DEPARTMENT OF REVENUE

State Assessed Property Section

Review of Minnesota Rules, Chapter 8100

4/24/2023

Contents

Legislative Requirements

First Special Session, Chapter 14 included an uncodified provision related to Minnesota Rules, Chapter 8100.

Article 6, Section 20 states:

> Sec. 20. REVIEW OF UTILITY AND PIPELINE VALUATION PROCESS.
>
> The commissioner of Revenue **shall initiate a review of the framework for valuations of property** described in Minnesota Statutes, sections 273.33, 273.35, 273.36, and 273.37, **including the methodology for valuations prescribed in Minnesota Rules, chapter 8100.**
>
> EFFECTIVE DATE. This section is effective the day following final enactment.

This section requires a review of the framework[1] for valuations of property of:

- Pipeline companies and others engaged in transporting products by pipelines
- Gas and water companies
- Electric light and power companies
- Companies supplying electric power

The review also includes the methodology for valuations prescribed in Minnesota Rules, Chapter 8100.

Additional Background

Commissioner's Office and Legislative Staff Review

The Department of Revenue issued a Review of Utility and Pipeline Valuation Project Stakeholder Engagement Update. The Stakeholder Engagement Process educated stakeholders on how the current process works and received feedback from stakeholders on what they and value the most in terms of how Rule 8100 impacts stakeholders.

As part of educating stakeholders, Revenue created a webinar for users to view on demand to learn, in detail, about Rule 8100, Rule 8106 and how each fit into the overall property tax system in Minnesota.

State Assessed Property Section Review

In addition to the Stakeholder Engagement Process, the State Assessed Property Section reviewed theoretical ideals and best practices for valuing utility, pipeline, and railroad operating property and added a comparison to Minnesota Rule, Chapter 8100.

More on Assessment and Valuation

Revenue is required to assess the operating property of utility and pipeline companies and certify those estimated market values to the counties where the property is located. "Estimated market values" means the assessor's determination of market value. Market value is the price that would tend to prevail under typical, normal, competitive open-market conditions.[2]

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[1] The ideas, information, and principles that form the structure of an organization or plan.

[2] Minnesota Statutes, section 272.03, subdivisions 8 and 14; Property Tax Administrators Manual, Module 2, p. 5

Summary of the Capitalization Rate Study Process

Revenue determines the estimated market value for utility, pipeline, and railroad operating property as of January 2 each year. We determine the unit value of the entire system to estimate the market value of these properties, in part, with the income approach to valuation. This approach measures the present value of the anticipated future benefits of property ownership.

For each market segment, the study derives:

- A yield capitalization rate (yield rate)
- A direct capitalization rate (direct rate)
- An implied growth rate
- A short-term growth rate
- A long-term growth rate
- An implied inflation rate

The market segments are:

- Electric
- Gas distribution
- Gas transmission pipeline
- Fluid transportation pipeline
- Railroad

We calculate yield and direct rates using the band of investment method. This method considers equity and debt financing and is the weighted rate of the cost of debt combined with the weighted rate for the cost of equity.

Each year, Revenue analyzes extensive market data to complete the study. More specifically, we:

- Select guideline companies for each market segment.
- Review companies' standard industrial classification codes and companies classified in specific markets by third party sources.
- Review each company's website to ensure fit as a guideline company.
- Determine if the company recently announced, is in the middle of, or recently completed a merger, as those companies would not be used as guideline companies.

Out of the approximately 150 companies reviewed as potential guideline companies, Revenue ultimately selects approximately 50 companies as guidelines. While many of the companies are used as guidelines in consecutive years, we complete a new analysis each year to determine if each company is still a good fit as a guideline company or if a company that was not used is now a good fit.

Next, Revenue gathers market data (approximately 35 different data points) from several resources (over five different sources) for each guideline company (and each individual guideline company's Securities and Exchange Commission form). We then gather market data that is applicable to each guideline company, including reviewing several sources to determine the average expected growth rate of the U.S. economy, each market segment's average expected growth rate, equity risk premium estimates, and risk free rate.

We then complete the following calculations and models:

- Unlever and relever each guideline company's beta, to use in the beta analysis.
- Beta analysis, using each guideline company's beta and unlevered/relevered beta to determine the overall riskiness of the market segment, used in the capital asset pricing model.
- Direct equity component, analyze each guideline company's price to equity ratio to determine the overall price to equity ratio of the market segment.
- Three-stage dividend growth model for each guideline company, using the company's current stock price, expected dividends, and an estimate of expected growth rate in dividends. Using three different stages of growth, determine the implied cost of equity for the market segment.
- Two-stage dividend growth model for each guideline company, using the company's dividend yield, short-term growth estimate, and the stable growth rate of the U.S. economy, apply growth rate in two stages to determine the implied cost of equity for the market segment.
- Single-stage dividend growth model using each guideline company's current dividend yield and projected short-term growth rate in earnings per share and in dividends to determine the implied cost of equity for the market segment.
- Capital asset pricing model and empirical capital asset pricing model, using an estimate of the equity risk premium from over 5 different sources (including one estimate calculated by the department using a three-stage model), the industry beta, and the risk-free rate to estimate the implied cost of equity for the market segment.
- Cost of debt, using the indexed debt rate based on each guideline company's debt rating and published yield rate to estimate the cost of debt for the market segment.[3]
- Capital structure, analyzing each guideline company's financing decisions of how much the company funds its operations with debt and how much with equity to determine the market segment's capital structure.
- Determine the best estimate of cost of debt and cost of equity and apply to the capital structure, to develop both the yield and direct rates.

Each year, Revenue evaluates models and data sources to determine if changes are needed. In several instances, we publish new models for feedback prior to relying heavily on the new model or data source.

Once the study is completed, Revenue posts a draft study welcoming comments from interested parties. We review the comments and incorporate the feedback, often adjusting the overall rates, before publishing the final study with the rates used in the valuation of utility, pipeline, and railroad companies with operating property in Minnesota.

[3] When time allows, we review recent debt issuances by each guideline company and completes yield to maturity calculations.

Defining Framework for Valuation[4]

Framework from The Appraisal of Real Estate[5]

The valuation process is a systematic procedure an appraiser follows to provide answers to a client's questions about real property value. It is a model that can be adapted to a wide variety of questions that relate to value. The objective of most appraisal assignments is to develop an opinion of market value. The valuation process contains all the steps appropriate for this type of assignment. The model also provides the framework for developing an opinion of other defined values. In assignments to develop an opinion of market value, the ultimate goal of the valuation process is a well-supported conclusion that reflects all of the pertinent factors that influence the market value of the property being appraised. To achieve this goal, an appraiser uses three different approaches to value:

- In the cost approach, value is indicated by the current cost of reproducing or replacing the improvements (including indirect costs and entrepreneurial incentive), less depreciation, plus land value.
- In the sales comparison approach, value is indicated by analysis of sales of comparable properties appropriately adjusted for difference form the subject property.
- In the income capitalization approach, value is indicated by the present value of a property's earning power, based on the capitalization of income.

Traditionally, specific appraisal techniques are applied within the three approaches to derive indications of real property value. One or more approaches to value may be used depending on which approaches are necessary to produce credible assignment results, given the intended use. The three approaches are interrelated.[6] Each requires the gathering and analysis of data that pertains to the property being appraised. From the approaches applied, the appraiser develops separate indications of value for the property being appraised. To complete the valuation process, the appraiser integrates the information drawn from market research, data analysis, and the application of the approaches to reach a value conclusion. The effective integration of all the elements in the process depends on the appraiser's skill, experience, and judgment.

Special-Purpose Properties

All properties are built for a specific use, but some properties are labeled **special-purpose properties** when the features of the improved property are appropriate for only a specific use or a limited number of uses, which may be costly to modify to another use. The highest and best use of a special-purpose property as improved is probably the continuation of its current use if that use remains viable and there is sufficient market demand for that use. The highest and best use analysis would likely include some forecast of continued economic demand.

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[4] The framework in this review relates to estimating the unitary valuation of the utility or pipeline company. It does not review allocation to Minnesota, adjustments to Minnesota allocated value, apportionment, or equalization.

[5] (Appraisal Institute, 2020)

[6] The sales comparison approach was once known as the "market approach." However, all three approaches to value are "market" approaches in that they rely on market data.

Components of the Valuation Process

This table shows the components of the valuation process.

Identification of the Problem					
Identify the client and intended users	Identify the intended use	Identify the type and definition of value	Identify the effect date of the opinion	Identify the relevant characteristics of the property	Identify any assignment conditions

Scope of Work Determination

Data Collection and Property Description		
Market Area Data	*Subject Property Data*	*Comparable Property Data*
General characteristics of region, city, and neighborhood	Subject characteristics of land use and improvements, personal property, business assets, etc.	Sales, listings, offers, vacancies, cost and depreciation, income and expenses, capitalization rates, etc.

Data Analysis	
Market Analysis	*Highest and Best Use Analysis*
Demand studies	Land as though vacant
Supply studies	Ideal improvement
Marketability studies	Property as improved

Land Value Opinion

Application of the Approaches to Value		
Sales Comparison Approach	Income Capitalization Approach	Cost Approach

Reconciliation of Value Indications and Final Opinion of Value

Report of Defined Value

Almost all appraisal assignments are subject to some conditions that affect the scope of work and must be communicated to the client to put the appraiser's analysis in the property context.

Assignment conditions include:

- General assumptions
- Special (or "extraordinary") assumptions
- Hypothetical conditions
- Laws and regulations
- Jurisdictional exceptions
- Other conditions that affect the scope of work for an assignment

Types of Value:

- Market value
- Fair value
- Use value
- Investment value
- Assessed value
- Insurable value
- Liquidation value
- Disposition value

Rights to be Appraised

The most complete form of ownership is the fee simple estate. This means absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat. Appraiser may be asked to value a partial interest or fractional interest. Fee simple estate is not absolute because it is subject to the four powers of government: taxation, eminent domain, police power, and escheat.

The complete bundle of rights includes the right to:

- Sell an interest
- Transfer an interest
- Lease an interest
- Occupy the property
- Mortgage an interest
- Give an interest away

A partial interest is any interest or group of interests that makes up less than the entire bundle of rights. Partial interests can be created in several ways:

- Economically
- Legally
- Physically
- Financially

Scope of Work

In the valuation process, the identification of the assignment elements leads directly into the determination of the scope of work of an assignment, which is the type and extent of research needed to solve an appraisal problem.

Developing a scope of work is a bottom-up process: an appraiser starts with the valuation practices that are essential in all assignments then considers the applicability of the professional standards and practices to the problem at hand. The ideal solution is arrived at not by reducing a standardized procedure to meet specific required components, but rather by building a logical framework for the assignment from the ground up.

In effect, scope of work provides appraisers with the flexibility to perform the level of analysis that is appropriate for a specific appraisal assignment. However, with that flexibility comes the responsibility to determine what the appropriate level of analysis is and to communicate that to the client.

The scope of work discussion should address the following topic areas:

- The extent to which the property was identified
- The extent to which the property was inspected
- The type and extent of data researched
- The type and extent of analyses applied

Data Collection

In real estate appraisal, the quality and quantity of information available for analysis are as important as the methods and techniques used to process the data and complete the assignment. The scope of work of an appraisal assignment includes consideration of the extent of the data collection process.

Appraisers gathers data directly (primary data) and use data that has been gathered by outside sources (secondary data). The data that appraisers use in the valuation process can be characterized in two ways related to the functions of the data:

- Macro-level data – an appraiser working in a specific market on a daily basis will often have general data on file. All macro-level data is ultimately understood in terms of how it affects the economic climate in which real property transactions occur.
- Micro-level data – in appraisals, micro-level data is used to determine highest and best use and to make the specific comparisons and analyses required to develop an opinion of value. The micro-level data about a subject property provided in land and building descriptions helps an appraiser select other micro-level data pertaining to comparable sales, rentals, construction costs, and specific characteristics of the local market that influence the value of the subject and comparable properties.

Sales Comparison Approach

In the sales comparison approach, appraisers develop opinions of value by analyzing closed sales, pending sales, active listings, and cancelled or expired listings of properties that are similar to the property being appraised. The comparative techniques of analysis applied in the sales comparison approach are fundamental to the valuation process.

In the sales comparison approach, an opinion of market value is developed by comparing properties similar to the subject property that have recently sold, are listed for sale, or are under contract (properties for which purchase offers and a deposit have been recently submitted). A major premise of the sales comparison approach is that an opinion of market value of a property can be supported by studying the market’s reaction to comparable and competitive properties.

Income Capitalization Approach

Income-producing real estate is typically purchased as an investment, and from an investor’s point of view earning power is the critical element affecting property value. A basic investment premise holds that the higher the earnings, the higher the value, provided the risk remains constant. An investor purchasing income-producing real estate is essentially trading present dollars for the expectation of receiving future dollars. The income capitalization approach to value consists of methods, techniques, and mathematical procedures that an appraiser uses to analyze a property’s capacity to generate benefits (usually the monetary benefits of periodic income and reversion from a future sale) and convert these benefits into an indication of present value.

Direct Capitalization

Direct capitalization is a method used in the income capitalization approach to convert a single year's income expectancy into a value indication. This conversion process is accomplished in one step, either by dividing the net operating income estimate by an appropriate income rate or by multiplying the income estimate by an appropriate factor. Direct capitalization is widely used when properties are already operating on a stabilized basis, or those that are being valued under the assumption that they are stabilized.

Yield Capitalization

Yield capitalization is the more complex of the two fundamental methods used in the income capitalization approach to value. Within these methods, various techniques are available for converting a series of future cash flows received over time into an indication of value. Yield capitalization is used to convert explicit future economic benefits into an indication of present value by applying an appropriate discount rate. To select an appropriate discount rate for a market value appraisal, an appraiser analyzes market evidences of the yields anticipated by typical investors, supported by market sales data, or both.

Discounted Cash Flow Analysis

Discounted cash flow (DCF) analysis is an appropriate tool for valuing any patter of regular or irregular income. In many markets and for many property types, DCF analysis is the technique that investors prefer. Properly applied, DCF analysis identifies the market conditions investors are anticipating as of the date of value.

Cost Approach

Like the sales comparison and income capitalization approaches, the cost approach is based on market comparison. In the cost approach, appraisers compare the replacement cost of the subject improvements to the cost to develop similar improvements as evidenced by the cost of construction of substitute properties with the similar utility as the subject property. The estimate of the development cost is adjusted for market-extracted losses in value caused by age, condition, and utility of the subject improvements or for locational problems.

The cost to construct an improvement on the effective appraisal date may be developed as either the estimated reproduction cost or estimated replacement cost of the improvement. The theoretical base (and classical stating point) for the cost approach is reproduction cost, but replacement cost is more commonly used because it may be easier to obtain and can reduce the complexity of depreciation analysis.

Appraisers estimate the cost to construct existing structures and site improvements (including direct costs, indirect costs, and an appropriate entrepreneurial incentive or profit) using one of three traditional methods:

- The comparative-unit method (or calculator method)
- The unit-in-place method (or segregated cost method)
- The quantity survey method

Appraisers then deduct all depreciation in the property improvements from the cost of the new structure as of the effective date of the appraisal. The amount of depreciation present is estimated using one or more of three fundamental methods:

- The market extraction method

- The economic age-life method
- The breakdown method

The market recognizes the occurrence of losses in the value of improvements due to the effects of age, wear and tear, and other causes, and an appraiser interprets how the market perceives the collective effect of all forms of depreciation. In short, depreciation is the difference between the contributory value of an improvement and its cost at the time of appraisal, where the cost of improvement is either reproduction or replacement cost.

Depreciation in an improvement can result from three major causes operating separately or in combination:

- Wear and tear from regular use, the impact of elements, or damage, which is known as *physical deterioration* and may be curable or incurable
- A flaw in the structure, materials, or design that diminishes the function, utility, and value of the improvement, which is known as *function obsolescence* and again may be curable or incurable
- A temporary or permanent impairment of the utility or salability of an improvement or property due to negative influences outside the property, which is known as *external obsolescence* and is rarely curable

The primary goals in the analysis of depreciation are to identify all forms of depreciation recognized by the market, to treat all these forms of depreciation, and to charge only once for each form of depreciation (for example, to avoid double-counting items of depreciation). The three principal methods for estimating depreciation are:

- The market extraction method
- The economic age-life method
- The breakdown method

Reconciling Value Indications

In the valuation process, more than one approach to value is usually applied, and each approach typically provides different indications of value. Reconciliation is the process in which different indications of value are converted into a value conclusion. If two or more approaches are used, appraisers must reconcile the value indications. Moreover, several value indications may be derived in a single approach. In the sales comparison approach, for example, the analysis of each comparable sale produces an adjusted sale price, which is an indication of value of the subject property. The various units of comparison applied to sales may also produce different value indications. For example, apartment properties may be analyzed in terms of price per unit or price per room, and office buildings in terms of price per square foot of gross building area or price per square foot of rentable area. In an analysis of income, different indications of value can result from applying income multipliers to specific types of income, directly capitalizing net income, and discounting cash flows.

Appraisers resolve multiple value indications derived within a single approach as part of the application of that approach. After resolving multiple value indications within a single approach, an appraiser applies the same process to the value indications of multiple approaches, providing the client with clear analyses of why the results of one (or more) of the approaches to value is given more weight than the results of the others.

Framework from Appraisal Handbook, Unit Valuation of Centrally Assessed Properties[7]

Many state agencies have the responsibility to value for ad valorem tax purposes certain properties or portions of going concerns that operate across county and state lines. The form of such valuation is known as unit valuation or unit appraisal. Unit valuation is valuation of an operating unit without reference to its separate parts.

The traditional approaches to value are cost, income, and market (stock and debt and sales comparison) approaches.

Cost approach

The principle of substitution holds that a buyer will not pay more for a property than the cost of a satisfactory substitute with equal utility assuming no unreasonable delay in obtaining the substitute property. Also, a knowledgeable owner of the property will not sell the property for less than the current cost of a substitute property les any depreciation or obsolescence exhibited by the subject property.

Since unitary properties are valuable for the income they are expected to produce, the utility of a property relates both to the income the property produces today and the length of time the property can be expected to continue producing the income. A new property and an existing property may produce the same income currently and, therefore, have equal "utility" at the moment, but the new property will produce income for a longer time than the existing property. The difference in total utility creates a difference in the value of the existing property versus a new substitute property.

Types of cost:

- **Historical cost less depreciation**, sometimes referred to as net book value. Historical cost is the cost of the property when first put into service. It includes hard and soft costs that were necessary to place the property into service, such as materials, labor, interests on funds during construction, taxes, other overhead during construction.
    - Original cost is the full, un-depreciated cost that should be recorded in the owner's accounting records. In theory, the recorded cost should include all expenditures required to place the property in service, including the purchase price, freight-in if the property was moved, installation, renovation.
- **Reproduction cost less depreciation** is an estimate of the cost to replace the existing property with a new property that is a duplicate, or virtually so, of the existing property.
- **Replacement cost less depreciation** is the current cost to replace a property with a new property of equal utility. The value differs from reproduction cost when technological advances have made the existing property unsuitable (for example, super-adequate) for current and future use. Any difference from reproduction cost could be considered as functional obsolescence.

Income Approach

The income approach to value may be described as any method that converts future anticipated income into present value. The conversion process is commonly known as income capitalization. The income approach is based on the appraisal principle of anticipation. The income approach is premised on the

[7] (Western States Association of Tax Admnistrators, Committee on Centrally Assessed Properties, 2009)

assumptions that investors buy and sell property based on the income it is expected to yield and that investors discount expected income at its attendant risk rate over its anticipated duration.

- Direct capitalization is a straightforward, market-oriented application of the income approach. It requires the selection of a single year's earning expectancy of a subject property and conversion of that income estimate into a value indicator by means of a capitalization rate or income multiplier.
- Yield capitalization: in yield capitalization, the value of an operating unit is the expected cash flows discounted at a rate that reflect the riskiness of the cash flows.
    - Discounted cash flow is the most sophisticated form of yield capitalization.
    - Constant growth model – uses DCF and applies simplifying assumptions.
    - No growth model – additional simplifying assumptions applied to DCF.

Stock and Debt Indicator

The stock and debt indicator is used as a surrogate or substitute for the sales comparison indicator of value in valuing centrally assessed properties. It is one form of the market approach. The conceptual basis for the stock and debt indicator is that the total value of a firm's assets is equal to the total value of its liabilities, including stockholders' equity. Firms purchase assets with debt or equity financing. Purchases of assets from internal cash flows are usually considered a contribution from existing shareholders. For firms that have publicly traded securities (stock and bonds), market prices can be obtained for sales of fractional portion s of these debt and equity securities. Accordingly, the market prices can be applied to the total group of securities to obtain the market value of the firms' assets.

Sales Comparison Indicator

The sales comparison indicator is a form of the market approach to value. Some appraisers of centrally assessed companies have disregarded the sales comparison indicator because of an alleged paucity of data. Rather than simply reject the indicator, appraisers should obtain more and better information about transactions in which centrally assessed properties are acquired whether by stock acquisition, corporate merger, or outright purchase of the unitary assets, and attempt to use the sales comparison indicator.

Reconciling the Value Indicators

To arrive at a final value estimate, the appraiser must analyze the results of the various approaches to value. This process of examining and resolving differences among the various indicators is called reconciliation. In the reconciliation process, the appraiser must address the issue of quantity and quality when using data from the various sources. The process of analysis, interpretation, and reconciliation should be continuous as data are developed into supportable conclusions. Seldom will the ideal situation exist in which each approach conforms closely to the indicated conclusion of value. Lack of reliability and the degree of applicability of the approach to the type of property will cause differences in value indicators that must be reconciled.

Framework from National Conference of Unit Valuation States, Unit Valuation Standards[8]

Unit appraisal means valuing an integrated group of assets functioning as an economic unit as one thing, without reference to the independent value of the component parts. The logic of this concept is that

[8] (National Conference of Unit Valuation States, 2018)

informed buyers and sellers will most likely buy or sell a viable operating unit as one thing and not as separate pieces of property. The goal of unit appraisal is to value a group of integrated operating assets at their highest and best use. The unit concept recognizes that the highest and best of use of many individual assets is achieved when those assets are arranged together as an operating economic unit. An operating economic unit usually has a value greater than the sum of the individual value of the component parts of the unit.

Under the unit concept, the market value of the unit includes the assemblage, enhancement, and/or synergistic value of all properties which comprise the unit. This includes all assets owned, used, and/or leased by a firm and needed in the operation of its business.

The unit value concept is superior to fractional or summation appraisals for valuing integrated operating units because it properly captures Going Concern Value. Going Concern Value is defined as, "the value of a business enterprise that is expected to continue to operate into the future."

Approaches to Value

A unit value appraisal considers the three basic approaches to value:

Cost

A general way of determining a value indication of an individual asset is by quantifying the amount of money required to replace the future service capability of that asset. The cost approach is an approach to value based on the principle of substitution, which is that a knowledgeable buyer would pay no more for an asset than the cost to acquire a similar asset of equivalent desirability and utility without undue delay.

When using the cost approach as an indicator of value, the following costs may be used:

- Original or Historical Cost
    - Should include all costs incurred to place the property into service. Historic costs should not be reduced by a company's deferred federal income tax reserve.
- Reproduction Cost
- Replacement Cost
    - Usually impractical for large multi-state units.
    - Only reliable if it influences potential market participants' decisions.

Market depreciation includes loss in value from physical, functional, and economic causes. It should not be calculated using a circular formula methodology that compares the differences in value between one approach to value another approach. Each approach to value should stand on its own merit and an appraiser's judgment as to which approach should be relied upon should be addressed in the reconciliation phase of an appraisal assignment.

Book depreciation is an accounting method used to match (amortize) expended costs of depreciable property against revenue.

The economic life and the depreciation method that should be used in a cost indicator are reflections of the market's perceptions of the total life, the remaining life, and the difference in value between new and existing property.

Market depreciation is typically not equal to book depreciation. However, accounting standards that require companies to test the book value of their asset for possible impairment may result in book depreciation tracking market depreciation more closely.

Market depreciation adjustments for functional or external obsolescence may be appropriate to apply to replacement cost or reproduction cost, but not historical cost (book value). Book depreciation is the appropriate amount to deduct from historical cost. Historical cost less book depreciation (net book value) should stand on its own as an indicator of value without further adjustments for additional market depreciation or appreciation. The relevance of HCLD should be reflected in the appraiser's reconciliation analysis.

The cost approach should not be the only approach used in an appraisal of a going concern unless it can be demonstrated that this approach is customarily used by buyers and sellers of similar property in determining market transaction prices.

Income

A general way of determining a value indication by using one or more methods that convert anticipated economic benefits into a present single amount. The income approach is based on the valuation principal of anticipation, which is that value is based on the present worth of future anticipated benefits that a property will provide.

An income approach involves the projection and conversion of future income generated by the subject property into a value estimate via one or more capitalization techniques. There are two generally accepted capitalization methods: direct capitalization and yield capitalization.

In direct capitalization, a single year's income is converted into market value by a direct capitalization rate.

In yield capitalization, cash flows for several years in the future, including proceeds upon sale, are converted into market value at the yield (discount) rate required by the market.

A yield rate, a discount rate, and the opportunity cost of capital are all synonymous terms. However, they are different from a direct capitalization rate.

Components of the capitalization rate are equity rate, preferred rate, and debt rate. The equity portion of a direct capitalization rate is not a cost of capital, but rather a relationship between earnings and prices observed in the marketplace. An overall direct capitalization rate may also be derived by identifying the relationship of a level of income with the market price paid for the debt and equity of an operating business or operating assets of a going concern.

The methods used to derive each of the components of yield capitalization include:

- An equity rate may be determined by using a model such as the:
    - Capital Asset Pricing Model
    - Discounted Cash Flow Model
    - Risk Premium Model
- A preferred rate is the annual dividends divided by the market value of the preferred stock.
- The debt rate is determined by analysis of yield to maturity.

To calculate an overall rate, the percentage of equity and debt are multiplied by their respective percentages of the capital structure, resulting in a weighted rate for each part of the capital structure.

Market (Sales Comparison or Stock and Debt)

Based on a comparison of the subject property with reasonably similar, recently conveyed properties for which the price, terms, and conditions of sale are known. The market approach may include analysis of:

- Stock and debt transfers or transactions
- Mergers and acquisitions
- Actual Sales

Reconciliation

To arrive at a final value estimate, the appraiser must analyze the results of the various approaches to value and consider the strengths and weaknesses of each approach. Each indicator of value should stand on its own and not be adjusted or converted to match another indicator. The difference between an HCLD indicator and an income or market indicator of value does not inherently reflect obsolescence (or appreciation) in the unit value appraisal.

Framework from the Association of International Certified Professional Accountant (AICPA)[9]

The Market Approach to Valuation: Look to the market to find guidance about the value of our subject company. The four most common methods under the market approach are:

- Prior transactions of the company's own stock
- Guideline public company method (using multiples from public companies)
- Merger and acquisition (transaction) method (also referred to as the guideline company transaction method or the direct market data method)
- Rules of thumb (industry method)

The Income Approach to Value: in theory, the value of a business or an interest in a business depends on the future economic benefits that will accrue to the owners, discounted back to the present at an appropriate risk-adjusted discount rate. This discounting principle is known as the principle of future benefits. Income methods include the discounted cash flow and capitalized cash flow methods.

The Asset Based Approach (cost approach, asset approach, and replacement cost approach): the theory behind the asset-based approach is as follows:

Current value of all assets, tangible and intangible, minus current value of all liabilities, equals the current value of the equity of the subject company.

At the conclusion of the valuation process all three approaches must be reconciled to present one value or a range of values. The valuator must use professional judgment based on the facts and circumstances to reconcile the three different models. Shannon Pratt identifies the following three key questions to ask during this process[10]:

- Did I value the right thing?
- Did I value it in the right way?
- Did I conclude the right value?

Ultimately, the valuator may wind up weighting the values derived under the three approaches, exclude one or more values from final consideration, or apply additional procedures or recalculate previously completed procedures to better reflect the value of the entity under different approaches.

[9] (Cowley, Dupke, Galuchie, Ferro, & Trugman, 2016)
[10] Adapted from Shannon R. Pratt, Valuing a Business, 5th Edition (New York: McGraw-Hill Books, 2008); 472

Framework from Uniform Standards of Professional Appraisal Practice[11]

From Standard 9: Business, Appraisal Development

In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must identify the problem to be solved, determine the scope of work necessary to solve the problem, and correctly complete the research and analyses necessary to produce a credible appraisal.

Standards Rule 9-1

In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must:

- Be aware of, understand, and correctly employ those recognized approaches, methods and procedures that are necessary to produce a credible appraisal;
- Not commit a substantial error of omission or commission that significantly affects an appraisal; and
- Not render appraisal services in a careless or negligent manner, such as by making a series of errors that, although individually might not significantly affect the results of an appraisal, in the aggregate affect the credibility of those results.

Standards Rule 9-2

In developing an appraisal of interest in a business enterprise or intangible asset, an appraiser must:

- Identify the intended users;
- Identify the intended use of the appraiser's opinions and conclusions;
- Identify the standard (type) and definition of value and the premise of value:
- Identify the sources the appraiser reasonably believes to be reliable, the characteristics of the subject property that are relevant to the standard (type) and definition of value and intended use of the appraisal, including:
    - The subject business enterprise or intangible asset, if applicable;
    - The interest in the business enterprise, equity, asset, or liability to be valued; and the attributes of the interest being appraised, including the rights and benefits of ownership;
    - All buy-sell and option agreements, investment letter stock restrictions, restrictive corporate charter or partnership agreement clauses, and similar features or factors that may have an influence on value;
    - The extent to which the interest contains elements of ownership control; and
    - The extent to which the interest is marketable and/or liquid
- Identify any extraordinary assumptions necessary in the assignment. An extraordinary assumption may be used in an assignment only if:
    - The extraordinary assumption is required to properly develop credible opinions and conclusions;
    - The appraiser has a reasonable basis for the extraordinary assumption; and
    - Use of the extraordinary assumption results in a credible analysis
- Identify any hypothetical conditions necessary in the assignment. A hypothetical condition may be used in an assignment only if:
    - Use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or of purposes of comparison; and
    - Use of the hypothetical condition results in a credible analysis

[11] (The Appraisal Foundation: Appraisal Standards Board, 2020)

- Determine the scope of work necessary to produce credible assignment results in accordance with the Scope of Work Rule

Standards Rule 9-3

In developing an appraisal of an interest in a business enterprise with the ability to cause liquidation, an appraiser must investigate the possibility that the business enterprise may have a higher value by liquidation of all or part of the enterprise than by continued operation as is. If liquidation of all or part of the enterprise is the indicated premise of value, and appraisal of any real property or personal property to be liquidated may be appropriate.

Standards Rule 9-4

In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must collect and analyze all information necessary for credible assignment results.

- An appraiser must develop value opinions and conclusions by use of one or more approaches that are necessary for credible assignment results.
- An appraiser must, when necessary for credible assignment results, analyze the effect on value, if any, of:
    - The nature and history of the business enterprise or intangible asset;
    - Financial and economic conditions affecting the business enterprise or intangible asset, its industry, and the general economy;
    - Past results, current operations, and future prospects of the business enterprise;
    - Past sales of capital stock or other ownership interests in the business enterprise or intangible asset being appraised;
    - Sales of capital stock or other ownership interests in similar business enterprises;
    - Prices, terms, and conditions affecting past sales of similar ownership interests in the asset being appraised or a similar asset; and
    - Economic benefit of tangible and intangible assets.

  This Standard Rule directs the appraiser to study the prospective and retrospective aspects of the business enterprise in terms of the economic and industry environment within which it operates.

- An appraiser must, when necessary for credible assignment results, analyze the effect on value, if any, of buy-sell and option agreements, investment letter stock restrictions, restrictive corporate charter or partnership agreement clauses, and similar features that may influence value.
- An appraiser must, when necessary for credible assignment results, analyze the effect on value, if any, of the extent to which the interest appraised contains elements of ownership control and is marketable and/or liquid. An appraiser must analyze factors such as holding period, interim benefits, and the difficulty of marketing the subject interest.

Standards Rule 9-5

In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must:

- Reconcile the quality and quantity of data available and analyzed within the approaches, methods, and procedures used
- Reconcile the applicability and relevance of the approaches, methods and procedures used to arrive at the value conclusions.

Note: USPAP Standard 10 addresses the content and level of information required in a report that communicates the results of an appraisal of an interest in a business enterprise or intangible asset developed under standard 9.

International Association of Assessing Officers, Standard on Valuation of Personal Property[12]

The International Association of Assessing Officer's guiding principles are:

- Personal property valuers must define, classify, discover and value personal property for ad valorem purposes.
- Personal property valuers must learn the distinction between personal and real property.

All three approaches to value should consider the trade level concept, which refers to the production and distribution stages of a product. The appraiser should recognize three distinct basic levels of trade: the manufacturing level, the wholesale level, and the retail level. Incremental costs (such as freight, overhead, handling, installation, sales and use taxes, and profits) are added to a product as it advances from one level of trade to the next, thereby increasing its value as a final, in-service product. Thus the value of goods will differ, depending on their level of trade. The appraiser should value personal property at its current level of trade, theoretically to a buyer within that same trade level. Such considerations are particularly important in inventory valuation

The cost, sales comparison, and income approaches should be considered in the appraisal of personal property. Consideration of the three approaches to value does not require the appraiser to use all three approaches, rather to evaluate their reliance in the valuation process. For example, if demand exceeds supply or supply exceeds demand, one or more of the three approaches may produce distorted results The degree of dependence on any one approach could also change with the availability of reliable data. The strengths and weaknesses of each developed approach to value are evaluated in the reconciliation phase of the appraisal. Units of comparison, such as value of personal property estimated by use of a market based per square foot rate of comparable properties can be used to check the value estimates derived from the standard appraisal approaches. Such units of comparison can also be used when the data required for other approaches are unavailable. Examples include cost/value per square foot of FF&E in an office building or cost/value per square foot of inventory for a retail business. The valuation method and techniques employed should be market based, subject to governing statutes and appraisal standards. In most jurisdictions, market value is defined using the value-in exchange concept, that is, the value to the next buyer as of the lien date. The principles of value are applicable to the valuation of personal property. The principles of substitution and Highest and Best Use determinations are essential in the valuation of personal property. The highest and best use of an asset is generally when the asset is fully installed and operating for the purpose in which the asset was intended.

The assessor must always consider the quality and quantity of the available market data.

The most common approach for the valuation of machinery and equipment is the cost approach, although the sales comparison approach should receive primary consideration when adequate data are available.[13]

[12] (International Association of Assessing Officers, 2018)
[13] (International Association of Assessing Officers, 2018)

Analytical Differences between Business Valuations, Unit Valuations, and Summation Valuations[14]

For ad valorem property tax purposes, both taxpayer owner/operators and taxing authorities have to value industrial and commercial properties.

Summation Principle Valuation

A summation principle valuation involves separate valuation of each category or component of assets of the subject property. The total value of the subject property is the additive sum of the values of the individual asset categories.

Unit Principle Valuation

A unit principle valuation involves the collective valuation of a bundle of operating assets. The bundle of assets could be located on a single parcel of land, such as an electric generation plant or a chemical processing plant or an oil refinery. Or, the bundle of asses could be located on numerous parcels of land, such as an interstate gas pipeline or a multistate electric transmission system or a national railroad. Nonetheless, in a unit principle valuation, all of the taxpayer asset categories are valued collectively, in the aggregate, as a single operating unit of assets. The unit valuation principle is often called the utility valuation principle. This is because most utility-type properties (for example, energy, communications, transportation, pipeline, water, and wastewater services) are typically valued by references to the unit valuation principles.

Data constraints often dictate which valuation principle is used.

Going-Concern Valuations

Unit principle valuations involve valuing a bundle (sometimes called a universe) of operating assts on a going-concern basis. Inexperienced analysts sometimes confuse this going-concern premise of value with the valuation of a going-concern business enterprise.

A premise of value is a hypothetical transaction structure. Some common alternative premises of value include:

- Value in continued use, on a going-concern basis
- Value in place, but not in current use
- Value in exchange, as a voluntary disposition of assets
- Value in exchange, as a voluntary liquidation of assets
- Value in exchange, as an involuntary liquidation of assets

The analyst will apply the primes of value to the analysis that will conclude the highest indication of value for the subject bundle of operating assets.

Some analysts confuse the going-concern premise of value (also called the value in continued use premise of value) with the valuation (or the sale) of a going-concern business enterprise.

In a business valuation, typically all of the company's income is subject to capitalization. This amount includes operating income and non-operating income.

Bundle of ownership interests for each type of valuation:

[14] (Reilly, 2017)

- The business value includes all of the company debt and equity instruments (and their associated investment attributes).
- The unit value includes all of the company operating assets in place as of the valuation date.
- The summation value includes only the individual asset categories specifically identified in the summation process.

Generally Accepted Valuation Approaches, Methods, and Procedures for Each Valuation Type

The generally accepted business valuation approaches and methods include:

- Income approach
  - Discounted cash flow method
  - Direct capitalization method
- Market approach
  - Guideline publicly traded company method
  - Guideline merged and acquired method
- Asset-based approach
  - Asset accumulation method
  - Adjusted net asset value method

The generally accepted unit valuation approaches and method include:

- Income approach
  - Yield capitalization method
  - Direct capitalization method
- Market approach
  - Stock and debt method
  - Comparable transaction method
- Cost approach
  - Original cost less depreciation method
  - Replacement cost new less depreciation method
  - Reproduction cost new less depreciation method

The generally accepted summation valuation approaches and methods include:

- Income approach
  - Yield capitalization method
  - Direct capitalization method
- Sales comparison approach
  - Direct sales comparison method
- Cost approach
  - Replacement cost new less depreciation method
  - Reproduction cost new less depreciation method

Generalities

Generalities about valuation:

- The models that we use in valuation may be quantitative, but the inputs leave plenty of room for subjective judgments. Thus, the final value that we obtain from these models is colored by the bias that we bring into the process.[15]
- The value obtained from any valuation model is affected by firm specific as well as market wide information. As a consequence, the value will change as new information is revealed. Given the constant flow of information into financial markets, a valuation done on a firm ages quickly and has to be updated to reflect current information. Th is information may be specific to the form, affect an entire sector, or alter expectations for all firms in the market.[16]
- Even at the end of the most careful and detailed valuation, there will be uncertainty about the final numbers, colored as they are by assumptions that we make about the future of the company and the economy. It is unrealistic to expect or demand absolute certainty in valuation, since cash flows and discount rates are estimated. This also means that analysts have to give themselves a reasonable margin for error in making recommendations on the basis of valuations.[17]
- It may seem obvious that making a model more complete and complex should yield better valuations; but it is not necessarily so. As models become more complex, the number of inputs needed to value a firm tends to increase, bringing with it the potential for input errors.[18]
- In general terms, there are three approaches to valuation:
    - Discounted cash flow valuation, relates the value of an asset to the present value of expected future cash flows on the asset
    - Relative valuation, estimates the value of an asset by looking at the pricing of comparable assets relative to a common variable such as earnings, cash flows, book value, or sales
    - Contingent claim valuation, uses option pricing models to measure the value of assets that share option characteristics[19]

Discounted cash flow formulas work for entire businesses. As long as the company's debt ratio is expected to remain fairly constant, you can treat the company as one big project and discount its cash flows by the weighted average cost of capital. The result is the combined value of the company's debt and equity.[20]

A company's value is drive, first, by its ability to earn a return on invested capital (ROIC) greater than its weighted average cost of capital (WACC), and second, by its ability to grow. High returns and growth result in high cash flows, which in turn drives value.[21]

Framework Used by Other States

The information in this section was available online from the states.

[15] (Damodaran, 2012), p. 2
[16] (Damodaran, 2012), p. 3
[17] (Damodaran, 2012), p. 4
[18] (Damodaran, 2012), p. 4
[19] (Damodaran, 2012), p. 11
[20] (Brealey, 2009)
[21] (Koller, 2005), p. 103

Alabama

Alabama Department of Revenue.

Alabama uses a millage rate property tax system.

All taxable real and personal property, with the exception of public utility property, is assessed on the local level at the county courthouse with the county assessing official. The lien date for taxes is October 1 and taxes are due the following October 1.[22]

Responsibilities

Annually discover, collect appraisal data, appraise, and allocate, hold informal appraisal hearings, and distribute the taxable property of all public utilities, railroads and airlines in Alabama. This is done in accordance with Title 40-21-1[23] and subsequent sections of The Code of Alabama.

Process

The Public Utility Section completes unit appraisals each year on local, national, and international companies having property in all fifty states, Canada, and Mexico. Unitary appraisals are performed on each company using generally accepted fair market appraisal methods. This requires using all three approaches to value, including the market approach, the cost approach, and the income approach, if sufficient data for each approach is available. As a part of this unitary appraisal process, the appraised value of fixed real and personal property located in Alabama and other states is apportioned to Alabama based on the gross investment in Alabama divided by the gross investment everywhere. For companies containing mobile property in their unitary appraisal, such as aircraft, other factors are added to the allocation process.

Once the state assessed value is determined, it is distributed back to each local Alabama taxing jurisdiction based on these same factors. Once this is completed the utility county assessments have to be totaled and certified to their respective counties in Alabama. The county taxing official then adds the respective state, county and city tax rate to each public utility assessment and sends a tax bill to each utility company.[24]

Assessment Procedures for the Valuation of Public Utility and Railroad Property in the State of Alabama[25]

The Alabama Department of Revenue shall determine the fair market value[26] of the tangible and intangible property of the public utility and railroad companies using generally accepted appraisal and unitary appraisal[27] methodologies embraced by nationally and internationally recognized appraisal groups. These appraisal groups include but are not limited to:

- The National Conference of Unit Valuation States
- The International Association of Assessing Officers
- The American Institute of Real Estate Appraisers
- The Appraisal Foundation

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[22] (Alabama Department of Revenue, 2021a)
[23] https://revenue.alabama.gov/wp-content/uploads/2017/05/PublicUtilitiesLaw_Ch21.pdf
[24] (Alabama Department of Revenue, 2021b)
[25] https://revenue.alabama.gov/wp-content/uploads/2017/05/PublicUtilities_RRRegulations_4-1-17.pdf
[26] Fair market value. the price which property will bring at a fair voluntary sale.
[27] Unitary appraisal. An appraisal of the total operating company’s capitalized tangible and intangible assets.

- The Society of Real Estate Appraisers

After receiving the information needed to assess and allocate the property, the Property Tax Division will review the documentation and determine the best methodology needed to compute the unitary market value of the company.

Allocation

After computing the unitary market value of the company, the allocated Alabama value will be determined by computing the percentage of the gross investment[28] the company has in Alabama divided by the total gross investment everywhere. This percentage is multiplied by the total unitary market value of the company to calculate the Alabama taxable value. Intangible properties of a public utility with undeterminable physical locations may be allocated to Alabama based on the level of business as measured by the gross revenue generated in Alabama divided by the gross revenue generated everywhere by the company. Intangible property of this nature generally arises from acquisitions or mergers of other companies with purchase prices paid in excess of the book value of the acquired companies. The sum of the allocated Alabama tangible and intangible property will compose the Alabama taxable value.

Assessed Value Process

The Alabama taxable value will then be multiplied by the constitutionally required property class assessment ratio to determine the tentative assessed value. Once the tentative assessed value of each company has been calculated, the taxpayer will be sent notice of this assessment and given the opportunity for an informal hearing. After the informal hearing, or if no hearing is requested after 30 days has passed, the taxpayer will be sent a final equalized assessment adjusted by the state determined equalization ratio. The taxpayer will also be sent information on how to appeal the final assessment. After the yearly assessment process has been finalized, the tangible and intangible equalized assessed values of the company's property in Alabama will be apportioned to each county and taxing jurisdiction in Alabama based on the percentage of the tangible gross investment in each Alabama taxing jurisdiction to the total tangible gross investment in the whole state. On July 1st of each year, or as soon thereafter as practical, the Property Tax Division will distribute to each Alabama county a certified copy of the equalized assessed value of each utility company located in its respective county along with a summary sheet of the total utility property in the county. Copies of these distributions will also be forwarded to each respective utility. This distribution will include a description of the property and the company's total county equalized assessed value and total value of the company located in each respective taxing jurisdiction within the county including school districts and cities. The county tax assessing official will use these assessments as a basis to compute the ad valorem taxes owed to the city, county, and state by each company.

California

California State Board of Equalization

Background of Property Taxes in California

Prior to 1912, the state derived up to 70% of its revenue from property taxes. The state no longer relies on property taxes as its primary source of funds—since 1933, the only property tax directly levied, collected, and retained by the state has been the tax on privately owned railroad cars. Currently, the

[28] Gross investment. The total undepreciated capitalized expense incurred to invest in tangible and intangible assets.

state's principal revenue sources are personal income taxes, sales and use taxes, bank and corporation taxes, and a series of excise taxes.

Today, it is California's counties, cities, schools, and special districts that depend on the property tax as a primary source of revenue. The property tax raised more than $62.1 billion for local government during 2016-17. These funds were allocated as follows:

- Counties 15%
- Cities 12%
- Schools (school districts and community colleges) 54%
- Special districts 19%[29]

The California State Board of Equalization has a State Assessment Manual that describes the principles and procedures used by the Board in the assessment of state-assessed property.[30]

The BOE acts in an oversight capacity to ensure compliance by county assessors with property tax laws, regulations, and assessment issues. To perform the oversight functions, Property Taxes conducts periodic compliance audits (surveys) of the 58 county assessors' programs, and develops property tax assessment policies and informational materials to guide county assessors and local assessment appeals boards. In addition, the BOE assesses the property of regulated railroads and specified utilities, and assesses and collects the private railroad car tax.[31]

In accordance with Section 19, Article XIII of the California Constitution, the BOE is responsible for assessing property owned or used by certain public utilities and other specified companies operating in California, enabling counties to use those values to collect local property taxes.

The BOE's State-Assessed Properties Division (SAPD) is responsible for annually preparing value recommendations for each state assessee. These indicators and recommendations, which are developed annually from information provided by state assessees, are used by the elected Board to determine the fair market value of the assessees unitary property. State-assessed property is not subject to the provisions of Proposition 13 and is assessed at its fair market value as of 12:01 a.m. each January 1.

Property values on the state-assessed roll are allocated by the BOE to the counties where the properties are located. Each county levies, bills, and collects the tax directly from state assessees, based upon the allocated values. The taxes are levied at the same rate that is applied to locally assessed property.[32]

If a state assessee disagrees with the value established for their property, they have a right to appeal the value under certain circumstances and limitations.

The Board of Equalization (BOE) shall prescribe rules and regulations for its own government and for the transactions of its business (Gov. Code section 15606). The BOE has adopted the Rules for Tax Appeals as the regulations governing the administrative and appellate review processes of the tax programs administered by the Board. The Rules for Tax Appeals are contained in Title 18 of the California Code of Regulations and a full copy is published in the BOE's Publication 310: Rules for Tax Appeals.[33]

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[29] For more information, see https://www.boe.ca.gov/proptaxes/pdf/pub29.pdf
[30] (California State Board of Equalization, 2016)
[31] (California State Board of Equalization, 2021a)
[32] (California State Board of Equalization, 2021b)
[33] (California State Board of Equalizaiton, 2021c)

Three documents available publicly:

- State Assessment Manual: State Assessment Manual (ca.gov)
- Unitary Valuation Methods: Valuation Methods Book (ca.gov)
- Appeal process: Publication 310, Rules for Tax Appeals of the State Board of Equalization

The State Assessment Manual describes the principles and procedures used by the Board in the assessment of state-assessed property. The manual was prepared within an open process that allowed input from industry representatives, county assessors, and others. Any issues regarding the manual's final language and contents that could not be resolved by consensus among interested parties were voted on and resolved by the Members of the Board of Equalization after hearing relevant testimony from interested parties and Board staff.

State Assessment Process

To provide an overview of the general process of state assessment, several major steps in the process are described in roughly chronological order below. These steps also point to the subject matter discussed in subsequent chapters.

1. The assessee files a property statement as required by section 826. Property statements must be filed no later than March 1 of each year; but the Board may grant limited extensions for specified parts of the property statement under section 830.1.
2. The State-Assessed Properties Division, a unit of the Board's Property Tax Department, develops unitary valuation indicators and makes recommendations to the Board regarding the value of the assessee's unitary property. State assessees are afforded an opportunity to discuss the value of their unitary property at a public Board meeting held in May.
3. The Board determines the value of the assessee's unitary and nonunitary property. Unitary value determinations are made and publicly announced no later than May 31. Nonunitary value determinations are made and announced no later than the last day of July. (Chapter 4 discusses value indicators.)
4. If a state assessee operates in more than one state, a portion of the value of the assessee's unitary property is allocated by the Board to California (interstate allocation). The portion of the value of the assessee's unitary property allocated to California—or, the total value of the assessee's unitary property if the assessee's operations are only in California—is allocated by the Board among the counties in which the property is located (intrastate allocation). (Chapter 5 discusses value allocation.)
5. For unitary and nonunitary values determined by the Board, the state assessee may file a petition for reassessment. (Chapter 6 discusses the appeals process for state assessments.)

Standard of Value: Fair Market Value.

Valuation Date: Lien date for property tax purposes is January 1 of each year

Unit Valuation: The principle of unit valuation holds, in essence, that a collection of tangible assets functioning as an operating unit should be valued as a whole, without reference to the separate values of the assets constituting the operating unit. A unit valuation is contrasted with a "summation valuation," in which the component parts of an operating unit are valued separately and summed to estimate the value of the whole. Under the principle of unit valuation, the Board may recognize the entire operating unit as the proper appraisal unit for certain property, thus recognizing the high degree of functional and economic integration of such property.

Approaches to Value: Value indicators are the evidence of market value prepared by the appraiser in support of the final value conclusion. Each year, as prescribed in Rule 902, staff develops unitary value indicators that are used by the Board in reaching its unitary value determinations. Staff also recommends annual values for state assessees other property located in California, that is, nonunitary property, operating nonunitary property, and nonunitary rail transportation property.

Under Rule 3 there are five indicators of market value, or value approaches, one or more of which must be considered in property tax valuation:

- The price or prices at which the subject property or comparable properties have recently sold (the comparative sales approach).
- The prices at which fractional equity interests in the subject property or comparable properties have recently sold, and the extent to which such prices would have been increased had there been no prior debt claims on the assets (the stock and debt approach).
- The cost of replacing reproducible property with new property of similar utility, or of reproducing the property at its present site and at present price levels, less the extent to which the value has been reduced by depreciation (the replacement and reproduction cost approaches, respectively).
- If the income from the property is regulated by law and the regulatory agency uses historical cost or historical cost less depreciation as a rate base, the amount invested in the property or the amount invested less depreciation computed by the method employed by the regulatory agency (the historical cost approach).
- The amount that investors would be willing to pay for the right to receive the income that the property would be expected to yield, with the risks attendant upon its receipt (the income approach).

Related specifically to the valuation of unitary property, staff of the Board's State-Assessed Properties Division has developed and published Unitary Valuation Methods, a publication that describes the valuation models (such as valuation approaches) used by staff in its preparation of unitary value indicators.

In addition, as also prescribed in Rule 902, State-Assessed Properties Division staff conducts and publishes an annual capitalization rate study that develops discount rates used in the Board's capitalized earnings ability model. Descriptions of the valuation models contained in Unitary Valuation Methods and the methods of capitalization rate derivation described in the annual capitalization rate study are not repeated in this manual; instead, the reader is referred to those publications. The reader is also referred to Assessors' Handbook Section 501*, Basic Appraisal*, and Section 502, *Advanced Appraisal*, publications containing discussions of general valuation principles and methods, much of which is generally applicable to the valuation of state-assessed property.

Unitary Valuation Methods: Valuation Methods Book[34]

The California Constitution requires the Board of Equalization to annually assess property, except franchises, owned or used by regulated railway, telegraph, or telephone companies, car companies operating on railways in the state, and companies transmitting or selling gas or electricity. It also requires the Board to annually assess pipelines, flumes, canals, ditches, and aqueducts lying within two or more counties. The taxes are levied and collected in the same manner as for county-assessed properties. The Valuation Division of the Property Taxes Department provides the elected members with

[34] For more information, see https://www.boe.ca.gov/proptaxes/pdf/methodsbook2003.pdf

reasonable and timely estimates of the market value of property subject to the Board's state assessment jurisdiction. State-assessed property, except rail transportation property, is assessed at its fair market value or full value as of 12:01 a.m. January 1. In conformity with federal law, the assessed value for railroad operating property and nonunitary rail transportation property is limited to a percentage of the market value set by the Board.

This *Unitary Valuation Methods* book has been prepared by the Valuation Division to document the valuation models currently used by the Board's staff in the preparation of indicators of value. As part of the process of producing the original (November 1998) manual, and subsequent revisions (March 2000 and March 2003), meetings were held with interested parties. Conflicts regarding the content of the manual were identified and most were resolved. Those issues not resolved were voted on by Members of the Board of Equalization after hearing testimony from interested parties and Board Staff. The results of the Board's action are reflected in this manual.

Cost Models

- Historical cost less depreciation
- Reproduction cost less depreciation
- Replacement cost less depreciation

Capitalized Earning Ability Models

- Perpetual life model
- Straight line capital recovery model
- Level annuity capital recovery model
- Net liquidation model

Other Valuation Models

- Sales model
- Pipeline rate base model

Appeal Process

If a state assessee disagrees with the value or penalty determined by the Board as set forth in the Notice of Unitary Assessed Value, the assessee must file a Petition for Reassessment of Unitary Value by July 20 of the calendar year in which the Notice of Unitary Assessed Value was issued.

If a state assessee disagrees with an assessment allocation, the assessee must file a Petition for Correction of Assessment Allocation by July 20 of the calendar year in which the Notice of Assessment Allocation was issued.

Idaho

Idaho State Tax Commission[35]

The Idaho State Tax Commission is responsible for appraising all operating property in the state and each year releases both preliminary and final operating property values.

[35] (Idaho State Tax Commission, 2015)

Operating Property Defined

Operating property, also known as centrally assessed property, generally includes all property operated in connection with any public utility, railroad, or private railcar fleet, located wholly or partially in Idaho. For a complete definition of operating property, see Idaho Code section 63-201(16).

The following industry types are classified as operating property:

- Electricity (and cooperative electricity) generation, transmission, and distribution
- Regulated telecommunications
- Water transportation and distribution
- Petroleum
- Gas transmission and distribution
- Railroads
- Private railcar fleets
- Gas transmission and distribution
- Anaerobic digesters
- Non-utility generators
- Wind farms (in place of property taxes; see Idaho Code sections 63-3502, 63-602JJ)
- Gas and oil gathering lines (beginning in 2015)

Appraisal of Operating Property

The unit method of valuation is preferred for valuing a railroad or public utility when the individual assets function collectively, are operated under one ownership and one management, are interdependent, and the property would be expected to trade in the marketplace as a unit. Under the unit method, the value of the tangible and intangible property is equal to the value of the going concern.

The market value of the unit is referred to as the "system value." For interstate property, allocation factors are used to determine what part of the system value is in Idaho. For more information, review Property Tax Rule 405 and Idaho Code section 63-405. Certain intangibles are exempt (see Idaho Code section 63-602L and Property Tax Rule 615) while other intangibles are taxable.

Example: An owner of operating property has property and provides services in Idaho and nine other states. The total property in all 10 states is appraised as an operating unit. Part of the total value is then allocated to Idaho based on its presence within the state.

Appraisal of all operating property is done annually. Every person or company owning operating property in Idaho is required to file a report (operator's statement) with the Tax Commission by April 30 of each year. This report may include asset listings, financial statements, reports to stockholders, and reports to regulatory agencies.

Reporting Operating Property

Some property may be classified as nonoperating. Nonoperating property generally includes assets owned, but not reasonably necessary for the maintenance and operation of the business. For more information see Idaho Code section 63-402.

Property is identified as either operating or nonoperating when the owner files a record of real estate ownership (Form R) with the Tax Commission. After a review by the Tax Commission, the Form R is sent to each county where the property is located. Nonoperating property is appraised at the local level by the county assessor rather than by the Tax Commission.

Operating property owners obtain an operator's statement form and submit it to the Tax Commission. Included in the statement is a report identifying the location of the company's property by county and tax code area. For property tax purposes, each county in Idaho is divided into tax code areas that are determined by the boundaries of taxing districts. Rather than reporting individual property items by specific location, the companies generally report the location and length of their wire, pipe, or rail in a particular tax code area. For more information, see Idaho Code sections 63-404 and 63-411, and Property Tax Rules 404 and 411 - 417.

Apportionment

Apportionment is the process of assigning the value of operating property to the appropriate taxing district.

It's done by calculating the value per mile of wire, pipe, or rail in Idaho and applying this rate per mile to each tax code area in which the wire, pipe, or rail is located. Apportionment for electric companies is done on a rate per wire mile for each county.

Some items, such as leased equipment and microwave facilities, are reported separately and assessed at their actual physical location. When a property is located in only one tax code area, no apportionment is necessary. For more information on apportionment, see Idaho Code section 63-405 and Property Tax Rules 405 and 413 - 417.

Appeals

If an operating property owner disagrees with the appraised property value, the owner can meet with the appraiser to informally discuss the valuation and can also request a formal hearing before the Tax Commission. The owner must request a formal hearing before August 1. For more information on appeals, see Idaho Code sections 63-406 through 63-410 and Property Tax Rules 407 and 408.

Map orders

Every year Idaho counties submit tax code area changes to the Tax Commission's Geographic Information Systems (GIS) section of the Property Tax Division. Digital copies of the maps for these tax code areas are available to the operating property owners, at no charge, on our website's GIS and Property Tax page. You can also purchase CD or paper versions of these maps.

More information

Assessments for operating property (also known as centrally assessed property) are developed by the Property Tax Division's Operating Property Bureau. If you have questions, please contact that bureau or review these operating property brochures, forms, and statements.

Iowa

Iowa Department of Revenue Property Tax Overview[36]

Iowa property tax is primarily a tax on "real property," which is mostly land, buildings, structures, and other improvements that are constructed on or in the land, attached to the land, or placed upon a foundation. Typical improvements include a building, house or mobile home, fences, and paving.

Six classes of real property are evaluated:

- Residential

[36] For more information, see http://tax.iowa.gov/iowa-property-tax-overview

- Agricultural
- Multiresidential
- Commercial
- Industrial
- Utilities/railroad (This class is assessed at the state level)

All real property is assessed every two years in odd-numbered years. Centrally assessed properties including railroads and public utilities are assessed every year by the Iowa Department of Revenue.

Property Taxes are billed and collected by county government.

More than 20 years ago, residential property values were rising quickly. To help cushion the impact of high inflation, the Legislature passed an assessment limitation law called rollback.

Increases in assessed values for residential and agricultural property are subject to this assessment limitation formula. If the statewide increase in values of homes and farms exceeds 3% due to revaluation, their values are "rolled back" so that the total increase in aggregate value statewide is 3%. Rollback for industrial and commercial property is 90%. Rollback for multiresidential property is[37]:

- 86.25% for the 2015 Assessment
- 82.5% for the 2016 Assessment
- 78.75% for the 2017 Assessment
- 75% for the 2018 Assessment
- 71.25% for the 2019 Assessment
- 67.5% for the 2020 Assessment
- 63.75% for the 2021 Assessment

Rollback for agricultural and residential property is allowed to fluctuate within the 3% limitation. This does not mean that the assessment on your home will increase by only 3%. The rollback is applied on a class of property, not an individual property. It means that the statewide total taxable value can increase by only 3% due to revaluation.[38]

Utility and Railroad Property Tax

County auditor's complete a change request form and send a copy to the utility or railroad company and the Iowa Department of Revenue when the assessed valuation district is updated (either partially or entirely).

Property Tax Replacement and Statewide Property Tax[39]

Senate File 278 redefines a new electric power generating plant, extends the life of the utility replacement tax task force, and requires notification by the taxpayer to the department of revenue and local taxing district upon transfer of utility property.

[37] For more information, see https://tax.iowa.gov/sites/default/files/2023-02/2022HistoryOfAssessmentLimitationsAMENDED.pdf
[38] (Iowa Department of Revenue, n.d.)
[39] For more information, see https://tax.iowa.gov/property-tax-utilities

Utility Replacement Tax Task Force[40] [41]

During the 1998 legislative session, the Iowa General Assembly passed and the Governor signed Senate File 2146, the Property Tax Replacement and Statewide Property Tax Act. The bill replaced the property taxes paid by electric and natural gas utilities on their property with an excise tax associated with the distribution of electricity and natural gas. The bill also created a “statewide property tax” on the real property associated with the electric and natural gas utility companies.

The bill required the Department of Management, in consultation with the Department of Revenue, to initiate and coordinate the establishment of a task force. It was the intent of the General Assembly that the task force include representatives of the Department of Management, Department of Revenue, electric companies, natural gas companies, municipal utilities, electric cooperatives, counties, cities, school boards, and industrial, commercial, and residential consumer, and other appropriate stakeholders.

The purpose of the Replacement Tax Task Force is to study the effect of the Replacement Tax on local taxing districts, consumers, and taxpayers. If the Task Force recommendations for modifications to the Replacement Tax that will further the purposes of tax neutrality for local taxing authorities, local taxing districts, taxpayers, and consumers, the Department of Management is tasked with transmitting those recommendations to the General Assembly.[42]

Louisiana

Louisiana Tax Commission

The Louisiana Tax Commission is a division of the Louisiana Department of Revenue[43]

Transportation & Communication Utilities Tax[44]

Every person owning or operating any public utility in Louisiana defined as railroads and railways, motor bus lines, motor freight lines, sleeping cars, express companies, telegraph companies, boat or packet lines, and pipelines must file a return. The tax rate is 2% of the gross receipts from intrastate business.

What Is Meant By Millage Rates Or Mills?

Millage is the percentage of value that is used in calculating taxes. A mill is defined as 1/10 of 1% and is multiplied by the assessed value after any exemptions have been subtracted to calculate the taxes. For example: if the tax rate is 150 mills and total assessed value is $10,000 with no exemptions, the taxes would be calculated as $10,000 x 0.150 = $1,500.00. If for the same house you had a homestead exemption the taxes would be: $10,000 - $7,500(H.E.) = $2,500.00 x 0.150 = $375.00 in taxes. This demonstrates the importance of filing a homestead exemption.

Capitalization Rate Study for Centrally Assessed Properties[45]

The Income Approach to Value is based primarily on the principle of anticipation and involves converting dollars of expected future income, or cash flow, into an estimate of present value. Mathematical

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[40] For more information, see https://tax.iowa.gov/utility-replacement-tax-task-force

[41] Utility Replacement Tax Task Force, report to the Iowa Legislature, December 15, 2014

[42] For more information on the Replacement Tax, see Iowa Code Chapter 437A and 701 Iowa Administrative Code Chapter 70.

[43] (Louisiana Tax Commission, n.d.)

[44] For more information, see https://revenue.louisiana.gov/ExciseTaxes/TransportationCommunication

[45] For more information, see https://www.latax.state.la.us/Menu_CapitalizationReports/UploadedFiles/2018%20Cap%20Rate%20Study.pdf

techniques used in the approach are tools for converting these data and assumptions into an estimate of current market value. The accuracy of this approach is no greater than the data and assumptions used to estimate the key variables, including the overall capitalization rate. Generally accepted appraisal procedures were used to estimate the key inputs needed to estimate the overall rate. The long-term debt cost is the cost for a particular risk class of debt on the lien date. The equity rate reflects the rate of return or compensation that will satisfy the risk that a prospective buyer would assume by investing in the property. The band of investment approach was used to determine the overall capitalization rates in our studies. Seven state-assessed industries: electric industry, gas distribution, pipelines – fluid, pipelines – gas, railroads – Class I, telecommunications, and water companies.

Public Utilities are values by the Louisiana Tax Commission using the unit methodology which includes cost, income, and market approaches.

Michigan

Michigan Department of Treasury

State Tax Commission

The State Tax Commission is comprised of three members appointed by the Governor with the advice and consent of the Senate. The State Tax Commission has general supervision of the administration of the Property Tax Laws in Michigan and shall render such assistance and give such advice to assessors, as they deem necessary. In 2009, the State Tax Commission became responsible for the education and certification of assessing officers.[46]

State Assessed Property[47]

Wired two-way communication, railroad and car line/railcar entities, as part of the State Assessed Roll, are required to file an Annual Property Report with Michigan Department of Treasury.

- Capitalization Rate Memo for 2021 State Assessment
- Final 2021 State Average Tax Rate Memo

General Property Tax

Michigan Law MCL 211.34c requires that not later than the first Monday in March each year, the local assessor shall classify all assessable property in their jurisdictional boundaries.

There are six real property classifications and five personal property classifications:

- Residential real and residential personal
- Agricultural real and agricultural personal
- Commercial real and commercial personal
- Industrial real and industrial personal
- Developmental real
- Timber cut-over real
- Utility personal

MCL 211.34c defines utility personal property as:

[46] (Michigan Department of Treasury, n.d. (a))
[47] (Michigan Department of Treasury, n.d. (b))

- Electric transmission and distribution systems, substation equipment, spare parts, gas distribution systems, and water transmission and distribution systems
- Oil wells and allied equipment such as tanks, gathering lines, and field pump units and buildings
- Inventories not exempt by law
- Gas wells and allied equipment and gathering lines
- Oil or gas field equipment stored in the open or in warehouses such as drilling rigs, motors, pipes, and parts
- Gas storage equipment
- Transmission lines of gas or oil transporting companies

Cable television and utility personal property submit an annual report with the original cost of their assets and a multiplier is applied to arrive at the assessor True Cash Value (TCV) calculations.

In determining the true cash value of personal property owned by an electric utility cooperative, the assessor shall consider the number of kilowatt hours of electricity sold per mile of distribution line compared to the average number of kilowatt hours of electricity sold per mile of distribution line for all electric utilities.[48]

Property of certain corporations and railroads

The real property of corporations exempt under the laws of this state, by reason of paying specific taxes instead of all other taxes for the support of the state is exempt from taxation under this act. Tracks, right of way, depot grounds and buildings, machine shops, rolling stock, and all other property necessarily used in operating any railroad in this state belonging to a railroad company shall remain exempt from taxation for any purpose, except for special assessments for local improvements in cities and villages, and land owned or claimed by a railroad company not adjoining the tracks of the company.

Montana

Montana Department of Revenue

Property Values and Mill Levies

The "Certified Values" are total taxable property values determined by the Department of Revenue for each tax jurisdiction. The department provides these values to the tax jurisdictions every year on the first Monday in August. Local governments establish their budgets and set their mill levies for property tax calculation and collections based on the certified taxable value provided to each taxing jurisdiction.

Step 1: Calculate Adjusted Property Tax Revenue (APTR)

The current year's adjusted property tax revenue is equal to the jurisdiction's previous year's property tax revenue increased by one-half of the average rate of inflation over the previous three years.

APTR = Previous Year's APTR × (1 + (3 Years Inflation/2))

Step 2: Calculate Maximum Mills

Next find the jurisdiction's maximum mills.

This is 1,000 times the jurisdiction's Adjusted Property Tax Revenue (APTR) divided by its Certified Taxable Value minus its Newly Taxable Value (Rounded down to the third decimal):

[48] See the True Cash Value definition in Appendix C.

Maximum Mills = 1,000 × (APTR/(Certified Taxable Value - Newly Taxable Value))

Step 3: Calculate Millage Rates

Find the Millage Rate. This is the total number of mills from all jurisdictions for your property divided by 1,000.

Millage Rate = Total Mills/1,000

Step 4: Estimate Property Tax

Finally, property owners multiply the Taxable Value by the Millage Rate to find their Property Tax.

Property Tax = Taxable Value × Millage Rate

This is an estimate of general property taxes. Local governments may also assess special fees and assessments. Property owners should contact their County Treasurer for more information on special assessments or fees.[49]

Centrally Assessed and Industrial Property

Centrally Assessed properties are appraised and taxed at the state level instead of the county level and include:

- Railroad
- Rail car
- Microwave Transmitters
- Telecommunications
- Telephone cooperatives
- Gas utilities
- Electric utilities
- Electric cooperatives
- Ditch
- Canal
- Flume
- Natural Gas Pipeline
- Oil pipeline
- Airlines

To be centrally assessed, the property must be either:

- Physically Connected Property: The company has property that crosses a county or state line.
- Unity of Operation: The company has property that works as a single entity across a county or state line, even if it isn't physically connected.

(15-23-101, MCA and ARM 42.22.102)

Montana Department of Revenue values Centrally Assessed property using the Unit method and may include a:

[49] (Montana Department of Revenue, 2021a)

- Cost indicator
- Capitalized income indicator
- Market indicator

The department uses an industry capitalization rate to estimate values when relying on the capitalized income indicator. The department performs an annual capitalization rate study for each industry to set the capitalization rates. Learn more about the study on the department's Capitalization Rate Studies page. (ARM 42.22.111)[50]

North Dakota

North Dakota State Tax Commission[51]

Locally Assessed Property

All real property, unless specifically exempted, is subject to property tax. The tax is due January 1 of each year following the year of assessment and is payable without penalty until March 1. A 5% discount is allowed for taxes paid in full by February 15. A mobile home used as a residence or business is subject to tax if it is 27 or more feet long or is attached to utility services. The tax is due January 10 of the year of assessment or ten days after the home is purchased or first moved into this state. A 5% discount is allowed for taxes paid in full by February 15 or within 30 days after the mobile home is purchased or moved into this state. The county determines and collects real property and mobile home taxes and distributes the revenue to the county, cities, townships, school districts, and other taxing districts.

Centrally Assessed Property

The State Board of Equalization values railroads, investor-owned public utilities, pipelines, and airlines for property tax purposes. The valuations of railroads, pipelines, and utilities are certified to the counties, and the counties determine and collect the tax at the same rates and at the same time as locally assessed property. The State Tax Commissioner collects airline taxes and distributes them to the airports where the airlines make regularly scheduled landings.[52]

Taxes Paid In Lieu Of Property Taxes

Rural Electric Cooperatives

Generation, distribution, and transmission property of rural electric cooperatives is subject to taxation under N.D.C.C. ch. 57-32.2. Other companies engaged in electric generation, distribution, and transmission may file an irrevocable election to be taxed under ch. 57-33.2 and exempt from ad valorem taxation. For tax rates and other details of these taxes, see Property Tax Guideline G-20, Property Not Assessed by Local Assessors - Centrally Assessed Property & Property that is subject to "In-Lieu" Taxes.

Telecommunications Companies

Telecommunications companies that provide two-way communications pay a 2.5% gross receipts tax in lieu of property tax on all property used in two-way communications service.

[50] (Minnesota Department of Revenue, 2021b)
[51] (North Dakota State Tax Commission, n.d.)
[52] For more information see, https://www.tax.nd.gov/sites/www/files/documents/forms/assessmenttermsandconcepts.pdf

New York

Department of Taxation and Finance

A property's assessment is one of the factors used by local government and school district to determine the amount of property taxes. All real property, commonly known as real estate, is assessed. Real property is defined as land and any permanent structures attached to it. Personal property (cars, jewelry, etc.) is not subject to property taxes in New York States.

A property's assessment is based on its market value. Market value is how much a property would sell for under normal conditions.

Assessments are determined by the assessor, a local official who estimates the value of all real property in a community. Most assessors work for a city or town, though some are employed by a county or village.

All properties in your municipality (except in New York City and Nassau County) are required to be assessed at a uniform percentage of market value each year. In other words, all taxable properties in your city or town must be assessed at market value or at the same percentage of market value.[53]

Valuation Standards

Valuation Standards provide the guidelines for valuing property in New York State for *ad valorem* real property valuation.

The basic rule of law is that "[t]he 'market value of real property is the amount which one desiring but not compelled to purchase will pay under ordinary conditions to a seller who desires but is not compelled to sell'".[54]

Railroads

The Office of Real Property Tax Services (ORPTS) computes a railroad ceiling for all railroad transportation property, in each assessing unit, where property is located. The ceiling is the maximum amount of assessed value that can be used when levying taxes on railroad transportation property. The difference between the State's established ceiling and the locally determined assessment is the exemption. In practice, most assessors do not independently value railroad property, but rather they assess the property using the actual ceiling values.

The preparation of railroad ceilings for ORPTS is a responsibility of the Valuation Services Bureau (VSB). The ceiling computation program uses the reproduction cost new less depreciation approach (RCNLD). The resultant RCNLD value is then adjusted by a factor that reflects the economic conditions of the railroad. The adjusted value is multiplied by the State equalization rate to determine the ceiling figure.

Upon approval of the tentative ceiling, notice is transmitted to the appropriate municipality and railroad owner, both of which then have an opportunity to object to the tentative ceiling by serving a complaint on the Commissioner.

After consideration of the complaint and supporting objections, VSB and Counsel's office in the case of questions of law, recommends to the State Board of Real Property Tax Services either that the ceiling remain unchanged or that an appropriate change be made. The State Board then determines the final ceiling. After the Board makes its determinations, certificates setting forth the final ceilings are

[53] (New York State Department of Taxation and Finance, 2021b)
[54] (New York State, Department of Taxation and Finance, 2021a)

transmitted to the appropriate municipalities for the use on their assessment rolls and to the respective owners of the railroads.[55]

Advisory Appraisal

New York State advisory appraisal service

Advisory Appraisal Program

This program was founded as a service to local governments with the enactment of the assessment improvement legislation of 1970; Article 15-A section 1544 of the Real Property Tax Law. It requires the Office of Real Property Tax Services to provide advisory appraisals upon request for taxable public utility properties and other highly complex properties that meet certain requirements. Though the property tax is purely a local tax, by its pervasiveness and size of collections, it is a key component of the state-local fiscal relationship. Because both the State and local governments have a stake in the fair administration of the tax, the 1970 Act sought to build capacity in both levels of government. The state was to have a role in providing specialized technical advice to local governments that their own resources would not allow them to otherwise obtain.

Utility Property

Public utility property as defined in 20 NYCRR 8185-1.1(199) means any property owned by persons or corporations which is used for electric and gas production; transmission or distribution of electric, gas, water, and other products (such as brine, petroleum); communications including cable television; transportation pipelines; and waste disposal. This generally would include properties with classification codes in the 740 and 800 series.

Utility property can be categorized into three broad categories — structural property, mass property, and land. Structural property is typically sited while mass property is generally not specific and land is, by its nature, sited. The following will provide you with a definition for the property related to each category.

Land Property

A portion of the earth's solid surface distinguishable by boundaries or ownership. In the appraisal of real estate, land is the non-wasting form of the asset (it is not subject to depreciation). If the land is a site with an improvement, the total property must, in the final analysis, be considered as an integral unit.

Structural Property

Improvements generally sited to a specific parcel. Utility structural property typically consists of office buildings, generating stations, gas manufacturing plants, dams and reservoirs and water or sewer treatment plants. They have characteristics relevant to their particular group or use, such as type of construction, date of construction, grade, condition, size, and present use, and do not have the homogeneity that typically characterizes mass property.

Mass Property

Improvements that have physical and functional characteristics that are so similar to other improvements of the same group (that is, poles, wires, and so on) that they are accounted for as a group or class. Mass property is generally not sited and consists predominantly of transmission and distribution facilities but occasionally includes certain items outside those categories. Mass property

[55] (Newy York State Department of Taxation and Finance, 2021c)

can be further categorized into special franchise and non-special franchise property. Most utility companies have a potential for sited and non-sited (mass) property. Utility-owned mass property can also be segmented into special franchise property in Roll Section 5 (RS5), as well as non-special franchise in Roll Section 6 (RS6), for example an electric transmission line with rights of way through private property.

A special franchise, in the context of real property taxation in New York State, is (1) the right to place, maintain and operate mains, pipes, wires and the like for conducting water, steam, light, sewer, and so on, on, under, or over publicly-owned land such as streets and waterways, and (2) the physical equipment so placed, maintained and operated. Common examples of such improvements are telephone and power-line poles, wires and cables, water pipes, and gas mains.

A special franchise, in general terms, consists of the tangible real property of a utility, which is situated in public places, together with the value of the intangible right or franchise to operate in the public place. Property of a utility company located in public places is special franchise property subject to assessment by the State Board in accordance with section 600 of the Real Property Tax Law. The Board establishes special franchise assessments and files a certificate of the special franchise property assessment with the local assessor for entry on the assessment roll except for Nassau County and New York City where the Board provides a full value that is equalized locally before entry on the assessment roll. After a public hearing on the assessment or full value, it then becomes a part of the roll with the same force and effect as if the local assessor had originally made it. All taxes and special ad valorem levies for county, city, town, village, school, and special districts are then based on this assessment.

Non-special franchise would generally consist of all other mass property not located on, under, or over publicly-owned land (streets) and waterways. The locality's assessor is responsible for the valuation and assessment of this property.

Appraisal

In accordance with the Advisory appraisal program your municipality has chosen, ORPTS will:

- Review the six year plans and try to accommodate the structural re-inspection schedules requested.
- Provide updated values on structural and mass properties, inclusive of inventory and market changes appraisal and field inspection in the first year followed by a re-inspection at least once every six years.
    - If significant new construction or demolition occurs, a site re-inspection will be done prior to establishing the value.
    - Appraisals will be in the style of computer-assisted mass appraisals, not detailed narrative appraisals.

Advisory appraisals will include:

- Form RP-7021, Utility Advisory Appraisal Request
- Values to match Roll Section 6 (Section, Block, Lot) if locality has standardized (UCARS)
- All mass property (poles, cables, wire, transmission and distribution property)
- Complex utility structures, such as; Municipal water properties
- Generating plants
- Compressor stations
- Electric substations

- Water treatment plant

Advisory Appraisals will not include:

- Cell towers
- CATV head end structures
- Utility owned office buildings
- Telephone central office buildings
- Utility service, maintenance and conference centers
- Utility warehouses and garages
- Non-utility scale solar farms (< 1 MW)

The valuation of these structures will be the responsibility of the local assessor. If requested, ORPTS will provide the latest inventory on file unless that inventory is subject to protection as a trade secret or is otherwise protected under Public Officers Law § 87(2)(d).

Advisory appraisals are also used for measurement of full value and equalization. If municipalities change utility property values or decide not to use the advisory appraisals, staff will need data to understand the local values for value verification. Data such as appraisals, inventory, methodology, unit pricing, depreciation schedules, and any other supporting documentation will be helpful in our understanding and verification of locally determined utility values. This data should be made available at least in the first year of the six-year plan. (See attached decision grid for utility properties.)

Defense of Utility Advisory Appraisals

Under RPTL § 1544(4), advisory appraisals are to be considered by the assessor in making assessments "but shall not be binding upon him." It is ultimately the assessors responsibility to value real property (other than special franchise property) within his or her jurisdiction, even when an advisory appraisal is requested. The Office of Real Property Tax Services cannot become involved in RPTL Article 7 proceedings or other litigation commenced against a municipality. Furthermore, an RPTL Article 7 proceedings is a de novo review which means that the advisory appraisal should not be directly relevant in such a proceeding—with few exceptions, the inquiry in an Article 7 proceeding is whether the assessed value is correct, not whether the method used to arrive at that value was correct.[56]

South Carolina

South Carolina Department of Revenue[57]

Utilities

Utilities Property Tax is assessed on all real and personal property of companies that fall under the classification of "utilities," as well as railroads and pipelines. Utility companies include water and sewer companies, power companies, telephone companies, wireless telecommunication companies, and cable companies. This tax is assessed based on fair market value, and the SCDOR may use any accepted or recognized valuation method which reflects the property's fair market value. This includes methods within the unit valuation concept.[58]

[56] (New York State Department of Taxation and Finance, 2021d)
[57] For more information, see https://dor.sc.gov/resources-site/publications/Publications/Property_Tax_Guide.pdf
[58] (South Carolina Department of Revenue, 2021b)

Fee in Lieu

Industries that invest at least $2.5 million in South Carolina may negotiate for a fee-in-lieu of property taxes. This can result in a savings of about 40% on property taxes otherwise due for a project. Certain large investments may be able to further reduce their liability by negotiating the assessment ratio from 10.5% down to 6%. For large investments, the assessment ratio can be reduced down to 4%. The county and the industry may agree to either set the millage rate for the entire agreement period or have the millage change every five years in step with the average millage rate for the area where the project is located. Any personal property subject to the fee in lieu of property taxes depreciates in accordance with South Carolina law, while the real property is either set at cost for the life of the agreement or can be appraised every five years.

A fee in lieu of property taxes is granted by, and at the discretion of, the county where the project is located. The industry must make the $2.5 million investment over a five-year period to qualify. Large investment projects have eight years to meet their increased investment requirements. During this period, all property that is placed in service pursuant to the agreement is subject to a fee instead of ad valorem property taxes. A county may give the industry an additional five years to complete the project and place new property in service subject to the fee. A single piece of property can be subject to the fee for up to 40 years with the county's consent. The total project can be subject to the fee for up to 50 years with the county's consent.

Other unique things about a fee in lieu of taxes include the ability to replace used property with new property and have it subject to the fee and the option for the county to grant a credit against the fee.[59]

South Dakota

South Dakota Department of Revenue

Property Tax

Property taxes are the primary source of funding for schools, counties, municipalities and other units of local government. The Property Tax Division plays a critical role in ensuring that property assessments are fair, equitable and in compliance with state law.

How Property Taxes are Calculated

Establish the Value of the Property

The first step is to establish the full and true value of all property within the boundaries of each unit of government. State statutes require property to be assessed at its market (or full and true) value. Market value is the amount the property would probably sell for if sold on the open market.

Determine the Taxable Value of the Property

All property is to be assessed at full and true value. Then the property is equalized to 85% for property tax purposes. If the county is at 100% of full and true value, then the equalization factor (the number to get to 85% of taxable value) would be .85. For example: A home with a full and true value of $230,000 has a taxable value ($230,000 multiplied by .85) of $195,500.

Determine the Tax Levy for All Taxing Jurisdictions Which can Tax Properties

The third step is to determine the amount of taxes needed to meet the costs of operating a unit of government. The higher the cost of operating the city or school district, the larger the

[59] (South Carolina Department of Revenue, 2021a)

revenues required from property taxes. Revenues from property taxes, combined with other monies such as federal grants, must equal the size of the budget of the unit of government. The amount of property taxes a taxing entity can ask for is limited based on the Property Tax Reduction Act. The tax rate for all property in a local unit of government is arrived at by dividing the value of all the property into the amount of the budget that is unfunded from other sources. This calculation results in a tax rate expressed in dollars of property value, or "dollars per thousand". For example: if the taxable value within a city is $10,000,000 and the city has a tax levy request of $100,000, the tax levy is $10 per thousand.

Compute Taxes for Individual Properties

The final step is to apply the tax rate calculated in step three to individual properties. For example, using a tax levy of $10 per thousand from the example above, the tax on a home with a taxable value of $200,000 would be calculated at $10 X 200 or a tax of $2,000.[60]

Public Utilities, Railroad, and Airline Tax[61]

The Department of Revenue shares property assessment duties with local South Dakota County Directors of Equalization. While some industries pay property taxes, others are responsible for paying a Gross Receipts Tax. Regardless of the method of taxation, all tax dollars are submitted to local governments.

Airline Flight Property

The Department of Revenue is responsible for assessing flight property (aircraft) of airline companies operating within the State of South Dakota. Airline companies subject to the property tax must be engaged in the operation of owned or leased aircraft for hire in interstate or international transportation on regularly scheduled flights. Flight property is assessed by the Department in July and the tax is then certified and sent to counties in August. The counties collect and distribute the taxes to the airports where the airlines make their regularly scheduled landings[62].

Natural Gas Pipeline Companies

The Department of Revenue is responsible for assessing the property of natural gas companies operating in South Dakota. The operating property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property[63].

Pipeline Companies

The Department of Revenue is responsible for assessing the property of pipeline companies operating as a common carrier in South Dakota. The operating property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property[64].

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[60] (South Dakota Department of Revenue, 2021a)

[61] For more information, see https://dor.sd.gov/businesses/taxes/property-tax/public-utilities-railroad-airline-tax/

[62] (SDCL 10-29)

[63] (SDCL 10-35)

[64] (SDCL 10-37)

Power & Light

Power and Light Companies provide energy to residents and businesses across South Dakota. For property tax purposes, the department has separated the industry into four different categories: Rural Electric, Investor or Privately Owned, Commercial Wind Generation Facilities and Municipal Electric.

Rural Electric Companies

Rural Electric Companies furnish electricity for consumption principally in rural areas of South Dakota. Rural Electric Cooperatives and Public Power Companies are included in this category. Transmission and Distribution Property is divided into real property and personal property for the purpose of taxation. The real property, land and buildings, is assessed by the County Director of Equalization. The counties determine and collect the tax at the same rates and at the same time as other locally assessed property. The personal property (which includes all wires, lines, transformers, meters, machinery, fixtures, attachments and appurtenances) is subject to a generation tax in lieu of a property tax. The Companies are required to file an annual report with the Department in February. The Department certifies the taxes to the counties in May. Taxes are collected by the counties in June and distributed to the school districts[65].

Generating Property

The Department of Revenue is responsible for assessing the property that is owned by rural electric companies and used for the generation of electricity. The property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property. SDCL 10-35

Investor or Privately Owned Power & Light

The Department of Revenue is responsible for assessing the property owned by companies which furnish electricity for public use. The property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property[66].

Railroads

The Department of Revenue is responsible for assessing the property used in the operation of a railroad in South Dakota. The property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property[67].

Telecom Companies

Telecommunications companies provide telephone service to residents and businesses across South Dakota. For property tax purposes, the Department has separated the industry into three different categories: Local Exchange Companies, Long Distance Companies, and Wireless Companies.

Telecommunications and Wireless Information

Local Exchange Telephone Companies

These companies are subject to a gross receipts tax instead of the property tax. Companies are required to file their South Dakota Annual Reports with the Department in April of each year. The Department

[65] (SDCL 10-36)
[66] (SDCL 10-35)
[67] (SDCL 10-28)

certifies the taxes to the school districts on or before July 1st. Taxes are collected by the Department on or before August 1st and distributed to the school districts by September 1[68].

Long Distance Companies

Department of Revenue is responsible for assessing the property of companies that provide long distance service in South Dakota. The property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed property[69].

Wireless Companies

Wireless Companies pay a 4% gross receipts tax on revenue from the sale at retail of intrastate and interstate telecommunications services to customers with a primary place of use in South Dakota. Gross Receipts includes the revenue of sales at retail of intrastate and interstate telecommunications services. Any real and personal property owned by a telecommunications company that is used or intended for use in furnishing and providing telecommunication services is exempt from real and personal property tax. Tax is reported and paid on your South Dakota sales tax return that is sent to the Department of Revenue. Taxes are collected by the department and distributed to the property tax reduction fund and to the counties based on population ratio[70].

Water Companies

Private or Investor Owner Water Companies

Department of Revenue is responsible for assessing the property of companies that provide water for public use. The property is assessed by the Department in July and the taxable value is then certified and sent to the counties in August. The counties determine and collect the tax at the same rates and at the same time as locally assessed[71].

Non-Profit Rural Water Supply Companies

Non-profit Rural Water Supply Companies are exempt from property taxes[72].

Wind Companies of 5mW of Greater

Commercial wind farms with a capacity of 5mW or greater pay a nameplate capacity tax and a production tax in lieu of all property taxes. The nameplate capacity tax is $3.00 per KW times the generating capacity. The production tax for commercial wind farms that were producing power prior to April 1, 2015 is $.00065 per KWH. The production tax for commercial wind farms that began producing power on or after April 1, 2015 is $.00045 per KWH. Companies are required to submit their South Dakota Annual Report and their payment on or before February 1[73] [74].

Texas

Texas Comptroller of Public Accounts

[68] (SDCL 10-33-21 SDCL 10-33-26)
[69] (SDCL 10-33)
[70] (SDCL 10-33A)
[71] (SDCL 10-35)
[72] (SDCL -10-36A)
[73] (SDCL 10-35-16)
[74] (South Dakota Department of Revenue, 2021b)

Property Tax System Basics

Property taxes are local taxes that provide the largest source of money local governments use to pay for schools, streets, roads, police, fire protection and many other services. Texas law establishes the process followed by local officials in determining the value for property, ensuring that values are equal and uniform, setting tax rates and collecting taxes.

Texas has no state property tax. The Texas Constitution and statutory law authorizes local governments to collect the tax. The state does not set tax rates, collect taxes or settle disputes between you and your local governments.

Components of Your Local Property Tax System

The property owner, whether residential or business, is responsible for paying taxes and has a reasonable expectation that the taxing process will be fairly administered. The property owner is also referred to as the taxpayer.

An appraisal district in each county, administered by a chief appraiser, appraises the value of your property each year. The appraisal district's board of directors hires the chief appraiser. Local taxing units elect the board directors and fund the appraisal district based on the amount of taxes levied in each taxing unit. For more information about your local appraisal process, please contact your county's appraisal district. The appraisal district can answer questions about exemptions and how your appraised value was determined.

An appraisal review board (ARB) is a board of local citizens that hears disagreements between property owners and the appraisal district about the taxability and value of property. In counties with a population of 120,000 or more, members of the ARB are appointed by the local administrative district judge in the county in which the appraisal district is located. The board of directors appoints ARB members in all other counties. Protests concerning the appraised value of your property should be directed to your ARB. Your appraisal district can provide you with contact information for the ARB.

Local taxing units, including the school districts, counties, cities, junior colleges and special districts, decide how much money they must spend to provide public services. Property tax rates are set according to taxing unit budgets. Some taxing units have access to other revenue sources, such as a local sales tax. School districts must rely on the local property tax, in addition to state and federal funds.

In many counties, taxing units contract with the county tax assessor-collector to collect all property taxes due in that county. The assessor-collector then transfers the appropriate amounts to each taxing unit. Although some taxing units may contract with an appraisal district to collect their taxes, the appraisal district does not levy a property tax. For information about local taxing unit budgets and tax rates, please contact the individual school district, county, city, junior college or special district.

The role of the Comptroller's Property Tax Assistance Division (PTAD) is primarily limited to monitoring responsibilities. PTAD conducts a biennial Property Value Study (PVS) for each school district for state funding purposes. The PVS, an independent estimate mandated by the Texas Legislature, ensures that property values within a school district are at or near market value for equitable school funding. The Comptroller's values do not directly affect local values or property taxes, which are determined locally.

PTAD also performs Methods and Assistance Program (MAP) reviews of all appraisal districts every two years. The reviews address four issues: governance, taxpayer assistance, operating standards and appraisal standards, procedures and methodologies. PTAD reviews approximately half of all appraisal districts each year. School districts located in counties that do not receive a MAP review in a year will be subject to a PVS in that year. [75]

Live Oak County Appraisal District Webpage

Within this site you will find general information about the District and the ad valorem property tax system in Texas, as well as information regarding specific properties within the district.

Live Oak County Appraisal District is responsible for appraising all real and business personal property within Live Oak County. The district appraises property according to the Texas Property Tax Code and the Uniform Standards of Professional Appraisal Practices (USPAP).

Live Oak County Appraisal District is contracted with Capitol Appraisal Group, Inc. to prepare valuations of all oil and gas leases, telephone, gas and electric utility systems, cable television systems, pipeline systems, railroad companies, and industrial properties designated by the Chief Appraiser. Under this contract, Capitol Appraisal also maintains a list of record owners of all producing oil and gas leases mentioned above, indicating the particular interest, or interests therein owned, including working interests and royalty interests. Capitol Appraisal may be contacted at 9300 Research Blvd., Suite 100; Austin, Texas 78759-6520; or by phone at (512) 346-5480; or on their website. (mineral.cagi.com)

Utah

Utah State Tax Commission

Centrally Assessed Real Property

The Centrally Assessed Team within the Property Tax Division values all mines, utilities and railroad property that operate as a unit. Values are set and apportioned to taxing entities based on situs of property. The local County Treasurer bills and collects the tax.

Division's Role	County's Role
Appraise Property • **Value all mines, utilities and railroad property that operate as a unit.**	Bill Property Tax • Local County Treasurer bills and collects the tax.

[76]

Utah Code, Title 59 Revenue and Taxation, Chapter 2 Property Tax Act, Part 2 Assessment of Property, Section 201 – Assessment by commission – Determination of value of mining property – Determination of value of aircraft – Notification of assessment – Local assessment property assessed by the unitary method – Commission may consult with county (Effective 5/9/2017).

[75] (Texas Comprtoller of Public Accounts, n.d.a)
[76] (Utah Property Tax Division, 2021a)

By May 1, the commission assessed the following property at its fair market value, as valued on January 1:

- Except as provided in Subsection (2), all property that operates as a unit across county lines, if the values must be apportioned among more than one county or state.
- All property of public utilities.
- All operating property of an airline, air charter service, and air contract service.
- All geothermal fluids and geothermal resources.
- All mines and mining claims except in cases, as determined by the commission, where the mining claims are used for other than mining purposes, in which case the value of mining claims used for other than mining purposes shall be assessed by the assessor of the county in which the mining claims are located.
- All machinery used in mining, all property or surface improvements upon or appurtenant to mines or mining claims. For the purposes of assessment and taxation, all processing plants, mills, reduction works, and smelters that are primarily used by the owner of a mine or mining claim for processing, reducing, or smelting minerals taken from a mine or mining claim shall be considered appurtenant to that mine or mining claim, regardless of actual location.

Valuation of State Assessed unitary Properties Pursuant to Utah Code Ann. Section 59-2-201

Utah Administrative Code, Tax Commission, Title R884-24P-62

R884-24P-62 specifies consistent mass appraisal methodologies to be used by the Property Tax Division in the valuation of tangible personal property assessable by the Commission; and identify preferred valuation methodologies to be considered by any party making an appraisal of an individual unitary property.

Unitary properties are assessed at fair market value based on generally accepted appraisal theory provided in Rule.

The assemblage or enhanced value attributable to the tangible property should be included in the assessed value. The preferred methods to determine fair market value are the cost approach and yield capitalization income indicator. A cost indicator may be developed under one or more of the following methods: replacement cost new less depreciation, reproduction cost less depreciation, and historic cost less depreciation. The yield capitalization formula is CF/(k-g), where “CF” is a single year’s normalized cash flow, “k” is the nominal, risk adjusted discount or yield rate, and “g” is the expected growth rate of the cash flow.

Washington

Washington State Department of Revenue

Washington State has a public utility tax that is a tax on public services businesses, including businesses that engage in transportation, communications, and the supply of energy, natural gas, and water. The tax is in lieu of the business and occupation (B&O) tax.[77]

[77] (Washington State Department of Revenue, n.d.)

Intercounty Utilities and Transportation Companies – Assessment and Taxation[78]

Washington State Department of Revenue lists and values the operating property of each company subject to assessment by the department. The department notifies the companies of the tentative valuation and county assessors can request the report of tentative value as well.

Companies can petition the department for a hearing related to the value of its operating property. The hearing is open to the public in most instances. The department makes a final determination of the true and correct actual cash value of the company's operating property on the assessment roll.

The true cash value of the operating property of public utilities is its "market value," which is the amount of money a buyer willing but not obligated to buy would pay for such operating property from a seller willing but not obligated to sell. In arriving at a determination of such value the department may consider only those factors which can within reason be said to affect the price in negotiations between a willing purchaser and a willing seller, and the department shall consider all such factors to the extent that reliable information is available to support a judgment as to the probable effect of such factors on price.

(In determining the true cash value of such operating property the department shall proceed in accordance with generally accepted principles applicable to the valuation of public utilities. The department may consider the cost approach, the income approach and the stock and debt approach to value. Any one of the three approaches to value, or all of them, or a combination of approaches may finally be used in making the final determination of true cash value, depending upon the circumstances.

The department shall use either the summation method or "unitary" or "enterprise" method in valuing the operating property of companies. As a general rule, the unitary or enterprise method is preferred where valuing a thoroughly integrated group of properties such that removal or destruction of any one property would jeopardize and/or immobilize the entire operation of the company. The summation method is preferred where adequate information is not available to derive reliable indicators of unitary or enterprise value, and the nature of the operating property is such that it may be segregated into component parts and the value of the parts readily determined. Notwithstanding the provisions of WAC 458-50-080, the department may, in using the summation method, employ the comparable sales or "market" approach to value to the exclusion of any other approach.

Washington State apportions the value of public utility companies to the various counties in such a manner that will reasonably reflect the true cash value of the operating property located within each county and taxing district. The WAC describes the apportionment basis, based on market segment.

County assessors are required by WAC to transmit certain documents and maps setting forth taxing district boundary changes to the department of revenue, property tax division. The department will prepare taxing district maps based on the information submitted.[79]

Wisconsin

Department of Revenue

[78] For more information, see [Chapter 458-50 Washington Administrative Code]
[79] (Washington State Legislature, 2016)

Taxation of Public Utilities and Insurers[80]

The department of revenue shall make an annual assessment of the property of all railroad companies, of all conservation and regulation companies, of all air carriers, and of all pipeline companies, within this state, for the purpose of levying and collecting taxes thereon, as provided in this subchapter.

The property, both real and personal, including all rights, franchises and privileges used in and necessary to the prosecution of the business of any company enumerated in s. 76.02 shall be deemed personal property for the purposes of taxation, and shall be valued and assessed together as a unit.

The department on or before September 15 in each year shall, according to its best knowledge and judgment, ascertain and determine the full market value of the property of each company within the state.

For the purpose of determining the full market value of the property of each company appearing on the assessment roll, the department may view and inspect the property of such company and shall consider the reports filed in compliance with s. 76.04 and the reports and returns of the company filed in the office of any officer of this state, and other evidence or information bearing upon the full market value of the property of the company assessed. In case of companies which own or use property lying partly within and partly without the state, the department shall value and assess only the property within this state, using the methods under subs. (4g) and (4r). When the full market value of the property of a company within this state has been determined, the amount shall be entered upon the assessment roll opposite the name of the company and shall be the assessment of the entire property of such company within this state for the levy of taxes thereon, subject to review and correction. The department shall thereupon give notice by certified mail to each company assessed of the amount of its assessment as entered upon such roll.

The department shall determine the property in this state of railroad companies, air carrier companies, pipeline companies and telephone companies in the following manner:

Natural gas pipelines. For natural gas pipelines, except liquefied gas pipelines:

1. Determine the gross cost of gas plant in service in this state, except motor vehicles exempt from the property tax under s. 70.112 (5), and of all other property owned or rented by the company and used in the operation of the company's business in this state and included in the base for purposes of rate regulation by the federal energy regulatory commission.
2. Determine the gross cost of gas plant in service everywhere, except motor vehicles specified under s. 70.112 (5), and of all other property owned or rented by the company and used in the operation of the company's business everywhere and included in the base for purposes of rate regulation by the federal energy regulatory commission.
3. Divide the amount under subd. 1. by the amount under subd. 2.
4. Multiply the fraction under subd. 3. by the full market value of the company's property everywhere.

Other pipeline companies. For pipeline companies except those under part (c):

1. Determine the gross cost of line of pipe owned or rented by the company and used in the operation of the company's business in this state.

[80] For more information, see Chapter 76, subchapter 1, Public Utilities

2. Determine the gross cost of line of pipe owned or rented by the company and used in the operation of the company's business everywhere.
3. Divide the amount under subd. 1. by the amount under subd. 2.
4. Multiply the fraction under subd. 3. by 3.
5. Divide the fraction under subd. 4. by 4.
6. Determine the barrel miles transported in this state.
7. Determine the barrel miles transported everywhere.
8. Divide the amount under subd. 6. by the amount under subd. 7.
9. Divide the fraction under subd. 8. by 5.
10. Determine the number of barrels received and delivered in this state.
11. Determine the number of barrels received and delivered everywhere.
12. Divide the amount under subd. 10. by the amount under subd. 11.
13. Divide the fraction under subd. 12. by 20.
14. Determine the gross cost of line of pipe everywhere.
15. Determine the gross cost of all property owned or rented by the company and used in the company's business everywhere.
16. Divide the amount under subd. 14. by the amount under subd. 15.
17. Add the fractions under subds. 5., 9. and 13. and multiply that result by the fraction under subd. 16.
18. Determine the gross cost of property owned or rented by the company and used in the operation of the company's business other than pipe in this state.
19. Determine the gross cost of all property owned or rented by the company and used in the operation of the company's business everywhere.
20. Divide the amount under subd. 18. by the amount under subd. 19.
21. Add the fraction under subd. 17. to the fraction under subd. 20.
22. Multiply the fraction under subd. 21. by the full market value of the company's property everywhere.

Subdivision 4r, Adjustment of factors**.** In making the determinations under sub. (4g), the department may adjust any factor or use any other factor in order to reflect more accurately the company's property in this state if in the department's judgment the factor or combination of factors does not produce a substantially just and correct determination or if during the 12 months preceding the assessment date any of the following conditions applies:

a. The company began operating in this state and the results of its operations during the first year materially distort the allocation of property to this state.
b. The company's service was interrupted so that the allocation of property to this state is materially distorted.
c. The company acquired or disposed of assets having a substantial value that are situated so as materially to distort the allocation of property to this state.
d. Another event occurred which materially distorted the allocation of property to this state.

Subdivision 5: Full market value.

a. The full market value of the operating property of a company listed in s. 76.01 shall be determined by applying recognized appraisal methods, which may include, but are not limited to, the capitalized income, cost, and stock and debt indicators of value, regardless of the method of accounting for legitimate business purposes used by the taxpayer. The department shall give due consideration to generally accepted accounting principles and regulated accounting practices.

b. The department shall promulgate rules relating to the general principles of the indicators of value under par. (a).[81]

General Property Taxes are in Chapter 70.

Gov. Evers: Democrats announce legislation repealing the personal property tax

Wisconsin Administrative Rules, Chapter 6, Public Utility Taxation: 6.02, 6.40, and 6.50

The validity of a determination of value may be measured against the supporting evidence and documented data from which the determination of value was derived. Accordingly the department shall consider and weigh, in its best judgment, any or all available indicators of full market value.

Current Framework

Property owners in Minnesota generally pay a property tax based on the property value. Property taxes help fund state and community services.[82] Each year, local governments set a levy (budget) and determine how much money must be raised by property tax revenue to cover their spending after accounting for other revenues. The value and classification of property are used to determine each property owner's share of the levy. The county assessor determines the estimated market value (EMV) and classification of most property by January 2 each year. The EMV is adjusted for any deferments, exclusions, or reductions to determine the taxable market value (TMV) of the property.[83]

State general levy tax is a property tax applied only to certain properties[84], which includes certain utility and pipeline operating property.

In its simplest form, the yearly tax due for each property mainly depends on:

- Local budget and tax calculations
- Value and use (classification) of the property
- Tax credits or programs that may reduce the tax due
- Additional school or state property taxes that apply to certain properties

The department determines the estimated market value of utility and pipeline operating property and provides those values to the counties for property tax calculation, billing, and collection.

Minnesota Rules, Chapter 8100, provides the current framework the department uses to estimate the market value of utility and pipeline operating property.

Client and other intended users

No client. Intended users: the Department of Revenue, department employees, and the company for whom the department completed the valuation.

81 (Wisconsin State Legislature, n.d.)
82 (Minnesota Department of Revenue, 2021a)
83 (Minnesota Department of Revenue, 2021b)
84 (Minnesota Department of Revenue, 2021a)

Intended use of appraiser's opinions and conclusion

To determine the market value of the taxable operating property of the company in order for the county where the property is located to calculate, bill, and collect property taxes in order to ensure the company pays its fair share.

Standard of value

Market value.[85] The terms market value, estimated market value, and market valuation mean the estimated market value of taxable property.[86]

Definition of value

Market value means the usual selling price at the place where the property to which the term is applied shall be at the time of assessment; being the price which could be obtained at a private sale or an auction sale, if it is determined by the assessor that the price from the auction sale represents an arm's-length transaction. The price obtained at a forced sale shall not be considered.[87]

Premise of value

Going concern.[88]

Identify the effective date of the opinion

January 2 of the assessment year.

Identify relevant characteristics of the property

Company specific and should identify the unit we are valuing.

Identify assignment conditions

Minnesota Rules, Chapter 8100 provides the current framework the department uses to estimate the market value of utility and pipeline operating property.

Source the appraiser reasonably believes to be reliable

Company-provided Market Value Report, internal financials, and regulatory forms.

Scope of Work

The scope is defined as the extent of the process of collecting, confirming, and reporting data upon with the valuation is based. In preparing valuations, the section relies on information provided by the company being valued and information available publicly.

Complete a form report. Determine the System Unit Value and Minnesota Apportionable Value of the property, assuming highest and best use is as currently being used. The System Unit Value is determined following Minnesota Rules, Chapter 8100.

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[85] Minnesota Statutes, section 273.11, except as provided in this section or section 273.17, subdivision 1, all property shall be valued at its market value."

[86] Minnesota statutes, section 273.032

[87] Minnesota statutes, section 272.03, subdivision 8

[88] "Under the going-concern premise, the business is assumed to continue operating indefinitely" & "Another important concept under the going-concern premise is that the sum of the independently development market values of the parts may not be equal to the value of the whole" (The Appraisal of Real Estate, pp. 666-667).

Data Collection

Data is collected from the company being valued and publicly available data as well as the data collected as part of developing the capitalization rate study.

- The subject business enterprise
- The interest in the business enterprise; and the attributes of the interest being appraised, including the rights and benefits of ownership (interest is all ownership rights)

Data Analysis

Data analysis includes the capitalization rate study and review of information submitted by the company (Utility and Pipeline Market Value Report and Utility and Pipeline Property Record Report, internal financial information, etc.) and other publicly available information such as news articles, stock prices, SEC Form 10-K, Jurisdictional Annual Report, FERC Annual Reports Forms 1, 2, or 6. The highest and best use of the subject property is presumed to be as it is currently used because it is special use property.

Highest and Best Use: Approaches to Value

The Department of Revenue establishes an estimate of the unit value for each utility company operating within the state. The entire system is valued utilizing data relating to the cost of the property, the earnings of the company owning or operating the property, and additional indicators of value where applicable. The resulting valuation is allocated to each state in which the utility company operates. The value of property located in Minnesota that is exempt from property tax or that is locally assessed is subtracted from the value allocated to Minnesota. Next, by the process of apportionment, the portion allocated to Minnesota is distributed to the various taxing districts within the state. The Department of Revenue reserves the right to exercise discretion whenever the circumstances of a valuation estimate dictate the need for it. Discretion may be used to ensure a balance between a prescriptive rule and sound appraisal judgment; to ensure that all relevant data pertaining to the value is considered; to ensure that a reasonable estimate of market value is derived; to address concerns of predictability and stability in estimations of market value; and to ensure that utility valuation is easily understood and administered.

The cost factor to be considered in the utility valuation formula is the original cost less depreciation of the system plant, plus the cost of improvements to the system plant, plus the original cost of all types of construction work in progress that are installed by the assessment date, plus the cost of property held for future use, plus the cost of contributions in aid of construction. The original cost of any leased operating property used by the utility must be reported to the commissioner in conjunction with the annual utility report. If the original cost of the leased operating property is not available, the commissioner shall make an estimate of the cost by capitalizing the lease payments. Depreciation is not allowed on construction work in progress. Depreciation is allowed as a deduction form cost in the amount allowed on the accounting records of the utility company, as such records are required to be maintained by the appropriate regulatory agency, except that depreciation may be reduced if available information indicates that the amount deduced does not equal actual accrued depreciation when the current estimated remaining life is considered.

The income indicator of value is estimated by weighting the capitalized net operating earnings of the utility company for the most recent three years as follows: most recent year, 40%; previous year, 35%, and final year, 25%. The net income is capitalized by applying a capitalization rate that is computed by using the band of investment method. This method considers:

- The capitalization structure of utilities
- The cost of debt or interest rate
- The yield on preferred stocks of utilities
- The yield on common stock of utilities
- The risk-free rate, relative risk, and risk premiums for public utility companies

Capitalization rates are computed for electric companies, gas distribution companies, natural gas transmission systems, and fluid pipeline companies. The rates are recalculated each year.

Additional indicators of value, other than the cost and income indicators, may exist in some situations. When additional indicators of value exist, the commissioner has the discretion to use these additional indicators in computing the unit value of a utility. Additional indicators of value include, but are not limited to, the market indicator.

If the commissioner determines that the market indicator can be quantified, is reliable, and is indicative of value for a company, the commissioner has the discretion to adjust the weightings of the cost and income indicators to give weight to the market indicator in the unit value computation. If the market indicator is used, the weighting for the market indicator must not exceed 5%.

If the commissioner finds economic or other forms of obsolescence exists, the commissioner has the discretion to adjust the weightings in the correlation process or make other adjustments in its methodology.

Reconciliation of Value Indications and Final Opinion of Value

If the commissioner uses additional indicators of value, the commissioner must state in writing the findings that necessitate deviation from the default weightings of 50% for the cost indicator and 50% for the income indicator.

The unit value of the utility company is equal to the total of the weighted indicators of value. The total weighting must equal 100%. The default weightings of the indicators are: market indicator, 0%; cost indicator, 50%; income indicator, 50%.

Minnesota Rule 8100.0300, subpart 5a and 6 provide for a separate valuation method for those cooperative associations, municipal power agencies, and pipelines that are not common carriers. Those entities can irrevocably elect the method under which they are valued. The unit value method, described above, or the cost less depreciation method, described below.

Minnesota Rule 8100 provides for allocating a portion of the System Unit Value to Minnesota and removing locally assessed and non-taxable property from the Minnesota allocated value. The Rule also provides for apportioning the remaining value to the parcels with operating property in Minnesota and applying equalization to the structures, if necessary.

Allocation depends on the market segment.

The unit value for electric companies is allocated to Minnesota based on two factors:

- The original cost of utility property in Minnesota divided by original cost of the property in all states, weighted at 90%.
- The gross revenue derived from operations in Minnesota divided by the gross operations revenue from all states, weighted at 10%.

The unit value for gas distribution companies is allocated to Minnesota based on two factors:

- The original cost of utility property in Minnesota divided by original cost of the property in all states, weighted at 75%.
- The gross revenue derived from operations in Minnesota divided by the gross operations revenue from all states, weighted at 25%.

The unit value for pipeline companies is allocated to Minnesota based on two factors:

- The original cost of utility property in Minnesota divided by original cost of the property in all states, weighted at 75%.
- The throughput of product from operations in Minnesota divided by throughput of product from operations in all states, weighted at 25%.

The unit value for electric companies is allocated to Minnesota based on two factors:

- The original cost of utility property in Minnesota divided by original cost of the property in all states, weighted at 90%.
- The gross revenue derived from operations in Minnesota divided by the gross operations revenue from all states, weighted at 10%.

The Rule provides for removing exempt or non-formula assessed property from the Minnesota portion of the unit value. The Minnesota portion of unit value is reduced by the value included in the unit value of the company for land, rights-of-way, nonoperating property, and exempt property. This amount is calculated by determining the ratio of the unit value to the cost less depreciation. This ratio is multiplied by the cost less deprecation of the property to be deducted. The utility company has the burden of proof to establish that the value of any property should be excluded from the Minnesota portion of the unit value.

Report of Defined Value

The valuation is provided to the company, as on Order of the Commissioner of Revenue. The company can choose to appeal the order. For more information on appeals, see Appendix A.

Apportioned Values

After the unit valuation of the company has been allocated to Minnesota and the amount of nonformula assessed (locally assessed or non-operating property) and exempt (non-taxable) property are removed, the remaining amount is apportioned, or distributed, to the taxing districts in Minnesota in which the companies operate. The Minnesota Apportionable Value is apportioned (spread) to the parcels in Minnesota with operating property, by property type. The market value assigned to each parcel is determined by the original cost of operating property at the parcel, by property type.

[Minnesota Statutes, section 273.88] provides that the commissioner must equalize the values of the operating structures to the level accepted by the State Board of Equalization if the appropriate sales ratio for each county is outside the range accepted by the board.

The equalized market value at each parcel, by property type, of operating property is rounded to the nearest $100. The department certifies the values to the counties where the property is located, by order or recommendation, by July 15 of the assessment year. The department issues corrected, certified values by October 1 of the assessment year. Corrected, certified values may include corrections related to administrative appeals. The commissioner may correct errors that are merely clerical in nature until December 31 of the assessment year. (Minnesota Statutes, section 273.3711).

The department also provides the certified values to the companies on the same date that the counties receive the information.

The counties used the equalized, rounded market values, by parcel and property type, to calculate property taxes that are due in the year following the assessment year. The counties also bill and collect those property taxes.

Comparing Minnesota’s Current Framework to Others

Alabama

In Alabama, the lien date for taxes is October 1 and taxes are due the following October 1. This may be problematic with the financial data used. Minnesota’s lien date is January 2 and we use the prior-year end financial data as it is dated only two days prior to the lien date. Alabama’s standard of value is fair market value. Minnesota’s standard of value is market value.

Alabama uses unitary appraisal process using the market approach, cost approach, and income approach, if sufficient data for each approach is available. This is similar to Minnesota.

Alabama allocates a portion of the unit value to Alabama based on gross investment. For companies containing mobile property, other factors are used for allocation. For intangible properties with undeterminable physical locations, the property is allocated to Alabama based on gross revenues. Minnesota has set allocation factors based on the market segment being valued.

Taxpayers in Alabama can request an informal hearing within thirty days of receiving their tentative assessed value. After the appeal hearing, or if no hearing is requested, the taxpayer is sent the final equalized assessment. Alabama send the taxpayer information on appealing their final assessment. Minnesota’s intimal values are final values, but may be appealed either through the administrative appeal process or through the Tax Court process.

California

California has a manual that describes the principles and procedures used by the California State Board of Equalization in the assessment of state-assessed property. Past Board decisions are reflected in the model. Minnesota does not have a similar, all-encompassing manual.

California’s standard of value is fair market value. Minnesota’s standard of value is market value.

California has a defined appeal process for companies to appeal to the Board of Equalization.

California has an audit program. Minnesota does not have a chance to go back and correct errors after a certain date.

Idaho

Idaho provided that the unit method of valuation is preferred for valuing a railroad or public utility when the individual assets function collectively, are operated under one ownership and one management, are interdependent, and the property would be expected to trade in the marketplace as a unit. Under the unit method, the value of the intangible and intangible property is equal to the value of the going concern. Minnesota is also unit valuation method.

Some of the apportionment process is done by miles of wire, pipe, or rail in each tax code area.

Minnesota apportions to taxing areas based on original cost of property.

Iowa

Utility and railroad property is assessed at the state level every year. Property taxes are billed and collected by the county government This is similar to Minnesota.

Iowa statutes provide for the reduction of property tax valuations according to assessment limitations to cushion the impact of inflation. Minnesota does not have a similar provision.

County auditor’s complete a change request and send a copy to the utility or railroad company and the Iowa Department of Revenue when the assessed valuation district is updated (either partially or entirely). This is different than Minnesota, where companies report their changes and the department notifies the counties.

During the 1998 legislative session, the Iowa General Assembly passed and the Governor signed Senate File 2146, the Property Tax Replacement and Statewide Property Tax Act. The bill replaced the property taxes paid by electric and natural gas utilities on their property with an excise tax associated with the distribution of electricity and natural gas. The bill also created a “statewide property tax” on the real property associated with the electric and natural gas utility companies.

Louisiana

Louisiana has a transportation & communication utilities tax. The tax rate is 2% of the gross receipts from interstate business for railroads and railways, motor bus lines, motor freight lines, sleeping cars, express companies, telegraph companies, boat or packet lines, and pipelines. Minnesota does not have a similar gross receipts tax.

Public Utilities are valued by the Louisiana Tax Commission using the unit methodology which includes cost, income, and market approaches. This is similar to Minnesota.

Michigan

Tracks, right of way, depot grounds and buildings, machine shops, rolling stock, and all other property necessarily used in operating any railroad in Michigan belonging to a railroad company shall remain exempt from taxation for any purpose, except for special assessments for local improvements in cities and villages, and land owned or claimed by a railroad company not adjoining the tracks of the company. Minnesota does not have a similar exemption.

Michigan assesses utility personal property at its true cash value. In determining the true cash value of personal property owned by an electric utility cooperative, the assessor shall consider the number of kilowatt hours of electricity sold per mile of distribution line compared to the average number of kilowatt hours of electricity sold per mile of distribution line for all electric utilities. Minnesota does not have a similar provision, however, cooperatives that pay an REA membership tax do not pay property taxes on their electric distribution lines outside of city limits.

Cable television and utility personal property submit an annual report with the original cost of their assets and a multiplier is applied to arrive at the assessor TCV [True Cash Value] calculations. Minnesota uses unitary valuation, as opposed to original cost and a multiplier.

Montana

Montana Department of Revenue values Centrally Assessed property using the Unit method and may include a:

- Cost indicator
- Capitalized income indicator
- Market indicator

The department uses an industry capitalization rate to estimate values when relying on the capitalized income indicator. The department performs an annual capitalization rate study for each industry to set the capitalization rates.

Minnesota also uses the unit method including a cost indicator and income indicator and other indicators as information is available. Minnesota also completes an annual capitalization rate study for each industry to develop rates to use in income models.

New York

In New York, a property’s assessment is based on its market value. This is similar to Minnesota. However, New York does not use the unitary valuation.

The state Board of Real Property Services is charged with valuing utility property operating in the public way, as special franchises. Local assessors are responsible for valuing utility property on privately owned rights of way, and also railroad property. Locally assessed values on railroads are taxable up to ceiling values set by the state. There is no similar ceiling in Minnesota.

As of 2005, railroad and utility property were taxed based on ad valorem property taxation, plus taxation on gross receipts of utilities. Fees are also imposed on utilities and railroads to compensate for costs incurred in various state regulatory and assessment activities.

North Dakota

Similar to Minnesota, North Dakota values railroads, investor-owned public utilities, and pipelines, for property tax purposes. The valuations are certified to the counties, and the counties determine and collect the tax.

Rural electric cooperatives pay a tax on the percentage of gross receipts and this tax is in lieu of all other taxes on a rural electric cooperative’s personal property. Any incorporated city receiving electric power from a rural electric distribution cooperative may impose an annual tax on the rural electric distribution cooperative for the privilege of distributing and furnishing power to consumers within the city. Minnesota does not have a similar provision.

South Carolina

South Carolina Department of Revenue determines the fair market value of utilities, railroads, and pipelines using any accepted or recognized valuation method which reflects the property’s fair market value. This includes the unit valuation concept.

Minnesota also uses unitary valuation. However, it’s unclear what accepted or recognized valuation methods South Carolina uses in its valuations.

South Dakota

Property is assessed at its market value, similar to Minnesota. The South Dakota Department of Revenue assess flight property. Counties collect the tax from airlines and distributes the tax to the airports where the airlines make their regularly scheduled landings. The South Dakota Department of Revenue also assesses property of natural gas companies, pipeline companies operating as common carriers, railroads property owned by investor or privately owned power and light companies, generation property owned by rural electric companies, property owned by companies that furnish electricity for public use. In Minnesota, the department values the operating property of these companies as well.

Real property, land and buildings, of rural electric cooperatives and public power companies are assessed by the county director of equalization. In Minnesota, counties value the land of rural electric cooperatives and non-operating property.

The personal property of rural electric cooperatives (which includes all wires, lines, transformers, meters, machinery, fixtures, attachments and appurtenances) is subject to a generation tax in lieu of a property tax. The Companies are required to file an annual report with the South Dakota Department in February. The generation tax is collected by the counites and distributed to the school districts. Minnesota has a generation tax on solar and wind facilities, but not on generation facilities of rural electric cooperatives.

Local exchange telephone companies are subject to a gross receipts tax instead of the property tax. South Dakota assesses companies that provide long distance service. Wireless companies pay a 4% gross receipts tax on revenue from the sale at retail of intrastate and interstate telecommunications services to customers. Minnesota does not have a similar provision.

South Dakota assesses property of companies that provide water for public use. Non-profit rural water supply companies are exempt from property taxes. Minnesota is similar.

Commercial wind farms with a capacity of 5MW or greater pay a nameplate capacity tax and a production tax in lieu of all property taxes. Minnesota has a similar provision (Wind Energy Production Tax that is tiered based on the size of the system, no nameplate capacity tax).

Texas

Property is locally assessed in Texas. This is unlike Minnesota that state-assesses operating property of certain companies.

The Texas Comptroller’s Property Tax Assistance Division conducts a biennial Property Value Study for each school district for state funding purposes. The study is an independent estimate mandated by the Texas legislature, ensuring property values within a school district are at or near market value for equitable school funding. The Comptroller’s values do not directly affect local values or property taxes, which are determined locally. Minnesota does not have a similar provision.

Utah

In Utah, the Centrally Assessed Team within the Property Tax Division values all mines, utilities and railroad property that operate as a unit. Values are set and apportioned to taxing entities based on situs of property. The local County Treasurer bills and collects the tax. This is similar to Minnesota with regards to the utilities and railroad property.

Washington

Washington State Department of Revenue lists and values the operating property of each company subject to assessment by the department. The department notifies the companies of the tentative valuation and county assessors can request the report of tentative value as well. Companies can petition the department for a hearing related to the value of its operating property. The hearing is open to the public in most instances. The department makes a final determination of the true and correct actual cash value of the company’s operating property on the assessment roll. Minnesota also has an appeal process after issuing initial valuations to companies. However, Minnesota does not refer to our initial valuations as tentative, the initial valuations are final, but subject to change related to administrative appeal.

Washington State determines the true cash value (market value) of the operating property. The department shall use either the summation method or "unitary" or "enterprise" method in valuing the operating property of companies. Minnesota also determines the market value of operating property using the unitary method.

Washington State apportions the value of public utility companies to the various counties in such a manner that will reasonably reflect the true cash value of the operating property located within each county and taxing district. The Washington Administrative Code describes the apportionment basis, based on market segment. This is similar to Minnesota; however, did not compare the apportionment basis between the two states.

County assessors are required by WAC to transmit certain documents and maps setting forth taxing district boundary changes to the department of revenue, property tax division. The department will prepare taxing district maps based on the information submitted. Minnesota does not collect taxing district boundaries or changes to those boundaries.

Wisconsin

Wisconsin values the operating property of companies (railroad companies, conservation and regulation companies, air carriers, and pipeline companies) at its fully market value by applying recognized appraisal methods including, but not limited to, the capitalized income, cost, and stock and debt indicators of value. Property is valued and assessed together as a unit. Minnesota also uses cost, income, and stock and debt indicators of value, in additional to other applicable methods as information is available, to value the operating property of railroad companies, utilities, and pipelines. Minnesota also uses unitary valuation.

Best Practices

- Unitary valuation appears to be the most common method used to assess state-assessed or centrally-assessed property. However, there are a few instances where other states use other methods:
    - Michigan
    - Iowa has transitioned away
- The California State Board of Equalization has a State Assessment Manual that describes the principles and procedures used by the Board in the assessment of state-assessed property.
- California has an auditing group that has the ability to audit past valuations. If Minnesota were to implement an audit program that goes back several years, we would need to determine how that would factor in with the tax calculation process.

- Idaho counties submit tax code area changes to Idaho Tax Commission's Geographic Information Systems (GIS) section of the Property Tax Division. Digital copies of the maps for the tax code areas are available to the operating property owners on their webpage.
- Some states tax telecommunication property in a similar manner to electric and gas distribution property. Other states tax telecommunication property at a percentage of gross receipts.
- New York posts their valuation standards online.
- Washington Administrative Code requires county assessors to transmit certain documents and maps setting forth taxing district boundary changes to the department. This would help the local jurisdictions, the companies, and the state identify the location of operating property in relation to the taxing jurisdictions.
- In Minnesota, utility companies have the burden of proof to establish that the value of any property should be excluded from the Minnesota portion of the unit value.
- Minnesota has an administrative appeal process that allows the department to enter into binding settlement agreements with companies when it's in the best interest of the state, eliminating the option for tax court appeals when settlements are reached.

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Appendix A – Administrative Appeals Process

The department values utility and pipeline operating property as of January 2 each year. The valuation is used by counties to determine property taxes payable in the following year.

The department begins completing the Capitalization Rate Study, which determines the yield and direct rates for each market segment, among other rates, in December of the year before the assessment year. The study is completed as a draft in early Spring with an open comment period. The final study is then posted around the end of April.

Companies file the Utility and Pipeline Market Value Report and Utility and Pipeline Property Record Report, and supplemental documentation to the department by March 31 of the assessment year. They provide data as of December 31 of the year before the assessment year.

The department completes valuations after returns are filed through early July. Once a company receives their valuation, if they disagree with the order, they can appeal it. Minnesota Statutes, section 273.372 allows for two different options for filing a petition to Minnesota Tax Court. If the appeal to court is from an order of the commissioner, it must be brought under chapter 271 and filed within 60 days from the date of the notice (with an optional extension of an additional 30 days). If the appeal is from the tax that results from implementation of the commissioner's order, certification, or recommendation, it must be brought under chapter 278. The petitioner must file on or before April 30 of the year in which the tax becomes payable.

Companies may also appeal their valuation (order) administratively to the commissioner prior to brining an action in court. Within 30 days after the notice date of the commissioner's valuation or other notice to the company, the company can file a written request for an appeal with the commissioner. Notice date means the notice date of the valuation certification, commissioner's order, recommendation, or other notice. Within 20 days of the date of the administrative appeal request, the commissioner shall conduct a conference. Within 30 days after the conference, the commissioner shall make a final determination of the matter and shall notify the company of the determination. The company can appeal the determination to Tax Court.

When it appears to be in the best interest of the state, the commissioner may settle the administrative appeal.

If a taxpayer files an administrative appeal and also files an appeal to Tax Court for that same order, the administrative appeal is dismissed.

Property owners can appeal their assessment from the county or city, or the tax levied against their property, to district court of the county in which the tax is levied or Tax Court under chapter 278. Minnesota Statutes, section 278.05, subdivision 5 provides for dismissal of the petition if the petitioner does contest the valuation of income-producing property and does not provide the following information to the county assessor before August 1 of the payable year:

- Year-end financial statement for the year prior to the assessment date
- Year-end financial statement for the year of the assessment date
- Rent roll on or near the assessment date listing the tenant name, lease start and end dates, base rent, square footage leased and vacant space
- Identification of all lease agreements not disclosed on a rent roll in the response to clause (3) listing the tenant name, lease start and end dates, base rent, and square footage leased

- Net rentable square footage of the building or buildings
- Anticipated income and expense in the form of a proposed budget for the year subsequent to the year of the assessment date.

Failure to provide the information required shall result in the dismissal of the petition unless (1) the failure to provide it was due to the unavailability of the information at the time the information was due, or (2) the petitioner was not aware of or informed of the requirement to provide the information.

Petitions filed against orders of the commissioner do not include similar dismissal provisions.

The current administrative appeal process is a result of laws enacted during the 2017 first special legislative session. Prior to the updates to Minnesota Statues, section 273.372, the department was not able to enter into binding settlement agreements.

After the administrative appeal section updates, the department was able to enter into binding settlement agreements and the number of tax court petitions has decreased.

Assessment Year	Valuations	Administrative Appeals	Tax Court Appeals
2016	102	18	11
2017	103	15	14
2018	102	14	14 (8 did not first administratively appeal)
2019	104	19	6 (3 did not first administratively appeal)
2020	104	19	4 (1 did not first administratively appeal)
2021	105	19	3
2022	105	20	4 (1 did not first administratively appeal)

Appendix B – Valuation Principles

Firm value is linked to investment, financing, and dividend decisions. The link between these decisions and firm value is made by recognizing that the value of affirm is the present value of its expected cash flows, discounted back at a rate that reflects both the riskiness of the projects of the firm and the financing mix used to finance them.[89]

- **Investment principle:** invest in assets and projects that yield a return greater than the minimum acceptable hurdle rate. The hurdle rate should be higher fir riskier projects and should reflect the financing mix used. Returns on projects should be measured based on cash flows generated and the timing of these cash flows; they should also consider positive and negative side effects of projects.[90]
- **Finance principle:** choose a financing mix (debt and equity) that maximizes the value of the investments made and match the financing nature to the assets being financed.[91]
- **Dividend principle:** if there are not enough investments that earn the hurdle rate, return the cash to the owners of the business. In the case of a publicly traded firm, the form of the return – dividends or stock buybacks – will depend on what stockholders prefer.[92]

Supply and demand: in economic theory, the principle that states that the price of a commodity, good or service varies directly, but not necessarily proportionately, with supply. In a real estate appraisal context, the principle of supply and demand states that the value of real property varies directly, but not necessarily proportionately, with demand and inversely, but not necessarily proportionate, with supply[93]

Substitution: when several similar or commensurate commodities, goods, or services are available, the one with the lowest price attracts the greatest demand and widest distribution. This principle assumes rational, prudent market behavior with no undue cost due to delay. A byer will not pay more for one property than for another that is equally desirable.

Balance: the principle of balance governs the related principles of diminishing returns, contribution, surplus productivity, and conformity.[94]

Externalities: the principle of externalities states that factors external to a property can have either a positive or negative effect on its value. Externalities may refer to the use or physical attributes of a properties located near the subject property or to the economic conditions that affect the market in which the property competes.[95]

Contribution: The principle of contribution, which holds that the value of an individual component of a property is measured in terms of how much it contributes to the value of the property as a whole, is integral to the application of the cost approach.

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[89] (Damodaran, 2015), p. 2
[90] (Damodaran, 2015), p. 2
[91] (Damodaran, 2015), p. 2
[92] (Damodaran, 2015), p. 3
[93] (Appraisal Institute, 2020), p. 23
[94] (Appraisal Institute, 2020), p. 25
[95] (Appraisal Institute, 2020), p. 28

Change: the result of the cause and effect relationship among the forces that influence real property value. The dynamic nature of the social, economic, governmental, and environmental forces that influence real property value accounts for change.[96]

Anticipation: the perception that value is created by the expectation of benefits to be derived in the future.[97]

Law of Conservation of Value: the value of a cake is unaffected by the way one slices it. A company cannot make its shareholders wealthier just by splitting its stock, nor by shifting the relative emphasis between shareholders and debtholders in its capital structure.[98]

[96] (Appraisal Institute, 2020), p. 22-23
[97] (Appraisal Institute, 2020), p. 22
[98] (Brealey R. A., 1979)

Appendix C – Definitions

Comparative analysis. The general term used to identify the process in the sales comparison approach in which quantitative and qualitative techniques are applied to comparable sales data to derive a value indication. Market rent can also be developed using comparative analysis.[99]

Corporate finance theory. The financial objective of the firm is to maximize the current market value of shareholders' investment.[100]

Cost. The amount required to create, produce, or obtain a property. Cost is either a fact or an estimate of fact.[101]

Differences between Fair Market Value and Fair Value[102]

Fair Market Value	Fair Value
Wiling buyer	Not always a willing buyer
Willing seller	Not a willing seller
Neither under compulsion	Buyer not always compelled; seller under compulsion
Assumes a typical hypothetical buyer and seller	The impact of the proposed transaction not considered; the concept of fairness to the seller a possible consideration
A price equitable to both	A concept of "fairness" to the seller, considering the inability to keep the stock
Assumes both buyer and seller have equal knowledge	No such assumption
Assumes reasonable knowledge of both parties	No such assumption
Applicable to controlling interests or minority blocks	Applicable to minority blocks
Applies to all federal tax valuations	The most common value standard in state dissenting and oppressed shareholder statutes

Estimated market value. The estimated market value for the parcel as reduced by market value exclusions, deferments of value, or other adjustments required by law, that reduce market value before application of classification rates.[103]

Extraordinary assumption. An assignment-specific assumption as of the effective date regarding certain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions. Uncertain information might include physical, legal, or economic characteristics of the subject property; or conditions external to the property, such as market conditions or trends; or the integrity of data used in an analysis.

[99] (Appraisal Institute, 2020), p. 371
[100] (Brealey, 2009), p. 47
[101] (The Appraisal Foundation: Appraisal Standards Board, 2020), p. 4
[102] (Cowley, Dupke, Galuchie, Ferro, & Trugman, 2016)
[103] Minnesota Statutes, section 272.03, subdivision 15

External considerations. Short-term and long-term influences such as the stage of a neighborhood's life cycle, the availability and affordability of financing, and supply and demand factors (such as market conditions).[104]

Fair value. In 2007, FASB defined fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The market value concept is sometimes also called fair market value, though it could be argued (as stated in a 1943 United States Supreme Court decision) that the term "fair" adds little to the phrase "market value." The Dictionary of Real Estate Appraisal, 6th Edition, indicates fair market value to be "equivalent" to market value in nontechnical usage and "similar in concept" with respect to technical usage in condemnation, litigation, and tax situations.[105]

Functional considerations. The rate at which construction technology, tastes in architecture, energy efficiency, and building design change. These factors can render an improvement functionally obsolete, regardless of its age or condition.[106]

Going concern: The assumption the company will continue to operate in a manner consistent with its intended business purpose into the future.[107] In the absence of evidence to the contrary, the entity is viewed as remaining in operation indefinitely.[108]

Highest and best use. The reasonably probable use of property that results in the highest value. Traditionally, to test alternative uses of a property in highest and best use analysis, appraisers have analyzed the four criteria in the following order:

- Legally permissibility
- Physical possibility
- Financial feasibility
- Maximum productivity.[109]

Hypothetical condition. A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis. Hypothetical conditions are contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis. Something that is known to be contrary to fact as of the effective date of the appraisal but that is taken to be true for the purposes of the appraisal.[110]

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[104] (Appraisal Institute, 2020), p. 563

[105] (Appraisal Institute, 2020), pp. 51-52
Historically, the accounting profession in the United States has used the depreciated purchase price to report the value of corporate assets for tax purposes and in financial statements. In the wake of the auditing scandals that gave rise to the Sarbanes-Oxley Act of 2002, the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) changed the generally accepted accounting principles (GAAP) to recognize fair value is a more accurate measurement.

[106] (Appraisal Institute, 2020), p. 563

[107] (Cowley, Dupke, Galuchie, Ferro, & Trugman, 2016)

[108] (Fremgen, 1968)

[109] (Appraisal Institute, 2020), p. 305

[110] (Appraisal Institute, 2020), p. 44

Intrinsic value. Amount an investor considers to be "true" or "real" worth of an item, based on an evaluation of available fats. It is sometimes called fundamental value. It is an analytical judgment of value based on perceived characteristics inherent in the investment (not characteristics peculiar to any one investor). Becomes fair market value when other investors reach same conclusions. Determined based on security analysis of expected earnings, dividends, capital structure, and other variables. Intrinsic value may be above or below fair market value.[111]

Jurisdictional exception. An assignment condition established by applicable law or regulation, which precludes an appraiser from complying with a part of USPAP [Uniform Standards of Professional Appraisal Practice]. When a relevant law or regulation precludes compliance with the relevant professional valuation standards. Only the part or parts of the professional valuation standards, that contradict the superseding regulation are affected by the jurisdictional exception. The balance of the professional standards remains in force.[112]

Market value. The usual selling price at the place where the property to which the term is applied shall be at the time of assessment; being the price which could be obtained at a private sale or an auction sale, if it is determined by the assessor that the price from the auction sale represents an arm's-length transaction. The price obtained at a forced sale shall not be considered.[113]

- Market Value is the most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.[114]
- Market value: a type of value, stated as an opinion, that presumes the transfer of property (for example, a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the value definition that is identified by the appraiser as applicable in an appraisal.[115]

Mass appraisal. The process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing[116]

Modern appraisal theory. Develop a tangible link between value theory and valuation theory. Translating economic theory into a working appraisal theory.

Modern Portfolio Theory. Provides a basis in which an investor can realize returns on investment required to achieve investment objectives. Since investor objectives are different for each investor, the structure of each investor's portfolio should also differ. Modern Portfolio Theory is the methodology by which each investor's objectives and risk preferences are matched with sets of suitable investment opportunities. In doing so, Modern Portfolio Theory utilizes the interrelationships between different securities as well as the expected return and volatility of each of the individual securities.[117]

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[111] (Cowley, Dupke, Galuchie, Ferro, & Trugman, 2016), p. 1-10
[112] (Appraisal Institute, 2020), p. 45
[113] Minnesota statutes, section 272.3, subdivision 8
[114] (Appraisal Institute, 2020), p. 48
[115] (The Appraisal Foundation: Appraisal Standards Board, 2020), p. 5
[116] (The Appraisal Foundation: Appraisal Standards Board, 2020), p. 5
[117] (HIrt, Block, & Basu, 2006), p. 117

Opportunity cost of capital. The cost of capital is the minimum acceptable rate of return for capital investment. Investment projects offering rates of return higher than the cost of capital add value to the firm. Projects offering rates of return less than the cost of capital actually subtract value and should not be undertaken.[118] The return that shareholders are giving up by keeping their money in the company is called the opportunity cost of equity capital. Shareholders want the company to invest only in projects for which the return on equity is at least as great as the cost of equity.[119]

Physical considerations. The rate at which the physical components of an improvement wear out, given the quality of construction, the use of the property, maintenance standards, and the region's climate.[120]

Price. The amount asked, offered, or paid for a property. Once stated, price is a fact, whether it is publicly disclosed or retained in private. Because of the financial capabilities, motivations, or special interests of a given buyer or seller, the price paid for a property may or may not have any relation to the value that might be ascribed to that property by others.[121]

Real property. The rights, interests, and benefits connected with real estate. Real estate is the physical parcel of land, improvements to the land (such as clearing and grading), improvements attached to the land (such as clearing and grading), improvements attached to the land (such as paving and buildings), and appurtenances (such as easements that cross the parcel or give access to the parcel).[122]

Personal property: Defined by exception: property that is not real is personal. The salient characteristics of personal property is its movability without damage either to itself or to the real estate to which it is attached.[123]

Replacement cost. The estimated cost to construct, as of the effective appraisal date, a substitute for the building being appraised using contemporary materials, standards, design, and layout. When this cost basis is used, some existing obsolescence in the property may be cured. Replacement cost may be the only alternative if reproduction cost cannot be estimated.[124]

Reproduction cost. The estimated cost to construct, as of the effective appraisal date, an exact duplicate or replica of the building being appraised, insofar as possible, using the same materials, construction standards, design, layout, and quality of workmanship, and embodying all the deficiencies, superadequacies, and obsolescence of the subject improvements.[125]

Special or extraordinary assumption. Something that is believed to be true on the effective date of the appraisal for the sake of the appraisal but that may or may not in fact be true as of the effective date of the appraisal. Unlike general assumptions, which often apply to many appraisal assignments (and are sometimes treated as boilerplate), special assumptions are specific to the assignment at hand. An appraisal assignment may be subject to more than one special assumptions.[126]

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[118] (Brealey, 2009), p. 48
[119] (Brealey, 2009), p. 84
[120] (Appraisal Institute, 2020), p. 563
[121] (The Appraisal Foundation: Appraisal Standards Board, 2020), p. 5
[122] (International Association of Assessing Officers, 2018), p. 2
[123] (International Association of Assessing Officers, 2018), p. 2
[124] (Appraisal Institute, 2020), p. 533
[125] (Appraisal Institute, 2020), p. 533
[126] (Appraisal Institute, 2020), p. 43

Superadequacy. Some aspect of the subject property exceeds market norms. An example of a superadequacy is an expensive, in-ground swimming pool in a neighborhood of relatively low-cost homes.[127]

True cash value. Term defined by Michigan statutes 211.27. The usual selling price at the place where the property to which the term is applied is at the time of assessment, being the price that could be obtained for the property at private sale, and not at auction sale except as otherwise provided in this section, or at forced sale. The usual selling price may include sales at public auction held by a nongovernmental agency or person if those sales have become a common method of acquisition in the jurisdiction for the class of property being valued. The usual selling price does not include sales at public auction if the sale is part of a liquidation of the seller's assets in a bankruptcy proceeding or if the seller is unable to use common marketing techniques to obtain the usual selling price for the property. A sale or other disposition by this state or an agency or political subdivision of this state of land acquired for delinquent taxes or an appraisal made in connection with the sale or other disposition or the value attributed to the property of regulated public utilities by a governmental regulatory agency for rate-making purposes is not controlling evidence of true cash value for assessment purposes. In determining the true cash value, the assessor shall also consider the advantages and disadvantages of location; quality of soil; zoning; existing use; present economic income of structures, including farm structures; present economic income of land if the land is being farmed or otherwise put to income producing use; quantity and value of standing timber; water power and privileges; minerals, quarries, or other valuable deposits not otherwise exempt under this act known to be available in the land and their value. In determining the true cash value of personal property owned by an electric utility cooperative, the assessor shall consider the number of kilowatt hours of electricity sold per mile of distribution line compared to the average number of kilowatt hours of electricity sold per mile of distribution line for all electric utilities.

[127] (Appraisal Institute, 2020), p. 583