 26.30	$ 26.45	$ 26.00	$ 29.46	$ 30.76	$ 33.86	$ 31.78	$ 35.67	$ 31.63	$ 34.64	$ 35.56					
EPD	Enterprise Products	high	$ 66.60	$ 68.10	$ 70.99	$ 74.14	$ 75.10	$ 78.52	$ 79.70	$ 79.20	$ 41.38	$ 40.95	$ 40.12	$ 38.75	$ 36.12	$36.41	$58.86	23.00	1.51
		low	$ 63.02	$ 64.44	$ 66.19	$ 69.03	$ 72.45	$ 73.20	$ 74.52	$ 38.72	$ 39.01	$ 31.65	$ 36.25	$ 30.71					
HEP	Holly Energy Part. LP	high	$ 33.88	$ 33.85	$ 34.24	$ 33.77	$ 35.49	$ 36.64	$ 35.34	$ 36.30	$ 36.66	$ 37.44	$ 35.55	$ 33.95	$ 29.91	$33.07	$33.55	28.91	1.08
		low	$ 32.00	$ 31.65	$ 32.30	$ 29.83	$ 32.39	$ 32.07	$ 32.93	$ 32.50	$ 34.98	$ 31.37	$ 31.63	$ 28.50					
KMI	Kinder Morgan Inc.	high	$ 36.45	$ 34.19	$ 32.59	$ 33.98	$ 33.98	$ 36.50	$ 38.05	$ 42.49	$ 40.31	$ 39.60	$ 42.41	$ 43.18	$ 42.31	$38.78	$35.94	33.71	1.19
		low	$ 33.60	$ 31.45	$ 30.81	$ 32.21	$ 32.10	$ 33.33	$ 35.20	$ 35.20	$ 37.34	$ 33.25	$ 37.20	$ 37.06					
MMP	Magellan Midstream Partners LP	high	$ 66.82	$ 70.99	$ 71.25	$ 75.15	$ 81.93	$ 84.41	$ 86.72	$ 84.50	$ 87.50	$ 85.13	$ 90.08	$ 86.71	$ 82.66	$80.47	$76.86	23.54	3.41
		low	$ 60.23	$ 62.94	$ 67.24	$ 69.56	$ 73.95	$ 81.04	$ 80.16	$ 77.14	$ 80.41	$ 66.36	$ 80.73	$ 73.80					
NS	Nustar Energy LP	high	$ 52.00	$ 53.00	$ 55.15	$ 59.45	$ 59.38	$ 62.88	$ 68.33	$ 66.27	$ 67.73	$ 66.94	$ 63.37	$ 59.33	$ 57.75	$58.27	$57.93	NA	(3.16)
		low	$ 47.69	$ 47.51	$ 49.26	$ 53.76	$ 56.07	$ 57.90	$ 61.30	$ 61.02	$ 62.08	$ 53.06	$ 56.00	$ 50.91					
PAA	Plains All American PL LP	high	$ 52.01	$ 54.79	$ 55.30	$ 57.49	$ 58.69	$ 60.05	$ 60.60	$ 60.44	$ 61.09	$ 59.75	$ 56.98	$ 52.68	$ 51.32	$51.84	$54.96	21.12	2.28
		low	$ 49.25	$ 50.09	$ 52.31	$ 54.54	$ 55.34	$ 56.33	$ 57.25	$ 55.98	$ 56.56	$ 46.63	$ 51.36	$ 43.61					
PSXP	Phillips 66 Partners	high	$ 39.28	$ 48.58	$ 50.45	$ 58.55	$ 61.14	$ 79.92	$ 79.83	$ 75.00	$ 74.05	$ 71.00	$ 70.90	$ 70.00	$ 68.93	$63.56	$58.99	49.98	1.27
		low	$ 35.50	$ 36.51	$ 45.40	$ 47.50	$ 52.50	$ 60.00	$ 62.22	$ 61.82	$ 66.20	$ 51.35	$ 61.17	$ 56.96					
SXL	Sunoco Logistics Partners L.P.	high	$ 78.66	$ 83.82	$ 91.52	$ 92.00	$ 95.63	$ 93.02	$ 47.50	$ 49.72	$ 51.45	$ 48.60	$ 52.47	$ 49.70	$ 41.78	$45.09	$63.99	26.50	1.68
		low	$ 72.80	$ 76.00	$ 81.50	$ 86.01	$ 90.01	$ 43.53	$ 43.86	$ 42.20	$ 46.10	$ 35.61	$ 44.83	$ 39.33					
TOT	Total SA	high	$ 60.49	$ 64.97	$ 66.30	$ 71.40	$ 73.52	$ 74.22	$ 73.09	$ 66.18	$ 67.70	$ 64.02	$ 60.69	$ 57.78	$ 51.20	$56.57	$63.57	10.43	5.09
		low	$ 56.50	$ 56.03	$ 63.00	$ 65.46	$ 69.27	$ 68.55	$ 64.28	$ 62.82	$ 62.53	$ 53.32	$ 55.19	$ 48.43					
TSO	Tesoro Corp.	high	$ 59.07	$ 52.77	$ 54.58	$ 56.85	$ 58.10	$ 62.89	$ 62.52	$ 65.31	$ 67.07	$ 73.00	$ 79.49	$ 79.05	$ 74.35	$71.04	$59.99	14.19	5.22
		low	$ 49.83	$ 46.40	$ 49.04	$ 47.03	$ 52.73	$ 55.54	$ 57.11	$ 58.55	$ 58.13	$ 55.59	$ 70.07	$ 69.05					
VLO	Valero Energy Corp.	high	$ 53.64	$ 52.64	$ 55.96	$ 58.97	$ 59.69	$ 58.13	$ 51.50	$ 54.61	$ 54.44	$ 50.17	$ 52.07	$ 52.10	$ 49.50	$48.42	$51.23	6.93	7.03
		low	$ 48.60	$ 45.90	$ 47.84	$ 50.61	$ 53.68	$ 50.03	$ 47.77	$ 49.37	$ 45.73	$ 42.53	$ 48.28	$ 45.35					
WMB	Williams Cos	high	$ 40.89	$ 42.47	$ 42.94	$ 42.42	$ 47.11	$ 59.68	$ 58.86	$ 59.46	$ 59.77	$ 57.00	$ 56.81	$ 51.72	$ 44.94	$50.74	$48.60	17.27	2.69
		low	$ 37.77	$ 39.29	$ 39.86	$ 39.31	$ 40.92	$ 46.57	$ 55.52	$ 54.28	$ 54.80	$ 46.15	$ 51.52	$ 41.21					
XOM	Exxon Mobil	high	$ 101.22	$ 97.25	$ 98.85	$ 102.57	$ 103.45	$ 104.61	$ 104.76	$ 100.43	$ 99.59	$ 96.89	$ 97.20	$ 95.33	$ 92.45	$92.11	$96.90	11.42	7.95
		low	$ 91.70	$ 89.25	$ 93.01	$ 96.24	$ 100.32	$ 99.59	$ 98.93	$ 97.63	$ 93.62	$ 86.91	$ 90.11	$ 86.19					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	4.95	4.97	5.00	5.02	5.04	5.05	5.07	5.09	5.10	5.13	5.15	5.17	5.06%	5.15%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	5.12	5.14	5.14	5.16	5.17	5.20	5.22	5.24	5.25	5.28	5.29	5.31	5.21%	5.29%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.87	4.86	4.76	4.71	4.62	4.64	4.62	4.49	4.66	4.52	4.44	4.43	4.64%	4.46%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	5.34	5.35	5.39	5.38	5.39	5.42	5.45	5.46	5.48	5.50	5.50	5.55	5.43%	5.52%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.94	4.95	4.83	4.78	4.68	4.70	4.69	4.55	4.72	4.72	4.64	4.60	4.73%	4.65%
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	4.76	4.75	4.80	4.81	4.76	4.79	4.82	4.81	4.84	4.86	4.85	4.88	4.81%	4.86%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.91	4.93	4.82	4.77	4.67	4.69	4.67	4.53	4.73	4.59	4.56	4.52	4.70%	4.56%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	7.31	7.31	7.41	7.38	7.35	7.40	7.43	7.40	7.47	7.47	7.45	7.51	7.41%	7.48%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	6.62	6.63	6.64	6.60	6.55	6.58	6.62	6.56	6.65	6.62	6.59	6.62	6.61%	6.61%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	5.77	5.80	5.71	5.84	5.56	5.58	5.57	5.46	5.66	5.48	5.40	5.31	5.60%	5.40%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	5.78	5.81	5.72	5.65	5.56	5.58	5.57	5.45	5.62	5.50	5.42	5.32	5.58%	5.41%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	5.67	5.69	5.61	5.52	5.38	5.34	5.35	5.22	5.38	5.26	5.18	5.21	5.40%	5.22%
ANR Pipeline	7.38	001814AQ5	Deb	2/15/2024	A-	5.97	5.98	5.96	5.94	5.88	5.91	5.86	5.84	5.94	5.88	5.83	5.88	5.91%	5.86%
ANR Pipeline	9.62	001814AR3	Deb	11/1/2021	A-	7.01	7.03	6.98	6.87	6.78	6.83	6.83	6.74	6.84	6.84	6.94	7.02	6.89%	6.93%
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	6.04	5.85	5.80	5.78	5.70	5.73	5.78	5.71	5.82	5.78	5.75	5.94	5.81%	5.82%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	6.12	5.96	5.91	5.89	5.80	5.84	5.86	5.78	5.90	5.86	5.83	6.02	5.90%	5.90%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.91	5.95	5.70	5.63	5.47	5.50	5.58	5.39	5.78	5.88	5.93	6.14	5.74%	5.98%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.64	5.67	5.47	5.41	5.29	5.31	5.39	5.14	5.42	5.53	5.57	5.78	5.47%	5.63%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	5.97	5.98	6.01	6.03	6.01	6.05	6.09	6.08	6.12	6.17	6.17	6.26	6.08%	6.20%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	6.10	6.11	6.12	6.09	6.07	6.11	6.00	6.16	6.21	6.27	6.27	6.38	6.16%	6.31%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	5.16	5.19	5.06	4.98	4.92	4.90	5.02	4.88	5.14	5.23	5.23	5.52	5.10%	5.33%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	5.00	5.00	5.04	5.03	5.04	5.05	5.09	5.10	5.11	5.16	5.16	5.20	5.08%	5.17%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	5.11	5.11	5.16	5.17	5.14	5.15	5.18	5.20	5.22	5.24	5.26	5.31	5.19%	5.27%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	5.61	5.61	5.60	5.58	5.30	5.34	5.36	5.26	5.38	5.28	5.23	5.21	5.40%	5.24%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	7.10	7.07	6.97	6.97	6.90	6.87	6.93	6.94	7.04	6.99	6.96	7.04	6.98%	7.00%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	6.50	6.53	6.39	6.35	6.25	6.28	6.27	6.11	6.28	6.16	6.07	6.07	6.27%	6.10%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	6.51	6.54	6.40	6.36	6.27	6.29	6.28	6.14	6.32	6.19	6.10	6.09	6.29%	6.13%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	6.49	6.49	6.50	6.49	6.43	6.47	6.50	6.27	6.28	6.41	6.47	6.67	6.46%	6.52%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	6.40	6.43	6.33	6.29	6.20	6.22	6.21	5.98	6.16	6.59	6.49	6.42	6.31%	6.50%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	6.92	6.93	6.69	6.69	6.63	6.67	6.71	6.66	6.78	6.80	6.76	6.84	6.76%	6.80%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	6.12	6.12	6.08	6.06	5.98	6.02	6.05	5.94	6.12	6.07	6.07	6.12	6.06%	6.09%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	5.79	5.80	5.77	5.75	5.57	5.60	5.63	5.49	5.67	5.60	5.60	5.65	5.66%	5.62%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	5.63	5.58	5.58	5.55	5.43	5.47	5.49	5.43	5.64	5.57	5.56	5.63	5.55%	5.59%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	5.49	5.52	5.43	5.27	5.19	5.18	5.17	5.05	5.34	5.21	5.21	5.24	5.28%	5.22%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	5.32	5.23	5.20	5.18	5.04	5.08	5.14	5.04	5.23	5.16	5.16	5.22	5.17%	5.18%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	5.08	4.98	4.92	4.85	4.77	4.73	4.72	4.59	4.75	4.77	4.72	4.78	4.81%	4.76%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	5.46	5.46	5.32	5.19	5.11	5.13	5.12	5.00	5.28	5.17	5.18	5.21	5.22%	5.19%
Diamond Offshore Drilling, Inc.	5.15	25271CAG7	Sr Nts	09/01/2014	A	5.01	5.03	5.05	5.07	5.09	5.11	5.13	5.15					5.08%	
Diamond Offshore Drilling, Inc.	4.88	25271CAJ1	Sr Nts	07/01/2015	A	4.59	4.61	4.63	4.65	4.66	4.67	4.69	4.70	4.71	4.74	4.75	4.77	4.68%	4.75%
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	5.92	5.93	5.90	5.88	5.81	5.85	5.83	5.74	5.87	5.87	5.82	5.90	5.86%	5.86%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	6.95	6.90	6.98	6.97	6.94	7.00	7.08	7.05	7.10	7.10	7.20	7.31	7.05%	7.20%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	6.07	5.80	5.80						5.75	5.65	5.59	5.69	5.76%	5.64%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	4/1/2028	A	6.07	5.80	5.80	5.77	5.67	5.71	5.74	5.63	5.75	5.65	5.59	5.69	5.74%	5.64%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nts	02/15/2029	A	6.36	6.31	6.22	6.20	6.09	6.13	6.16	6.04	6.18	5.91	5.85	5.96	6.12%	5.91%
Occidental Pete Corp Med Term	8.75	67461FED5	N Tranche # Tr 001	1/15/2023	A	6.66	6.68	6.66	6.52	6.45	6.49	6.52	6.45	6.55	6.49	6.45	6.54	6.54%	6.49%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	5.54	5.53	5.60	5.59	5.57	5.58	5.62	5.64	5.68	5.69	5.68	5.76	5.62%	5.71%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	5.51	5.44	5.42	5.39	5.27	5.28	5.34	5.26	5.46	5.39	5.39	5.45	5.38%	5.41%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.57	5.58	5.39						5.24	5.28	5.30	5.49	5.41%	5.36%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.95	5.86	5.79	5.69	5.61	5.61	5.63	5.50	5.72	5.67	5.70	5.77	5.71%	5.71%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.96	5.96	5.95	5.93	5.83	5.81	5.84	5.73	5.81	6.17	6.11	6.13	5.94%	6.14%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	5.40	5.42	5.45	5.48	5.50	5.52	5.54	5.57	5.58				5.50%	
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.51	5.58	5.38	5.33	5.23	5.22	5.22	5.04	5.22	5.17	5.09	5.25	5.27%	5.17%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	4.77	4.78	4.80	4.82	4.57	4.85	4.57	4.89	4.90	4.93	4.94	4.96	4.82%	4.94%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.29	5.30	5.14	5.09	4.98	4.98	4.97	4.89	5.03	5.00	4.93	5.00	5.05%	4.98%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	6.82	6.82	6.91	6.92	6.90	6.94	7.00	6.92	6.98	7.02	7.01	7.09	6.94%	7.04%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	6.00	6.00	5.98						5.85	5.88	5.87	6.16	5.96%	5.97%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.78	5.85	5.76						5.55	5.58	5.70	5.90	5.73%	5.73%
Diamond Shamrock	8.75	252747AD2	Deb	06/15/2015	BBB	8.10	8.13	8.15	8.20	8.23	8.27	8.32	8.35	8.37	8.44	8.46	8.52	8.30%	8.47%
Diamond Shamrock	7.65	252747AF7	Deb	07/01/2026	BBB	6.15	6.15	6.09	6.07	5.97	6.01	5.99	5.93	6.06	5.96	5.91	6.04	6.03%	5.97%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.75	5.77	5.66	5.59	5.49	5.52	5.46	5.28	5.44	5.27	5.24	5.19	5.47%	5.23%
Enbridge Energy Partners, L.P.	5.35	29250RAF3	Fixed Rt Sr Gbl Nts	12/15/2014	BBB	5.14	5.15	5.17										5.15%	
Enbridge Energy Partners, L.P.	6.3	29250RAG1	Fixed Rt Sr Gbl Nts	12/15/2034	BBB	5.91	5.93	5.82										5.89%	
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	5.26	5.27	5.30	5.28	5.28	5.31	5.31	5.32	5.34	5.38	5.39	5.42	5.32%	5.40%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	6.25	6.27	6.08	6.03	5.88	5.90	5.85	5.92	6.17	6.19	6.16		6.06%	6.18%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	6.29	6.31	6.13	6.04	5.95	5.97	6.00	5.99	6.27	6.24	6.16		6.12%	6.20%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	6.11	6.06	5.93	5.88	5.72	5.74	5.79	5.85	6.07	6.02	6.03		5.93%	6.03%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	5.36	5.33	5.38	5.37	5.36	5.38	5.41	5.42	5.46	5.50	5.49		5.41%	5.50%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.83	5.85	5.73	5.62	5.51	5.53	5.62	5.59	5.84	5.84	5.86		5.71%	5.85%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.96	5.89	5.79	5.73	5.62	5.64	5.73	5.66	5.92	6.14	5.95		5.82%	6.05%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/1/2018	BBB	5.98	5.98	6.04	6.03	6.01	6.04	6.02	6.04	6.07	6.06	6.06	6.12	6.04%	6.08%
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	5.59	5.57	5.48	5.43	5.34	5.35	5.34	5.28	5.44	5.44	5.41	5.62	5.44%	5.49%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.43	6.37	6.09	6.03	5.93	5.85	5.88	5.76	5.89	5.97	5.90	6.10	6.02%	5.99%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	5.47	5.46	5.49	5.48	5.49	5.52	5.55	5.56	5.60	5.65	5.66	5.72	5.55%	5.68%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.89	5.78	5.64	5.52	5.40	5.40	5.39	5.27	5.51	5.64	5.66	5.78	5.57%	5.69%
Plains All Amern Pipeline L P	5.88	72650RAF9	Sr Nt	08/15/2016	BBB	5.34	5.35	5.39						5.41	5.44	5.46	5.49	5.41%	5.46%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	4.95	4.97	5.00	5.02	5.03	5.05	5.07	5.06	5.07	5.10	5.11	5.14	5.05%	5.12%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.49	5.55	5.42	5.37	5.28	5.26	5.25	5.19	5.41	5.38	5.31	5.38	5.36%	5.36%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	6.30	6.22	6.18						5.85	6.01	6.02	6.23	6.12%	6.09%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	7.02	7.03	6.99	6.99	6.92	6.96	6.99	6.92	7.02	6.99	6.95	7.01	6.98%	6.98%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	6.63	6.63	6.65	6.64	6.58	6.59	6.62	6.54	6.64	6.60	6.54	6.68	6.61%	6.61%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	6.45	6.45	6.43	6.42	6.34	6.38	6.41	6.32	6.43	6.38	6.32	6.45	6.40%	6.38%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	6.72	6.75	6.52	6.48	6.38	6.41	6.40	6.26	6.44	6.40	6.31	6.39	6.46%	6.37%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	6.02	6.00	5.88	5.80	5.65	5.65	5.64	5.64	5.92	5.83	5.80	5.97	5.82%	5.87%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.65	5.67	5.49	5.40	5.30	5.33	5.43	5.27	5.53	5.46	5.39	5.61	5.46%	5.49%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	5.38	5.32	5.34	5.36	5.36	5.38	5.25	5.43	5.47	5.51	5.51	5.57	5.41%	5.53%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	6.25	6.27	6.31	6.32	6.31	6.34	6.39	6.40	6.43	6.49	6.48	6.57	6.38%	6.51%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.71	6.69	6.69	6.42	6.33	6.31	6.29	6.16	6.27	6.33	6.33	6.47	6.42%	6.38%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.46	6.39	6.24	6.08	6.31	6.22	6.19	5.98	6.26	6.09	5.94	5.95	6.18%	5.99%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.64	6.49	6.34	6.19	6.09	6.06	5.85	6.13	5.95	5.81	5.82	6.17%	5.86%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.48	6.40	6.40	6.07	5.95	5.92	5.94	5.75	5.87	5.94	5.94	6.20	6.07%	6.03%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.27	6.26	6.25	5.93	5.80	5.77	5.79	5.68	5.80	5.86	5.86	6.02	5.94%	5.91%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	6.26	6.20	6.16	5.92	5.81	5.74	5.64	5.52	5.65	5.72	5.72	5.83	5.85%	5.76%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	5.33	5.32	5.36	5.34	5.35	5.37	5.41	5.42	5.44	5.49	5.50	5.56	5.41%	5.52%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.53	5.52	5.44	5.22	5.12	5.08	5.14	5.03	5.26	5.31	5.21	5.37	5.27%	5.30%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	4.79	4.75	4.78	4.78	4.78	4.80	4.82	4.82	4.83	4.83	4.83	4.86	4.81%	4.84%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	6.57	6.58	6.57	6.55	6.48	6.51	6.53	6.45	6.55	6.48	6.43	6.42	6.51%	6.44%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	5.66	5.68	5.70	5.56	5.56	5.79	5.80	5.56	5.83	5.88	5.90	5.92	5.74%	5.90%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	5.46	5.46	5.47	5.48	5.47	5.50	5.50	5.51	5.53	5.58	5.58	5.65	5.52%	5.60%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	6.00	5.97	5.85	5.68	5.58	5.58	5.50	5.48	5.70	5.73	5.77	5.88	5.73%	5.79%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg R	08/01/2066	BBB-	7.52	7.49	7.43	7.40	7.41	7.44	7.44	7.50	7.53	7.66	7.67	7.79	7.52%	7.71%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	6.14	6.03	6.03	5.85	5.69	5.59	5.48	5.39	5.51	5.58	5.58	5.73	5.72%	5.63%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	6.17	6.10	6.05	5.23	5.65	5.58	5.62	5.53	5.74	5.77	5.76	5.76	5.75%	5.76%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	5.80	5.79	5.72	5.53	5.42	5.41	5.49	5.43	5.53	5.59	5.59	5.72	5.59%	5.63%
Sunoco Logistics Ptns Operatio	6.12	86765BAE9	Sr Nt	05/15/2016	BBB-	5.70	5.71	5.74	5.74	5.75	5.77	5.79	5.80	5.81	5.83	5.83	5.86	5.78%	5.84%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	6.40	6.39	6.39	6.00	5.90	5.83	5.81	5.77	5.89	5.96	5.96	6.11	6.03%	6.01%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.39	6.24	6.08	5.93	5.82	5.72	5.69	5.97	5.79	5.65	5.66	5.97%	5.70%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	6.26	6.25	6.31	6.30	6.27	6.28	6.30	6.20	6.25	6.29	6.30	6.39	6.28%	6.33%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	6.00	5.93	5.93	5.75	5.93	5.57	5.55	5.48	5.61	5.67	5.67	5.83	5.74%	5.72%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	6.57	6.65	6.72	6.72	6.68	6.58	6.63	6.61	6.66	6.63	6.62	6.68	6.65%	6.64%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	7.02	6.92	6.80	6.61	6.45	6.34	6.40	6.30	6.56	6.56	6.63	7.07	6.64%	6.75%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	7.14	7.06	6.96	6.67	6.52	6.43	6.48	6.41	6.53	6.66	6.57	7.24	6.72%	6.82%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	6.72	6.62	6.62	6.55	6.49	6.58	6.41	6.39	6.47	6.51	6.57	6.82	6.56%	6.63%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	7.44	7.35	7.24	7.04	6.87	7.03	6.84	6.74	7.00	6.99	7.12	7.50	7.10%	7.20%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BB+	5.05	5.08	5.10	5.10	5.10	5.05	5.08	5.07	5.09	5.14	5.13	5.21	5.10%	5.16%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BB+	5.25	5.37	5.40	5.39	5.40	5.35	5.39	5.40	5.41	5.47	5.49	5.53	5.40%	5.50%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	5.83	5.83	5.87	5.83	5.81	5.82	5.88	5.87	5.92	5.99	6.01	6.14	5.90%	6.05%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	5.78	5.79	5.84	5.86	5.87	5.84	5.88	5.90	5.92	6.01	6.01	6.07	5.90%	6.03%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	5.78	5.75	5.79	5.80	5.78	5.80	6.02	5.89	5.92	5.96	6.00	6.08	5.88%	6.01%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Liquid Pipelines
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	6.13	6.00	6.07	6.06	5.91	5.93	6.11	5.93	5.99	5.97	6.03	6.36	6.04%	6.12%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Co	11/15/2035	BB-	2.62	2.61	2.64						2.69		2.73	2.75	2.67%	2.74%
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Co	5/15/2037	BB-	2.47	2.47	2.46						2.43	2.51	2.51	2.57	2.49%	2.53%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv	5/15/2037	BB-	2.49	2.49	2.47						2.47	2.53	2.52	2.63	2.51%	2.56%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Co	12/15/2038	BB-	2.41	2.40	2.39						2.34	2.37	2.36	2.50	2.40%	2.41%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	6.27	6.18	6.22	6.24	6.13	6.14	6.39	6.24	6.29	6.33	6.37	6.62	6.29%	6.44%
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-	7.01	6.98	7.05	7.05	7.05	7.05	7.04	7.02	7.08	7.57	7.91	12.07	7.57%	9.18%
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	7.01	7.01	7.01	7.01	7.02%	7.01%
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	4.96	4.96	5.00	5.01	5.01	5.04	5.05	5.05	5.06	5.09	5.11	5.12	5.04%	5.11%
Kinder Morgan Fin Co Ulc	5.7	49455WAD8	Gtd Nts	01/05/2016	BB	5.32	5.31	5.35						5.46	5.45	5.44	5.47	5.40%	5.45%
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	7.22	7.22	7.22	7.22	7.23%	7.22%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.99	6.99	6.99	6.99	7.00%	6.99%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B												7.92	7.92%	7.92%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	7.36	7.32	7.64	7.70	7.83	7.98	8.19	11.05	12.28	35.63	37.50	89.06	19.96%	54.06%
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%
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	6.87	6.87	6.87	6.87	6.88%	6.87%
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%	
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%	
Forest Oil Corp.	7.75	346091AU5	Sr Nts	05/01/2014	NR	7.65	7.65	7.65	7.65									7.65%	
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	7.01				7.02%	
Newfield Exploration Co.	6.62	651290AH1	Sr Sub Nts	09/01/2014	NR	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55					6.55%	
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	5.87	5.84	5.84	5.70	5.61	5.65	5.63	5.52	5.65	5.68	5.67	5.87	5.71%	5.74%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nt	6/15/2028	NR	5.87	5.84	5.84	5.70	5.61	5.65	5.63	5.52	5.65	5.68	5.67	5.87	5.71%	5.74%
Range Resources Corp.	7.5	75281AAG4	Sr Sub Nts	05/15/2016	NR	7.23	7.23	7.23	7.23	7.00	7.23	7.23	7.23	7.22	7.22	7.23	7.23	7.21%	7.23%
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	5.23	5.25	5.22	5.19	5.21	5.22	5.25	5.25	5.27	5.29	5.28	5.32	5.25%	5.30%
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	6.55	6.55	6.55	6.55	6.56%	6.55%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30%	7.30%
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	NR	4.71	4.73											4.72%	
			Counts of data			148	148	147	134	132	132	132	132	142	139	140	134	151	141

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	4.94%	4.93%
AA's	6.12%	6.02%
A's	5.81%	5.85%
BBB's	5.92%	5.97%
BB's	5.56%	5.70%
B's	7.92%	7.92%
CCC's	13.36%	30.41%
NR's	6.78%	6.33%
ALL	6.00%	6.23%
BBB- & Above	5.84%	5.87%
BB- & Above	5.76%	5.81%

**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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	5.3	98385XAG1	Sr Nts	06/30/2015	AAA	0.43	0.40	0.50	0.02	0.03	0.25	0.78	1.10	1.40	0.35	0.35	0.39	0.50%	0.36%
XTO Energy Inc.	5.65	98385XAH9	Sr Nts	04/01/2016	AAA	0.90	0.87	0.67	0.88	0.97	1.24	1.49	1.62	1.77	0.66	0.58	0.61	1.02%	0.62%
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.32	4.30	4.14	4.05	3.90	3.93	3.90	3.68	3.97	3.73	3.58	3.56	3.92%	3.62%
XTO Energy Inc.	6.25	98385XAL0	Sr Nts	08/01/2017	AAA	1.27	1.25	1.37	0.78	0.82	1.04	1.24	1.29	1.46	1.18	1.12	1.33	1.18%	1.21%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.27	4.27	4.09	3.98	3.83	3.85	3.83	3.61	3.90	3.88	3.76	3.69	3.91%	3.78%
XTO Energy Inc.	5.5	98385XAP1	Sr Nts	06/15/2018	AAA	1.81	1.73	1.90	1.78	1.44	1.61	1.83	1.76	1.92	1.71	1.62	1.75	1.74%	1.69%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.37	4.40	4.23	4.14	3.98	4.00	3.98	3.76	4.07	3.85	3.80	3.73	4.03%	3.79%
Texaco Capital	9.75	881685AN1	GtdDeb	03/15/2020	AA	3.62	3.59	3.78	3.71	3.59	3.76	3.83	3.73	3.93	3.44	3.35	3.46	3.65%	3.42%
Texaco Capital	8.875	881685AV3	GtdDeb	09/01/2021	AA	3.69	3.69	3.67	3.29	3.13	3.24	3.34	3.20	3.43	3.25	3.14	3.18	3.35%	3.19%
Texaco Capital	8.625	881685AX9	GtdDeb	11/15/2031	AA	4.55	4.58	4.43	4.34	4.20	4.10	4.10	3.90	4.24	3.95	3.81	3.64	4.15%	3.80%
Texaco Capital	8.625	881685AY7	GtdDeb	04/01/2032	AA	4.60	4.63	4.48	4.34	4.20	4.24	4.22	4.03	4.31	4.05	3.91	3.72	4.23%	3.89%
Texaco Capital	8	881685BB6	GtdDeb	08/01/2032	AA	4.66	4.69	4.54	4.37	4.12	4.05	4.07	3.83	4.12	3.90	3.76	3.80	4.16%	3.82%
Atlantic Richfield	9	048825AW3	Deb	04/01/2021	A	4.58	4.48	4.16	4.12	3.95	3.88	4.03	4.05	4.31	3.89	3.76	3.93	4.10%	3.86%
Atlantic Richfield	9	048825AY9	Deb	05/01/2031	A	5.52	5.55	5.33	5.22	5.10	5.12	5.10	4.86	5.12	4.89	4.75	4.72	5.11%	4.79%
Atlantic Richfield	9.125	048825AZ6	Deb	08/01/2031	A	5.52	5.55	5.33	5.20	5.05	5.10	5.07	4.86	5.14	4.93	4.78	4.75	5.11%	4.82%
Atlantic Richfield	8.25	048825BA0	Deb	02/01/2022	A	4.23	4.21	4.19	4.20	4.05	4.12	4.20	3.17	3.19	3.71	3.82	4.35	3.95%	3.96%
Atlantic Richfield	8.75	048825BB8	Deb	03/01/2032	A	5.52	5.55	5.40	5.32	5.17	5.22	5.20	4.83	5.02	5.73	5.59	5.46	5.33%	5.59%
Burlington Resources Inc.	9.125	122014AE3	Deb	10/01/2021	A	4.22	4.22	3.56	3.22	3.07	3.20	3.27	3.15	3.48	3.50	3.36	3.53	3.48%	3.46%
Burlington Resources Inc.	8.2	122014AH6	Deb	03/15/2025	A	4.32	4.32	4.20	4.15	3.98	4.05	4.12	3.88	4.26	4.01	4.00	4.11	4.12%	4.04%
Burlington Resources Inc.	6.875	122014AJ2	Deb	02/15/2026	A	4.82	4.82	4.76	4.71	4.34	4.40	4.46	4.15	4.39	4.31	4.30	4.41	4.49%	4.34%
Burlington Resources Inc.	7.375	122014AL7	Deb	03/01/2029	A	4.53	4.43	4.41	4.34	4.12	4.20	4.24	4.12	4.39	4.31	4.30	4.41	4.32%	4.34%
Burlington Resources Fin	7.2	12201PAB2	Gtd Nt	8/15/2031	A	4.60	4.64	4.48	4.15	4.00	4.00	3.98	3.78	4.26	4.04	4.04	4.09	4.17%	4.06%
Conoco Inc	6.95	208251AE8	Nts	04/15/2029	A	4.20	4.04	3.97	3.90	3.63	3.71	3.83	3.61	4.00	3.81	3.80	3.91	3.87%	3.84%
ConocoPhillips	5.9	20825CAF1	Nts	10/15/2032	A	4.61	4.43	4.32	4.22	4.03	3.98	3.93	3.71	4.00	4.03	3.94	4.05	4.10%	4.01%
Conoco Funding	7.25	20825UAC8	Sr Nt	10/15/2031	A	4.54	4.54	4.28	4.10	3.85	3.89	3.88	3.66	4.14	3.97	3.98	4.03	4.07%	3.99%
Diamond Offshore Drilling, Inc.	5.15	25271CAG7	Sr Nts	09/01/2014	A	0.60	0.60	0.87										0.69%	
Diamond Offshore Drilling, Inc.	4.88	25271CAJ1	Sr Nts	07/01/2015	A	0.61	0.61	0.75	0.11	0.35	0.40	0.80	1.11	1.45	0.53	0.50	0.82	0.67%	0.62%
Louisiana Land/Exp	7.65	546268AG8	Deb	12/01/2023	A	4.03	4.03	3.93	3.95	3.81	3.59	3.66	3.68	3.65	3.70	3.55	3.73	3.78%	3.66%
Occidental Petroleum Corp.	9.25	674599BE4	Sr Deb	08/01/2019	A	2.75	2.53	2.69	2.27	2.17	2.35	2.59	2.51	2.70	2.45	2.74	3.02	2.56%	2.74%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	04/01/2022	A	5.31	4.83	4.81						4.70	4.46	4.34	4.52	4.71%	4.44%
Occidental Petroleum Corp.	7.2	674599BM6	Sr Deb	4/1/2028	A	5.31	4.83	4.81	4.73	4.58	4.64	4.68	4.46	4.70	4.46	4.34	4.52	4.67%	4.44%
Occidental Petroleum Corp.	8.45	674599BT1	Sr Nts	02/15/2029	A	5.27	5.18	5.01	4.95	4.78	4.86	4.68	4.68	4.80	4.38	4.25	4.44	4.77%	4.36%
Occidental Pete Corp Med Term	8.75	67461FED5	'N Tranche # Tr 001	1/15/2023	A	4.48	4.50	4.41	4.12	3.98	4.05	3.73	3.54	3.80	3.77	3.64	3.83	3.99%	3.75%
Phillips Petroleum	6.65	718507BH8	Deb	07/15/2018	A	1.96	1.84	2.07	1.68	1.58	1.65	1.88	1.97	2.19	1.88	1.79	2.11	1.88%	1.93%
Phillips Petroleum	7	718507BK1	Deb	03/30/2029	A	4.52	4.38	4.34	4.27	4.03	4.05	4.17	4.03	4.41	4.21	4.20	4.31	4.24%	4.24%
ANR Pipeline	7.38	001814AQ5	Deb	2/15/2024	A-	4.45	4.45	4.39	4.35	4.22	4.27	4.27	4.09	4.12	4.05	3.93	4.03	4.22%	4.00%
ANR Pipeline	9.62	001814AR3	Deb	11/1/2021	A-	4.00	4.00	3.82	3.73	2.93	3.02	3.05	2.79	3.07	3.11	3.34	3.48	3.36%	3.31%
Apache Corp.	7.7	037411AJ4	Nts	03/15/2026	A-	4.70	4.32	4.20	4.15	3.95	4.03	4.12	3.98	4.22	4.03	3.96	4.34	4.17%	4.11%
Apache Corp.	7.95	037411AK1	Nts	04/15/2026	A-	4.70	4.38	4.26	4.18	4.00	4.07	4.12	3.96	4.22	4.03	3.96	4.34	4.19%	4.11%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.90	5.93	5.68	5.61	5.44	5.49	5.58	5.37	5.75	5.87	5.92	6.13	5.72%	5.97%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.39	5.42	5.17	5.09	4.93	4.95	5.06	4.73	5.09	5.24	5.28	5.54	5.16%	5.35%
Apache Corp.	7	037411AN5	Sr Nts	02/01/2018	A-	2.47	2.44	2.51	2.71	2.61	2.78	3.00	1.80	2.07	2.64	2.61	2.99	2.55%	2.75%
Apache Corp.	7.62	037411AP0	Sr Nts	07/01/2019	A-	2.67	2.64	2.62	2.24	2.15	2.32	2.52	2.50	2.71	2.64	2.60	2.99	2.55%	2.74%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.82	4.86	4.67	4.56	4.46	4.43	4.56	4.00	4.75	4.90	4.91	5.32	4.69%	5.04%
Apache Corp.	5.62	037411AS4	Nts	01/15/2017	A-	1.31	1.22	1.39	1.56	1.61	1.71	0.30	0.41	0.60	1.49	1.40	1.61	1.22%	1.50%
EOG Resources, Inc.	5.88	26875PAA9	Sr Nts	09/15/2017	A-	1.63	1.55	1.78	1.24	1.02	1.07	1.30	1.43	1.60	1.55	1.62	1.83	1.47%	1.67%
Enron Oil & Gas	6.65	293562AD6	Nts	04/01/2028	A-	4.83	4.83	4.81	4.73	4.22	4.27	4.32	4.12	4.36	4.12	4.00	3.95	4.38%	4.02%
Canadian Natural Resources Limited	6.45	136385AE1	Nt	6/30/2033	BBB+	5.15	5.17	4.87						4.61	4.65	4.69	5.00	4.88%	4.78%
Devon Fin Corp	7.95	251799AA0	Sr Deb	04/15/2032	BBB+	5.09	4.95	4.83	4.65	4.51	4.51	4.56	4.34	4.70	4.58	4.63	4.73	4.67%	4.65%
ENSCO International Inc.	7.2	26874QAB6	Deb	11/15/2027	BBB+	5.08	5.08	5.06	5.03	4.86	4.71	4.76	4.54	4.70	5.39	5.29	5.32	4.99%	5.33%
Enterprise Products Oper	5.6	293791AN9	Sr Nts'B'	10/15/2014	BBB+	0.37	0.54	0.64	3.28									1.21%	
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.13	4.83	4.76	4.58	4.54	4.54	4.24	4.53	4.46	4.34	4.59	4.63%	4.46%
Enterprise Products Oper	5	293791AR0	Sr Nts'B'	03/01/2015	BBB+	0.57	0.57	0.69	1.23	1.77	1.94	1.77	2.68	1.77	0.74	0.77	1.02	1.29%	0.84%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.08	5.08	4.84	4.76	4.59	4.59	4.59	4.44	4.63	4.61	4.49	4.60	4.69%	4.57%
OceanEnergy	8.25	674812AK8	Sr Nts 'B'	07/01/2018	BBB+	3.14	3.09	3.32	3.09	2.98	3.17	3.39	3.10	3.31	3.13	3.05	3.28	3.17%	3.15%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Amerada Hess Corp.	7.875	023551AF1	Nts	10/01/2029	BBB	4.98	4.98	4.94						4.63	4.69	4.67	5.16	4.86%	4.84%
Amerada Hess Corp.	7.3	023551AJ3	Nts	08/15/2031	BBB	5.03	5.13	4.98						4.61	4.63	4.84	5.15	4.91%	4.87%
Diamond Shamrock	8.75	252747AD2	Deb	06/15/2015	BBB	2.77	2.74	2.61	1.89	2.26	2.80	3.38	3.79	4.11	2.55	2.54	2.75	2.85%	2.61%
Diamond Shamrock	7.65	252747AF7	Deb	07/01/2026	BBB	4.99	4.99	4.86	4.76	4.56	4.64	4.68	4.60	4.73	4.50	4.38	4.63	4.69%	4.50%
Enbridge Energy Partners, L.P.	5.95	29250RAD8	Sr Nts 'B'	06/01/2033	BBB	5.65	5.68	5.52	5.39	5.25	5.29	5.20	4.90	5.17	4.89	4.84	4.75	5.21%	4.83%
Enbridge Energy Partners, L.P.	5.35	29250RAF3	Fixed Rt Sr Gbl Nts	12/15/2014	BBB	0.70	0.63	0.72										0.68%	
Enbridge Energy Partners, L.P.	6.3	29250RAG1	Fixed Rt Sr Gbl Nts	12/15/2034	BBB	5.75	5.78	5.62										5.72%	
Enbridge Energy Partners, L.P.	5.88	29250RAH9	Nt	12/15/2016	BBB	1.74	1.66	1.77	1.95	2.00	2.17	0.50	0.64	0.81	1.47	1.40	1.55	1.47%	1.47%
Kinder Morgan Energy Partners, L.P.	7.4	494550AJ5	Nts	03/15/2031	BBB	5.70	5.72	5.42	5.34	5.10	5.12	5.05	5.15	5.56	5.57	5.51		5.39%	5.54%
Kinder Morgan Energy Partners, L.P.	7.75	494550AL0	Nts	03/15/2032	BBB	5.68	5.70	5.42	5.27	5.12	5.17	5.00	5.20	5.63	5.55	5.43		5.38%	5.49%
Kinder Morgan Energy Partners, L.P.	7.3	494550AQ9	Sr Nts	08/15/2033	BBB	5.64	5.57	5.37	5.27	5.03	5.05	5.22	5.22	5.56	5.48	5.49		5.35%	5.49%
Kinder Morgan Energy Partners, L.P.	6	494550AU0	Sr Nt	2/1/2017	BBB	1.90	1.64	1.85	1.93	1.85	2.00	2.17	0.58	1.02	1.82	1.71		1.68%	1.77%
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.61	5.63	5.46	5.29	5.12	5.17	5.32	5.25	5.59	5.61	5.64		5.43%	5.63%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.67	5.58	5.43	5.34	5.20	5.22	5.32	5.22	5.58	5.90	5.64		5.46%	5.77%
Lakehead Pipe Line Co	7	511546AA1	Sr Nt	10/1/2018	BBB	3.08	2.99	3.19	2.72	2.59	2.76	4.64	2.87	2.92	2.79	2.72	2.92	3.02%	2.81%
Lakehead Pipe Line Co	7.12	511546AB9	Sr Nt	10/1/2028	BBB	4.64	4.64	4.64	4.64	4.64	4.54	4.64	4.64	4.63	4.63	4.64	4.64	4.63%	4.64%
Marathon Oil Corp.	6.8	565849AB2	Nts	03/15/2032	BBB	4.98	4.93	4.78	4.70	4.54	4.56	4.54	4.44	4.73	4.68	4.63	4.97	4.71%	4.76%
Murphy Oil Corp.	7.05	626717AA0	Nts	05/01/2029	BBB	6.07	5.97	5.51	5.39	5.20	5.07	5.12	4.90	5.14	5.25	5.13	5.46	5.35%	5.28%
ONEOK Partners, L.P.	6.15	68268NAB9	Gtd Sr Nt	10/1/2016	BBB	1.44	1.26	1.33	0.02	0.16	0.41	0.68	0.83	1.15	1.47	1.38	1.83	1.00%	1.56%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.63	5.48	5.28	5.07	4.30	4.90	4.88	4.71	5.07	5.26	5.30	5.46	5.11%	5.34%
Plains All Amern Pipeline L P	5.88	72650RAF9	Sr Nt	08/15/2016	BBB	1.85	1.82	1.99						1.54	1.32	1.44	1.58	1.65%	1.45%
Plains All Amer/PAA Fin	5.25	72650RAJ1	Sr Nts	06/15/2015	BBB	0.93	0.90	1.10	0.62	0.84	1.24	1.65	1.52	1.79	0.57	0.55	0.62	1.03%	0.58%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.05	5.13	4.93	4.83	4.68	4.68	4.66	4.57	4.91	4.85	4.75	4.85	4.82%	4.82%
Talisman Energy Inc.	7.25	87425EAE3	Deb	10/15/2027	BBB	5.66	5.52	5.44						4.73	5.05	5.08	5.46	5.28%	5.20%
USX Corp.	9.375	902905AL2	Deb	05/15/2022	BBB	4.50	4.48	4.36	4.24	4.09	4.17	4.27	4.07	4.34	4.06	3.93	4.04	4.21%	4.01%
USX Corp.	8.5	902905AN8	Deb	03/01/2023	BBB	4.66	4.64	4.66	4.62	4.44	4.51	4.59	4.24	4.31	4.34	4.17	4.48	4.47%	4.33%
USX Corp.	8.125	902905AQ1	Deb	07/15/2023	BBB	4.71	4.69	4.61	4.46	4.29	4.38	4.44	4.39	4.51	4.31	4.15	4.45	4.45%	4.30%
Valero Energy Corp. (New)	8.75	91913YAB6	Nts	06/15/2030	BBB	5.86	5.89	5.53	5.42	5.27	5.29	5.29	5.07	5.36	5.26	5.12	5.23	5.38%	5.20%
Valero Energy Corp. (New)	7.5	91913YAE0	Nts	04/15/2032	BBB	5.37	5.33	5.13	4.99	4.76	4.76	4.79	4.73	5.19	5.02	4.97	5.23	5.02%	5.07%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.33	5.35	5.09	4.95	4.81	4.86	5.00	4.76	5.14	5.04	4.93	5.25	5.04%	5.07%
Valero Energy Corp. (New)	6.12	91913YAM2	Nts	06/15/2017	BBB	1.91	1.44	1.47	1.23	1.24	1.36	1.71	1.72	1.99	1.74	1.69	2.01	1.63%	1.81%
Williams Ptns L P	7.25	96950HAD2	Sr Nt	2/1/2017	BBB	1.77	1.75	1.84	2.10	2.08	2.27	2.51	0.55	0.80	1.87	1.68	2.21	1.79%	1.92%
Anadarko Petroleum Corp.	7.25	032511AH0	Deb	03/15/2025	BBB-	6.23	6.20	6.19	5.65	5.47	5.42	5.47	5.34	5.34	5.40	5.40	5.69	5.65%	5.50%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.45	6.38	6.23	6.08	6.30	6.21	6.17	5.98	6.24	6.08	5.93	5.94	6.17%	5.98%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.63	6.48	6.32	6.17	6.08	6.05	5.83	6.12	5.95	5.80	5.81	6.16%	5.85%
Anadarko Petroleum Corp.	7	032511AL1	Deb	11/15/2027	BBB-	6.13	6.00	5.99	5.42	5.20	5.05	5.10	4.71	4.97	5.10	5.10	5.58	5.36%	5.26%
Anadarko Petroleum Corp.	6.62	032511AM9	Deb	01/15/2028	BBB-	6.03	6.00	5.99	5.42	5.17	5.12	5.10	4.86	5.12	5.25	5.25	5.53	5.40%	5.34%
Anadarko Petroleum Corp.	7.2	032511AN7	Deb	03/15/2029	BBB-	5.71	5.60	5.54	5.10	4.90	4.78	4.64	4.39	4.63	4.70	4.70	4.88	4.96%	4.76%
Anadarko Petroleum Corp.	5.95	032511AX5	Sr Nts	09/15/2016	BBB-	1.46	1.26	1.39	0.21	0.29	0.53	0.85	0.97	1.20	1.38	1.34	1.78	1.06%	1.50%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.19	5.17	5.05	4.71	4.58	4.46	4.59	4.42	4.78	4.84	4.69	4.93	4.78%	4.82%
Buckeye Partners, L.P.	5.12	118230AE1	Fixed Rt Nts	07/01/2017	BBB-	3.01	2.70	2.81	2.63	2.60	2.71	2.88	2.85	3.00	2.76	2.67	2.89	2.79%	2.77%
Energen Corp MTN BE	7.32	29265AAP1	'N Tranche # Tr 000	7/28/2022	BBB-	5.63	5.63	5.59	5.47	5.29	5.37	5.42	5.22	5.47	5.25	5.13	5.08	5.38%	5.15%
Energy Transfer Partners, L.P.	5.95	29273RAB5	Sr Nt	2/1/2015	BBB-	0.88	0.88	0.83	2.33	2.33	2.33	3.28	2.33		0.92	1.32	2.33	1.80%	1.52%
Energy Transfer Partners, L.P.	6.12	29273RAE9	Sr Nt	2/15/2017	BBB-	2.03	1.94	1.86	2.07	2.00	2.16	2.15	2.24	0.76	1.75	1.65	2.12	1.89%	1.84%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.79	5.75	5.58	5.34	5.17	5.17	5.17	5.03	5.36	5.40	5.46	5.61	5.40%	5.49%
Enterprise Prods Oper L P	8.38	293791AV1	Sub Nt Fixed/fltg Ra	08/01/2066	BBB-	7.51	7.47	7.41	7.37	7.39	7.42	7.44	7.42	7.51	7.65	7.65	7.78	7.50%	7.69%
Kerr-McGee Corp.	7.125	492386AK3	Deb	10/15/2027	BBB-	5.45	5.25	5.24	4.93	4.51	4.32	4.10	3.93	4.17	4.30	4.30	4.59	4.59%	4.40%
Kerr-McGee Corp.	7.875	492386AT4	Nts	09/15/2031	BBB-	5.42	5.31	5.22	4.54	4.51	4.39	4.46	4.29	4.68	4.72	4.69	4.69	4.74%	4.70%
Kerr-McGee Corp.	6.95	492386AU1	Nts	07/01/2024	BBB-	4.54	4.51	4.34	3.83	3.58	3.54	3.71	3.59	3.83	3.90	3.90	4.19	3.96%	4.00%
Sunoco Logistics Ptns Operatio	6.12	86765BAE9	Sr Nt	05/15/2016	BBB-	2.82	2.79	2.90	2.63	2.71	2.91	3.13	3.20	3.32	2.73	2.69	2.82	2.89%	2.75%
Union Pacific Resources Group	7.5	907834AB1	Deb	10/15/2026	BBB-	5.60	5.57	5.56	4.88	4.54	4.38	4.44	4.27	4.51	4.65	4.65	4.94	4.83%	4.75%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.38	6.23	6.08	5.93	5.81	5.78	5.69	5.95	5.78	5.64	5.65	5.97%	5.69%
Union Pacific Resources Group	7.05	907834AF2	Deb	05/15/2018	BBB-	3.83	3.77	3.97	3.78	3.67	3.71	3.90	3.68	3.61	3.41	3.39	3.77	3.71%	3.52%
Union Pacific Resources Group	7.15	907834AG0	Deb	05/15/2028	BBB-	5.23	5.10	5.09	4.73	4.54	4.39	4.39	4.34	4.46	4.55	4.55	4.84	4.68%	4.65%
Williams Companies, Inc. (The)	7.625	969457AW0	Nts	07/15/2019	BBB-	4.31	4.53	4.72	4.56	4.42	4.06	4.24	4.15	4.34	4.09	4.01	4.18	4.30%	4.09%
Williams Companies, Inc. (The)	7.5	969457BB5	Deb	01/15/2031	BBB-	6.82	6.66	6.48	6.20	5.95	5.78	5.81	5.66	6.08	6.10	6.21	6.87	6.22%	6.39%
Williams Companies, Inc. (The)	7.75	969457BD1	Nts	06/15/2031	BBB-	6.90	6.78	6.63	5.17	5.17	5.82	5.90	5.78	5.97	6.16	6.02	7.02	6.11%	6.40%
Williams Companies, Inc. (The)	7.875	969457BG4	Nts	09/01/2021	BBB-	5.13	4.85	4.81	0.00	4.27	3.88	4.05	4.00	4.24	4.30	4.45	5.11	4.09%	4.62%
Williams Companies, Inc. (The)	8.75	969457BM1	Nts	03/15/2032	BBB-	7.02	6.88	6.73	6.44	6.17	5.95	6.15	6.00	6.36	6.34	6.52	7.06	6.47%	6.64%
Boardwalk Pipelines Llc	5.5	096629AA8	Nt	2/1/2017	BB+	2.46	2.57	2.61	2.74	2.74	2.38	2.58	1.21	1.43	2.26	2.17	2.78	2.33%	2.40%
Boardwalk Pipelines Lp	5.88	096630AA6	Sr Nt	11/15/2016	BB+	1.54	2.28	2.45	2.73	2.76	0.85	1.33	1.40	1.56	2.18	2.28	2.46	1.99%	2.31%
Pioneer Natural Resources Co.	6.88	723787AF4	Sr Nts	05/01/2018	BB+	2.45	2.38	2.47	2.12	2.05	2.10	2.38	2.33	2.62	2.44	2.48	3.09	2.41%	2.67%
Pioneer Natural Resources Co.	6.65	723787AG2	Sr Nts	03/15/2017	BB+	1.73	1.69	1.86	1.97	2.02	1.87	2.12	2.22	2.38	1.98	1.96	2.20	2.00%	2.05%
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	7.19	7.26	7.26	7.26	7.21%	7.26%

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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
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	6.97	6.95	6.95	6.95	6.97%	6.95%
Kinder Morgan Inc	5.15	494553AC4	Sr Nts	03/01/2015	BB	1.65	1.40	1.86	2.21	2.38	2.96	3.09	3.09		1.78	2.32	1.95	2.24%	2.02%
Kinder Morgan Fin Co Ulc	5.7	494555WAD8	Gtd Nts	01/05/2016	BB	2.01	1.74	1.94						1.38	1.15	1.41	1.61	1.61%	1.39%
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	6.58	6.06	6.59	5.99	6.50%	6.21%
Range Resources Corp.	7.25	75281AAJ8	Sr Sub Nts	05/01/2018	BB	6.38	6.38	6.38	6.38	6.59	6.38	6.38	6.38	6.38	6.07	6.38	6.02	6.34%	6.16%
Chesapeake Energy Corp.	6.5	165167BS5	Sr Nts	08/15/2017	BB-	2.80	2.55	2.68	2.27	2.19	2.32	3.63	2.84	3.09	3.07	3.29	3.77	2.88%	3.38%
Chesapeake Energy Corp.	6.88	165167BU0	Sr Nts	11/15/2020	BB-	4.78	4.35	4.53	4.59	4.15	3.83	4.46	3.83	4.07	4.03	4.21	5.27	4.34%	4.50%
Chesapeake Energy Corp.	2.75	165167BW6	ontingent Sr Nt Cor	11/15/2035	BB-	2.46	2.44	2.51						2.60		2.71	2.75	2.58%	2.73%
Chesapeake Energy Corp.	2.5	165167BZ9	ontingent Sr Nt Cor	5/15/2037	BB-	2.43	2.44	2.41						2.36	2.53	2.53	2.67	2.48%	2.58%
Chesapeake Energy Corp.	2.5	165167CA3	r Contingent Conv I	5/15/2037	BB-	2.49	2.47	2.43						2.43	2.58	2.55	2.81	2.54%	2.65%
Chesapeake Energy Corp.	2.25	165167CB1	ontingent Sr Nt Cor	12/15/2038	BB-	2.62	2.59	2.59						2.48	2.53	2.51	2.83	2.59%	2.62%
Chesapeake Energy Corp.	7.25	165167CC9	Sr Nt	12/15/2018	BB-	3.74	3.32	3.42	3.63	3.24	3.29	3.56	2.89	3.17	3.42	3.57	4.59	3.49%	3.86%
Plains Exploration & Production Company	7	726505AC4	SrNts	03/15/2017	BB-						6.17	6.17	6.17	6.17	5.38	5.35	5.29	5.81%	5.34%
Plains Exploration & Production Company	7.75	726505AD2	SrNts	06/15/2015	BB-						7.00	7.00	7.00	7.00	4.40	4.12	3.41	5.70%	3.98%
Swift Energy Co.	7.12	870738AF8	SrNts	06/01/2017	BB-	6.61	6.43	6.76	6.75	6.70	6.75	6.65	6.56	6.93	9.83	11.84	42.19	10.33%	21.29%
Berry Petroleum Co.	8.25	085789AC9	Sr SubNts	11/01/2016	B												5.83	5.83%	5.83%
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	6.74	6.57	6.75		6.73%	6.66%
Quicksilver Resources Inc.	7.12	74837RAC8	Sr Sub Nts	04/01/2016	CCC-	8.79	8.58	10.95	11.53	12.48	13.62	15.13	34.52	42.18	49.99	49.99	49.99	25.65%	49.99%
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	5.56	5.53	5.47	6.08%	5.52%
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%	
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	4.47	4.36	4.10	5.41%	4.31%
Ferrellgas Partners L.P.	6.75	31529MAA6	Sr Nts	05/15/2014	NR	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%	
Mariner Energy, Inc.	8	56845TAF4	Sr Nts	05/15/2017	NR	0.00	0.00	0.00	5.21	5.21	5.21	5.21	5.21	5.21				3.47%	
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%	
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nts	01/15/2028	NR	4.97	4.92	4.90	4.61	4.44	4.51	4.48	4.27	4.51	4.55	4.53	4.88	4.63%	4.65%
Pioneer Natural Resources Co.	7.2	723787AB3	Sr Nt	6/15/2028	NR	4.97	4.92	4.90	4.61	4.44	4.51	4.48	4.27	4.51	4.55	4.53	4.88	4.63%	4.65%
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	6.58	4.89	6.59	6.59	6.45%	6.02%
Sunoco, Inc.	5.75	86764PAD1	Nts	01/15/2017	NR	2.28	2.34	2.01	1.97	2.12	2.22	0.93	0.97	1.19	1.68	1.52	1.70	1.74%	1.63%
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	6.24	5.55	5.49	5.36	6.05%	5.47%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	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%	7.27%
Valero Energy Corp. (New)	4.75	91913YAK6	Sr Nts	04/01/2014	NR	0.46	0.37											0.42%	
			Counts of data			148	148	147	133	130	132	132	132	139	139	140	134	151	141

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%	2.15%
AA's	3.91%	3.62%
A's	3.77%	3.82%
BBB's	4.24%	4.29%
BB's	4.60%	5.18%
B's	5.83%	5.83%
CCC's	16.19%	28.33%
NR's	6.77%	4.94%
ALL	4.42%	4.48%
BBB- & Above	3.96%	3.98%
BB- & Above	3.99%	4.08%

**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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
XTO Energy Inc.	6.1	98385XAJ5	Sr Nts	04/01/2036	AAA	4.32	4.30	4.14	4.05	3.90	3.93	3.90	3.68	3.97	3.73	3.58	3.56	3.92%	3.62%
XTO Energy Inc.	6.75	98385XAM8	Sr Nts	08/01/2037	AAA	4.27	4.27	4.09	3.98	3.83	3.85	3.83	3.61	3.90	3.88	3.76	3.69	3.91%	3.78%
XTO Energy Inc.	6.38	98385XAQ9	Sr Nts	06/15/2038	AAA	4.37	4.40	4.23	4.14	3.98	4.00	3.98	3.76	4.07	3.85	3.80	3.73	4.03%	3.79%
Apache Corp.	7.625	037411AL9	Deb	11/01/2096	A-	5.90	5.93	5.68	5.61	5.44	5.49	5.58	5.37	5.75	5.87	5.92	6.13	5.72%	5.97%
Apache Corp.	7.38	037411AM7	Deb	08/15/2047	A-	5.39	5.42	5.17	5.09	4.93	4.95	5.06	4.73	5.09	5.24	5.28	5.54	5.16%	5.35%
Apache Corp.	6	037411AR6	Nts	01/15/2037	A-	4.82	4.86	4.67	4.56	4.46	4.43	4.56	4.00	4.75	4.90	4.91	5.32	4.69%	5.04%
Enterprise Products Oper	6.65	293791AP4	Sr Nts'B'	10/15/2034	BBB+	5.03	5.13	4.83	4.76	4.58	4.54	4.54	4.24	4.53	4.46	4.34	4.59	4.63%	4.46%
Enterprise Products Oper	5.75	293791AT6	Sr Nts'B'	03/01/2035	BBB+	5.08	5.08	4.84	4.76	4.59	4.59	4.59	4.44	4.63	4.61	4.49	4.60	4.69%	4.57%
Enbridge Energy Partners, L.P.	6.3	29250RAG1	ixed Rt Sr Gbl N	12/15/2034	BBB	5.75	5.78	5.62										5.72%	
Kinder Morgan Energy Partners, L.P.	6.5	494550AV8	Sr Nt	2/1/2037	BBB	5.61	5.63	5.46	5.29	5.12	5.17	5.32	5.25	5.59	5.61	5.64		5.43%	5.63%
Kinder Morgan Energy Partners, L.P.	6.95	494550AW6	Sr Nt	1/15/2038	BBB	5.67	5.58	5.43	5.34	5.20	5.22	5.32	5.22	5.58	5.90	5.64		5.46%	5.77%
ONEOK Partners, L.P.	6.65	68268NAC7	Gtd Sr Nt	10/1/2036	BBB	5.63	5.48	5.28	5.07	4.30	4.90	4.88	4.71	5.07	5.26	5.30	5.46	5.11%	5.34%
Plains All Amern Pipeline L P	6.7	72650RAM4	Sr Nt	5/15/2036	BBB	5.05	5.13	4.93	4.83	4.68	4.68	4.66	4.57	4.91	4.85	4.75	4.85	4.82%	4.82%
Valero Energy Corp. (New)	6.62	91913YAL4	Nts	06/15/2037	BBB	5.33	5.35	5.09	4.95	4.81	4.86	5.00	4.76	5.14	5.04	4.93	5.25	5.04%	5.07%
Anadarko Petroleum Corp.	7.73	032511AJ6	Deb	09/15/2096	BBB-	6.45	6.38	6.23	6.08	6.30	6.21	6.17	5.98	6.24	6.08	5.93	5.94	6.17%	5.98%
Anadarko Petroleum Corp.	7.25	032511AK3	Deb	11/15/2096	BBB-	6.70	6.63	6.48	6.32	6.17	6.08	6.05	5.83	6.12	5.95	5.80	5.81	6.16%	5.85%
Anadarko Petroleum Corp.	6.45	032511AY3	Sr Nts	09/15/2036	BBB-	5.19	5.17	5.05	4.71	4.58	4.46	4.59	4.42	4.78	4.84	4.69	4.93	4.78%	4.82%
Energy Transfer Partners, L.P.	6.62	29273RAF6	Sr Nt	10/15/2036	BBB-	5.79	5.75	5.58	5.34	5.17	5.17	5.17	5.03	5.36	5.40	5.46	5.61	5.40%	5.49%
Enterprise Prods Oper L P	8.38	293791AV1	ub Nt Fixed/fltg R	08/01/2066	BBB-	7.51	7.47	7.41	7.37	7.39	7.42	7.44	7.42	7.51	7.65	7.65	7.78	7.50%	7.69%
Union Pacific Resources Group	7.5	907834AC9	Deb	11/01/2096	BBB-	6.70	6.38	6.23	6.08	5.93	5.81	5.78	5.69	5.95	5.78	5.64	5.65	5.97%	5.69%
Chesapeake Energy Corp.	2.75	165167BW6	ntingent Sr Nt Co	11/15/2035	BB-	2.46	2.44	2.51						2.60		2.71	2.75	2.58%	2.73%
Chesapeake Energy Corp.	2.5	165167BZ9	ntingent Sr Nt Co	5/15/2037	BB-	2.43	2.44	2.41						2.36	2.53	2.53	2.67	2.48%	2.58%
Chesapeake Energy Corp.	2.5	165167CA3	Contingent Conv	5/15/2037	BB-	2.49	2.47	2.43						2.43	2.58	2.55	2.81	2.54%	2.65%
Chesapeake Energy Corp.	2.25	165167CB1	ntingent Sr Nt Co	12/15/2038	BB-	2.62	2.59	2.59						2.48	2.53	2.51	2.83	2.59%	2.62%
Texaco Capital	7.5	881685BD2	GtdDeb	03/01/2043	NR	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%	7.27%
			Counts of data			25	25	25	20	20	20	20	20	24	23	24	22	25	24

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	3.95%	3.73%
AA's	---	---
A's	5.19%	5.46%
BBB's	5.49%	5.48%
BB's	2.55%	2.64%
B's	---	---
CCC's	---	---
NR's	7.27%	7.27%
ALL	4.87%	4.86%
BBB- & Above	5.22%	5.20%
BB- & Above	4.77%	4.75%

**Investment Grade (BBB- & Above)*

Montana Department of
REVENUE

2015 Capitalization Rate Study

Railroads

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Class I Railroads
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	ALL	Median	
	4.40%	4.54%	Yahoo
	4.59%	4.60%	Value Line
	4.49%	4.57%	Average of E/Ps

Inverse of P/E Ratios:

	4.52%	4.65%	Yahoo
	5.32%	5.30%	Value Line
	4.92%	4.98%	Average of Inverse of the P/E
	6.43%	6.67%	Inverse of median P/E, Value Line
	4.71%	4.77%	Average of all above except median P/E
Mean =	5.05%	5.15%	
Median =	4.59%	4.65%	

Equity Measure NUOI = 5.00%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.53%	5.42%	ALL
	5.46%	5.32%	BBB- & Above
	5.48%	5.35%	BB- & Above
Mean =	5.49%	5.36%	
Median =	5.48%	5.35%	

Debt Measure = 5.50%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	88.00%	x	5.00%	=	4.40%	
Debt	12.00%	x	5.50%	=	0.66%	
	100%				5.06%	
			Direct Cap Rate NUOI		=	**5.25%**

Gross Cash Flow / Price:

Mean	Median	
6.91%	6.53%	Value Line

Equity Measure Gross = 6.90%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	88.00%	x	6.90%	=	6.07%	
Debt	12.00%	x	5.50%	=	0.66%	
	100%				6.73%	
Direct Cap Rate GCF					=	**6.75%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Class III Railroads
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	ALL	Median	
	4.54%	4.54%	Yahoo
	4.43%	4.60%	Value Line
	4.48%	4.57%	Average of E/Ps

Inverse of P/E Ratios:

	4.52%	4.65%	Yahoo
	5.30%	5.30%	Value Line
	4.91%	4.98%	Average of Inverse of the P/E
	5.26%	6.67%	Inverse of median P/E, Value Line
	4.70%	4.77%	Average of all above except median P/E
Mean =	4.81%	5.15%	
Median =	4.54%	4.65%	

Equity Measure NUOI = 4.80%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	5.53%	5.42%	ALL
	5.46%	5.32%	BBB- & Above
	5.48%	5.35%	BB- & Above
Mean =	5.49%	5.36%	
Median =	5.48%	5.35%	

Debt Measure = 5.50%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	76.00%	x	4.80%	=	3.65%	
Debt	24.00%	x	5.50%	=	1.32%	
	100%				4.97%	
			Direct Cap Rate NUOI		=	**5.00%**

Gross Cash Flow / Price:

Mean	Median	
7.73%	6.53%	Value Line

Equity Measure Gross = 7.75%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	76.00%	x	7.75%	=	5.89%	
Debt	24.00%	x	5.50%	=	1.32%	
	100%				7.21%	
Direct Cap Rate GCF					=	**7.25%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Railroads
2015 Assessment Year

Equity Measures Calculated:	**Class I**	**Class III**
Dividend Growth Model - Dividends	15.50%	---
Dividend Growth Model - Earnings	15.50%	---
Dividend Growth Model - Plowback	13.50%	---
Capital Asset Pricing Model	9.97%	10.85%
Mean =	12.74%	10.85%
Equity Measure FCF =	**10.00%**	**11.00%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.96%	3.73%	4.89%	4.53%
BBB- & Above	3.91%	3.65%	4.89%	4.53%
BB- & Above	3.94%	3.71%	4.89%	4.53%
Mean =	3.94%	3.70%	4.89%	4.53%
Median =	3.94%	3.71%	4.89%	4.53%

Debt Measure = 4.90%

CLASS I

Yield Cap Rate Free Cash Flow						
Equity	88.00%	x	10.00%	=	8.80%	
Debt	12.00%	x	4.90%	* (1 - 0.35) =	0.38%	
	100.00%				9.18%	
Weighted Average Cost of Capital (WACC) =						**9.25%**

CLASS III

Yield Cap Rate Free Cash Flow						
Equity	76.00%	x	11.00%	=	8.36%	
Debt	24.00%	x	4.90%	* (1 - 0.35) =	0.76%	
	100.00%				9.12%	
Weighted Average Cost of Capital (WACC) =						**10.25%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Railroads
2015 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	830,600	68.91	14.659	57,236,646	12,176,000	0	0	6,410,000	1.00	6,410,000
Union Pacific	UNP	A++	912,000	119.13	23.273	108,646,560	21,225,000	0	0	8,872,000	1.00	8,872,000
Kansas City South'n	KSU	A	110,200	122.03	30.531	13,447,706	3,364,500	6,100	6,100	1,856,900	1.00	1,856,900
Norfolk Southern	NSC	A	308,900	109.61	36.546	33,858,529	11,289,000	0	0	8,903,000	1.00	8,903,000
CSX Corp.	CSX	B++	1,008,900	36.23	10.411	36,552,447	10,504,000	0	0	9,022,000	1.00	9,022,000
Can. Pacific Railway	CP	B++	175,500	192.69	38.011	33,817,095	6,671,000	0	0	4,406,000	1.00	4,406,000
Genesee & Wyoming	GWR	B+	53,500	89.92	40.146	4,810,720	2,147,800	0	0	1,540,300	1.00	1,540,300
SUMS & AVERAGES - ALL						288,369,703	67,377,300	6,100	6,100	41,010,200		41,010,200
CLASS I SUMS & AVERAGES - ALL						283,558,983	65,229,500	6,100	6,100	39,469,900		39,469,900
CLASS III SUMS & AVERAGES - ALL						4,810,720	2,147,800	0	0	1,540,300		1,540,300
MEDIAN VALUES - ALL												

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

INDUSTRY MARKET STRUCTURE						
	CLASS I RAILROADS		CLASS III RAILROADS		ALL RAILROADS	
COMMON	88.00%	283,558,983	76.00%	4,810,720	88.00%	288,369,703
DEBT	12.00%	39,476,000	24.00%	1,540,300	12.00%	41,016,300
TOTAL	100.00%	323,034,983	100.00%	6,351,020	100.00%	329,386,003

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
2015 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) Beta	(VL) Est. Tax Rate
Can. National Railway	CNI	3.12	4.53%	3.17	4.60%	4.50	6.53%	21.46	4.66%	18.63	5.37%	15.00	6.67%	0.95	27.50%
Union Pacific	UNP	5.41	4.54%	5.50	4.62%	7.60	6.38%	21.50	4.65%	19.26	5.19%	15.00	6.67%	1.00	37.50%
Kansas City South'n	KSU	4.30	3.52%	4.66	3.82%	6.70	5.49%	27.15	3.68%	22.87	4.37%	24.00	4.17%	1.15	35.00%
Norfolk Southern	NSC	6.39	5.83%	6.15	5.61%	9.85	8.99%	16.69	5.99%	15.58	6.42%	13.00	7.69%	1.05	38.00%
CSX Corp.	CSX	1.85	5.11%	1.90	5.24%	3.10	8.56%	19.42	5.15%	17.10	5.85%	14.00	7.14%	1.15	38.00%
Can. Pacific Railway	CP	5.50	2.85%	7.03	3.65%	10.60	5.50%	33.55	2.98%	21.30	4.69%	16.00	6.25%	1.05	27.50%
Genesee & Wyoming	GWR	4.08	4.54%	3.98	4.43%	6.95	7.73%	22.13	4.52%	18.86	5.30%	19.00	5.26%	1.20	38.50%
SUMS & AVERAGES - ALL			4.42%		4.57%		7.02%		4.52%		5.31%		6.26%	1.08	34.57%
CLASS I SUMS & AVERAGES - ALL			4.40%		4.59%		6.91%		4.52%		5.32%		6.43%	1.06	33.92%
CLASS III SUMS & AVERAGES - ALL			4.54%		4.43%		7.73%		4.52%		5.30%		5.26%	1.20	38.50%
MEDIAN VALUES - ALL			4.54%		4.60%		6.53%		4.65%		5.30%		6.67%	1.05	37.50%

Class I Industry Beta = 1.07
Class III Industry Beta = 1.20

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

2014 Notes/Rational for Changes to Gu
Genesee & Wyoming acquired Rail Ar

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Railroads
2015 Assessment Year

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

	Class I	Class III
K_E = Cost of Equity	**9.97%**	**10.85%**
R_F = Risk Free Rate	2.75%	2.75%
β= Beta	1.07	1.20
R_M = Market Rate of Return	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	6.75%	6.75%

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/	1/1/2015 implied premium	5.78%
Duff & Phelps	February 6, 2015 Table Equity Risk Premiu	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2014 Not updated for 2015

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	12.10%	12.10%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	10.10%	10.10%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	8.50%	8.50%
	Mean =	10.23%	10.20%
	Median =	10.10%	9.80%
	R_M=	**9.50%**	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2014-31 Table 2 December 8, 2014

Rev Rule 2014-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.34%
	Mid Term - AFR	R_f =	1.28%
	Long Term - AFR	R_f =	2.68%

The ValueLine Investment Survey January 9, 2015

U.S. Treasury Securities December 30, 2014

1 Year	R_f =	0.20%
10 Year	R_f =	2.19%
30 Year	R_f =	2.76%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2014

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

1 year constant maturity, quoted on investment basis	R_f =	0.25%
10-year constant maturity, quoted on investment basis	R_f =	2.17%
20-year constant maturity, quoted on investment basis	R_f =	2.47%
30-year constant maturity, quoted on investment basis	R_f =	2.75%
	Mean =	1.71%
	Median =	2.18%
	Weighted Mean =	2.08%
	R_f =	**2.75%**

U.S. Treasury Securities Long-Term December 31, 2014

20 year constant maturity	R_f = **2.47%**
30 year constant maturity	R_f = **2.75%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Railroads
2015 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

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	68.91	1.13	1.64%	15.00%	16.64%
Can. Pacific Railway	CP	192.69	1.40	0.73%	17.00%	17.73%
CSX Corp.	CSX	36.23	0.70	1.93%	12.50%	14.43%
Kansas City South'n	KSU	122.03	1.28	1.05%	19.50%	20.55%
Norfolk Southern	NSC	109.61	2.40	2.19%	7.50%	9.69%
Union Pacific	**UNP**	**119.13**	**2.10**	**1.76%**	**11.50%**	**13.26%**
Genesee & Wyoming ***	GWR	89.92	Nil		Nil	

*** Class III Railroad

Weighted Mean= 15.26%
Median= 15.54%
Mean= 15.38%

Cost of Equity, (K_E) = 15.50%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Railroads
2015 Assessment Year

$$K_E = D1 / P_O + G_A$$

Based on Dividend Earnings

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)	Earnings Growth ***	Ke 1 Year
Can. National Railway	CNI	68.91	1.13	1.64%	13.00%	14.64%
Can. Pacific Railway	CP	192.69	1.40	0.73%	27.00%	27.73%
CSX Corp.	CSX	36.23	0.70	1.93%	11.50%	13.43%
Kansas City South'n	KSU	122.03	1.28	1.05%	14.00%	15.05%
Norfolk Southern	NSC	109.61	2.40	2.19%	8.50%	10.69%
Union Pacific	**UNP**	**119.13**	**2.10**	**1.76%**	**11.00%**	**12.76%**
Genesee & Wyoming ***	GWR	89.92	Nil		15.00%	
		105.50	1.50	1.42%	14.29%	15.71%

*** Class III Railroad

Weighted Mean=	15.71%
Median=	14.04%
Mean=	15.72%

Cost of Equity, (K_E) = 15.50%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Railroads
2015 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
Can. National Railway	CNI	68.91	1.13	1.64%	30.00%	23.00%	6.90%	8.54%
Can. Pacific Railway	CP	192.69	1.40	0.73%	86.00%	21.50%	18.49%	19.22%
CSX Corp.	CSX	36.23	0.70	1.93%	67.00%	17.00%	11.39%	13.32%
Kansas City South'n	KSU	122.03	1.28	1.05%	77.00%	13.00%	10.01%	11.06%
Norfolk Southern	NSC	109.61	2.40	2.19%	67.00%	16.50%	11.06%	13.24%
Union Pacific	**UNP**	119.13	2.10	1.76%	67.00%	22.00%	14.74%	16.50%
Genesee & Wyoming ***	GWR	89.92	Nil			10.50%		

*** Class III Railroad

Weighted Mean= 13.52%
Mean= 13.65%
Median= 13.28%

Cost of Equity - All, (K_E) = 13.50%

MONTANA DEPARTMENT OF REVENUE

Historical Stock Price Analysis From YAHOO Finance
Industry: Railroads
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
CNI	Can. National Railway	high	$ 57.09	$ 57.07	$ 57.54	$ 59.11	$ 60.75	$ 65.44	$ 69.75	$ 72.08	$ 75.92	$ 71.06	$ 74.73	$ 70.66	$ 68.91	$ 63.10	21.46	$ 3.12
		low	$ 51.08	$ 52.68	$ 54.82	$ 54.40	$ 57.85	$ 60.00	$ 64.67	$ 65.47	$ 70.15	$ 60.78	$ 68.06	$ 63.22				
CP	Can. Pacific Railway	high	$ 153.86	$ 159.70	$ 159.77	$ 158.47	$ 167.90	$ 186.00	$ 199.65	$ 201.23	$ 210.87	$ 220.20	$212.19	$ 198.50	$ 192.69	$ 176.36	33.55	$ 5.50
		low	$ 139.37	$ 145.01	$ 147.15	$ 142.73	$ 155.20	$ 167.81	$ 179.90	$ 186.09	$ 198.42	$ 180.13	$192.09	$ 170.51				
CSX	CSX Corp.	high	$ 29.25	$ 27.97	$ 29.45	$ 29.27	$ 29.75	$ 31.13	$ 31.59	$ 30.99	$ 32.66	$ 35.95	$ 37.99	$ 37.53	$ 36.23	$ 30.61	19.42	$ 1.85
		low	$ 25.89	$ 25.84	$ 27.35	$ 27.14	$ 27.58	$ 28.94	$ 29.88	$ 29.07	$ 30.91	$ 29.75	$ 34.39	$ 34.34				
GBX	Greenbrier Cos Inc.	high	$ 38.35	$ 43.20	$ 47.33	$ 52.61	$ 56.65	$ 62.96	$ 67.94	$ 72.79	$ 78.32	$ 73.42	$ 67.45	$ 55.50	$ 53.73	$ 53.89	14.26	$ 3.44
		low	$ 30.59	$ 32.58	$ 41.40	$ 42.29	$ 47.87	$ 54.00	$ 57.22	$ 60.08	$ 68.07	$ 45.09	$ 55.00	$ 42.62				
GWR	Genesee & Wyoming	high	$ 98.59	$ 99.24	$ 100.27	$ 99.57	$ 98.76	$ 105.88	$ 106.02	$ 99.53	$ 103.55	$ 96.59	$101.55	$ 98.60	$ 89.92	$ 96.11	22.13	$ 4.08
		low	$ 88.30	$ 86.22	$ 94.50	$ 91.97	$ 93.52	$ 97.47	$ 99.23	$ 92.75	$ 95.04	$ 83.42	$ 94.12	$ 82.01				
KSU	Kansas City South'n	high	$ 123.21	$ 106.18	$ 102.54	$ 105.73	$ 108.87	$ 108.77	$ 117.25	$ 115.44	$ 123.95	$ 124.68	$126.49	$ 123.96	$ 122.03	$ 109.40	27.15	$ 4.30
		low	$ 92.50	$ 88.56	$ 92.94	$ 95.41	$ 98.18	$ 103.50	$ 106.67	$ 107.13	$ 114.27	$ 111.29	$118.62	$ 109.57				
NSC	Norfolk Southern	high	$ 95.10	$ 94.93	$ 98.09	$ 98.12	$ 101.33	$ 104.63	$ 108.84	$ 107.00	$ 113.41	$ 113.50	$117.64	$ 112.22	$ 109.61	$ 101.42	16.69	$ 6.39
		low	$ 87.14	$ 89.46	$ 90.90	$ 91.91	$ 92.69	$ 98.54	$ 101.55	$ 99.63	$ 106.60	$ 101.80	$108.13	$ 101.02				
UNP	Union Pacific	high	$ 177.00	$ 181.28	$ 190.48	$ 194.16	$ 199.46	$ 202.62	$ 103.25	$ 106.34	$ 110.26	$ 117.10	$123.61	$ 121.40	$ 119.13	$ 142.94	21.50	$ 5.41
		low	$ 164.97	$ 171.12	$ 178.29	$ 180.72	$ 186.81	$ 99.16	$ 97.96	$ 96.76	$ 105.49	$ 96.17	$114.80	$ 111.28				
PRRR	Pioneer Railcorp	high	$ 10.25	$ 9.10	$ 8.20	$ 8.00	$ 7.80	$ 8.15	$ 9.50	$ 9.29	$ 10.00	$ 10.85	$ 10.88	$ 9.75	$ 9.75	$ 8.61	29.52	$ 0.31
		low	$ 8.90	$ 7.56	$ 7.30	$ 7.25	$ 7.10	$ 7.10	$ 7.74	$ 7.86	$ 8.45	$ 8.30	$ 8.75	$ 8.55				
PWX	Providence & Worcester R	high	$ 20.00	$ 19.25	$ 18.45	$ 18.42	$ 18.25	$ 19.75	$ 18.50	$ 18.42	$ 17.84	$ 17.80	$ 20.20	$ 19.75	$ 18.09	$ 18.03	50.47	$ 0.37
		low	$ 17.79	$ 17.00	$ 17.04	$ 17.00	$ 17.05	$ 17.60	$ 17.26	$ 16.83	$ 17.19	$ 16.51	$ 17.25	$ 17.60				

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Canadian Pac Ry Co	4	136447AW9	rpetual Cons Deb Sto	1/1/2022	AA-	5.15	5.19	5.11						5.26	5.17	5.19	5.19	5.18%	5.18%
Canadian National Railway Company	7.62	136375AY8	Deb	5/15/2023	A	6.00	6.02	6.02						5.99	5.89	5.86	5.90	5.95%	5.88%
Canadian National Railway Company	6.8	136375BA9	Nt	7/15/2018	A	5.70	5.65	5.71						5.82	5.80	5.81	5.87	5.77%	5.83%
Canadian National Railway Company	6.9	136375BD3	Nt	7/15/2028	A	5.29	5.30	5.24						5.19	5.16	5.13	5.15	5.21%	5.15%
Canadian National Railway Company	6.71	136375BE1	ttable Reset Secs Pu	7/15/2036	A	5.12	5.14	5.04						4.96	4.86	4.78	4.72	4.95%	4.79%
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	4.91	4.76	4.80	4.55	4.51	4.44	4.44	4.29	4.28	4.28	4.28	4.28	4.49%	4.28%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	4.91	4.76	4.80	4.55	4.51	4.44	4.44	4.29	4.28	4.41	4.61	4.47	4.54%	4.50%
Union Pacific Corp.	7	907818AZ1	Deb	2/1/2016	A	6.28	6.29	6.34	6.38	6.40	6.43	6.46	6.48	6.50	6.54	6.54	6.57	6.43%	6.55%
Union Pacific Corp.	7.12	907818BY3	Deb	02/01/2028	A	5.59	5.60	5.60	5.58	5.40	5.44	5.48	5.36	5.48	5.38	5.33	5.31	5.46%	5.34%
Union Pacific Corp.	6.62	907818CF3	Deb	02/01/2029	A	5.32	5.35	5.35	5.38	5.04	5.07	5.10	4.90	5.11	5.01	4.96	4.94	5.13%	4.97%
Union Pacific Corp.	5.38	907818CT3	Nts	05/01/2014	A	5.31	5.32	5.35	5.38									5.34%	
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	5.31	5.29	5.23	5.15	5.06	5.07	5.05	4.91	5.06	4.85	4.77	4.69	5.04%	4.77%
Union Pacific Corp.	4.88	907818CV8	Sr Nt	1/15/2015	A	4.68	4.69	4.71	4.73	4.74	4.76	4.78	4.79	4.80	4.83	4.84	4.87	4.77%	4.85%
Union Pacific Corp.	5.65	907818CW6	Nts	05/01/2017	A	5.03	5.03	5.05	5.03	4.99	5.05	5.08	5.08	5.10	5.15	5.15	5.19	5.08%	5.16%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	5.22	5.25	5.15	5.07	5.02	5.00	4.98	4.83	5.01	4.86	4.78	4.68	4.99%	4.77%
Burlington Northern	8.75	121897WQ1	Deb	02/25/2022	BBB+	6.65	6.67	6.67	6.67	6.59	6.63	6.56	6.50	6.60	6.59	6.55	6.63	6.61%	6.59%
Burlington NorthernR.R.	3.8	121899CC0	Con Mtg L	01/01/2020	BBB+	3.87	3.87	3.90	3.90	3.83	3.85	3.87	3.68	3.71	3.68	3.67	3.69	3.79%	3.68%
Burlington NorthernR.R.	6.55	121899CD8	Con Mtg K	01/01/2020	BBB+	5.82	5.81	5.88	5.88	5.82	5.79	5.83	5.68	5.60	5.68	5.66	5.70	5.76%	5.68%
Burlington NorthernR.R.	6.55	121899CE6	Con Mtg O	01/01/2020	BBB+	5.82	5.81	5.88	5.88	5.82	5.79	5.83	5.68	5.60	5.68	5.66	5.70	5.76%	5.68%
Burlington NorthernR.R.	8.15	121899CF3	Con Mtg N	01/01/2020	BBB+	6.86	6.86	6.93	6.94	6.85	6.85	6.87	6.62	6.62	6.60	6.59	6.64	6.77%	6.61%
Burlington NorthernR.R.	8.15	121899CG1	Con Mtg P	01/01/2020	BBB+	6.86	6.86	6.93	6.94	6.85	6.85	6.87	6.62	6.62	6.60	6.59	6.64	6.77%	6.61%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	4.50	4.52	4.40	4.34	4.19	4.19	4.17	4.07	4.27	4.12	4.02	4.04	4.24%	4.06%
Burlington Northn Santa Fe Cor	6.1	12189QAA8	MTN Ser A	02/27/2027	BBB+	5.50	5.49	5.49										5.49%	
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	5.50	5.46	5.37										5.44%	
Burlington Northern Santa Fe Corp.	7	12189TAA2	Deb	12/15/2025	BBB+	5.55	5.55	5.52										5.54%	
Burlington Northern Santa Fe Corp.	6.88	12189TAB0	Deb	02/15/2016	BBB+	6.19	6.21	6.25										6.22%	
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	5.66	5.64	5.53										5.61%	
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.90	5.89	5.75										5.85%	
Burlington Northern Santa Fe Corp.	6.88	12189TAG9	Deb	12/01/2027	BBB+	5.57	5.60	5.61										5.59%	
Burlington Northern Santa Fe Corp.	6.7	12189TAJ3	Deb	08/01/2028	BBB+	5.63	5.61	5.54										5.59%	
Burlington Northern Santa Fe	7.08	12189TAK0	ble Reset Sec Pursua	05/13/2029	BBB+	5.83	5.79	5.72										5.78%	
Burlington Northern Santa Fe	6.75	12189TAN4	Deb	03/15/2029	BBB+	5.73	5.69	5.46										5.63%	
Burlington Northern Santa Fe Corp.	8.12	12189TAQ7	Deb	04/15/2020	BBB+	6.38	6.38	6.48										6.41%	
Burlington Northern Santa Fe Corp.	7.95	12189TAR5	Deb	08/15/2030	BBB+	5.91	5.91	5.85										5.89%	
Burlington Northern Santa Fe	4.88	12189TAW4	Fixed Rt Sr Nt	01/15/2015	BBB+	4.68	4.69	4.71										4.69%	
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	5.28	5.33	5.20										5.27%	
Burlington Northern Santa Fe	5.65	12189TAY0	Deb	05/01/2017	BBB+	4.99	4.98	5.03										5.00%	
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	5.18	5.24	5.13										5.18%	
CSX Corp.	8.62	126408AM5	Deb	05/15/2022	BBB+	6.78	6.76	6.78	6.77	6.70	6.74	6.77	6.68	6.77	6.73	6.69	6.60	6.73%	6.67%
CSX Corp.	8.1	126408AQ6	Deb	09/15/2022	BBB+	6.51	6.49	6.51	6.50	6.43	6.46	6.49	6.40	6.49	6.44	6.41	6.15	6.44%	6.33%
CSX Corp.	5.6	126408GJ6	Nts	05/01/2017	BBB+	4.98	4.95	5.00	4.99	5.00	5.02	5.05	5.05	5.07	5.08	5.08	5.11	5.03%	5.09%
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	5.25	5.20	5.13	5.01	4.96	4.98	4.94	4.86	5.06	4.94	4.93	4.76	5.00%	4.88%
Norfolk Southern Corp.	7.7	655844AE8	Nts	05/15/2017	BBB+	6.45	6.47	6.50	6.52	6.49	6.53	6.58	6.59	6.62	6.68	6.68	6.74	6.57%	6.70%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	5.55	5.55	5.46	5.27	5.15	5.16	5.20	5.05	5.26	5.19	5.09	5.03	5.25%	5.10%
Norfolk Southern Corp.	7.8	655844AJ7	Nts	05/15/2027	BBB+	5.97	5.95	5.93	5.81	5.72	5.76	5.74	5.63	5.76	5.68	5.62	5.61	5.77%	5.64%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.66	5.65	5.50	5.37	5.25	5.25	5.23	5.00	5.26	5.16	5.04	4.89	5.27%	5.03%
Norfolk Southern Corp.	7.25	655844AQ1	Sr Nts	02/15/2031	BBB+	5.67	5.70	5.63	5.59	5.35	5.37	5.36	5.26	5.42	5.30	5.24	5.26	5.43%	5.27%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	5.35	5.39	5.24	5.11	4.98	5.07	4.99	4.77	5.12	4.93	4.85	4.67	5.04%	4.82%
Norfolk Southern Corp.	5.59	655844AW8	Nts	05/17/2025	BBB+	4.97	4.99	4.99	4.97	4.89	4.92	4.79	4.71	4.80	4.76	4.71	4.70	4.85%	4.72%
Norfolk Southern Corp.	5.64	655844AX6	Nts	05/17/2029	BBB+	5.06	5.08	5.08	4.90	4.81	4.84	4.86	4.75	4.87	4.77	4.71	4.71	4.87%	4.73%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	5.25	5.21	5.10	5.04	4.88	4.89	4.97	4.85	5.03	4.89	4.81	4.77	4.97%	4.82%
CSX Corp MTN BE	6.8	12641LBU6	MTN Ser C	12/1/2028	BBB	5.60	5.61	5.62	5.59	5.49	5.52	5.55	5.35	5.48	5.46	5.42	5.40	5.51%	5.43%
Kansas City Southern	7	485170AF1	Deb	12/15/2025	BB-	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.25	6.28	6.28	6.28	6.28	6.28%	6.28%
Consolidated Rail	9.75	209864AT4	Deb	6/15/2020	NR	7.79	7.79	7.88	7.79	7.74	7.62	7.65	7.66	7.73	7.71	7.69	7.75	7.73%	7.72%
Missouri Pacific RR.	4.75	606198LF4	Gen Mtg Inc Ser A	1/1/2020	NR		4.89	4.94							4.81	4.79	4.78	4.84%	4.79%
Missouri Pacific RR.	4.75	606198LG2	Gen Mtg Ser B	1/1/2030	NR	5.33	5.06	4.98				4.83				4.82	4.75	4.96%	4.79%
Missouri Pacific RR.	5	606198LH0	Income Deb	1/1/2045	NR	6.06	6.01	5.88				5.58			5.46	5.37	5.22	5.65%	5.35%
Norfolk Southern Corp.	9	655844AA6	Nts	03/01/2021	NR	7.23	7.22	7.28	7.08	7.02	7.06	7.09	7.03	7.12	7.08	7.04	7.05	7.11%	7.06%
			Counts of data			57	58	58	34	33	33	35	33	38	40	41	41	58	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
AA's	5.53%	5.42%
A's	5.22%	5.14%
BBB's	5.56%	5.44%
BB's	6.28%	6.28%
NR's	6.06%	5.94%
ALL	5.53%	5.42%
BBB- & Above	5.46%	5.32%
BB- & Above	5.48%	5.35%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Canadian Pac Ry Co	4	136447AW9	Perpetual Cons D	1/1/2022	AA-	7.85	7.99	7.79						8.72	8.44	8.36	8.40	8.22%	8.40%
Canadian National Railway Compar	7.62	136375AY8	Deb	5/15/2023	A	4.10	4.13	4.11						3.95	3.73	3.50	3.57	3.87%	3.60%
Canadian National Railway Compar	6.8	136375BA9	Nt	7/15/2018	A	2.25	1.97	2.15						2.38	2.28	1.96	2.17	2.17%	2.14%
Canadian National Railway Compar	6.9	136375BD3	Nt	7/15/2028	A	4.10	4.10	3.98						3.83	3.76	3.66	3.70	3.88%	3.71%
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	5.61	5.42	5.47	5.17	5.12	5.05	5.07	4.88	4.87	4.85	4.85	4.85	5.10%	4.85%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	5.61	5.42	5.47	5.17	5.12	5.05	5.07	4.88	4.87	5.01	5.27	5.10	5.17%	5.13%
Union Pacific Corp.	7	907818AZ1	Deb	2/1/2016	A	1.22	1.14	1.34	1.99	2.12	2.41	2.88	0.02	0.02	1.19	1.01	0.97	1.36%	1.06%
Union Pacific Corp.	7.12	907818BY3	Deb	02/01/2028	A	4.48	4.48	4.48	4.44	4.09	4.15	4.20	3.85	4.09	3.96	3.84	3.79	4.15%	3.86%
Union Pacific Corp.	6.62	907818CF3	Deb	02/01/2029	A	4.38	4.43	4.43	4.37	3.83	3.88	3.93	3.61	3.85	3.70	3.58	3.53	3.96%	3.60%
Union Pacific Corp.	5.38	907818CT3	Nts	05/01/2014	A	0.64	0.49	1.03										0.72%	
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	4.87	4.83	4.73	4.59	4.44	4.46	4.44	4.20	4.44	4.08	3.96	3.80	4.40%	3.95%
Union Pacific Corp.	4.88	907818CV8	Sr Nt	1/15/2015	A	0.53	0.45	0.62	1.84	2.06	2.38				0.59	0.71		1.15%	0.65%
Union Pacific Corp.	5.65	907818CW6	Nts	05/01/2017	A	1.77	1.68	1.72	1.40	1.28	1.58	1.76	1.78	1.93	1.69	1.60	1.77	1.66%	1.69%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	4.87	4.90	4.75	4.64	4.51	4.51	4.49	4.27	4.53	4.29	4.17	4.01	4.50%	4.16%
Burlington Northern	8.75	121897WQ1	Deb	02/25/2022	BBB+	4.13	4.13	4.11	4.10	3.90	4.00	4.07	3.68	3.45	3.62	3.49	3.63	3.86%	3.58%
Burlington NorthernR.R.	3.8	121899CC0	Con Mtg L	01/01/2020	BBB+	4.18	4.15	4.33	4.28	3.95	4.05	4.22	3.07	3.26	3.16	3.06	3.19	3.74%	3.14%
Burlington NorthernR.R.	6.55	121899CD8	Con Mtg K	01/01/2020	BBB+	4.14	4.11	4.30	4.34	4.15	4.03	3.81	3.17	2.90	3.29	3.20	3.31	3.73%	3.27%
Burlington NorthernR.R.	6.55	121899CE6	Con Mtg O	01/01/2020	BBB+	4.14	4.11	4.30	4.34	4.15	4.03	3.81	3.17	2.90	3.29	3.20	3.31	3.73%	3.27%
Burlington NorthernR.R.	8.15	121899CF3	Con Mtg N	01/01/2020	BBB+	4.49	4.46	4.65	4.75	4.46	4.46	3.95	3.07	3.09	3.19	3.10	3.21	3.91%	3.17%
Burlington NorthernR.R.	8.15	121899CG1	Con Mtg P	01/01/2020	BBB+	4.49	4.46	4.65	4.75	4.46	4.46	3.95	3.07	3.09	3.19	3.10	3.21	3.91%	3.17%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	5.06	5.09	4.94	4.86	4.66	4.66	4.66	4.51	4.80	4.58	4.44	4.46	4.73%	4.49%
Burlington Northn Santa Fe Cor	6.1	12189QAA8	MTN Ser A	02/27/2027	BBB+	4.97	4.93	4.94				4.54						4.85%	
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	5.15	5.08	4.96										5.06%	
Burlington Northern Santa Fe Corp.	7	12189TAA2	Deb	12/15/2025	BBB+	4.19	4.18	4.10										4.16%	
Burlington Northern Santa Fe Corp.	6.88	12189TAB0	Deb	02/15/2016	BBB+	1.37	1.36	1.54										1.42%	
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	5.11	5.08	4.91										5.03%	
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.89	5.88	5.74										5.84%	
Burlington Northern Santa Fe Corp.	6.88	12189TAG9	Deb	12/01/2027	BBB+	4.57	4.63	4.64										4.61%	
Burlington Northern Santa Fe Corp.	6.7	12189TAJ3	Deb	08/01/2028	BBB+	4.87	4.83	4.69										4.80%	
Burlington Northern Santa Fe	6.75	12189TAN4	Deb	03/15/2029	BBB+	5.05	4.98	4.56										4.86%	
Burlington Northern Santa Fe Corp.	8.12	12189TAQ7	Deb	04/15/2020	BBB+	3.23	3.21	3.45										3.30%	
Burlington Northern Santa Fe Corp.	7.95	12189TAR5	Deb	08/15/2030	BBB+	4.89	4.88	4.76										4.84%	
Burlington Northern Santa Fe	4.88	12189TAW4	Fixed Rt Sr Nt	01/15/2015	BBB+	0.68	0.50	0.72										0.63%	
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	4.92	4.98	4.79										4.90%	
Burlington Northern Santa Fe	5.65	12189TAY0	Deb	05/01/2017	BBB+	1.53	1.34	1.56										1.48%	
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	4.81	4.88	4.72										4.80%	
CSX Corp.	8.62	126408AM5	Deb	05/15/2022	BBB+	4.63	4.58	4.59	4.49	4.32	4.42	4.49	4.27	4.48	4.23	4.11	3.82	4.37%	4.05%
CSX Corp.	8.1	126408AQ6	Deb	09/15/2022	BBB+	4.63	4.58	4.59	4.39	4.20	4.29	4.37	4.14	4.36	4.23	4.11	3.40	4.27%	3.91%
CSX Corp.	5.6	126408GJ6	Nts	05/01/2017	BBB+	1.68	1.41	1.64	1.44	1.46	1.61	1.82	1.85	2.02	1.40	1.31	1.49	1.59%	1.40%
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	4.91	4.83	4.73	4.54	4.46	4.49	4.44	4.32	4.61	4.42	4.41	4.13	4.52%	4.32%
Norfolk Southern Corp.	7.7	655844AE8	Nts	05/15/2017	BBB+	1.63	1.64	1.62	1.49	1.32	1.56	1.83	1.90	2.08	1.53	1.39	1.56	1.63%	1.49%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	5.06	5.05	4.92	4.64	4.46	4.46	4.54	4.32	4.61	4.50	4.35	4.25	4.60%	4.37%
Norfolk Southern Corp.	7.8	655844AJ7	Nts	05/15/2027	BBB+	4.68	4.63	4.58	4.32	4.12	4.20	4.17	3.95	4.22	3.98	3.86	3.81	4.21%	3.88%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.64	5.63	5.48	4.68	5.22	5.22	5.20	4.98	5.24	5.13	5.01	4.85	5.19%	5.00%
Norfolk Southern Corp.	7.25	655844AQ1	Sr Nts	02/15/2031	BBB+	4.84	4.88	4.75	4.68	4.27	4.29	4.28	3.51	4.29	4.13	4.01	4.04	4.33%	4.06%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	5.34	5.38	5.23	5.10	4.98	5.05	4.98	4.76	5.12	4.92	4.84	4.65	5.03%	4.80%
Norfolk Southern Corp.	5.59	655844AW8	Nts	05/17/2025	BBB+	4.21	4.23	4.23	4.15	3.95	4.03	3.73	3.51	3.75	3.59	3.47	3.42	3.86%	3.49%
Norfolk Southern Corp.	5.64	655844AX6	Nts	05/17/2029	BBB+	4.60	4.63	4.63	4.26	4.07	4.14	4.17	3.98	4.22	3.98	3.86	3.84	4.20%	3.89%
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	4.94	4.88	4.71	4.61	4.37	4.37	4.49	4.32	4.61	4.38	4.25	4.19	4.51%	4.27%
CSX Corp MTN BE	6.8	12641LBU6	MTN Ser C	12/1/2028	BBB	4.78	4.78	4.79	4.76	4.56	4.54	4.59	4.20	4.46	4.44	4.35	4.30	4.55%	4.36%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
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	5.60	5.59	5.60	5.73%	5.60%
Consolidated Rail	9.75	209864AT4	Deb	06/15/2020	NR	5.08	5.05	5.24	4.83	4.70	4.34	4.40	4.46	4.65	4.37	4.28	4.39	4.65%	4.35%
Norfolk Southern Corp.	9	655844AA6	Nts	03/01/2021	NR	4.88	4.83	4.95	4.42	4.27	4.37	4.44	4.27	4.00	4.08	3.95	3.91	4.36%	3.98%
			Counts of data			53	53	53	33	33	33	33	32	36	37	37	36	53	37

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	8.22%	8.40%
A's	3.24%	3.20%
BBB's	4.03%	3.69%
BB's	5.73%	5.60%
NR's	4.61%	4.34%
ALL	3.96%	3.73%
BBB- & Above	3.91%	3.65%
BB- & Above	3.94%	3.71%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Railroads
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Northern Pac.Ry	3	665585JP1	GenLn Mtg	01/01/2047	A	5.61	5.42	5.47	5.17	5.12	5.05	5.07	4.88	4.87	4.85	4.85	4.85	5.10%	4.85%
Northern Pac.Ry	3	665585KH7	Gen LnMtg-Stpd	01/01/2047	A	5.61	5.42	5.47	5.17	5.12	5.05	5.07	4.88	4.87	5.01	5.27	5.10	5.17%	5.13%
Union Pacific Corp.	6.25	907818CU0	Deb	05/01/2034	A	4.87	4.83	4.73	4.59	4.44	4.46	4.44	4.20	4.44	4.08	3.96	3.80	4.40%	3.95%
Union Pacific Corp.	6.15	907818CX4	Deb	05/01/2037	A	4.87	4.90	4.75	4.64	4.51	4.51	4.49	4.27	4.53	4.29	4.17	4.01	4.50%	4.16%
Burlington NorthernR.R.	3.2	121899CH9	Con Mtg M	01/01/2045	BBB+	5.06	5.09	4.94	4.86	4.66	4.66	4.66	4.51	4.80	4.58	4.44	4.46	4.73%	4.49%
Burlington Northn Santa Fe Cor	6.53	12189QAB6	MTN Ser A	07/15/2037	BBB+	5.15	5.08	4.96										5.06%	
Burlington Northern Santa Fe Corp.	7.29	12189TAD6	Deb	06/01/2036	BBB+	5.11	5.08	4.91										5.03%	
Burlington Northern Santa Fe	7.25	12189TAF1	Deb	08/01/2097	BBB+	5.89	5.88	5.74										5.84%	
Burlington Northern Santa Fe Corp.	6.2	12189TAX2	Deb	08/15/2036	BBB+	4.92	4.98	4.79										4.90%	
Burlington Northern Santa Fe Corp.	6.15	12189TAZ7	Deb	05/01/2037	BBB+	4.81	4.88	4.72										4.80%	
CSX Corp.	6.15	126408GK3	Nts	05/01/2037	BBB+	4.91	4.83	4.73	4.54	4.46	4.49	4.44	4.32	4.61	4.42	4.41	4.13	4.52%	4.32%
Norfolk Southern Corp.	7.05	655844AF5	Nts	05/01/2037	BBB+	5.06	5.05	4.92	4.64	4.46	4.46	4.54	4.32	4.61	4.50	4.35	4.25	4.60%	4.37%
Norfolk Southern Corp.	7.9	655844AK4	Nt	5/15/2097	BBB+	5.64	5.63	5.48	4.68	5.22	5.22	5.20	4.98	5.24	5.13	5.01	4.85	5.19%	5.00%
Norfolk Southern Corp.	6	655844AV0	Fixed Rt Sr Nt	3/15/2105	BBB+	5.34	5.38	5.23	5.10	4.98	5.05	4.98	4.76	5.12	4.92	4.84	4.65	5.03%	4.80%
CSX Corp.	6	126408GH0	Nts	10/01/2036	BBB	4.94	4.88	4.71	4.61	4.37	4.37	4.49	4.32	4.61	4.38	4.25	4.19	4.51%	4.27%
			Counts of data			15	15	15	10	10	10	10	10	10	10	10	10	15	10

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	4.79%	4.52%
BBB's	4.93%	4.54%
BB's	---	---
NR's	---	---
ALL	4.89%	4.53%
BBB- & Above	4.89%	4.53%
BB- & Above	4.89%	4.53%

**Investment Grade (BBB- & Above)*

Montana Department of
REVENUE

2015 Capitalization Rate Study

Telecommunications

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study

Industry: Telecommunications, Telephone Exchange Carriers

2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	B & Above	Local	
	4.76%	4.91%	4.03%	Yahoo
	4.62%	5.45%	3.23%	Value Line
	4.69%	5.18%	3.63%	Average of E/Ps
Inverse of P/E Ratios:				
	9.57%	7.02%	12.52%	Yahoo
	4.89%	5.57%	3.50%	Value Line
	7.23%	6.29%	8.01%	Average of Inverse of the P/E
	5.47%	6.58%	5.46%	Inverse of median P/E, Value Line
	5.96%	5.74%	5.82%	Average of all above except median P/E
Mean =	5.86%	5.91%	5.75%	
Median =	4.89%	5.57%	4.03%	

Equity Measure NUOI = 6.00%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.17%	6.04%	ALL
	5.96%	5.82%	BBB- & Above
	6.10%	5.99%	BB- & Above
Mean =	6.08%	5.95%	
Median =	6.10%	5.99%	

Debt Measure = 6.00%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	67.00%	x	6.00%	=	4.02%	
Debt	33.00%	x	6.00%	=	1.98%	
	100.00%				6.00%	
Direct Cap Rate NUIO =						**6.00%**

Gross Cash Flow / Price:

All	B & Above	Local	
23.54%	21.50%	24.28%	Value Line

Equity Measure Gross = 22.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	67.00%	x	22.00%	=	14.74%	
Debt	33.00%	x	6.00%	=	1.98%	
	100.00%				16.72%	
Direct Cap Rate GCF =						**16.75%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study
Industry: Telecommunications - Wireless
2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	Wireless	Mixed	Median	
	7.29%	9.28%	5.96%	5.23%	Yahoo
	6.94%	-----	6.94%	7.81%	Value Line
	7.11%	4.64%	6.45%	6.52%	Average of E/Ps
Inverse of P/E Ratios:					
	5.30%	5.78%	4.64%	3.26%	Yahoo
	7.21%	-----	7.21%	7.69%	Value Line
	6.25%	2.89%	5.92%	5.47%	Average of Inverse of the P/E
	4.81%	3.79%	5.49%	4.00%	Inverse of median P/E, Value Line
	6.68%	3.77%	6.19%	6.00%	Average of all above except median P/E
Mean =	6.31%	6.28%	6.05%	5.60%	
Median =	6.94%	5.78%	5.96%	5.23%	

Equity Measure NUOI = 6.30%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.17%	6.04%	ALL
	5.96%	5.82%	BBB- & Above
	6.10%	5.99%	BB- & Above
Mean =	6.08%	5.95%	
Median =	6.10%	5.99%	

Debt Measure = 6.00%

Industry Market Capital Structure			NUOI Rate		
Equity	70.00%	x	6.30%	=	4.41%
Debt	30.00%	x	6.00%	=	1.80%
	100.00%				6.21%
Direct Cap Rate NUIO =					**6.25%**

Gross Cash Flow / Price:

All	Wireless	Mixed	Median	
23.39%	24.18%	22.34%	20.48%	Value Line

Equity Measure Gross = 24.00%

Industry Market Capital Structure			Gross Cash Flow Rate (GCF)		
Equity	70.00%	x	24.00%	=	16.80%
Debt	30.00%	x	6.00%	=	1.80%
	100.00%				18.60%
Direct Cap Rate GCF =					**18.75%**

MONTANA DEPARTMENT OF REVENUE

Direct Capitalization Rate Study

Industry: Telecommunications with significant portion of Cable TV Service

2015 Assessment Year

Equity Measures Calculated:

E/P estimates:

	All	B & Above	
	4.53%	4.12%	Yahoo
	4.63%	4.20%	Value Line
	4.58%	4.16%	Average of E/Ps
Inverse of P/E Ratios:			
	9.14%	7.95%	Yahoo
	4.83%	5.33%	Value Line
	6.98%	6.64%	Average of Inverse of the P/E
	4.62%	5.53%	Inverse of median P/E, Value Line
	5.78%	5.40%	Average of all above except median P/E
Mean =	5.55%	5.43%	
Median =	4.63%	5.33%	

Equity Measure NUOI = 6.50%

Debt Measure Calculated, Current Yield:

	Annual	4th Qtr	
	6.00%	5.93%	ALL
	5.86%	5.80%	BBB- & Above
	6.09%	6.02%	BB- & Above
Mean =	5.98%	5.92%	
Median =	6.00%	5.93%	

Debt Measure = 6.00%

Industry Market Capital Structure Net Utility Operating Income (NUOI) Rate						
Equity	68.00%	x	6.50%	=	4.42%	
Debt	32.00%	x	6.00%	=	1.92%	
	100.00%				6.34%	
Direct Cap Rate NUIO =						**6.50%**

Gross Cash Flow / Price:

All	B & Above	
23.05%	16.48%	Value Line

Equity Measure Gross = 20.00%

Industry Market Capital Structure Gross Cash Flow Rate (GCF)						
Equity	68.00%	x	20.00%	=	13.60%	
Debt	32.00%	x	6.00%	=	1.92%	
	100.00%				15.52%	
Direct Cap Rate GCF =						**15.75%**

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Telecommunications
2015 Assessment Year

Equity Measures Calculated:	**Exchange Carriers**	**Wireless Carriers**
Dividend Growth Model - Dividends	7.50%	8.80%
Dividend Growth Model - Earnings	17.00%	9.00%
Dividend Growth Model - Plowback	8.50%	8.00%
Capital Asset Pricing Model	8.49%	9.50%
Mean =	7.99%	9.15%
Median =	7.99%	9.15%
Equity Measure FCF =	**8.50%**	**9.50%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.69%	3.55%	5.55%	5.35%
BBB- & Above	4.39%	4.24%	5.35%	5.13%
BB- & Above	4.61%	4.49%	5.54%	5.32%
Mean =	4.23%	4.09%	5.48%	5.27%
Median =	4.39%	4.24%	5.54%	5.32%

Debt Measure = 5.35%

Yield Cap Rate Free Cash Flow - Telecommunications, Exchange Carriers						
Equity	67.00%	x	8.50%	=	5.70%	
Debt	33.00%	x	5.35%	* (1 - 0.35) =	1.15%	
	100.00%				6.84%	
Weighted Average Cost of Capital (WACC) =						**8.25%**

Yield Cap Rate Free Cash Flow - Telecommunications, Wireless Carriers						
Equity	70.00%	x	9.50%	=	6.65%	
Debt	30.00%	x	5.35%	* (1 - 0.35) =	1.04%	
	100.00%				7.69%	
Weighted Average Cost of Capital (WACC) =						**7.75%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Study
Industry: Telecommunications with significant portion of Cable TV Service
2015 Assessment Year

Equity Measures Calculated:	**Cable TV**
Dividend Growth Model - Dividends	7.00%
Dividend Growth Model - Earnings	15.00%
Dividend Growth Model - Plowback	10.00%
Capital Asset Pricing Model	9.16%
Mean =	10.29%
Median =	9.58%
Equity Measure FCF =	**9.25%**

Debt Measures Calculated, Yield to Maturity:

	ALL DEBT		**20 YEAR PLUS DEBT**	
	Annual	**4th Qtr**	**Annual**	**4th Qtr**
ALL	3.69%	3.55%	5.13%	4.88%
BBB- & Above	2.97%	2.89%	4.59%	4.36%
B- & Above	3.64%	3.53%	5.13%	4.88%
Median =	3.64%	3.53%	5.13%	4.88%

Debt Measure = 4.75%

Yield Cap Rate Free Cash Flow - Telecommunications, Cable TV						
Equity	68.00%	x	9.25%	=	6.29%	
Debt	32.00%	x	4.75%	* (1 - 0.35) =	0.99%	
	100.00%				7.28%	
Weighted Average Cost of Capital (WACC) =						**7.50%**

Where Assumed Growth Rate = Inflation **Growth = 1.60%**

see appendix for calculation 2.16%

US Inflation Calculator 12/31/2014 1.60%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Exchange Carriers
2015 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	(VL) Book Value Common (000)	(VL) Book Value Preferred (000)	(VL) Book Value Debt (000)	Mkt/Book Debt Ratio	Mkt. Value Pref. & Debt
	A					DxE	FxD				
AT&T Inc**	**T**	**A++**	**5,226,300**	**33.12**	**17.50**	**173,095,056**	**91,460,250**	**0**	**69,290,000**	**1.00**	**69,290,000**
Verizon Communications**	**VZ**	**A++**	**4,141,100**	**46.23**	**9.38**	**191,443,053**	**38,843,518**	**0**	**89,658,000**	**1.00**	**89,658,000**
CenturyLink Inc	**CTL**	**B++**	**583,600**	**39.58**	**29.45**	**23,098,888**	**17,187,020**	**0**	**20,181,000**	**1.00**	**20,181,000**
Frontier Communications	**FTR**	**B**	**999,500**	**6.67**	**4.06**	**6,666,665**	**4,057,970**	**0**	**7,873,700**	**1.00**	**7,873,700**
Windstream Hldgs.	WIN	**B**	**596,200**	8.24	**1.41**	4,912,688	840,642	**0**	**8,622,200**	1.00	8,622,200
Consol. Communic.	CNSL	**C++**	**40,100**	27.83	**3.69**	1,115,983	147,969	**0**	**1,212,100**	1.00	1,212,100
Gen'l Communic. 'A'	GNCMA	**C++**	**40,400**	13.75	**3.89**	555,500	157,156	**0**	**1,113,300**	1.00	1,113,300
Cincinnati Bell	CBB	**C+**	**208,700**	3.19	**(3.86)**	665,753	(805,582)	**129,400**	**2,252,600**	1.00	2,382,000

SUMS & AVERAGES						
Cos. with positive per share- price, book value, and cash flow.	All	401,553,586	152,694,525	129,400	200,202,900	200,332,300
Local Carriers - CTL, FTR, CNSL, WIN, and CBB	B and Above	399,216,350	152,389,400	0	195,624,900	195,624,900
Include only AT&T, Verizon and Gen'l Comm Inc.	Local Carriers	36,459,977	22,233,601	129,400	40,141,600	40,271,000
	Mixed Carriers	365,093,609	130,460,924	0	160,061,300	160,061,300

* All **Negative** values left out of calculations
** 2014 Wireless & Wireline contributions:
AT&T Corp., 54% Wireless, 46% Wireline
Verizon Com., 67% Wireless, 33% Wireline
Gen'l Comm. I, Grp., 24% Wireless, 76% Wireline

INDUSTRY MARKET STRUCTURES								
	ALL COMPANIES		**B & ABOVE**		**LOCAL ONLY**		**MIXED**	
COMMON	67.00%	401,553,586	67.00%	399,216,350	48.00%	36,459,977	70.00%	365,093,609
DEBT	33.00%	200,332,300	33.00%	195,624,900	52.00%	40,271,000	30.00%	160,061,300
TOTAL	100.00%	601,885,886	100.00%	594,841,250	100.00%	76,730,977	100.00%	525,154,909

Notes/Rational for Changes to Guideline Companies

Hickory Tech Corp became Enventis on May 6, 2014 now traded under which was acquired by Consolidated Communications - HTCO replaced with CNSL
GCI completed purchase of Alaska Communications wireless arm on 2/5/14 - ALSK replaced with GNCMA

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Exchange Carriers
2015 Assessment Year

A	B	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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	(VL) Est. Tax Rate
AT&T Inc**	**T**	**3.27**	**9.87%**	**2.72**	**8.21%**	**6.25**	**18.87%**	**34.68**	**2.88%**	**12.66**	**7.90%**	**14.00**	**7.14%**	**0.75**	35.0%
Verizon Communications**	**VZ**	**2.42**	**5.23%**	**3.61**	**7.81%**	**5.40**	**11.68%**	**48.64**	**2.06%**	**13.01**	**7.69%**	**14.00**	**7.14%**	**0.70**	35.0%
CenturyLink Inc	**CTL**	**1.43**	**3.61%**	**2.66**	**6.72%**	**10.50**	**26.53%**	**36.58**	**2.73%**	**15.20**	**6.58%**	**13.00**	**7.69%**	**0.75**	35.0%
Frontier Communications	**FTR**	**0.18**	**2.70%**	**0.22**	**3.30%**	**1.50**	**22.49%**	**5.91**	**16.92%**	**27.08**	**3.69%**	**23.00**	**4.35%**	**0.90**	38.0%
Windstream Hldgs.	WIN	0.26	3.16%	**0.10**	1.21%	2.30	27.91%	9.53	10.50%	**50.69**	1.97%			**0.90**	35.0%
Consol. Communic.	CNSL	0.71	2.55%	**0.84**	3.02%	3.65	13.12%	22.43	4.46%	**33.48**	2.99%			**0.75**	36.0%
Gen'l Communic. 'A'	GNCMA	0.38	2.76%	**0.66**	4.80%	5.00	36.36%	11.12	8.99%	**16.58**	6.03%	**46.00**	**2.17%**	**1.10**	9.0%
Cincinnati Bell	CBB	0.26	8.15%	**0.06**	1.88%	1.00	31.35%	3.57	27.99%	**44.29**	2.26%	**23.00**	**4.35%**	**1.15**	40.0%
SUMS & AVERAGES		All	4.76%		4.62%		23.54%		9.57%		4.89%		5.47%	0.88	32.88%
Cos. with positive per share- price, book value, and cash flow.		B and Above	4.91%		5.45%		21.50%		7.02%		5.57%		6.58%	0.80	35.60%
Local Carriers - CTL, FTR, CNSL, WIN, and CBB		Local Carriers	4.03%		3.23%		24.28%		12.52%		3.50%		5.46%	0.89	36.80%
Include only AT&T, Verizon and Gen'l Comm Inc.		Mixed Carriers	5.96%		6.94%		22.31%		4.64%		7.21%		5.49%	0.85	26.33%

* All **Negative** values left out of calculations
** 2014 Wireless & Wireline contributions:
AT&T Corp., 54% Wireless, 46% Wireline
Verizon Com., 67% Wireless, 33% Wireline
Gen'l Comm. I, Grp., 24% Wireless, 76% Wireline

Beta of Exchange Carriers = 0.85

Notes/Rational for Changes to Guideline Companies

Hickory Tech Corp became Enventis on May 6, 2014 now tı
GCI completed purchase of Alaska Communications wirele

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Wireless
2015 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++**	5,226,300	33.12	17.50	173,095,056	91,460,250	0	69,290,000	1.00	69,290,000
Verizon Communications**	VZ	**A++**	4,141,100	46.23	9.38	191,443,053	38,843,518	0	89,658,000	1.00	89,658,000
Gen'l Communic. 'A'	GNCMA	**C++**	40,400	13.75	3.89	555,500	157,156	0	1,113,300	1.00	1,113,300
U.S. Cellular	USM	**B+**	84,200	39.83	40.49	3,353,686	3,409,258	0	878,000	1.00	878,000
Telephone & Data Sys	TDS	**B**	108,800	25.25	37.85	2,747,200	4,118,080	800	1,720,100	1.00	1,720,900
Sprint Nextel Corp	S	**C++**	3,934,000	4.15	6.50	16,326,100	25,571,000	0	32,017,000	1.00	32,017,000
T-Mobile US	TMUS	**B**	801,900	26.94	17.76	21,603,186	14,241,744	0	22,441,000	1.00	22,441,000

SUMS & AVERAGES						
Cos. with positive per share- price, book value, and cash flow.	All Comp	409,123,781	177,801,006	800	217,117,400	217,118,200
	All Wireless	44,030,172	47,340,082	800	57,056,100	57,056,900
	Mixed	365,093,609	130,460,924	-	160,061,300	160,061,300

All Wireless excludes AT&T, Verizon and Alaska

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

INDUSTRY MARKET STRUCTURE						
	All Companies		**All Wireless**		**Mixed**	
COMMON	65.00%	409,123,781	44.00%	44,030,172	70.00%	365,093,609
DEBT	35.00%	217,118,200	56.00%	57,056,900	30.00%	160,061,300
TOTAL	100.00%	626,241,981	100.00%	101,087,072	100.00%	525,154,909

Notes/Rational for Changes to Guideline Companies
Leap Wireless removed since it was acquired by AT&T in July 2013
T-Mobile was added
GCI completed purchase of Alaska Communications wireless arm on 2/5/14 - ALSK replaced with GNCMA

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications, Wireless
2015 Assessment Year

A	B	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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	(VL) Est. Tax Rate
AT&T Inc**	T	3.27	9.87%	2.72	8.21%	6.25	18.87%	34.68	2.88%	12.66	7.90%	14.00	7.14%	0.75	35.0%
Verizon Communications**	VZ	2.42	5.23%	3.61	7.81%	5.45	11.79%	48.64	2.06%	13.01	7.69%	14.00	7.14%	0.70	35.0%
Gen'l Communic. 'A'	GNCMA	0.38	2.76%	0.66	4.80%	5.00	36.36%	11.12	8.99%	16.58	6.03%	46.00	2.17%	1.10	9.0%
U.S. Cellular	USM	7.17	18.00%	(0.46)	(1.15%)	8.40	21.09%	39.09	2.56%			28.00	3.57%	1.00	
Telephone & Data Sys	TDS	(1.16)	(4.59%)	(1.36)	(5.39%)	9.00	35.64%	25.44	3.93%			25.00	4.00%	1.20	33.0%
Sprint Nextel Corp	S	(3.29)	(79.28%)	(0.54)	(13.01%)	0.85	20.48%	7.47	13.39%					1.15	
T-Mobile US	TMUS	0.15	0.56%	(0.42)	(1.56%)	5.25	19.49%	30.66	3.26%						

SUMS & AVERAGES	All Comp	7.29%	6.94%	23.39%	5.30%	7.21%	4.81%	0.98	28.00%
Cos. with positive per share- price, book value, and cash fl	All Wireless	9.28%	-----	24.18%	5.78%	-----	3.79%	1.12	33.00%
	Mixed	5.96%	6.94%	22.34%	4.64%	7.21%	5.49%	0.85	26.33%
All Wireless excludes AT&T, Verizon and Alaska	All Median	5.23%	7.81%	20.48%	3.26%	7.69%	4.00%	1.05	34.00%

Beta of Wireless Industry = **1.00**

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

Notes/Rational for Changes to Guideline Companies
Leap Wireless removed since it was acquired by AT&
T-Mobile was added
GCI completed purchase of Alaska Communications

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications with significant portion of Cable TV Service
2015 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++**	**583,600**	**39.58**	**29.45**	**23,098,888**	**17,187,020**	**0**	**20,181,000**	**1.00**	**20,181,000**
Time Warner Cable	TWC	B++	277,900	152.06	24.98	42,257,474	6,941,942	0	23,285,000	1.00	23,285,000
Comcast Corp.	CMCSA	A	2,597,100	57.78	19.52	150,060,438	50,695,392	0	44,567,000	1.00	44,567,000
Charter Communications	**CHTR**	**B**	**106,100**	**166.62**	**1.42**	**17,678,382**	**150,662**	**0**	**14,181,000**	**1.00**	**14,181,000**
Frontier Communications	**FTR**	**B**	**999,500**	**6.67**	**4.06**	**6,666,665**	**4,057,970**	**0**	**7,873,700**	**1.00**	**7,873,700**
Crown Media Holdings Inc Cl A	CRWN	B	359,700	3.54	1.11	1,273,338	399,267	0	437,900	1.00	437,900
Hawaiian Telcom Holdco Inc	HCOM	**C++**	10,500	27.57	29.82	289,485	313,110	0	291,700	1.00	291,700
Consol. Communic.	CNSL	C++	40,100	27.83	3.69	1,115,983	147,969	0	1,212,100	1.00	1,212,100
General Communications	GNCMA	C++	40,400	8.80	3.89	355,520	157,156	0	1,113,300	1.00	1,113,300
Cablevision Sys. 'A'	CVC	C+	267,700	20.64	(19.74)	5,525,328	(5,284,398)	0	9,419,800	1.00	9,419,800
Cincinnati Bell	CBB	**C+**	**208,700**	3.19	**(3.86)**	665,753	(805,582)	**129,400**	**2,252,600**	1.00	2,382,000
FairPoint Communications Inc.	FRP	**C+**	26,500	14.21	(11.68)	376,565	(309,520)	0	912,200	1.00	912,200
MDU Communications Inc	MDTV		5,700	0.01	(2.23)	57	(12,711)	0	0	1.00	0

SUMS & AVERAGES	All	249,363,876	80,050,488	125,727,300	125,856,700
Cos. with positive per share- price, book value, and cash flow.	B and Above	239,761,847	79,745,363	110,817,300	110,817,300

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

INDUSTRY MARKET STRUCTURES				
	ALL COMPANIES		B & ABOVE	
COMMON	66.00%	249,363,876	68.00%	239,761,847
DEBT	34.00%	125,856,700	32.00%	110,817,300
TOTAL	100.00%	375,220,576	100.00%	350,579,147

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

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications with significant portion of Cable TV Service
2015 Assessment Year

M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
(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	(VL) Est. Tax Rate
1.43	**3.61%**	**2.66**	**6.72%**	**10.50**	**26.53%**	**36.58**	**2.73%**	**15.20**	**6.58%**	**13.00**	**7.69%**	**0.75**	35.00%
7.17	4.72%	7.17	4.72%	19.60	12.89%	142.11	0.70%	18.40	5.43%			0.90	40.00%
3.18	5.50%	2.94	5.09%	6.25	10.82%	53.16	1.88%	17.82	5.61%	**22.00**	4.55%	1.00	37.00%
(0.90)	**(0.54%)**	**(1.26)**	**(0.76%)**	**16.15**	**9.69%**	**145.94**	**0.69%**					**0.90**	
0.18	**2.70%**	**0.22**	**3.30%**	1.50	**22.49%**	**5.91**	**16.92%**	**27.08**	**3.69%**	**23.00**	**4.35%**	**0.90**	38.00%
0.19	5.37%	0.10	2.82%			3.44	29.08%					1.15	
0.78	2.83%	0.70	2.54%			27.54	3.63%					0.90	
0.71	2.55%	0.84	3.02%	3.65	13.12%	22.43	4.46%	33.48	2.99%			0.75	36.00%
0.38	4.32%	0.66	7.50%	5.00	56.82%	11.12	8.99%	16.58	6.03%	**46.00**	2.17%	1.10	9.00%
1.15	5.57%	1.24	6.01%	4.90	23.74%	17.99	5.56%	16.56	6.04%			1.30	40.00%
0.26	8.15%			1.00	31.35%	3.57	27.99%	**44.29**	2.26%	**23.00**	**4.35%**	**1.15**	40.00%
(3.29)	(23.15%)	(4.65)	(32.72%)			14.26	7.02%					1.40	
(0.65)	(6,500.00%)	(0.80)	(8,000.00%)			0.02						0.15	
All	4.53%		4.63%		23.05%		9.14%		4.83%		4.62%	0.95	34.38%
B and Above	4.12%		4.20%		16.48%		7.95%		5.33%		5.53%	0.93	37.50%

Beta of Exchange Carriers = 0.95

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model
Industry: Telecommunications
2015 Assessment Year

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

	Exchange Carriers	Wireless Carriers	Telecom w/ Cable
K_E = Cost of Equity	**8.49%**	**9.50%**	**9.16%**
R_F = Risk Free Rate	2.75%	2.75%	2.75%
β= Beta	0.85	1.00	0.95
R_M = Market Rate of Return	9.50%	9.50%	9.50%
R_P = Equity Risk Premium (RM - RF)	6.75%	6.75%	6.75%

Equity 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/	1/1/2015 implied premium	5.78%
Duff & Phelps	February 6, 2015 Table Equity Risk Premium	2/28/13 until further notice	5.00%

R_m = Investor's Market Rate of Return

2014 Not updated for 2015

Ibbotson, SBBI, Large Company, Average Annual Return, ***Arithmetic** Average, Ex-Post	R_M=	12.10%
Ibbotson, SBBI, Large Company, Average Annual Return, ***Geometric** Average, Ex-Post	R_M=	10.10%
3 Stage Dividend Growth Model, S & P 500, See Exhibit, Ex Ante	R_M=	8.50%
	Mean =	10.23%
	Median =	10.10%
	R_M=	**9.50%**

R_f = Risk Free Rate

Internal Revenue Service, Rev Rule 2014-31 Table 2 December 8, 2014

Rev Rule 2014-31 Table 2

Annual Rates	Short Term - AFR	R_f =	0.34%
	Mid Term - AFR	R_f =	1.28%
	Long Term - AFR	R_f =	2.68%

The ValueLine Investment Survey January 9, 2015

U.S. Treasury Securities December 30, 2014

1 Year	R_f =	0.20%
10 Year	R_f =	2.19%
30 Year	R_f =	2.76%

Federal Reserve Statistical Release

Treasury constant Maturities, December 31, 2014

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

1 year constant maturity, quoted on investment basis	R_f =	0.25%
10-year constant maturity, quoted on investment basis	R_f =	2.17%
20-year constant maturity, quoted on investment basis	R_f =	2.47%
30-year constant maturity, quoted on investment basis	R_f =	2.75%
	Mean =	1.71%
	Median =	2.18%
	Weighted Mean =	2.08%
	R_f=	**2.75%**

U.S. Treasury Securities Long-Term December 31, 2014

20 year constant maturity	R_f = **2.47%**
30 year constant maturity	R_f = **2.75%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications
2015 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

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	33.12	1.88	5.68%	4.00%	9.68%
Verizon Communications	VZ	46.23	2.24	4.85%	2.00%	6.85%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	(3.50%)	5.46%
Gen'l Communic. 'A'	GNCMA	13.75				
Frontier Communications	FTR	6.67	0.40	6.00%	(4.00%)	6.00%
Consol. Communic.	CNSL	27.83	1.55	5.57%	Nil	5.57%
Windstream Corportation	WIN	8.24	1.00	12.14%	Nil	12.14%
Cincinnati Bell	CBB	3.19				

Weighted Mean= 9.89%
Mean = 7.61%
Median = 6.42%

Estimated Cost of Equity = 7.50%

Wireless Sector:

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke
AT&T Inc.	T	33.12	1.88	5.68%	4.00%	9.68%
Gen'l Communic. 'A'	GNCMA	13.75				
T-Mobile US	TMUS	26.94				
Verizon Communications	VZ	46.23	2.24	4.85%	4.00%	8.85%
Sprint Nextel Corp	S	4.15				
Telephone & Data Sys	TDS	25.25	0.56	2.22%	4.00%	6.22%
U.S. Cellular	USM	39.83				

Weighted Mean= 9.77%
** AT&T Corp, Verizon Communications, and Alaska Communications
Mean = 8.25%
Median = 8.85%

NOTAdjusted for Wireline and Wireless Contributions

Estimated Cost of Equity = 8.80%

AT&T Corp., 46% Wireless, 54% Wireline
Verizon Communications, 58% Wireless, 42% Wireline
Alaska Communications SyS, Grp., 59% Wireless, 41% Wireline

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications
2015 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

Major Exchange Carriers:

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Earnings Growth ** (G_1)	Ke
AT&T Inc.	T	33.12	1.88	5.68%	7.00%	12.68%
Verizon Communications	VZ	46.23	2.24	4.85%	8.00%	12.85%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	8.00%	13.46%
Gen'l Communic. 'A'	GNCMA	13.75				
Frontier Communications	FTR	6.67	0.40	6.00%	21.00%	27.00%
Consol. Communic.	CNSL	27.83	1.55	5.57%	18.00%	23.57%
Windstream Corportation	WIN	8.24	1.00	12.14%	6.50%	18.64%
Cincinnati Bell	CBB	3.19			28.50%	

Weighted Mean= 20.75%
Mean = 18.03%
Median = 16.05%

Estimated Cost of Equity = 17.00%

Wireless Sector:

Company Name	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/P0)	Earnings Growth Growth (G_1)	Ke
AT&T Inc.	T	33.12	1.88	5.68%	7.00%	12.68%
Gen'l Communic. 'A'	GNCMA	13.75				
T-Mobile US	TMUS	26.94				
Verizon Communications	VZ	46.23	2.24	4.85%	4.00%	8.85%
Sprint Nextel Corp	S	4.15				
Telephone & Data Sys	TDS	25.25	0.56	2.22%	4.00%	6.22%
U.S. Cellular	USM	39.83				

Weighted Mean= 10.77%
Mean = 9.25%
Median = 8.85%

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

NOTAdjusted for Wireline and Wireless Contributions

Estimated Cost of Equity = 9.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications
2015 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

Major Exchange Carriers:

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
AT&T Inc.	T	33.12	1.88	5.68%	32.00%	14.50%	4.64%	10.32%
Verizon Communications	VZ	46.23	2.24	4.85%	41.00%	13.00%	5.33%	10.18%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	14.00%	8.50%	1.19%	6.65%
Gen'l Communic. 'A'	GNCMA	13.75				18.50%		
Frontier Communications	FTR	6.67	0.40	6.00%		6.00%		6.00%
Consol. Communic.	CNSL	27.83	1.55	5.57%		24.00%		5.57%
Windstream Corportation	WIN	8.24	1.00	12.14%		12.00%		12.14%
Cincinnati Bell	CBB	3.19						

All Companies In Survey

Weighted Mean=	10.61%
Mean=	8.47%
Median=	8.41%

Cost of Equity - All, (K_E) = 8.50%

Wireless Sector:

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
AT&T Inc.	T	33.12	2.16	6.52%	32.00%	14.50%	4.64%	11.16%
Gen'l Communic. 'A'	GNCMA	13.75				18.50%		
T-Mobile US	TMUS	26.94				1.50%		
Verizon Communications	VZ	46.23	2.24	4.85%	41.00%	13.00%	5.33%	10.18%
Sprint Nextel Corp	S	4.15						
Telephone & Data Sys	TDS	25.25	0.56				0.00%	2.22%
U.S. Cellular	USM	39.83						

All Companies In Survey

Weighted Mean=	9.44%
Mean=	7.85%
Median=	10.18%

Cost of Equity - All, (K_E) = 8.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications with significant portion of Cable TV Service
2015 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 (D1)	Dividend Yield (D1/P0)	Dividend Growth (G_1)	Ke
Cablevision Sys. 'A'	CVC	20.64	0.60	2.91%	1.50%	4.41%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	(3.50%)	5.46%
Frontier Communications	FTR	6.67	0.40	6.00%	(4.00%)	6.00%
Cincinnati Bell	CBB	3.19				
Consol. Communic.	CNSL	27.83	1.55	5.57%	Nil	5.57%
FairPoint Communications Inc.	FRP	14.21				
Hawaiian Telcom Holdco Inc	HCOM	27.57				
Gen'l Communic. 'A'	GNCMA	13.75				
Time Warner Cable	TWC	152.06	3.00	1.97%	7.00%	8.97%
Comcast Corp.	CMCSA	57.78	1.05	1.82%	13.00%	14.82%
Charter Communications	CHTR	166.62	Nil		Nil	
Crown Media Holdings Inc Cl A	CRWN	3.54				
MDU Communications Inc	MDTV	0.01				

Weighted Mean=	6.08%
Mean =	7.54%
Median =	5.78%
Estimated Cost of Equity =	**7.00%**

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications with significant portion of Cable TV Service
2015 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
Cablevision Sys. 'A'	CVC	20.64	0.60	2.91%	22.00%	24.91%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	19.50%	24.96%
Frontier Communications	FTR	6.67	0.40	6.00%	21.00%	27.00%
Cincinnati Bell	CBB	3.19				
Consol. Communic.	CNSL	27.83	1.55	5.57%		5.57%
FairPoint Communications Inc.	FRP	14.21				
Hawaiian Telcom Holdco Inc	HCOM	27.57				
Gen'l Communic. 'A'	GNCMA	13.75				
Time Warner Cable	TWC	152.06	3.00	1.97%	8.00%	9.97%
Comcast Corp.	CMCSA	57.78	1.05	1.82%	10.00%	11.82%
Charter Communications	CHTR	166.62	16.15			9.69%
Crown Media Holdings Inc Cl A	CRWN	3.54				
MDU Communications Inc	MDTV	0.01				

Weighted Mean= 24.11%
Mean = 16.27%
Median = 11.82%

Estimated Cost of Equity = 15.00%

MONTANA DEPARTMENT OF REVENUE

Dividend Growth Model
Industry: Telecommunications with significant portion of Cable TV Service
2015 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
Cablevision Sys. 'A'	CVC	20.64	0.60	2.91%	59.00%	16.00%	9.44%	12.35%
CenturyLink Inc.	CTL	39.58	2.16	5.46%	14.00%	8.00%	1.12%	6.58%
Frontier Communications	FTR	6.67	0.40	6.00%		6.00%		6.00%
Cincinnati Bell	CBB	3.19						
Consol. Communic.	CNSL	27.83	1.55	5.57%		24.00%		5.57%
FairPoint Communications Inc.	FRP	14.21						
Hawaiian Telcom Holdco Inc	HCOM	27.57						
Gen'l Communic. 'A'	GNCMA	13.75				18.50%		
Time Warner Cable	TWC	152.06	3.00	1.97%	66.00%	20.00%	13.20%	15.17%
Comcast Corp.	CMCSA	57.78	1.05	1.82%	69.00%	15.00%	10.35%	12.17%
Charter Communications	CHTR	166.62	16.15	9.69%				9.69%
Crown Media Holdings Inc Cl A	CRWN	3.54						
MDU Communications Inc	MDTV	0.01						

All Companies In Survey

Weighted Mean=	17.20%
Mean=	9.65%
Median=	9.69%

Cost of Equity - All, (K_E) = All, (K_E) = 10.00%

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
ALSK	Alaska Communic Sys Grp	high	$ 2.49	$ 2.25	$ 2.70	$ 2.03	$ 1.97	$ 1.82	$ 1.90	$ 1.86	$ 1.79	$ 1.57	$ 1.64	$ 2.05	$ 1.79	$ 1.49	$ 1.84	NA	(0.09)
		low	$ 2.12	$ 2.09	$ 1.84	$ 1.84	$ 1.75	$ 1.66	$ 1.69	$ 1.72	$ 1.57	$ 1.25	$ 1.27	$ 1.18					
AMT	American Tower Corp	high	$ 84.65	$ 84.90	$ 82.99	$ 84.27	$ 90.00	$ 90.73	$ 97.56	$ 99.90	$ 99.90	$ 100.36	$ 106.31	$105.09	$ 98.85	$ 98.88	$ 90.49	54.83	1.83
		low	$ 78.60	$ 78.38	$ 80.01	$ 80.10	$ 83.70	$ 87.05	$ 89.05	$ 93.88	$ 92.78	$ 90.20	$ 95.72	$ 95.58					
CBB	Cincinnati Bell	high	$ 3.87	$ 3.55	$ 3.75	$ 3.77	$ 3.98	$ 3.97	$ 4.13	$ 3.87	$ 3.90	$ 3.72	$ 3.74	$ 3.58	$ 3.19	$ 3.42	$ 3.57	12.54	0.26
		low	$ 3.44	$ 3.25	$ 3.18	$ 3.31	$ 3.17	$ 3.53	$ 3.78	$ 3.54	$ 3.26	$ 3.21	$ 3.30	$ 2.94					
CHTR	Charter Communications	high	$140.74	$ 140.24	$129.75	$142.70	$ 144.59	######	$ 167.30	$ 160.99	######	$ 159.15	$ 169.73	$169.85	$166.62	$ 156.10	$ 145.94	NA	(0.90)
		low	$130.58	$ 120.50	$120.75	$116.78	$ 134.14	######	$ 151.59	$ 149.66	######	$ 137.51	$ 142.37	$158.00					
CLWR	Clearwire Corp.	high		Purchased by Sprint/Nextel on July 9. 2013															
		low																	
CMCSA	Comcast Corp.	high	$ 54.70	$ 55.28	$ 52.37	$ 52.00	$ 52.48	$ 54.26	$ 56.49	$ 55.10	$ 57.49	$ 55.69	$ 57.28	$ 59.30	$ 57.78	$ 54.65	$ 53.16	17.93	3.18
		low	$ 50.67	$ 50.19	$ 49.00	$ 47.74	$ 49.16	$ 51.94	$ 53.25	$ 52.52	$ 53.41	$ 49.33	$ 51.56	$ 54.74					
CNSL	Consol. Communic.	high	$ 20.42	$ 19.73	$ 20.25	$ 20.45	$ 20.55	$ 22.50	$ 23.32	$ 24.41	$ 25.87	$ 28.81	$ 27.94	$ 28.65	$ 27.83	$ 26.67	$ 22.43	37.87	0.71
		low	$ 18.86	$ 18.31	$ 18.66	$ 18.71	$ 19.25	$ 19.77	$ 21.10	$ 22.19	$ 24.07	$ 24.06	$ 25.41	$ 25.12					
CRWN	Crown Media Holdings Inc Cl A	high	$ 3.55	$ 3.44	$ 3.94	$ 3.98	$ 3.84	$ 3.80	$ 3.82	$ 3.62	$ 3.45	$ 3.50	$ 3.56	$ 3.65	$ 3.54	$ 3.38	$ 3.44	18.47	0.19
		low	$ 2.92	$ 2.80	$ 3.29	$ 3.52	$ 3.29	$ 3.39	$ 3.31	$ 3.32	$ 2.96	$ 2.93	$ 3.28	$ 3.37					
CVC	Cablevision Sys. 'A'	high	$ 17.86	$ 17.95	$ 18.28	$ 17.79	$ 17.78	$ 17.77	$ 20.42	$ 19.53	$ 19.38	$ 19.14	$ 20.37	$ 21.97	$ 20.64	$ 19.25	$ 17.99	17.95	1.15
		low	$ 15.69	$ 15.78	$ 16.27	$ 15.92	$ 16.42	$ 16.87	$ 17.65	$ 17.54	$ 17.41	$ 16.94	$ 17.73	$ 19.32					
CTL	CenturyLink Inc	high	$ 31.82	$ 31.48	$ 32.98	$ 34.93	$ 38.21	$ 38.10	$ 45.67	$ 41.69	$ 41.50	$ 41.99	$ 41.97	$ 41.50	$ 39.58	$ 39.83	$ 36.58	27.64	1.43
		low	$ 28.31	$ 27.93	$ 30.34	$ 32.45	$ 34.42	$ 35.69	$ 35.70	$ 38.25	$ 39.45	$ 37.64	$ 38.33	$ 37.56					
DISH	Dish Network 'A'	high	$ 58.55	$ 59.95	$ 63.98	$ 64.52	$ 63.35	$ 65.75	$ 67.50	$ 66.63	$ 67.06	$ 65.54	$ 79.57	$ 79.28	$ 72.89	$ 68.25	$ 62.82	41.50	1.78
		low	$ 53.72	$ 54.31	$ 57.67	$ 55.45	$ 57.19	$ 57.86	$ 60.91	$ 61.00	$ 62.78	$ 56.17	$ 60.50	$ 68.45					
DTV	DIRECTV	high	$ 73.44	$ 78.05	$ 80.77	$ 79.46	$ 89.46	$ 85.53	$ 88.25	$ 86.51	$ 87.94	$ 88.00	$ 88.08	$ 87.98	$ 86.70	$ 85.80	$ 81.62	47.85	1.78
		low	$ 67.80	$ 67.81	$ 72.28	$ 73.54	$ 77.50	$ 82.14	$ 84.55	$ 83.14	$ 86.02	$ 82.04	$ 86.33	$ 82.36					
DY	Dycom Industries	high	$ 31.82	$ 31.48	$ 32.98	$ 34.93	$ 38.21	$ 38.10	$ 45.67	$ 41.69	$ 41.50	$ 41.99	$ 41.97	$ 41.50	$ 39.58	$ 39.83	$ 36.58	32.94	1.20
		low	$ 28.31	$ 27.93	$ 30.34	$ 32.45	$ 34.42	$ 35.69	$ 35.70	$ 38.25	$ 39.45	$ 37.64	$ 38.33	$ 37.56					
FRP	FairPoint Communications Inc	high	$ 13.79	$ 14.16	$ 14.20	$ 14.46	$ 15.83	$ 14.88	$ 15.44	$ 16.91	$ 16.78	$ 17.13	$ 16.94	$ 15.06	$ 14.21	$ 15.03	$ 14.26	NA	(3.29)
		low	$ 11.13	$ 11.86	$ 12.26	$ 13.01	$ 12.54	$ 13.37	$ 13.47	$ 13.05	$ 14.78	$ 13.81	$ 13.96	$ 13.30					
FTR	Frontier Communications	high	$ 4.97	$ 5.15	$ 5.74	$ 6.10	$ 6.09	$ 5.90	$ 7.24	$ 6.86	$ 6.85	$ 6.55	$ 7.15	$ 7.12	$ 6.67	$ 6.47	$ 5.91	36.89	0.18
		low	$ 4.62	$ 4.40	$ 4.67	$ 5.41	$ 5.44	$ 5.44	$ 5.62	$ 6.28	$ 6.24	$ 5.62	$ 6.20	$ 6.16					
GNCMA	Gen'l Communic. 'A'	high	$ 11.75	$ 10.51	$ 11.60	$ 11.51	$ 11.50	$ 11.43	$ 11.38	$ 11.41	$ 11.67	$ 11.80	$ 12.48	$ 13.91	$ 13.75	$ 12.00	$ 11.12	33.74	0.38
		low	$ 9.64	$ 9.24	$ 10.24	$ 10.20	$ 10.33	$ 10.45	$ 10.70	$ 10.50	$ 10.87	$ 10.61	$ 11.46	$ 11.73					
HCOM	Hawaiian Telcom Holdco Inc	high	$ 29.84	$ 28.84	$ 29.93	$ 28.93	$ 28.00	$ 29.90	$ 29.36	$ 31.50	$ 28.20	$ 27.69	$ 27.72	$ 27.89	$ 27.57	$ 26.30	$ 27.54	34.46	0.78
		low	$ 26.95	$ 26.26	$ 27.76	$ 25.65	$ 24.75	$ 26.99	$ 27.76	$ 27.06	$ 25.38	$ 22.85	$ 25.78	$ 25.86					
HTCO	Hickory Tech Corp	high		Changed name to Enventis then purchased by Concolidated Communications															
		low																	

MONTANA DEPARTMENT OF REVENUE

Support for Industry Capital Structure
Industry: Telecommunications
2015 Assessment Year

Ticker	Company		Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	End of Year Closing	4th Qtr Average	Annual Average	Yahoo P-E	Yahoo EPS lst 12 mo
IDT	IDT Corp	high	$ 18.07	$ 18.03	$ 19.32	$ 17.08	$ 16.61	$ 18.14	$ 18.05	$ 16.09	$ 16.79	$ 16.93	$ 17.87	$ 20.43	$ 20.31	$ 17.08	$ 16.76	4.44	4.18
		low	$ 16.60	$ 16.00	$ 16.20	$ 15.51	$ 15.14	$ 15.98	$ 15.56	$ 15.20	$ 15.41	$ 14.00	$ 16.49	$ 16.73					
LEAP	Leap Wireless	high					Part of AT&T as of July 2013												
		low																	
LVLT	Level 3 Communications	high	$ 34.71	$ 39.13	$ 39.69	$ 43.50	$ 44.77	$ 45.97	$ 49.22	$ 44.98	$ 48.21	$ 47.05	$ 50.16	$ 50.10	$ 49.38	$ 46.00	$ 42.15	43.58	1.11
		low	$ 31.55	$ 30.67	$ 36.09	$ 36.00	$ 42.12	$ 41.28	$ 43.07	$ 40.91	$ 43.69	$ 37.61	$ 44.42	$ 46.65					
MDTV	MDU Communications Inc	high	$ 0.03	$ 0.03	$ 0.02	$ 0.01	$ 0.02	$ 0.02	$ 0.03	$ 0.02	$ 0.02	$ 0.02	$ 0.03	$ 0.01	$ 0.01	$ 0.02	$ 0.02	(0.02)	(0.65)
		low	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01					
PGI	Premiere Global Services	high	$ 11.75	$ 11.33	$ 12.36	$ 13.10	$ 13.62	$ 13.71	$ 14.05	$ 13.40	$ 13.56	$ 12.42	$ 10.94	$ 10.72	$ 10.62	$ 10.73	$ 11.96	40.06	0.26
		low	$ 10.16	$ 10.50	$ 11.18	$ 11.35	$ 12.44	$ 12.65	$ 12.60	$ 12.84	$ 11.95	$ 9.89	$ 10.30	$ 10.11					
S	Sprint Nextel Corp	high	$ 10.69	$ 8.77	$ 9.46	$ 9.60	$ 9.76	$ 9.75	$ 8.68	$ 7.60	$ 7.15	$ 6.45	$ 6.25	$ 5.09	$ 4.15	$ 5.32	$ 7.47	NA	(3.29)
		low	$ 8.16	$ 7.42	$ 8.40	$ 7.38	$ 8.39	$ 8.19	$ 7.07	$ 5.36	$ 5.50	$ 5.71	$ 4.64	$ 3.79					
T	AT&T Corp	high	$ 35.29	$ 33.50	$ 35.50	$ 36.41	$ 36.86	$ 35.75	$ 37.48	$ 35.82	$ 35.55	$ 36.16	$ 36.15	$ 35.37	$ 33.12	$ 34.51	$ 34.68	10.31	3.27
		low	$ 32.01	$ 31.74	$ 31.76	$ 34.32	$ 35.00	$ 34.62	$ 35.03	$ 34.17	$ 34.36	$ 33.10	$ 34.22	$ 32.07					
TDS	Telephone & Data Sys	high	$ 27.90	$ 27.09	$ 26.22	$ 27.24	$ 28.41	$ 27.78	$ 26.37	$ 26.42	$ 26.93	$ 26.11	$ 26.49	$ 26.37	$ 25.25	$ 24.76	$ 25.44	NA	(1.16)
		low	$ 25.35	$ 21.30	$ 23.08	$ 25.95	$ 26.19	$ 24.67	$ 24.29	$ 23.08	$ 23.76	$ 22.19	$ 24.62	$ 22.77					
TMUS	T-Mobile US	high	$ 33.92	$ 32.70	$ 33.23	$ 33.69	$ 35.50	$ 34.95	$ 33.88	$ 34.55	$ 32.03	$ 29.60	$ 29.55	$ 29.01	$ 26.94	$ 27.32	$ 30.66	177.57	0.15
		low	$ 29.90	$ 29.06	$ 30.01	$ 27.62	$ 31.04	$ 32.34	$ 30.73	$ 28.44	$ 28.25	$ 24.50	$ 27.01	$ 24.26					
TWC	Time Warner Cable	high	$137.20	$ 147.28	$142.34	$142.60	$ 142.84	######	$ 154.12	$ 149.14	######	$ 147.57	$ 150.00	$155.95	$152.06	$ 142.68	$ 142.11	20.83	7.17
		low	$130.53	$ 133.50	$133.67	$132.58	$ 133.44	######	$ 145.10	$ 142.90	######	$ 128.78	$ 131.00	$142.75					
USM	U.S. Cellular	high	$ 44.86	$ 44.43	$ 41.43	$ 42.92	$ 43.50	$ 43.08	$ 42.00	$ 39.72	$ 38.85	$ 36.98	$ 39.72	$ 40.92	$ 39.83	$ 36.76	$ 39.09	5.28	7.17
		low	$ 40.86	$ 35.93	$ 36.88	$ 39.55	$ 40.07	$ 38.33	$ 37.66	$ 33.17	$ 34.35	$ 31.79	$ 36.38	$ 34.76					
VOD	Vodafone Grp	high	$ 39.43	$ 42.14	$ 41.51	$ 37.96	$ 38.54	$ 35.17	$ 34.69	$ 34.55	$ 34.81	$ 33.29	$ 37.00	$ 36.08	$ 34.17	$ 33.42	$ 35.19	1.31	26.44
		low	$ 36.40	$ 35.13	$ 35.99	$ 35.01	$ 34.10	$ 31.87	$ 32.21	$ 32.03	$ 32.40	$ 28.63	$ 32.45	$ 33.09					
VG	Vonage Holdings Corp	high	$ 4.94	$ 4.96	$ 4.68	$ 4.42	$ 4.50	$ 3.85	$ 4.01	$ 3.53	$ 3.74	$ 3.55	$ 3.80	$ 3.96	$ 3.81	$ 3.49	$ 3.80	40.00	0.09
		low	$ 3.25	$ 4.09	$ 4.18	$ 3.63	$ 3.44	$ 3.33	$ 3.40	$ 3.17	$ 3.21	$ 3.10	$ 3.27	$ 3.24					
VZ	Verizon Communications	high	$ 49.40	$ 48.34	$ 48.39	$ 48.46	$ 50.01	$ 50.33	$ 53.66	$ 50.52	$ 50.38	$ 50.50	$ 51.73	$ 50.84	$ 46.23	$ 48.99	$ 48.64	19.82	2.42
		low	$ 46.58	$ 45.45	$ 45.83	$ 45.85	$ 46.60	$ 48.75	$ 48.54	$ 48.20	$ 48.26	$ 46.89	$ 48.86	$ 45.09					
WIN	Windstream Hldgs.	high	$ 8.08	$ 8.08	$ 8.45	$ 9.18	$ 9.73	$ 10.22	$ 13.30	$ 11.66	$ 11.37	$ 10.97	$ 10.63	$ 10.11	$ 8.24	$ 9.80	$ 9.53	35.25	0.26
		low	$ 7.31	$ 7.18	$ 7.93	$ 8.24	$ 8.52	$ 9.51	$ 9.83	$ 10.66	$ 10.54	$ 9.61	$ 9.28	$ 8.22					
ZAYO	Zayo Group Holdings Inc	high	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 23.92	$ 28.11	$ 32.18	$ 30.57	$ 25.64	$ 6.41	(1.16)	(1.16)
		low	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21.21	$ 22.62	$ 25.82					

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/2031	A	6.79	6.61	6.40	6.36	6.18	6.20	6.20	6.06	6.24	6.05	5.96	5.87	6.24%	5.96%
ALLTEL Corp	6.8	020039AJ2	Deb	5/1/2029	A-	5.66	5.66	5.61	5.58	5.48	5.49	5.46	5.49	5.62	5.53	5.46	5.44	5.54%	5.48%
ALLTEL Corp	7.88	020039DC4	Sr Nt	7/1/2032	A-	5.89	5.92	5.83	5.76	5.67	5.68	5.59	5.45	5.62	5.54	5.46	5.35	5.65%	5.45%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	5.75	5.69	5.54						5.32	5.18	5.15	5.22	5.41%	5.18%
AT&T Broadband	9.46	00209TAB1	Nts	11/15/2022	A-	6.74	6.70	6.66	6.59	6.50	6.50	6.54	6.50	6.61	6.61	6.57	6.58	6.59%	6.59%
AT&T Corp.	6.5	001957AW9	Nts	03/15/2029	A-	5.77	5.77	5.66	5.62	5.52	5.58	5.58	5.48	5.61	5.51	5.43	5.44	5.58%	5.46%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/2031	A-	5.85	5.88	5.75	5.66	5.52	5.52	5.39	5.34	5.51	5.44	5.42	5.43	5.56%	5.43%
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	5.77	5.75	5.65	5.55	5.39	5.38	5.38	5.25	5.43	5.30	5.17	5.14	5.43%	5.20%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	5.72	5.65	5.55	5.46	5.25	5.26	5.26	5.12	5.37	5.32	5.23	5.26	5.37%	5.27%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	5.67	5.63	5.49	5.40	5.19	5.21	5.38	5.05	5.29	5.25	5.21	5.21	5.33%	5.22%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/2018	A-	4.84	4.84	4.87	4.91	4.84	4.86	4.88	4.88	4.91	4.93	4.94	4.98	4.89%	4.95%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/2018	A-	4.89	4.88	4.93	4.85	4.89	4.91	4.93	4.93	4.96	4.98	4.98	5.02	4.93%	4.99%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	5.69	5.65	5.52	5.42	5.21	5.22	5.24	5.13	5.31	5.20	5.32	5.18	5.34%	5.23%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/2031	A-	6.10	6.06	6.01	5.93	5.85	5.67	5.89	5.77	5.83	5.81	5.69	5.65	5.86%	5.72%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/2026	A-	6.01	6.01	5.99	5.66	5.67	5.60	5.59	5.50	5.62	5.51	5.45	5.43	5.67%	5.46%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/2030	A-	6.42	6.44	6.35	6.25	5.99	5.90	5.89	5.78	5.91	5.90	5.90	5.87	6.05%	5.89%
BellSouth Corp	5.2	079860AL6	Nt	12/15/2016	A-	4.71	4.71	4.74	4.78	4.73	4.69	4.70	4.70	4.69	4.69	4.69	4.69	4.71%	4.69%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/2031	A-	5.99	6.01	5.85	5.81	5.72	5.74	5.66	5.54	5.71	5.62	5.54	5.49	5.72%	5.55%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.88	5.90	5.73	5.68	5.45	5.47	5.41	5.29	5.46	5.31	5.22	5.17	5.50%	5.23%
BellSouth Corp.	5.2	079860AG7	Nts	09/15/2014	A-	5.05	5.06	5.09	5.11	5.13	5.15							5.10%	
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.69	5.71	5.45	5.40	5.37	5.39	5.37	5.23	5.41	5.32	5.24	5.19	5.40%	5.25%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/2025	A-	6.07	6.07	6.07	6.04	5.79	5.82	5.85	5.81	5.89	5.79	5.75	5.74	5.89%	5.76%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	6.10	5.88	5.92	5.85	5.73	5.75	5.73	5.59	5.82	5.63	5.51	5.39	5.74%	5.51%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.54	6.39	6.32	6.18	6.21	6.01	5.81	5.92	5.64	5.54	5.35	6.03%	5.51%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.54	6.39	6.32	6.18	6.21	6.01	5.81	5.92	5.64	5.54	5.35	6.03%	5.51%
BellSouthTelecommunications	6.3	079867AQ0	AmortizingDeb	12/15/2015	A-	6.02	6.04	6.07	6.10	6.13	6.15	6.17	6.24	6.25	6.27	6.28	6.11	6.15%	6.22%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/2028	A-	5.69	5.69	5.68	5.60	5.41	5.45	5.47	5.38	5.51	5.40	5.34	5.32	5.50%	5.35%
Cingular Wireless LLC	7.12	17248RAJ5	Sr Nt	12/15/2031	A-	5.61	5.66	5.58										5.62%	
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/2026	A-	6.34	6.22	6.22	5.90	5.81	5.85	5.83	5.82	5.94	5.85	5.79	5.78	5.95%	5.81%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/2022	A-	6.45	6.42	6.31	6.27	6.21	6.24	6.23	6.20	6.29	6.23	6.19	6.19	6.27%	6.20%
Pacific Bell	7.125	694032AT0	Deb	03/15/2026	A-	5.77	5.73	5.70	5.66	5.52	5.58	5.56	5.48	5.59	5.52	5.58	5.59	5.61%	5.56%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.17	7.17	7.17	7.17	7.17	5.55	7.17	7.17	7.16	7.16	7.16	7.16	7.03%	7.16%
SBCCommunications	5.62	78387GAL7	GlobalNts	06/15/2016	A-	5.08	5.08	5.10	5.13	5.13	5.15							5.11%	
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	5.48	5.53	5.46	5.42	5.33	5.28	5.33	5.18	5.35	5.43	5.31	5.27	5.36%	5.34%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	5.48	5.53	5.46	5.42	5.33	5.28	5.33	5.18	5.35	5.43	5.31	5.27	5.36%	5.34%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	5.46	5.52	5.44	5.40	5.29	5.15	5.17	5.03	5.24	5.24	5.11	5.18	5.27%	5.18%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/2015	A-	6.45	6.47	6.52	6.55	6.56	6.59	6.62	6.65	6.67	6.72	6.74	6.81	6.61%	6.76%
TCI Communications	8.75	872287AC1	Sr Deb	08/01/2015	A-	7.82	7.84	7.89	7.95	7.98	8.03	8.07	8.13	8.18	8.26	8.29	8.36	8.07%	8.30%
TCI Communications	7.875	872287AF4	Sr Deb	02/15/2026	A-	5.98	5.95	5.93	5.92	5.64	5.63	5.61	5.64	5.77	5.70	5.64	5.65	5.76%	5.66%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/2028	A-	5.68	5.62	5.63	5.52	5.37	5.36	5.34	5.33	5.46	5.36	5.29	5.30	5.44%	5.32%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/2022	A-	7.38	7.36	7.27	7.27	7.21	7.25	7.25	7.22	7.32	7.26	7.21	7.23	7.27%	7.23%
Telefonos de Mexico, S.A.B. de C.	5.5	879403AS2	Sr Nt	1/27/2015	A-	5.30	5.31	5.32				5.38		5.41	5.44	5.46	5.48	5.39%	5.46%
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/2032	A-	5.51	5.49	5.39						5.30	5.26	5.17	5.15	5.32%	5.19%
Vodafone Group plc	5.38	92857WAD2	Nt	1/30/2015	A-	5.12	5.14	5.16						5.16	5.16		0.00	4.29%	2.58%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	7/15/2018	A-	4.18	4.17	4.19						4.23	4.25	4.24	4.29	4.22%	4.26%
Vodafone Group plc	5	92857WAG5	Gbl Nt	9/15/2015	A-	4.68	4.69	4.69						4.69	4.69		0.00	3.91%	2.35%
Vodafone Group Plc	5.75	92857WAK6	Notes	03/15/2016	A-	5.24	5.23	5.22	5.23	5.23	5.23	5.23	5.23	5.22	5.22	5.23	5.23	5.23%	5.23%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/2017	A-	5.01	4.98	5.01						5.12	5.14	5.15	5.19	5.09%	5.16%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/2037	A-	5.54	5.50	5.41						5.43	5.25	5.19	5.15	5.35%	5.20%
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/2026	A-	6.28	6.28	6.27	6.24	6.14	6.17	6.14	6.09	6.22	6.10	6.04	6.01	6.17%	6.05%
ALLTEL Corp	7	020039AE3	Deb	3/15/2016	BBB+	6.21	6.24	6.24	6.27	6.29	6.33	6.37	6.39	6.41	6.45	6.47	6.47	6.35%	6.46%
Bell Atlantic-PA	6	07786DAA4	Deb	12/1/2028	BBB+	5.72	5.72	5.71	5.68	5.48	5.51	5.54	5.42	5.55	5.45	5.39	5.37	5.55%	5.40%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/2030	BBB+	6.83	6.85	6.61	6.48	6.39	6.41	6.41	8.27	6.45	6.29	6.18	6.08	6.60%	6.18%
Bell Tel. of Penna	8.75	078167BA0	Deb	8/15/2031	BBB+	6.88	6.91	6.72	6.60	6.51	6.53	6.53	6.39	6.39	6.22	6.12	6.01	6.48%	6.12%
Chesapeake Pot.Tel Md	8	165069AP0	Deb	10/15/2029	BBB+	6.68	6.68	6.46	6.29	5.44	6.22	6.25	6.13	6.27	6.17	6.08	6.07	6.23%	6.11%
Chesapeake Pot.Tel Md	8.3	165069AQ8	Deb	08/01/2031	BBB+	6.93	6.95	6.85	6.80	6.71	6.73	6.73	6.58	6.76	6.24	6.15	6.08	6.63%	6.16%
Chesapeake Pot.Tel Md	7.15	165069AS4	Deb	05/01/2023	BBB+	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15%	7.15%
Chesapeake&Pot.Tel VA	8.38	165087AL1	Forty Yr Deb	10/01/2029	BBB+	6.78	6.75	6.74	6.29	6.44	6.48	6.51	6.38	6.53	6.43	6.34	6.33	6.50%	6.37%

MONTANA DEPARTMENT OF REVENUE

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STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Chesapeake&Pot.Tel VA	7.88	165087AN7	Deb	1/15/2022	BBB+	6.64	6.65	6.65	6.64	6.58	6.61	6.64	6.56	6.66	6.59	6.54	6.54	6.61%	6.56%
GTE California	6.75	362311AG7	Deb 'F'	05/15/2027	BBB+	6.06	6.06	6.01	5.95	5.85	5.86	5.88	5.77	5.90	5.81	5.75	5.73	5.89%	5.76%
GTE Corp	8.75	362320AT0	Deb	11/01/2021	BBB+	6.81	6.72	6.73	6.72	6.67	6.60	6.66	6.59	6.55	6.74	6.70	6.71	6.68%	6.72%
GTE Corp	6.84	362320AZ6	Deb	04/15/2018	BBB+	5.84	5.85	5.75	5.77	5.76	5.80	5.85	5.84	5.88	5.89	5.89	5.93	5.84%	5.90%
GTE Corp	6.94	362320BA0	Deb	04/15/2028	BBB+	5.96	5.88	5.76	5.95	5.53	5.57	5.69	5.58	5.71	5.63	5.57	5.55	5.70%	5.58%
GTE Florida	6.86	362333AH9	Deb 'E'	02/01/2028	BBB+	6.28	6.08	6.07	5.93	5.85	6.91	5.91	5.79	5.84	5.75	5.67	5.69	5.98%	5.70%
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/2029	BBB+	6.57	6.58	6.40	6.26	6.14	6.18	6.21	6.08	6.23	6.12	6.04	6.02	6.24%	6.06%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/2029	BBB+	6.63	6.57	6.56	6.53	6.14	6.12	6.15	6.03	6.17	6.07	6.00	5.98	6.25%	6.02%
New Jersey Bell Tel	8	645767AY0	Deb	06/01/2022	BBB+	6.52	6.53	6.48	6.44	6.37	6.41	6.44	6.36	6.46	6.36	6.32	6.32	6.42%	6.33%
New York Telephone Co	6.7	650094CA1	Deb	11/01/2023	BBB+	6.70	6.70	6.70	6.70	6.70	6.70							6.70%	
New York Telephone Co	7	650094CB9	Deb	12/01/2033	BBB+	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00%	7.00%
New York Telephone Co	6.5	650094CJ2	Deb	04/15/2028	BBB+	6.34	6.34	6.33	6.15	6.05	6.08	5.83	5.71	5.85	5.70	5.64	5.62	5.97%	5.65%
Verizon Communications Inc.	5.55	92343VAC8	Nts	02/15/2016	BBB+	5.08	5.08	5.08	5.12	5.13	5.15	5.18	5.19	5.20	5.24	5.23	5.23	5.16%	5.23%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	5.49	5.45	5.36	5.29	5.20	5.15	5.22	5.06	5.25	5.20	5.18	5.09	5.25%	5.16%
Verizon Communications Inc.	5.5	92343VAG9	Nts	04/01/2017	BBB+	4.89	4.89	4.88	4.89	4.90	4.92	4.95	4.96	4.99	5.01			4.93%	5.01%
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/2032	BBB+	5.93	5.96	5.88	5.77	5.67	5.70	5.48	5.41	5.56	5.42	5.32	5.56	5.64%	5.43%
Verizon Global Fndg	4.9	92344GAW6	Nts	09/15/2015	BBB+	4.59	4.59	4.62	4.63	4.64	4.66	4.68	4.69	4.70	4.72			4.65%	4.72%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	5.30	5.29	5.27	5.18	5.03	5.01	5.10	4.93	5.11	5.05	5.01	4.98	5.11%	5.01%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/2033	BBB+	5.17	5.19	5.04	5.04	5.02	5.03	5.03	4.91	5.07	5.02	4.93	4.86	5.03%	4.94%
VerizonNY	7.38	92344XAB5	Sr Deb Ser B	4/1/2032	BBB+	6.31	6.36	6.16										6.28%	
Centel Capital	9	15133KAC7	Deb	10/15/2019	BBB-	7.54	7.46	7.54	7.55	7.61	7.40	7.46	7.43	7.49	7.47	7.45	7.51	7.49%	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	7.48	7.48	7.48	7.48	7.49%	7.48%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/2030	BBB-	7.07	7.43	7.33	7.27	7.18	6.90	6.88	6.74	6.92	6.76	6.68	6.56	6.98%	6.67%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	7.19	7.22	7.26	7.31	7.35	7.38	7.42	7.46	7.48				7.34%	
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	7.06	7.07	7.11	7.19	7.16	7.20	7.24	7.27	7.29	7.35	7.37	7.42	7.23%	7.38%
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	5.73	5.75	5.75	5.75	5.76	5.72	5.77	5.79	5.81	5.87	5.89	5.94	5.79%	5.90%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	6.18	5.98	5.97	5.89	5.71	5.74	5.77	5.61	5.76	5.67	5.57	5.58	5.79%	5.61%
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-	7.13	7.00	6.95	6.86	6.82	5.83	6.82	6.81	6.82	6.82	6.82	6.85	6.79%	6.83%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	7.39	7.22	7.12	7.15	7.04	7.10	7.23	7.03	7.23	7.03	6.95	6.94	7.12%	6.97%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/2025	BBB-	6.66	6.53	6.47	6.33	6.26	6.16	8.24	6.13	6.25	6.16	6.10	6.09	6.45%	6.12%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/2026	BBB-	7.14	7.14	7.14	7.15	7.14	7.15	7.15	7.15	7.16	7.17	7.17	7.17	7.15%	7.17%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	7.23	7.21	7.13	7.18	7.07	7.00	7.03	7.02	7.04	7.04	7.03	7.03	7.08%	7.03%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/2033	BBB-	6.79	6.80	6.59						6.84	6.69	6.69	6.81	6.74%	6.73%
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/2025	BBB-	7.11	7.12	7.03	7.01	6.92	6.98	6.93	6.88	7.01	6.90	6.84	6.83	6.96%	6.86%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/2023	BBB-	6.43	6.43	6.42	6.32	6.24	6.27	6.21	6.17	6.28	6.19	6.14	6.13	6.27%	6.15%
Aliant Communications	6.75	016090AA0	Nts	04/01/2028	BB+	7.14	7.10	7.18	7.16	7.03	6.85	6.77	6.89	6.93	6.95	6.95	6.99	7.00%	6.96%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	7.38	7.27	7.09	6.97	6.89	6.91	6.89	6.86	6.85	6.76	6.82	6.90	6.97%	6.83%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	7.43	7.35	7.19	6.88	6.81	6.74	6.77	6.67	6.75	6.75	6.84	6.87	6.92%	6.82%
CenturyLink, Inc.	5	156700AJ5	ked Rt Sr Nt Ser	02/15/2015	BB	4.83	4.83	4.84	4.86	4.88	4.90	4.93	4.94	4.96	4.96	4.97	4.98	4.91%	4.97%
CenturyLink, Inc.	6	156700AL0	ed Rt Sr Nts Se	04/01/2017	BB	5.44	5.45	5.42	5.43	5.00	5.44	5.53	5.54	5.58	5.55	5.56	5.58	5.46%	5.56%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.71	7.66	7.65						7.28	7.21	7.18	7.15	7.41%	7.18%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	6.33	6.29	6.35						6.49	6.58	6.56	6.57	6.45%	6.57%
Qwest Cap Fdg Inc	7.62	74913EAQ3	Nts 144a	8/3/2021	BB	7.21	7.12	7.07	7.09	6.75	6.75	7.56	6.79	6.88	6.96	6.83	7.07	7.01%	6.95%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/2031	BB	8.03	7.94	7.84	7.67	7.49	7.49	7.56	7.58	7.57	7.59	7.59	7.63	7.67%	7.60%
Qwest Cap Funding	7.62	74913EAQ3	Nts	08/03/2021	BB	7.21	7.12	7.07	7.09	6.75	6.75	6.78	6.79	6.88	6.96	6.83	7.07	6.94%	6.95%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/2028	BB	7.45	7.25	7.16	6.94	6.82	6.72	6.84	6.74	6.82	6.80	6.84	6.87	6.94%	6.84%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/2018	BB	6.00	5.89	5.89	5.83	5.82	5.83	5.83	5.88	5.90	5.86	5.86	5.91	5.88%	5.88%
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	7.09	7.09	8.97	7.14	7.18	8.36%	7.76%
Cincinnati Bell Tel	6.3	171875AD9	>(Tel)<EB>Gtd	12/01/2028	BB-	7.11	7.03	6.68	6.65	6.58	6.55	6.49	6.56	6.63	6.49	6.52	6.70	6.67%	6.57%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.95	8.86	8.82	8.70	8.47	8.35	8.45	8.33	8.56	8.29	8.35	8.51	8.55%	8.38%
GTE North Inc	6.73	362337AK3	Deb 'G'	02/15/2028	BB-	7.33	7.45	7.43	7.26	7.08	6.91	7.04	6.99	6.95	7.00	7.06	7.22	7.14%	7.09%
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/2022	BB-	7.78	7.74	7.69	7.63	7.51	7.58	7.77	7.84	7.90	8.18	8.11	8.18	7.83%	8.16%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	5.52	5.51	5.47	5.48	5.49	5.51	5.58	5.63	5.66	5.68	5.70	5.75	5.58%	5.71%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	5.52	5.51	5.47	5.48	5.49	5.51	5.58	5.63	5.66	5.68	5.70	5.75	5.58%	5.71%
Sprint Capital	6.88	852060AD4	Nts	11/15/2028	B+	7.18	7.11	7.12						7.12	7.39	7.33	7.81	7.29%	7.51%
Sprint Capital	6.9	852060AG7	Nts	05/01/2019	B+	6.35	6.35	6.30	6.29	6.24	6.26	6.45	6.43	6.49	6.71	6.65	6.74	6.44%	6.70%
Sprint Capital	8.75	852060AT9	Nts	03/15/2032	B+	8.04	7.98	7.96	7.82	7.56	7.58	7.88	7.85	7.88	8.19	8.31	8.92	8.00%	8.47%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.93	6.94	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93%	6.93%
NII Holdings, Inc.	2.75	62913FAF9	Sr Nt Conv 144a	8/15/2025	B-									2.75	2.75			2.75%	2.75%
Centennial Com/Cell Op/PR	8.12	151352AB7	Sr Nts	02/01/2014	NR	7.81												7.81%	
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%
NII Holdings, Inc.	2.88	62913FAC6	Nt Conv 144a	2/1/2034	NR									3.82	3.82	3.82	3.82	3.82%	3.82%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.56	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55	6.55%	6.55%
Qwest Communications Internatio	7.5	749121BR9	Sr Nts'B'	02/15/2014	NR	7.50												7.50%	
Qwest Communications Internatio	7.5	749121BV0	Sr Nts'B'	02/15/2014	NR	7.50												7.50%	
Southwest'n Bell Tel	7.375	845335BX5	Deb	07/15/2027	NR	6.46	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.17	7.17	7.17	7.17	7.12%	7.17%
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%	
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/2022	NR	7.33	7.26	7.20	7.19	7.13	7.17	7.17	7.13	7.24	7.18	7.12	7.14	7.19%	7.15%
			Counts of data			125	122	122	108	108	108	106	105	119	117	111	113	127	117

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	5.62%	5.48%
BBB's	6.34%	6.21%
BB's	6.79%	6.75%
B's	6.28%	6.47%
NR's	7.04%	6.75%
ALL	6.17%	6.04%
BBB- & Above	5.96%	5.82%
BB- & Above	6.10%	5.99%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications with significant portion of Cable TV Service
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
CURRENT YIELD

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Comcast Cable Commun	8.88	20029PAG4	Sr Nt - Exchange	5/1/2017	A-	7.22	7.20	7.27	7.27	7.29	7.30	7.36	7.40	7.44	7.51	7.51	7.58	7.36%	7.53%
Comcast Cable Commun	8.5	20029PAH2	Sr Nt - Exchange	5/1/2027	A-	6.21	6.08	6.09	6.07	5.98	6.02	6.00	5.96	6.08	5.98	5.92	5.93	6.03%	5.94%
Comcast Corp.	6.5	20030NAB7	Nt	1/15/2015	A-	6.15	6.17	6.21	6.24	6.27	8.30	6.32	6.36	6.37	6.43	6.45	6.49	6.48%	6.46%
Comcast Corp.	7.05	20030NAC5	Sr Nt	3/15/2033	A-	5.62	5.48	5.41	5.36	5.23	5.23	5.18	5.12	5.27	5.16	5.14	5.07	5.27%	5.12%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr N	6/15/2035	A-	5.14	5.07	4.98	4.90	4.77	4.79	4.72	4.66	4.84	4.75	4.64	4.56	4.82%	4.65%
Comcast Corp.	4.95	20030NAG6	Gtd Fixed Rt Sr N	6/15/2016	A-	4.52	4.53	4.55	4.56	4.58	4.58	4.59	4.81	4.61	4.64	4.65	4.67	4.61%	4.65%
Comcast Corp.	5.9	20030NAL5	Gtd Nt	3/15/2016	A-	5.34	5.35	5.36	5.39	5.39	5.42	5.44	5.47	5.48	5.51	5.53	5.56	5.44%	5.53%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	5.41	5.31	5.23	5.12	5.05	5.06	5.00	4.92	5.11	5.07	4.97	4.85	5.09%	4.96%
Comcast Corp.	6.5	20030NAP6	Nts	1/15/2017	A-	5.65	5.65	5.69	5.69	5.68	5.71	5.74	5.78	5.79	5.83	5.84	5.88	5.74%	5.85%
Comcast Corp.	5.88	20030NAR2	Nt	2/15/2018	A-	5.08	5.07	5.12	5.12	5.07	5.10	5.11	5.13	5.17	5.18	5.18	5.22	5.13%	5.19%
Comcast Corp.	6.3	20030NAU5	Sr Nts	11/15/2017	A-	5.39	5.36	5.42	5.41	5.40	5.42	5.45	5.76	5.51	5.52	5.53	5.56	5.48%	5.54%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	5.52	5.42	5.33	5.25	5.18	5.16	5.12	5.05	5.18	5.15	5.04	4.93	5.19%	5.04%
AOL Time Warner	7.62	00184AAC9	Deb	4/15/2031	BBB	5.89	5.86	5.72	5.60	5.49	5.55	5.60	5.51	5.68	5.61	5.56	5.51	5.63%	5.56%
Time Warner Cos Inc	9.15	887315AM1	Deb Dtd 02/04/19	2/1/2023	BBB	6.80	6.73	6.72	6.66	6.55	6.61	6.88	6.55	6.66	6.75	6.71	6.73	6.70%	6.73%
Time Warner Cos Inc	6.88	887315AY5	Deb	6/15/2018	BBB	5.77	5.75	5.79	5.79	5.77	5.77	5.79	5.83	5.87	5.88	5.91	5.95	5.82%	5.91%
Time Warner Cos Inc	8.05	887315BA6	Deb	1/15/2016	BBB	7.14	7.16	7.22	7.26	7.29	7.33	7.37	7.40	7.42	7.44	7.47	7.52	7.34%	7.48%
Time Warner Cos Inc	6.85	887315BB4	Deb	1/15/2026	BBB	6.12	6.11	6.10	6.07	5.98	6.01	6.04	5.83	6.05	5.96	5.92	5.93	6.01%	5.94%
Time Warner Cos Inc	7.57	887315BH1	Deb	2/1/2024	BBB	6.10	6.09	6.06	5.93	5.82	5.85	5.88	5.80	5.90	5.90	5.86	5.83	5.92%	5.86%
Time Warner Cos Inc	7.25	887315BJ7	Deb	10/15/2017	BBB	6.07	6.08	6.14	6.16	6.17	6.20	6.18	6.19	6.22	6.26	6.27	6.32	6.19%	6.28%
Time Warner Cos Inc	6.95	887315BM0	Gtd Deb	1/15/2028	BBB	5.70	5.69	5.55	5.47	5.36	5.39	5.43	5.41	5.51	5.47	5.39	5.43	5.48%	5.43%
Time Warner Cos Inc	6.62	887315BN8	Deb	5/15/2029	BBB	5.58	5.52	5.49	5.36	5.19	5.20	5.30	5.21	5.34	5.27	5.27	5.23	5.33%	5.26%
Time Warner Inc.	5.88	887317AC9	Nt	11/15/2016	BBB	5.22	5.22	5.25	5.25	5.26	5.28	5.31	5.32	5.34	5.37	5.39	5.41	5.30%	5.39%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	5.59	5.60	5.46	5.34	5.26	5.31	5.34	5.19	5.45	5.29	5.20	5.11	5.35%	5.20%
Time Warner Entertainment	8.38	88731EAF7	Sr Deb	3/15/2023	BBB	7.14	6.44	6.38	6.24	6.21	6.19	6.20	6.17	6.28	6.25	6.19	6.22	6.33%	6.22%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	7.19	7.22	7.26	7.31	7.35	7.38	7.42	7.46	7.48				7.34%	
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	7.06	7.07	7.11	7.13	7.16	7.20	7.24	7.27	7.29	7.35	7.37	7.42	7.22%	7.38%
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	5.73	5.75	5.75	5.75	5.76	5.72	5.77	5.79	5.81	5.87	5.89	5.94	5.79%	5.90%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	6.18	5.98	5.97	5.89	5.71	5.74	5.82	5.61	5.76	5.67	5.57	5.58	5.79%	5.61%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	7.38	7.27	7.09	6.97	6.89	6.91	6.89	6.86	6.85	6.76	6.82	6.90	6.97%	6.83%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	7.43	7.35	7.19	6.88	6.81	6.74	6.77	6.67	6.75	6.75	6.84	6.87	6.92%	6.82%
CenturyTel, Inc.	5	156700AJ5	Sr Nts'M'	02/15/2015	BB	4.83	4.83	4.84	4.86	4.88	4.90	4.93	4.94	4.96	4.96	4.97	4.98	4.91%	4.97%
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts S	04/01/2017	BB	5.44	5.45	5.42	5.43	5.44	5.44	5.53	5.54	5.58	5.55	5.56	5.58	5.50%	5.56%
CenturyTel, Inc.	6	156700AL0	SrNts'N'	04/01/2017	BB	5.44	5.45	5.42	5.43	5.44	5.44	5.53	5.54	5.58	5.55	5.56	5.58	5.50%	5.56%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.71	7.66	7.65						7.28	7.21	7.18	7.15	7.41%	7.18%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	6.33	6.29	6.35						6.49	6.58	6.56	6.57	6.45%	6.57%
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	7.09	7.09	8.97	7.14	7.18	8.36%	7.76%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>G	12/01/2028	BB-	7.11	7.03	6.68	6.65	6.56	6.55	6.49	6.56	6.63	6.49	6.52	6.70	6.66%	6.57%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.95	8.86	8.82	8.70	8.47	8.35	8.45	8.43	8.56	8.29	8.35	8.51	8.56%	8.38%
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.93	6.94	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93%	6.93%
Time Warner Telecom	2.38	887319AC5	Sr Deb Conv	4/1/2026	NR									1.50	1.50			1.50%	1.50%
			Counts of data			39	39	39	37	37	37	37	37	40	39	38	38	40	39

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	5.55%	5.54%
BBB's	6.10%	6.01%
BB's	6.72%	6.62%
B's	6.93%	6.93%
ALL	6.00%	5.93%
BBB- & Above	5.86%	5.80%
BB- & Above	6.09%	6.02%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
GTE Southwest	8.5	362338AQ8	1st	11/15/2031	A	6.15	5.88	5.56	5.49	5.23	5.17	5.17	4.95	5.24	4.95	4.81	4.64	5.27%	4.80%
AT&T Corp.	6.5	001957AW9	Nts	03/15/2029	A-	5.27	5.27	5.08	5.00	4.81	4.88	4.93	4.73	5.00	4.76	4.61	4.62	4.91%	4.66%
AT&T Corp.	8	001957BD0	Sr Nts	11/15/2031	A-	4.89	4.93	4.71	4.37	4.37	4.37	4.10	4.37	4.22	4.12	4.08	4.09	4.39%	4.10%
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	5.41	5.38	5.24	5.07	4.86	4.83	4.83	4.64	4.90	4.71	4.50	4.44	4.90%	4.55%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	5.46	5.36	5.22	5.07	4.76	4.78	4.78	4.56	4.95	4.88	4.74	4.79	4.95%	4.80%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	5.46	5.40	5.21	5.07	4.78	4.81	4.76	4.54	4.90	4.86	4.80	4.79	4.95%	4.82%
AT&T Inc.	5.5	00206RAJ1	GlobalNts	02/01/2018	A-	1.97	1.92	1.99	1.97	1.95	2.05	2.17	1.13	1.79	1.82	1.86	2.03	1.89%	1.90%
AT&T Inc.	5.6	00206RAM4	GlobalNts	05/15/2018	A-	2.06	1.98	2.17	1.97	1.78	1.95	2.05	2.00	2.21	1.97	1.90	2.09	2.01%	1.99%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	5.46	5.41	5.23	5.07	4.78	4.81	4.83	4.66	4.92	4.76	4.94	4.72	4.97%	4.81%
AT&T Wireless Services	8.75	00209AAF3	Sr Nts	03/01/2031	A-	4.95	4.87	4.78	4.66	4.51	4.55	4.56	4.36	4.36	4.38	4.17	4.08	4.52%	4.21%
AT&T Broadband	9.46	00209TAB1	Nts	11/15/2022	A-	3.99	3.87	3.73	3.70	3.49	3.00	3.07	2.98	3.26	3.30	3.19	3.15	3.39%	3.21%
ALLTEL Corp	6.8	020039AJ2	Deb	5/1/2029	A-	4.91	4.91	4.81	4.73	4.55	4.56	4.61	4.56	4.81	4.60	4.48	4.43	4.66%	4.50%
ALLTEL Corp	7.88	020039DC4	Sr Nt	7/1/2032	A-	5.05	5.08	4.93	4.78	4.65	4.66	4.46	4.29	4.58	4.41	4.27	4.08	4.60%	4.25%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	5.50	5.41	5.18						4.80	4.58	4.57	4.67	4.96%	4.61%
BellSouth Capital Funding	6.04	079857AC2	Deb	11/15/2026	A-	5.98	5.98	5.96	5.32	5.12	5.15	5.14	4.95	5.19	4.97	4.85	4.80	5.28%	4.87%
BellSouth Capital Funding	7.88	079857AH1	Deb	02/15/2030	A-	5.70	5.73	5.58	5.39	4.98	4.83	4.81	4.64	4.75	4.77	4.76	4.70	5.05%	4.74%
BellSouth Corp.	6.875	079860AD4	Nts	10/15/2031	A-	5.55	5.58	5.33	5.27	5.07	5.10	4.98	4.78	5.07	4.92	4.78	4.69	5.09%	4.80%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.60	5.63	5.38	5.29	4.95	4.98	4.88	4.68	4.97	4.72	4.57	4.48	5.01%	4.59%
BellSouth Corp.	5.2	079860AG7	Nts	09/15/2014	A-	0.49	0.39	0.53										0.47%	
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.55	5.58	5.20	5.12	5.07	5.07	5.05	4.68	5.12	4.98	4.87	4.78	5.09%	4.88%
BellSouth Corp	5.2	079860AL6	Nt	12/15/2016	A-	1.49	1.46	1.58	2.00	1.80	1.44	0.02	0.02	0.02	0.06	0.02		0.90%	0.04%
BellSouthTelecommunications	7	079867AM9	Deb	10/01/2025	A-	5.23	5.23	5.21	5.09	4.54	4.61	4.42	4.23	4.78	4.55	4.47	4.42	4.73%	4.48%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	6.15	5.88	5.93	5.86	5.71	5.73	5.71	5.54	5.80	5.59	5.44	5.28	5.72%	5.44%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.53	6.38	6.32	6.17	6.20	6.00	5.81	5.90	5.63	5.52	5.34	6.03%	5.50%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.53	6.38	6.32	6.17	6.20	6.00	5.81	5.90	5.63	5.52	5.34	6.03%	5.50%
BellSouthTelecommunications	6.3	079867AQ0	AmortizingDeb	12/15/2015	A-	3.94	4.16	4.35	4.59	4.79	5.01	4.28	5.38	5.52	5.87	6.04	3.07	4.75%	4.99%
BellSouthTelecommunications	6.375	079867AW7	Deb	06/01/2028	A-	5.18	5.18	5.16	4.98	4.64	4.68	4.73	4.56	4.80	4.58	4.46	4.41	4.78%	4.48%
Cingular Wireless LLC	7.12	17248RAJ5	Sr Nt	12/15/2031	A-	4.85	4.92	4.78										4.85%	
Indiana Bell Telephone	7.3	454614AK4	Deb	08/15/2026	A-	5.61	5.38	5.36	4.68	4.49	4.56	4.55	4.51	4.75	4.55	4.43	4.38	4.77%	4.45%
Michigan Bell Telephone	7.85	594185AQ3	Deb	01/15/2022	A-	4.58	4.48	4.16	4.07	3.93	4.01	3.81	3.49	3.78	3.70	3.57	3.53	3.93%	3.60%
Pacific Bell	7.125	694032AT0	Deb	03/15/2026	A-	4.58	4.49	4.42	4.32	4.03	4.10	4.12	3.93	4.19	3.93	4.05	4.07	4.19%	4.02%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.14	7.13	7.13	7.13	7.14%	7.13%
SBCCommunications	5.62	78387GAL7	GlobalNts	06/15/2016	A-	1.12	0.96	0.98	0.72	0.75	0.93							0.91%	
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	5.05	5.12	5.01	4.93	4.78	4.73	4.81	4.58	4.83	4.95	4.75	4.69	4.85%	4.80%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	5.05	5.12	5.01	4.93	4.78	4.73	4.81	4.58	4.83	4.95	4.75	4.69	4.85%	4.80%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	5.15	5.23	5.11	5.03	4.86	4.64	4.68	4.44	4.78	4.78	4.58	4.69	4.83%	4.68%
Southwest'n Bell Tel	7	845335BQ0	Deb	07/01/2015	A-	0.95	0.95	1.11	0.19	0.18	0.69	1.15	1.57	2.01	0.60	0.59	1.58	0.96%	0.92%
TCI Communications	8.75	872287AC1	Sr Deb	08/01/2015	A-	0.79	0.62	0.62	0.02	0.02	0.02	0.33	1.10	1.66	0.54	0.61	0.75	0.59%	0.63%
TCI Communications	7.875	872287AF4	Sr Deb	02/15/2026	A-	4.45	4.38	4.33	4.29	3.73	3.68	3.58	3.73	3.78	3.71	3.56	3.56	3.90%	3.61%
TCI Communications	7.125	872287AL1	Sr Nts	02/15/2028	A-	4.65	4.52	4.53	4.32	4.03	4.00	3.93	3.95	4.07	3.91	3.78	3.78	4.12%	3.82%
Tele-Communications(Old)	10.125	879240AQ2	Sr Deb	04/15/2022	A-	4.64	4.55	4.31	4.24	4.10	4.20	4.07	4.11	4.36	3.96	3.80	3.78	4.18%	3.85%
Telefonos de Mexico, S.A.B. de C.	5.5	879403AS2	Sr Nt	1/27/2015	A-	1.73	1.70	1.39				1.33				1.41	1.28	1.47%	1.35%
Vodafone Group plc	6.25	92857WAB6	Deb	11/30/2032	A-	5.13	5.11	4.93						4.75	4.68	4.54	4.51	4.81%	4.58%
Vodafone Group plc	5.38	92857WAD2	Nt	1/30/2015	A-	0.63	0.46	0.45						0.47	0.47			0.50%	0.47%
Vodafone Group plc	4.62	92857WAE0	Gbl Nt	7/15/2018	A-	2.17	2.04	2.12						2.18	2.29	2.07	2.34	2.17%	2.23%
Vodafone Group plc	5	92857WAG5	Gbl Nt	9/15/2015	A-	0.86	0.79	0.52						0.53	0.53			0.65%	0.53%
Vodafone Group Plc	5.75	92857WAK6	Notes	03/15/2016	A-	1.17	0.91	0.61	0.63	0.63	0.63	0.63	0.63	0.62	0.62	0.63	0.63	0.70%	0.63%
Vodafone Group Plc	5.62	92857WAP5	Notes	02/27/2017	A-	1.55	1.27	1.37						0.66	0.90	1.46	1.73	1.28%	1.36%
Vodafone Group Plc	6.15	92857WAQ3	Notes	02/27/2037	A-	5.32	5.25	5.12						5.12	4.86	4.79	4.73	5.03%	4.79%
Wisconsin Bell Inc	6.35	976585AG4	Deb	12/01/2026	A-	6.23	6.23	6.21	6.15	5.95	6.00	5.96	5.98	6.12	5.87	5.75	5.70	6.01%	5.77%
ALLTEL Corp	7	020039AE3	Deb	3/15/2016	BBB+	0.95	1.06	0.74	1.11	1.27	1.57	1.88	2.06	2.25	0.73	0.65	0.19	1.21%	0.52%
Bell Atlantic-PA	6	07786DAA4	Deb	12/1/2028	BBB+	5.52	5.52	5.50	5.44	5.07	5.10	5.15	4.93	5.19	5.00	4.88	4.83	5.18%	4.90%
Bell Tel. of Penna	8.35	078167AZ6	Deb	12/15/2030	BBB+	6.20	6.23	5.86	5.66	5.51	5.56	5.47	5.25	5.53	5.30	5.12	4.94	5.55%	5.12%
Bell Tel. of Penna	8.75	078167BA0	Deb	8/15/2031	BBB+	6.19	6.22	5.93	5.71	5.56	5.60	5.59	5.37	5.39	5.11	4.94	4.76	5.53%	4.94%
Chesapeake Pot.Tel Md	8	165069AP0	Deb	10/15/2029	BBB+	6.03	6.03	5.67	5.59	5.15	5.21	5.26	5.05	5.29	5.13	4.98	4.94	5.36%	5.02%
Chesapeake Pot.Tel Md	8.3	165069AQ8	Deb	08/01/2031	BBB+	6.40	6.43	6.28	6.17	6.03	6.05	6.05	5.83	6.12	5.30	5.16	5.03	5.90%	5.16%
Chesapeake Pot.Tel Md	7.15	165069AS4	Deb	05/01/2023	BBB+	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.14	7.14	7.14	7.14	7.15%	7.14%
Chesapeake&Pot.Tel VA	8.38	165087AL1	Forty Yr Deb	10/01/2029	BBB+	6.03	5.98	5.96	5.59	6.03	5.47	5.51	5.29	5.56	5.39	5.24	5.22	5.61%	5.28%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Chesapeake&Pot.Tel VA	7.88	165087AN7	Deb	1/15/2022	BBB+	5.03	5.03	5.01	5.00	4.84	4.93	4.68	4.49	4.75	4.67	4.51	4.48	4.79%	4.55%
GTE California	6.75	362311AG7	Deb 'F'	05/15/2027	BBB+	5.53	5.53	5.43	5.29	5.10	5.12	5.17	4.95	5.19	4.99	4.87	4.82	5.17%	4.89%
GTE Corp	8.75	362320AT0	Deb	11/01/2021	BBB+	4.38	4.13	4.11	4.23	3.61	3.44	3.60	3.42	3.31	3.84	3.72	3.68	3.79%	3.75%
GTE Corp	6.84	362320AZ6	Deb	04/15/2018	BBB+	2.56	2.53	1.97	1.97	1.93	2.15	2.37	2.32	2.51	1.99	1.90	2.00	2.18%	1.96%
GTE Corp	6.94	362320BA0	Deb	04/15/2028	BBB+	5.28	5.13	4.91	4.68	4.48	4.51	4.76	4.55	4.80	4.60	4.48	4.43	4.72%	4.50%
GTE Florida	6.86	362333AH9	Deb 'E'	02/01/2028	BBB+	5.88	5.53	5.51	5.25	5.10	5.17	5.22	4.90	5.00	4.86	4.71	4.73	5.16%	4.77%
New England Tel. & Tel.	7.88	644239AY1	Deb	11/15/2029	BBB+	5.93	5.93	5.64	5.42	5.22	5.20	5.25	5.03	5.29	5.12	4.97	4.93	5.33%	5.01%
New Jersey Bell Tel	7.85	645767AW4	Deb	11/15/2029	BBB+	6.02	5.93	5.91	5.86	5.25	5.11	5.16	4.95	5.19	5.04	4.92	4.87	5.35%	4.94%
New Jersey Bell Tel	8	645767AY0	Deb	06/01/2022	BBB+	4.68	4.68	4.54	4.34	4.17	4.27	4.34	4.15	4.41	4.03	3.90	3.86	4.28%	3.93%
New York Telephone Co	6.7	650094CA1	Deb	11/01/2023	BBB+	6.71	6.71	6.71	6.71	6.71	6.71							6.71%	
New York Telephone Co	7	650094CB9	Deb	12/01/2033	BBB+	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.99	6.99	6.99	7.00%	6.99%
New York Telephone Co	6.5	650094CJ2	Deb	04/15/2028	BBB+	6.23	6.23	6.21	5.90	5.71	5.76	5.32	5.10	5.34	5.05	4.93	4.88	5.56%	4.95%
Verizon Communications Inc.	5.55	92343VAC8	Nts	02/15/2016	BBB+	0.98	0.87	0.69	1.25	1.35	1.58	1.83	1.99	0.02	0.87	0.58	0.19	1.02%	0.55%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	5.22	5.15	5.02	4.92	4.78	4.71	4.81	4.57	4.87	4.77	4.75	4.61	4.85%	4.71%
Verizon Communications Inc.	5.5	92343VAG9	Nts	04/01/2017	BBB+	1.48	1.43	1.22	1.27	1.29	1.44	1.65	1.73	1.97	1.35			1.48%	1.35%
Verizon Global Fndg	7.75	92344GAS5	Nts	06/15/2032	BBB+	5.15	5.18	5.06	4.86	4.68	4.73	4.38	4.24	4.51	4.25	4.08	4.48	4.63%	4.27%
Verizon Global Fndg	4.9	92344GAW6	Nts	09/15/2015	BBB+	0.81	0.65	0.73	0.02	0.02	0.02	0.13	0.39	0.66	0.56			0.40%	0.56%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	5.05	5.04	5.00	4.86	4.61	4.59	4.73	4.46	4.75	4.66	4.60	4.54	4.74%	4.60%
Verizon Maryland	5.125	92344WAB7	Deb'B'	06/15/2033	BBB+	5.20	5.23	4.98	4.99	4.95	4.98	4.95	4.76	5.05	4.95	4.81	4.68	4.96%	4.81%
VerizonNY	7.38	92344XAB5	Sr Deb Ser B	4/1/2032	BBB+	5.85	5.92	5.62										5.80%	
Centel Capital	9	15133KAC7	Deb	10/15/2019	BBB-	5.06	4.79	4.98	5.20	4.49	4.12	4.32	4.22	4.44	4.34	4.26	4.36	4.55%	4.32%
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	7.51	7.54	7.54	7.54	7.52%	7.54%
Northwestern Bell Tel	7.75	668027AT2	Deb	05/01/2030	BBB-	6.77	7.29	7.14	7.05	6.91	6.49	6.39	6.25	6.51	6.26	6.13	5.94	6.59%	6.11%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	1.06	1.06	1.04										1.05%	
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	1.76	1.50	1.64	0.69	1.11	1.60	2.18	2.67	2.98	1.46	1.50	1.62	1.73%	1.53%
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	2.34	2.34	2.22	1.97	2.07	1.78	2.11	2.22	2.38	2.18	2.24	2.51	2.20%	2.31%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	5.93	5.58	5.56	5.39	5.07	5.12	5.16	4.81	5.09	4.96	4.76	4.77	5.18%	4.83%
United States Cellular Corp.	6.7	911684AD0	Sr Nts	12/15/2033	BBB-	6.83	6.83	6.55						6.90	6.69	6.69	6.85	6.76%	6.74%
U S WESTCommunications	7.5	912920AB1	Deb	06/15/2023	BBB-	7.50	7.45	7.45	7.45	7.45	7.45	7.25	7.45	7.45	7.44	7.44	7.44	7.44%	7.44%
U S WESTCommunications	6.875	912920AC9	Deb	09/15/2033	BBB-	7.22	7.04	6.98	6.86	6.81	6.81	6.78	6.78	6.80	6.80	6.80	6.85	6.88%	6.82%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	7.43	7.23	7.12	7.15	7.03	7.10	7.25	7.00	7.24	7.02	6.93	6.91	7.12%	6.95%
U S WESTCommunications	7.25	912920AK1	Deb	09/15/2025	BBB-	6.17	5.93	5.81	5.47	5.32	5.12	5.27	7.13	5.31	5.11	4.99	4.94	5.55%	5.01%
U S WESTCommunications	7.2	912920AL9	Deb	11/10/2026	BBB-	7.09	7.10	7.11	7.10	7.10	7.10	7.10	5.05	7.12	7.15	7.15	7.15	6.94%	7.15%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	7.23	7.20	7.09	7.15	7.02	6.93	6.95	6.95	6.97	6.97	6.97	6.96	7.03%	6.97%
United Tel Co(Florida)	8.375	913026AT7	1st HH	01/15/2025	BBB-	6.13	6.13	5.96	5.93	5.75	5.81	5.71	5.49	5.75	5.59	5.47	5.42	5.76%	5.49%
United Tel Co(Florida)	7.125	913026AU4	1st GG	07/15/2023	BBB-	5.63	5.63	5.61	5.29	5.11	5.18	5.08	4.95	5.22	4.96	4.83	4.79	5.19%	4.86%
Aliant Communications	6.75	016090AA0	Nts	04/01/2028	BB+	7.38	7.32	7.44	7.42	7.22	6.93	6.78	6.98	7.05	7.09	7.10	7.16	7.16%	7.12%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	7.52	7.32	7.00	6.80	6.64	6.64	6.61	6.54	6.53	6.37	6.49	6.64	6.76%	6.50%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	7.76	7.64	7.39	6.88	6.76	6.66	6.70	6.52	6.66	6.67	6.81	6.87	6.94%	6.78%
CenturyLink, Inc.	5	156700AJ5	xed Rt Sr Nt Ser	02/15/2015	BB	1.59	1.34	1.41	2.06	2.44	2.82	3.45	3.70		2.55	2.61	1.88	2.35%	2.35%
CenturyLink, Inc.	6	156700AL0	xed Rt Sr Nts Ser	04/01/2017	BB	2.60	2.61	2.36	2.34	2.41	2.38	3.00	3.07	3.36	2.52	2.56	2.54	2.65%	2.54%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.65	7.58	7.57						7.10	7.01	6.97	6.93	7.26%	6.97%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	1.89	1.41	1.68						2.37	2.17	1.76	1.50	1.83%	1.81%
Qwest Cap Funding	7.75	74913EAJ9	Nts	02/15/2031	BB	8.13	8.02	7.88	7.64	7.38	7.38	7.49	7.52	7.50	7.53	7.53	7.58	7.63%	7.55%
Qwest Cap Fdg Inc	7.62	74913EAQ3	Nts 144a	8/3/2021	BB	6.63	6.42	6.28	6.10	5.34	5.34	5.44	5.47	5.70	5.89	5.53	6.17	5.86%	5.86%
Qwest Cap Funding	7.62	74913EAQ3	Nts	08/03/2021	BB	6.63	6.42	6.28	6.10	5.34	5.34	5.44	5.47	5.70	5.89	5.53	6.17	5.86%	5.86%
U S WEST Cap Fndg	6.88	912912AQ5	Deb	07/15/2028	BB	7.77	7.47	7.32	6.98	6.78	6.61	6.84	6.66	6.78	6.76	6.81	6.87	6.97%	6.81%
U S WEST Cap Fndg	6.5	912912AR3	Deb	11/15/2018	BB	4.56	4.08	4.04	3.93	3.88	3.38	3.38	3.83	3.75	3.59	3.56	3.75	3.81%	3.63%
Cin Bell Tel	7.25	171870AK4	Sec Nts	06/15/2023	BB-	9.84	9.84	9.84	9.84	9.34	9.84	9.84	9.84	6.90	10.73	7.02	7.09	9.16%	8.28%
Cincinnati Bell Tel	6.3	171875AD9	B>(Tel)<EB>GtdD	12/01/2028	BB-	7.60	7.48	6.92	6.98	6.73	6.72	6.64	6.76	6.85	6.63	6.68	6.97	6.91%	6.76%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.94	8.82	8.77	8.59	8.30	8.15	8.27	8.13	8.41	8.06	8.14	8.35	8.41%	8.18%
GTE North Inc	6.73	362337AK3	Deb 'G'	02/15/2028	BB-	7.70	7.88	7.86	7.60	7.31	7.03	7.25	6.99	7.11	7.18	7.29	7.55	7.40%	7.34%
Sprint Nextel Corp.	9.25	852061AA8	Deb	04/15/2022	BB-	6.28	6.16	6.03	5.86	5.56	5.73	6.17	6.32	6.46	6.97	6.80	6.94	6.27%	6.90%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	2.85	2.64	2.31	2.66	2.71	1.46	1.89	2.58	2.95	3.15	3.27	3.68	2.68%	3.37%
Sprint Nextel Corp.	6	852061AD2	Nt	12/1/2016	BB-	2.85	2.64	2.31	2.66	2.71	1.46	1.89	2.58	2.95	3.15	3.27	3.68	2.68%	3.37%
Sprint Capital	6.88	852060AD4	Nts	11/15/2028	B+	7.34	7.25	7.26						7.29	7.70	7.60	8.35	7.54%	7.88%
Sprint Capital	6.9	852060AG7	Nts	05/01/2019	B+	5.03	4.98	4.77	4.66	4.51	4.56	5.27	5.20	5.44	6.18	5.92	6.29	5.23%	6.13%
Sprint Capital	8.75	852060AT9	Nts	03/15/2032	B+	7.83	7.74	7.72	7.52	7.17	7.20	7.61	7.58	7.61	8.02	8.17	8.97	7.76%	8.39%

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Cincinnati Bell Tel	7	171871AH9	Sr Nts	02/15/2015	B	6.45	6.45	6.45	6.45	6.37	6.45	6.45	6.45	6.45	3.08	2.25		5.75%	2.67%
NII Holdings, Inc.	2.75	62913FAF9	Sr Nt Conv 144a	08/15/2025	B-									2.75	2.75			2.75%	2.75%
Centennial Com/Cell Op/PR	8.12	151352AB7	Sr Nts	02/01/2014	NR	6.95												6.95%	
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	8.34	8.35			8.35%	8.35%
NII Holdings, Inc.	2.88	62913FAC6	Nt Conv 144a	02/01/2034	NR									4.70	4.70	4.88	4.89	4.79%	4.82%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.51	6.52	6.52	6.52	6.52%	6.52%
Qwest Communications Internatior	7.5	749121BR9	Sr Nts'B'	02/15/2014	NR	7.50												7.50%	
Qwest Communications Internatior	7.5	749121BV0	Sr Nts'B'	02/15/2014	NR	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	7.03	7.03	7.03	7.08%	7.03%
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%	
Tele-Communications(Old)	9.88	879240AR0	Sr Deb	06/15/2022	NR	4.79	4.61	4.43	4.27	4.12	4.22	4.19	4.15	4.39	4.08	3.92	3.91	4.26%	3.97%
			Counts of data			125	122	122	106	106	106	105	104	116	116	111	109	127	117

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	3.92%	3.82%
BBB's	4.93%	4.71%
BB's	5.63%	5.60%
B's	5.81%	5.56%
NR's	6.63%	6.14%
ALL	4.80%	4.61%
BBB- & Above	4.39%	4.24%
BB- & Above	4.61%	4.49%

**Investment Grade (BBB- & Above)*

Industry: Telecommunications with significant portion of Cable TV Service

Support for Debt Rating
Industry: Telecommunications, Cable TV
2015 Assessment Year

STANDARD & POOR'S BOND GUIDE
BOND YIELD TO MATURITY

Company Name	Coupon	CUSIP	Issue	Maturity Date	S&P Bond Rating	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Comcast Cable Commun	8.88	20029PAG4	Sr Nt - Exchange	5/1/2017	A-	1.64	1.41	1.58	1.32	1.41	1.46	1.87	1.97	2.18	1.40	1.28	1.44	1.58%	1.37%
Comcast Cable Commun	8.5	20029PAH2	Sr Nt - Exchange	5/1/2027	A-	4.72	4.47	4.48	4.39	4.22	4.29	4.24	4.17	4.44	4.14	4.01	4.01	4.30%	4.05%
Comcast Corp.	6.5	20030NAB7	Nt	1/15/2015	A-	0.60	0.48	0.68	2.26	2.70	3.16	0.38			0.73	1.01		1.33%	0.87%
Comcast Corp.	7.05	20030NAC5	Sr Nt	3/15/2033	A-	4.98	4.75	4.63	4.54	4.32	4.32	4.23	4.15	4.41	4.18	4.15	4.01	4.39%	4.11%
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr I	6/15/2035	A-	4.90	4.79	4.65	4.51	4.29	4.32	4.22	4.12	4.41	4.26	4.08	3.94	4.37%	4.09%
Comcast Corp.	4.95	20030NAG6	Gtd Fixed Rt Sr I	6/15/2016	A-	0.98	0.89	0.93	0.58	0.68	0.83	0.74	1.17	1.30	0.84	0.86	0.82	0.89%	0.84%
Comcast Corp.	5.9	20030NAL5	Gtd Nt	3/15/2016	A-	0.98	0.84	0.78	1.08	1.10	1.38	0.70	1.85	1.98	0.73	0.78	0.85	1.09%	0.79%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	5.03	4.89	4.76	4.54	4.49	4.51	4.42	4.29	4.58	4.51	4.35	4.16	4.54%	4.34%
Comcast Corp.	6.5	20030NAP6	Nts	1/15/2017	A-	1.32	1.19	1.34	1.58	1.56	1.76	1.05	0.07	0.38	1.18	1.13	1.31	1.16%	1.21%
Comcast Corp.	5.88	20030NAR2	Nt	2/15/2018	A-	1.84	1.73	1.95	2.00	1.76	1.88	1.54	2.05	1.23	1.67	1.63	1.76	1.75%	1.69%
Comcast Corp.	6.3	20030NAU5	Sr Nts	11/15/2017	A-	1.72	1.44	1.70	1.97	1.91	0.79	1.45	1.07	1.38	1.54	1.48	1.57	1.50%	1.53%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	5.06	4.91	4.78	4.64	4.51	4.49	4.45	4.32	4.53	4.49	4.32	4.15	4.55%	4.32%
AOL Time Warner	7.62	00184AAC9	Deb	4/15/2031	BBB	5.05	4.99	4.75	4.54	4.34	4.44	4.54	4.37	4.68	4.50	4.42	4.32	4.58%	4.41%
Time Warner Cos Inc	9.15	887315AM1	Deb Dtd 02/04/1	2/1/2023	BBB	4.45	4.28	4.21	4.10	3.85	3.98	4.15	3.42	3.68	4.03	3.92	3.92	4.00%	3.96%
Time Warner Cos Inc	6.88	887315AY5	Deb	6/15/2018	BBB	2.26	2.12	2.22	1.93	1.85	1.84	1.86	2.15	2.36	2.41	2.11	2.18	2.11%	2.23%
Time Warner Cos Inc	8.05	887315BA6	Deb	1/15/2016	BBB	1.43	1.39	1.57	2.43	2.61	2.91	0.02	0.02	0.02	1.14	1.23	1.32	1.34%	1.23%
Time Warner Cos Inc	6.85	887315BB4	Deb	1/15/2026	BBB	5.48	5.46	5.44	5.37	5.20	5.25	5.17	4.99	5.24	5.09	4.99	5.00	5.22%	5.03%
Time Warner Cos Inc	7.57	887315BH1	Deb	2/1/2024	BBB	4.55	4.52	4.42	4.12	3.88	3.95	4.03	3.54	3.80	3.89	3.78	3.69	4.01%	3.79%
Time Warner Cos Inc	7.25	887315BJ7	Deb	10/15/2017	BBB	1.82	1.78	1.99	2.55	1.24	1.43	1.34	1.36	1.57	1.71	1.69	1.86	1.70%	1.75%
Time Warner Cos Inc	6.95	887315BM0	Gtd Deb	1/15/2028	BBB	4.78	4.76	4.49	4.34	4.11	4.17	4.20	4.07	4.29	4.25	4.09	4.16	4.31%	4.17%
Time Warner Cos Inc	6.62	887315BN8	Deb	5/15/2029	BBB	4.88	4.77	4.71	4.44	4.12	4.14	4.34	4.17	4.41	4.23	4.24	4.15	4.38%	4.21%
Time Warner Inc.	5.88	887317AC9	Nt	11/15/2016	BBB	1.32	1.19	1.26	1.78	1.83	0.18	0.53	0.66	0.85	1.16	1.23	1.30	1.11%	1.23%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	5.26	5.28	5.08	4.90	4.78	4.83	4.86	4.84	5.05	4.80	4.67	4.53	4.91%	4.67%
Time Warner Entertainment	8.38	88731EAF7	Sr Deb	3/15/2023	BBB	5.91	4.33	4.16	4.10	3.73	3.71	3.62	3.65	3.92	3.62	3.46	3.50	3.98%	3.53%
Qwest Corp	7.5	74913GAG0	Nts	10/01/2014	BBB-	1.06	1.06	1.04										1.05%	
Qwest Corp	7.62	74913GAK1	Nts	06/15/2015	BBB-	1.76	1.50	1.64	0.69	1.11	1.60	2.18	2.67	2.98	1.46	1.50	1.62	1.73%	1.53%
Qwest Corp	6.5	74913GAT2	Nts	06/01/2017	BBB-	2.34	2.34	2.22	1.23	2.07	1.78	2.19	2.22	2.38	2.18	2.24	2.51	2.14%	2.31%
TCA Cable TV	6.53	872241AB0	Deb	02/01/2028	BBB-	5.93	5.58	5.56	5.39	5.07	5.12	5.16	4.81	5.09	4.96	4.76	4.77	5.18%	4.83%
Century Tel Enterpr	7.2	156686AJ6	Sr Nts 'D'	12/01/2025	BB	7.52	7.32	7.00	6.80	6.64	6.64	6.61	6.54	6.53	6.37	6.49	6.64	6.76%	6.50%
Century Tel Enterpr	6.875	156686AM9	Deb 'G'	01/15/2028	BB	7.76	7.64	7.39	6.88	6.76	6.66	6.70	6.52	6.66	6.67	6.81	6.87	6.94%	6.78%
CenturyTel, Inc.	5	156700AJ5	Sr Nts'M'	02/15/2015	BB	1.59	1.34	1.41	2.06	2.44	2.82	3.45	3.70	3.32	2.55	2.61	1.88	2.43%	2.35%
CenturyLink, Inc.	6	156700AL0	Fixed Rt Sr Nts S	04/01/2017	BB	2.60	2.61	2.36	2.35	2.41	2.38	3.00	3.07	3.36	2.52	2.56	2.54	2.65%	2.54%
CenturyTel, Inc.	6	156700AL0	SrNts'N'	04/01/2017	BB	2.60	2.61	2.36	2.35	2.41	2.38	3.00	3.07	3.36	2.52	2.56	2.54	2.65%	2.54%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.65	7.58	7.57						7.10	7.01	6.97	6.93	7.26%	6.97%
Embarq Corp.	7.08	29078EAB1	Nts	06/01/2016	BB	1.89	1.41	1.68						2.37	2.17	1.76	1.50	1.83%	1.81%
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	6.90	10.73	7.02	7.09	9.21%	8.28%
Cincinnati Bell Tel	6.3	171875AD9	<SB>(Tel)<EB>0	12/01/2028	BB-	7.60	7.48	6.92	6.88	6.73	6.72	6.64	6.76	6.85	6.63	6.68	6.97	6.91%	6.76%
Citizens Communications Co.	9	17453BAJ0	Sr Nts	08/31/2031	BB-	8.94	8.82	8.77	8.59	8.30	8.15	8.27	8.25	8.41	8.06	8.14	8.35	8.42%	8.18%
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	3.08	2.25	6.45	5.82%	3.93%
			Counts of data			39	39	39	36	36	36	36	35	37	38	38	37	39	38

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	2.62%	2.43%
BBB's	3.23%	3.26%
BB's	5.50%	5.27%
B's	5.82%	3.93%
ALL	3.69%	3.55%
BBB- & Above	2.97%	2.89%
BB- & Above	3.64%	3.53%

**Investment Grade (BBB- & Above)*

MONTANA DEPARTMENT OF REVENUE

Support for Debt Rating
Industry: Telecommunications
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
AT&T Inc.	6.8	00206RAB8	Nts	05/15/2036	A-	5.41	5.38	5.24	5.07	4.86	4.83	4.83	4.64	4.90	4.71	4.50	4.44	4.90%	4.55%
AT&T Inc.	6.5	00206RAD4	GlobalNts	09/01/2037	A-	5.46	5.36	5.22	5.07	4.76	4.78	4.78	4.56	4.95	4.88	4.74	4.79	4.95%	4.80%
AT&T Inc.	6.3	00206RAG7	GlobalNts	01/15/2038	A-	5.46	5.40	5.21	5.07	4.78	4.81	4.76	4.54	4.90	4.86	4.80	4.79	4.95%	4.82%
AT&T Inc.	6.4	00206RAN2	GlobalNts	05/15/2038	A-	5.46	5.41	5.23	5.07	4.78	4.81	4.83	4.66	4.92	4.76	4.94	4.72	4.97%	4.81%
America Movil, S.A.B. de C.V.	6.38	02364WAJ4	Sr Nt	3/1/2035	A-	5.50	5.41	5.18						4.80	4.58	4.57	4.67	4.96%	4.61%
BellSouth Corp.	6.55	079860AE2	Nts	06/15/2034	A-	5.60	5.63	5.38	5.29	4.95	4.98	4.88	4.68	4.97	4.72	4.57	4.48	5.01%	4.59%
BellSouth Corp.	6	079860AK8	Nts	11/15/2034	A-	5.55	5.58	5.20	5.12	5.07	5.07	5.05	4.68	5.12	4.98	4.87	4.78	5.09%	4.88%
BellSouthTelecommunications	5.85	079867AN7	Deb	11/15/2045	A-	6.15	5.88	5.93	5.86	5.71	5.73	5.71	5.54	5.80	5.59	5.44	5.28	5.72%	5.44%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.53	6.38	6.32	6.17	6.20	6.00	5.81	5.90	5.63	5.52	5.34	6.03%	5.50%
BellSouthTelecommunications	7	079867AP2	Deb	12/15/2095	A-	6.50	6.53	6.38	6.32	6.17	6.20	6.00	5.81	5.90	5.63	5.52	5.34	6.03%	5.50%
Pacific Bell	7.375	694032AV5	Deb	07/15/2043	A-	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.14	7.13	7.13	7.13	7.14%	7.13%
SBCCommunications	6.45	78387GAM5	GlobalNts	06/15/2034	A-	5.05	5.12	5.01	4.93	4.78	4.73	4.81	4.58	4.83	4.95	4.75	4.69	4.85%	4.80%
SBCCommunications	6.45	78387GAM5	Gbl Nt	6/15/2034	A-	5.05	5.12	5.01	4.93	4.78	4.73	4.81	4.58	4.83	4.95	4.75	4.69	4.85%	4.80%
SBCCommunications	6.15	78387GAQ6	Gbl Nt	9/15/2034	A-	5.15	5.23	5.11	5.03	4.86	4.64	4.68	4.44	4.78	4.78	4.58	4.69	4.83%	4.68%
U S WESTCommunications	7.25	912920AM7	Deb	10/15/2035	BBB-	7.23	7.20	7.09	7.15	7.02	6.93	6.95	6.95	6.97	6.97	6.97	6.96	7.03%	6.97%
Verizon Communications Inc.	6.25	92343VAF1	Nts	04/01/2037	BBB+	5.22	5.15	5.02	4.92	4.78	4.71	4.81	4.57	4.87	4.77	4.75	4.61	4.85%	4.71%
Verizon Global Fndg	5.85	92344GAX4	Nts	09/15/2035	BBB+	5.05	5.04	5.00	4.86	4.61	4.59	4.73	4.46	4.75	4.66	4.60	4.54	4.74%	4.60%
U S WESTCommunications	7.125	912920AG0	Deb	11/15/2043	BBB-	7.43	7.23	7.12	7.15	7.03	7.10	7.25	7.00	7.24	7.02	6.93	6.91	7.12%	6.95%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.65	7.58	7.57						7.10	7.01	6.97	6.93	7.26%	6.97%
NII Holdings, Inc.	2.88	62913FAC6	Nt Conv 144a	02/01/2034	NR									4.70	4.70	4.88	4.89	4.79%	4.82%
Pacific Bell	6.625	694032AX1	Deb	10/15/2034	NR	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.52	6.51	6.52	6.52	6.52	6.52%	6.52%
			Counts of data			20	20	20	18	18	18	18	18	21	21	21	21	21	21

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	5.30%	5.06%
BBB's	5.93%	5.81%
BB's	7.26%	6.97%
NR's	5.66%	5.67%
ALL	5.55%	5.35%
BBB- & Above	5.35%	5.13%
BB- & Above	5.54%	5.32%

**Investment Grade (BBB- & Above)*

Industry: Telecommunications with significant portion of Cable TV Service

Support for Debt Rating
Industry: Telecommunications, Cable TV
2015 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-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Avg Full Year	Avg 4th QTR
Comcast Corp.	5.65	20030NAF8	Gtd Fixed Rt Sr I	6/15/2035	A-	4.90	4.79	4.65	4.51	4.29	4.32	4.22	4.12	4.41	4.26	4.08	3.94	4.37%	4.09%
Comcast Corp.	6.45	20030NAM3	Gtd Nt	3/15/2037	A-	5.03	4.89	4.76	4.54	4.49	4.51	4.42	4.29	4.58	4.51	4.35	4.16	4.54%	4.34%
Comcast Corp.	6.95	20030NAV3	Sr Nts	8/15/2037	A-	5.06	4.91	4.78	4.64	4.51	4.49	4.45	4.32	4.53	4.49	4.32	4.15	4.55%	4.32%
Time Warner Inc.	6.5	887317AD7	Deb	11/15/2036	BBB	5.26	5.28	5.08	4.90	4.78	4.83	4.86	4.84	5.05	4.80	4.67	4.53	4.91%	4.67%
Embarq Corp.	8	29078EAA3	Nts	06/01/2036	BB	7.65	7.58	7.57						7.10	7.01	6.97	6.93	7.26%	6.97%
			Counts of data			4	4	4	4	4	4	4	4	4	4	4	4	4	4

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	4.49%	4.25%
BBB's	4.91%	4.67%
BB's	7.26%	6.97%
ALL	5.13%	4.88%
BBB- & Above	4.59%	4.36%
BB- & Above	5.13%	4.88%

**Investment Grade (BBB- & Above)*

Montana Department of
REVENUE

2015 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 @:	12.50%				11.70%			*S & P GICS Composite 1500 Valuations as of 12/31/14 Monthly Investment Review, January 2015*
2nd Stage	6-15 years		Linear from:	11.84%	to	5.28%	OR	10.99%	to	3.90%	*Linear from 1st Stage to 3rd Stage*
				Real Growth				Inflation			
3rd Stage	15 years -perpetuity	GDP Growth:	Real and Inflation	1.80%		3.07%	+	2.10%	to	2.21%	*Inflation Range = Federal Reserve, Treasuries Inflation - Indexed*
		GDP Growth*:	Real + Inflation	5.28%			TO	3.90%			**GDP Growth = Real growth + Inflation*

First Quarter 2015 Survey of Professional Forecasters - Philadelphia Federal Reserve Release Date 2/13/2015
Livingston Survey Release Date December 12, 2014

Model 1

Year	**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**	12.500%	12.500%	12.500%	12.500%	12.500%	11.84%	11.187%	10.531%	9.875%	9.218%	8.562%	7.905%	7.249%	6.593%	5.936%
S & P 500	$ (2,058.90)	$ 42.88	$ 48.24	$ 54.27	$ 61.05	$ 68.69	$ 77.27	$ 86.42	$ 96.09	$106.21	$ 116.70	$127.46	$ 138.37	$ 149.31	$ 160.13	$ 170.69	$ 180.82
Implied Market Return =		8.87%															

Model 2

Year	**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**	11.700%	11.700%	11.700%	11.700%	11.700%	10.99%	10.282%	9.573%	8.864%	8.155%	7.445%	6.736%	6.027%	5.318%	4.609%
S & P 500	$ (2,058.90)	$ 42.88	$ 47.90	$ 53.50	$ 59.76	$ 66.75	$ 74.56	$ 82.76	$ 91.27	$100.00	$ 108.87	$117.74	$ 126.51	$ 135.03	$ 143.17	$ 150.79	$ 157.74
Implied Market Return =		7.68%															

Conclusions:

Implied Market Rate Range =	**7.68%**	**to**	**8.87%**

Mean	***8.28%***
Median	***8.28%***
Market Rate Used	**8.50%**

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$ 190.37	$200.42	$211.00	$222.14	$233.87	$246.22	$259.22	$272.91	$287.32	$302.49	$318.46	$335.27	$352.97	$371.61	$391.23	$411.89	$433.64	$456.53	$480.64	$506.02	$532.73

2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$ 163.89	$170.28	$176.92	$183.82	$190.99	$198.44	$206.18	$214.22	$222.57	$231.25	$240.27	$249.64	$259.38	$269.49	$280.01	$290.93	$302.27	$314.06	$326.31	$339.03	$352.26

2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$560.86	$590.47	$621.65	$654.48	$689.03	$725.41	$763.71	$ 804.04	$ 846.49	$ 891.19	$ 938.24	$ 987.78	$1,039.93	$1,094.84	$1,152.65	$1,213.51	$1,277.58	$1,345.04	$1,416.06

2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$365.99	$380.27	$395.10	$410.51	$426.52	$443.15	$460.43	$ 478.39	$ 497.05	$ 516.43	$ 536.57	$ 557.50	$ 579.24	$ 601.83	$ 625.31	$ 649.69	$ 675.03	$ 701.36	$ 728.71

2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088
													3rd Stage Growth Rates				
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$1,490.83	$1,569.54	$1,652.41	$1,739.66	$1,831.52	$1,928.22	$2,030.03	$2,137.22	$2,250.06	$2,368.86	$2,493.94	$2,625.62	$2,764.25	$2,910.21	$3,063.86	$3,225.64	$3,395.95	$3,575.26

2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088
													3rd Stage Growth Rates				
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$ 757.13	$ 786.66	$ 817.34	$ 849.21	$ 882.33	$ 916.74	$ 952.50	$ 989.64	$1,028.24	$1,068.34	$1,110.01	$1,153.30	$1,198.28	$1,245.01	$1,293.56	$1,344.01	$1,396.43	$1,450.89

2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$3,764.03	$3,962.77	$4,172.00	$4,392.29	$4,624.20	$4,868.36	$ 5,125.41	$ 5,396.03	$ 5,680.94	$ 5,980.89	$ 6,296.68	$ 6,629.15	$ 6,979.17	$ 7,347.67	$ 7,735.62	$ 8,144.06

2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$1,507.48	$1,566.27	$1,627.35	$1,690.82	$1,756.76	$1,825.27	$ 1,896.46	$ 1,970.42	$ 2,047.27	$ 2,127.11	$ 2,210.07	$ 2,296.26	$ 2,385.81	$ 2,478.86	$ 2,575.54	$ 2,675.98

2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$ 8,574.07	$ 9,026.78	$ 9,503.39	$10,005.17	$10,533.45	$11,089.61	$11,675.14	$12,291.59	$12,940.59	$13,623.85	$14,343.19	$15,100.51	$15,897.82	$16,737.22	$17,620.95	$18,551.33

2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$ 2,780.35	$ 2,888.78	$ 3,001.44	$ 3,118.50	$ 3,240.12	$ 3,366.48	$ 3,497.78	$ 3,634.19	$ 3,775.92	$ 3,923.19	$ 4,076.19	$ 4,235.16	$ 4,400.33	$ 4,571.95	$ 4,750.25	$ 4,935.51

2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131
5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%	5.280%
$19,530.84	$20,562.07	$21,647.75	$22,790.75	$23,994.10	$25,260.99	$26,594.77	$27,998.98	$29,477.32	$31,033.73	$32,672.31

2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131
3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%	3.900%
$ 5,128.00	$ 5,327.99	$ 5,535.78	$ 5,751.68	$ 5,975.99	$ 6,209.05	$ 6,451.21	$ 6,702.80	$ 6,964.21	$ 7,235.82	$ 7,518.01

SURVEY OF PROFESSIONAL FORECASTERS

Release Date: February 13, 2015

FIRST QUARTER 2015

Unchanged Outlook for Growth, but Brighter Outlook for Labor Markets

The outlook for growth in the U.S. economy over the next three years has changed little from the survey of three months ago, according to 39 forecasters surveyed by the Federal Reserve Bank of Philadelphia. The forecasters predict real GDP will grow at an annual rate of 2.7 percent this quarter and 3.0 percent next quarter. On an annual-average over annual-average basis, real GDP will grow 3.2 percent in 2015, up 0.2 percentage point from the previous estimate. The forecasters predict real GDP will grow 2.9 percent in 2016, 2.7 percent in 2017, and 2.7 percent in 2018.

A brighter outlook for the labor market accompanies the nearly stable outlook for growth. The forecasters predict that the unemployment rate will be an annual average of 5.4 percent in 2015, before falling to 5.1 percent in 2016, 5.0 percent in 2017, and 4.9 percent in 2018. The projections for 2015, 2016, and 2017 are below those of the last survey.

The panelists also predict an improved outlook on the employment front. They have revised upward their estimates for job gains in the next four quarters. The forecasters see nonfarm payroll employment growing at a rate of 269,300 jobs per month this quarter, 233,800 jobs per month next quarter, 222,000 jobs per month in the third quarter of 2015, and 229,400 jobs per month in the fourth quarter of 2015. The forecasters' projections for the annual-average level of nonfarm payroll employment suggest job gains at a monthly rate of 252,500 in 2015 and 213,600 in 2016, 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:						
2015:Q1	2.8	2.7	5.8	5.6	211.2	269.3
2015:Q2	3.1	3.0	5.7	5.5	195.4	233.8
2015:Q3	2.8	2.8	5.6	5.4	208.0	222.0
2015:Q4	3.0	2.8	5.5	5.2	201.3	229.4
2016:Q1	N.A.	2.9	N.A.	5.2	N.A.	213.8
Annual data (projections are based on annual-average levels):						
2015	3.0	3.2	5.6	5.4	212.3	252.5
2016	2.9	2.9	5.4	5.1	N.A.	213.6
2017	2.7	2.7	5.2	5.0	N.A.	N.A.
2018	N.A.	2.7	N.A.	4.9	N.A.	N.A.

RESEARCH DEPARTMENT FEDERAL RESERVE BANK OF PHILADELPHIA
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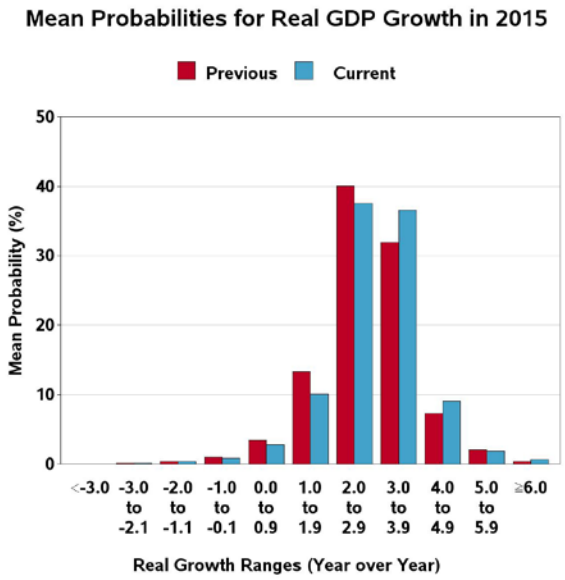
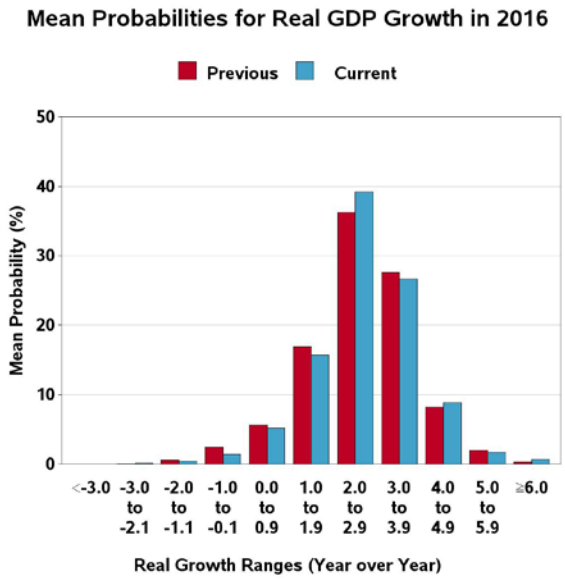
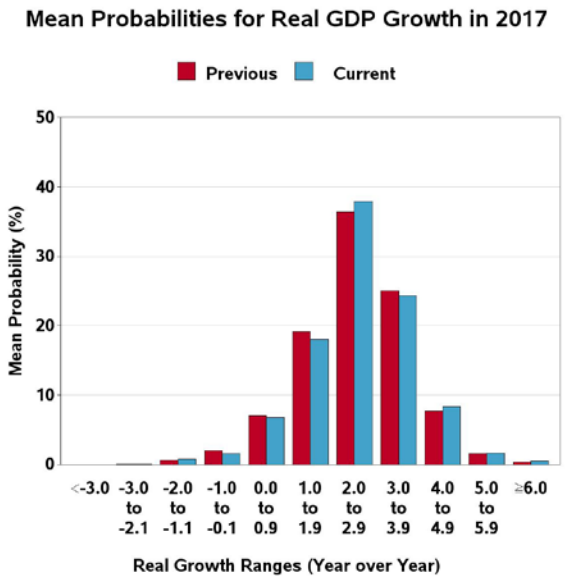
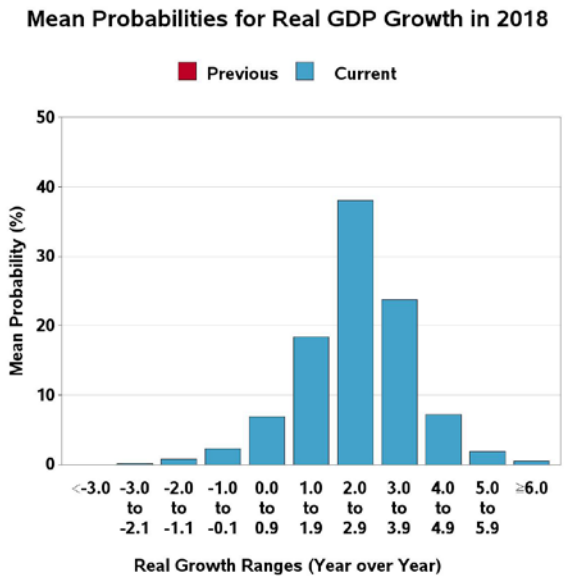
The charts below provide some insight into the degree of uncertainty the forecasters have about their projections for the rate of growth in the annual-average level of real GDP. Each chart (except the one for 2018) presents the forecasters' previous and current estimates of the probability that growth will fall into each of 11 ranges. The probability estimates for growth in 2015, 2016, and 2017 are about the same now as they were in the previous survey.

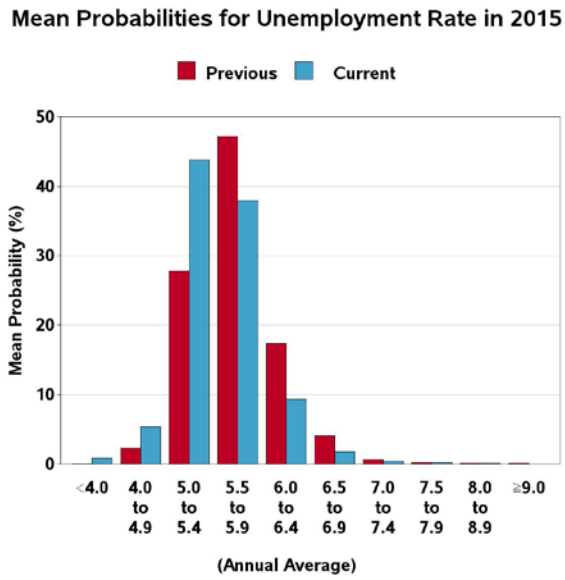


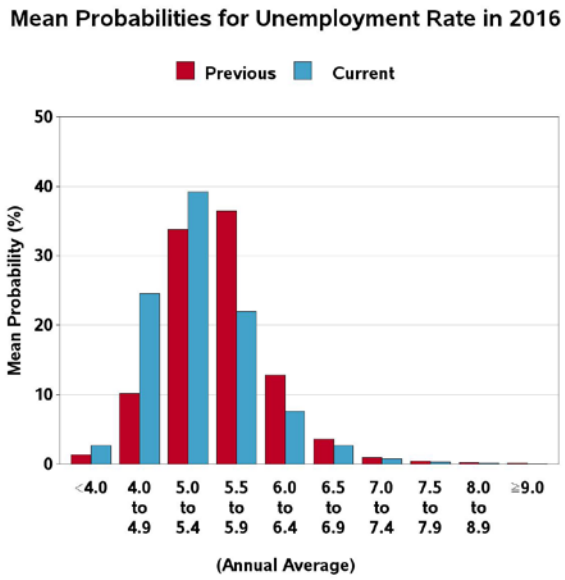


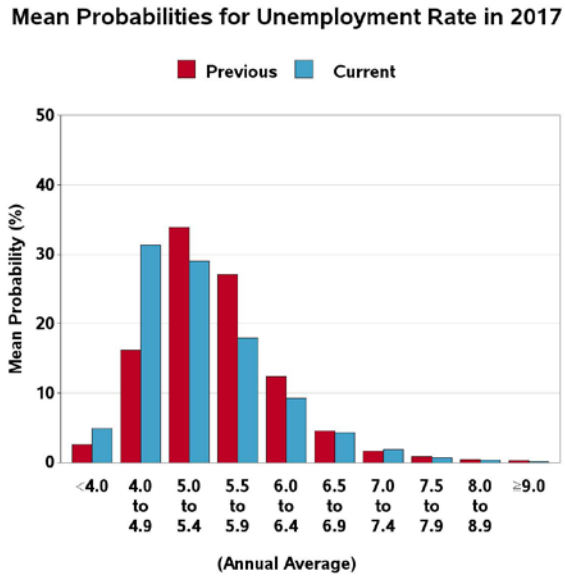


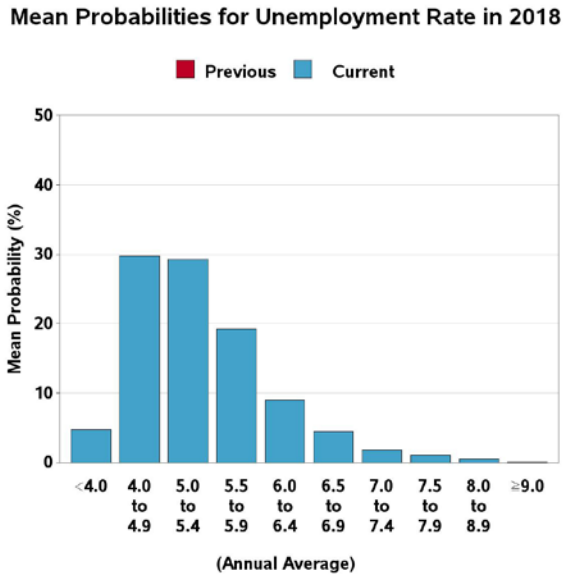


The forecasters' density projections for unemployment, shown below, shed light on uncertainty about the labor market over the next four years. Each chart for unemployment presents the forecasters' current estimates of the probability that unemployment will fall into each of 10 ranges. The charts show the forecasters are raising their density estimates over the next three years at the lower levels of unemployment outcomes, suggesting they are more confident about lower unemployment than they were in the last survey.









Forecasters Predict Lower Inflation in 2015

The forecasters expect current-quarter headline CPI inflation to average -1.4 percent, lower than the last survey's estimate of 1.8 percent. The forecasters predict current-quarter headline PCE inflation of -0.6 percent, lower than the prediction of 1.7 percent from the survey of three months ago.

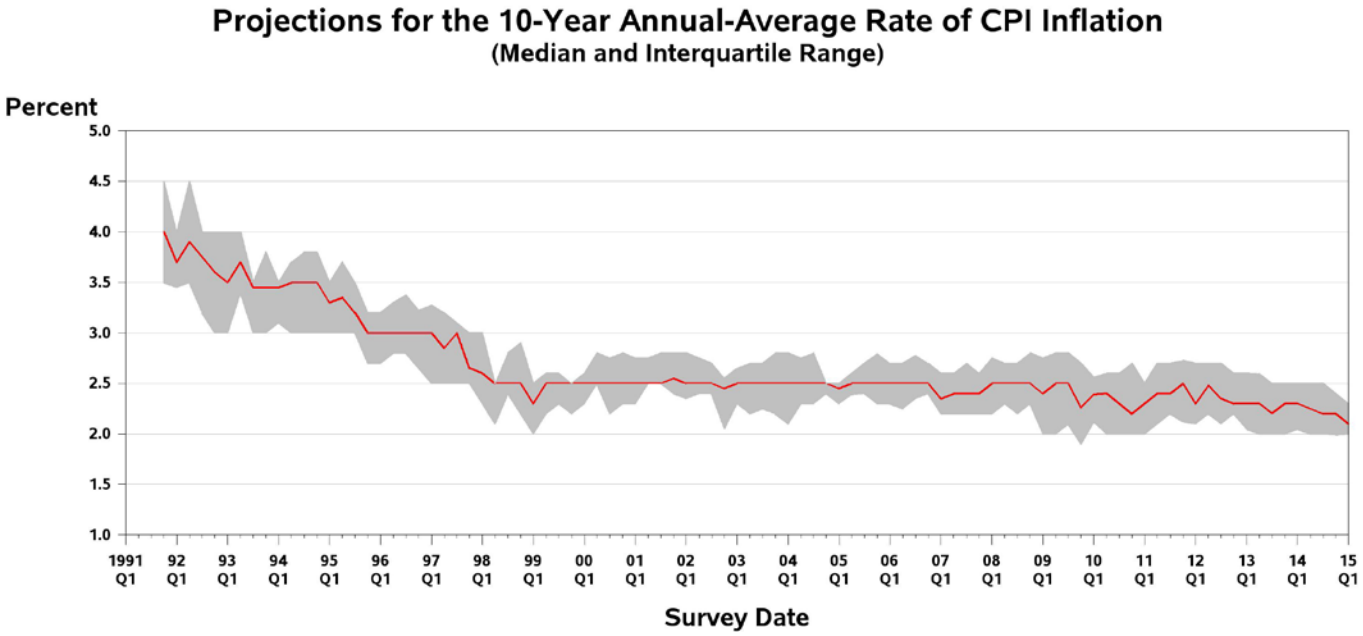
The forecasters also see lower headline and core measures of CPI and PCE inflation in 2015. Measured on a fourth-quarter over fourth-quarter basis, headline CPI inflation is expected to average 1.1 percent in 2015, down from 1.9 percent in the last survey. Forecasters expect fourth-quarter over fourth-quarter headline PCE inflation to also average 1.1 percent in 2015, down from 1.8 percent in the last survey.

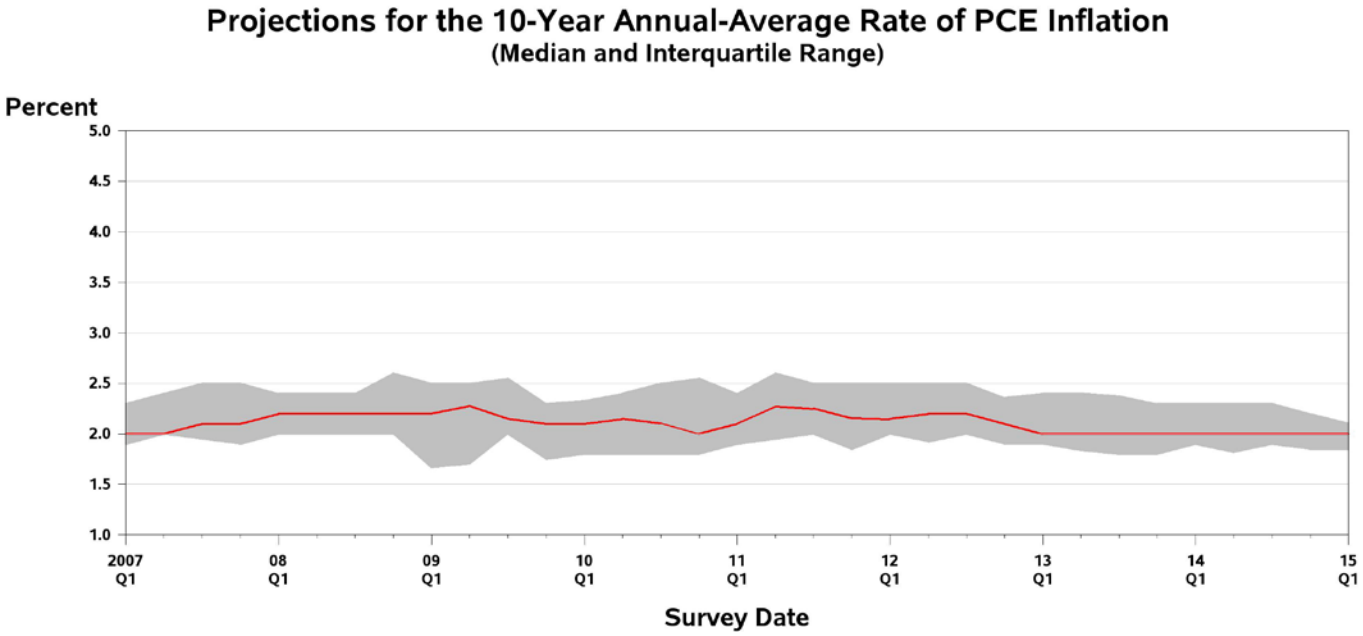
Over the next 10 years, 2015 to 2024, the forecasters expect headline CPI inflation to average 2.1 percent at an annual rate. The corresponding estimate for 10-year annual-average PCE inflation is 2.0 percent.

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

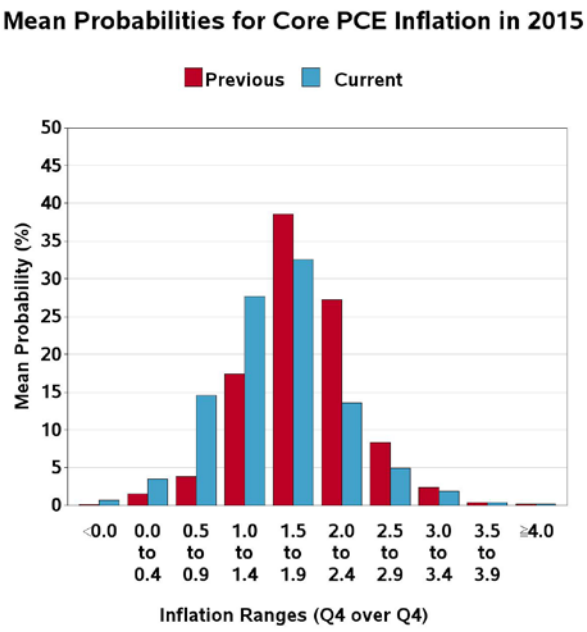
	Headline CPI		Core CPI		Headline PCE		Core PCE	
	Previous	Current	Previous	Current	Previous	Current	Previous	Current
Quarterly								
2015:Q1	1.8	-1.4	1.9	1.3	1.7	-0.6	1.7	1.2
2015:Q2	1.9	1.6	1.9	1.7	1.8	1.4	1.7	1.4
2015:Q3	2.0	1.9	1.9	1.8	1.8	1.9	1.8	1.5
2015:Q4	2.0	2.0	2.0	1.8	1.9	1.8	1.8	1.7
2016:Q1	N.A.	2.1	N.A.	1.9	N.A.	1.8	N.A.	1.6
Q4/Q4 Annual Averages								
2015	1.9	1.1	2.0	1.7	1.8	1.1	1.8	1.4
2016	2.1	2.1	2.0	1.9	1.9	1.9	1.8	1.7
2017	N.A.	2.3	N.A.	2.1	N.A.	2.1	N.A.	1.9
Long-Term Annual Averages								
2014-2018	2.09	N.A.	N.A.	N.A.	1.90	N.A.	N.A.	N.A.
2015-2019	N.A.	2.00	N.A.	N.A.	N.A.	1.80	N.A.	N.A.
2014-2023	2.20	N.A.	N.A.	N.A.	2.00	N.A.	N.A.	N.A.
2015-2024	N.A.	2.10	N.A.	N.A.	N.A.	2.00	N.A.	N.A.

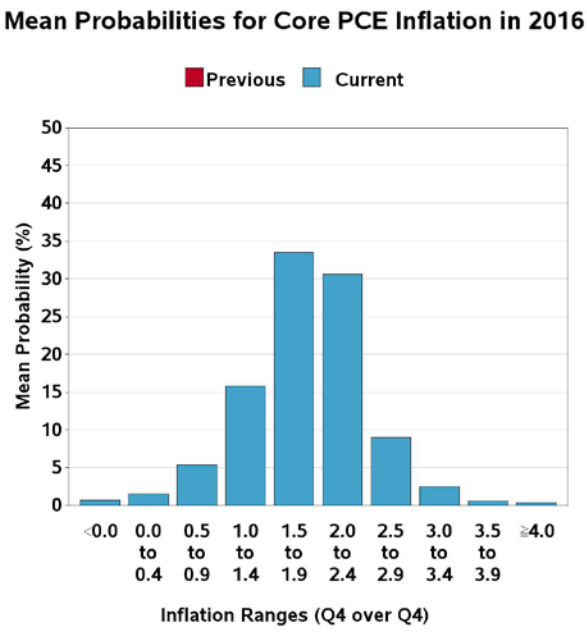
The charts below show the median projections (the red line) and the associated interquartile ranges (the gray area around the red line) for 10-year annual-average CPI and PCE inflation. The top panel shows a slightly lower level of the long-term projection for CPI inflation, at 2.1 percent. The bottom 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 2015 and 2016 will fall into each of 10 ranges. For 2015, the forecasters assign a higher chance than previously predicted that core PCE inflation will be below 1.5 percent (and a lower probability that inflation will be above 1.5 percent).





Lower Risk of a Negative Quarter

For the current quarter, the forecasters predict a 7.9 percent chance of negative growth. As the table below shows, the forecasters have also reduced their risk estimates for a downturn in the following quarters, compared with their previous estimates.

Risk of a Negative Quarter (%)
Survey Means

Quarterly data:	Previous	New
2015:Q1	10.3	7.9
2015:Q2	11.4	9.3
2015:Q3	12.6	11.1
2015:Q4	13.5	11.9
2016:Q1	N.A.	13.2

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 their measure from a list of indices or to write in their own index. For each index of their choosing, the panelists provided forecasts for growth in 2015 and 2016.

Twenty-two 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 seven house-price indices listed in the table below range from 3.7 percent to 5.9 percent in 2015 and from 3.0 percent to 5.0 percent in 2016.

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

Index	2015 (Q4/Q4 Percent Change)			2016 (Q4/Q4 Percent Change)		
	N	Mean	Median	N	Mean	Median
S&P/Case-Shiller: U.S. National	7	4.4	4.5	7	5.0	4.0
S&P/Case-Shiller: Composite 10	2	4.0	4.0	2	3.5	3.5
S&P/Case-Shiller: Composite 20	5	3.7	4.0	5	2.9	3.5
FHFA: U.S. Total	5	4.9	5.6	5	4.8	5.0
FHFA: Purchase Only	8	3.5	3.7	8	3.0	3.0
CoreLogic: National HPI, incl. Distressed Sales (Single Family Combined)	4	5.1	5.3	4	4.4	4.5
NAR Median: Total Existing	2	5.9	5.9	2	3.7	3.7

Forecasters See Slightly Lower Long-Run Growth in Output and Productivity and in Returns to Financial Assets

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 reduced 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 2.50 percent over the next 10 years, down from 2.60 percent in the first-quarter survey of 2014.

Similarly, productivity growth is now expected to average 1.70 percent, down from 1.80 percent. Downward revisions to the return on two of the financial assets accompany the current outlook. The forecasters see the S&P 500 returning an annual-average 5.45 percent per year over the next 10 years, down from 6.00 percent. The forecasters expect the rate on 10-year Treasuries to average 3.98 percent over the next 10 years, down from 4.35 percent in last year's first-quarter survey. Three-month Treasury bills will return 2.67 percent, up from 2.50 percent.

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

	First Quarter 2014	*Current Survey*
Real GDP Growth	2.60	2.50
Productivity Growth	1.80	1.70
Stock Returns (S&P 500)	6.00	5.45
Rate on 10-Year Treasury Bonds	4.35	3.98
Bill Returns (3-Month)	2.50	2.67

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; **David Crowe**, National Association of Home Builders; **Nathaniel Curtis**, Navigant Consulting; **Gregory Daco**, Oxford Economics USA, Inc.; **Rajeev Dhawan**, Georgia State University; **Michael R. Englund**, Action Economics, LLC; **Michael Gapen**, Barclays Capital; **James Glassman**, JPMorgan Chase & Co.; **Matthew Hall** and **Daniil Manaenkov**, RSQE, University of Michigan; **Jan Hatzius**, Goldman Sachs; **Keith Hembre**, Nuveen Asset Management; **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; **Jack Kleinhenz**, Kleinhenz & Associates, Inc.; **Thomas Lam**, OSK-DMG/RHB; **L. Douglas Lee**, Economics from Washington; **John Lonski**, Moody's Capital Markets Group; **Macroeconomic Advisers, LLC**; **R. Anthony Metz**, Pareto Optimal Economics; **Michael Moran**, Daiwa Capital Markets America; **Joel L. Naroff**, Naroff Economic Advisors; **Luca Noto**, Anima Sgr; **Brendon Ogmundson**, BC Real Estate Association; **Tom Porcelli**, RBC Capital Markets; **Arun Raha**, Eaton Corporation; **Martin A. Regalia**, U.S. Chamber of Commerce; **Vincent Reinhart**, Morgan Stanley; **Philip Rothman**, East Carolina University; **Chris Rupkey**, Bank of Tokyo-Mitsubishi UFJ; **John Silvia**, Wells Fargo; **Allen Sinai**, Decision Economics, Inc.; **Sean M. Snaith, Ph.D.**, University of Central Florida; **Neal Soss**, Credit Suisse; **Stephen Stanley**, Amherst Pierpont Securities; **Charles Steindel**, Ramapo College of New Jersey; **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

	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2015	2016	2017	2018
						(YEAR-OVER-YEAR)			
PERCENT GROWTH AT ANNUAL RATES									
1. REAL GDP (BILLIONS, CHAIN WEIGHTED)	2.7	3.0	2.8	2.8	2.9	3.2	2.9	2.7	2.7
2. GDP PRICE INDEX (PERCENT CHANGE)	0.6	1.6	1.9	1.6	2.0	1.1	1.8	N.A.	N.A.
3. NOMINAL GDP ($ BILLIONS)	3.5	4.2	4.5	4.5	4.5	4.2	4.8	N.A.	N.A.
4. NONFARM PAYROLL EMPLOYMENT									
(PERCENT CHANGE)	2.3	2.0	1.9	1.9	1.8	2.2	1.8	N.A.	N.A.
(AVG MONTHLY CHANGE)	269.3	233.8	222.0	229.4	213.8	252.5	213.6	N.A.	N.A.
VARIABLES IN LEVELS									
5. UNEMPLOYMENT RATE (PERCENT)	5.6	5.5	5.4	5.2	5.2	5.4	5.1	5.0	4.9
6. 3-MONTH TREASURY BILL (PERCENT)	0.0	0.1	0.3	0.6	0.8	0.3	1.2	2.7	3.0
7. 10-YEAR TREASURY BOND (PERCENT)	2.0	2.2	2.4	2.5	2.7	2.3	3.1	3.9	4.1

	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2015	2016	2017
						(Q4-OVER-Q4)		
INFLATION INDICATORS								
8. CPI (ANNUAL RATE)	-1.4	1.6	1.9	2.0	2.1	1.1	2.1	2.3
9. CORE CPI (ANNUAL RATE)	1.3	1.7	1.8	1.8	1.9	1.7	1.9	2.1
10. PCE (ANNUAL RATE)	-0.6	1.4	1.9	1.8	1.8	1.1	1.9	2.1
11. CORE PCE (ANNUAL RATE)	1.2	1.4	1.5	1.7	1.6	1.4	1.7	1.9

THE FIGURES ON EACH LINE ARE MEDIANS OF 39 INDIVIDUAL FORECASTERS.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

SURVEY OF PROFESSIONAL FORECASTERS

First Quarter 2015

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, 2015.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORECASTERS	ACTUAL 2014 Q4	FORECAST 2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	ACTUAL 2014 ANNUAL	FORECAST 2015 ANNUAL	2016 ANNUAL	2017 ANNUAL	2018 ANNUAL
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	38	17711	17864	18048	18249	18449	18652	17421	18156	19022	N.A.	N.A.
2. GDP PRICE INDEX (2009=100)	38	108.64	108.81	109.25	109.76	110.19	110.74	108.31	109.53	111.47	N.A.	N.A.
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	17	N.A.	1629.2	1659.1	1682.9	1705.2	1717.2	N.A.	1652.6	1752.9	N.A.	N.A.
4. UNEMPLOYMENT RATE (PERCENT)	39	5.7	5.6	5.5	5.4	5.2	5.2	6.1	5.4	5.1	5.0	4.9
5. NONFARM PAYROLL EMPLOYMENT (THOUSANDS)	31	140061	140869	141570	142236	142925	143566	138890	141920	144484	N.A.	N.A.
6. INDUSTRIAL PRODUCTION (2007=100)	33	106.1	107.1	108.0	108.8	109.7	110.4	104.2	108.4	111.5	N.A.	N.A.
7. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	36	1.07	1.09	1.13	1.18	1.22	1.25	1.00	1.15	1.30	N.A.	N.A.
8. 3-MONTH TREASURY BILL RATE (PERCENT)	36	0.02	0.05	0.10	0.30	0.56	0.84	0.03	0.26	1.21	2.66	3.00
9. AAA CORPORATE BOND YIELD (PERCENT)	27	3.88	3.65	3.80	4.00	4.13	4.30	4.16	3.87	4.50	N.A.	N.A.
10. BAA CORPORATE BOND YIELD (PERCENT)	26	4.74	4.53	4.70	4.83	4.96	5.09	4.85	4.78	5.28	N.A.	N.A.
11. 10-YEAR TREASURY BOND YIELD (PERCENT)	38	2.28	1.97	2.22	2.43	2.52	2.75	2.54	2.30	3.11	3.86	4.09
12. REAL GDP (BILLIONS, CHAIN WEIGHTED)	37	16312	16419	16542	16657	16771	16893	16090	16598	17074	17536	18003
13. TOTAL CONSUMPTION EXPENDITURE (BILLIONS, CHAIN WEIGHTED)	35	11114.9	11206.2	11293.2	11377.0	11467.0	11540.8	10967.8	11329.7	11662.5	N.A.	N.A.
14. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	2154.8	2178.9	2206.5	2239.0	2266.9	2290.2	2112.7	2223.2	2331.3	N.A.	N.A.
15. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	33	504.6	513.3	524.4	537.6	551.2	564.5	496.3	532.1	581.1	N.A.	N.A.
16. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	34	1119.7	1122.0	1123.9	1127.1	1128.6	1130.2	1123.4	1125.3	1132.0	N.A.	N.A.
17. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	33	1775.2	1780.8	1787.1	1794.2	1801.0	1806.0	1764.9	1791.0	1812.3	N.A.	N.A.
18. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	33	113.1	84.0	75.0	73.0	68.0	62.4	78.8	75.2	61.4	N.A.	N.A.
19. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	34	-471.5	-477.9	-489.7	-500.9	-509.8	-520.5	-452.6	-493.5	-532.6	N.A.	N.A.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA. SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

TABLE TWO
MAJOR MACROECONOMIC INDICATORS
PERCENTAGE CHANGES AT ANNUAL RATES

	NUMBER OF FORECASTERS	Q4 2014 TO Q1 2015	Q1 2015 TO Q2 2015	Q2 2015 TO Q3 2015	Q3 2015 TO Q4 2015	Q4 2015 TO Q1 2016	2014 TO 2015	2015 TO 2016	2016 TO 2017	2017 TO 2018
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	38	3.5	4.2	4.5	4.5	4.5	4.2	4.8	N.A.	N.A.
2. GDP PRICE INDEX (2009=100)	38	0.6	1.6	1.9	1.6	2.0	1.1	1.8	N.A.	N.A.
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	17	7.5	7.5	5.9	5.4	2.8	9.3	6.1	N.A.	N.A.
4. UNEMPLOYMENT RATE (PERCENT)	39	-0.1	-0.1	-0.1	-0.2	-0.0	-0.7	-0.3	-0.1	-0.0
5. NONFARM PAYROLL EMPLOYMENT										
(PERCENT CHANGE)	31	2.3	2.0	1.9	1.9	1.8	2.2	1.8	N.A.	N.A.
(AVG MONTHLY CHANGE)	31	269.3	233.8	222.0	229.4	213.8	252.5	213.6	N.A.	N.A.
6. INDUSTRIAL PRODUCTION (2007=100)	33	3.8	3.4	3.1	3.2	2.7	4.0	2.8	N.A.	N.A.
7. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	36	6.6	14.1	19.4	12.8	9.8	14.7	12.8	N.A.	N.A.
8. 3-MONTH TREASURY BILL RATE (PERCENT)	36	0.03	0.05	0.20	0.26	0.28	0.23	0.94	1.46	0.34
9. AAA CORPORATE BOND YIELD (PERCENT)	27	-0.23	0.15	0.20	0.13	0.17	-0.29	0.63	N.A.	N.A.
10. BAA CORPORATE BOND YIELD (PERCENT)	26	-0.21	0.17	0.13	0.13	0.13	-0.07	0.50	N.A.	N.A.
11. 10-YEAR TREASURY BOND YIELD (PERCENT)	38	-0.31	0.25	0.21	0.08	0.23	-0.24	0.81	0.75	0.22
12. REAL GDP (BILLIONS, CHAIN WEIGHTED)	37	2.7	3.0	2.8	2.8	2.9	3.2	2.9	2.7	2.7
13. TOTAL CONSUMPTION EXPENDITURE (BILLIONS, CHAIN WEIGHTED)	35	3.3	3.1	3.0	3.2	2.6	3.3	2.9	N.A.	N.A.
14. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	4.6	5.1	6.0	5.1	4.2	5.2	4.9	N.A.	N.A.
15. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	33	7.1	8.9	10.5	10.5	10.0	7.2	9.2	N.A.	N.A.
16. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	34	0.8	0.7	1.1	0.5	0.6	0.2	0.6	N.A.	N.A.
17. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	33	1.3	1.4	1.6	1.5	1.1	1.5	1.2	N.A.	N.A.
18. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	33	-29.1	-9.0	-2.0	-5.0	-5.6	-3.6	-13.8	N.A.	N.A.
19. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	34	-6.4	-11.8	-11.2	-8.8	-10.8	-40.9	-39.1	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 2015.

TABLE THREE
MAJOR PRICE INDICATORS
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORECASTERS	ACTUAL	FORECAST(Q/Q)					ACTUAL	FORECAST(Q4/Q4)		
		2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2014 ANNUAL	2015 ANNUAL	2016 ANNUAL	2017 ANNUAL
1. CONSUMER PRICE INDEX (ANNUAL RATE)	37	-1.2	-1.4	1.6	1.9	2.0	2.1	1.2	1.1	2.1	2.3
2. CORE CONSUMER PRICE INDEX (ANNUAL RATE)	35	1.4	1.3	1.7	1.8	1.8	1.9	1.7	1.7	1.9	2.1
3. PCE PRICE INDEX (ANNUAL RATE)	32	-0.5	-0.6	1.4	1.9	1.8	1.8	1.1	1.1	1.9	2.1
4. CORE PCE PRICE INDEX (ANNUAL RATE)	34	1.1	1.2	1.4	1.5	1.7	1.6	1.4	1.4	1.7	1.9

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA. SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

TABLE FOUR
ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	Q4 2014 TO Q1 2015	Q1 2015 TO Q2 2015	Q2 2015 TO Q3 2015	Q3 2015 TO Q4 2015	Q4 2015 TO Q1 2016
	NUMBER OF FORECASTERS				
10 OR LESS	27	27	18	17	16
11 TO 20	6	5	14	15	15
21 TO 30	0	1	1	1	1
31 TO 40	0	0	0	0	1
41 TO 50	0	0	0	0	0
51 TO 60	0	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	6	6	6	6	6
MEAN AND MEDIAN					
MEDIAN PROBABILITY	6.00	10.00	10.00	10.00	12.00
MEAN PROBABILITY	7.90	9.30	11.14	11.85	13.20

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 33.
SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

TABLE FIVE
MEAN PROBABILITIES

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

	2015	2016	2017	2018
9.0 PERCENT OR MORE	0.00	0.09	0.14	0.07
8.0 TO 8.9 PERCENT	0.12	0.14	0.37	0.52
7.5 TO 7.9 PERCENT	0.18	0.27	0.69	1.09
7.0 TO 7.4 PERCENT	0.45	0.80	1.88	1.81
6.5 TO 6.9 PERCENT	1.83	2.68	4.32	4.49
6.0 TO 6.4 PERCENT	9.36	7.63	9.27	8.98
5.5 TO 5.9 PERCENT	38.01	22.00	17.96	19.24
5.0 TO 5.4 PERCENT	43.82	39.18	29.07	29.29
4.0 TO 4.9 PERCENT	5.38	24.57	31.38	29.74
LESS THAN 4.0 PERCENT	0.85	2.64	4.90	4.77

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

	2014-2015	2015-2016	2016-2017	2017-2018
6.0 OR MORE	0.64	0.72	0.53	0.50
5.0 TO 5.9	1.84	1.70	1.69	1.86
4.0 TO 4.9	9.05	8.84	8.33	7.18
3.0 TO 3.9	36.63	26.63	24.38	23.80
2.0 TO 2.9	37.53	39.22	37.90	38.07
1.0 TO 1.9	10.09	15.69	18.02	18.39
0.0 TO 0.9	2.83	5.21	6.79	6.91
-1.0 TO -0.1	0.87	1.46	1.56	2.32
-2.0 TO -1.1	0.36	0.42	0.77	0.80
-3.0 TO -2.1	0.16	0.11	0.09	0.15
LESS THAN -3.0	0.00	0.00	0.02	0.02

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

	2014-2015	2015-2016
4.0 OR MORE	0.08	0.12
3.5 TO 3.9	0.08	0.68
3.0 TO 3.4	0.78	2.34
2.5 TO 2.9	4.63	9.62
2.0 TO 2.4	11.78	26.27
1.5 TO 1.9	22.48	32.78
1.0 TO 1.4	33.64	17.99
0.5 TO 0.9	20.21	7.00
0.0 TO 0.4	5.57	2.52
WILL DECLINE	0.75	0.69

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

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

MEAN PROBABILITY ATTACHED TO CORE CPI INFLATION:

	14Q4 TO 15Q4	15Q4 TO 16Q4
4 PERCENT OR MORE	0.40	0.83
3.5 TO 3.9 PERCENT	0.65	0.90
3.0 TO 3.4 PERCENT	1.94	3.37
2.5 TO 2.9 PERCENT	6.56	11.60
2.0 TO 2.4 PERCENT	17.42	29.91
1.5 TO 1.9 PERCENT	36.34	33.83
1.0 TO 1.4 PERCENT	25.48	13.31
0.5 TO 0.9 PERCENT	8.18	3.86
0.0 TO 0.4 PERCENT	2.45	1.74
WILL DECLINE	0.76	0.66

MEAN PROBABILITY ATTACHED TO CORE PCE INFLATION:

	14Q4 TO 15Q4	15Q4 TO 16Q4
4 PERCENT OR MORE	0.16	0.40
3.5 TO 3.9 PERCENT	0.37	0.58
3.0 TO 3.4 PERCENT	1.88	2.49
2.5 TO 2.9 PERCENT	4.94	9.01
2.0 TO 2.4 PERCENT	13.60	30.64
1.5 TO 1.9 PERCENT	32.56	33.53
1.0 TO 1.4 PERCENT	27.72	15.82
0.5 TO 0.9 PERCENT	14.59	5.36
0.0 TO 0.4 PERCENT	3.47	1.49
WILL DECLINE	0.73	0.68

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

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

ANNUAL AVERAGE OVER THE NEXT 5 YEARS: 2015-2019

CPI INFLATION RATE		PCE INFLATION RATE	
MINIMUM	1.10	MINIMUM	0.90
LOWER QUARTILE	1.90	LOWER QUARTILE	1.70
MEDIAN	2.00	MEDIAN	1.80
UPPER QUARTILE	2.20	UPPER QUARTILE	2.00
MAXIMUM	2.60	MAXIMUM	2.40
MEAN	2.03	MEAN	1.83
STD. DEVIATION	0.33	STD. DEVIATION	0.30
N	35	N	33
MISSING	4	MISSING	6

ANNUAL AVERAGE OVER THE NEXT 10 YEARS: 2015-2024

CPI INFLATION RATE		PCE INFLATION RATE	
MINIMUM	1.40	MINIMUM	1.30
LOWER QUARTILE	2.00	LOWER QUARTILE	1.85
MEDIAN	2.10	MEDIAN	2.00
UPPER QUARTILE	2.30	UPPER QUARTILE	2.11
MAXIMUM	3.10	MAXIMUM	2.50
MEAN	2.14	MEAN	1.94
STD. DEVIATION	0.31	STD. DEVIATION	0.26
N	33	N	31
MISSING	6	MISSING	8

REAL GDP GROWTH RATE		PRODUCTIVITY GROWTH RATE	
MINIMUM	1.80	MINIMUM	0.10
LOWER QUARTILE	2.30	LOWER QUARTILE	1.50
MEDIAN	2.50	MEDIAN	1.70
UPPER QUARTILE	2.68	UPPER QUARTILE	2.00
MAXIMUM	3.07	MAXIMUM	2.40
MEAN	2.51	MEAN	1.63
STD. DEVIATION	0.28	STD. DEVIATION	0.55
N	28	N	21
MISSING	11	MISSING	18

STOCK RETURNS (S&P 500)		BOND RETURNS (10-YEAR)		BILL RETURNS (3-MONTH)	
MINIMUM	1.70	MINIMUM	2.44	MINIMUM	0.30
LOWER QUARTILE	5.00	LOWER QUARTILE	3.75	LOWER QUARTILE	2.21
MEDIAN	5.45	MEDIAN	3.98	MEDIAN	2.67
UPPER QUARTILE	7.00	UPPER QUARTILE	4.50	UPPER QUARTILE	3.00
MAXIMUM	8.10	MAXIMUM	5.00	MAXIMUM	3.90
MEAN	5.79	MEAN	3.91	MEAN	2.55
STD. DEVIATION	1.38	STD. DEVIATION	0.70	STD. DEVIATION	0.74
N	20	N	25	N	24
MISSING	19	MISSING	14	MISSING	15

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA.
SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2015.

THE LIVINGSTON SURVEY

Release Date: December 12, 2014

DECEMBER 2014

Forecasters Predict Steady Growth and Lower Unemployment

The 29 participants in the December *Livingston Survey* predict fairly steady output growth through the end of 2015. 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 3.1 percent for the second half of 2014. They predict that the growth rate of economic output will be 2.9 percent (annual rate) in the first half of 2015 and 2.7 percent (annual rate) in the second half of 2015. The current projection for growth in the second half of 2014 is 0.1 percentage point higher than the projection from the survey of six months ago, while the forecast for the first half of 2015 is unchanged.

The forecasters see the unemployment rate falling next year, and the projections have been revised downward. The forecasters predict that the unemployment rate will be 5.7 percent in December 2014 and 5.6 percent in June 2015. The current projections for December 2014 and June 2015 are down 0.4 and 0.3 percentage points, respectively, from the last survey. The unemployment rate will fall to 5.4 percent in December 2015.

	Growth Rate of Real GDP (%)			*Unemployment Rate (%)*	
	Previous	*New*		*Previous*	*New*
Half-year data:					
2014 Q2 to 2014 Q4	3.0	3.1	December 2014	6.1	5.7
2014 Q4 to 2015 Q2	2.9	2.9	June 2015	5.9	5.6
2015 Q2 to 2015 Q4	N.A.	2.7	December 2015	N.A.	5.4

Forecasters See Lower CPI and PPI Inflation in 2015

On an annual-average over annual-average basis, CPI inflation is expected to be 1.7 percent in 2014 and 1.4 percent in 2015. The 2015 projection is down 0.6 percentage point from the estimate in the June survey. PPI inflation is expected to be 2.1 percent in 2014 and 1.1 percent in 2015. These projections are down 0.3 and 0.6 percentage points, respectively, from those of the last survey.

	CPI Inflation (%)		*PPI Inflation (%)*	
	Previous	*New*	*Previous*	*New*
Annual-average data:				
2013 to 2014	1.8	1.7	2.4	2.1
2014 to 2015	2.0	1.4	1.7	1.1
2015 to 2016	N.A.	2.1	N.A.	1.5

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

The forecast for the interest rate on three-month Treasury bills is little changed from that of six months ago, while the forecast for 10-year Treasury bonds reflects a downward revision. At the end of June 2015, the interest rate on three-month Treasury bills is predicted to be 0.25 percent, revised up from 0.20 percent in the survey of six months ago. The forecasters predict that the rate will be 0.81 percent at the end of 2015 and 2.25 percent at the end of 2016. The interest rate on 10-year Treasury bonds is predicted to reach 2.72 percent at the end of June 2015, down from the previous estimate of 3.50 percent. According to the forecasters, the 10-year rate will rise to 3.20 percent at the end of 2015, and to 3.75 percent at the end of 2016.

	3-Month Treasury Bill Interest Rate		*10-Year Treasury Bond Interest Rate*	
	Previous	*New*	*Previous*	*New*
Dec. 31, 2014	0.07	0.03	3.10	2.40
June 30, 2015	0.20	0.25	3.50	2.72
Dec. 31, 2015	0.95	0.81	3.75	3.20
Dec. 30, 2016	N.A.	2.25	N.A.	3.75

2014 Livingston Survey Participants

S. Anderson	**Bank of the West**	**J. Lonski**	**Moody's Capital Markets Group**
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.**	**F. Nothaft**	**Federal Home Loan Mortgage Corp.**
C. Chrappa	**Independent Equipment Company**	**M. Regalia**	**U.S. Chamber of Commerce**
D. Crowe	**National Association of Home Builders**	**V. Reinhart**	**Morgan Stanley & Co., Inc.**
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**	**J. Smith**	**Parsec Financial Management, Inc.**
P. Hooper	**Deutsche Bank Securities, Inc.**	**S. Snaith**	**University of Central Florida**
B. Horrigan	**Loomis Sayles & Co.**	**S. Stanley**	**Pierpont Securities**
S. Kahan	**Kahan Consulting Ltd.**	**D. Torgerson**	**USDA**
D. Knop	**Independent Economist**	**B. Wesbury/R. Stein**	**First Trust Advisors, L.P.**
T. Lam	**OSK-DMG**	**L. Yun/D. Hale**	**National Association of Realtors**
E. Leamer/D. Shulman	**University of California, Los Angeles**		

Outlook for Long-Term Inflation Revised Downward

The panelists project lower long-term inflation, compared with their projection in the June 2014 survey, but their projection for long-term output growth is unchanged. The forecasters now predict that inflation (measured by the CPI) will grow 2.25 percent annually over the next 10 years, which is lower than the forecast of 2.35 percent in the survey of six months ago. Real GDP growth is expected to average 2.50 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 2014 at a level of 2065.0, an upward revision from the estimate of 1950.0 in the June 2014 survey. They also see stock prices increasing over the next two years, with the index rising to 2125.0 by the end of June 2015, to 2160.6 by the end of 2015, and then to 2300.0 by the end of 2016.

	Stock Prices (end of period) *S&P 500 Index*	
	Previous	*New*
Dec. 31, 2014	1950.0	2065.0
June 30, 2015	1999.8	2125.0
Dec. 31, 2015	2026.5	2160.6
Dec. 30, 2016	N.A.	2300.0

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, 2014-2016

QUARTERLY INDICATORS (percentage changes at annual rates)	Q2 2014 TO Q4 2014	Q4 2014 TO Q2 2015	Q2 2015 TO Q4 2015	2013 TO 2014	2014 TO 2015	2015 TO 2016
Real Gross Domestic Product	3.1	2.9	2.7	2.3	3.0	2.8
Nominal Gross Domestic Product	4.5	4.8	4.7	3.8	4.7	4.8
Nonresidential Fixed Investment	5.9	5.3	5.8	6.1	5.8	5.6
Corporate Profits After Taxes	11.7	5.1	5.0	-7.6	8.9	4.5

MONTHLY INDICATORS (percentage changes at annual rates)	JUN 2014 TO DEC 2014	DEC 2014 TO JUN 2015	JUN 2015 TO DEC 2015	2013 TO 2014	2014 TO 2015	2015 TO 2016
Industrial Production	2.9	3.0	3.7	4.0	3.7	3.4
Producer Prices - Finished Goods	-1.6	1.6	1.6	2.1	1.1	1.5
Consumer Price Index (CPI-U)	0.3	1.7	2.1	1.7	1.4	2.1
Average Weekly Earnings in Mfg.	1.6	2.3	2.3	1.8	2.3	2.5
Retail Trade	2.9	4.8	4.3	4.0	4.4	4.5

(levels of variables)	DEC 2014	JUN 2015	DEC 2015	2014	2015	2016
Total Private Housing Starts (annual rate, millions)	1.040	1.131	1.231	0.999	1.165	1.332
Unemployment Rate (percent)	5.7	5.6	5.4	6.2	5.6	5.3
Automobile Sales (incl. foreign) (annual rate, millions)	7.8	8.0	7.9	7.7	7.9	8.1

FINANCIAL INDICATORS (levels of variables at end of month)	DEC 2014	JUN 2015	DEC 2015	DEC 2016
Prime Interest Rate	3.25	3.25	3.85	5.25
10-Year Treasury Note Yield	2.40	2.72	3.20	3.75
3-Month Treasury Bill Rate	0.03	0.25	0.81	2.25
Stock Prices (S&P500)	2065.0	2125.0	2160.6	2300.0

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

Real GDP	2.50
Consumer Price Index	2.25

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2014

LIVINGSTON SURVEY

December 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 November 20; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before December 4.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS, 2014-2016
MEDIANS OF FORECASTER PREDICTIONS

QUARTERLY INDICATORS	NUMBER OF FORE-CASTERS	ACTUAL 2014 Q2	FORECASTS 2014 Q4	FORECASTS 2015 Q2	FORECASTS 2015 Q4	ACTUAL 2013	FORECASTS 2014	FORECASTS 2015	FORECASTS 2016
1. Real Gross Domestic Product (billions, chain weighted)	29	16010.4	16259.4	16494.3	16716.6	15710.3	16066.4	16546.8	17017.6
2. Nominal Gross Domestic Product ($ billions)	28	17328.2	17713.2	18131.0	18547.9	16768.1	17412.5	18236.7	19109.7
3. Nonresidential Fixed Investment (billions, chain weighted)	27	2099.6	2160.6	2217.0	2280.0	1990.6	2111.7	2235.1	2359.8
4. Corporate Profits After Taxes ($ billions)	18	1498.2	1583.6	1623.2	1663.4	1632.6	1508.8	1643.3	1716.5

MONTHLY INDICATORS		ACTUAL JUN 2014	FORECASTS DEC 2014	FORECASTS JUN 2015	FORECASTS DEC 2015	ACTUAL 2013	FORECASTS 2014	FORECASTS 2015	FORECASTS 2016
5. Industrial Production (2007=100)	25	104.0	105.5	107.1	109.0	99.9	103.9	107.7	111.4
6. Total Private Housing Starts (annual rate, millions)	26	0.909	1.040	1.131	1.231	0.930	0.999	1.165	1.332
7. Producer Prices - Finished Goods (index level)	20	202.4	200.8	202.4	204.1	196.7	200.8	203.0	206.1
8. Consumer Price Index (CPI-U) (index level)	27	237.7	238.0	240.0	242.5	233.0	236.9	240.3	245.3
9. Unemployment Rate (percent)	27	6.1	5.7	5.6	5.4	7.3	6.2	5.6	5.3
10. Average Weekly Earnings in Mfg. ($)	12	824.8	831.4	840.8	850.2	807.5	822.2	841.1	862.1
11. Retail Trade ($ billions)	15	440.3	446.6	457.2	467.0	422.2	438.9	458.3	478.9
12. Automobile Sales (incl. foreign) (annual rate, millions)	18	8.1	7.8	8.0	7.9	7.6	7.7	7.9	8.1

TABLE ONE (CONTINUED)

INTEREST RATES & STOCK PRICES (end of period)		ACTUAL JUN 2014	FORECASTS DEC 2014	JUN 2015	DEC 2015	DEC 2016
13. Prime Interest Rate (percent)	27	3.25	3.25	3.25	3.85	5.25
14. 10-Year Treasury Note Yield (percent)	28	2.53	2.40	2.72	3.20	3.75
15. 3-Month Treasury Bill Rate (percent)	27	0.04	0.03	0.25	0.81	2.25
16. Stock Prices (S&P500) (index level)	18	1960.2	2065.0	2125.0	2160.6	2300.0

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2014

TABLE TWO
MAJOR MACROECONOMIC INDICATORS, 2014-2016
PERCENTAGE CHANGES AT ANNUAL RATES

QUARTERLY INDICATORS	NUMBER OF FORE-CASTERS	Q2 2014 TO Q4 2014	Q4 2014 TO Q2 2015	Q2 2015 TO Q4 2015	2013 TO 2014	2014 TO 2015	2015 TO 2016
1. Real Gross Domestic Product	29	3.1	2.9	2.7	2.3	3.0	2.8
2. Nominal Gross Domestic Product	28	4.5	4.8	4.7	3.8	4.7	4.8
3. Nonresidential Fixed Investment	27	5.9	5.3	5.8	6.1	5.8	5.6
4. Corporate Profits After Taxes	18	11.7	5.1	5.0	-7.6	8.9	4.5

MONTHLY INDICATORS		JUN 2014 TO DEC 2014	DEC 2014 TO JUN 2015	JUN 2015 TO DEC 2015	2013 TO 2014	2014 TO 2015	2015 TO 2016
5. Industrial Production	25	2.9	3.0	3.7	4.0	3.7	3.4
6. Total Private Housing Starts	26	0.131	0.091	0.101	0.069	0.166	0.167
7. Producer Prices - Finished Goods	20	-1.6	1.6	1.6	2.1	1.1	1.5
8. Consumer Price Index (CPI-U)	27	0.3	1.7	2.1	1.7	1.4	2.1
9. Unemployment Rate	27	-0.4	-0.1	-0.2	-1.2	-0.6	-0.3
10. Average Weekly Earnings in Mfg.	12	1.6	2.3	2.3	1.8	2.3	2.5
11. Retail Trade	15	2.9	4.8	4.3	4.0	4.4	4.5
12. Automobile Sales (incl. foreign)	18	-0.3	0.2	-0.1	0.1	0.2	0.2

INTEREST RATES & STOCK PRICES		JUN 2014 TO DEC 2014	DEC 2014 TO JUN 2015	JUN 2015 TO DEC 2015	DEC 2015 TO DEC 2016
13. Prime Interest Rate	27	0.00	0.00	0.60	1.40
14. 10-Year Treasury Note Yield	28	-0.13	0.32	0.48	0.55
15. 3-Month Treasury Bill Rate	27	-0.01	0.22	0.56	1.44
16. Stock Prices (S&P500)	18	11.0	5.9	3.4	6.5

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 2014

TABLE THREE
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI Inflation Rate

STATISTIC	
Minimum	1.40
Lower Quartile	1.95
Median	2.25
Upper Quartile	2.50
Maximum	2.90
Mean	2.21
Std. Deviation	0.39
N	29
Missing	0

SERIES: Real GDP

STATISTIC	
Minimum	1.80
Lower Quartile	2.30
Median	2.50
Upper Quartile	2.65
Maximum	3.10
Mean	2.50
Std. Deviation	0.28
N	29
Missing	0

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2014

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 5, 2015

Instruments	2014 Dec 29	2014 Dec 30	2014 Dec 31	2015 Jan 1*	2015 Jan 2	Week Ending Jan 2	Week Ending Dec 26	2014 Dec
Federal funds (effective)[1 2 3]	0.13	0.13	0.06	0.06	0.12	0.12	0.13	0.12
Commercial Paper[3 4 5 6]								
Nonfinancial								
1-month	0.17	0.08	n.a.		0.13	0.13	0.10	0.11
2-month	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	0.11
3-month	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	0.13
Financial								
1-month	0.10	n.a.	n.a.		0.12	0.11	0.11	0.11
2-month	0.14	0.14	n.a.		0.14	0.14	0.14	0.14
3-month	0.17	0.16	0.18		0.16	0.17	0.16	0.15
Eurodollar deposits (London)[3 7]								
1-month	0.19	0.19	0.19		0.19	0.19	0.19	0.18
3-month	0.30	0.30	0.30		0.30	0.30	0.30	0.26
6-month	0.37	0.37	0.37		0.37	0.37	0.37	0.36
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	0.03	0.03		0.02	0.02	0.01	0.03
3-month	0.03	0.03	0.04		0.02	0.03	0.03	0.03
6-month	0.12	0.12	0.12		0.11	0.12	0.14	0.11
1-year	0.22	0.20	0.22		0.22	0.22	0.25	0.20
Treasury constant maturities								
Nominal[10]								
1-month	0.01	0.03	0.03		0.02	0.02	0.01	0.03
3-month	0.03	0.03	0.04		0.02	0.03	0.03	0.03
6-month	0.12	0.12	0.12		0.11	0.12	0.14	0.11
1-year	0.25	0.23	0.25		0.25	0.25	0.27	0.21
2-year	0.72	0.69	0.67		0.66	0.69	0.73	0.64
3-year	1.14	1.11	1.10		1.07	1.11	1.17	1.06
5-year	1.72	1.68	1.65		1.61	1.67	1.74	1.64
7-year	2.02	2.00	1.97		1.92	1.98	2.05	1.98
10-year	2.22	2.20	2.17		2.12	2.18	2.24	2.21
20-year	2.51	2.49	2.47		2.41	2.47	2.54	2.55
30-year	2.78	2.76	2.75		2.69	2.75	2.81	2.83
Inflation indexed[11]								
5-year	0.50	0.47	0.38		0.31	0.42	0.46	0.37
7-year	0.55	0.54	0.44		0.37	0.48	0.50	0.47
10-year	0.57	0.56	0.49		0.41	0.51	0.55	0.51
20-year	0.74	0.75	0.68		0.61	0.70	0.74	0.73
30-year	0.88	0.88	0.83		0.76	0.84	0.89	0.89
Inflation-indexed long-term average[12]	0.76	0.76	0.71		0.64	0.72	0.75	0.74
Interest rate swaps[13]								
1-year	0.44	0.44	0.44		0.45	0.44	0.45	0.41
2-year	0.89	0.89	0.89		0.89	0.89	0.92	0.84
3-year	1.30	1.28	1.29		1.28	1.29	1.33	1.24
4-year	1.60	1.57	1.58		1.55	1.57	1.63	1.54
5-year	1.81	1.78	1.79		1.74	1.78	1.84	1.76
7-year	2.08	2.05	2.06		2.00	2.05	2.12	2.06
10-year	2.32	2.29	2.31		2.23	2.28	2.36	2.33
30-year	2.72	2.70	2.71		2.65	2.69	2.77	2.80
Corporate bonds								
Moody's seasoned								
Aaa[14]	3.75	3.73	3.72		3.67	3.72	3.79	3.79
Baa	4.71	4.69	4.68		4.63	4.68	4.75	4.74
State & local bonds[15]				3.56		3.56	3.65	3.70
Conventional mortgages[16]				3.87		3.87	3.83	3.86

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 Thomson Reuters 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. Data obtained from Bloomberg Finance L.P.
15. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality; Thursday quotations. Data obtained from Bloomberg Finance L.P.
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.

Download Page H.15 Selected Interest Rates for Feb 04, 2015

Series Description	Market yield on U.S.	Market yield o	Market yield on U	Market yield on U.S. Tı	Market yield (	Market yield on U.S. ˙	Market yield on U.S. Treasury securities at 20-year	constant maturity, quoted on investment basis,	inflation-indexed			
Unit:	Percent: Per Year	Percent: Per	Percent: Per Yea	Percent: Per Year	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/RIFLGFCY01_N.WF	H15/H15/RIFLGFCY05_N.WF	H15/H15/RIFLGFCY05_XII_N.WF	H15/H15/RIFLGFCY10_N.WF	H15/H15/RIFLGFCY10_XII_N.WF	H15/H15/RIFLGFCY20_N.WF	H15/H15/RIFLGFCY20_XII_N.WF					
Time Period	RIFLGFCY01_N.WF	RIFLGFCY05	RIFLGFCY05_XII	RIFLGFCY10_N.WF	RIFLGFCY1(	RIFLGFCY20_N.WF	RIFLGFCY20_XII_N.W	Inflation on 10 year	Average	Inflation on 20 year	Average	Used in 3 stage growth Model
2014-01-03	0.13	1.73	0.05	3.01	0.76	3.69	1.32	2.25	2.1025	2.37	2.214615	
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		
2014-02-14	0.12	1.53	-0.24	2.75	0.56	3.41	1.14	2.19		2.27		
2014-02-21	0.12	1.54	-0.23	2.73	0.6	3.42	1.16	2.13		2.26		
2014-02-28	0.11	1.52	-0.26	2.69	0.53	3.35	1.08	2.16		2.27		Average of 10 & 20 year
2014-03-07	0.12	1.55	-0.26	2.71	0.52	3.37	1.04	2.19		2.33		**2.158558**
2014-03-14	0.12	1.59	-0.22	2.72	0.53	3.37	1.06	2.19		2.31		
2014-03-21	0.14	1.67	-0.1	2.74	0.58	3.36	1.08	2.16		2.28		
2014-03-28	0.13	1.73	-0.01	2.72	0.59	3.29	1.03	2.13		2.26		
2014-04-04	0.12	1.75	0.05	2.77	0.64	3.35	1.07	2.13		2.28		
2014-04-11	0.1	1.63	-0.04	2.68	0.55	3.27	1	2.13		2.27		
2014-04-18	0.11	1.67	-0.1	2.67	0.51	3.23	0.95	2.16		2.28		
2014-04-25	0.11	1.74	-0.24	2.71	0.5	3.23	0.92	2.21		2.31		
2014-05-02	0.1	1.7	-0.26	2.66	0.48	3.2	0.9	2.18		2.3		
2014-05-09	0.1	1.65	-0.27	2.62	0.44	3.15	0.84	2.18		2.31		
2014-05-16	0.09	1.59	-0.33	2.57	0.39	3.12	0.84	2.18		2.28		
2014-05-23	0.09	1.55	-0.4	2.54	0.35	3.12	0.83	2.19		2.29		
2014-05-30	0.1	1.53	-0.42	2.47	0.25	3.05	0.73	2.22		2.32		
2014-06-06	0.1	1.64	-0.28	2.59	0.4	3.16	0.87	2.19		2.29		
2014-06-13	0.11	1.69	-0.25	2.62	0.41	3.17	0.89	2.21		2.28		
2014-06-20	0.1	1.72	-0.26	2.63	0.39	3.17	0.86	2.24		2.31		
2014-06-27	0.11	1.68	-0.36	2.57	0.3	3.12	0.77	2.27		2.35		
2014-07-04	0.11	1.68	-0.33	2.6	0.34	3.16	0.81	2.26		2.35		
2014-07-11	0.11	1.69	-0.31	2.57	0.29	3.11	0.75	2.28		2.36		
2014-07-18	0.11	1.69	-0.28	2.53	0.28	3.06	0.72	2.25		2.34		
2014-07-25	0.11	1.69	-0.25	2.49	0.24	3.01	0.65	2.25		2.36		
2014-08-01	0.12	1.73	-0.22	2.53	0.25	3.03	0.67	2.28		2.36		
2014-08-08	0.11	1.64	-0.25	2.47	0.23	3	0.66	2.24		2.34		
2014-08-15	0.1	1.59	-0.26	2.41	0.19	2.95	0.64	2.22		2.31		
2014-08-22	0.11	1.63	-0.19	2.41	0.24	2.93	0.65	2.17		2.28		
2014-08-29	0.11	1.66	-0.13	2.37	0.23	2.85	0.6	2.14		2.25		
2014-09-05	0.1	1.7	-0.07	2.44	0.28	2.93	0.64	2.16		2.29		
2014-09-12	0.11	1.78	0.05	2.54	0.42	3.01	0.77	2.12		2.24		
2014-09-19	0.12	1.82	0.17	2.61	0.54	3.1	0.89	2.07		2.21		
2014-09-26	0.1	1.79	0.17	2.55	0.54	3.01	0.89	2.01		2.12		
2014-10-03	0.11	1.73	0.15	2.47	0.51	2.92	0.85	1.96		2.07		
2014-10-10	0.1	1.61	0.08	2.36	0.41	2.82	0.77	1.95		2.05		
2014-10-17	0.1	1.41	0.02	2.19	0.29	2.67	0.64	1.9		2.03		
2014-10-24	0.11	1.47	0.02	2.25	0.35	2.73	0.7	1.9		2.03		
2014-10-31	0.11	1.57	0.09	2.32	0.41	2.78	0.76	1.91		2.02		
2014-11-07	0.12	1.63	0.08	2.36	0.42	2.79	0.77	1.94		2.02		
2014-11-14	0.14	1.64	0.13	2.36	0.45	2.8	0.78	1.91		2.02		
2014-11-21	0.14	1.64	0.22	2.33	0.49	2.78	0.79	1.84		1.99		
2014-11-28	0.14	1.56	0.13	2.25	0.42	2.68	0.74	1.83		1.94		
2014-12-05	0.15	1.6	0.23	2.27	0.5	2.69	0.8	1.77		1.89		
2014-12-12	0.2	1.61	0.34	2.19	0.49	2.55	0.73	1.7		1.82		
2014-12-19	0.23	1.61	0.4	2.14	0.49	2.47	0.69	1.65		1.78		
2014-12-26	0.27	1.74	0.46	2.24	0.55	2.54	0.74	1.69		1.8		

ASWATH DAMODARAN'S WACC - AS OF JANUARY 2015

For Tax Year 2015

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)	Pre-Tax Cost of Capital	Cost of Capital
Advertising	52	1.18	8.96%	66.39%	51.52%	3.67%	4.13%	2.20%	33.61%	7.18%	6.69%
Aerospace/Defense	93	1.16	8.84%	84.07%	50.15%	3.67%	14.87%	2.20%	15.93%	8.02%	7.78%
Air Transport	22	0.98	7.80%	55.09%	53.32%	3.67%	18.71%	2.20%	44.91%	5.94%	5.28%
Apparel	64	0.99	7.88%	82.83%	56.24%	3.67%	11.16%	2.20%	17.17%	7.16%	6.90%
Auto & Truck	22	1.09	8.47%	48.56%	43.52%	3.17%	4.45%	1.90%	51.44%	5.74%	5.09%
Auto Parts	75	1.35	9.92%	77.73%	53.89%	3.67%	11.05%	2.20%	22.27%	8.53%	8.20%
Bank (Money Center)	13	0.81	6.81%	31.38%	39.98%	3.17%	26.43%	1.90%	68.62%	4.31%	3.44%
Banks (Regional)	676	0.53	5.20%	56.28%	37.41%	3.17%	20.66%	1.90%	43.72%	4.31%	3.76%
Beverage (Alcoholic)	22	1.06	8.24%	82.05%	55.14%	3.67%	8.54%	2.20%	17.95%	7.42%	7.16%
Beverage (Soft)	46	1.14	8.71%	81.27%	61.94%	3.67%	5.55%	2.20%	18.73%	7.77%	7.49%
Broadcasting	28	1.30	9.62%	58.46%	62.12%	3.67%	18.34%	2.20%	41.54%	7.15%	6.54%
Brokerage & Investment Banking	46	1.16	8.84%	24.78%	44.77%	3.17%	13.99%	1.90%	75.22%	4.57%	3.62%
Building Materials	39	1.12	8.59%	75.62%	43.52%	3.17%	17.45%	1.90%	24.38%	7.27%	6.96%
Business & Consumer Services	177	1.19	9.03%	76.68%	52.77%	3.67%	13.30%	2.20%	23.32%	7.78%	7.44%
Cable TV	18	0.91	7.42%	69.06%	52.83%	3.67%	21.18%	2.20%	30.94%	6.26%	5.81%
Chemical (Basic)	46	0.94	7.55%	71.27%	50.32%	3.67%	10.88%	2.20%	28.73%	6.43%	6.01%
Chemical (Diversified)	10	1.17	8.91%	75.08%	41.14%	3.17%	22.47%	1.90%	24.92%	7.48%	7.17%
Chemical (Specialty)	103	1.03	8.07%	82.40%	51.80%	3.67%	11.16%	2.20%	17.60%	7.29%	7.04%
Coal & Related Energy	42	1.64	11.61%	47.53%	74.62%	4.17%	0.99%	2.50%	52.47%	7.71%	6.83%
Computer Services	119	1.16	8.84%	78.39%	59.41%	3.67%	10.48%	2.20%	21.61%	7.72%	7.40%
Computers/Peripherals	64	1.21	9.13%	91.35%	66.35%	4.17%	7.35%	2.50%	8.65%	8.70%	8.56%
Construction Supplies	55	1.60	11.37%	68.78%	47.26%	3.17%	16.28%	1.90%	31.22%	8.81%	8.42%
Diversified	23	1.00	7.91%	62.16%	32.85%	3.17%	13.96%	1.90%	37.84%	6.12%	5.64%
Drugs (Biotechnology)	400	1.10	8.52%	92.18%	93.06%	5.17%	1.48%	3.10%	7.82%	8.26%	8.10%
Drugs (Pharmaceutical)	151	1.03	8.08%	88.17%	75.04%	4.17%	4.58%	2.50%	11.83%	7.61%	7.42%
Education	42	1.13	8.65%	71.72%	70.19%	4.17%	12.18%	2.50%	28.28%	7.39%	6.91%
Electrical Equipment	126	1.24	9.29%	85.57%	65.34%	4.17%	5.99%	2.50%	14.43%	8.55%	8.31%
Electronics (Consumer & Office)	28	1.37	10.06%	95.76%	56.16%	3.67%	4.50%	2.20%	4.24%	9.79%	9.73%
Electronics (General)	189	1.03	8.08%	87.19%	69.01%	4.17%	8.64%	2.50%	12.81%	7.58%	7.37%
Engineering/Construction	56	1.31	9.69%	78.55%	47.91%	3.17%	14.18%	1.90%	21.45%	8.29%	8.02%
Entertainment	84	1.21	9.10%	78.42%	58.48%	3.67%	4.11%	2.20%	21.58%	7.93%	7.61%
Environmental & Waste Services	103	1.28	9.56%	71.14%	65.61%	4.17%	6.31%	2.50%	28.86%	8.00%	7.52%
Farming/Agriculture	37	0.84	7.02%	62.32%	41.59%	3.17%	9.36%	1.90%	37.68%	5.57%	5.09%
Financial Svcs. (Non-bank & Insurance)	288	0.67	6.01%	7.65%	38.80%	3.17%	18.49%	1.90%	92.35%	3.39%	2.22%
Food Processing	96	0.99	7.88%	78.61%	42.05%	3.17%	13.70%	1.90%	21.39%	6.88%	6.60%
Food Wholesalers	14	1.41	10.29%	85.40%	35.73%	3.17%	13.47%	1.90%	14.60%	9.25%	9.07%
Furn/Home Furnishings	27	1.09	8.44%	78.98%	54.24%	3.67%	14.48%	2.20%	21.02%	7.43%	7.13%
Green & Renewable Energy	26	1.32	9.76%	47.63%	53.18%	3.67%	1.94%	2.20%	52.37%	6.57%	5.80%
Healthcare Products	261	0.99	7.86%	86.46%	64.48%	3.67%	6.73%	2.20%	13.54%	7.29%	7.09%
Healthcare Support Services	138	1.05	8.23%	78.95%	46.72%	3.17%	13.27%	1.90%	21.05%	7.16%	6.90%
Heathcare Information and Technology	127	0.95	7.63%	83.51%	70.49%	4.17%	6.35%	2.50%	16.49%	7.06%	6.79%
Homebuilding	35	1.29	9.57%	62.20%	53.78%	3.67%	18.11%	2.20%	37.80%	7.34%	6.78%
Hospitals/Healthcare Facilities	56	0.97	7.76%	56.95%	43.11%	3.17%	10.93%	1.90%	43.05%	5.79%	5.24%
Hotel/Gaming	80	1.18	8.96%	64.67%	49.55%	3.17%	11.41%	1.90%	35.33%	6.91%	6.47%
Household Products	135	1.03	8.08%	84.11%	61.63%	3.67%	10.46%	2.20%	15.89%	7.38%	7.15%
Information Services	67	1.11	8.58%	88.25%	42.71%	3.17%	17.93%	1.90%	11.75%	7.95%	7.80%
Insurance (General)	24	1.03	8.09%	69.91%	35.35%	3.17%	19.21%	1.90%	30.09%	6.61%	6.23%
Insurance (Life)	25	1.04	8.16%	58.40%	34.48%	3.17%	24.30%	1.90%	41.60%	6.08%	5.56%
Insurance (Prop/Cas.)	52	0.83	6.94%	75.24%	36.73%	3.17%	22.18%	1.90%	24.76%	6.00%	5.69%
Investments & Asset Management	148	1.10	8.48%	57.45%	41.63%	3.17%	6.84%	1.90%	42.55%	6.22%	5.68%
Machinery	137	1.23	9.22%	83.03%	46.22%	3.17%	15.64%	1.90%	16.97%	8.20%	7.98%
Metals & Mining	124	1.28	9.54%	66.36%	74.49%	4.17%	1.80%	2.50%	33.64%	7.73%	7.17%
Office Equipment & Services	25	1.34	9.89%	65.84%	49.87%	3.17%	18.65%	1.90%	34.16%	7.59%	7.16%
Oil/Gas (Integrated)	8	0.81	6.81%	90.04%	33.56%	3.17%	14.56%	1.90%	9.96%	6.45%	6.33%
Oil/Gas (Production and Exploration)	392	1.27	9.45%	67.49%	71.93%	4.17%	7.04%	2.50%	32.51%	7.74%	7.19%
Oil/Gas Distribution	85	0.96	7.71%	67.68%	43.15%	3.17%	4.68%	1.90%	32.32%	6.25%	5.84%
Oilfield Svcs/Equip.	161	1.54	11.04%	78.35%	65.23%	4.17%	10.99%	2.50%	21.65%	9.56%	9.19%
Packaging & Container	26	0.95	7.62%	67.30%	31.06%	3.17%	18.18%	1.90%	32.70%	6.16%	5.75%
Paper/Forest Products	22	0.84	6.97%	66.22%	44.94%	3.17%	11.54%	1.90%	33.78%	5.69%	5.26%
Power	82	0.83	6.94%	56.90%	29.70%	3.17%	20.77%	1.90%	43.10%	5.31%	4.77%

ASWATH DAMODARAN'S WACC - AS OF JANUARY 2015

For Tax Year 2015

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)*	*Pre-Tax Cost of Capital*	*Cost of Capital*
Precious Metals	147	1.29	9.61%	71.02%	93.69%	5.17%	1.33%	3.10%	28.98%	8.32%	7.72%
Publshing & Newspapers	43	1.15	8.77%	67.85%	50.42%	3.67%	14.93%	2.20%	32.15%	7.13%	6.66%
R.E.I.T.	213	0.79	6.69%	53.05%	31.55%	3.17%	1.24%	1.90%	46.95%	5.04%	4.44%
Real Estate (Development)	18	1.02	8.04%	68.77%	43.65%	3.17%	7.21%	1.90%	31.23%	6.52%	6.13%
Real Estate (General/Diversified)	11	1.82	12.63%	78.39%	45.97%	3.17%	9.39%	1.90%	21.61%	10.59%	10.31%
Real Estate (Operations & Services)	52	1.30	9.66%	63.56%	50.05%	3.67%	8.63%	2.20%	36.44%	7.48%	6.94%
Recreation	68	1.21	9.14%	75.97%	50.41%	3.67%	11.25%	2.20%	24.03%	7.82%	7.47%
Reinsurance	4	1.35	9.91%	72.68%	21.20%	2.67%	15.53%	1.60%	27.32%	7.93%	7.64%
Restaurant/Dining	79	0.89	7.30%	78.20%	44.43%	3.17%	15.14%	1.90%	21.80%	6.40%	6.13%
Retail (Automotive)	30	1.18	8.93%	66.58%	48.06%	3.17%	18.76%	1.90%	33.42%	7.00%	6.58%
Retail (Building Supply)	5	1.44	10.46%	83.71%	50.71%	3.67%	30.64%	2.20%	16.29%	9.36%	9.12%
Retail (Distributors)	90	1.12	8.58%	67.57%	52.06%	3.67%	16.84%	2.20%	32.43%	6.99%	6.51%
Retail (General)	23	1.03	8.10%	76.12%	46.36%	3.17%	21.36%	1.90%	23.88%	6.93%	6.62%
Retail (Grocery and Food)	21	1.05	8.20%	64.05%	51.83%	3.67%	22.94%	2.20%	35.95%	6.57%	6.04%
Retail (Online)	46	1.40	10.19%	93.01%	70.16%	4.17%	9.38%	2.50%	6.99%	9.77%	9.65%
Retail (Special Lines)	128	1.07	8.35%	70.70%	51.42%	3.67%	20.44%	2.20%	29.30%	6.98%	6.55%
Rubber& Tires	4	1.02	8.04%	53.26%	49.54%	3.17%	13.58%	1.90%	46.74%	5.76%	5.17%
Semiconductor	100	1.21	9.15%	90.29%	57.12%	3.67%	10.11%	2.20%	9.71%	8.62%	8.48%
Semiconductor Equip	47	1.23	9.26%	85.01%	60.18%	3.67%	6.88%	2.20%	14.99%	8.42%	8.20%
Shipbuilding & Marine	14	1.36	10.00%	65.10%	71.45%	4.17%	6.75%	2.50%	34.90%	7.97%	7.38%
Shoe	13	0.84	7.01%	93.16%	40.80%	3.17%	20.15%	1.90%	6.84%	6.75%	6.66%
Software (Entertainment)	20	1.12	8.58%	85.25%	69.84%	4.17%	1.46%	2.50%	14.75%	7.93%	7.68%
Software (Internet)	327	1.29	9.57%	94.71%	72.48%	4.17%	5.07%	2.50%	5.29%	9.28%	9.19%
Software (System & Application)	259	1.10	8.52%	91.16%	61.85%	3.67%	6.86%	2.20%	8.84%	8.09%	7.96%
Steel	40	1.31	9.72%	60.96%	52.45%	3.67%	13.99%	2.20%	39.04%	7.36%	6.78%
Telecom (Wireless)	21	1.15	8.78%	39.31%	53.05%	3.67%	5.76%	2.20%	60.69%	5.68%	4.79%
Telecom. Equipment	126	1.24	9.32%	89.51%	62.74%	3.67%	8.70%	2.20%	10.49%	8.72%	8.57%
Telecom. Services	77	1.07	8.31%	60.45%	55.60%	3.67%	11.83%	2.20%	39.55%	6.48%	5.90%
Tobacco	20	1.09	8.41%	83.51%	41.74%	3.17%	12.39%	1.90%	16.49%	7.55%	7.34%
Transportation	21	0.86	7.10%	82.62%	42.36%	3.17%	20.08%	1.90%	17.38%	6.42%	6.20%
Transportation (Railroads)	10	1.05	8.19%	83.19%	30.73%	3.17%	21.30%	1.90%	16.81%	7.35%	7.14%
Trucking	30	1.32	9.78%	60.00%	48.49%	3.17%	27.38%	1.90%	40.00%	7.14%	6.63%
Unclassified	8	0.10	2.77%	79.20%	NA	#N/A	3.93%	#N/A	20.80%	#N/A	#N/A
Utility (General)	21	0.59	5.58%	62.00%	23.02%	2.67%	30.59%	1.60%	38.00%	4.47%	4.07%
Utility (Water)	19	1.09	8.41%	66.59%	38.21%	3.17%	15.10%	1.90%	33.41%	6.66%	6.24%
Total Market	**7887**	**1.06**	**8.29%**	**60.19%**	**53.60%**	**3.67%**	**10.76%**	2.20%	**39.81%**	6.45%	**5.87%**

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Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Dec 31, 2014	2,082.11	2,085.58	2,057.94	2,058.90	2,606,070,000	2,058.90
Dec 30, 2014	2,088.49	2,088.49	2,079.53	2,080.35	2,440,280,000	2,080.35
Dec 29, 2014	2,087.63	2,093.55	2,085.75	2,090.57	2,452,360,000	2,090.57

* Close price adjusted for dividends and splits.

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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.

REV. RUL. 2014–31 TABLE 2
Adjusted AFR for December 2014

	Period for Compounding			
	Annual	*Semiannual*	*Quarterly*	*Monthly*
Short-term adjusted AFR	.34%	.34%	.34%	.34%
Mid-term adjusted AFR	1.28%	1.28%	1.28%	1.28%
Long-term adjusted AFR	2.68%	2.66%	2.65%	2.65%

REV. RUL. 2014–31 TABLE 3
Rates Under Section 382 for December 2014

Adjusted federal long-term rate for the current month	2.68%
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.)	2.80%

REV. RUL. 2014–31 TABLE 4
Appropriate Percentages Under Section 42(b)(1) for December 2014

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	7.51%
Appropriate percentage for the 30% present value low-income housing credit	3.22%

REV. RUL. 2014–31 TABLE 5
Rate Under Section 7520 for December 2014

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. 2014–31 TABLE 6
Rates Under Sections 846 and 807

Applicable rate of interest for 2015 for purposes of sections 846 and 807	1.68%

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 2014. See Rev. Rul. 2014–31, page 935.

Section 7520.—Valuation Tables

The adjusted applicable federal short-term, mid-term, and long-term rates are set forth for the month of December 2014. See Rev. Rul. 2014–31, page 935.

Section 7872.—Treatment of Loans With Below-Market Interest Rates

The adjusted applicable federal short-term, mid-term, and long-term rates are set forth for the month of December 2014. See Rev. Rul. 2014–31, page 935.

S&P GICS Composite 1500 Valuations as of 12/31/14

	Earnings % Change		P/E Ratios			P/Es Rel. to the S&P 1500			Proj. 5-Yr %	2015e P/E to	Div'd
	2014e	2015e	2014e	2015e	5 Yr Avg	2014e	2015e	5 Yr Avg	G. Rate	G. Rate	Yield
S&P GICS Composite 1500	**8.8**	**13.8**	**18.1**	**15.9**	**18.9**	**1.0**	**1.0**	**1.0**	**11.9**	**1.3**	**1.9**
S&P 500	8.8	12.2	17.6	15.7	18.4	1.0	1.0	1.0	11.7	1.3	2.0
S&P 400	5.5	29.8	22.9	17.7	22.2	1.3	1.1	1.2	12.5	1.4	1.5
S&P 600	13.0	30.9	24.3	18.6	24.7	1.3	1.2	1.3	14.3	1.3	1.4
Consumer Discretionary	**8.7**	**18.9**	**21.3**	**17.9**	**21.9**	**1.2**	**1.1**	**1.2**	**15.5**	**1.2**	**1.4**
Advertising	11.6	20.9	20.7	17.1	20.9	1.1	1.1	1.1	8.3	2.1	2.9
Apparel Retail	6.5	13.4	20.9	18.4	20.8	1.2	1.2	1.1	12.0	1.5	1.3
Apparel, Accessories & Luxury Goods	6.1	12.2	22.3	19.9	22.6	1.2	1.2	1.2	17.7	1.1	1.0
Auto Parts & Equipment	5.9	20.0	15.8	13.2	16.9	0.9	0.8	0.9	14.4	0.9	1.7
Automobile Manufacturers	(15.4)	73.9	12.0	6.9	8.9	0.7	0.4	0.5	13.2	0.5	3.3
Automotive Retail	15.9	12.4	21.8	19.4	24.2	1.2	1.2	1.3	15.6	1.2	0.1
Broadcasting	10.9	23.2	17.5	14.2	18.2	1.0	0.9	1.0	16.8	0.8	0.8
Cable & Satellite	16.9	7.5	18.4	17.1	20.6	1.0	1.1	1.1	11.9	1.4	1.3
Casinos & Gaming	1.2	7.4	21.8	20.3	23.9	1.2	1.3	1.3	12.3	1.7	3.5
Computer & Electronics Retail	17.8	14.5	14.3	12.4	14.4	0.8	0.8	0.8	14.0	0.9	2.5
Consumer Electronics	22.5	10.8	19.2	17.3	21.6	1.1	1.1	1.1	12.6	1.4	2.2
Department Stores	13.5	22.9	21.9	17.8	21.7	1.2	1.1	1.2	9.7	1.8	1.9
Distributors	16.0	12.8	22.0	19.5	23.7	1.2	1.2	1.3	13.1	1.5	1.4
Education Services	NM	NM	NM	NM	14.3	NM	NM	0.8	10.4	NM	0.7
Footwear	16.1	10.6	25.9	23.5	27.7	1.4	1.5	1.5	14.2	1.6	1.0
General Merchandise Stores	4.1	15.7	22.4	19.4	20.7	1.2	1.2	1.1	11.8	1.6	1.6
Home Furnishings	19.3	20.9	20.9	17.3	23.1	1.2	1.1	1.2	13.3	1.3	0.9
Home Improvement Retail	20.4	17.8	24.1	20.5	27.0	1.3	1.3	1.4	16.4	1.3	1.6
Homebuilding	11.9	NM	15.3	NM	24.2	0.8	NM	1.3	12.0	NM	0.7
Homefurnishing Retail	0.6	10.7	17.5	15.8	17.4	1.0	1.0	0.9	10.2	1.6	0.5
Hotels, Resorts & Cruise Lines	17.6	31.2	24.9	19.0	25.0	1.4	1.2	1.3	18.6	1.0	1.6
Household Appliances	(7.5)	22.9	16.7	13.6	17.1	0.9	0.9	0.9	24.9	0.5	1.3
Housewares & Specialties	7.9	12.8	17.9	15.9	18.4	1.0	1.0	1.0	11.2	1.4	1.5
Internet Retail	9.3	51.0	70.5	46.7	68.8	3.9	2.9	3.6	31.9	1.5	0.0
Leisure Facilities	4.7	12.9	19.8	17.5	19.8	1.1	1.1	1.1	12.5	1.4	0.2
Leisure Products	(6.3)	8.8	18.2	16.8	17.7	1.0	1.1	0.9	12.6	1.3	2.9
Motorcycle Manufacturers	17.7	13.3	17.0	15.0	18.8	0.9	0.9	1.0	13.4	1.1	1.7
Movies & Entertainment	15.1	12.3	20.5	18.2	22.4	1.1	1.1	1.2	15.6	1.2	1.2
Publishing	(19.0)	(2.4)	18.3	18.7	17.4	1.0	1.2	0.9	9.9	1.9	1.6
Restaurants	1.4	10.2	23.6	21.4	23.4	1.3	1.3	1.2	12.4	1.7	2.3
Specialized Consumer Services	66.7	7.3	19.4	18.1	24.0	1.1	1.1	1.3	12.0	1.5	1.8
Specialty Stores	10.6	24.6	23.3	18.7	23.1	1.3	1.2	1.2	13.5	1.4	1.1
Tires & Rubber	9.4	2.0	9.4	9.2	10.9	0.5	0.6	0.6	12.0	0.8	0.8
Consumer Staples	**4.0**	**9.5**	**20.3**	**18.6**	**20.6**	**1.1**	**1.2**	**1.1**	**9.0**	**2.1**	**2.5**
Agricultural Products	29.2	13.0	16.1	14.2	17.9	0.9	0.9	1.0	12.4	1.2	1.7
Brewers	4.5	7.6	20.5	19.0	21.2	1.1	1.2	1.1	6.2	3.1	1.6
Distillers & Vintners	NM	NM	NM	22.6	29.0	NM	1.4	1.5	12.2	1.9	0.7
Drug Retail	9.5	19.0	23.0	19.3	24.1	1.3	1.2	1.3	14.0	1.4	1.6
Food Distributors	8.8	8.8	21.8	20.0	21.9	1.2	1.3	1.2	8.8	2.3	2.5
Food Retail	22.6	11.4	23.4	21.0	24.8	1.3	1.3	1.3	10.3	2.0	1.3
Household Products	6.5	5.2	20.7	19.7	21.4	1.1	1.2	1.1	7.6	2.6	2.7
Hypermarkets & Super Centers	(1.3)	5.3	19.6	18.7	19.4	1.1	1.2	1.0	7.4	2.5	1.8
Packaged Foods & Meats	(0.9)	12.5	21.2	18.9	20.9	1.2	1.2	1.1	10.7	1.8	2.1
Personal Products	0.4	4.2	20.3	19.5	20.8	1.1	1.2	1.1	11.3	1.7	1.5
Soft Drinks	4.9	13.7	20.7	18.2	20.5	1.1	1.1	1.1	8.7	2.1	2.7
Tobacco	(2.7)	4.9	17.5	16.7	17.4	1.0	1.0	0.9	6.4	2.6	4.5
Energy	**6.7**	**(6.9)**	**13.2**	**14.2**	**13.9**	**0.7**	**0.9**	**0.7**	**12.7**	**1.1**	**2.8**
Coal & Consumable Fuels	NM	NM	NM	NM	NM	NM	NM	NM	11.7	NM	1.4
Integrated Oil & Gas	(5.5)	(26.3)	12.1	16.4	12.1	0.7	1.0	0.6	8.0	2.0	3.3
Oil & Gas Drilling	(6.0)	(7.1)	7.5	8.1	7.7	0.4	0.5	0.4	3.2	2.5	7.3
Oil & Gas Equipment & Services	20.2	(0.2)	13.5	13.5	15.5	0.7	0.8	0.8	17.3	0.8	1.6
Oil & Gas Exploration & Production	34.9	26.2	14.6	11.6	18.1	0.8	0.7	1.0	12.5	0.9	1.8
Oil & Gas Refining & Marketing	20.9	5.9	10.3	9.7	10.5	0.6	0.6	0.6	15.9	0.6	2.7
Oil & Gas Storage & Transport	4.9	12.0	37.7	33.6	35.7	2.1	2.1	1.9	27.2	1.2	4.4
Financials	**7.4**	**9.4**	**15.4**	**14.1**	**16.7**	**0.8**	**0.9**	**0.9**	**10.2**	**1.4**	**2.0**
Asset Management & Custody Banks	8.1	14.5	17.5	15.3	18.3	1.0	1.0	1.0	13.6	1.1	1.8
Consumer Finance	5.0	NM	13.3	NM	15.2	0.7	NM	0.8	9.8	NM	1.4
Diversified Banks	14.1	10.0	12.0	10.9	13.0	0.7	0.7	0.7	10.1	1.1	1.8
Diversified REITs	150.1	19.3	57.1	47.9	77.2	3.2	3.0	4.1	8.3	5.8	3.2
Industrial REITs	(6.4)	(25.4)	58.1	77.9	102.5	3.2	4.9	5.4	8.4	9.2	3.1

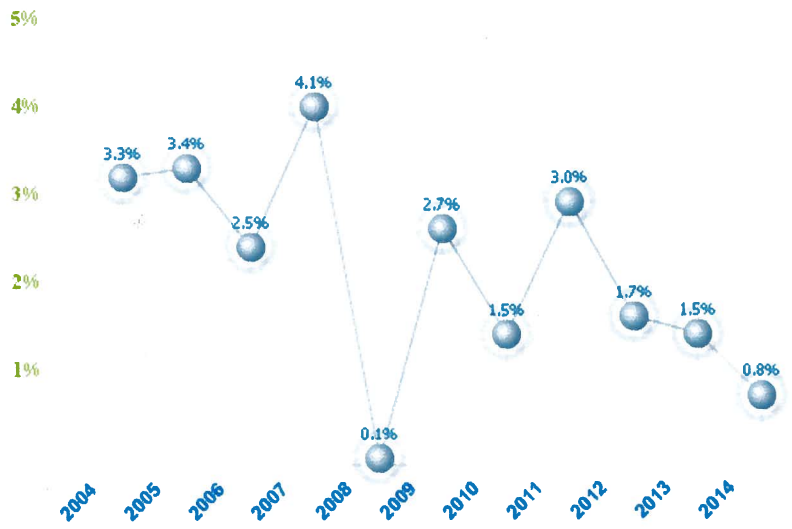
Current US Inflation Rates: 2004-2015

The latest inflation rate for the United States is 0.8% through the 12 months ended December 2014, as published by the US government on January 16, 2015. The next update is scheduled for release on February 26, 2015 at 8:30 a.m. ET. It will offer the rate of inflation over the 12 months ended January 2015.

The chart, graph and table below displays **annual US inflation rates** for calendar years 2004-2014. Rates of inflation are calculated using the current Consumer Price Index published monthly by the Bureau of Labor Statistics (BLS). For 2015, when available, the most recent monthly data (12-month based) will be used in the chart and graph.

Historical inflation rates are available from 1914-2014. If you would like to calculate accumulated rates between different dates, the US Inflation Calculator will do that quickly.

Inflation Rates Graph (2004-2014)



Annual Inflation Rates Chart (2004-2014)

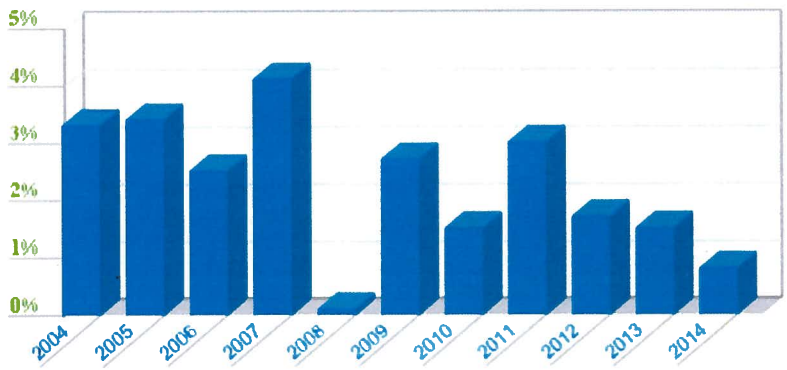


Table of Inflation Rates (%) by Month and Year (1999-2015)

Since figures below are 12-month periods, look to the December column to find inflation rates by calendar year. These also appear in the graph and chart above. For example, the rate of inflation in 2014 was 0.8%. The last column, "Ave," shows the average inflation rate for each

year. They are published by the BLS but are rarely discussed in news media, taking a back seat to a calendar year's actual rate of inflation.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2015													
2014	1.6	1.1	1.5	2.0	2.1	2.1	2.0	1.7	1.7	1.7	1.3	0.8	1.6
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

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