



DEPARTMENT OF REVENUE

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MEMORANDUM

TO: All Department Assessed Companies and Interested Parties

FROM: Alan Lemaster
Appraisal Supervisor
Appraisal Services Group
Property Tax Division

SUBJECT: 2017 Executive Summary of Capitalization Rates for Department Assessments

DATE: March 31, 2017

This document contains the 2017 capitalization rates for Department assessed industries. There are 8 pages listing the major industry, industry sub-groupings (if applicable) and rating agency sub-grouping for capital structures, rates for debt and common equity and an overall rate of return.

The capitalization rate procedures used are in compliance with Wyoming Department of Revenue Rules and Regulations, Chapter 7 "PROPERTY TAX VALUATION METHODOLOGY AND ASSESSMENT (DEPARTMENT ASSESSMENTS)" Section 7. Capitalization Rate Development.

The Band-of-Investment method was used to estimate the capitalization rates. This method requires capital structures and rates based upon current industry standards as evidenced by the market. Individual company embedded rates of return and capital structures were not used.

The capital structures used were those typical to an industry rather than company specific. Good appraisal practice dictates use of a capital structure typical for an industry purchaser. Data was gathered by industry, industry sub-grouping (if applicable) and sub-groupings with similar bond ratings and estimated on the basis of current market statistics, trends, regulatory guidelines, financing considerations and appraisal judgment. Rates (debt and common equity) changed from the prior assessment year study. The rates did not change uniformly from industry to industry or by respective bond ratings.

Rates of return for debt were based upon the annual average of the current yields of bonds. Sources for this data were reviewed from: Mergent's Bond Record, Standard and Poor's Corporate Bond Yields, Value Line Investment Survey, Cooperative Finance Corporation, Federal Reserve Bulletin, Thomson/Reuters Financial Spread for Industrials and the Bloomberg's Industrial Bonds Record. The corresponding debt rates used were from the 20 year Industrial Bond as reported by Bloomberg.

Equity rates of return were based upon industry data for indicated returns on common equity. The equity rates were based on various measures of cash returns on annual average high and low common stock prices as shown in the January 3, 2017 "Wall Street Journal". The Discounted Cash Flow Models (DCF), Risk Premium Models (RP) and the Capital Asset Pricing Models (CAPM) were used to determine equity rates of return. Risk Premiums adjustments and Size Premia return adjustments were calculated from the Duff and Phelps-2017 Valuation Handbook "Guide to Cost of Capital", exhibit 2.3 and Appendix 3 CRSP Deciles Size Premia Study. Data for the application of the Ex-Ante adjustments was obtained from MorningStar, Zacks, Reuters and International Data Corporation.

Appraisal Services Group appraisers analyzed the studies and/or comments as submitted by the respective companies or industries by the March 28, 2017 comment deadline, and utilized them when deemed appropriate under Department of Revenue Rules and Regulations to assist in developing derived rates. The final rates and overall rates of return reflect Flotation Cost adjustments as calculated by the Department from available sources, i.e. Public Utility Finance Tracker and industry studies, as applicable.

Following discussions at the 2017 Capitalization Rate Meeting, changes to the individual industry cap rates have been made. Those changes include:

Major/IOU Electrics: Adjustments were made to the weighting of the overall Cost of Equity techniques. The new weighting slightly increased the overall Adjusted Cost of Equity and overall selected Cap Rate.

Merchant Electrics: Adjustments were made to the weighting of the overall Cost of Equity techniques. The new weighting slightly increased the overall Adjusted Cost of Equity and overall selected Cap Rate. Selected companies within the overall sample size changed also. With the new selected sample of companies, analysis was re-ran, and the new data provided by those indicators was used.

Railroads: Adjustments were made to the weighting of the overall Cost of Equity techniques. The new weighting slightly increased the overall Adjusted Cost of Equity and overall selected Cap Rate.

Telecom Companies: Adjustments were made regarding the companies used in the sample cap rate studies which affected capital structure, cost of equity and debt rates. These changes slightly increased the overall WACC for each industry.

Although capitalization rates involve many subjective judgments, the Department has made reasonable estimates that reflect current market conditions or changes in industry patterns for the appraisal period. The Department greatly appreciates the efforts of all parties who assisted with the capitalization rate process by submission of studies, supplemental comments and attendance at the annual Appraisal Services Group capitalization rate input meeting conducted March 15, 2017.

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

AIRLINES-MAJOR, REGIONAL & CARGO

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS	DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	
Major Airlines	All	26%	0%	74%	7.41%	0.00%	13.24%	11.70%
Regional Airlines	All	23%	0%	77%	8.60%	0.00%	13.76%	12.60%
Cargo Airlines	All	22%	0%	78%	4.85%	0.00%	12.81%	11.10%

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

ELECTRIC- INVESTOR OWNED, G &T, MUNICIPAL, MERCHANT, RURAL

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS	DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	
Investor Owned and G&T's	All	40%	0%	60%	4.97%	0.00%	10.50%	8.30%
Municipal	All	40%	0%	60%	4.97%	0.00%	10.50%	8.30%
Merchant	B	72%	0%	28%	8.33%	0.00%	12.51%	9.50%
Rural Electric <i>Distribution</i>	N/R	50%	0%	50%	5.50%	0.00%	5.23%	5.40%

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

NATURAL GAS PIPELINES

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	COMMON EQUITY	
Interstate Carriers	All	39.00%	0.00%	61.00%	5.89%	0.00%	17.57%	13.00%

**WYOMING DEPARTMENT OF REVENUE
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APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

LIQUID PIPELINES

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	COMMON EQUITY	
Interstate Carriers	All	39.00%	0.00%	61.00%	5.89%	0.00%	17.57%	13.00%

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

RAILROADS

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	COMMON EQUITY	
All	All	22%	0%	78%	5.66%	0.00%	12.88%	11.30%

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

TELECOMMUNICATIONS

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS	DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	
Reseller/Broadband	All	20%	0%	80%	9.03%	0.00%	13.02%	12.20%
Wireline	All	33%	0%	67%	9.01%	0.00%	12.47%	11.30%
Long Distance	All	33%	0%	67%	9.01%	0.00%	12.47%	11.30%
Rural Communications	All	51%	0%	49%	10.60%	0.00%	13.75%	12.10%
Cellular/Wireless	All	33%	0%	67%	9.01%	0.00%	12.47%	11.30%
VOIP	All	33%	0%	67%	9.01%	0.00%	12.47%	11.30%
Cable/Satellite	All	33%	0%	67%	9.01%	0.00%	12.47%	11.30%

**WYOMING DEPARTMENT OF REVENUE
PROPERTY TAX DIVISION
APPRAISAL SERVICES GROUP
2017 CAPITALIZATION RATE STUDY**

GAS DISTRIBUTION

SUB-GROUPING DESCRIPTION	ST. & POOR RATING	CAPITAL STRUCTURE			RATE OF RETURN			OVERALL RATE
		BONDS DEBT	PREFERRED STOCK	COMMON EQUITY	DEBT	PREFERRED STOCK	COMMON EQUITY	
	All	26.00%	0.00%	74.00%	4.55%	0.00%	11.78%	9.90%