

APPRAISING UTILITIES

Under RSA 83-F the Department of Revenue (DRA) is given the statutory authority to develop an opinion of value for every utility property in New Hampshire. To accomplish this, DRA utilizes valuation techniques that conform to USPAP (Uniform Standards of Professional Appraisal Practice), a nationally recognized series of guidelines that require the appraiser to “correctly employ those recognized methods and techniques necessary to produce a credible appraisal” (USPAP Standard Rule 1-1).

The first step in ANY valuation process is the development of a clear understanding of the appraisal assignment. Without exception, this involves identifying the specific characteristics of the appraised property, such as the nature of the improvements, accompanying property rights, etc. Utilities are known as “special purpose” properties because they are associated with a limited and very specific market of potential users and investors. As you would expect, utility assets are specifically constructed to conform to unique physical and functional requirements. Overall, these physical and functional requirements are very different from the requirements associated with typical commercial users or investors. For example, when a local real estate market is in transition, it is not unusual for certain types of industrial buildings to be converted into low or medium-quality office space, or vice versa. However, as a special purpose use, it is highly unlikely that a utility property will be converted to an alternative use because of the unique functional and physical characteristics associated with this class of properties.

Additionally, while typical commercial properties are “stand-alone” buildings, and are not functionally dependent on the existence of other properties to operate, utility properties typically rely on a geographically distributed infrastructure (such as poles, wires, pipelines, and even right-of-ways) external to the specific utility property being appraised to operate effectively. In short, because a typical utility property is “functionally” integrated with other external property and buildings, and each external component’s value is contributory and enables the entire infrastructure to operate - the value of any one component is best understood by studying all the assets first. This is because the isolated valuation of any one component would fail to capture the underlying synergy and long-term viability of all the assets.

Therefore, while standard appraisal concepts apply to utility properties, one significant departure is the adoption of what is known as “Unitary Methodology”, which is defined as follows:

"This is an appraisal of an integrated property as a whole without any reference to the value of its component parts. It is to be distinguished from fractional appraisal, which is a valuation of one of the parts without reference to the value of the whole, and from the summation appraisal, which is a valuation of the whole derived by adding two or more fractional appraisals." Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes (National Association of Tax Administrators, June, 1954, p 2).

The “Unit Method” then becomes the platform for the application of traditional valuation techniques, these are: the Cost, Sales Comparison, and Income approaches to value. A brief explanation of each technique and their respective strengths and weaknesses follows:

1. COST approach to value: This approach considers the depreciated cost of the assets, including land. The relevance of a Cost approach is very intuitive, because a property's value should be similar to what someone paid to build it. When the property is new, this may be true. However, even at this optimal point in time, the market perceived value might not equal cost. A classic example is the swimming pool that a homeowner spent \$20,000 to have installed, while the typical residential market response is to immediately depreciate the pool's "value" substantially.

In general though, when discussing the Cost Approach it is important to consider the particular market the entity is associated with.

If a utility entity is associated with the "non-regulated" market, independent of rate-base requirements associated with compliance with the New Hampshire Public Utilities Commission, there are at least two significant reasons why the non-regulated market attaches reservations to relying on the Cost approach as the primary basis for determining value. 1) All three types of depreciation ("physical", "functional", and "economic/external") must be considered, and these estimates can be very speculative. Of the three types of depreciation, physical depreciation is the easiest to estimate. However, functional and economic/external depreciation are usually understood in the context of an analysis of the entity's cash-flow, and are more difficult to quantify. 2) The appraisal must evaluate an entity the way an investor would, and few investors utilize the Cost approach as the primary basis for negotiating their purchase or sale agreement. Overall, however, the Cost approach is a useful technique when developed properly and completely, and is also used in conjunction with other supporting approaches to value.

If, however, one is considering a utility entity associated with the "regulated" market, and is required to comply with rate-base requirements associated with the New Hampshire Public Utilities Commission, the relevance of the Cost Approach is treated differently than for the non-regulated market. This is because this sub-market (of NH PUC regulated utilities) attaches significant relevance to the prevailing "rate-base" established by the PUC, and to the elements of consideration that the PUC relies on to derive the rate-base for a specific utility. Overall, these elements of consideration are more closely identified with the Cost Approach than the Income Approach, and because "rate-base" is very similar to a Cost Approach, it is reasonable that additional emphasis be attached to the Cost Approach, over and above that of the Income Approach.

2. SALES or MARKET COMPARISON approach to value: This approach develops an opinion of value for the appraised property by comparing similar, or conforming properties to the property being appraised. However, as a "special purpose" property, the availability of reliable comparable sale data is typically very limited. Additionally, the negotiated sale price is often "clouded" with complex financial and accounting offsets that hinder establishing a meaningful "per unit" sale price.

3. INCOME approach to value: This approach considers the capitalized value of the net operating income of a utility company. Two primary analytical options are available, either Direct Capitalization or Discounted Cash Flow (DCF).

Direct capitalization attempts to convert a single year's net operating income into an estimate of value, and this technique is most relevant when the cash flow is expected to be uniform or stable over time. Alternatively, a discounted cash flow assumes a series of projected cash flows over several years (typically 10 to 15), plus the projected resale of the property at the end, and then "discounts" these values back to the current date to reflect the "time value of money" (the concept that \$1 received today is worth more than \$ received in the future, due to the certainty of payment today versus the unknown risks in the future and inflation). Overall, each of these capitalization techniques has its strengths and weaknesses, and the selection of either technique is best determined only after studying the appraised property. One advantage of the Income approach, and why investors prefer it, is that depreciation (all three types) does not have to be separately calculated. If the company's assets are in physical disrepair, its operations will be less efficient and its net income will be lower. Conversely, if the assets are maintained properly, its net income will be higher. Continuing with this reasoning, if there are reasons why a company's operations are not "functionally" conforming to market expectations, or if there are "economic/external" constraints on its business, such as governmental regulation, these impacts will be reflected in the company's cash flow.

Importantly, appraisal theory considers each of the three techniques above (Cost, Sales, and Income) to be independent of the others, since each valuation technique relies on different types of data and assumptions. By extension then, utilization of more than one technique is considered to be desirable since each serves as a "proof-check" on the others. From a practical standpoint, the ability to develop a particular analysis is usually determined by the availability, reliability, and relevance of the data to the particular market the property is associated with. DRA typically receives sufficient information to complete both a Cost and Income approach to value.

Because DRA typically utilizes more than one valuation technique (Cost and Income approaches to value), a single opinion of final value must be derived from these two different approaches to value. This is the last phase of a valuation problem, and is known as "reconciliation". Generally, a reconciliation of the different values derived from the Cost and Income approaches is largely determined by the criteria described above: the quality and reliability of the data available to any particular valuation technique, and the relevance of any particular technique to investors or a particular market. For instance, in the course of our discussion with utility owners, operators, and utility analysts, DRA has come to conclude that investors in utility properties not regulated by the NH PUC are more interested in the financial performance of an entity than its depreciated cost. As a result, the income approach is frequently given the greatest weighting in our reconciliation. Conversely, if a property is subject to the rate-base constraints imposed by the NH PUC, the Cost Approach to value may receive the greatest weighting in the final reconciliation.

One last step remains after the reconciliation is completed, and the final opinion of "unit" or total utility value is established. Because utility property is frequently distributed over several taxing jurisdictions, the total reconciled "unit" value of a company is then allocated to the

various municipalities. The geographic allocation of value is determined on the basis of “original cost” distribution. In other words, if the final (total) “unit” value of Company XYZ is \$1,000,000, and the cost basis for Company XYZ is 70% in Londonderry and 30% in Manchester, then the allocation of value to Londonderry is \$700,000 ($\$1,000,000 \times 70\% = \$700,000$), and the allocation of value to Manchester is \$300,000 ($\$1,000,000 \times 30\% = \$300,000$). The appraised company typically provides the specific assignment of the cost basis to each municipality, and DRA completes the geographic allocation on a percentage basis. Importantly, the allocation percentages can vary from year to year as a company adds assets, removes them, or re-distributes them around the State.