A REVIEW OF

MN Rules Chapter 8100 Pertaining to the Valuation & Assessment of Electric Generation, Transmission and Distribution Systems; Petroleum Pipelines; and Natural Gas Distribution and Transmission Pipelines in the State of Minnesota

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EXECUTIVE SUMMARY

This report was prepared under contract with the Minnesota Department of Revenue. The purpose of the report is to evaluate the current rule that the Department uses to value utility property in the state of Minnesota for property tax purposes and make recommendations for revisions. Specifically, the consultant performed the following tasks:

- Performed a full review of Minnesota's statutes and rules pertaining to the valuation and assessment of utility property.
- Reviewed public comments submitted to the Minnesota Department of Revenue from utility companies, local governments, and taxpayer groups.
- Prepared a preliminary report of initial findings and responded to specific questions raised by the Minnesota Department of Revenue. The preliminary report and the responses to those questions have been incorporated into this final report.
- Surveyed other states concerning the methodologies employed to value and assess utility property.
- Questioned and surveyed various national experts in the area of utility valuation.
- Made recommendations about possible amendments to the Minnesota utility valuations rule.
- And, prepared a sample appraisal that emulates the recommendations.

Findings Regarding the Minnesota Rule

The consultant finds the Minnesota Rule to be a rigid, formula driven rule.

The consultant finds the Rule to forbid the use of the market approach. The market approach is one of the three basic approaches to value. Minnesota is not in line with the majority of states that allow and do perform market approaches to value. The

stock and debt approach has been widely used as a surrogate for the market approach for public utility companies.

The consultant finds that the Rule prescribes an HCLD cost approach to value. This is in line with what the vast majority of states perform for utility companies. However, the Rule places rigid limits on how much depreciation can be deducted in the HCLD approach. The consultant finds this to be out of line with what other states are doing and is improper in the quest to reach market value. The consultant finds Minnesota to be the only state that places such limits on depreciation.

The consultant finds that the Rule allows for an adjustment in the cost approach for CWIP and operating leased property. This is in line with what other states are doing.

The consultant finds that the Rule makes no provision for an adjustment for contributions in aid of construction (CIAC). This is not in line with what the majority of states are doing.

The consultant finds that the Rule prescribes a basic yield capitalization methodology for the income approach. The basic formula for the method is as follows:

Income Approach Value = NOI Estimate / Weighted Average Cost of Capital

A similar income approach model was used by 77% of the states. This model is simplistic and thus requires numerous assumptions by the appraiser in order to be valid.

The consultant finds that the Rule provides for a 3 year weighted average of historical net operating income as the basis for estimating the NOI to be capitalized. The consultant finds this to be a very strict and rigid definition of this important variable. The consultant also finds this to be out of line with how other states forecast future income.

The consultant finds that the Rule makes no provision for an adjustment to the estimated NOI for CWIP. This is out of line with how other states perform their assessments.

The consultant finds that the Rule makes no provision for an adjustment in the income approach for the full value of leased property. This is also out of line with how other states perform their assessments.

The consultant finds that the Rule provides that the capitalization rate will be the weighted average cost of capital. This is the correct rate to use in yield capitalization. The consultant also finds that the Rule does not specify what method or data sources to use when determining the cost of equity, cost of debt or capital structure. The consultant finds this to be preferable in order to give the appraiser the flexibility to exercise his or her appraisal judgment.

The consultant finds the Rule prescribes weightings to be applied to the cost and income approaches in the correlation (reconciliation) process. This is out of line with the vast majority of other states. The consultant finds the use of prescribed weightings in the correlation process to be improper and prevents the appraiser from reaching market value.

The consultant finds the Rule provides for the elimination from the unit value of all property that has been retired from utility service. The consultant can find no provision in the Rule that this property must be eliminated from the utility's Plant in Service account before it can be eliminated from the unit value. This is out of line with what other states do with retired property.

The consultant finds the Rule provides a method for eliminating the value of exempt property and other property that, by statute, is to be assessed by local county assessors (land, nonoperating property, and rights-of-way). These properties are to be eliminated by deducting the book value of these properties from the allocated Minnesota value of the system. The consultant finds this provision to be improper. The system value is a combination of a cost approach and an income approach. The deduction is done at book value. The elimination of non-taxable property from an allocated system value should always be done at the same level of value as the system value.

The consultant finds the rule provides a method for allocating a portion of the correlated system value to the State of Minnesota. Approximately one third of the states have similar rule or statute provisions. The consultant finds that the factors and percentages prescribed by the Rule are not out of line with the norm.

Recommendations Regarding the Minnesota Rule

As a general statement, the consultant recommends that the Rule be amended to provide more flexibility to the Department in arriving at market value. Following are specific recommendations made by the consultant:

- The Rule should be amended to allow the calculation of a market approach to value.
- The Rule should be amended to remove the limitations on depreciation deductions in the cost approach. The existence of obsolescence can be recognized in the correlation process by giving more weight to the income approach to value.
- The Rule should be amended to provide for the inclusion in the cost approach the value of contributions in aid of construction (CIAC).
- The Rule should be amended to allow for more than one income approach to value. This would include Direct Capitalization, Discounted Cash Flow, etc.

- The Rule should be amended to eliminate the strict method prescribed for estimating future income. The Rule should give more flexibility to the appraiser to estimate future income.

- The Rule should be amended to provide for the inclusion in the income approach the value of construction work in progress (CWIP).

- The Rule should be amended to provide for the inclusion in the income approach the full value of operating leased property.

- The Rule should be amended to eliminate the prescribed correlation weightings. The appraiser should be given full flexibility to use appraisal judgment in arriving at a market value estimate.

- The Rule should be amended to provide that before retired utility property is eliminated from an assessment it must first be eliminated from the utility's Plant in Service accounts.

- The Rule should be amended to change the prescribed manner in which non-taxable or nonoperating property is eliminated from the allocated system value. The elimination of non-taxable or nonoperating property should always be done at the same level of value as the system value. The proper way to make these eliminations is to compute a system value to system book value ratio. The appraiser would then apply this ratio to the book value of the property to be eliminated.

PREFACE AND SCOPE

In their never-ending search for market value, appraisers of utility property are constantly bombarded with different appraisal methodologies from numerous sources. Many forums throughout the country attempt to provide a framework toward possible standardization of methodology. Although it is obviously too much to ask for everyone to agree on all aspects of the appraisal process, some areas of the process can and should have standards of practice applied to them.

In the laws of most, if not all, states there is a definition of market value for property tax purposes. Also, in many states, this definition may be the only statutorial guidance given to the assessor for determining the value of property for property tax purposes. Hence, it is left to the policy makers or assessing jurisdictions to determine the most appropriate method for meeting their market value mandate. Indeed, the approach of every market value definition presupposes that, like Plato's ideal, there is in fact a "market value," that it exists, that it can be pointed to, pictured, recognized and can be used as the standard against which valuation figures may be compared.

With this scenario in mind, an appraiser should be able to judge success in valuation by how well his/her valuation corresponds with this so-called "ideal'. However, the valuation process does not work this way. First, valuation is an art, not a science. All of this is simply a sophisticated effort at "let's pretend", and all of it involves judgment. Not natural law, not science—judgment.

It has been against this background that this consultant has been retained to evaluate the current rule that the Minnesota Department of Revenue has promulgated and uses to value utility property in the State of Minnesota for property tax purposes.

Specifically, the charge to the consultant was to "review the MN Rules Chapter 8100 and make recommendations for revision".

To fulfill this charge, the consultant has performed the following tasks: performed a full review of Minnesota statutes and rules pertaining to the valuation and assessment of utility property; prepared a preliminary report of initial findings; reviewed the public comments made to the Minnesota Department of Revenue from utility companies, taxpayers groups, local governmental entities and groups, etc. pertaining to the possible amendment of the Departments rules; surveyed 35 states concerning the methodologies employed to value and assess utility property; questioned and surveyed various national experts in the area of utility valuation.

The consultant has also called upon his own experience and expertise of almost twenty years in the valuation of utility properties in fulfilling this assignment. A summary of the consultant's qualifications is found in Appendix 6 of this report. The following report is the result of the aforementioned efforts.

BACKGROUND

Brief Description of Minnesota Statute and Rule

Minnesota Statute 273.11 provides that all property in Minnesota "shall be valued at its market value". To this end the Minnesota Department of Revenue (the "Department") has promulgated Minnesota Rules, Chapter 8100 (the "Rule"). The Rule is used by the Department to value public utility properties; specifically, electric companies, gas distribution companies and pipeline companies. Copies of the pertinent statutes and rules are found in Appendix 2 of this report.

Unit Valuation

The Rule requires that public utility companies be valued as units. A brief discussion of the unit value concept would be proper at this point.

The appraisal of large interstate properties as a going concern involves analysis of the system's operations using the unit valuation concept. 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 components parts.[1] The essential premise of the unit valuation concept is that the value of a complex property is a function of the interaction of the various components of the property. To ascertain the market value of such a property, one must quantify the value of the system as it functions as an integral unit. Unit valuation requires valuing a public service property as a going concern.[2]

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[1] Western States Association of Tax Administrators, *Appraisal Handbook – Valuation of Utility & Railroad Property,* (1988), pg. 8.

[2] "Going concern" as used here is not synonymous with enterprise value. Enterprise value is a broader term which encompasses the value of the corporate entity including all of its tangible and intangible assets; it is a valuation of the present owner's total business in contrast to the exchange valuation of tangible assets as a going concern.

The intangible enhancement referred to in the above definition does not represent separate identifiable assets which are intangible. Rather, any intangible enhancement is an integral part of the group of assets making up the operating unit. By operating together as a unit, the operating assets achieve their highest and best use. A unit value appraisal typically consists of multiple indicators of value within the cost approach, income approach and market approach to value.

The Rule gives the Department very specific instructions on how to construct a cost approach and an income approach to value. The Rule specifically instructs the Department not to perform a market approach to value.

Cost Approach

The Rule prescribes an original cost less depreciation (OCLD) cost approach. The depreciation described in the Rule is regulatory book depreciation. The Rule, however, places rather rigid limits on how much depreciation can be deducted (20% for electrics, 50% for gas distribution and pipelines). If book depreciation exceeds these limits, a further deduction of only 50% of the excess is allowed. The Rule also states that depreciation "may be reduced if available information indicates the amount deducted does not equal actual accrued depreciation when the current estimated remaining life is considered". The consultant is unclear of the interpretation of this statement. The consultant assumes that it may refer to a reconciliation of the differences between regulatory depreciation and GAAP (Generally Accepted Accounting Principles) depreciation. There is no provision in the Rule for increasing depreciation above the limits prescribed. The Rule also requires an addition of construction work in progress at

100% of the booked costs. The Rule also requires an addition for the depreciated cost of leased property.

Income Approach

The Rule prescribes a basic yield capitalization methodology for the income approach. The basic formula for this method is as follows:

Income Approach Value = Net Operating Income (NOI) Estimate / Capitalization Rate

The Rule provides for a 3 year weighted average of historical net operating income as the basis for estimating the NOI to be capitalized. The Rule makes no provision for an adjustment to the estimated NOI for construction work in progress or leased property. The Rule provides that the capitalization rate will be a weighted average cost of capital computed by using the band of investment method.

Correlation

In the correlation, or reconciliation process, the Rule details prescribed weightings that are to be applied to the cost approach and the income approach. These weightings are; 75% - cost approach, and 25% - income approach.

Retirements

The Rule provides for the elimination from the unit value of all property that has been retired from utility service.

Allocation

The Rule provides a method for allocating a portion of the correlated system value to the State of Minnesota. The method prescribes allocation factors and weightings for the allocation factors to determine a final Minnesota allocation percentage. Two allocation factors are prescribed for each class of utilities; gross plant and gross revenue.

Different weightings of these factors are assigned; Electrics – 90% cost, 10% revenue; Gas and Pipelines – 75% cost, 25% revenue.

Adjustments for Non-Formula-Assessed or Exempt Property

The Rule provides a method for eliminating the value of exempt property and other property that, by statute, is to be assessed by local county assessors (land, nonoperating property, and rights-of-way). These properties are to be eliminated by deducting the book value (cost for non-depreciating property and cost less depreciation for depreciable property) of these properties from the allocated Minnesota value of the system.

SURVEY OF STATES

The scope of the consultant's research included a survey of other states. This survey included almost all states that centrally assess public utility companies. The survey also included some states where public utility companies are locally assessed but where unit appraisals are routinely performed by the local assessors. A total of 35 states were surveyed. The consultant personally talked with assessing personnel from all 35 states. Since many of the public utility companies assessed by the Department are multi-state companies, the methods used by other states to value these properties become pertinent in this process.

The Department gave the consultant an outline of what the survey of states should consist of. Following is that outline:

1. How many states are primarily guided by "rule"; by statutory provisions; by appraisal judgment?
2. In other states, specifically identify which valuation rules (or statutory provisions) tend to be "rigid" and which tend to be "vague". Specifically, how does Minnesota compare with respect to the use of:
    a. Formula driven calculations
    b. Market Approach
    c. Cost Approach
    d. Construction Work in Progress (CWIP) and Leased Property
    e. Contributions in Aid of Construction (CIAC)
    f. Income Approach
    g. Correlation Weighting
    h. Retirements
    i. Allocation Factors

The discussion that follows is the result of the consultant's survey of the various states pertaining to the information desired by the Department as outlined above. A

matrix of the results of the consultant's survey of states can be found in Appendix 3 of this report.

Valuation Methodology Dictated by Rule or Statute? Or by Appraisal Judgement?

An ongoing debate among policymakers across the country when they attempt to deal with property tax assessment issues is whether valuation methodology should be strictly dictated by a rule or statute or whether an assessor should have the flexibility to use appraisal judgment in reaching a market value mandate. There are arguments for and against and on both sides of this issue. That is why the results the consultant found for this question run the range of possible outcomes; from very strict and rigid formulas to almost complete freedom in selecting methodology. I would characterize the Minnesota Rule as being rigid and quite formulaic. What I mean by this is that, in many areas of the appraisal process, the Rule takes away appraiser judgment in making valuation decisions. To a great extent an appraiser, in complying with the Rule, can construct valuation spreadsheets and "hardwire" percentages, weightings, and other data prescribed by the Rule into these spreadsheets and merely transfer data from audited financial statements to these spreadsheets and generate approaches to value and system values.

Of the 35 states surveyed[3], **18 (51%) of the states stated that their valuation methodology was dictated to them by a rule or statute**. The specific methodology almost always was found in a rule or regulation. The statutes of most states, typically, would only contain a value definition and provisions that certain types of property would be subject to central assessment on a unit valuation basis. Occasionally you would find a state statute that mentions that certain approaches to value should be considered, but

[3] Minnesota is always considered one of the 35 states surveyed throughout this report.

rarely would you find specific instructions in statutes that detail how these various approaches should be calculated. These specific instructions are typically found in rules. **17 (49%) states stated that there were no specific rules or statutes that dictated to them the methodology that they should use to produce their valuations**. Thus, a slight majority of the states possess rules or statutes that dictate to them how they should perform their valuations of public utility property. Minnesota is one of these states.

However, the rigidity of these rules varies quite dramatically. **Of the 18 states that have specific valuation rules, only 7 (39%) of these states considered their rules to be "rigid". Only 4 (22%) of these states considered their rule to be formula driven.** As stated previously, the consultant considers Minnesota's Rule to be both rigid and formula driven.

Minnesota is also unique among the four formula driven states (Arizona, Michigan and Iowa being the others). Arizona performs only a specialized cost approach on its public utility property. Michigan's public utilities are locally assessed by local assessors using unique cost schedules developed by a state agency. Iowa's assessment of public utilities is not based on the market value of property but is better characterized as an excise tax on a base value established in the late 1990's and adjusted each year according to a statutorial formula. Minnesota is the only one of the four formula driven states that performs a unit valuation of public utilities using multiple approaches to value.

Market Approach to Value?

The market approach is one of the three standard approaches to value. The market approach is based on the principle of substitution, since an investor would not pay more for a property than the price at which a reasonable substitute could be acquired.

The market approach generally involves an analysis of comparable properties that have sold. For some types of properties, sales rarely occur and alternative forms of analysis must be employed. In the absence of sales data, a stock and debt indicator is typically developed in the appraisal of large interstate properties such as public utilities. The stock and debt indicator is based on the accounting premise that the value of the assets equals the value of liabilities plus equity. Most large interstate properties have publicly traded debt and equity securities. Thus, by valuing the liability and equity side of the balance sheet one can infer the value of the assets. When the subject company's securities are traded in the open market, the stock and debt indicator is a relatively straight-forward, strong value indicator. The number of shares outstanding multiplied by the price per share produces the aggregate value of each type of security. The controversy arises in regards to the stock and debt indicator when the subject company is a subsidiary of a larger publicly traded parent company and the value of the subject company's equity and debt must be allocated from the larger parent. The allocation process becomes somewhat subjective.

Of the 35 states surveyed, **24 (69%) of the states responded that they routinely perform market approaches on public utility companies**. The market approach was almost always the stock and debt indicator. Occasionally, states would perform analyses of actual market sales of complete units if data was available. The general consensus among states was that the market approach was given the least weight in the correlation process. Some states performed the market approach as a "sanity" check against the accuracy of the other approaches to value. Minnesota's Rule specifically states that the market approach shall not be used to value public utility companies.

Cost Approach to Value?

The cost approach is based on the premise that an investor would pay no more for a property than the cost of constructing an acceptable replacement which exhibits the same usefulness as the subject property. This appraisal concept is also known as the principle of substitution. In order for the cost approach to have validity, it must be economically feasible to build a new substitute property rather than purchase the subject property. When considering the cost of public utility property, several types of cost may be analyzed and considered. These costs include the following:

1. **Historical Cost** – The cost at the time a property was originally acquired or constructed and placed into public service.
2. **Trended Historical Cost** – The historical cost factored by reference to some current index.
3. **Reproduction Cost** – The cost of reproducing a new replica property on the basis of current prices, with the same or closely similar material.
4. **Replacement Cost** – The cost of replacing a property with an equally desirable substitute property.

Of the 35 states surveyed, **33 (94%) of the states performed a cost approach to value on public utility companies.** Only two states (Georgia and Iowa) did not perform cost approaches on public utility companies. Of the 33 states that perform cost approaches, **31 (94%) of the states characterize their cost approach as Historical Cost Less Depreciation (HCLD).** Two of the states (Michigan and New Mexico) characterize their cost approach as Reproduction or Replacement Cost Less Depreciation (RCLD). All 31 states that use HCLD get their information from regulatory financial statements. Minnesota's Rule provides for an HCLD cost approach. However,

Minnesota is the only HCLD state that has a limit placed on how much regulatory depreciation may be subtracted in the cost approach.

Construction Work in Progess in the Cost Approach

Construction Work in Progress (CWIP) represents that cost of property that is not in service or has not been placed in a Plant in Service account as of the assessment date. Since most cost approaches begin with an analysis of Plant in Service accounts, an addition must be made to the cost approach in order to properly account for the value of CWIP. There exists some controversy concerning the treatment of CWIP within the various indicators of value. Some would advocate a discount to the booked costs of long-term construction projects on the theory that since the property will not earn revenue until some time in the future, its market value cannot equal its present cost.

Of the 33 states that perform cost approaches, **21 (64%) of the states include CWIP in their cost approaches at 100% of the booked costs. 9 (27%) of the states include CWIP in their cost approaches at something less than 100% of the booked costs.** Sometimes this discount is a present value discount of the costs from the date of expected conclusion to the assessment date. Other times this discount is a flat percentage. **3 (9%) of the states consider CWIP to be exempt from property taxation.** Minnesota's Rule provides that CWIP should be included in the cost approach at 100% of booked costs.

Operating Leased Property in the Cost Approach?

The value of operating leased property is a typical adjustment made by unitary appraisers to the various indicators of value. These properties are not owned by the utility company and thus will not appear in the Plant in Service accounts. Therefore, a separate addition must be made to the cost approach in order to account for these properties that are contributing to the value of the unit.

Of the 33 states that perform cost approaches to value, **32 (97%) of the states make an adjustment to their cost approach for the depreciated value of property held under operating leases. Only one state (Texas) makes no adjustment to the cost approach for property held under an operating lease.** Minnesota's Rule provides that an adjustment should be made to the cost approach for leased property.

Contributions in Aid of Construction in the Cost Approach?

Contributions in Aid of Construction (CIAC) is another common addition to the cost approach for public utilities. CIAC represents property that was paid for or given to the public utility by another party. Property contributed to a utility company is not included in the Plant in Service accounts because the utility did not pay for it. Nevertheless, if the property represents an integral part of the utility operation, it contributes to earnings and has value.

Of the 33 states that perform cost approaches, **17 (52%) of the states make an adjustment to their cost approach for the depreciated value of CIAC. 15 (45%) states made no adjustment to their cost approach for CIAC. One state (South Carolina) exempts CIAC from property taxation.** Minnesota's Rule makes no provision for an adjustment for CIAC in the cost approach.

Income Approach to Value?

In the income approach, the income which a property is expected to produce is converted into a value estimate through the capitalization process. The income approach is premised on the assumption that investors will buy and sell property based on the income it is expect to yield. The conversion process is commonly known as income capitalization. Capitalization of income simply recognizes that there is a relationship between the price an investor is willing to pay for assets and the income which will be received from the assets. The capitalization process must take into consideration the type (or level) of income to be capitalized and the timing of the income to be received. The timing of income receipts would not be important except that inflation makes future income less valuable than today's income. Also the impact of delayed consumption makes future income less valuable because of the lost opportunity to invest income today. Future income is also more uncertain and may, therefore, carry additional risk which may reduce the quality of the investment.

Each of these concerns is addressed when the appraiser selects the capitalization techniques which will be used to develop an income approach indicator. The various capitalization techniques address each of these points (level of income, quality of income, timing, inflation) is a somewhat different manner.

Two fundamentally different methods of capitalization may be used in the income approach: 1) Direct Capitalization, and 2) Yield Capitalization. These two capitalization methods may be described in the following way:

> Direct capitalization is used to convert and estimate of a single year's income expectancy into an indication of value in one direct step.[4]

[4] Western States Association of Tax Administrators, *Appraisal Handbook – Valuation of Utility & Railroad Property,* (1988), pg. 60.

> Yield Capitalization uses the discounting procedure to convert future income flows to present value on the premise of a required level of return on invested capital.[5]

Direct capitalization converts income into a value estimate according to the formula:

$$\text{Value} = \text{Income} / \text{Direct Rate}$$

Yield capitalization converts future cash flows into present value as of the appraisal date using the following formula:

$$\text{Value} = \text{Cash Flows}_1 / (1+r)^1 + \text{Cash Flows}_2 / (1+r)^2 \ldots + \ldots \text{Cash Flows}_n + (1+r)^n$$

The essential difference between these two methods is that direct capitalization converts a single year's income into value, while in yield capitalization a series of future cash flows are discounted into present value estimates. The reliability of a direct capitalization model is based on the validity of the appraiser's market observations. The reliability of a yield capitalization model is based on the validity of the appraiser's assumptions concerning the shape and duration of the future income streams.

Direct capitalization focuses on observable data from the market. By observing the relationship between income and price, direct capitalization provides an estimate of value which is less subjective than estimates derived from yield capitalization techniques. Yield capitalization requires the quantification of all future investor expectations. Direct capitalization requires a reliance on observed data from the market. Hence, direct capitalization is not biased by the appraiser's view of the future. Instead, in direct capitalization, all future expectations are reflected in the direct capitalization rate which expresses the relationship between the price paid by the investor and the property's

[5] Id., pg. 60.

present level of income. Yield capitalization requires an analysis of cash flows, while direct capitalization is typically based on accounting income.

Of the 35 states surveyed, **30 (86%) of the states performed an income approach to value on public utility companies. 5 (14%) of the states did not perform an income approach to value.** Minnesota's Rule provides that an income approach to value will be performed.

Direct or Yield Capitalization?

Of the 30 states that perform an income approach to value, **23 (77%) of the states performed only a yield capitalization, 5 (17%) states performed only a direct capitalization, and 2 (6%) states performed both a yield capitalization and direct capitalization.** Minnesota's Rule provides for only a yield capitalization indicator.

The vast majority of the states that are performing a yield capitalization use one specific formula in their calculation. This formula is as follows:

Value = Net Operating Income / Yield Rate

This formula, on the surface, looks like a direct capitalization model since income is being converted to value in one step. However, this formula is actually a consolidated form of yield capitalization with a number of assumptions. This model is sometimes referred to as a no-growth perpetuity model. The assumptions made by the appraiser in order to justify the above formula include the following:

1) Net Operating Income = Net Cash Flow
2) Depreciation + Other Noncash Expenses = Capital Expenditures
3) No real growth is expected in the future, i.e., expected return on investment exactly equals the company's cost of capital
4) Inflation will have no effect on the company's earnings in the future
5) Direct Capitalization Rate = Yield Capitalization Rate

The typical yield rate used by states in the above yield capitalization model is a weighted average cost of capital. The Minnesota Rule provides for the above described no-growth perpetuity model. The yield rate prescribed by the Minnesota Rule is a weighted average cost of capital. **The Minnesota Rule, however, has a very rigid provision for estimating the Net Operating Income to capitalize. There is no room for appraisal judgment in the estimation of income to capitalize. This rigid provision is unique for Minnesota among those states that perform income approaches.**

Construction Work in Progress in the Income Approach?

Since CWIP has not contributed to the earnings of a company in past years, there is general consensus in the appraisal field that an adjustment needs to be made in the income approach to account for the future earning capability of CWIP. This is especially true for CWIP that is expanding or enhancing the property of the utility.

Of the 30 states that perform income approaches, **21 (70%) of the states make a specific adjustment in their income approach to account for effects of this type of CWIP. 7 (23%) of the states make no adjustment to their income approach for CWIP. 2 (7%) states (Maryland and South Carolina) exempt CWIP by statute.** Minnesota's Rule makes no provision to adjust the income approach for CWIP.

Operating Leases in the Income Approach?

Since lease payments are fully deducted as an operating expense, the lessor's interest in the property held under an operating lease agreement is removed from the income approach unless an adjustment is made. The full fee simple interest in all utility

property, which includes operating leased property, should be valued in each approach to value.

Of the 30 states surveyed that perform an income approach to value, **25 (83%) of the states made an adjustment to the income approach to account for the full value of operating leased property. 5 (17%) of the states make no adjustment to their income approach for operating leased property.** Minnesota's Rule makes no provision for an adjustment to the income approach for property held under an operating lease.

Correlation? (Reconcilation)

After all approaches to value have been completed, the next step in the unit appraisal process requires a correlation of the approaches into a final unit value estimate. The correlation or reconciliation process accounts for the relative strengths and weaknesses which are inherent in each approach. The reliability of a value indicator is a function of: 1) the applicability of the procedure to the subject property, and 2) the quality and quantity of the input data which was available.

Some procedures are better suited for certain types of properties than others. For example, the cost approach is most applicable to new properties which are at highest and best use, where the principle of substitution is operable. The older the property, the more difficult it is to measure depreciation for the cost approach.

Data for each approach varies in both quantity and quality. Input data to each procedure may reduce the quality of the resulting indicator if it is subject to large probabilities of error. When possible, the data utilized in each procedure is based on

actual verifiable facts. When this is not possible, this lack of verifiability should be reflected in the correlation process.

The correlation process should be the area of the appraisal assignment where the appraiser's judgment is most prevalent. This is where confidence can be shown for the existence of substantial data of good quality and where lack of confidence can be shown for lack of quantity and quality of data. This is why it is imperative that the appraiser be unfettered from rules or statutes that prescribe specific weightings for the value indicators.

Of the 35 states surveyed, **30 (86%) of the states perform a correlation of multiple approaches to value. Of the 30 states that perform a correlation, 28 (93%) of the states are allowed to use appraisal judgment in the correlation process. Only 2 (7%) of the states are required to use prescribed weightings.** These states are Arkansas and Minnesota. Minnesota's Rule specifies the exact weightings that must be used in the correlation process.

Interstate Allocation?

After determining a final system value, the appraiser must allocate a portion of this value to an individual state. Typically, allocation formulas contain a combination of property, income and use factors which are readily available and not burdensome for the taxpayer to provide. Many states, such as those in the Western United States, have banded together to standardize allocation formulas. This attempt at standardization is beneficial since it insures that no more or no less than 100% of the value of a utility is allocated to the states in which it has property.

Of the 35 states surveyed, **30 (86%) of the states performed an interstate allocation of their unit values. Of the 30 states that perform an interstate allocation, 20 (67%) of the states have no rule or statute that prescribes the allocation formulas to use. 10 (33%) of the states have specific rules or statutes that dictate to them the allocation formulas that they should use.** Minnesota's Rule prescribes a specific allocation formula for the Department to use.

Retirements?

Minnesota's Rule provides for the elimination from the unit value of all property that has been retired from utility service. There is nothing in the Rule that states that the retired property must be eliminated from a Plant in Service account or must be eliminated from the utilities rate base. Of the 35 states surveyed, 34 (97%) of the states stated that a property must be eliminated from a Plant in Service account and eliminated from the utility's rate base before the property is eliminated from the unit value. Minnesota was the only state that did not make this distinction.

EVALUATION OF MINNESOTA'S RULE AND VALUATION METHODOLOGY

Preliminary Report

The first task undertaken by the consultant in this assignment was to conduct a thorough review of the Rule and make a Preliminary Report to the Department. Following is a reiteration of the findings made by the consultant in the Preliminary Report coupled with additional observations that resulted from the results of the survey of states.

Approaches to Value – Market Value

The Rule forbids the use of the Market Approach. The Market Approach is one of the three basic approaches to value discussed in all appraisal literature. While the problems with the approach described in the Rule, as it is applied to public utilities, may be accurate, the Rule should not forbid an appraiser from using this approach; especially if sufficient data is available to use in its application. There have been times in the past when many public utilities have changed hands as complete units. The consultant has personally analyzed numerous of these sales and have been able to extract sufficient data to develop market approaches to value. This approach is especially relevant if your subject property has changed hands in close proximity to the assessment date.

The stock and debt indicator of value has been used as a surrogate to the market approach for public utilities. This approach is widely used and has been sanctioned by numerous courts. The famous Adams Express case in the 19th century involved the use of the stock and debt approach. Most public utilities are or are part of publicly traded entities that have publicly traded debt and equity securities. Thus, market prices are readily available for these securities. Obviously, the more allocations that have to be

made to get from the publicly traded entity to the subject property the less valid the indicator is. But this is a matter of appraisal judgment that can be addressed in the correlation process.

69% of the states surveyed performed market or stock and debt approaches to value. Although some states admit that they place little weight on the indicator, it is still performed and adds to the credibility of the state's appraisal. An appraiser is like a carpenter with a tool box. The appraiser has a limited number of tools at his or her disposal. It is the consultant's opinion that the Rule should not limit the tools which an appraiser has at his or her disposal.

Aproaches to Value – Cost Approach

The Rule prescribes an original cost less depreciation (OCLD) cost approach. Although, technically, there are minor differences in the definitions of "original cost" and "historical cost"[6], for purposes of this appraisal the consultant is assuming that the two terms are the same. The consultant will use the term "historical cost less depreciation (HCLD)" to describe the Rule's cost approach. The depreciation described in the rule is regulatory book depreciation. The Rule, however, places rather rigid limits on how much depreciation can be deducted (20% for electrics, 50% for gas distribution and pipelines). If book depreciation exceeds these limits, a further deduction of only 50% of the excess is allowed.

Of course, what an appraiser is trying to estimate in the cost approach is market depreciation. One rule of thumb often used by utility appraisers is that the HCLD cost approach is a relevant indicator of value for cost-of-service regulated utilities because it

[6] "Original Cost" is normally defined as the cost of the asset when first place in service, "Historical Cost" is normally defined as the cost of the asset to the current owner.

approximates the rate base of the utility. The rates that the utility charges its ratepayers are based on a recovery of and a return on these historical costs. The problem with the rule is that it establishes limits on the amount of depreciation that can be deducted. Once again, this restricts the appraiser in making judgments concerning the market and the regulatory environment the utility is in. It appears to the consultant that these limitations on depreciation were enacted in order to insure that tax bases do not erode below certain levels. Of course, this goal runs contrary to the "market value" standard found in the statutes. For utilities to remain viable they must be constantly replacing, enhancing and expanding their properties. Thus, it is highly unlikely that a utility that is operating as a going concern will ever fully depreciate. The unit valuation process has checks and balances to insure that the appraiser can reach the market value standard. It is the use of multiple approaches to value and the complete freedom of the appraiser to use his or her judgment in correlating these approaches to value that is the most meaningful check and balance.

94% of the states surveyed that perform cost approaches perform an HCLD cost approach. Thus, the Rule's prescription for an HCLD cost approach is in line with what the vast majority of states are using. Where the Rule departs from conformity is in the limitation placed on depreciation. No other state makes this type of limitation.

Construction Work in Progress (CWIP)

The Rule requires an addition in the cost of approach of 100% of the booked costs of construction work in progress. This is proper. 64% of the surveyed states that perform cost approaches include CWIP at 100% of the booked costs.

Operating Leased Property

The Rule requires an addition to the cost approach for operating leased property. This is proper. 97% of surveyed states that perform a cost approach make a similar addition.

Contributions in Aid of Construction (CIAC)

The Rule makes no comment concerning contributions in aid of construction (CIAC). CIAC is property bought and paid for by another entity and given to the utility. Property contributed to a regulated utility is not included in rate base because the utility did not pay for it. Nevertheless, if the property represents an integral part of the utility operation, it contributes to earning and has value. This property should be included in the HCLD indicator. Since the cost of CIAC is usually not shown on the books of the utility, the Department of Revenue would have to make a special request for than information. 52% of the surveyed states that perform a cost approach made an adjustment for CIAC.

Approaches to Value – Income Approach

The rule prescribes a basic yield capitalization methodology for the income approach. The basic formula for this method is as follows:

Income Approach Value = NOI Estimate / Weighted Average Cost of Capital

This is a widely used method among assessing agencies for regulated public utilities. Of the 30 states surveyed that performed income approaches, 83% of them used some form of this method. Along the spectrum of yield capitalization methods this is probably the most simplistic and thus requires numerous assumptions by the appraiser. These assumptions were enumerated previously in this report.

Some will argue that over the long run these assumptions are valid and proper for a highly regulated utility. However, it is the consultant's opinion that an appraiser should

have the flexibility to choose alternative and more sophisticated income approach methods should conditions and data availability warrant it. For example, Discounted Cash Flow is a widely used method and is typically used by market participants to determine the value of these types of properties. Direct capitalization is also a widely used method and is very adaptable to public utilities because of the enormous amount of market data available from comparable public utility companies. 23% of the surveyed states performed direct capitalization models with their income approach to value.

The Rule provides for a 3 year weighted average of historical net operating income as the basis for estimating the NOI to be capitalized in the income approach. The Rule provides for the exact weighting to be applied to each of the three historical years. No other state surveyed has such a stringent requirement for estimating income. Once again, this is a very strict and rigid definition of this very important variable. If a company is experiencing a steady growth in earnings and this trend is expected to continue, using historical averages will undervalue the company. On the other hand, if a company has discontinued some part of its operation or has experienced some other form of extraordinary event, the use of historical averages will overvalue the company. The Rule needs to give the appraiser the flexibility to look at all information that may be available to derive an informed estimate of future income. Historical averages are certainly one part of this information, but many other data sources should also be available to the appraiser, such as; statistical trending, performance ratios, analyst reports, etc.

Construction Work in Progress (CWIP)

The Rule makes no provision for an adjustment to the estimated NOI for CWIP. On many occasions a company's CWIP account will contain significant investment in plant expansion. Almost always this plant expansion is expected to generate additional earnings for the company in the future. The use of historical averages to estimate future NOI will not account for these expected additional earnings. The Rule needs to provide for an adjustment to estimate future earnings to account for the effects of expansion CWIP. 70% of the surveyed states that perform income approaches made adjustments to their income approach to account for CWIP.

Operating Leased Property

The Rule makes no provision for an adjustment in the income approach for property held under an operating lease agreement. The Rule does provide for leased property in the cost approach but not the income approach. Since leased payments are fully deducted as an operating expense, the lessor's interest in the leased property is removed from the income approach unless an adjustment is made. The full fee simple interest in all utility property, which includes leased property, should be valued in each approach to value. The Rule needs to provide for an adjustment to either estimated future earnings or as a lump sum adjustment to the income approach to account for the full value of operating leased property. 83% of the surveyed states that perform income approaches make an adjustment to their income approach to account for the full value of operating leased property.

Capitalization Rate

The Rule provides that the capitalization rate in the income approach will be a weighted average cost of capital computed by using the band of investment method. This is the correct rate to use in yield capitalization. The Rule does not specify what method or data sources to use when determining the cost of equity, cost of debt or capital structure within the weighted average cost of capital. This is proper because there are numerous accepted methods and data sources to choose from to make these computations. This is one area of the Rule where the appraiser has the flexibility to choose and use appraisal judgment in making decisions about methods and data sources.

Correlation

The Rule has prescribed weightings that are to be applied to the cost approach and the income approach (75% cost, 25% income). The correlation process is generally the appraisal process that involves the most judgment by the appraiser in analyzing the quality, quantity and reliability of the data used. The use of prescribed weightings eliminates the use of this judgment and, in the consultant's opinion, may prevent the appraiser from reaching market value. There are numerous fact situations that may arise that will lead an appraiser to have more or less confidence in a valuation approach. Mechanical weightings are not a substitute for an appraiser who can assemble the facts and fit them into cause and effect relationships which then lead to final value conclusions. The appraiser needs to be able to make these judgments when these situations arise. Of the 30 states surveyed that perform a correlation of multiple

approaches to value, 93% used appraisal judgment in the correlation process. Minnesota is one of only two states that use prescribed weightings in the correlation process.

Retirements

The Rule provides for the elimination from the unit value of all property that has been retired from utility service. It is unclear as to whether this treatment is afforded to property that still remains in the utility's rate base and is, thus, still earning a rate of return on its investment. If property is still is a Plant in Service account and is still contained in a utility's rate base it should still be considered operating property even though it is not functioning as such. The Rule needs to make this distinction. Every state surveyed (outside of Minnesota) makes this distinction.

Elimination of Non-Formula Assessed or Exempt Property

The Rule provides a method for eliminating the value of exempt property and other property that, by statute, is to be assessed by local county assessors (land, nonoperating property, and rights-of-way). These properties are to be eliminated by deducting the book value (cost for non-depreciating property and cost less depreciation for depreciable property) of these properties from the allocated Minnesota value of the system. Since the system value is a correlation of a cost approach and an income approach, the deduction of these properties at their book value is improper. The elimination of non-taxable property from an allocated system value should always be done at the same level of value as the system value. The proper way to make these eliminations is to compute a system value to system book value ratio. You then apply

this ratio to the book value of the property to be eliminated. This is the proper level of value to eliminate from the allocated system value.

Interstate Allocation

The Rule provides a method for allocating a portion of the correlated system value to the State of Minnesota. The method prescribes allocation factors and weightings of the allocation factors to determine a final Minnesota allocation percentage. This is similar to what is accepted for unit value states across the country. Two allocation factors are prescribed for each class of utilities, gross plant and gross revenue. Different weightings of these factors are assigned; Electrics – 90% cost, 10% revenue; Gas and Pipelines – 75% cost, 25% revenue. These are commonly used factors and typically cost is given the most weight in these formulas. The only concern the consultant would have is with the Electrics. This formula should work fine if all Electrics are vertically integrated. In other words, have generation, distribution and transmission. Distribution is typically the only segment of a vertically integrated electric company where revenue is always measured. If you have an Electric that has only transmission or only generation in your state, then the revenue portion of the Rule's allocation formula may be troublesome. A lot of states will divide their allocation formula for Electrics into three segments; generation, distribution, and transmission and miscellaneous. Depending upon the specific characteristics of the properties in Minnesota, the Department may want to consider this.

Questions to the Consultant from the Department

As part of his assignment, the consultant was given a list of questions from the department to answer. These questions dealt with specific areas of unit valuation. What follows is the Department's questions and the consultant's answers.

1. Is economic obsolescence a valid calculation to make and allow to companies? If not, is there any other way to consider differences between cost and income indicators?

Economic obsolescence has been defined as a loss in value due to negative influences external to the subject property. Authoritative appraisal texts outline two basic methods for determining economic obsolescence. The appraiser can either 1) capitalize the income or rent loss to the entire property that is attributable to the negative influence, or 2) compare sales of similar properties that are subject to the negative influence and others that are not. These texts go on to say that the second method is preferred if pertinent sales data is available. That is because for large unitary companies which are spread over a large geographical area, it is very difficult to isolate and identify specific negative influences and the income loss associated with them. It is also difficult for large unitary companies to isolate and identify negative influences that affect their property and not affect other properties for which market data is available.

Some appraisers calculate economic obsolescence through what has been termed the "income shortfall" method. This method compares a company's actual historical earnings with the theoretical earnings that should have been achieved by the company with the assets on hand if they were earning a fair return on the depreciated cost of their property. When the achieved rate of return is less than the market rate of return, economic obsolescence is implied. This method is improper. Income shortfall measures

internal rather than external factors. Economic obsolescence should not include loss in value die to internal factors, such as management prerogative and control. The method presumes that any deficiency in income is solely attributable to the property, and that if the current management had adequate equipment, the company would earn the theoretical rate of return. The income shortfall method is a derivative of what has previously been described as the capitalized rent loss procedure. The capitalized rent loss procedure focuses on the comparison of two properties, one property with the obsolete feature and the other property without the obsolete feature. Based on this comparison, the capitalized rent loss method determines the difference between the properties and their rents, expenses, or cash flows and capitalizes the difference. Income shortfall differs from the capitalized rent loss procedure because the income shortfall method does not compare properties. The income shortfall method merely comports the cost approach to the value derived from the income approach. Therefore, any flaw or error in the calculation of the income approach will be carried over to the cost approach. For example, if the appraiser has overstated the discount rate then the calculation of the income approach and the cost approach will be understated. The Oregon Supreme Court made this statement concerning the income shortfall method:

> "The mathematical logic of [the income shortfall] approach essentially converts the cost approach to an income approach. Where the income and the rate are given, [the income shortfall] method will always result in a value exactly the same as the income approach because it shoves the cost out the back door. Algebraically, the method cancels all cost in excess of the value indicated by the income approach as obsolescence."[7]

Another deficiency of the income shortfall method is that it compares historical earnings of a company to a current benchmark. A potential buyer of a company is not

[7] United Telephone Co. of the Northwest, Inc. v. Departments of Revenue, 770 P. 2d 43, Oregon 1988

buying historical earnings; the potential buyer is buying the future earnings stream of the company. If an appraiser can obtain access to a company's strategic plans that contain estimates of the future earnings of the subject property, an analysis can be performed that would indicate whether obsolescence may exist with the subject property. The appraiser can use his/her estimate of cost less depreciation as a hypothetical sales price (cash outflow) on the appraisal date and then use the forecasted future earnings of the company as cash inflows. The appraiser can then calculate an internal rate of return on these cash outflows and inflows. If the internal rate of return is greater than the company's weighted average cost of capital, the appraiser can safely assume that no additional adjustment for obsolescence is warranted. This is a very definitive analysis since the appraiser is using the property owner's own earnings forecasts in the analysis. The property owner is one half of the willing buyer—willing seller scenario.

If an appraiser is concerned that the HCLD indicator varies drastically from current market value, there is another method that can be used. A market-to-book ratio can be compared to the HCLD figure. This ratio can be obtained from analyzing similar ratios for the debt and equity securities of similarly situated comparable companies. An overall ratio that combines debt and equity should be calculated. This method not only invokes market value principles but also unitary valuation principles into the cost approach. If the market-to-book ratio calculated is greater than 1.00, then this is market evidence that no economic obsolescence is present.

One other way to acknowledge the existence of economic obsolescence in a unitary appraisal is in the correlation process. If an appraiser feels that economic obsolescence exists within a unitary company but is unable to isolate and measure it, then

the correlation process is one way to acknowledge the existence. This is done by the appraiser giving more reliance to the income approach than the cost approach. If the income approach is less than the cost approach then the correlated value will be less than the cost approach (this assumes no market approach was performed, of course). Under Minnesota's current rule this is not possible because the rule dictates that the cost approach be given three times more weight than the income approach. This is why it is imperative that an appraiser be given complete freedom to correlate the approaches to value according to appraisal judgment.

2. Should intangibles ever be allowed as a deduction when the costs have been expensed and not capitalized? Items such as long term contracts, customer lists, software, supplier agreements, trade names, research & development and others have been mentioned. We have allowed only intangibles that have been capitalized in the past. Items such as organization cost and rights-fo-way are commonly allowed.

Dealing with the intangible personal property exemption issue is a perplexing problem to appraisers conducting unitary appraisals. To add to the potential difficulty, there have been attempts in some jurisdictions to expand the meaning of the intangible personal property exemption to include items that do not usually have the characteristics of property, such as trained work force, managerial or technical expertise (of employees) and goodwill. Other items that do have a tangible, physical existence such as computer software and inventories have nevertheless been exempted as intangible. Assets sometimes claimed as intangible, such as, easements, acquisition adjustments, routs and gates, rights-of-way and goodwill, may in fact simply be rights to tangible property that is taxable.

State legislatures exempt certain intangible property from taxation for a variety of reasons. Among these reasons include efforts to avoid double taxation, difficulty in the

administration of the taxation of intangible property, and attempts to attract and promote certain economic activities. Double taxation would occur, for example, in the case of common stock ownership. The common stock represents ownership in the assets of a corporation. The value of the stock is based upon the value of the corporate assets. If an ad valorem property tax is assessed against the assets of the corporation, it is a double tax on those assets to apply an ad valorem property tax on the stock of the corporation as well. In the case of administrative difficulty, it is easy to imagine the futility of trying to apply a property tax on cash within a jurisdiction on a given date; the more strenuously the law was enforced, the less likely there would be any cash to be found. Economic development policies may lead to intangible personal property exemptions (and other kinds of exemptions as well). Localities often wish to discourage the development of "smokestack" industries in their area. They are more inclined to want business whose activities are based upon technology, research and development, and service orientation, rather than massive, expensive industrial plants and factories. The values of these businesses often include significant intangible components such as patents, copyrights, and trade secrets.

When one peruses a list of "intangibles' that are or, according to some, should be exempted from taxation one finds items that range from tangible property (e.g. software, inventories, stranded costs, present value of future prospects), to items that represent the right to exclusive use of tangible property (e.g. gates and routes, easements), to "traditional" intangible property items (e.g. stocks, bonds, patents, copyrights), to items that do not have a separate, independent property existence (e.g. goodwill, enterprise value, trained work force).

In theory, the purpose of unitary appraisal is to value the entire unit as "one thing". There is no distinction made for real, personal, intangible personal property or "other intangibles" among the individual assets making up the unit. The unit is usually defined based upon the nature of the properties to be appraised, the use of the properties, the most probable use of the properties, the ownership and control of the assets, and finally the most probable grouping of assets that would be sold as a unit.[8] The last criterion is critical in that it suggests the market to which the appraiser will look to value the property.

Usually the market relied upon is the stock and bond markets where interests in "units" defined by corporate boundaries are bought and sold. In these markets, properties are bought and sold without regard to whether or not intangible assets are part of the mix; they are bought and sold as units, as "one thing". The goal of unitary assessment, generally, is to efficiently appraise the property of the unit at its highest and best use, all parts acting synergistically to contribute to the value of the whole. Given the nature of unitary assessment, dividing up the unit in order to exempt certain assets is problematic at best, and may effectively destroy the unit. The contribution of an individual asset to the value of the whole may be extremely difficult to determine even if it is possible to arrive at a reasonable market value of the asset, separate and apart from the whole. Even cash-in-the-bank may be argued to contribute something different to the market value than a dollar-for-dollar amount. For example, the market value of a company carrying what the market perceives as excessive amounts of cash may be reduced on a greater than dollar-for-dollar basis because the market perceives that the company is not using the cash efficiently. Conversely, a large cash balance may have a positive impact on value if the

[8] National Conference of Unit Value States (NCUVS), Standard 1.D.

market perceives that this cash balance could be used for valuable acquisitions, or as a cushion from approaching "hard times".

Separating out the contributions of cash or any other asset from a unit value is likely to be a daunting task. If "intangible assets" such as goodwill or going concern value or work force contracts or licenses and franchises to operate are removed, what is left of the unit value? The market place simply buys and sells assuming all those "intangible" things may exist and be inseparably present.

In order to separate and value an intangible asset from a unit, the intangible must necessarily have the characteristics of property. It must be subject to specific identification and description, it must be subject to legal existence and protection, and it must be capable of private ownership as a thing in itself.[9] Stated more specifically, a property item should meet three criteria to qualify as an exempt intangible: 1) it must be clearly and separately identifiable; 2) it must be capable of being valued; and 3) it must be capable of being sold separately and apart from the unit. Separating the asset from the unit must not materially affect the defined unit as a going concern. Sometimes items such as *goodwill* are listed as an intangible. Ambiguous terms, such as goodwill, have at least two flaws when used to describe an exempt property: 1) they do not have the characteristics of property described above, and 2) the meanings of the terms themselves are subject to widely divergent interpretation.

In principle, intangible property, like other property, can be valued using the three traditional approaches to value; cost, income, and market. Under the cost approach, the cost to acquire the asset is estimated and then depreciated based upon its

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[9] Pratt, Shannon P., Robert F. Reilly, and Robert P. Schweihs, *Valuing a Business,* 3rd Edition, Irwin Professional Publishing, Chicago, (1995), pg. 536-537.

economic life. Computer software, copyrights, patents, stocks, bonds, and cash may be examples of property classed as intangible that are most amenable to this type of analysis. The income approach used will most likely be a discounted cash flow method where the value is the present value of future benefits. Patents, licenses, franchises, customer lists, trademarks and trade names, and contracts appear to be likely candidates for an income approach analysis. Under the market approach the appraiser would identify instances of recent sales of the same or similar assets, analyze those sales, and impute a current value to the subject based upon the sales information. FCC licenses, rights of way, trademarks and trade names may lend themselves to a market approach valuation.

Problems will likely arise under each of these approaches. In the cost approach, for example, there may be little or no market data to estimate the economic depreciation. The appraiser may resort to "rules of thumb" or "guesstimates" in order to arrive at the depreciation. Even detailed "engineering" calculations might not be validated by market data. In the income approach, the appraiser may make numerous assumptions about the size, shape, and duration of the future cash flows related to the asset with little independent data to guide the analysis. Likewise the appraiser may find little or no market data to guide the determination of the discount rate. Paucity of market data may make the market approach untenable. Even when a value is estimated for an intangible asset, it is questionable whether it is the correct value contribution to the unit value.[10] One way to remove any exempt property is through a market to book ratio. In this method it is assumed that all property contributes in equal amounts to the unit value. This is a valid assumption in unit valuations. The book value of an exempt intangible asset is multiplied by the market-to-book ratio of the entire unit, and then that value is

[10] See NCUVS Standard VI.G.3

eliminated from the unit value. This is the most accurate and theoretically correct method for eliminating the value of intangible assets from a unit valuation. With this approach, obviously, the exempt asset must be capitalized on the books and have an accounting book value.

Once a value for intangible property is determined, NCUVS standards state that it is properly removed from the unit valuation rather than from individual value indicators.[11] The best practice is to remove the value of the tax-exempt intangible property located in the state giving the exemption from the state's allocated unit value.

Commenting on the difficulties of eliminating intangibles from ad valorem tax appraisals in Utah, three academic professors made the following statement:

"A careful review of financial theory as applied to corporate valuation shows that there is no generally agreed upon method for identifying and isolating intangible value from the unit value. ....Markets typically do not distinguish between tangible and intangible value. Value is based on expected future earnings. In principle it would be possible to value tangible and intangible assets separately if the cash flow associated with each type of asset could be isolated. In practice it is impractical if not impossible to so isolate the income streams.

There are a variety of approaches used in different states, and proposed in Utah, to adjust unit or enterprise values for intangibles. We find that these adjustment methods which start from unit value generally have a substantial *ad hoc* component, and have little or no foundation in finance theory. They result in lower property values it is true, but whether the reduction is an appropriate measure of intangible value cannot be determined....

As a result of the theoretical and practical difficulties in isolating and valuing intangible property starting from the unit or enterprise value, we find that the only certain way to avoid taxing intangible property is to abandon the market value standard and use reproduction cost.[12]

Although separate valuation of intangible property is incompatible with generally accepted financial and appraisal theory of unit valuation, many states have laws

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[11] See NCUVS Standards I.F.3 and VI.G.1

[12] Walters, Lawrence C., PhD., J. Michael Pinegar, PhD., and James S. Schallheim, PhD., *A Review of Centrally Assessed Property Tax Issues in Utah,* December 17, 1997. Report was prepared under contract with the Utah Office of Legislative Research and General Counsel, for the Utah Tax Review Commission.

exempting certain items of intangible property from property taxation. Walters, Pinegar and Schallheim, cited above, recommended that the market value standard and unit valuation be kept and that state law "be modified to eliminate the distinction between tangible and intangible property. It simply is not a distinction that can be made practically." They suggested that if the legislature is determined to exempt certain intangible properties, a specific list should be drawn up that avoids items not readily valued by markets.

At the present level of theory and practice, there are many questions and problems regarding intangible property exemptions and unitary appraisal. An appraiser attempting to value intangible property should consider the following:

- Exempt intangible property should be valued based upon its contribution to the unit and deducted from the unit value and not from individual indicators. With this in mind, market-to-book ratios can be used to value the intangible property.

- Exempt intangibles should have the characteristics of property so that they can be separated and valued apart from the unit. The removal of an exempt intangible should not destroy the unit.

- With regard to any tax exemption, the burden of proof is on the taxpayer, not the assessing agency.

- Exemptions should not be granted for "intangibles" that merely represent a right and interest in tangible taxable property.

- Limiting the valuation of intangibles to one approach, or to a set formula, or by establishing that one approach is the upper limit of value is contrary to standard appraisal theory and violates the principles of market valuation.

3. Could any limit on depreciation be valid? Would it be practical to have "salvage value" as a limt?

When you perform a unit appraisal, one of the assumptions you make is that you are appraising a going concern. When you appraise a going concern, the appraiser also

assumes that the going concern has prudent management and that the going concern will be operating into perpetuity. Prudent management of a going concern will have an on-going program of maintaining and replacing existing property and taking advantage of growth opportunities to expand existing properties. With this is mind it is highly unlikely that the depreciated value of a unitary company will ever approach salvage value. There may be times when individual properties of a utility may be almost fully depreciated. But a unitary appraiser must look at the aggregate, the unit.

The only time a jurisdiction would ever consider placing a limit on depreciation is if there is something that prevents an appraiser from performing more than just a cost approach to value. If there are statutorial restrictions on performing other approaches to value or if there is not enough data to perform other approaches to value, a jurisdiction may think about putting restrictions on the cost approach in order to insure that the tax base remains stable. For most regulated utilities there should always be sufficient data resources to perform at least an income approach and very often a market approach. It is the consultant's opinion that any limit on depreciation violates the market value principle.

Salvage value is a term that really should not be considered when performing a unit valuation. Salvage value is the value of a property that has been retired from service. It is basically the liquidation value of the component parts of a property. Once again, the assumption you make when you perform a unit valuation is that you are valuing a going concern. A property that has been retired from service is not a going concern. Salvage value would come into play only when determining the value of a non-operating property that has been separated from the unit, or when the entire unit is out of service.

4. Should any cost of capital calculation include possible "size premium?

Many appraisers will adjust their cost of equity estimate upward to reflect what they call a size premium. In other words, they feel that the size of their subject property makes it more risky and thus should demand higher returns. The data to support this adjustment primarily comes from the Ibbotson Associates annual SBBI (Stocks, Bonds Bills, Investments)Yearbook. In its yearbook, Ibbotson tracks the returns of publicly traded companies from 1926 to the present. They have arrayed these returns in each year according to the size of the companies and have concluded that smaller companies demand higher returns and, thus, are riskier.

It is the consultant's opinion that the size premium adjustment is improper. First of all, the data sources used to make this adjustment do not break their information down by industry class. This is contrary to basic valuation principles which state that discount rates should be derived from guideline companies in the same industry class.[13] Secondly, there is a lot of controversy in the appraisal arena concerning whether this so-called "small firm effect" is really the result of firms being small. In other words, could this effect be a proxy for some other unknown factor,[14] such as the age of the company? A disproportionate number of small firms are also new firms. Obviously, new companies will be riskier than older established companies and would demand higher returns. Finally, in recent years the Ibbotson data base has come under severe criticisms by academics as to whether it contains bias and inaccuracies. In Appendix 4 of this report the consultant has attached a copy of a study that disputes the existence of the small firm premium. The study is titled, "The Current Status of Adding a Small Firm Risk Premium

[13] NCUVS Standard III.B.5.a
[14] Banz, R.W., "The Relationship between Returns and Market Value of Common Stocks", *Journal of Financial Economics*, Vol. 9, (1981), pg. 16-17.

to the Valuation Discount Rate", by John J. Kania, PhD. The study was published in the September 2000 issue of Business Valuation Review. This study outlines a number of problems associated with the data and the assumptions surrounding the adjustment for size. One problem discussed in this study is the "January effect". The January effect is an anomaly that suggests that the small firm premium was a seasonal effect and occurred primarily during the first few days of January each year. A possible explanation for this effect is the tax-loss selling strategy whereby investors sell stocks in December to realize capital losses for tax purposes. These stocks are then repurchased in January. This type of selling occurs much more frequently in small firms. Another problem suggested by this study is transaction costs. Transaction costs are fees paid by the investor in the form of commissions to the broker to buy or sell the stock. For smaller less actively traded stocks, these costs increase dramatically. Business Valuation services has found that the trading costs were .64 percent of the stock price for large firms, but rose dramatically to 9.38% for small firms over the period—1963 to 1992.[15] Finally, the Kania study discusses what has been termed a "delisting bias" in the Ibbotson data base. The data base is maintained by the University of Chicago's Center for Research in Security Prices (CRSP). This data base includes the returns from equity securities from 1926 to the present. Research has disclosed that prior to 1982 the data base did not include firms who had been delisted from the various stock exchanges because they were performing poorly. Large stock returns are not affected, because a disproportionate number of small firms are delisted for poor performance. Kania shows that if you study the period of 1982-1996 which was not affected by the delisting bias, the small firm premium

[15] "Is it Appropriate to Use a Higher Discount Rate to Value Small Firms", *Business Valuation Services, Inc.,* September 1996, pg. 14 (BVS Study).

disappears and actually reverses and becomes a large firm premium. This makes sense because if the small firm premium actually existed, shareholders would be demanding that the large firms be broken up into smaller firms so shareholders could experience these larger returns. But the reality is just the opposite; firms are merging with each other and becoming larger.

5. Are there other "cost of capital" texts besides the Ibbotson SBBI that are generally used?

The Ibbotson SBBI Yearbook is the most widely used data source for what is termed the "historical market risk premium". I am not aware of any other source for this variable. The market risk premium is a component of the Capital Asset Pricing Model (CAPM), the most widely used method for calculating the cost of equity. There are numerous other sources for the other variables in the CAPM. For instance, yields on governmental "risk-free" securities can be found in the Wall Street Journal and Federal Reserve publications. Betas are found in Value Line and Standard & Poor publications as well as other investment services.

As stated previously, Ibbotson is the major source for the historical market risk premium. This is sometimes known as an ex post premium. The premise behind the ex post market risk premium is that historical average premiums are the best predictor of what the future premium will be. Recently, analysts are calculating ex ante or forward looking market risk premiums. The premise behind the ex ante premium is that instead of relying on history to predict the future, use current day information to forecast what the return of the equity market will be and use this forward looking forecast to calculate the expected market risk premium. A recent book by Bradford Cornell, PhD entitled, *The*

Equity Risk Premium describes various methods of calculating a forward looking market risk premium.

Other analysts are using the Ibbotson data as a starting point but making adjustments to this data in order to account for some of the "bias" that has been previously discussed in this report. One such book that does this is entitled *Valuation: Measuring and Managing the Value of Companies* by Tom Copeland, Tim Koller and Jack Murrin.

It is important to remember that even though Ibbotson's Yearbook contains commentary on how to use their data, the book is primarily a source of data. There are many varied opinions on how to use the data. The Department should become informed on all the different opinions and then be able to make informed decisions on how best to meet their statutorial mandates. In addition to the two texts mentioned previously in this section, following is a list a books dealing with corporate finance and the cost of capital which are highly recommended:

Principles of Corporate Finance; by Brealey and Myers
Financial Management: Theory and Practice; by Brigham and Gapinski
Corporate Finance; by Ross and Westerfield
Investment Analysis; by Bodie, Kaine and Marcus
Corporate Valuation; by Bradford Cornell

6. <u>We have been formulating "industry capitalization rates", is it preferable to use financial ratings to differentiate the rates instead?</u>

It is the consultant's opinion that industry capitalization rates are the preferred rate for the Department to use in their unit appraisals. Since the goal of the appraiser is to estimate the most probable price between a willing buyer and willing seller, the capitalization rate used should reflect the most typical rate for the subject industry. The

capitalization rate contemplated should be a representative or typical rate of an industry group, not that of the present owner. The logic here is to strike an optimum capital structure, cost of equity and cost of debt from the perspective of a potential investor. For example, investors tend to recapitalize companies that are leveraged below or above the norm. Thus, the typical industry capital structure should be used. The same is true for the cost of equity and cost of debt.

Reaction to Comments from Local Government and Industry

When the Department announced that they were going to conduct a review of their utility valuation rules, they solicited public comment from interested parties such as local governments, local government organizations, utilities, and utility organizations. The consultant was given copies of the public comment received by the Department and invited to react to these comments. Copies of the public comments are found in Appendix 5 of this report.

As one might expect, there was stark contrast between the comments received from the local governments and local government organizations and those comments received from the utility industry. The local governments wanted very much to maintain the status quo and not make major amendments to the Rule. The utility industry felt that major changes to the Rule were necessary. The most controversial areas of the Rule were the depreciation limits mandated in the cost approach portion of the Rule and the prescribed correlation weightings for the cost and income approaches (75% - cost, and 25% - income). The consultant will attempt to respond to the specific comments in the following paragraphs.

Comments by Local Governments and Local Government Organizations

As stated previously, the major tone of local government comment was to maintain the status quo without any amendments to the Rule. However, if amendments were inevitable, the local governments had some specific changes in mind.

The primary change advocated by the local governments was to go to RCNLD (Replacement Cost New Less Depreciation) rather than HCLD in the cost approach.[16] The rational here is that RCNLD was more theoretically correct in that it required the appraiser to use current costs of construction and calculate market depreciation rather than relying on book depreciation. The consultant has commented extensively in this report concerning the use of HCLD for regulated utilities. Reiteration is necessary here. HCLD is the most widely used cost approach by state assessing agencies for rate based regulated utilities (used by 94% of the states). The reason being is that the rates charged by the utilities are based on a recovery of and a return on these historical costs. As long as the utilities covered by the Rule remain cost of service or rate base regulated, the HCLD cost approach should be used. If state regulators depart from this type of regulation, then other cost approaches can and should be considered. The consultant would also point out that it is very time consuming and costly to perform a complete RCN study on a large, vertically integrated public utility. The resources needed to perform a proper study may be cost prohibitive for some state assessing agencies.

The local governments also felt there was no need to amend the prescribed correlation weighting provisions of the Rule. The general theme of these comments was

[16] See comments of Council of Utility Cities, Goodhue County, and Sherburne County.

that public utilities were special use properties and thus, by definition, consistent market and market income information does not exist. Therefore, it is justifiable for the cost approach to be given greater weight.[17] While the consultant agrees that public utility properties are special use property, that does not mean that sufficient market and market income information does not exist in order to perform market and income approaches to value. On the contrary, vast amounts of market and income information exist. Most of these companies either are publicly traded, or are subsidiaries of publicly traded entities. These types of companies are tracked and reported on by investment surveys, investment bankers, Wall Street analysts, etc. These companies file audited financials statements with regulators and the Securities and Exchange Commission. These companies have publicly traded debt that is rated by bond rating companies. This type of information is typically more relevant to the determination of market value than cost data.

One local government organization[18] felt that the 25% weighting given to the income approach in the Rule gives sufficient acknowledgment to the existence of any obsolescence. The consultant agrees that the best way to acknowledge the existence of obsolescence in a unit appraisal is too perform multiple approaches to value and then use appraisal judgment in the correlation process to account for the existence of obsolescence. In other words, if obsolescence exists then the income and market approaches should be less than the cost approach. The appraiser can acknowledge the existence of this obsolescence by giving weight to these approaches in the correlation process. However, the appraiser needs the flexibility to weight the indicators in the

[17] See comments of Goodhue County and Sherburne County.
[18] See comment from Metropolitan Inter-County Association.

manner in which his or her judgment dictates. The strict 25% weighting for the income approach prescribed by the Rule does not give the appraiser this flexibility.

Utility Industry Comments

As stated previously, the utility industry advocates considerable change to the Rule. The most prominent changes requested were the elimination of the depreciation limits in the cost approach and the change to the prescribed weightings in the correlation process.[19]

The consultant agrees that the provision in the Rule that limits depreciation in the cost approach is contrary to market valuation principles. Some of the utilities feel that the Rule should require specific deductions for functional and economic obsolescence. The consultant would direct the reader to the area of this report where the consultant answers the Department's question concerning the adjustment for obsolescence.

The consultant also agrees that the provision in the Rule mandating prescribed weightings in the correlation process is improper and is contrary to market valuation principles. The majority of the utilities, however, advocate just changing the prescribed weightings from 75% - cost and 25% - income to 50% - cost and 50% - income.[20] The consultant disagrees with this change. The consultant would eliminate any prescribed weightings in the correlation process and leave correlation to appraisal judgment.

One utility company comment states that the income level capitalized by the Department in their income approach needs to be adjusted.[21] This utility states that since

[19] See comments of Allete, Great Lake Gas Transmission, Xcel Energy, Otter Tail Power Company, and Aquila.
[20] See comments of Xcel Energy, Otter Tail Power Company, and Aquila.
[21] See comment of Allete.

interest expense is excluded from income for the valuations, the related tax benefits from the interest expense should be excluded as well. The consultant disagrees with this comment. The income capitalized by the Department is the Net Operating Income (NOI) of the utility. NOI is a specific line item found on utility income statements. It is the level of income after taxes and *before* interest expense. It is the income available for both equity holders and debt holders. Thus, interest is not excluded from income for valuations. The income tax calculated by the utility in determining NOI, however, has taken into account the tax benefits of the interest expense. This is proper. The capitalization rate used by the Department is the weighted average cost of capital (without any adjustment to the debt portion of the rate to account for the tax benefits of debt financing). This is the proper rate to use (given the assumptions implied by the Rule and explained previously in this report). Thus, the proper level of income has been matched to the proper capitalization rate.

One utility wants a flotation cost adjustment made to the capitalization rate.[22] The rational for this adjustment is that the true cost of capital cannot be estimated without adding the cost of issuing the various debt and equity securities. The assumption that must be made in making this adjustment is that a company will refinance and reissue its entire portfolio of debt and equity every year. This is not a valid assumption. This is what Dr. Bardford Cornell has to say about the flotation cost adjustment in his book *The Equity Risk Premium:*

> "This [flotation cost] debate is of little importance in most situations because virtually all the new equity capital raised in the United States come from retained earnings, not new stock sales. Consider, for instance, the telecommunications industry. Between 1993 and 1998, the industry invested tens of billions of dollars in new infrastructure. Nonetheless, net stock issuances in the same

[22] See comments of Xcel Energy.

time period were approximately zero. Virtually the entire investment has been financed from retained earnings."[23]

As far as a flotation cost for debt is concerned, the real issue is the magnitude of the adjustment. The consultant's experience is that the floatation cost adjustment for debt is normally 1 or 2 basis points in the weighted average cost of capital. This adjustment is so small as to be meaningless. This lends an element of too much accuracy to a process that is fraught with much judgment, rounding, and assumptions.

One utility wants the Rule to provide for just one capitalization rate for electric and gas distribution companies.[24] The utility states that "there no longer exists the historical differences between electric and gas distribution industries that formerly justified differences in the way the two are valued." The comment seems to intimate that, historically, gas distribution companies have been given a capitalization rate 25 basis points higher than electric companies. The consultant can find no justification in the Rule that makes this distinction between electric and gas distribution. The consultant will merely comment on the utility's request that the two industries should have the same capitalization rate. This request is improper. Electric and gas distribution companies are two separate industry segments. Investment surveys, analysts, etc., track separate segments of guideline companies for electrics and natural gas utilities. There are different market forces, different regulatory environments, differing fuel sources for these two segments. The analysis for capitalization rates should be done separately by industry and with separate groups of guideline companies.

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[23] Cornell, Bradford (1999), *The Equity Risk Premium,*New York: John Wiley & Sons, Inc., pg. 105.
[24] See comments of Xcel Energy.

At least two utilities requested that the Department hold annual meetings prior to the assessment process to discuss capitalization rates and capital markets in general.[25] Many states do this. This is a very good suggestion. The more discussion and exchange of information that takes place prior to the assessment, the less likely that valuations will be disputed.

One utility commented that the Rule should specify the method to be used to determine the equity component of the capitalization rate.[26] The consultant feels that this is one of the positive aspects of the Rule. It isn't rigid as to the method or methods to use in calculating the capitalization rate. However, the Rule could specify the preferred methods to use to calculate the cost of equity, such as, Capital Asset Pricing Model, Dividend Growth Model, or Risk Premium Model. The Rule could even specify that the Department should use at least two methods and use appraisal judgment in selecting the most appropriate estimate of the cost of equity. Presently, the Department uses only the Capital Asset Pricing Model (CAPM) to calculate the cost of equity.

One utility requests that the interstate allocation formula be changed from 75% - Gross Cost, 25% - Gross Revenues to 50% - Net Book Value, 50% - Pipe Miles.[27] The rational here is that Net Book Value will measure the relative value of the property better that Gross Cost would and that Gross Revenue is not a good measurement of value because different states values will go up and down depending on which state is experiencing a rate case. Thus, Pipe Miles will be a more stable indicator of value to use in the formula. The consultant disagrees with this utility's comments.

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[25] See comments of Xcel Energy and Otter Tail Power Company.
[26] See comments of Xcel Energy.
[27] See comments of Aquila.

A few general comments concerning interstate allocation may be pertinent on this point. The most comprehensive report concerning interstate allocation of unit values was a 1960 study performed by the Committee on Allocation of Public Utilities – Western States Association of Tax Administrators. Within this study the committee compiled a set of goals for workable allocation formulas. These goals are as follows:

1. The formula should be suitable for all states to use.
2. The aggregate of all percentages should total 100% if all states use the same formula.
3. There should be a realization that no formula is perfect.
4. The formula should be simple in application and not burdensome for the taxpayer.
5. The formula should be based on readily available data.
6. The allocation factors themselves should not be an allocation.

Interstate allocation formulas generally contain two or more factors. The factors are generally a combination of property factors, uses factors, and revenue factors. Property factors are typically given the greatest weight in the formulas. Property factors include: Property cost, property net book value, miles of pipe, miles of wire, miles of track, number of distribution mains, number of meters, number of access lines, etc. Use factors include: Kilowatt hours sold or generated, originating or terminating barrels or mcf, revenue ton miles, barrel miles, etc. Revenue factors include: Gross revenues, operating revenues, operating expenses, net operating income, etc. Allocation formulas should avoid measuring the same thing and hopefully measure a cross-section of property, use and revenue factors.

The utility's recommendation to use Net Book Value in the interstate allocation formula violates one of the above goals. The allocation factors themselves should not be an allocation. A utility cannot tract the depreciation on an individual asset in a specific geographical location or taxing jurisdiction. Thus, the utility is forced to allocate depreciation to a specific taxing jurisdiction. A lot of times this allocation of depreciation is based on gross cost. This defeats any benefit there might have been with the Net Book Value allocation. The consultant has also seen allocation anomalies whereby some jurisdictions end up with negative Net Book Values. The observation by the utility that Net Book Value is used by most of the states is not correct in the opinion of the consultant. It is the consultant's observation that Gross Cost is used by at least half of the states surveyed.

The consultant also disagrees with the utility's comment that Gross Revenues is an improper factor to use in the allocation formula. If one state's revenues go up because of a rate case that obviously will have an effect on the profits of the company. Profits have an effect on the value of the company. If one state's property is more profitable than another state that should affect the allocation of value. Pipe Miles is not a better factor than Gross Revenues. Pipe Miles is also a property factor just like Gross Cost is. Thus, you would have two factors that are measuring the same thing instead of two factors that are measuring two different things. Allocation factors should create some balance in the measurement of value in a particular state.

UTILITY VALUATION "BEST PRACTICES"
HOW SHOULD UTILITIES BE APPRAISED

The laws of most states contain a definition of value for property tax purposes. The descriptive words may be full cash value, actual cash value, true cash value, fair cash value, fair market value, or market value. It is assumed that all of these terms contemplate a transaction between a willing buyer and a willing seller under what is termed "open market conditions". These open market conditions include: 1) No duress, 2) No collusion, 3) A reasonable time allowed finding a buyer, 4) All parties having a reasonable knowledge of the property's uses, and 5) Consideration is in the form of cash or its equivalent.

The natural comment from the critic of central assessment is that since the properties sell so infrequently, a market value benchmark can never be established. The mere fact that sales may be scarce does not preclude the appraiser from attempting to estimate a value at the defined market value level. That is why it is so imperative that the appraiser not be restricted in the methods that are at his or her disposal in order to estimate market value. Statutes, rules and regulations should be established that give an appraiser access to all the "tools" that may be necessary to reach the market value mandate. An appraiser is like a carpenter with a tool box. Some assignments will require one tool and some assignments will require another tool. Access to all tools is what makes a carpenter efficient. The same is true with appraisers. What follows is a discussion by the consultant about the various approaches to value and their uses.

Cost Approach

The cost approach is based on the principle of substitution. The principle of substitution holds that people 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.

The words "equal utility" mean that the property or its substitute are valuable only for the useful functions they can be expected to perform presently and during the future. A property may have features that were desirable when the property was created but are not considered useful today or during the future; therefore, the cost of the substitute property would not include allowance for such features.

Since public utility properties are valuable for the income they are expected to produce (as opposed to amenity values for owner-occupied residences), it stands to reason that 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 the income for a longer time than the existing property. This difference in total utility creates a difference in the value of the existing property versus a new substitute property. This difference between new and existing property is depreciation.

From a theoretical viewpoint, a property should be worth the cost of a new substitute property less depreciation. The primary tasks in any cost approach are to estimate the cost of the substitute property and the proper level of depreciation.

The cost approach is considered a meaningful tool for estimating market value under certain conditions. Three cost concepts have potential application to public utility

properties—replacement, reproduction and historical. The relevance of these concepts will vary depending upon economic and regulatory influences on the market.

Replacement cost is the cost to replace an existing facility with one of equal utility. In the case of properties with growth potential and not subject to government regulation, the competitive forces of the market establish a return on replacement cost new which is sufficiently high to induce additional investment. In a non-growth industry, the market establishes a return satisfactory to investors on a replacement cost new less depreciation (RCNLD) basis. Consequently, in a nonregulated industry, replacement cost either with or without depreciation is an important and valid indicator of value. If government regulation is deficient or ineffective, RCNLD may also be valid for the appraisal of a utility. The reason for these conclusions is that the market may permit earnings which are sufficiently high to return the replacement cost of the investment together with a rate of return satisfactory to investors.

Reproduction cost may be different from replacement cost. It is the cost of an exact duplication insofar as is possible of an existing facility. This cost concept also has relevance as a value indicator whenever the market forces permit returns satisfactory to investors.

In the case of regulated utilities which are governed by the Minnesota Rule, the regulatory agency periodically establishes a rate base and a fair rate of return; utilities are permitted to earn at the established rate on the rate base. The practice of many regulatory agencies is to use historical or original cost less book depreciation as the rate base. If regulation effectively limits earnings to the rate base at a rate of return acceptable to

investors, then historical cost less depreciation (HCLD) tends to be a good indicator of market value.

The strengths of the cost approach are that it provides a relatively stable indicator and an objective reference point for comparing one property to other properties in the same industry. It is useful for allocation, for estimating age and remaining life of the property, and the data for calculating it is relatively simple to obtain and verify. If is particularly useful for newer properties, where the income stream has not matured and where sales data are not readily available.

It is a weak indicator to value when the property is relatively old, when significant technological or economic changes have occurred since the property was placed in service, or when it is clear than prudent management would not reconstruct the property in it present form. Even under these circumstances, it remains useful as a comparison among properties of similar types.

Income Approach

The income approach is based on the appraisal principle of anticipation. The approach 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 premised on the assumptions that investors will buy and sell property based on the income it is expected to yield and that investors will discount expected income at its attendant risk rate over its anticipated duration. The income approach is a conceptually sound method to estimate market value for income producing properties, but it requires many difficult estimates and judgments. Judgments by

informed persons can differ, and consequently values indicated by this approach may differ significantly.

Application of the income approach requires estimating future annual income for a period of time and converting income into a value estimate by means of a capitalization rate, discount rate, or present worth factor. The critical ingredients of the approach are future income, duration of income, capitalization rate, and method of capitalization.

For appraisal purposes, income is the anticipated net benefits a property will provide to its owners over time. Benefits must be expressed in terms of money or order to apply the income approach. Benefits expressed in money are common with public utility property since such properties are owned and operated for the purpose of producing money income.

Gross income or gross revenue is the total amount of income anticipated from operating the property prior to taking into account the burdens (costs) necessary to produce the income. Net operating income is the money benefits that remain after gross income is reduced by burdens. These remaining net benefits represent the income rational investors (both equity and debt) take into account in making decisions to buy or sell property.

For public utility properties, benefits originate from the cooperative effort of a group of integrated assets functioning as a single unit. Income arises in the aggregate and is not known or recorded on an asset-by-asset basis. Each asset required for the system operation makes an implicit contribution to income through its beneficial use regardless of whether it is included in or excluded from a rate-base calculation used in establishing revenue requirements.

The selection of a capitalization technique is a very important part of any income approach. There are numerous variations of the income approach that an appraiser can select from. The use of more than one technique in an appraisal allows the appraiser to use different assumptions about the shape and duration of the future income stream and will lead to a more informed result. The purpose of a capitalization method is to transform anticipated income estimates into value. Some methods involve simple calculations using a single year's income while others require the use of complex discounting techniques and sophisticated cash flow analysis. Capitalization techniques can be placed into two categories—direct capitalization and yield capitalization.

Direct capitalization is used to convert an estimate of a single year's income expectancy into an indication of value in one direct step. With direct capitalization, no explicit assumptions need to be made about the amount and duration of future income. All the conditions necessary to satisfy investor demands are implicit in the market-derived capitalization rate. That is why the reliability of a direct capitalization model depends on the quality and the quantity of the market observations used to develop the capitalization rate.

Yield capitalization uses the discounting procedure to convert future income flows to present value on the premise of a required level of return on invested capital. With yield capitalization, the model contains implicit assumptions of the shape and duration of the future cash flow streams. Investors' assumptions of growth are impounded in the cash flow stream and the yield capitalization rate. The reliability of a yield capitalization model depends on the credibility of the appraiser's implicit assumptions.

The no-growth perpetuity capitalization technique prescribed by the Minnesota Rule and used by numerous states is correctly categorized as yield capitalization. One might contend that capitalizing a level income flow into perpetuity is a form of direct capitalization. The similarity, however, is appearance only, not in concept. Because the model uses a yield capitalization rate and because of the implicit assumptions (described earlier in this report), this model is yield capitalization.

After all is said and done, the method or methods selected by the appraiser should fit the appraiser's set of valuation assumptions and facts. In absence of clear displays of investor behavior, it is always wise to use more than one method.

Market Approach

As stated previously, the statutes of most states contain a definition of market value. This definition almost always contemplates a sale or transaction. With this definition in mind, it stands to reason that the market approach should be the preferred valuation method when sales data are available. There is general consensus that there is not an active market for complete units of public utilities. There are, however, sales that do take place. The laws of states should not prohibit appraisers from analyzing the sales that do take place and apply their appraiser judgment as to how to best use this data in the unitary appraisal process.

In the absence of comparable sales data, the stock and debt approach can be used as a surrogate for the market sales approach in valuing public utilities. The conceptual basis for the stock and debt approach is an accounting principle that holds that the total value of a firm's assets is equal to the total value of its liabilities and stockholder's equity. Firms purchase assets using equity and debt financing. Purchases of assets from

internal cash flows are usually considered a contribution from existing equity and debt holders. For firms that have publicly traded securities (stocks and bonds), market prices can be obtained for sales of fractional portions 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.

As with all other indicators of value, the stock and debt method has some merits and some deficiencies. The positive aspects of this approach include its relationship to market prices. The stock and debt evidence of unit value consists essentially in ascertaining the market's consensus as to the values of interest in the property. Adding up the market values of individual units of a company's equity and debt interests in property presumably results in gross market value.

The stock and debt indicator works best when the company whose property is being valued is engaged in only one business e.g., electric utility, gas utility, pipeline, etc. When a company is the subsidiary of a parent holding company or if it has subsidiary operations of its own that are not related to its primary business, estimates and subjective judgments must be made to determine the portion of the total that relates to the property being valued. The allocation factor may be that proportion of earnings contributed by the subsidiary, or the percentage of total assets used by the subsidiary, or other similar rational factors. Do these current financial relationships provide reasonably accurate value estimates? The relative size of the subject to the parent along with Wall Street or other analysts' commentaries can be of significant assistance in answering this question.

Unlike the cost approach and the income approach, the stock and debt indicator in its purest form requires no forecasts or subjective judgments: it is directly tied to market

evidence. It must be acknowledged on the other hand that subjective elements inevitably play an important role in the practical application of this method of finding property value. Seldom, if ever, is the firm being valued a pure unitary business. Synthetically constructed stock value, roughly estimated deductions for nonunitary property, and the question of whether the market is efficient can raise questions regarding the accuracy of the approach.

The stock and debt indicator provides a meaningful test to the validity of other valuation approaches that suffer from limitations of their own. Used in conjunction with other accepted appraisal approaches, the stock and debt indicator is a valuable tool to the appraiser in establishing market value.

Preferred Methods for Investor Owned Utilities (Electrics, Gas, Pipelines)

All three approaches to value described above can and should be used to value investor owned utilities. For rate base regulated utilities such as the electric and gas utilities covered by the Minnesota Rule, a few rules of thumb can be used. The preferred cost approach for rate base regulated utilities such as electrics and gas is HCLD. For all the reasons previously mentioned in this report, the HCLD cost approach is preferred. For mature utilities with long histories of income production, there should be sufficient data to perform a reliable income approach to value. This would include the performance of more than one income indicator of value. The data resources needed to calculate capitalization and discount rates for these types of utilities is available and extensive. Audited historical income statements as well as analyst forecasts of income are available to aid the appraiser in forecasting future income streams. When the data is available and extensive to perform a reliable income approach, the income approach is typically the

preferred approach to value. This is the approach relied upon by investors in these types of properties.

Electric and gas utilities are usually parts of publicly traded parent companies. Many times they are the major portion of the publicly traded parent. This makes the stock and debt indicator of value a viable indicator. For publicly traded companies, the data sources available to the appraiser to produce a valid stock and debt indicator are extensive and should be utilized.

Preferred Methods for Electric Cooperatives

Electric Cooperatives have always been a source of concern of state assessing agencies. How do you determine the market value for a unit that is not in business to earn a profit? In the survey of the states, the consultant found numerous methods being used to value co-ops. Two methods were the most prevalent.

Of the 35 states surveyed, 10 states performed unit appraisals using HCLD and income approaches to value. However, the income approach for these states was quite varied. Six of the states used an investor owned utility (IOU) capitalization rate. Of these states, only one state adjusted the income estimate to match the IOU cap rate. In other words, five states capitalized co-op income with an IOU cap rate. This is a mismatch. Three of the states attempted to estimate a co-op cap rate. This would be the proper rate to use when capitalizing co-op income. Since co-ops are not publicly traded, estimating the equity portion of the cap rate could be quite arbitrary. These states typically estimated the equity rate by analyzing the relative difference between the equity and debt rates of IOUs and then estimating the co-op equity rate as a similar ratio. Debt

rates for co-ops should be available for the appraiser to analyze. One state used a "blended" co-op and IOU rate.

The next largest group of states (7) performed an HCLD approach and adjusted it for obsolescence. The obsolescence adjustment was always based on a multi-factored analysis; comparing the subject co-op to a typical IOU. It is the consultant's opinion that this type of analysis is improper. Comparing an IOU with a co-op is an economic mismatch. An IOU is in business to enhance shareholder wealth. This is not the motivation of a co-op. A co-op is in business to provide a utility service to members. The members are usually located in areas that an IOU found to not be economically feasible to provide service. A co-op's rate structure is built around recovering its costs and building only enough equity to replace its plant and possibly expand if necessary. A co-op's rates are not structured to provide a market return on its investment like an IOU's rates are. Thus, any economic comparison is comparing apples to oranges.

Three of the states surveyed performed HCLD approaches only with no adjustment for obsolescence. Three of the states surveyed performed RCLD approaches only with no obsolescence adjustments. One state (Michigan) performed an RCLD approach and adjusted this result for obsolescence based on an analysis of all co-ops in the state. One state (Arizona) performed an RCLD approach and adjusted this result for obsolescence based on an analysis of capacity utilization. This result was coupled with a stock and debt approach. The estimation of the equity portion of the stock and debt approach was quite arbitrary.

Four states surveyed did not calculate a market value for their co-ops; instead these states calculated a fee in lieu of property tax based upon a % of gross receipts. One

state (Oregon) based their assessed value on the lower of HCLD or 4% of gross receipts. Two states base their assessed value on a formula (Gross Sales Multiplier). Two states (Mississippi and North Dakota) exempt co-ops from property taxation.

Minnesota gives co-ops a choice of valuation methods. They may choose a unit approach where cost and income approaches are performed (co-op income is capitalized with an IOU cap rate) or they may choose an HCLD only. Depreciation is capped at 2½% per year for 10 years.

Any discussion of the preferred method to value electric cooperatives should be precluded by a discussion of the appraisal principle of highest and best use. One of an appraiser's first chores in an appraisal assignment is to determine the subject property's highest and best use. Highest and best use is defined as, the reasonably probable and legal use of a property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value.[28] Highest and best use reflects a basic assumption about market behavior—that the price a buyer will pay or a seller will accept for a property is based on his or her conclusions about the most profitable use of the property.[29] As far as electric cooperatives are concerned, the appraiser should first ask: Is there a distinction between IOUs and co-ops for the purpose of valuation? The answer is an obvious, yes. The existence of co-ops results from the fact that their plant failed the highest and best use financial feasibility test as an IOU at a point in time. That is why using an IOU as the basis for comparison to determine the degree to which a co-op is economically obsolete is a case of comparing unlike entities. It is like comparing a country club golf course to a public golf course. Co-ops are a sub-class of regulated

[28] Appraisal Institute, *The Appraisal of Real Estate,* 11th Edition, Chicago, (1996), pg. 50.
[29] Id.

electric distribution utilities where superadequacy is necessary. Operation at less than capacity is normal. On the basis of kWh sales/mile of distribution line, most co-ops operate at substantially less than the IOU average.

As stated previously, co-ops exist because IOU's have made an economic decision not to invest in a certain geographical area. Obviously, the most profitable use of any income producing property is to be a part of a for-profit entity. In the case of co-ops, appraisers need to evaluate, from time to time, if the financial unfeasibility of the co-op still exists. Also, in addition to the financial feasibility analysis of highest and best use, the appraiser needs to look at the legal permissibility aspect of highest and best use. Are their any legal or regulatory barriers that would not allow the co-op to be purchased by an IOU and be operated as an IOU? If these two barriers can be overcome, the appraiser could then value the co-op like an IOU. This would include imputing economic IOU income and using an IOU cap rate.

It is the consultant's opinion that, in most cases, these barriers are very difficult to overcome. If this is the case it is the consultant's opinion that the preferred method to value co-ops is to perform a unit valuation with both a cost approach and an income approach. The income approach would then reflect a capitalization of co-op income by a co-op capitalization rate. Since a co-op's rates are based on a recovery of their historical costs, the HCLD cost approach method is preferred. The regulatory depreciation should be allowed without any limit placed upon it.

The estimation of a capitalization rate for co-op income will be the most difficult aspect of the process, especially the equity component. The capital structure will also be difficult to estimate. Since co-op equity is not publicly traded and very few co-ops

change hands, an assumption that the market value of equity equals the book value of equity is probably valid.

The capital structure of an electric cooperative is primarily made up of debt obligations. The long term debt obligations of a co-op are primarily to Rural Utilities Services (RUS) and National Rural Utilities Cooperative Finance Corporation (CFC). RUS has the responsibility for making loans to provide and improve service to rural customers. Its borrowers are expected to make a diligent effort to serve all consumers in their service areas. RUS insured loans are offered at what could be considered municipal bond rates. CFC is a not-for-profit cooperative financial institution, which is owned by the cooperatives. The current rates on long term debt issued by these organizations should be readily available.

The equity portion of a co-op's capital structure is called patronage capital. Patronage capital is, essentially, the accumulated difference of operating revenues plus capital contributed by the members, less operating expenses, depreciation, taxes, and interest on debt. A return is not paid on the balance. There can be return of patronage capital to members, by decision of the board of directors of the co-op.

The co-op's distribution plant is not built or operated to provide a return on the patronage capital. The fees and tariffs charged for electric service are not intended to provide a return on the patronage capital of the members. Most cooperatives follow what's called TIER (Times Interest Earned Ratio) ratemaking. This method bases rates on an annual review of certain financial ratios for the cooperative. If the cooperative's financial ratios fall within an acceptable range, no rate change is made. If the

cooperative's ratios are outside the acceptable range, an adjustment to the rates is made, either up or down, to bring the cooperative's ratios within the accepted range.

The TIER is: Patronage Capital and Margins plus Interest Expense / Interest Expense

Estimating the equity portion of the capitalization rate will be somewhat subjective since no real market evidence exists. One state surveyed (West Virginia) places the equity rate 200 basis points above the co-op debt rate. An analysis of the relative differences between debt and equity rates for small IOUs may also be helpful in estimating the equity portion of the cap rate.

Preferred Methods for Municipal Electrics

Of the 35 states surveyed, only 7 (20%) of the states assessed a property tax on the property of municipal electric companies.[30] The other 28 (80%) states exempted the property of municipal electrics from property tax. Of these 7 states that assessed a property tax, 6 states used the same method to value municipal electrics that was used to value electric cooperatives in their state. One state (Wyoming) valued municipal electrics in the same manner as IOUs.

It is the consultant's opinion that municipal electrics are similar in enough ways to electric cooperatives that similar methods should be used to value them.

Final Thoughts on General Tone of Rule

The goal of any rulemaking process is to hopefully strike that perfect balance between strict adherence and flexibility. The Minnesota Rule does have some areas that are quite general in nature and allows for judgment by the Department (the calculation of the capitalization rate, for example). For the most part, however, the Rule is quite

[30] "Municipal electric companies" refers to municipalities located in that particular state. All states tax the property owned by out-of-state municipalities.

formulaic. The Rule takes away appraiser judgment in making many of the valuation decisions that an appraiser must make. To a great extent an appraiser, in complying with the Rule, can construct valuation spreadsheets and "hardwire" percentages, weightings, and other data prescribed into these spreadsheets and generate approaches to value and system values. This type of rule does have its advantages. Assessed values can be much more predictable for taxpayers and governmental entities. There are less appraisal variables to have disagreements about, thus fewer appeals may be filed on valuation issues. Assessment administration is more streamlined and less time consuming. However, the formulaic process also has many disadvantages. Minnesota statutes, as do most states, mandate "market value" as the standard by which property should be taxed. The rigid requirements of the Rule may prevent an appraiser from having the flexibility of judgment to reach market value. Since the market value standard is prescribed by statute it may usurp the advantages that the consultant has previously outlined for the present Rule. A rigid rule is open to legal challenges. Legal challenges are difficult for the Department to deal with because there is seldom little room for compromise. A "flexible" rule, on the other hand, gives the appraiser latitude in making appraisal judgments. This allows the appraiser to more efficiently reach the statutorial mandate of market value. It also allows the Department's methodology to evolve in a manner that ultimately has a better opportunity to be satisfactory to all parties. The Rule can make statements about certain approaches or methods being more preferred than others, but the Rule should not prohibit the Department from performing approaches or methods that have been found to be generally accepted.

FINDINGS AND RECOMMENDATIONS

Findings Regarding the Appraisal Practices of Other States

The consultant finds that a small majority of states (51%) have their utility valuation methods governed by a rule or statute. However, only a small percentage of these states (39%) would characterize their rule or statute as being "rigid". An ever smaller percentage of these states (22%) would characterize their rule or statute as being "formula driven".

The consultant finds that a relatively large percentage of states (69%) perform market approaches on utility companies.

The consultant finds that almost all states (94%) perform a cost approach to value. The vast majority of these states (94%) perform an HCLD cost approach. A majority of these states (64%) also include CWIP in their cost approaches at 100% of the booked costs. A large majority of states (97%) make an adjustment to their cost approaches for operating leased property. Also, a slight majority of states (52%) make an adjustment to cost approaches for contributions in aid of construction (CIAC).

The consultant finds that a large majority of states (86%) perform an income approach to value on their utility companies. Of these states, 77% of them characterize their income approach as yield capitalization. A large majority of these states (70%) adjust their income approach for the value of CWIP. An even larger majority of these states (83%) adjust their income approach to capture the full value of property held under operating leases.

The consultant finds that 85% of the states perform a correlation (reconciliation) of their approaches to value. The vast majority of these states (93%) use appraisal judgment when performing their correlation.

The consultant finds that 86% of the states perform an interstate allocation of their utility valuations. Of these states, only one-third (33%) of the states have a rule or statute that dictates to them the interstate allocation formula they should use.

The consultant finds that 97% of the states remove retired utility property from their assessments *only* when the property had been removed from the utility's Plant in Service account.

The consultant finds that the methods used by the various states to value electric cooperatives are numerous and varied. The two most predominant methods encompass about 50% of the states. The first method is an HCLD cost approach adjusted for obsolescence. The obsolescence adjustment is based on a comparison of the co-op with investor owned utilities (IOUs). The consultant finds this method to be improper. Co-ops should not be compared with IOUs because the economic motivations of each are vastly different. IOUs are in business to enhance shareholder wealth and co-ops are not. The second method is a unit valuation comprised of an HCLD cost approach and an income approach. Most of these states used an IOU cap rate to capitalize the co-op income. The consultant finds this income approach to be improper. Capitalizing co-op income with an IOU cap rate is a mismatch.

The consultant finds that a large majority of states (80%) exempt municipal electric companies from property tax. Of the states that tax municipal electrics, most of them (75%) use the same methods that are used to value electric cooperatives.

Findings Regarding the Minnesota Rule

The consultant finds the Minnesota Rule to be a rigid, formula driven rule.

The consultant finds the Rule to forbid the use of the market approach. The market approach is one of the three basic approaches to value. Minnesota is not in line with the majority of states that allow and do perform market approaches to value. The stock and debt approach has been widely used as a surrogate for the market approach for public utility companies.

The consultant finds that the Rule prescribes an HCLD cost approach to value. This is in line with what the vast majority of states perform for utility companies. However, the Rule places rigid limits on how much depreciation can be deducted in the HCLD approach. The consultant finds this to be out of line with what other states are doing and is improper in the quest to reach market value. The consultant finds Minnesota to be the only state that places such limits on depreciation.

The consultant finds that the Rule allows for an adjustment in the cost approach for CWIP and operating leased property. This is in line with what other states are doing.

The consultant finds that the Rule makes no provision for an adjustment for contributions in aid of construction (CIAC). This is not in line with what the majority of states are doing.

The consultant finds that the Rule prescribes a basic yield capitalization methodology for the income approach. The basic formula for the method is as follows:

Income Approach Value = NOI Estimate / Weighted Average Cost of Capital

A similar income approach model was used by 77% of the states. This model is simplistic and thus requires numerous assumptions by the appraiser in order to be valid.

The consultant finds that the Rule provides for a 3 year weighted average of historical net operating income as the basis for estimating the NOI to be capitalized. The consultant finds this to be a very strict and rigid definition of this important variable. The consultant also finds this to be out of line with how other states forecast future income.

The consultant finds that the Rule makes no provision for an adjustment to the estimated NOI for CWIP. This is out of line with how other states perform their assessments.

The consultant finds that the Rule makes no provision for an adjustment in the income approach for the full value of leased property. This is also out of line with how other states perform their assessments.

The consultant finds that the Rule provides that the capitalization rate will be the weighted average cost of capital. This is the correct rate to use in yield capitalization. The consultant also finds that the Rule does not specify what method or data sources to use when determining the cost of equity, cost of debt or capital structure. The consultant finds this to be preferable in order to give the appraiser the flexibility to exercise his or her appraisal judgment.

The consultant finds the Rule prescribes weightings to be applied to the cost and income approaches in the correlation (reconciliation) process. This is out of line with the vast majority of other states. The consultant finds the use of prescribed weightings in the correlation process to be improper and prevents the appraiser from reaching market value.

The consultant finds the Rule provides for the elimination from the unit value of all property that has been retired from utility service. The consultant can find no

provision in the Rule that this property must be eliminated from the utility's Plant in Service account before it can be eliminated from the unit value. This is out of line with what other states do with retired property.

The consultant finds the Rule provides a method for eliminating the value of exempt property and other property that, by statute, is to be assessed by local county assessors (land, nonoperating property, and rights-of-way). These properties are to be eliminated by deducting the book value of these properties from the allocated Minnesota value of the system. The consultant finds this provision to be improper. The system value is a combination of a cost approach and an income approach. The deduction is done at book value. The elimination of non-taxable property from an allocated system value should always be done at the same level of value as the system value.

The consultant finds the rule provides a method for allocating a portion of the correlated system value to the State of Minnesota. Approximately one third of the states have similar rule or statute provisions. The consultant finds that the factors and percentages prescribed by the Rule are not out of line with the norm.

Recommendations Regarding the Minnesota Rule

As a general statement, the consultant recommends that the Rule be amended to provide more flexibility to the Department in arriving at market value. Following are specific recommendations made by the consultant:

- The Rule should be amended to allow the calculation of a market approach to value.
- The Rule should be amended to remove the limitations on depreciation deductions in the cost approach. The existence of obsolescence can be recognized in the correlation process by giving more weight to the income approach to value.

- The Rule should be amended to provide for the inclusion in the cost approach the value of contributions in aid of construction (CIAC).

- The Rule should be amended to allow for more than one income approach to value. This would include Direct Capitalization, Discounted Cash Flow, etc.

- The Rule should be amended to eliminate the strict method prescribed for estimating future income. The Rule should give more flexibility to the appraiser to estimate future income.

- The Rule should be amended to provide for the inclusion in the income approach the value of construction work in progress (CWIP).

- The Rule should be amended to provide for the inclusion in the income approach the full value of operating leased property.

- The Rule should be amended to eliminate the prescribed correlation weightings. The appraiser should be given full flexibility to use appraisal judgment in arriving at a market value estimate.

- The Rule should be amended to provide that before retired utility property is eliminated from an assessment it must first be eliminated from the utility's Plant in Service accounts.

- The Rule should be amended to change the prescribed manner in which non-taxable or nonoperating property is eliminated from the allocated system value. The elimination of non-taxable or nonoperating property should always be done at the same level of value as the system value. The proper way to make these eliminations is to compute a system value to system book value ratio. The appraiser would then apply this ratio to the book value of the property to be eliminated.

A sample appraisal that incorporates the above recommendations is found in Appendix 1 of this report.

CERTIFICATION OF THE CONSULTANT

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.

The reported analyses, opinions and conclusions are limited by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions and conclusions.

I have no present or prospective interest in the Minnesota property that is the subject of this report, and I have no personal interest or bias with respect to any parties involved in this process.

My compensation is not contingent on an action or event resulting from the analyses, opinions or conclusions in, or the use of, this report.

My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice and the code of ethics of the International Association of Assessing Officers and the American Society of Appraisers.

_____

Brent Eyre, ASA

Date_____

APPENDIX 1

Viking Utility
2005 Assessment
Cost Approach - HCLD Value Indicator

Description	12/31/2005
Land	$ 6,400,000
Rights-of-Way	$ 121,400,000
Utiltiy Plant in Service	$ 1,703,100,000
Vehicles, office furniture and equipment	$ 41,000,000
Construction Work in Progress	$ 16,800,000
Gross Plant	$ 1,888,700,000
Less: Accumulated Depreciation	$ (488,200,000)
Historical Cost Less Depreciation Value Indicator	**$ 1,400,500,000**

Viking Utility
2005 Assessment
Development of Weighted Average Cost of Capital and Direct Capitalization Rate

Cost of Equity

Capital Asset Pricing Model (Petroleum-Integrated)

Risk Free Rate + (Market Risk Premium)Beta

5.00% + (7.00%)(0.85) = **10.95%**

Dividend Growth Model:

Dividend Yield + Growth
2.50% + 7.15% = **9.65%**

Selected Cost of Equity **10.30%**

Cost of Debt
Selected Industry Bond Rating
Baa3 (Mergents)

Selected Cost of Debt **7.00%**

Calculation of Weighted Average Cost of Capital

Capital	Percentage	Cost	Composite
Equity	70%	10.30%	7.21%
Debt	30%	7.00%	2.10%
Weighted Average Cost of Capital			**9.31%**

Calculation of Direct Capitalization Rate

Capital	Percentage	Rate	Composite
Equity	70%	9.00%	6.30%
Debt	30%	7.50%	2.25%
Direct Capitalization Rate			**8.55%**

Viking Utility
2005 Assessment
Income Approach - Direct Capitalization and No Growth Yield Capitalization

Year	Net Operating Income	Index	Adjusted NOI
2000	$ 76,540,820	1.079	$ 82,587,545
2001	$ 79,054,000	1.056	$ 83,481,024
2002	$ 81,560,000	1.032	$ 84,169,920
2003	$ 83,900,000	1.016	$ 85,242,400
2004	$ 90,860,000	1.000	$ 90,860,000

Average 2000-2004	**$ 85,268,178**
Wtd. Average 2000-2004	**$ 86,550,818**
Current Year NOI	**$ 90,860,000**
Average Growth 2000-2004 (2.50%)	**$ 93,131,500**

Direct Capitalization Rate

Capital	Percentage	Rate	Composite
Equity	70%	9.00%	6.30%
Debt	30%	7.50%	2.25%

Direct Capitalization Rate **8.55%**

Direct Capitalization Value Indicator

Expected Growth From 2004 to 2005	1.00%	2.00%	2.50%
Expected Net Operating Income	$ 91,768,000	$ 92,677,200	$ 93,131,500
Value Indicator	**$ 1,073,309,942**	**$ 1,083,943,860**	**$ 1,089,257,310**

Yield Capitalization Rate

Capital	Percentage	Rate	Composite
Equity	70%	10.30%	7.21%
Debt	30%	7.00%	2.10%

Yield Capitalization Rate **9.31%**

No Growth Yield Capitalization Value Indicator

Current Year NOI / Yield Capitalization Rate

$90,860,000 / 9.31% = **$ 975,939,850**

Viking Utility
2005 Assessment
Discounted Cash Flow Valuation (millions)

	2004 (Actual)	2005 (Forecast)	2006 (Forecast)	2007 (Forecast)	2008 (Forecast)	2009 (Forecast)	Term. Value
Operating Revenues	$ 328.2	$ 336.0	$ 344.4	$ 353.0	$ 361.8	$ 370.9	
Operating Expenses	$ (210.5)	$ (215.8)	$ (221.2)	$ (226.7)	$ (232.4)	$ (238.2)	
Operating Income	$ 117.7	$ 120.2	$ 123.2	$ 126.3	$ 129.4	$ 132.7	
Interest Expense	$ (50.5)	$ (50.3)	$ (51.6)	$ (52.9)	$ (54.2)	$ (55.6)	
Taxable Income	$ 67.2	$ 69.9	$ 71.6	$ 73.4	$ 75.2	$ 77.1	
Income Tax	$ (26.9)	$ (28.0)	$ (28.6)	$ (29.4)	$ (30.1)	$ (30.8)	
Net Income	$ 40.3	$ 41.9	$ 43.0	$ 44.0	$ 45.1	$ 46.3	
NOI (add-back interest)	$ 90.8	$ 92.2	$ 94.6	$ 96.9	$ 99.3	$ 101.9	
+ Depreciation	$ 57.1	$ 65.0	$ 68.0	$ 71.0	$ 74.0	$ 77.0	
- Capital Expenditures	$ (66.7)	$ (80.0)	$ (80.0)	$ (80.0)	$ (80.0)	$ (80.0)	
- Increase in W. C.	$ (1.0)	$ (1.0)	$ (1.0)	$ (1.0)	$ (1.0)	$ (1.0)	
Net Cash Flow	$ 80.2	$ 76.2	$ 81.6	$ 86.9	$ 92.3	$ 97.9	
P.V. Factor (9.31%)		0.9555	0.8741	0.7997	0.7316	0.6693	
DCF Value		$ 72.8	$ 71.3	$ 69.5	$ 67.5	$ 65.5	

Terminal Value (assuming 1% terminal growth rate)		$ 1,178.1
Terminal Value (assuming 1.5% terminal growth rate)		$ 1,272.7
Terminal Value (assuming 2% terminal growth rate)		$ 1,366.6
P.V. factor (9.31%)		0.6408
Discounted Terminal Value (1% terminal growth rate)		$ 754.9
Discounted Terminal Value (1.5% terminal growth rate)		$ 815.5
Discounted Terminal Value (2% terminal growth rate)		$ 875.7

TOTAL DCF VALUE RANGE **$1,101.5 - $1,222.3**

Assumptions: (1) Operating revenues, operating expenses, and interest expense to grow at 2.5% per year for the first five years,
(2) Capital expenditures will average $80 million per year (5 year historical average),
(3) Depreciation will slowly converge to level of capital expenditures,
(4) Terminal growth rate will be between 1 and 2%,
(5) Discount rate will be 9.31%,

Viking Utility
2005 Assessment
Calculation of Percent of Viking, Inc. Equity Value Attributable to Viking Utility

2004 Operating Revenues		
Utility	$	329,200,000
Inc.	$	3,172,300,000
Utility %		**10.38%**
2004 Operating Income		
Utility	$	117,700,000
Inc.	$	194,300,000
Utility %		**60.58%**
2004 Net Income		
Utility	$	40,300,000
Inc.	$	78,665,000
Utility %		**51.23%**
Gross Plant 12/31/2004		
Utility	$	1,888,700,000
Inc.	$	3,012,200,000
Utility %		**62.70%**
Net Plant 12/31/2004		
Utility	$	1,400,500,000
Inc.	$	2,465,600,000
Utility %		**56.80%**
Total Assets 12/31/2004		
Utility	$	1,488,300,000
Inc.	$	3,231,800,000
Utility %		**46.05%**

Selected Percent of Viking Inc. Attributable to Viking Utility **50.00%**

Calculation of Operating Property Percentage

Utility Operating Property (NBV)	$	1,400,500,000
Utility Total Assets (Minus Current Assets)	$	1,497,220,000

Operating Property Percentage (O.P. / T.A.) **93.54%**

Viking Utility
2005 Assessment
Market Approach - Stock and Debt Value Indicator

Common Stock: 45,567,837 shares @ $50.81 / share (Viking, Inc.)	$ 2,315,301,798
Percent allocated to Viking Utility (See Allocation Schedule)	50%
Estimated Viking Utility Equity Value	$ 1,157,650,899
Market Value of Long Term Debt (See Debt Schedule)	$ 519,765,200
Add: Current Liabilities	$ 48,400,000
Less: Current Assets	$ (56,870,000)
Total Stock and Debt Value - Viking Utility	$ 1,668,946,099
Operating Property Percentage	93.54%
Stock and Debt Value Indicator	**$ 1,561,132,181**

VIKING UTILITY
2005 Assessment
Final Estimate of System Value

Historical Cost Less Depreciation Indicator of Value	**$**	**1,400,500,000**
Direct Capitalization Indicator of Value (Average of Range)	**$**	**1,081,128,363**
No Growth Yield Capitalization Indicator of Value	**$**	**975,939,850**
Discounted Cash Flow Indicator of Value (Average of Range)	**$**	**1,161,900,000**
Stock and Debt Indicator of Value	**$**	**1,561,132,181**
FINAL ESTIMATE OF SYSTEM VALUE	**$**	**1,200,000,000**
Minnesota Allocation Percentage		**100.00%**
FINAL ESTIMATE OF MINNESOTA MARKET VALUE	**$**	**1,200,000,000**

Elimination of Nontaxable or Nonassessable Property

System Value	$	1,200,000,000
Divide by Net Book Value of System (HCLD Value Indicator)	$	1,400,500,000
Ratio of System Market Value to System Net Book Value		0.857
Net Book Value of Nontaxable or Nonassessable Property (Land, ROW, Vehicles, etc)	$	168,800,000
Imputed Market Value of Nontaxable or Nonassessable Property	**$**	**144,661,600**
FINAL ESTIMATE OF MINNESOTA TAXABLE VALUE	**$**	**1,055,338,400**

APPENDIX 2

Minnesota Statutes 2004, 273.11

Minnesota Statutes 2004, Table of Chapters

Table of contents for Chapter 273

273.11 Valuation of property.

Subdivision 1. Generally. Except as provided in this section or section 273.17, subdivision 1, all property shall be valued at its market value. The market value as determined pursuant to this section shall be stated such that any amount under $100 is rounded up to $100 and any amount exceeding $100 shall be rounded to the nearest $100. In estimating and determining such value, the assessor shall not adopt a lower or different standard of value because the same is to serve as a basis of taxation, nor shall the assessor adopt as a criterion of value the price for which such property would sell at a forced sale, or in the aggregate with all the property in the town or district; but the assessor shall value each article or description of property by itself, and at such sum or price as the assessor believes the same to be fairly worth in money. The assessor shall take into account the effect on the market value of property of environmental factors in the vicinity of the property. In assessing any tract or lot of real property, the value of the land, exclusive of structures and improvements, shall be determined, and also the value of all structures and improvements thereon, and the aggregate value of the property, including all structures and improvements, excluding the value of crops growing upon cultivated land. In valuing real property upon which there is a mine or quarry, it shall be valued at such price as such property, including the mine or quarry, would sell for at a fair, voluntary sale, for cash, if the material being mined or quarried is not subject to taxation under section 298.015 and the mine or quarry is not exempt from the general property tax under section 298.25. In valuing real property which is vacant, platted property shall be assessed as provided in subdivision 14. All property, or the use thereof, which is taxable under section 272.01, subdivision 2, or 273.19, shall be valued at the market value of such property and not at the value of a leasehold estate in such property, or at some lesser value than its market value.

Minnesota Rules, Chapter 8100.

8100.0100 DEFINITIONS.

Subpart 1. **Scope.** As used in this chapter, the following words, terms, and phrases shall have the meanings given to them by this part, except where the context clearly indicates a different meaning.

Subp. 2. **Allocation.** "Allocation" means the process of dividing the unit value of a utility company among the states in which the utility operates.

Subp. 3. **Apportionment.** "Apportionment" means the process of distributing that portion of the utility company's unit value which has been allocated to Minnesota to the various taxing districts in which the utility company operates.

Subp. 4. **Book depreciation.** "Book depreciation" means the depreciation shown by a utility company on its corporate books, and allowed the company by various regulatory agencies.

Subp. 5. **Capitalization rate.** "Capitalization rate" means the relationship of income to capital investment or value, expressed as a percentage.

Subp. 5a. [Repealed, 24 SR 1106]

Subp. 6. **Electric company.** "Electric company" means any company engaged in the generation, transmission, or distribution of electric power, excluding municipal corporations.

Subp. 7. **Gas distribution company.** "Gas distribution company" means any company engaged in the distribution of natural or synthetic gas, excluding municipal corporations.

Subp. 8. MR 1989 [Repealed, 14 SR 1806]

Subp. 8. **Integrated company.** "Integrated company" means any company engaged in two or more utility operations within Minnesota, such as electric distribution and gas distribution, within the framework of one corporate structure.

Subp. 9. MR 1989 [Renumbered 8100.0100, subpart 8]

Subp. 9. **Net operating earnings.** "Net operating earnings" means earnings from the system plant of the utility after the

deduction of operating expenses, depreciation, and taxes, but before any deduction for interest.

Subp. 10. MR 1989 [Repealed, 14 SR 1806]

Subp. 10. **Non-formula-assessed property.** "Non-formula-assessed property" means property of a utility which is valued by the local or county assessor rather than by the commissioner of revenue.

Subp. 11. MR 1989 [Renumbered 8100.0100, subpart 9]

Subp. 11. **Operating property.** "Operating property" means any property, owned or leased, except land that is directly associated with the generation, transmission, or distribution of electricity, natural gas, gasoline, petroleum products, or crude oil. Examples of operating property include, but are not limited to, substations, transmission and distribution lines, generating plants, and pipelines. Land, garages, warehouses, office buildings, pole yards, radio communication towers, and parking lots are examples of nonoperating property.

Subp. 12. MR 1989 [Renumbered 8100.0100, subpart 10]

Subp. 12. **Pipeline company.** "Pipeline company" means any company engaged in the transmission of natural gas, gasoline, petroleum products, or crude oil via a fixed line of pipes.

Subp. 13. MR 1989 [Renumbered 8100.0100, subpart 11]

Subp. 13. **Qualifying construction work in progress.** "Qualifying construction work in progress" means the cost of materials and associated charges which are not yet placed in a permanent site.

Subp. 14. MR 1989 [Renumbered 8100.0100, subpart 12]

Subp. 14. **System plant.** "System plant" means the total tangible property, real and personal, of a company which is used in its utility operations in all states in which it operates.

Subp. 14a. MR 1989 [Renumbered 8100.0100, subpart 13]

Subp. 15. MR 1989 [Renumbered 8100.0100, subpart 14]

Subp. 15. **Throughput.** "Throughput" means the amount of product measured in barrels, gallons, or cubic feet which passes through a pipeline.

Subp. 16. MR 1989 [Renumbered 8100.0100, subpart 15]

Subp. 16. **Unit value.** "Unit value" means the value of the system plant of a utility company taken as a whole without any regard to the value of its component parts.

Subp. 17. MR 1989 [Renumbered 8100.0100, subpart 16]

Subp. 17. [Repealed, 21 SR 749]

Subp. 18. MR 1989 [Renumbered 8100.0100, subpart 17]

STAT AUTH: MS s 270.06; 270.11

HIST: 14 SR 1806; 21 SR 749; 24 SR 1106
Current as of 03/02/00

8100.0200 INTRODUCTION.

The commissioner of revenue will estimate the valuation of the entire system of a utility company operating within the state. The entire system will be valued as a unit instead of valuing the component parts, utilizing data relating to the cost of the property and the earnings of the company owning or operating the property. The resulting valuation will be allocated or assigned to each state in which the utility company operates. Finally, by the process of apportionment, the portion allocated to Minnesota will be distributed to the various taxing districts within the state. Most of the data used in the valuation, allocation, and apportionment process will be drawn from reports submitted to the Department of Revenue by the utility companies. These reports will include Minnesota Department of Revenue Annual Utility Reports (UTL forms), Reports to the Minnesota Public Utilities Commission, Annual Reports to Shareholders, Annual Reports to the Federal Energy Regulatory Commission, United States Department of Agriculture, Rural Utility Service or equivalent, and Annual Reports to the Interstate Commerce Commission. Periodic examinations of the supporting data for these reports will be made by the Department of Revenue.

The methods, procedures, indicators of value, capitalization rates, weighting percents, allocation factors, and equalization will be used as described in parts 8100.0300 to 8100.0700 for 2000 and subsequent years.

As in all property valuations, the commissioner of revenue reserves the right to exercise his or her judgment whenever the circumstances of a valuation estimate dictate the need for it.

STAT AUTH: MS s 270.06; 270.11

HIST: 11 SR 635; 12 SR 58; 13 SR 394; 14 SR 1806; 15 SR 2190; 21 SR 749; 24 SR 1106
Current as of 03/02/00

8100.0300 VALUATION.

Subpart 1. **General.** Because of the unique character of public utility companies, such as being subject to stringent government regulations over operations and earnings, the traditional approaches to valuation estimates of property (cost, capitalized income, and market) must be modified when utility property is valued. Consequently, for the 2000 and subsequent assessment years, the value of utility company property will be estimated in the manner provided in this chapter.

Subp. 2. **Market approach.** Market value implies a price for which an entire public utility enterprise might reasonably change hands between willing and informed buyers and sellers. The term presupposes a market of normal activity, no urgency to buy or sell on the part of either the buyer or seller, and continued operation of the utility as a single entity. Public utility property is seldom transferred as a whole unit under these circumstances. Consequently, after consideration of this approach, it has been decided that valuation of utility properties by this approach is speculative and unreliable and will not be employed as a method of valuation for utility property at this time.

Subp. 3. **Cost approach.** The cost factor to be considered in the utility valuation formula is the original cost less depreciation of the system plant, plus improvements to the system plant, plus the original cost of construction work in progress on the assessment date. 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 will not be allowed on construction work in progress. Depreciation will be allowed as a deduction from 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 the amount deducted does not equal actual accrued depreciation when the current estimated remaining life is considered.

Depreciation, however, shall not exceed the prescribed percentage of cost: for electric companies, 20 percent; for gas distribution companies, 50 percent; and for pipeline companies, 50 percent. If the amount of depreciation shown on the company's books exceeds these percentages, the company may deduct 50 percent of the excess.

The cost indicator of value computed in accordance with this subpart will be weighted for each type of utility company as follows: electric companies, 75 percent; gas distribution companies, 75 percent; and pipeline companies, 75 percent.

The following example illustrates how the cost indicator of value would be computed for an electric company:

1.	Utility Plant	$200,000,000
2.	Construction Work in Progress	$ 5,500,000
3.	Total Plant	$205,500,000
4.	Nondepreciable Plant (Land, Intangibles, C.W.I.P.)	$ 17,500,000
5.	Depreciable Plant	$188,000,000
6.	Book Depreciation	$ 40,000,000
7.	Maximum Depreciation (20%)	$ 37,600,000
8.	50% Excess Depreciation Allowance	$ 1,200,000
9.	Total Allowable Depreciation	$ 38,800,000
10.	Total Cost Indicator of Value	$166,700,000

Subp. 4. **Income approach.** The income indicator of value will be estimated by weighting the capitalized net operating earnings of the utility company for the most recent three years as follows: most recent year, 40 percent; previous year, 35 percent; and final year, 25 percent. The net income will be capitalized by applying to it a capitalization rate which will be computed by using the band of investment method. This method will consider:

A. the capital structure of utilities;

B. the cost of debt or interest rate;

C. the yield on preferred stock of utilities; and

D. the yield on common stock of utilities.

Rates will be computed for electric companies, gas distribution companies, and pipeline companies. The rates will be recalculated each year using the method described in this subpart.

The income indicator of value computed in accordance with this subpart will be weighted for each class of utility company as follows: electric companies, 25 percent; gas distribution companies, 25 percent; and pipeline companies, 25 percent.

The following example illustrates how the income indicator of value would be computed for a gas distribution company:

	1998	1999	2000
1. Net Operating Income	$ 394,000	$ 450,000	$ 470,000
2. Weighting Factor	25%	35%	40%
3. Weighted Income to be Capitalized	98,500	157,500	188,000
4. Capitalized Income at 9.25%	1,064,865	1,702,703	2,032,432
5. Total Income Indicator of Value		$4,800,000	

Subp. 5. **Unit value computation.** The unit value of the utility company will be the total of the weighted indicators of value.

The following is an example of the computation of the unit value for a gas distribution company:

1. Cost Indicator of Value:
   $5,000,000 x 75% = $3,750,000
2. Income Indicator of Value:
   $4,800,000 x 25% = $1,200,000
3. Unit Value of Gas Distribution Company:
   100% $4,950,000

Subp. 6. **Valuation of utility property of cooperatives and other noncommon carrier or nonregulated utilities.** Cooperative associations may irrevocably elect to have their property valued using the unit value method described in subparts 1 to 5. Cooperative associations not electing unit valuation and other

types of utilities which do not operate in the traditional profit-making mode, are not common carriers, or are nonregulated, will have their utility property valued on the basis of historical cost only. Elections made by a cooperative association prior to November 1 of any year will be effective the next assessment year. Such elections will be in a format prescribed by the commissioner. Depreciation will be allowed as a deduction from the historical cost in increments of 2-1/2 percent per year, but the maximum depreciation allowed shall not exceed 25 percent of the cost of the utility operating property. Additions to existing utility property will be depreciated 2-1/2 percent per year until they reach the 25 percent maximum. Retirements of utility property will be deducted from the cost basis at the appropriate depreciation level of the retired property.

The following example illustrates this process for an electric cooperative association not electing valuation under subparts 1 to 5:

1.	Cost of Substation	$1,000,000
2.	Value 1st year @ 97.5%	975,000
3.	Value 2nd year @ 95%	950,000
4.	Value 3rd year @ 92.5%	925,000
5.	Value 4th year @ 90%	900,000
6.	Value 5th year @ 87.5%	875,000
7.	Value 6th year @ 85%	850,000
8.	Value 7th year @ 82.5%	825,000
9.	Value 8th year @ 80%	800,000
10.	Value 9th year @ 77.5%	775,000
11.	Value 10th year @ 75%	750,000
12.	Value 11th and succeeding years at 75%	750,000

Subp. 7. [Repealed, 21 SR 749]

Subp. 8. **Retirements.** Utility operating property may be retired from the utility system while still in place if certain criteria are met:

A. The property must be physically disconnected from the utility system. In the case of electrical plants, the disconnection or dismantling of wires, cables, connectors, or transformers would constitute physical disconnection. In the case of pipelines, the disconnection of pipes, valves, or fittings would be evidence of physical disconnection.

B. An affidavit of retirement should be filed by the utility with the commissioner at least 30 days prior to the assessment date. This affidavit shall indicate the facility being retired and the date it was taken out of service.

The utility should make every effort to inform the commissioner of pending major retirements. The commissioner in turn shall notify the county assessor of impending major retirements as soon as this information becomes available to the department.

Utility property which is retired in place shall continue to be taxed for ad valorem purposes. However, its market value

shall not be determined on the basis of its value as utility operating property.

If a utility should choose to temporarily retire a facility pending the development of an alternate fuel, greater demand, increased source of supply, or another valid reason, the cost of this facility must be transferred to the appropriate regulatory agency's account entitled "Held for Future Use." Standby facilities will not be considered to be temporarily retired unless their costs are carried in this account. Temporarily retired utility facilities will be valued taking into account a number of factors including age of the facility, type of facility, amount of maintenance and additional costs needed to restore the facility to operational status, length of retirement, and earning potential of the facility. In no instance shall a temporarily retired facility be valued lower than if the facility were considered nonoperating utility property.

STAT AUTH: MS s 270.06; 270.11; 273.33; 273.37; 273.38

HIST: 7 SR 1797; 8 SR 2723; 10 SR 18; 11 SR 635; 12 SR 58; 13 SR 394; 14 SR 1806; 15 SR 2190; 21 SR 749; 24 SR 1106
Current as of 03/02/00

8100.0400 ALLOCATION.

Subpart 1. **General.** After the unit value of the utility property has been estimated, the portion of value which is attributable to Minnesota must be determined. This process of dividing the unit value of a utility company among the states in which the utility operates is called allocation. Each of the factors in the allocation formula is assigned a weighted percentage to denote the relative importance assigned to that factor. The resulting sum of the weighted factors multiplied by the unit value yields the valuation of the utility property which will, after the adjustments described in part 8100.0500, be subject to ad valorem tax in the state of Minnesota.

The factors to be considered in making allocations of unit value to Minnesota for the utility companies and the weight assigned to each factor for each class are specified in this rule.

Subp. 2. **Electric companies.** The original cost of the utility property located in Minnesota divided by the total original cost of the property in all states of operation is weighted at 90 percent. Gross revenue derived from operations in Minnesota divided by gross operations revenue from all states is weighted at ten percent.

The following example illustrates this formula, assuming a unit value of $20,000,000.

1. Minnesota Plant Cost $115,000,000
   x .90 = 50.49%
2. System Plant Cost $205,000,000

3. Minnesota Gross Revenue 40,000,000

x .10 = 3.8%

4. System Gross Revenue $105,000,000

5. Total Percentage Allocable to Minnesota 54.29%

6. Unit Value of System Plant $20,000,000

7. Amount of Value Allocable to Minnesota $10,858,000

Subp. 3. **Gas distribution companies.** The allocation of value of gas distribution companies shall be made considering the same factors as are used to determine the allocation of value of electric companies. The weight given to the original cost factor will be 75 percent, and gross revenue shall be weighted 25 percent.

Subp. 4. **Pipeline companies.** The allocation of pipeline companies shall be the original cost of the utility property located in Minnesota divided by the total original cost of the property in all states of operation weighted at 75 percent. Additionally, throughput of product from operations in Minnesota divided by throughput of product from operations in all states is weighted at 25 percent.

The following example illustrates the allocation of value of property of a pipeline company and the weights given to each factor:

1. Minnesota Plant Cost $13,500,000
   x .75 = 25.76%
2. System Plant Cost $39,300,000
3. Minnesota Throughput (Mcf or Barrel miles) 8,940,000 x .25 = 8.01%
4. System Throughput (Mcf or Barrel miles) 27,900,000
5. Total Percentage Allocable to Minnesota 33.76%

STAT AUTH: MS s 270.06

HIST: 14 SR 1806; 21 SR 749

Current as of 03/02/00

8100.0500 ADJUSTMENTS FOR NON-FORMULA-ASSESSED OR EXEMPT PROPERTY.

Subpart 1. **Deduction for exempt or non-formula-assessed property.** After the Minnesota portion of the unit value of the utility company, except for electric cooperatives, is determined, any property which is non-formula-assessed or which is exempt from ad valorem tax, will be deducted from the Minnesota portion of the unit value. Only that qualifying property located within the state of Minnesota may be excluded.

Subp. 2. **Valuation formula not applicable to certain utility property.** The following properties will be valued by the local or county assessor and, therefore, the formula provided herein for the valuation of utility property will not

be applicable for such property:

A. land;

B. nonoperating property; and

C. rights-of-way.

Subp. 3. **Deduction for cost of land and rights of way; application to nonoperating property.** The Minnesota portion of the unit value will be reduced by the original cost of land and rights-of-way. In the case of nonoperating property, the deduction shall be original cost, less the rate of depreciation applicable in the valuation process pursuant to part 8100.0300.

Subp. 4. **Deduction for exempt property.** A deduction from the Minnesota portion of the unit value shall also be made for property, real or personal, which is exempt from ad valorem tax. For instance, pollution control equipment for which an exemption has been granted is exempt. The original cost of qualifying construction work in progress shall be excluded from the Minnesota portion of the unit value. A deduction from the Minnesota portion of the unit value shall be made at original cost, less the applicable rate of depreciation used in the valuation process under part 8100.0300. The value of personal property, such as office machinery and vehicles, which is not taxed, shall also be excluded from the Minnesota portion of the unit value. The deduction shall be at original cost less the applicable rate of depreciation utilized in the valuation process.

The following example illustrates how these items are deducted from the Minnesota portion of the unit value.

1. Minnesota Portion of Unit Value			$5,000,000
2. Excludable Items - Nondepreciable			
a. Land Assessed Locally		3,000	
b. Land Rights		2,000	
c. Qualifying construction work in progress			5,000
3. Excludable Items - Depreciable			
a. General Plant Items	$10,000		
b. Pollution Control Equipment	10,000		
c. Gross Depreciable Items	20,000		
d. Depreciated at 25 percent	5,000		
e. Net Depreciable Excludable Items			15,000
4. Total Excludable Items			25,000
5. Minnesota Apportionable Value			$ 4,975,000

Subp. 4a. **Deduction for exempt or non-formula-assessed property of cooperatives electing to be valued under part 8100.0300, subparts 3 to 5.** In the case of cooperative associations valued using unit valuation, exempt or non-formula-assessed property shall be deducted to the extent included in the unit value. The value to be deducted shall be

computed by adding the cost of all exempt or locally assessed property and dividing by the cost of all property in Minnesota. The resulting percentage shall be multiplied by the Minnesota portion of the unit value to arrive at the amount to be deducted. The amount to be deducted is subtracted from the Minnesota portion of the unit value.

The following example illustrates how these items are deducted from the Minnesota portion of the unit value.

1. Minnesota portion of Unit Value		$1,000,000
2. Cost of Excludable Items		
a. Land Assessed Locally	10,000	
b. Land Rights	15,000	
c. General Plant Items	100,000	
d. Rural Distribution Lines	865,000	
3. Total Cost of Excludable Items		990,000
4. Total Cost of Minnesota Property		1,100,000
5. Percent Excludable equals Line 3 divided by Line 4	90.0%	
6. Amount Excludable equals Line 5 times Line 1		900,000
7. Minnesota Apportionable Value equals Line 1 minus line 6	100,000	

Subp. 5. **Burden of proof and responsibility of utility company.** The utility company shall have the burden of proof to establish that the value of any property should be excluded from the Minnesota portion of the unit value. Accordingly, the utility company shall have the responsibility to submit, in the form required by the commissioner of revenue, such schedules of exempt or non-formula-assessed property as the commissioner may require.

STAT AUTH: MS s 270.06; 270.11

HIST: 14 SR 1806; 17 SR 1279; 24 SR 1106
Current as of 03/02/00

8100.0600 APPORTIONMENT.

Subpart 1. **Apportionment to taxing district.** After the unit valuation of the utility company has been allocated to the state of Minnesota and has been adjusted under part 8100.0500, the determined amount shall be apportioned or distributed to the taxing districts in Minnesota in which the company operates. This apportionment will be made by the commissioner of revenue on the basis of information submitted by the utility companies in annual reports filed with the commissioner.

Subp. 2. **Required information.** The following information must be submitted for each taxing district:

A. the original cost of the company's operating

property by classification, including the cost of leased taxable property;

B. the original cost of any new additions since the last assessment, including work in progress on the assessment date; and

C. the original cost of any retirements made after the last assessment.

Subp. 3. **Required information when new taxing district established.** Whenever a new taxing district is established, the information submitted by the utility companies for the taxing district must be submitted in the same form as enumerated in subpart 2, items A to C. If the utility, because of administrative difficulty, is forced to make estimates of values and costs for property within new taxing districts, these estimates must be approved by the commissioner.

Subp. 4. **Market value of the operating utility property.** The total market value of each company's operating utility property in Minnesota shall be:

The current original cost in each taxing district as of the last assessment date plus original cost of new construction reduced by the original cost of property retired since the last assessment date. The Minnesota portion of the unit value as adjusted under this rule shall be divided by the total current original cost to determine a percentage. The resulting percentage shall be multiplied by the current original cost in each taxing district to determine the market value in each district.

Subp. 5. [Repealed, 14 SR 1806]

STAT AUTH: MS s 270.06

HIST: 14 SR 1806
Current as of 03/02/00

8100.0700 EQUALIZATION.

Subpart 1. **In general.** After the apportionment of value referred to in part 8100.0600 has been made, the values of structures valued by the commissioner must be equalized to coincide with the assessment levels of commercial and industrial property within each respective county receiving a share of the apportioned utilities value. This equalization will be accomplished through the use of an assessment/sales ratio.

Subp. 2. **Assessment/sales ratio computation.** A comprehensive assessment/sales ratio study compiled annually by the sales ratio section of the Local Government Services Division of the Department of Revenue will be used in this computation. The portions of this study which will be used for purposes of this part are known as the "County Commercial and Industrial Sales Ratio."

This commercial and industrial (C &> I) sales ratio is computed through an analysis of the certificates of real estate value filed by the buyers or sellers of commercial or industrial property within each county. The information contained on these certificates of real estate value is compiled pursuant to requests, standards, and methods set forth by the Minnesota Department of Revenue acting upon recommendations of the Minnesota Legislature. The most recent C &> I study available will be used for purposes of this part.

The median C &> I sales ratio from this County Commercial and Industrial Sales Ratio study will be used as a basis to estimate the current year C &> I median ratio for each county.

The process used to estimate this current year median ratio will be as follows:

The State Board of Equalization abstract of market value will be examined. The current estimated market value of commercial and industrial property within each county will be taken from this abstract. The amount of the value of new commercial and industrial construction ("new" meaning since the last assessment period), as well as the value of commercial and industrial property which has changed classification (for example, commercial to tax exempt property) will also be taken from the abstract. The value of new construction will then be deducted from the estimated market value, resulting in a net estimated current year market value for commercial and industrial property within the county. The value of commercial and industrial property which has changed classification will be deducted from the previous years estimated market value to arrive at a net estimated previous year market value for commercial and industrial property within the county. The net current year value will be compared to the net previous year's estimated market value for commercial and industrial property within the county and the difference between the two values noted. This difference will be divided by the previous year's net estimated market value for commercial and industrial property to find the percentage of increase, or decrease, in assessment level for each year. This percent of change will be applied to the most recent C &> I median ratio to estimate the current year's C &> I median ratio. An example of this calculation for a typical county is shown below.

1990 E.M.V. for Commercial and Industrial Property	$12,000,000	
Less: New Construction	1,500,000	
1990 Net E.M.V. for C & I property		$ 10,500,000
1989 E.M.V. for C & I property	$10,250,000	
Less: Classification changes	250,000	
1989 Net E.M.V. for C & I property		10,000,000
Difference 1989 vs 1990 E.M.V.		500,000

Percent of change (500,000/10,000,000)	5%
1989 Median C & I ratio	88%
1990 Estimated Median C & I ratio (88% x 105%)	92.4%

This same calculation is performed for each Minnesota county. If there are five or fewer valid sales of commercial and industrial property within a county during the study period, these few sales are insufficient to form the basis for a meaningful C &> I ratio. Therefore, the median assessment/sales ratio to be used for purposes of the example computation in this subpart will not be the median C &> I ratio but will be the weighted median ratio of all property classes within the county for which a sales ratio is available. This weighted median ratio is computed in the same manner using the same procedures and standards as the C &> I ratio. In addition, the example computation in this subpart will not be performed using the commercial and industrial estimated market value but will use the estimated market value for all property within the county. All other aspects of the calculations are identical except for this substitution.

Class of Property	Amount of Value	Percent of Value	Median Ratio	Weighted Median Ratio
Residential	$ 20,000,000	20%	86%	17.00%
Agricultural	55,000,000	55%	95%	52.25%
Seasonal - Recreational	5,000,000	5%	90%	4.50%
Commercial Industrial	20,000,000	20%	85%	17.00%
Total	$100,000,000	100%		90.75%

Subp. 3. **Application of the estimated current year median assessment/sales ratio.** After the estimated current year median ratio has been calculated under subpart 2, it is used to adjust the apportioned estimated market value of utility structures valued by the commissioner. The value of these structures is reduced by the difference between 95 percent and the median ratio as adjusted in subpart 2. This is done by subtracting the current year median ratio, as adjusted, from the 95 percent provided for in Minnesota Statutes, section 278.05, subdivision 4, to arrive at an equalization factor. The estimated market value of utility structures is multiplied by the equalization factor to arrive at the reduction amount. The reduction amount is subtracted from the estimated market value of the utility structures to arrive at the equalized market value of structures. In no instance will any adjustment be made if, after comparing the current year median sales ratio as adjusted to the assessment level of utility structures, the difference between the two is ten percent or less. An example of this adjustment is as follows:

	County A	County B
Estimated Level of Assessment for Utility Property*	100.00%	100.00%
95 percent provided for in Minnesota Statutes, section 278.05, subdivision 4	95.00%	95.00%
County Commercial/Industrial Sales Ratio	87.00%	93.00%

Equalization Factor	8.00%	0.00%
Estimated Market Value of Structures	1,000,000	1,000,000
Reduction in Value	80,000	0
Equalized Market Value of Structures	920,000	1,000,000**

*For purposes of this example, assume that utility property is assessed at 100 percent of market value.

**No adjustment is made because the Estimated Current Year Median Sales Ratio is within ten percent of the assessment level of utility property.

All utilities operating within a particular county will be equalized at the same percentage. No adjustment for equalization will be made to machinery or personal property.

These equalized estimated market values of utility structures valued by the commissioner will be forwarded to the county assessor denoting specific utility companies and taxing districts together with personal property and machinery values pursuant to Minnesota Statutes.

STAT AUTH: MS s 270.06

HIST: 15 SR 2190
Current as of 03/02/00

APPENDIX 3

SURVEY OF STATES
Minnesota Department of Revenue

State	Utility Valuation Methodology			Market Approach	Cost Approach				
	Rule?	Rigid?	Formula?		Yes or No	HCLD or RCLD	CWIP	Oper. Leases	CIAC
Alabama	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Arizona	Yes	Yes	Yes	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Arkansas	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
California	No	n/a	n/a	No	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Colorado	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Florida	Yes	No	No	Yes	Yes	HCLD	Exempt	Depr. Cost Added	Not Included
Georgia	No	n/a	n/a	Yes	No	n/a	n/a	n/a	n/a
Idaho	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Indiana	No	n/a	n/a	No	Yes	n/a	10% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Iowa	Yes	Yes	Yes	No	No	HCLD	n/a	n/a	n/a
Kansas	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Kentucky	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Louisiana	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Maryland	No	n/a	n/a	Yes	Yes	HCLD	Exempt	Depr. Cost Added	Depr. Cost Add
Michigan	Yes	Yes	Yes	No	Yes	RCLD	50% Bk. Cost	Depr. Cost Added	Not Included
Minnesota	Yes	Yes	Yes	No	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Missiouri	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Mississippi	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Montana	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Nebraska	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
Nevada	Yes	Yes	No	No	Yes	HCLD	Add to Unit Val.	Depr. Cost Added	Not Included
New Mexico	Yes	Yes	No	No	Yes	HCLD	50% Bk. Cost	Depr. Cost Added	Not Included
North Carolina	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
North Dakota	No	n/a	n/a	No	Yes	HCLD	75% Bk. Cost	Depr. Cost Added	Not Included
Oklahoma	No	n/a	n/a	Yes	Yes	HCLD	Disc. Bk. Cost	Depr. Cost Added	Depr. Cost Add
Oregon	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
South Carolina	No	n/a	n/a	No	Yes	HCLD	Exempt	Depr. Cost Added	Exempt
South Dakota	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Not Included
Tennessee	No	n/a	n/a	Yes	Yes	HCLD	15% Bk. Cost	Depr. Cost Added	Not Included
Texas	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Not Included	Depr. Cost Add
Utah	Yes	Yes	No	No	Yes	HCLD	Disc. Bk. Cost	Depr. Cost Added	Depr. Cost Add
Washington	No	n/a	n/a	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add
West Virginia	Yes	No	No	Yes	Yes	HCLD	35% Bk. Cost	Depr. Cost Added	Not Included
Wisconsin	Yes	No	No	Yes	Yes	HCLD	100% Bk. cost	Depr. Cost Added	Depr. Cost Add
Wyoming	Yes	No	No	Yes	Yes	HCLD	100% Bk. Cost	Depr. Cost Added	Depr. Cost Add

SURVEY OF STATES
Minnesota Department of Revenue

State	Income Approach			Correlation	Retiremnts	Allocation	Electric Co-Op Methodology	Muni. Assesment
	Yes or No	CWIP	Oper. Leases					
Alabama	Yes-Direct	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	HCLD - Adj. for comparison w / IOU	Exempt
Arizona	No	n/a	n/a	n/a	Incl. if in P in S	n/a	RCLD & Market Appr. (stock & debt)	Taxed if election made
Arkansas	Yes-Yield	Adjust For	Adjust For	Prescribed Wt.	Incl. if in P in S	No rule	HCLD Only	Exempt
California	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - Income imputed as IOU	Exempt
Colorado	Yes-Yield	No Adjustment	No Adjustment	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses IOU cap rate	Exempt
Florida	Yes-Direct	Exempt	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	RCLD	Exempt
Georgia	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	RCLD	Exempt
Idaho	Yes-Yield	No Adjustment	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Gross Sales Multiplier - Formula driven	Exempt
Indiana	No	n/a	n/a	n/a	Incl. if in P in S	n/a	HCLD - Adj. for comparison w / IOU	Exempt
Iowa	No	n/a	n/a	n/a	Incl. if in P in S	n/a	n/a	n/a
Kansas	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses IOU cap rate	Exempt
Kentucky	Yes-Direct	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	HCLD Only	Exempt
Louisiana	Yes-Yield	Adjust For	No Adjustment	Appr. Judgemt	Incl. if in P in S	Rule	Cost & Income - uses Co-op cap rate	Exempt
Maryland	Yes-Yield	Exempt	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses IOU cap rate	Exempt
Michigan	No	n/a	n/a	n/a	Incl. if in P in S	n/a	RCLD - Adj. for compariosn w / IOU	Exempt
Minnesota	Yes-Yield	No Adjustment	No Adjustment	Prescribed Wt.	Eliminated	Rule	Large- Cost & Income, Small- Cost only	Same as Sm. Co-ops
Missiouri	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	HCLD - Adj. for comparison w / IOU	Exempt
Mississippi	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	Exempt	Exempt
Montana	Yes-Direct	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses blended cap rate	Same as Co-ops
Nebraska	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Fee in lieu - based on % of gr. receipts	Same as Co-ops
Nevada	Yes-Yield	Add to Unit Val.	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses sm. IOU cap rate	Exempt
New Mexico	No	n/a	n/a	n/a	Incl. if in P in S	n/a	RCLD	Exempt
North Carolina	Yes-Direct	No Adjustment	No Adjustment	Appr. Judgemt	Incl. if in P in S	No rule	HCLD - Adj. for comparison w / IOU	Exempt
North Dakota	Yes-Yield	No Adjustment	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Exempt	Exempt
Oklahoma	Yes-Both	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	Fee in lieu	Exempt
Oregon	Yes-Both	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	Lower of HCLD or 4% of gr. Receipts	Exempt
South Carolina	Yes-Yield	Exempt	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	HCLD - Adj. for comparison w / IOU	Exempt
South Dakota	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Fee in lieu - based on % of gr. receipts	Exempt
Tennessee	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	HCLD	Exempt
Texas	Yes-Yield	No Adjustment	No Adjustment	Appr. Judgemt	Incl. if in P in S	No rule	HCLD - Adj. for comparison w / IOU	HCLD
Utah	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - uses IOU cap rate	Exempt
Washington	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	HCLD - Adj. for comparison w / IOU	Exempt
West Virginia	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Cost & Income - Eq. rate=debt rate +	Exempt
Wisconsin	Yes-Yield	Adjust for	Adjust For	Appr. Judgemt	Incl. if in P in S	No rule	Fee in lieu - based on % of gr. receipts	Same as Co-ops
Wyoming	Yes-Yield	Adjust For	Adjust For	Appr. Judgemt	Incl. if in P in S	Rule	Cost & Income - Eq. rate=debt rate +	Same as IOUs

APPENDIX 4

The Current Status of Adding a Small Firm Risk Premium to the Valuation Discount Rate

by JOHN J. KANIA, Ph.D.

A. The Issue

It is an accepted practice to adjust the capital asset pricing model (CAPM) developed independently by financial economists, Sharpe and Lintner, by adding a small firm risk premium based on the notion that small firms are more risky than their large counterparts. Indeed, many individuals fervently believe in this small firm effect. But, while one may be able to demonstrate that investors demand a small firm risk premium for short specific time periods, valuation professionals and financial economists, who specialize in observing the behavior of financial markets, have been unable to conclusively show that investors consistently demand a small firm risk premium.[1] In fact, evidence that the small firm risk premium is largely a myth began to appear in the literature in 1983.

B. Small firm risk premium - Evidence from the literature

1. Transaction costs and the small firm risk premium

Financial economist R. Banz, in 1982, is recognized as the first to use an econometric model to advance the argument that a small firm risk premium might exist.[2] However, he cautioned that the small firm risk premium (or size effect) might simply be a proxy for some other unknown factor.[3] This very important caution has been frequently overlooked by readers of Banz's article. Later in 1983, R. Roll, D.B. Keim , and others, demonstrated that the small firm risk premium was a seasonal effect and occurred primarily during the first few days of January of each year.[4, 5] This anomaly has subsequently become known as the "January effect" which can be observed by comparing columns (2) and (3) in **Table 1** of this paper. One of several plausible explanations for this effect is the tax-loss selling strategy whereby investors sell stocks in December to realize capital losses for tax purposes. These stocks are then repurchased in January.

Roll suggested that transaction costs along with small stock illiquidity might be Banz's unknown factor proxied by the observed early January small firm risk premium.[6] But, what are transaction costs? A simple definition is the costs paid by the investor in the form of commissions to the broker to buy or sell the stock, and trading costs (bid-ask spread) paid to the market maker.[a] For smaller less actively traded stocks, these costs increase dramatically. Business Valuation Services has found that the trading costs were ,64 percent of the stock price for large firms, but rose dramatically to 9.38 percent for small firms over the period - 1963 to 1992.[7]

Also, in 1983, H.R. Stoll and R.E. Whaley tested the transaction cost hypothesis and found that these costs did explain a significant portion of the so called small firm risk premium.[8] Subsequent studies by S.C. Isberg and C.F. Theis in 1991, P. Shen in 1993, M. Bajaj in 1995, Business Valuation Services (BVS) in 1996, and J.L. Horowitz, T. Loughran, and N.E. Savin, in 1999, all support Stoll and Whaley's conclusion.[9, 10, 11, 12, 13, 14] Then in 1999, M. Bajaj and S. Hakala ran a series of linear regressions on small stock returns over the period 1926 to 1996. They found that the small firm risk premium was statistically insignificant from zero.[15] Yet, there are recent studies which include those by R. Grabowski and D. King, and several by E. F. Fama and K. R. French that still purport to have found a small firm risk premium (size effect).[16, 17, 18] However, since these researchers did not reduce their stock returns for transaction costs or correct for the delisting bias as discussed in the next subsection, it is not a surprise that they found a small firm risk premium.

In fact, a number of researchers have been quite critical of the way that Fama and French interpret their data.

An illustration of the apparent small firm risk premium and the effect of removing trading costs is presented in **Table 1.**

Table 1

Firm Size and Stock Returns 1963 - 1992

- Before and After Trading Costs 1/

	(1)	(2)	(3)	(4)	(5)	(6)
		January	Non-January	Annual		Stock Return
	Size	Stock	Stock	Stock	Trading	After
	Rank 2/	Return	Return	Return	Cost	Trading costs 3/
		(%)	(%)	(%)	(%)	(%)
Smallest	1	18.6	9.6	21.6	9.38	12.42
	2	14.2	6.2	17.5	3.86	13.64
	3	12.5	5.9	16.4	3.38	13.02
	4	11.1	6.4	15.8	3.57	12.23
	5	9.6	7.1	16.3	3.27	13.03
	6	9.2	8.0	16.6	3.06	13.54
	7	8.1	9.6	16.8	2.57	14.23
	8	7.6	8.1	14.9	2.39	12.51
	9	7.2	8.4	15.4	2.19	13.21
	10	7.0	8.0	14.9	1.99	12.91
	11	6.1	9.0	14.9	1.73	13.17
	12	6.0	10.5	16.5	1.64	14.86
	13	5.0	9.9	15.3	1.54	13.76
	14	4.9	10.6	15.6	1.37	14.23
	15	4.1	10.1	14.4	1.29	13.11
	16	3.5	9.6	13.4	1.16	12.24
	17	3.3	9.3	12.8	1.07	11.73
	18	2.9	9.3	12.5	0.95	11.55
	19	2.6	9.4	12.1	0.86	11.24
Largest	20	1.6	8.9	10.5	0.64	9.86

Table Notes:

1/ Permission was granted to use columns (1) - (5) from Table 2 on page 8 of a white paper entitled: Is it appropriate to use a higher discount rate to value small firms", Business Valuation Services Inc., September 1996. Computation of returns and pertinent definitions are found in another unpublished paper by M. Bajaj, "Turnover in Equity Ownership, Risk and Return," July 1995.

2/ 3,000 stocks are in each category. Small cap stocks are in categories 1 - 4.

3/ Stock return after trading cost still includes the brokerage commission and may also be affected by a delisting bias.

If one observes the returns in columns (1) and (4), the usual inverse relation between firm size and average stock return is found which provides apparent support for the existence of the small firm risk premium. However, when these returns are corrected for part of the transaction costs, namely trading costs, a comparison of returns in columns (4) and (6) show that the inverse relationship largely disappears.

2. The delisting bias and the small firm risk premium

T. Shumway, in 1997, examined the small firm risk premium from a different perspective. The security price data bank used by almost all studies on the small firm risk premium is maintained by the University of Chicago's Center for Research in Security Prices, and is commonly referred to by its acronym - CRSP. Shumway demonstrated that the CRSP data suffers from a serious error referred to as a "delisting bias."[b, 21] Specifically, firms were examined that had been delisted from the major stock exchanges because they were performing poorly, but were still traded in negotiated over-the-counter transactions. He discovered that over 4,500 stocks delisted for poor performance were not included in the CRSP data base. Data on these poorly performing stocks was obtained from sources such as the National Quotations Bureau and "Pink Sheets" for the period 1961 to 1993. It was discovered that these poorly performing delisted stocks exhibited an average negative return of 23 percent, and their exclusion from the CRSP data bank resulted in average small stock returns being distorted upward by 1.45 to 5.21 percent.[22] Shumway concludes that:

> *the influence of delisting returns seems to be highly correlated with size ... Including delisting returns ... reduces performance of small stocks substantially, but it does not affect large stocks' returns.*[23]

Large stock returns are not affected, because a disproportionate number of small firm stocks are delisted for poor performance. In a subsequent 1998 study, Shumway found that when stock returns from the NASDAQ were corrected for the delisting bias, the small firm risk premium (size effect) disappears.[24]

C. Small firm risk premium - Evidence from Ibbotson Associates Yearbook

As an alternative to reviewing the econometrically complex and sophisticated literature, one can analyze the data presented by Ibbotson Associate's SBBI 1997 Yearbook and come to the same conclusion that a small firm risk premium is largely a "myth".

1. Ibbotson data – pre 1982

Prior to 1982, according to Ibbotson, historical small firm returns "...are before-transaction-cost returns" and not corrected for the delisting bias.[25] A representative small firm return of 15.64 percent for the holding period 1961 - 1981 is presented in column (3) of Table 2.

Table 2

Example Small Firm Risk Premiums determined from Ibbotson Associates 1997 Yearbook

Compound Annual Returns for 15 Yr holding periods

(1)	(2)	(3)	(4)
Period	Large Firm Stock Returns	Small Firm Stock Returns	Small Firm Premium (3) - (2)
	CRSP Data Index	CRSP Data Index	
1966-1981	7.11	15.64	8.53
	Vanguard S&P 500 Index	DFA 9-10 Index	
1982-1996	16.79	14.41	-2.38

When the large firm return is subtracted, a value of 8.53 percent is found. To find the small firm risk premium, 8.53 percent must now be reduced for transaction costs and the upward distortion caused by the delisting bias discovered in Shumway's research. We know for certain that the premium will be less than 8.53 percent and could even be negative depending on the magnitude of transaction costs and delisting bias. Unfortunately, the data necessary to correct the 8.53 percent is not readily available and may not be available at all for earlier years due to the passage of time.

2. Ibbotson data – post 1981

But after 1981, Ibbotson began to present the small firm return index of the mutual fund - Dimensional Fund Advisors Small Company 9-10 Fund (DFA).[c] A poorly performing stock delisted from an exchange would probably be in the DFA fund, and affect the return index negatively. Thus, the DFA fund does not suffer from the delisting bias that is so endemic to the average small firm stock return derived from the CRSP data base. So, when the small firm risk premium is calculated by subtracting the large firm from the small firm return, the result is dramatic.[26] For the 1982 - 1996 holding period, the small firm risk premium not only disappears, it becomes a negative 2.38 percent as shown in **Table 2**. This risk premium disappearance is just as dramatic for other shorter holding periods that one would care to observe from the Ibbotson Yearbook after 1981. Other writers including R.G. Ibbotson, *et al*, and economists, Drs. B.C. Becker and I. Gray, have also found a negative small firm premium in the last 20 years.[27, 28]

One might speculate that the negative small firm risk premium is the result of studies purporting to show a small firm risk premium. Such studies may have induced investors to increase their demand for small firm stocks, and, according to Nobel Laureate Dr. William Sharpe, as investors put more money into small stocks, this drives up the price "... and there goes the premium."[d]

D. The court and the small firm risk premium

The existence or non-existence of a small firm risk premium has not been an issue in tax court until the early part of the 90's. In the *Estate of Mildred Herschede Jung v Commissioner, 101 T.C. 412; 1993 U.S. Tax CT, N11, [*443] (c), N12*, the petitioner argued that the valuation discount rate in the discounted cash flow should be increased for an assumed small firm risk premium. The court, however, was not persuaded that a small firm risk premium should be added simply because the firm being valued was small. The same conclusion was reached by the court in *Louise B. Barnes, Donor, Et Al, Petitioners v Commissioner, TCM 1998-413, Barnes v Commissioner.* In *Nathan P. Morton and Geraldine V. Morton v Commissioner of Internal Revenue, T.C. Memo 1997-166*, the court found for the respondent, and the valuation discount rate presented by the respondent's expert witness did not include a small firm risk premium. However, it is not clear that the absence of a small firm risk premium was a major factor in the judicial decision. But, in *Hendrickson v. Commissioner, T.C.M. 1999-278, and Smith v. Commissioner, T.C.M. 1999-368*, the court found for the petitioner and allowed a small firm risk premium. Thus, while the court record is mixed, it is still evident that the court will not automatically accept a small firm risk premium without substantiation.

E. Conclusion

Since 1982, it is quite evident from **Table 2** that the small firm risk premium does not exist. Studies based on using stock return data from the 70s though the 90s have demonstrated that the small firm risk premium may be a proxy for transaction costs and is distorted upward by a delisting bias. Studies that purport to show a small firm risk premium for historical periods prior to the 70s could be corrected, more or less, for transaction costs. However, information necessary to eliminate the delisting bias no longer exists due to the passage of time. But, since investors place more weight

on current stock returns, the existence or non-existence of a historical small firm risk premium is simply not that important.

The main conclusion of this paper is that there is no conclusive empirical evidence to support the general practice of adding a small firm risk premium to the discount rate when valuing small firms.

Footnotes

a. The commission is the fee charged by the broker to serve as the investor's agent in seeking the best price, executing the stock transaction, and maintaining the record. The market maker stands ready to buy shares at the stock's bid price and sell shares at the asking price. Thus, the bid-ask spead (trading cost) represents the market maker's commission to cover costs and yield a profit.

b. The majority of firm securities are delisted from the major exchanges for poor performance, however, delisting also occurs because of a merger, liquidation, or movement to another exchange.

c. The DFA is not a pure index fund, in that it does not hold all the ninth and tenth deciles small cap stocks from the NYSE, AMEX, and NASDAQ. The fund follows an investment rule that minimizes trading costs (transaction costs). Therefore, very illiquid stocks with prices less than $2 and/or market capitalization of less than $10 MM are excluded, and more liquid stocks that have risen to the eight decile are retained in the fund. So, does the DFA fund really reflect the returns and risks of small firm stocks? D.B. Keim has researched this question and has concluded in the affirmative. See Keim, D.B., "An analysis of mutual fund design: the case of investing in small-cap stocks", *Journal of Financial Economics*, Vol. 51, 1999, P. 173-194.

d. "Revisiting the Capital Asset Pricing Model", An interview with William Sharpe by Jonathan Burton, *Asset Management*, Dow Jones, May/June 1998, P. 21-28.

Endnotes

1. Siegel researched the small firm risk premium from 1926 through 1997 and found that it was limited to the short period between 1974 and 1983. Siegel, J., *Stocks for the Long-run*, c. 1998, Chapter 8.
2. Banz, R.W., "The Relationship Between Returns and Market Value of Common Stocks", *Journal of Financial Economics*, Vol. 9, (1981), P. 3-18.
3. Ibid., P. 16-17.
4. Roll, R., "Vas ist das? The Turn-of-the-Year Effect and the Return Premia of Small Firms", *The Journal of Portfolio Management*, Winter 1983, P. 18 - 28.
5. Keim, D.B., "Size-Related Anomalies and Stock Return Seasonality," *Journal of Financial Economics*, Vol. 12, 1983, P. 13-32.
6. Op. cit., Roll, P. 25.
7. "Is It Appropriate to Use a Higher Discount Rate to Value Small Firms", Business Valuation Services Inc., September 1996, P. 14. (BVS Study)
8. Stoll, H.R., and R.E. Whaley, "Transaction Costs and the Small Firm Effect", *Journal of Financial Economics*, Vol. 12, 1983, P. 57-79.
9. Isberg, S.C., and C.F. Thies, "Small firm Mutual Funds: Additional Evidence on the Small Firm Effect," *Journal of Small Business Economics*, 1991, P. 211- 219.
10. Shen, Pu, "Pricing Bid-Ask Spreads in Common Stocks, Liquidity Premium and the Small Firm Effect", Working Paper RWP 93-19, December 1993, Federal Reserve Bank of Kansas City.
11. Bajaj, M., "Turnover in Equity Ownership, Risk and Return", Unpublished paper, July 1995.
12. Op. Cit., BVS Study.
13. Horowitz, J.L., T. Loughran, N.E. Savin, "The Disappearing Size Effect", Working Paper, April 1999, The University of Iowa, 108 PBAB, Iowa City Iowa 52242-1000.
14. A layman's discussion concerning transaction costs and the small firm risk premium, can be found in a *Forbes* article by M. Hulbert, "The Small-Cap Myth", *Forbes Magazine*, Vol. 159, No. 5, March 10, 1997, P. 203.

15. *Financial Valuation: Businesses and Business Interests*, 1999 Update, M.D. Hannan and R.A. Sheeler editors, Warren Gorham & Lamont, Chap. 12, written by M. Bajaj, and S.D. Hakala, subsection A.4[2][c].

16. Ibbotson, R.G., L.B. Siegel, and M.B. Waring, "Historical Returns on Principal Investments," In J.F. Friedman, ed., *Encyclopedia of Investments*, 2nd Edition, New York, Warren, Gorham, & Lamont, c. 1990, P. 855 - 877.

17. Grabowski, R. and D. King, "The Size Effect and Equity Returns", *Business Valuation Review*, June 1995, P. 69 - 74.

18. Fama, E.F., and K.R. French, "The Cross-Section of Expected Stock Returns", *The Journal of Finance*, Vol. XLVII, No. 2, June 1992, P. 427-465.

19. Black, F., "Beta and Return", *The Journal of Portfolio Management*, Fall 1993, P. 9.

20. Jagannathan, R., and E.R. McGrattan, "The CAPM Debate", Federal Reserve Bank of Minneapolis Quarterly Review, Fall 1995, P. 12 - 13.

21. Shumway, T., "Delisting Bias in CRSP Data", *Journal of Finance*, Vol. 52, No. 1, March 1997, P. 327-340.

22. Ibid., Shumway, Table V on P. 336.

23. Ibid., Shumway, Last paragraph on P. 339.

24. Shumway, T., and V. A. Warther, "The Delisting Bias in CRSP's Nasdaq Data and Its Implications for the Size Effect," August 6, 1998, Unpublished paper, P. 17.

25. Ibbotson Associates, SBBI 1997 Yearbook, Market Results for 1926 - 1996, c. 1997, P. 53. Small firm returns prior to 1982 going back to 1926 are based on a historical data series derived from CRSP and developed by R.W. Banz where stocks in the 5th quintile of the NYSE was put in a portfolio and held for five years. Every five years the portfolio was then rebalanced. (*SBBI 1997 Yearbook*)

26. SBBI 1997 Yearbook, P. 45.

27. Op. cit., Encyclopedia of Investments.

28. Becker, B.C. and I. Gray, "Using Average Historical Data For Risk Premium Estimates: Arithmetic Mean, Geometric Mean, or Something Else?", *Business Valuation Review*, December 1998, P. 139.

DISCLAIMER: *The content of this article is the opinion of the writer and does not necessarily represent the position of the Internal Revenue Service. All information used in the development of this paper was taken from publicly available sources.*

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APPENDIX 5

COALITION OF UTILITY CITIES

February 9, 2004

Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-2220

BY FAX AND U.S. MAIL

Re: Possible Amendment of Rules Governing Valuation and Assessment of the Property of Utility Companies, Minnesota Rules Chapter 8100

Dear Ms. Sims:

Thank you for the opportunity to offer the following comments on the above-referenced matter, on behalf of the Coalition of Utility Cities (CUC). The CUC is a joint powers organization of seven cities that host electric generation plants owned and operated by investor-owned utilities: Becker, Cohasset, Granite Falls, Hoyt Lakes, Monticello, Oak Park Heights, and Red Wing. The CUC formed in 1997 to protect the utility property tax base in host communities, and to stem its ongoing erosion. These communities host many of the largest baseload generation plants in the state, including the Prairie Island and Monticello nuclear power plants and Sherco.

The CUC supports the Department's decision to review the valuation rules, because the current rules do not accurately reflect current market value of utility property. However, the CUC does not believe that investor-owned utility (IOU) property is overvalued, nor does the CUC believe that IOU's are overtaxed. Rather, the CUC believes that electric utilities and the communities hosting baseload generation plants operate in a long-standing partnership. The generation plants provide jobs to the residents of our communities, but they produce other, less savory impacts as well. For example:

1. Radioactive spent fuel rods stored near nuclear power plants;
2. Mercury, particulates, ash, and other matter discharged by coal-fired power plants;
3. Noise and vibration from turbines and other machinery;
4. Coal train traffic with its attendant noise and vibration;
5. Hundreds of acres of land that cannot be used to its fullest extent because of its proximity to the power plant, including prime recreational and riverfront property in communities such as Red Wing, Hoyt Lakes and Oak Park Heights; and
6. Increased security measures at nuclear plants in the wake of the 9/11/01 attacks, such as the shutdown of Red Wing's municipal airport for several weeks.

The CUC views the real and personal property tax revenues derived from hosting these generation plants as fair compensation for the social, economic and environmental costs of hosting them. However, the public utility tax base in host communities has steadily eroded from year to year as the result of reductions in class rates and broad exemptions granted to pollution control and other utility property.

1. **The Department should defer any rulemaking activity on the utility valuation issue until the conclusion of the Aquila lawsuit, and until the independent consultant's report has been completed and released for public review and comment.**

The CUC strongly supports the Department's decision to review the utility property valuation rules, as well as its decision to hire an independent consultant to study the issue in more detail. However, as the Department is aware, the natural gas utility Aquila and 51 Minnesota counties are currently engaged in litigation over a number of issues, including central allocation of pipeline property, depreciation limits for personal property, and capitalization rates for net operating income. These issues are likely to be addressed in the proposed rulemaking.

If the Department completes rulemaking before the conclusion of the Aquila lawsuit, it is possible that a court decision could modify or strike down provisions in the current valuation rules, forcing the Department to re-open the rules, and wasting months of time and effort by the litigants and the Department to frame the relevant issues.

In addition, controversy around the valuation of public utility real and personal property has persisted for years. For this reason, the CUC believes the Department was wise to seek the assistance of an independent consultant to review Minnesota's valuation rules and make recommendations on any changes. The consultant's report could serve as a mutually-agreeable foundation for valuation rule changes or, in the alternative, as sound justification for a Department decision to forego amending the rules. Rulemaking should not proceed at this time, however, at least until the consultant has issued his report and the report has been released to the public for review and comment.

2. **If the Department decides to pursue rulemaking prior to the conclusion of the Aquila lawsuit, then the Department should consider the substantial tax relief given to investor-owned utilities over the past 15 years.**

From discussions among cities, counties and IOU's, it is clear that the IOU's believe utility property is overvalued and that their tax burden prevents them from being competitive. The CUC disagrees, and submits the charts labeled as Appendices A through J to illustrate this point. The Minnesota Legislature has enacted a number of changes to commercial/industrial (C/I) class rates since 1990, and these class rate changes directly impact the taxes paid by IOU's. Consider the following C/I class rate changes from 1990 to 1997 with the $100,000 break point:

Year	First $100,000	Over $100,000
1992	3.1	4.75
1993	3.0	4.7
1994-1997	3.0	4.6

The 1997 Legislature changed the C/I rate again, and increased the break point to $150,000:

Year	First $150,000	Over $150,000
1998	2.7	4.0
1999-2001	2.45	3.5
2002	1.5	2.0

The 1997 Legislature also eliminated the requirement that an owner of multiple C/I parcels could receive the preferential class rate on only one parcel of property. All C/I parcels now receive the lower class rate on the first $150,000 of value, except for contiguous parcels owned by the same person.

The 2001 Legislature again reduced class rates, removed the general education levy, and established a state general property tax on C/I and public utility property as well as cabins. Public utility attached machinery of electric generating systems was exempted from the state general business tax.

Because of the effects of class rate compression on certain communities, the 2002 Legislature enacted a permanent property tax aid for counties in which public utility property constituted over 40% of the county's tax base for 2001 taxes.

Clearly, the trend over the last ten years has been toward class rate compression and lower tax rates on C/I property. An obvious result of this compression is a reduced C/I tax base for IOU host communities. As C/I class rates drop, property tax revenues generated by those properties are reduced. Cities' operating expenses, however, do not decrease simply because class rates are reduced; therefore, the tax burden is often shifted to other types of properties such as residential and agricultural.

The state's takeover of the general education levy in 2001 may also have contributed to the decrease in property tax revenues to host communities. The state now funds part of education expenses through a state general business tax, which utilities pay on real property but not attached generation machinery. The state then provides the school district with revenues, though the amount may differ from what the school received under the local property tax system. The state chose not to subject utility attached machinery to the statewide general tax, perhaps with the thought that if deregulation occurs, it would further complicate the property tax system.

In summary, the CUC submits the following observations, based on Department information:

The taxable market value of public utility property has dropped from 2.06% of total real and personal property in 1990 to 1.09% of total market value in 2002. (MDOR Table 7)

- The tax capacity value of public utility property was 4.6% of the total real and personal property in 1990. In 2002, the tax capacity value of public utility property was 1.09% of total real and personal property. (MDOR Table 8)

Tax capacity value of public utility property in nominal dollars has decreased 56% from 1990 to 2002. (MDOR Table 8)

The taxable market value of public utility property statewide increased 11.9% from 1990-2002 in nominal dollars. (MDOR Table 7)

- The 2002 taxable market value of public utility property was 1.09% of total market value of real and personal property. (MDOR Table 7)

The gross property tax on public utility property was 3.8% of the estimated distribution of total gross property taxes in 1990. In 2002, the percentage was down to 2.06%. (MDOR Table 9)

- The Minnesota Department of Revenue has stated that the effective tax rate of TCPU (transportation, communication and public utility) property will decrease from 5.05 in 2000 to 4.64 in 2005. (2003 Minnesota Tax Incidence Study)

These reductions in revenues flowing to local governments from IOU's have continued relatively unabated for the past decade, often without any changes to the valuation methodology.

3. **If the Department of Revenue increases or removes limits on electric utility property depreciation, then the Department must also consider basing cost-approach utility valuation on substitution (current-day) cost, rather than historical cost.**

Minn. R. 8100.0300, subp. 3 (2002) limits depreciation for electric utility personal property at 20%, plus 50% of book depreciation in excess of this amount. Although the 20% limit has remained in place for some time, the limit on excess depreciation was adjusted regularly until the practice was discontinued a few years ago. The increase in allowable depreciation has, over time, had a significant impact on host communities through the reduction in taxable market value of public utility personal property.

It is the CUC's understanding that some IOU's wish to remove depreciation limits entirely, and utilize full book depreciation as allowed for other C/I properties. A rule change of this nature

would have a profound adverse impact on host communities, and CUC communities in particular, because the amount of electric utility personal property located in baseload plant host communities dwarfs that of other communities that host intermediate or peaking plants. Therefore, the effects of increased depreciation would be concentrated in these communities and cause already-shrinking tax base to fall even more precipitously.

If IOU's truly wish to be treated like other businesses, then the Department's valuation methodology must be based on current-day substitution cost, rather than historical cost. Most business properties do not utilize straight-line depreciation; rather, the rate of depreciation tends to decrease as the property ages, due to maintenance and upgrades. This is only fair because if the market is used to determine depreciation, then it should also be used to determine the initial value of the property being depreciated. The CUC expects that if this approach is adopted, the substitution value of electric generation personal property could increase substantially, given the regulatory hurdles to be overcome in constructing a new coal-fired or nuclear generation plant and that fact that no one wants these plants in their communities. In any event, IOU's should not be allowed to "cherry-pick" and eliminate regulation in some areas where it is most beneficial for them, while leaving in place other protections that are in the current regulatory scheme.

4. **The Department of Revenue should not increase income-approach capitalization rates for electric utility property or increase the weighting of income-approach valuation, because of its exponential effect on utility property valuation as a whole.**

Minn. R. 8100.0300, subp. 4 (2002) directs the Department to utilize a regularly-updated capitalization rate applied to net operating earnings over the current and previous two years to arrive at net operating income (NOI). According to information provided to the CUC by Department staff, the capitalization rate computed by the Department for Pay 2003 was 9.0%, roughly equal to that applied by other states and less than one percent below what Xcel Energy calculated. IOU's have urged that this capitalization rate should be increased, but since the Department's calculation appears to be relatively on par with other states as well as Xcel's own calculations, an increase in the rate is unnecessary. MDOR should be extremely cautious about making any such changes to the capitalization rate, as it may result in rewarding IOU's for poor management decisions, such as Xcel's recent acquisition of now-bankrupt NRG.

The valuation factors are structured such that the income approach is weighted at 25%, and the cost approach is weighted at 75%. IOU's have urged the Department to decrease the weight for the cost approach, and increase the weight for the income approach. Despite protestations to the contrary, utility property is and long has been properly classified as special use property. The reason it is special use property is because the consistent market and market income information available for other businesses is not as readily available for public utilities. CUC believes that the weights given to the two approaches should not be changed unless 1) the capitalization rate under the income approach is reduced, 2) the cost approach is amended to be based on the substitution cost of utility property rather than historical cost, or both.

5. **The Department of Revenue should re-examine its construction and application of the personal property tax exemption for pollution control equipment, because the exemption is currently being applied to equipment not directly related to pollution control and is frequently being applied twice in the same valuation process.**

In the wake of the Minnesota Supreme Court's decision in *United Power Association v. Commissioner of Revenue*, 483 N.W.2d 74 (1992), the Department has applied the pollution control exemption liberally to public utility property, including buildings, safety equipment, and other personal property only tangentially related to pollution control, if at all. For example, safety equipment, coal storage sheds and even parking lots are being exempted because of their roles in pollution abatement, no matter how miniscule. As part of the present rulemaking, the Department should re-examine its application of this exemption, as exemptions tend to be very strictly applied under state statute. In addition to its apparently liberal application, the CUC is also concerned that the exemption may be counted twice in the valuation process, once under the income approach to valuation and then again under the cost approach.

6. **Conclusion**

In summary of the issues discussed above, the CUC offers the following for the Department's consideration:

- IOU's and their host communities have operated in a long-standing partnership, and real and personal property tax revenues are a fair compensation for the social, economic and environmental costs of hosting nuclear and coal-fired baseload generation facilities.

  The Department's effort to re-visit its utility property valuation rules is needed and commendable, but the Department should delay rulemaking until the conclusion of the Aquila lawsuit with the counties and until the consultant's study is made available to the public for review and comment.

  The Legislature's actions reducing class rates over the past 15 years, and the Department's liberal application of the pollution control equipment exemption in the wake of the *United Power Association* decision, have given ample tax relief to IOU's and they do not need further tax relief to remain competitive. These factors should be taken into account as part of the rulemaking.

- If the Department agrees with IOU's that they should be treated like other businesses and be allowed full book depreciation for personal property, then the Department must also base depreciation on the substitution cost of the property in question, rather than historical cost.

- Public utility property is properly classified as "special use" property and, because of its nature, a majority of its valuation is properly based on the cost factor of value. The Department should continue with this approach and not grant more weight to the income factor, nor should the Department increase the capitalization rate to reward public utilities for poor management decisions.

Thank you for the opportunity to offer these comments on behalf of the CUC. If you have any questions or require additional information, please give me a call at **763-261-4302** or joer@ci.becker.mn.us.

Yours truly,

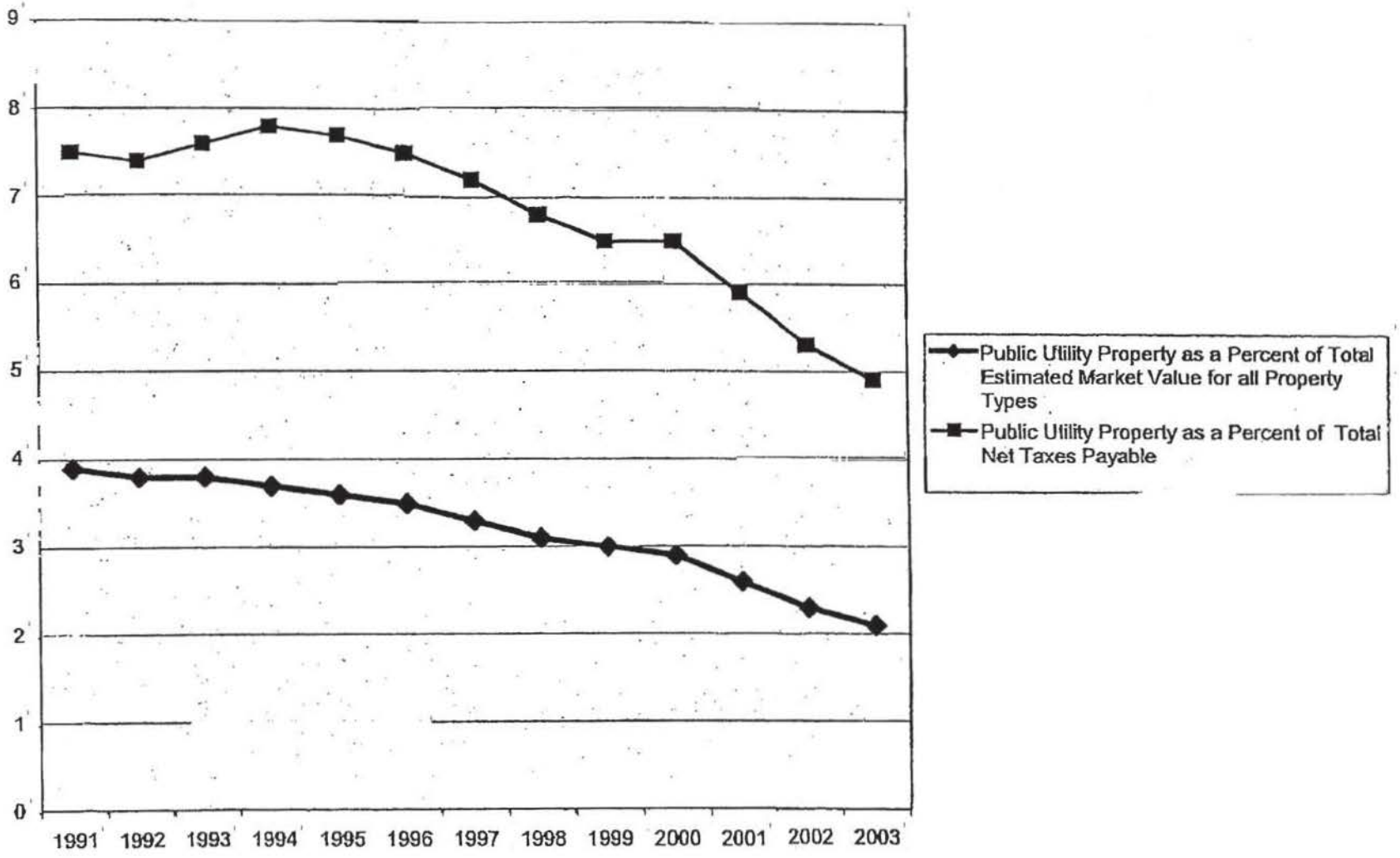
Joe Rudberg, Administrator
City of Becker
CUC President

Appendices

Charts prepared by Flaherty & Hood, P.A. on behalf of the Coalition of Utility Cities based on data from the House Research Department, the U.S. Department of Energy, the Federal Energy Regulatory Commission, and other sources.

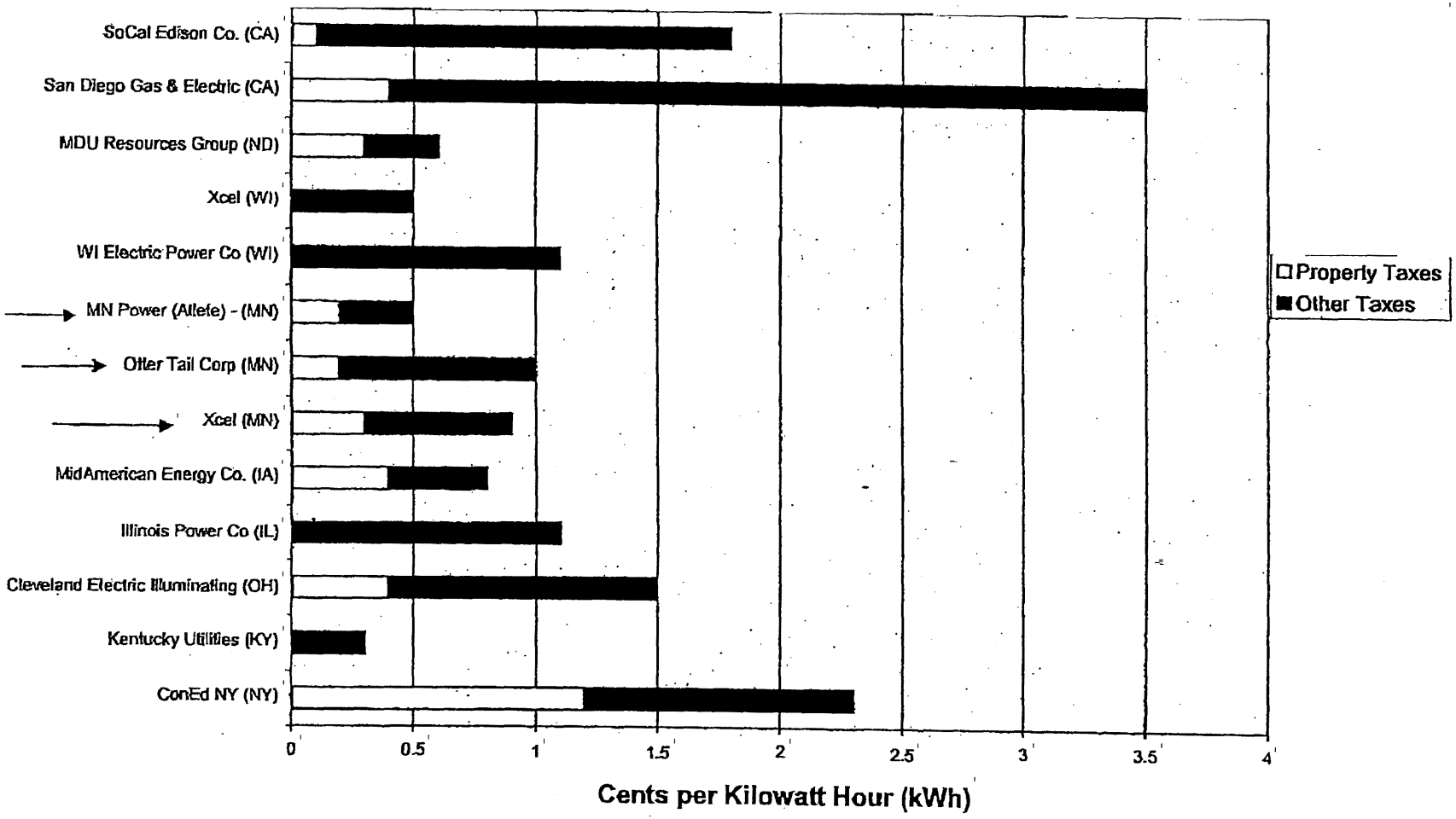
Appendix A:	Public Utility Property as a Percent of Total Market Value and Net Taxes: 1991-2003
Appendix B:	Taxes Paid by Utilities – 2002
Appendix C:	"Minnesota's electric utilities have taxes comparable to those in other states for 2002."
Appendix D:	Property Taxes in Cents per Kilowatt Hour (kWh)
Appendix E:	"Minnesota's electric companies currently provide low prices to the public."
Appendix F:	"Minnesota enjoys low electricity prices. Currently Minnesota is tied for 11th lowest electricity rates in the nation. Minnesota was 17th lowest in 1998."
Appendix G:	Average Cents per Kilowatt Hour (kWh) for Residential Customers – 2001
Appendix H:	Average Cents per Kilowatt Hour (kWh) for Commercial Customers – 2001
Appendix J:	Average Cents per Kilowatt Hour (kWh) for Industrial Customers – 2001

Public Utility Property as a Percent of Total Market Value and Net Taxes: 1991-2003



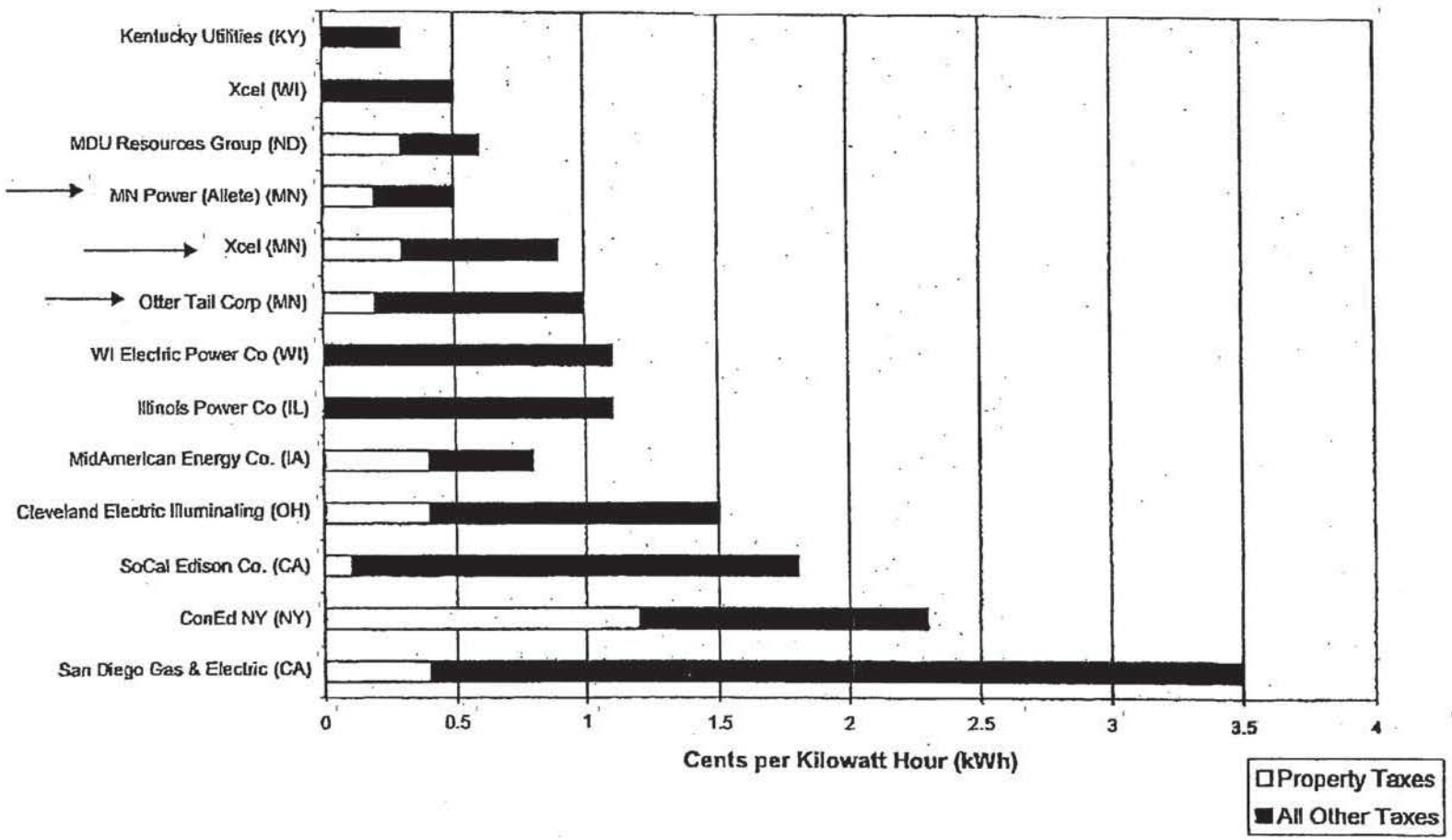
Data from MN House Research, "Estimated Market Values and Net Tax Amounts by Property Type." Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities September 2003

Taxes Paid by Utilities - 2002



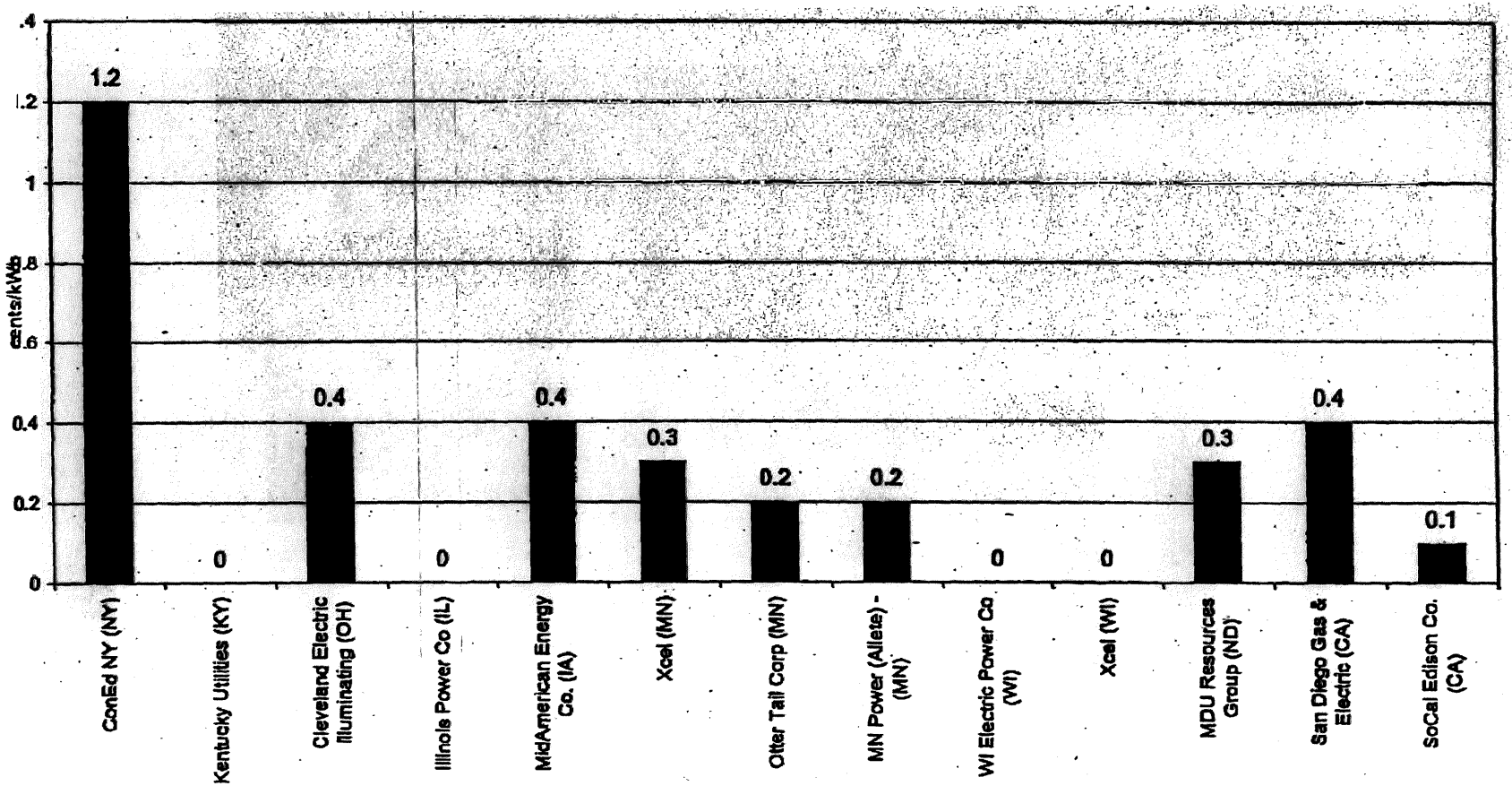
Data from Federal Energy Regulatory Commission (FERC) filings. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

Minnesota's electric utilities have taxes comparable to those in other states for 2002.



Data from Federal Energy Regulatory Commission (FERC) filings. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

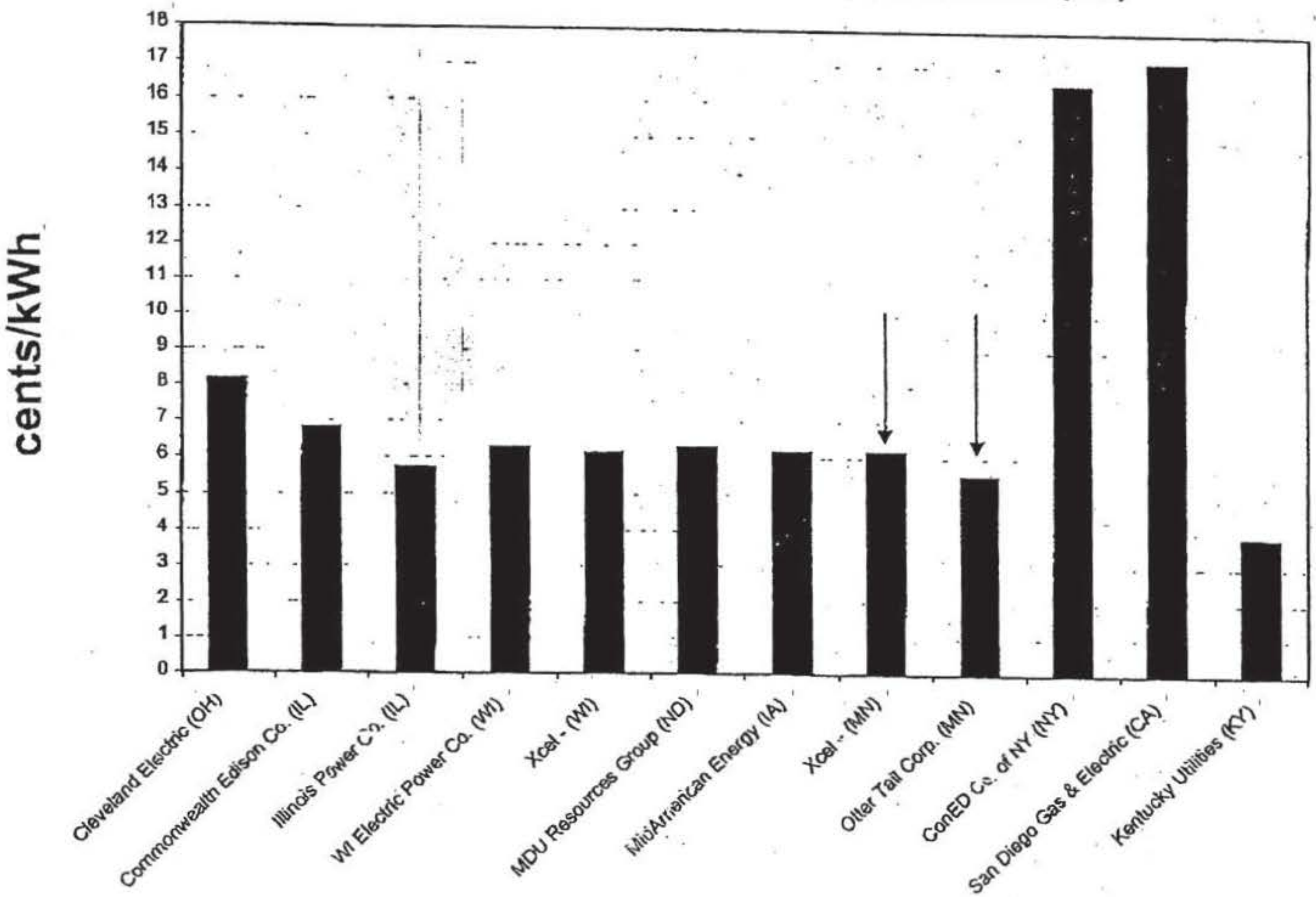
Property Taxes in Cents per Kilowatt Hour (kWh)



Data from Federal Energy Regulatory Commission (FERC) filings. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

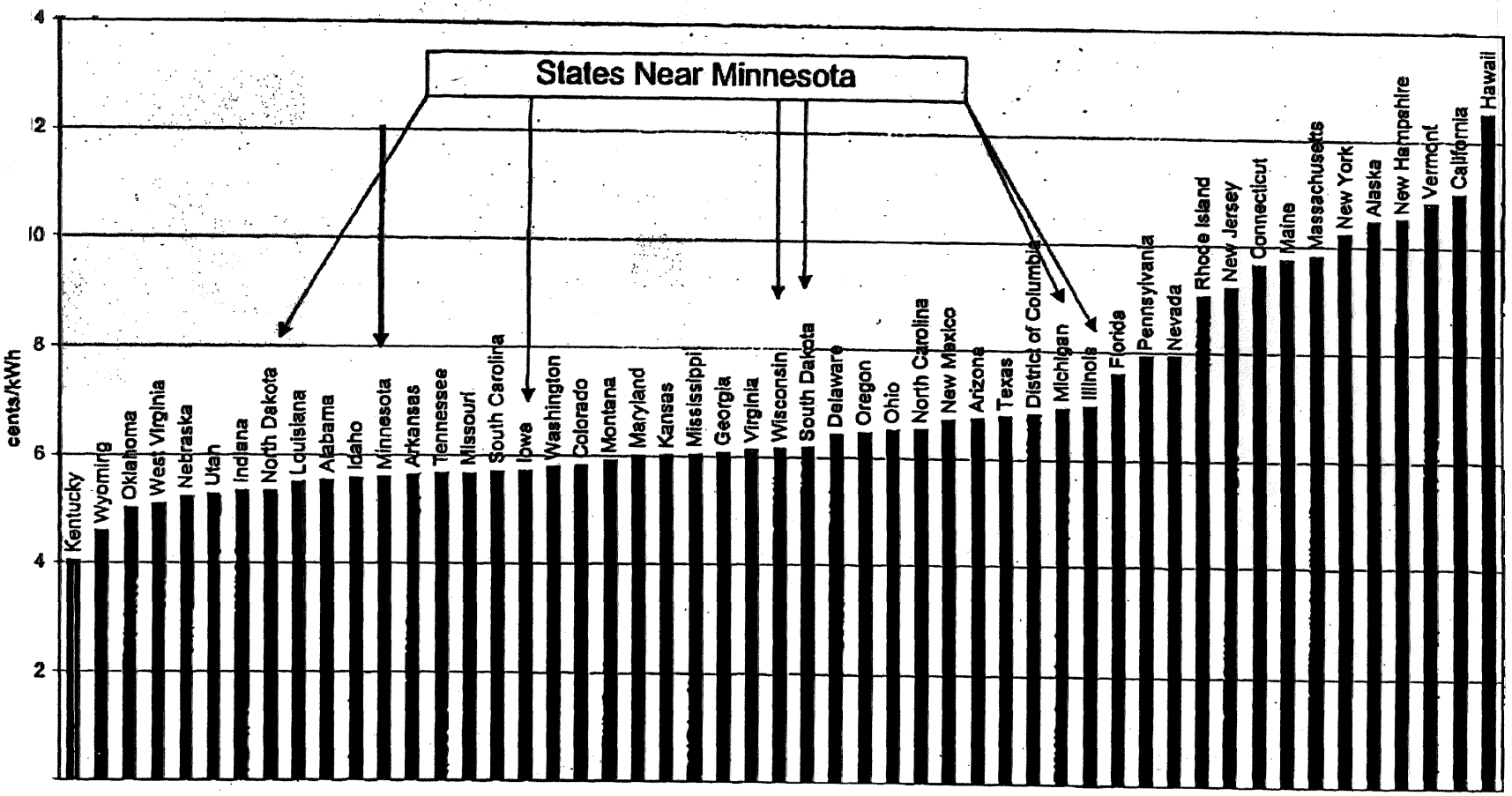
Minnesota's electric companies currently provide low prices to the public.

Electric Rates: Average Retail Price in Cents per Kilowatt Hour (kWh)



Fitch Ratings: Sales and Revenue Statistics for Year Ended Dec. 31, 2001.
Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

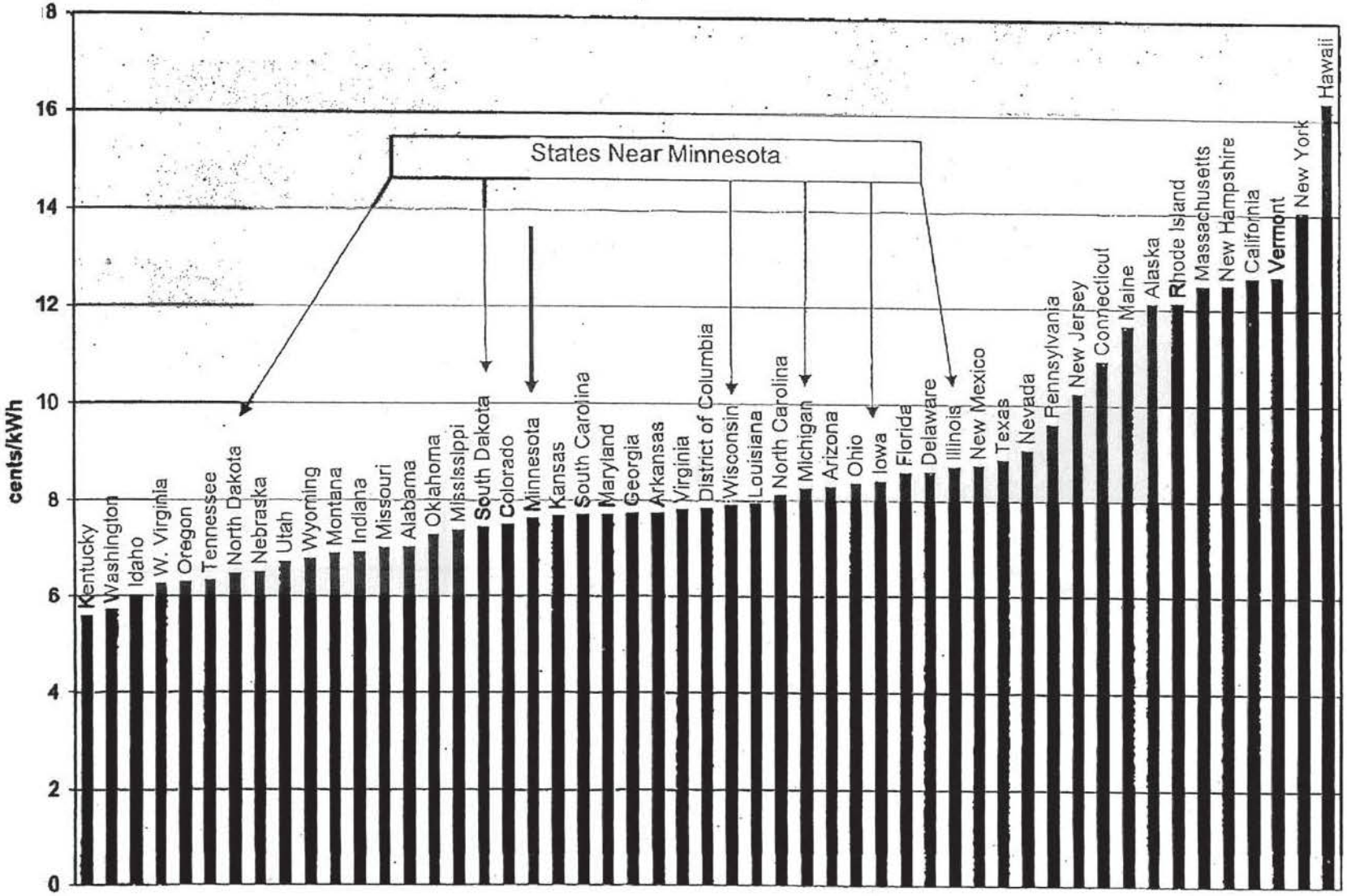
Minnesota enjoys low electricity prices. Currently Minnesota is tied for 11th lowest electricity rates in the nation. Minnesota was 17th lowest in 1998. (Energy Information Administration, U.S. Department of Energy)



Utility Average Revenue (cents per kWh) in 2002

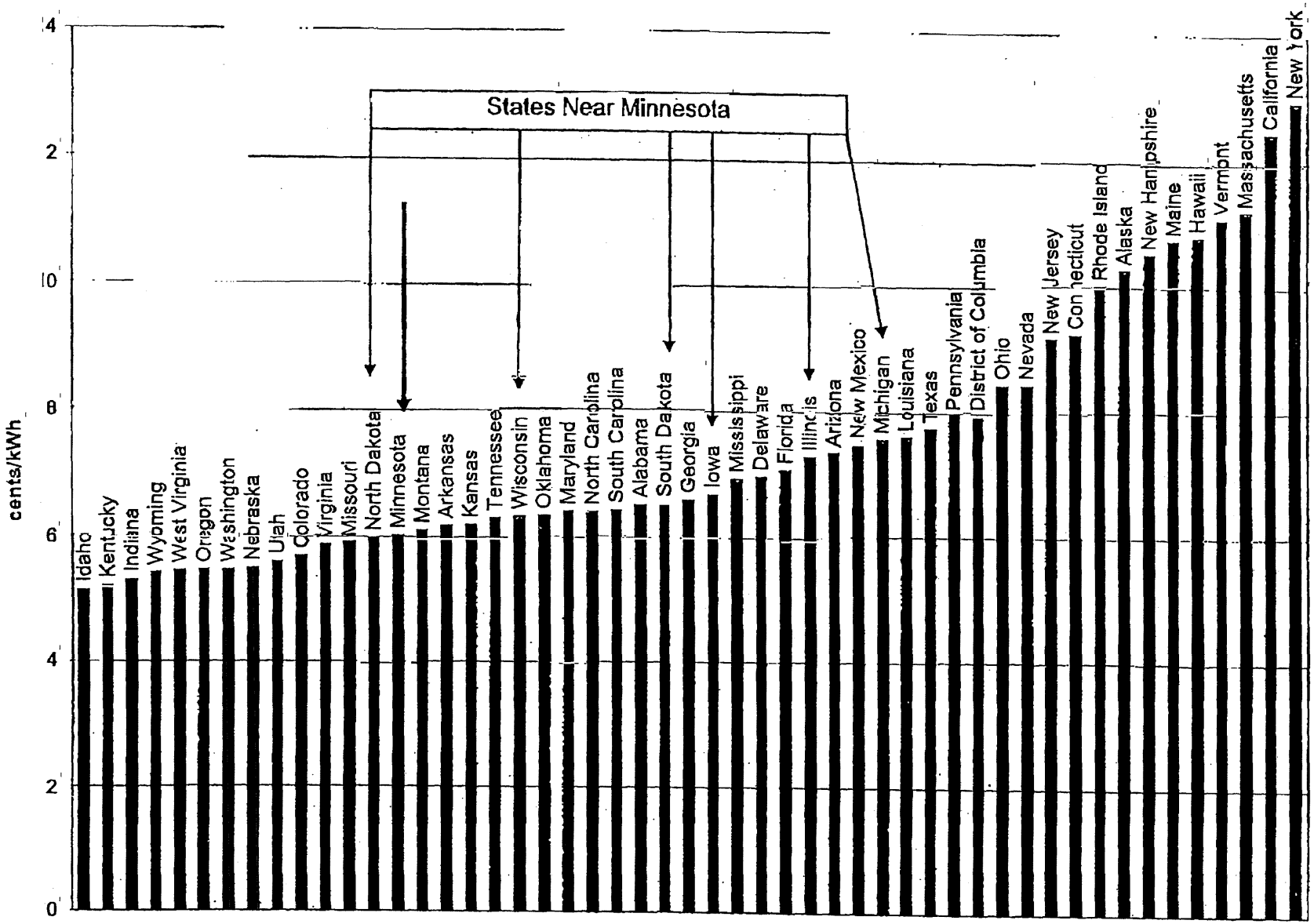
Data from the Energy Information Administration. Prepared by Flaherty Hoo *Coalition of Utility Cities - Se* *r 2003*

Average Cents per Kilowatt Hour (kWh) for Residential Customers - 2001



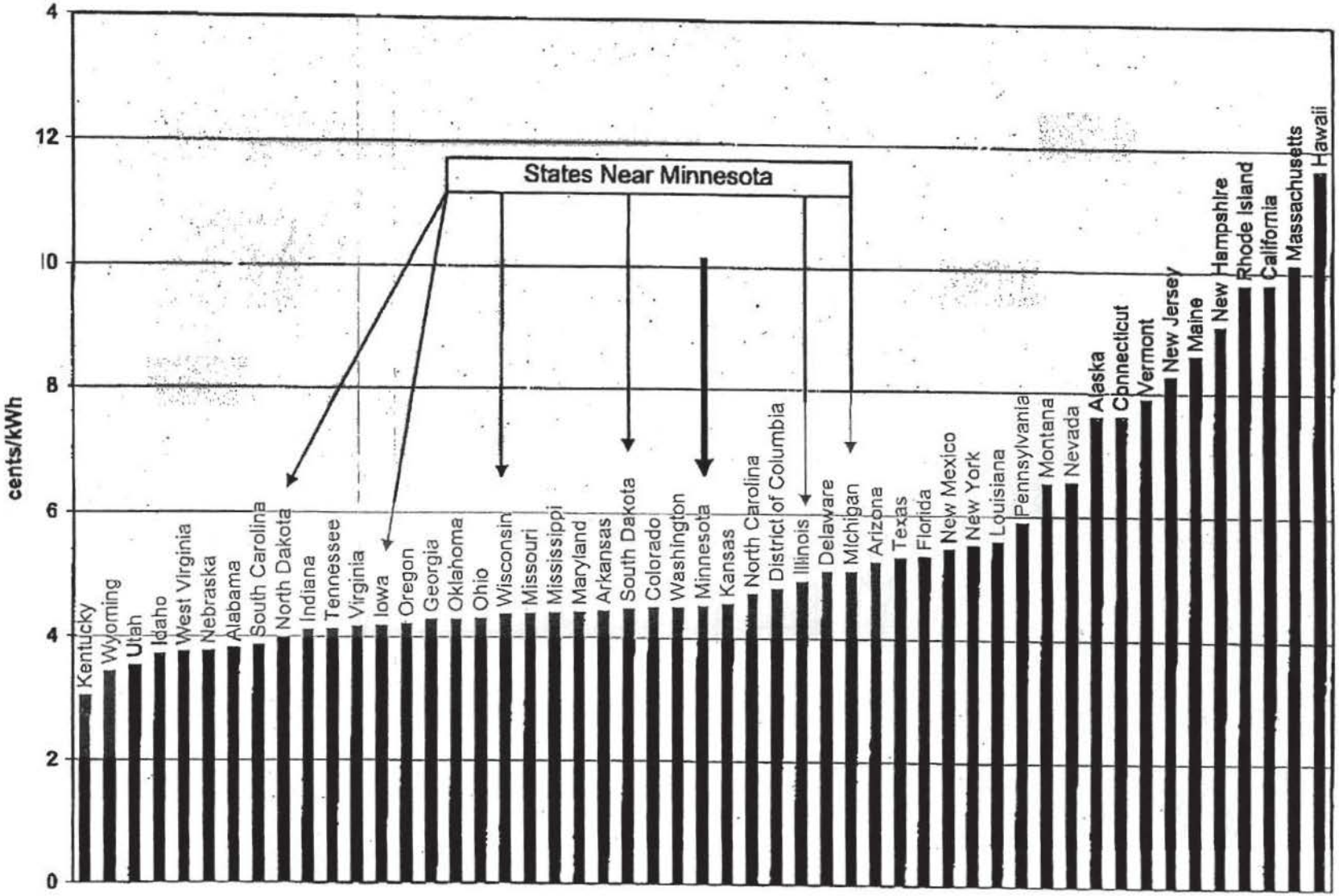
Data from the Energy Information Administration. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

Average Cents per Kilowatt Hour (kWh) for Commercial Customers - 2001



Data from the Energy Information Administration. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

Average Cents per Kilowatt Hour (kWh) for Industrial Customers - 2001



Data from the Energy Information Administration. Prepared by Flaherty Hood, P.A. for the Coalition of Utility Cities - September 2003

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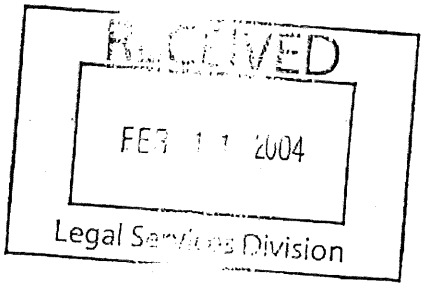
METROPOLITAN COUNTIES ENERGY TASK FORCE

2

Anoka County
Dakota County
Hennepin County

Scott County
Washington County



February 5, 2004

Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146

RE: **Possible Amendment of Rules Governing Valuation and Assessment of Utility Companies**

Dear Ms. Sims:

The following are the comments of the Metropolitan County Energy Task Force ("Task Force") in regard to the Minnesota Department of Revenue's possible amendment of rules governing valuation and assessment of utility companies, as noticed in the State Register on Monday, December 8, 2003.

The Task Force was established in 1999 in response to the restructuring of the electric utility industry. There are currently five participating counties, including Hennepin, Anoka, Washington, Dakota and Scott counties. The Task Force consists of one voting County Commissioner from each of the participating counties, and one alternate County Commissioner. The Task Force meets monthly to address issues relating to energy policies that affect the counties' interest.

Utility plant properties make up an important part of the tax base of Minnesota counties. The utility plant subject to property tax includes electric generation plant, transmission and distribution lines, natural gas transmission and distribution pipelines and petroleum pipelines. Counties rely upon the tax revenue from this tax base to offset the costs associated with hosting utility operations. These tax revenues have become increasingly important due to significant reductions in local government aid.

In anticipation of a restructured electric utility industry and competitive electric markets, the legislature has granted many exemptions to the property tax on utility generation related personal property. These exemptions have grown in number and have included exemptions for both conventional and renewable energy generating facilities. The Task Force anticipates that this trend may continue into the future, and further adversely affect this source of tax revenue.

How utility plant is valued is becoming more important because of the anticipated expansion of electric generating facilities in Minnesota and the supporting natural gas infrastructure.

c/o O'Neill, Grills & O'Neill, P.L.L.P., W1750 First National Bank Bldg., 332 Minnesota St., Saint Paul, MN 55101
(651) 298-8300 Fax (651) 298-1474

Hennepin and Washington County are currently examining the potential impact of converting Xcel Energy's coal-fired Riverside plant to natural gas and the repowering the Alan S. King plant. Xcel Energy recently announced that it has been unable to complete negotiations of power purchase agreements with certain suppliers outside of Minnesota due to transmission constraints. This means new electric generating facilities will more than likely be located within Minnesota, closer to the load center in the metropolitan area.

One of Xcel Energy's recently selected suppliers is moving its planned facility from Wisconsin to Mankato, Minnesota because of transmission constraints. Xcel Energy recently announced plans to install two new natural gas-fired units at its Blue Lake facility in Shakopee, Minnesota, and has indicated the need for additional new baseload capacity. Great River Energy is looking at the possibility of a new generating facility in Dakota County. These new facilities impose tangible costs in connection with supporting public infrastructure and services. Tax revenues from these facilities help defray these costs. Consequently, the valuation of utility plant for tax purpose is an important issue for the Task Force.

In addition to electric utility generating assets, there will more than likely be substantial investments in transmission and distribution related utility plant. The 2003 Minnesota Biennial Transmission Projects Report prepared by the Minnesota Department of Commerce indicates that the electric transmission system is experiencing unprecedented demands and that portions of the transmission system are thirty-five to fifty years old. The last major transmission facility addition was placed into service in 1987. This means that there will be substantial investment in transmission facilities in the not too distant future. How these new facilities will be valued by the Department will be an important issue for the Task Force.

The Task Force has concerns regarding any proposed amendment to the rules governing valuation and assessment of utility plant, particularly if such changes cause further contraction of the tax base. The Task Force is not certain as to the reason the Department is considering amending the rules. The Department suggests that it is because of "current economic conditions," and the need to "properly reflect the market value of the subject property." The Task Force would like to explore further with the Department the necessity for any proposed rule changes, and what impact these changes might have on the current and future tax base. It would be the Task Force's hope that such discussions could occur prior to notice of any proposed changes to the current rules.

The Task Force would like to thank the Minnesota Department of Revenue for the opportunity to submit these comments. If you should have any questions or concerns, please feel free to contact Carl Michaud, the Chairman of the Staff Advisory Committee for the Task Force, at (612) 348-3054.

Sincerely,

Commissioner Peter McLaughlin, Chair
Metropolitan Counties Energy Task Force

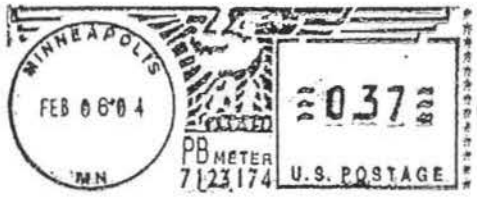
cc: Dan Erhart, Anoka County Commissioner

c/o O'Neill, Grills & O'Neill, P.L.L.P., W1750 First National Bank Bldg., 332 Minnesota St., Saint Paul, MN 55101
(651) 298-8300 Fax (651) 298-1474

Dick Lang, Anoka County Commissioner
Joseph Harris, Dakota County Commissioner
Nancy Schouweiler, Dakota County Commissioner
Mark Stenglein, Hennepin County Commissioner
Penny Steele, Hennepin County Commissioner
Bob Vogel, Scott County Commissioner
Jerry Hennen, Scott County Commissioner
Dick Stafford, Washington County Commissioner
Nile Kriesel, Washington County Commissioner

c/o O'Neill, Grills & O'Neill, P.L.L.P., W1750 First National Bank Bldg., 332 Minnesota St., Saint Paul, MN 55101
(651) 298-8300 Fax (651) 298-1474

Counties Energy Task Force
Grills & O'Neill, PLLP
ational Bank Building
ota Street
MN 55101



Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
Saint Paul, MN 55146

metropolitan inter-county association
161 st. anthony avenue • suite 850 • st. paul, minnesota 55103 • (651) 222-8737 • fax (651) 222-8747
internet: www.mica.org • email: mail@mica.org
anoka • blue earth • carver • dakota • olmsted • rice • st. louis • scott • sherburne • stearns • washington • winona

February 11, 2004

Ms. Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul Minnesota 55146-2220

Re: Possible Amendment of Rules Governing Valuation and Assessment of the Property of Utility Companies, *Minnesota Rules*, chapter 8100

Dear Ms. Sims:

Thank you for the opportunity to comment on proposed rule changes for electric utility valuation. With 2002 net tax capacity of over $177 million, public utilities are a substantial portion of the state's property tax base. Electric utilities compromise a large portion of that total. For host communities where electric generation facilities are located, electric utilities represent a far greater portion of the local tax base. While those communities are often viewed as property tax rich, the diseconomies imposed on those communities by blocking or limiting development of what otherwise would be desirable shoreland and requiring considerable investment in public safety infrastructure to respond to potential disasters unique to this industry counters any argument that this industry is due significant tax reductions via any administrative rules changes.

In general, we believe Minnesota Rules Chapter 8100 as currently codified and administered suffices to provide valuations that are as accurate as possible. We see no need to modify the rule at this time. Specific comments follow.

Unit Value:

We support continuation of valuing electric utilities on a unit value basis.

Income and Cost Approaches to Value:

We support the continued utilization of the income and cost approaches to value as enunciated in Rule 8100.0300 with the present weighting of 75% via the cost approach and 25% via the income approach to value.

Capitalization Rate:

We support the continued determination of the capitalization rate (utilized for the income approach of value) via the band of investment method that integrates the Capital Asset Pricing Model in a manner that is specific to the electric utility industry as enunciated in Rule 8100.0300, subpart 4.

Obsolescence:

We oppose any adjustment for obsolescence. The current 25% weight given to the income approach to value suffices to address the issues raised by the proponents of an adjustment for obsolescence.

Allocation of Unit Value Among States of Operation:

We believe Rule 8100.0400, subpart 2 suffices to provide reasonable allocation of unit value among the states where a utility operates.

Deduction for Locally Assessed and Exempt Property:

We believe the current adjustment for locally assessed and exempt property on a cost basis as enunciated in Rule 8100.0500 is a practical way to deal with this issue and does not need to be changed.

Apportionment Among Local Taxing Districts:

We believe the apportionment of value among the taxing districts as provided under Rule 8100.0600 suffices to provide a reasonable apportionment and does not need to be changed.

Equalization:

At this time, we support administering equalization under Rule 8100.0700 as currently codified. We note, however, that the rule is more generous than the current statute governing utilization of sales ratios in property tax appeals - MS 278.05, subd. 4 - where relief is limited to those instances where the median ratio is less than 90%. The current rule grants relief when the sales ratio is less than 95%.

Again, thank you for the opportunity to comment on the proposed rule changes. If you have any questions or comments, please do not hesitate to contact me at the above addresses or you can most readily phone me at 612-759-9442.

Sincerely,

Keith E. Carlson,
Executive Director

cc: Commissioner Dan Salomone
Gordon Folkman
Alan Whipple
MICA County Administrators
Kathy Hahne
Luci Botzek

FEB 4 2004

GOODHUE COUNTY'S COMMENTS REGARDING THE PROPOSED RULE CHANGE AFFECTING THE VALUATION OF UTILITY PROPERTY

The proposed rule change, as yet undrafted, apparently intends to change long time formulas used in the valuation of utility property in the State of Minnesota. The statutes provide that all taxable property is to be assessed at market value, and all three approaches to value—cost, income, and market—must be considered.

Discussion concerning the rule change indicates that the following are potential revisions:

1) the cap on depreciation will be removed, allowing for the possibility that components of the nuclear plant would have no value.
2) The weight placed on the cost and income approaches, currently 75% and 25% respectively, will potentially by changed to allow more weight on the income approach
3) The capitalization rate calculation may be changed, potentially creating more volatile evaluations.

We agree that the current valuation formula has flaws, but focus our attention on these points listed below. We realize that some of these components involve statutory change rather than rule changes, but strongly believe that the total tax policy concerning utilities must be considered, not only certain factors in the valuation formula that are likeliest to decrease value:

1) Historical cost is used in the cost approach rather than replacement cost. This is inconsistent with assessment of all other property.
2) Depreciation is normally market derived, not based on theory. Most properties are not straight-line; the rate of depreciation slows as the property ages, due to upkeep and remodeling.
3) Book value is generally double the value recommended by the Department of Revenue. This indicates that many exemptions and favorable procedures (for the utilities) currently exist in the formula.
4) Pollution Control Exemptions have been liberally applied to utilities, and have included shelters and safety equipment. Exemption is normally strictly applied, as indicated by statute. These exemptions are unique to Minnesota, and must be revisited in conjunction with any changes to the valuation formula.
5) Utilities are special use property. In these situations, cost is normally weighted heavier than the other two approaches, because consistant market and market income information doesn't exist.
6) We strongly question determinations of what is market income and market expenses and market capitalization rates in the calculation of the current income formula. It appears to us that utilities will be allowed value reductions based on poor management decisions and acquisitions. These losses should not be calculated into an income formula used to derive property values.

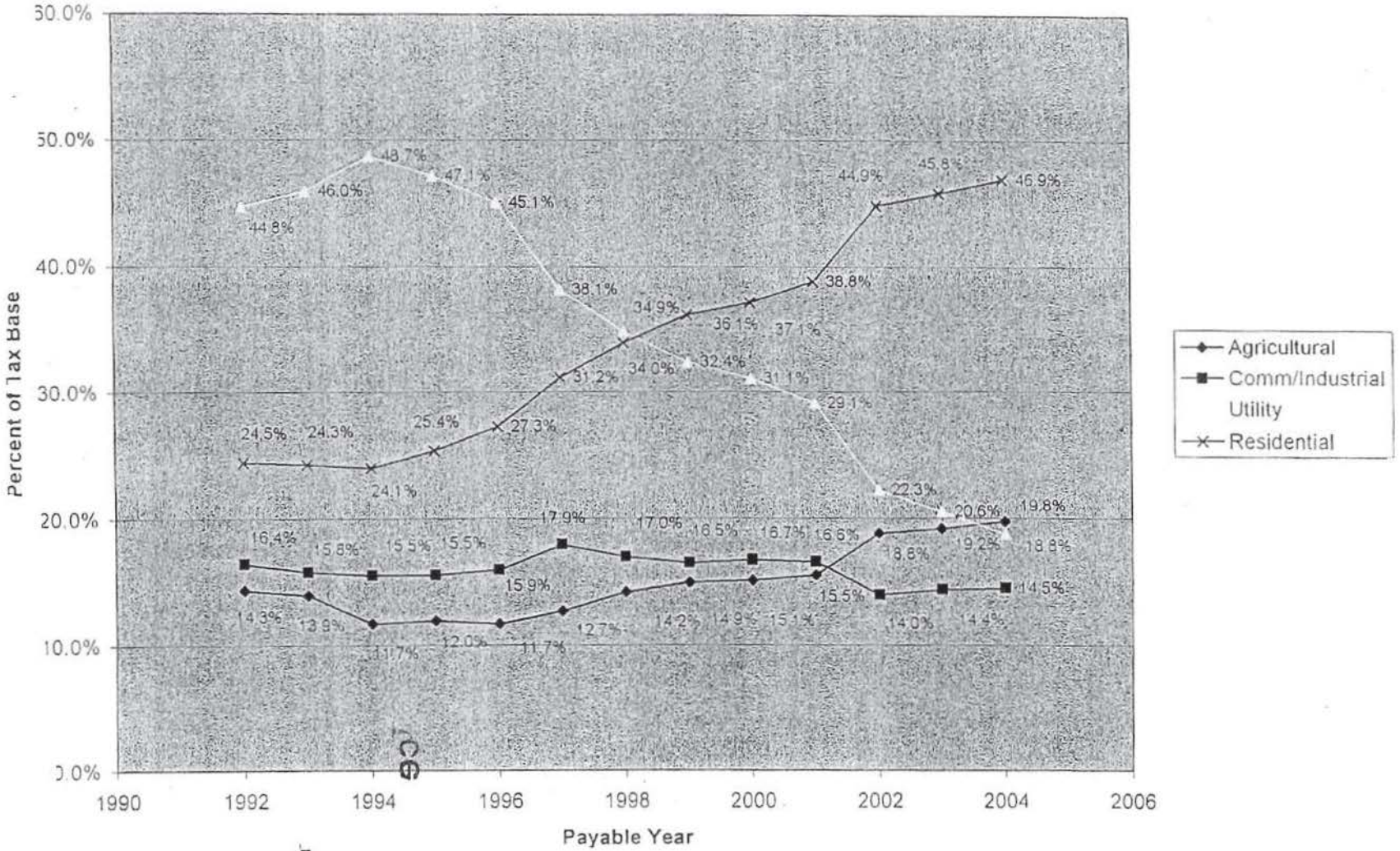
Also, with the Aquila lawsuit filed for payable 2003, we question the wisdom of the Department of Revenue proceeding with the rule change investigation.

Lastly, utilities have obtained enormous tax decreases since 1989 and before. In 1989, the tax classification rate was 5.06%, it is now 2%. This has compressed far more than residential or agricultural tax rates. In Goodhue County, XCEL's taxes have dropped from over $22 million to approximately $13 million. The proportion of the County tax base has dropped from 48% in 1994 to 21% in 2003, with the lost utility tax revenue shifting to homeowners and farmers. This is not sound tax policy. Generation machinery, unlike other commercial property, is also exempt from the State General Levy. Utilities are also regulated, and unlike other commercial-industrial property, are not in need of economic assistance to continue operations.

Robert D. Noah

Robert Noah
Goodhue County Board Chairman

Goodhue County Tax Base Shifts



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Sherburne County Attorney's Office
and
Victim Witness Services

Kathleen A. Heaney, Sherburne County Attorney

FAX COVER SHEET

FAX: 651-296-8229

DATE: December 19, 2003

TO: Harriet Sims

FROM: Kathleen A. Heaney KAH

MESSAGE: Possible Amendment to Rules Governing Valuation and Assessment of the Property of Utility Companies, *Minnesota Rules,* chapter 8100

Including this cover sheet, the transmission consists of 5 page(s). If you did not receive the complete transmission, contact *Loretta at 763-241-2565* so that I may transmit the missing page(s).

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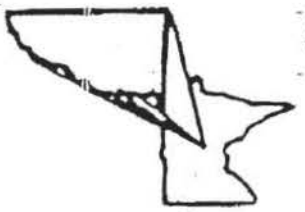
(763) 241-2565 • Fax (763) 241-2575 • 1-800-433-5244
attorney@co.sherburne.mn.us



Sherburne County Attorney's Office
and
Victim Witness Services

Kathleen A. Heaney, Sherburne County Attorney

December 19, 2003

Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-2220

RE Possible Amendment to Rules Governing Valuation and Assessment of the Property of Utility Companies, *Minnesota Rules,* chapter 8100

Dear Ms. Sims

On behalf of the County of Sherburne, I am submitting to the Commissioner information encapsulating the case law for special use property, to-wit: personal property.

I believe that the rise of the public forum is an ill-advised avenue for solicitation of comment. As you are aware, there is pending litigation involving 50+ counties and the valuation of a pipeline. Any comment made can and will be used against the County in litigation. Therefore, you will not receive from the County any constructive suggestions or direction for change.

The counties have stood ready to provide assistance to the Department of Revenue in the form of ideas and expertise. This offer has been in effect since 1989 when I first started on the venture. Within this last week, I again offered assistance. Even though I was "turned down flat", I again extend the offer. For you see, you may value the facilities, but we live with them.

Cordially,

Kathleen A. Heaney
Sherburne County Attorney

KAH:lmb

13880 Highway 10, Elk River, MN 55330-4601
(763) 241-2565 • Fax (763) 241-2575 • 1-800-433-5244
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The Proposed Possible Amendment of the Valuation of Personal Property

The assumption of this writer is that the Department of Revenue will be following the statutory scheme for valuation that has been laid forth by our legislators and the case law that the appellate courts have set forth in the interpretation of the same.

Minnesota statutes provide that all property shall be taxed unless specifically excluded. Minnesota Statute 272.01 and 272.02. The property that is taxed includes personal property; to-wit: generation equipment, pipelines, and transmission and distribution lines. Minnesota Statute 272.02 et. seq. The personal property that is taxed under this system located in Sherburne County includes the Sherco generation plant. It is the largest power producer in the State of Minnesota. The plant was located in Sherburne County under the premise that the County would receive property taxes from the facility. The present valuation of the facility under the assessment date of January 2, 2003 is:

Parcel #60-201-2400
Xcel Energy

Land	Building	Machinery	Total
$1,424,600	$ 67,648,300	$ 324,049,900	$ 393,122,800

Parcel #60-201-2401
Southern Minn Mun Power

Land	Building	Machinery	Total
$ 122,500	$ 48,613,300	$ 124,409,000	$173,144,800

Parcel #60-201-1000
Xcel Energy

Land	Building	Machinery	Total
$4,093,800	$ 92,100	$ 7,523,400	$ 11,709,300
		Grand Total:	$577,976,900

The assessor under the State statute is required to consider for valuation the income, market and cost approach for property that is subject to ad valorem taxation. Minnesota Statute 273.11 and 272.12. The Minnesota appellate courts have identified that when property is "special use property", then the appropriate manner of valuation is the cost approach. See, *McCannel v. County of Hennepin*, 301 NW2d 910, 924 (Minn. 1980) and

American Express v. County of Carver, 573 NW2d 651, 657. The definition of special use property is property that is treated in the market as adapted to or designed and built for a special purpose. This definition combines both functional and structural aspects: a special purpose property becomes such either by its use for unique functions or by its distinctive, specially-designed structural details. See, *American Express* at 656. The cost approach uses the current replacement value of the property and then adjusts the present day value to reflect the economic, physical and functional depreciation. Clearly, the depreciation is not straight line depreciation but is subject to the useful life of the property. For example, in Sherburne County, we host a refuse derived fuel (RDF) burn facility in Elk River. The power plant was originally a nuclear plant. It was first converted to a coal burning plant and now to an RDF burn plant. The useful life of the building has been extended numerous times with the retrofit of the feed systems and modifications of the boiler and attendant systems. To use straight line depreciation on the facility would be illogical and not recognize the economic reality of the times.

When valuing the special use property, the cost approach is the best method. See, *McCannel & American Express.*

The present formula authorized by Minnesota Rules Chapter 8100 provides for a weighting of the cost approach (historic cost as opposed to the replacement value minus depreciation) by 75 percent and a weighting of the Income Approach by 25 percent. Clearly any deminimus change in the capitalization rate has an exponential impact on the valuation, particularly in light of the values that are being reviewed. Any proposal to change this ratio would allow for an increased ability to manipulate the formula to achieve a desired outcome. This would border on capriciousness. This is the opposite of a steady, predictable value which the host communities deserve.

The Minnesota statutes also provide for the exemption of the pollution control equipment. Minnesota Statute 272.02 subd (10). This exemption is already taken into consideration in the formula for the income approach (by recognizing the NOI, any attendant costs for the facility for operation or replacement is considered by the assessor). If the replacement cost approach is provided for, the pollution control equipment is ancillary to the equipment that is being valued and, again, the statutory mandate is being fulfilled.

In the valuation of the facilities, great care must be taken by the Department of Revenue for reasons that do not appear in the statutes. For example, the siting of a generation facility takes approximately two to eight years (a minimum of two years to

have the generators manufactured and up to eight years to site and complete the regulatory scheme). The larger facilities such as Sherco generate more than electricity; it generates coal dust, emissions of mercury and dioxins, a significant amount of train traffic which makes any highways and roads by definition more hazardous, and other attendant costs to the host communities (this cost has only been heightened with the 9-11 terrorism attack as was evidenced by Governor Pawlenty's call for the National Guard to protect the facilities when the country went to code red). The only offset that the host communities have is the tax base. To reduce that lone benefit for an industry that is not considered a "clean industry" is to eliminate any reason for a community to host the facility.

Respectfully submitted:

Dated: 19 December 03

Kathleen A. Heaney
Sherburne County Attorney
13880 Highway 10
Elk River, MN 55330

ALLETE

FEB 17 2004

February 13, 2004

Harriet Simms
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-2220

Ms. Simms:

ALLETE, Inc. is a public utility company headquartered in Duluth, Minnesota. Personal property owned by "public utilities" is subject to property taxes based on Chapter 8100 of the Minnesota Statutes. Our property taxes are calculated based upon an approximate "market value" as defined under these rules. There are two segments we would like considered for rule changes.

Depreciation Limitation in Cost Factor

Currently, 75 percent of the valuation used in calculating our electric utility property tax value is derived from a cost factor. However, the depreciation used in calculating the cost factor for electric utilities is limited. Limiting the depreciation allowed in the calculation of the cost factor does not reflect an approximation of "market value" under most acceptable real estate valuation methods. The limitation is also inequitable with respect to other utilities in Minnesota, e.g., limitation for electric utilities is, effectively, 60 percent, while for gas distribution companies it's 75 percent.

Tax Benefit from Interest in Income Factor

Twenty five percent of the value of the property is based upon applying a capitalization factor to the "net operating earnings" of the utility. "Net operating earnings" is defined as "earnings from the system plant of the utility after the deduction of operating expenses, depreciation, and taxes, but before any deduction for interest."

Our issue is with, "what is included in the tax expense amount." Currently, the State is including the tax benefit generated by the interest expense in the total tax expense amount. Our position is that since the interest expense is excluded from income for the valuations, the related tax benefits from the interest expense should be excluded as well.

The effect of including these tax benefits is to increase property taxes and to have property taxes vary depending on the level of debt and the interest rates. The higher tax rates also put investor owned utilities at a competitive disadvantage to lower leveraged independent power producers and other non-tax paying entities.

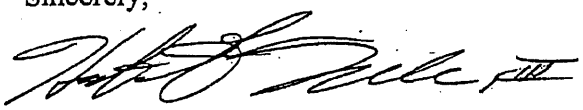
30 West Superior Street | Duluth, Minnesota 55802-2093 | 218-279-5000 | Fax 218-279-5050

Conclusion

ALLETE has raised these issues with the Minnesota Department of Revenue informally in past discussions. We would like to see the rules changed with respect to property tax valuations used in electric utility property tax calculations.

Please call with any questions or concerns, (218) 723-3919.

Sincerely,



Herbert G. Minke, III
Manager – Corporate Tax
ALLETE, Inc.

Minnesota
Rural Electric Association
11640 - 73rd Avenue North • Maple Grove, MN 55369
Phone # 763-424-1020 • Fax # 763-424-5820

February 5, 2004

Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-2220

RE: Possible Amendment of Rules Governing Valuation and Assessment of the Property of Utility Companies, *Minnesota Rules*, Chapter 8100.

Dear Ms. Sims:

The Minnesota Rural Electric Association represents 45 member-owned electric cooperatives and six generation and transmission cooperatives, providing service to about 657,000 customers and covering about 85 percent of the geographic area of the State. MREA members own nearly 120,000 miles of distribution line and serve an average of only 5.7 customers per mile of line.

MREA appreciates the opportunity to make a number of observations regarding both the rule and the process.

1. The electric cooperatives have been very pleased with the current rule since January 2000. At that time chapter 8100 was amended to allow electric cooperatives to choose between using the historical cost method or the unit value method of valuation. The Department has been extremely helpful and patient while working through this process with so many of our member co-operatives. We are opposed to any change that would directly or indirectly diminish or eliminate this option or its components.
2. MREA has no preconceptions on how the key components of the valuation provisions found in 8100.0300 might be revised, if at all. Therefore, we have no specific comments at this time. However, a few individual electric cooperatives do have specific ideas and comments which they might submit to you under separate cover.
3. We believe it would be advantageous and productive for cooperatives and all other interested parties to be able to review and comment on the consultant's report and recommendations before the Department acts on the report or before the Department conducts a public forum on the report. Additionally, if the Department forms an advisory group to discuss the components of

8100.0300 or the consultant's report or both, then the electric co-ops would very much like to be an industry participant of the group.

Thank you for the opportunity to comment. We look forward to providing more specificity based on the Department's consultant report and on the views expressed by other interested parties.

Sincerely,

Mark Glaess
Manager

FEB 6 2004

8

Great Lakes
Gas Transmission Company

February 4, 2004

Ms. Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-2220

Re: Comments on Possible Amendment of Rules Governing Valuation and Assessment of the Property of Utility Companies

Dear Ms. Sims:

Great Lakes Gas Transmission Limited Partnership (Great Lakes) appreciates the opportunity to make written comments on the possible amendment of rules governing valuation and assessment of property of utility companies, Minnesota Rules, Chapter 8100. Great Lakes is a limited partnership organized and existing under the laws of the State of Delaware, with its principal place of business at 5250 Corporate Drive, Troy, Michigan 48098. Great Lakes is a processor and transporter of natural gas in interstate commerce, subject to the jurisdiction of the Federal Energy Regulatory Commission.

Great Lakes and the Minnesota Department of Revenue (Department) have always had a common goal in property tax valuation rule changes of achieving a more accurate indicator of fair market value as the end result. It is with this common goal in mind that we provide the following comments in response to your notice dated November 26, 2003 soliciting comments on the possible amendments to the Rules under Chapter 8100.

We believe that the Minnesota rules should be modified in the following areas to provide a more accurate and valid determination of fair market value:

Depreciation

Great Lakes has two concerns relating to depreciation. First, Minnesota Rule 8100.0300, Subp. 3 limits depreciation for purposes of the cost approach. The rules set forth a floor in arriving at accumulated depreciation for the cost indicator of pipeline companies, by allowing only 50 percent of cost recorded on a company's books plus 50% of the excess depreciation. We believe that this limitation is contrary to appraisal theory, has no logical basis, and prevents the Department's cost approach from being a more accurate indicator of fair market value.

5250 Corporate Drive, Troy Michigan 48098
248-205-7400

Second, the cost approach methodology is based on the premise that cost is reduced by an amount equivalent to the total loss in value that occurs through all forms of depreciation. To ascertain a fair market value under the cost approach would require a deduction for the total amount of accrued depreciation attributable to not only physical deterioration, but also attributable to functional obsolescence and external (economic) obsolescence. Functional obsolescence results from the loss in value due to curable or incurable defects in the structure, materials or design of the property. Economic obsolescence would include the loss in value resulting from the reduced utility of property due to incurable, negative influences external to the property itself, including the effects of regulation on the property. The rules should require the Department to consider any information that is evidence of functional and external depreciation, and make appropriate adjustments in its cost approach methodology.

Weighting
The current rules, under part 8100.0300, apply a weighting of 75% and 25% to the cost and income approaches, respectively. There is no basis in appraisal theory for weighting the cost indicator three times more than the income indicator. The rules should provide that the Department consider relevant information and determine a weighting to yield an accurate indication of value on a case by case basis.

Other Appraisals
The Department should be required to consider all appraisals concerning the property provided to them. The Department should make adjustments to its formula-calculated value which are appropriate to achieve a more accurate indicator of fair market value, based on appraisals and information that have been provided.

In summary, Great Lakes recommends that, in amending the rules governing the valuation and assessment of utility property, the Department consider the above changes in order to obtain a more accurate methodology based on sound appraisal theory. As part of these changes, we believe that the cost approach should be adjusted to allow for both functional and external obsolescence and the depreciation limits removed. Further, the Department should consider all relevant information, including appraisals, that is provided to the Department, so as to obtain a more accurate indication of fair market value.

Please call me at 248-205-7489 if you would like to discuss our comments or wish to obtain additional information. Thank you in advance for your time.

Sincerely,

Nancy F. Priemer

Nancy F. Priemer
Department Head, Taxes

99

Xcel Energy℠

414 Nicollet Mall
Minneapolis, Minnesota 55401-1993

2/6/2004

Ms. Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, Minnesota 55146-2220

Re: Request for comments relating to possible amendment of rules governing valuation and assessment of the property of utility companies, *Minnesota Rules*, Chapter 8100

Dear Ms. Sims:

Xcel Energy values its partnerships with local units of government and recognizes that they are in the midst of difficult fiscal times. We also expect to pay our fair share of property tax; however, because the bulk of our property is personal property, we already contribute proportionately more than other businesses do. Xcel Energy does not propose to eliminate the tax on personal property, though. We simply request that the Minnesota operating property of all utility companies be valued at market value.

We are, therefore, encouraged that the Minnesota Department of Revenue ("DOR") is requesting comments relating to possible amendment of its Chapter 8100 rule ("Rule"). In particular, it is encouraging that the DOR "is considering rule amendments that update the existing rule in light of current economic conditions and that properly reflect the market values of the subject properties." We believe the current Rule is inconsistent with the requirement under Minn. Stat. Section 273.11 that utility company property be valued at "market value," as defined in Minn. Stat. Section 272.03, Subd. 8.

We feel there are four main areas in which the Rule does not achieve the statutory goal of market value:

1. Physical deterioration and functional obsolescence (i.e., depreciation);
2. Economic obsolescence;
3. Capitalization rate; and
4. Value indicator weightings.

Physical deterioration and functional obsolescence (depreciation)

For purposes of determining value under the cost approach, 8100.0300, Subpart 3 of the Rule currently limits the amount of depreciation allowed. The limitation for electric companies is 20%, while the limitation for gas distribution and pipeline companies is 50%. Additionally, for all utility companies subject to the Rule, if the amount of depreciation shown on a company's books exceeds these percentages, the company may deduct 50% of the excess. We are aware of no other state that applies the unitary method of valuation that imposes this limitation. Similarly, we are aware of no appraisal authority that supports such limitation. This limitation is inconsistent with achieving market value for utility assets

subject to assessment that have net book values below the limitation. Consequently, in order to attain the stated goal of reflecting market value, we recommend abolishing the limitation on depreciation.

Assuming the DOR decides not to remove the limitation on depreciation, there are two primary reasons we believe the DOR should at least conform the limitation for electric companies to the limitations for gas distribution and pipeline companies.

First, the Rule was promulgated in 1975, when several differences existed in the way electric companies were valued as compared to gas distribution companies. The differences were arguably justified historically in light of regulatory, economic and technological differences between the two industries. However, the electric companies began in the early-90s to advocate for conformity of the unit value formula between the electric and gas distribution companies as deregulation of the electric industry began to evolve. Competition in the electric industry started in 1992 after Congress passed the Energy Policy Act ("Act"), which deregulated the electric wholesale markets. After enactment of this legislation, both the electric and gas wholesale markets were open to supplier choice. Due in large part to the similarities (risk, chief among them) that existed between the two industries with the passage of the Act, the DOR conformed the income and cost value indicator weightings in 1996 to 75% and 25%, respectively, for all utility companies.

The similarities that existed between the two industries at the time of passage of the Act have continued and are widely expected to continue. Given these similarities, and the conformity of the value indicator weightings in 1996, it seems reasonable for the DOR to equalize any remaining depreciation limitations, as well.

Second, the historic rationale that underlies the current depreciation limitation is no longer applicable. The DOR in public testimony in 1975 justified the then-15% depreciation limitation for electric companies and 45% limitation for the gas companies by stating:

> "Holding the depreciation at a specified maximum recognizes the fact that a facility may be wearing out while also making an allowance for the fact that to replace or reproduce the facility would produce more value. The electric industry has an overall depreciation rate of approximately 25%. This rate is due in part to the fact that the state of the art in electric power generation and transmission has advanced rapidly over the years, witness the advent of nuclear power plants, and the companies have replaced to keep up with technology. We are allowing the electric companies a maximum depreciation rate of 15%."
>
> "Gas distribution and pipeline companies have a larger overall rate of depreciation rate due partly to the type of business they are engaged in. The technology used in a pipeline has not changed markedly for a number of years. A buried pipe is after all a buried pipe and while it might be preferable to have a larger or smaller pipe at certain times, once a pipeline is installed it is usually kept in place for a long period of time. This tends to build up large depreciation allowances. We recognize this fact but still only allow these utilities 45% depreciation."[1]

Even though the limitation percentages have changed over the last 29 years, the disparity between electric companies and gas distribution and pipeline companies remains. The DOR's original rationale was that

[1]Please see copy of the DOR's public testimony, Pages 7 and 8, attached as Exhibit 1.

the electric industry has an overall depreciation rate that is significantly less than that of the gas distribution industry due to more regular replacement of capital components. However, this justification, even if historically supported, is no longer the case. For example, the accumulated depreciation figures for the assets of Northern States Power Company ("NSP") (d/b/a Xcel Energy) as of December 31, 2002, reflect that NSP had an overall depreciation reserve that was approximately 59% of original cost for its electric assets and approximately 42% for its gas assets.[2] Clearly, NSP is not replacing its electric assets at a rate that justifies two categories of limitation in the Rule.

Moreover, a comparison between the depreciation lives authorized by the Minnesota Public Utilities Commission ("MPUC") for NSP's electric assets vs. its gas assets shows no meaningful difference. The MPUC essentially allows approximately a 30-year recovery period on both electric and gas production equipment and approximately a 33-year recovery period on both electric and gas transmission and distribution equipment.[3]

2. Economic obsolescence

The Rule does not specifically allow for consideration of external, or economic, obsolescence ("EO"). Not considering and allowing for EO when warranted results in an artificial and arbitrary departure from standard, generally accepted appraisal practices and the statutory requirement that the Rule properly reflect market value. EO is described by the Appraisal Institute as "a temporary or permanent impairment of the utility or salability of an improvement due to negative influences outside the property."[4] For income-producing property, EO represents the loss in income caused by factors in the marketplace; this loss in income can be identified and quantified using standard appraisal methods, and may also be capitalized into an estimate of the loss in total property value.[5] A rate-regulated utility has limited earning capacity because of rate regulation. In most jurisdictions, the utility is not allowed to earn a return on all of its property subject to assessment. This will often cause the earned rate of return to fall short of the market-derived capitalization rate, which is the rate of return a typical investor would expect the utility to achieve. EO is a measurement of this shortfall.

EO is supported by noted texts that discuss appraisal and the unitary method of valuation.[6] Many states in the west and midwest that apply this method of valuation consider and allow an EO adjustment, if warranted.

3. Capitalization rate

There are three ways in which the current Rule impacts upon the capitalization rate ("cap rate") selected for use in the income approach.

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[2] For Public Service Company of Colorado, Xcel Energy's utility in Colorado, the December 31, 2002 depreciation reserve for both its electric and gas assets was 36%.

[3] Please see NSP's depreciation rates as authorized by the MPUC, attached as Exhibit 2.

[4] The Appraisal of Real Estate, 12th Edition, The Appraisal Institute, 2001, p.363

[5] Ibid, pp. 412-414

[6] Property Appraisal and Assessment Administration, International Association of Assessing Officers, 1990; The Valuation of Real Estate, 3rd Edition, Alfred A. Ring and James H. Boykin, 1986; Income Property Valuation, William W. Kinnard, Jr., 1979; *Appraisal of Railroad and Other Public Utility Property for Ad Valorem Tax Purposes,* National Association of Tax Administrators, 1954

First, in developing the cap rate, the Rule indicates that the band of investment method will be used. However, there is no guidance as to specifically how the band of investment will be calculated. The band of investment is a technique in which the overall capitalization rate attributable to a property is calculated based upon the required return to the components of the property (typically, the debt capitalization rate and the equity capitalization rate) which are identified in the market, and combined to derive a weighted average cap rate using capital structure ratios supported in the market. For example, the Rule should specify the methods used to determine the equity component of the cap rate (e.g., earnings-price ratio, discounted cash flow, capital asset pricing model, etc). In addition, because these market factors change over time, the Rule should require an annual hearing at which the DOR and utility company representatives can freely discuss and exchange information in an effort to develop a fair and reasonable cap rate. That way, the process is made more participative, the outcome is based upon the most reliable data and interpretation available in the market, and the affected parties can fully understand how the cap rate is developed. Many other centrally assessed states hold this type of hearing. In Xcel Energy's service territory, these include Colorado, Kansas, Oklahoma, South Dakota, and Wyoming. While some states do not hold hearings, they consider taxpayer studies in developing their capitalization rate.

Second, although not specified in the Rule, it appears that the DOR does not make a flotation cost adjustment in developing its cap rate. Other states allow such adjustment. Flotation costs are the costs associated with issuing debt and equity. They consist of several kinds of costs, such as underwriter's fees, legal expenses, cost of preparing prospectuses, etc. Many studies have been made regarding whether it is proper to make a flotation adjustment in calculating a cap rate, and all of these studies essentially reach the same conclusion: an adjustment should be made if the cap rate, and consequently the income approach, is to fairly and properly reflect market value.

Third, the Rule currently indicates that a cap rate will be separately developed for electric companies, gas distribution companies, and pipeline companies. Instead, one cap rate should be developed for electric and gas distribution companies using research from both industries. Since 1975, when the Rules were first promulgated, the cap rate for electric companies has been 25 basis points lower than for gas distribution companies. The DOR's public testimony in 1975 justified a 25 basis point differential by stating:

> "We determined that gas distribution companies were probably the most 'average' utilities and so assigned a rate of 8% to them; electric utilities were better than average in that they normally had slightly lower interest rates, and, therefore, assigned a rate of 7-3/4% to them."[7]

As discussed above, there no longer exist the historical differences between electric and gas distribution industries that formerly justified differences in the way the two were valued. In recognition of this, the DOR made the income and cost value indicator weightings the same for both industries in 1996. Consistency and a more accurate reflection of market value argue for restructuring the Rule to recognize the similarities between electric and gas distribution companies in all other valuation respects, including cap rates.

[7] Please see Page 9 of Exhibit 1.

4. Value indicator weightings

The Rule currently specifies weightings for the cost and income value indicators at 75% and 25%, respectively, for all utility companies. It is well established among utility appraisers that the income approach is a much more accurate indicator of market value than the cost approach. A potential investor is far more interested in the future cash flows of property than its net book value. The National Association of Tax Administrators made the following comment about the income approach to value for a utility company: "The Committee accepts as a cardinal principle in appraisal theory that it is the income which a property is expected to yield that determines its value."[8]

Consequently, the Rule should be changed to give at least a 50% weighting to the income approach. In addition, because of the depreciation limitation and the lack of allowance for EO, the cost approach currently does not properly reflect market value; assigning an inappropriately greater weight to the cost approach further widens the disparity between a value determined under the current Rule and market value as required under the governing statutes.

Thank you for giving us the opportunity to submit comments relating to possible Chapter 8100 rule amendments. It is our hope these Rules will be amended to be consistent with the statutory requirement of "market value." Should you need any further clarification or any other additional information, please do not hesitate to contact me. I can be contacted at 612-330-5839 or joseph.p.rheinberger@xcelenergy.com

Sincerely,

Joe Rheinberger

Joe Rheinberger
Senior Tax Consultant, Tax Services
Xcel Energy

[8] *Appraisal of Railroad and Other Public-Utility Property for Ad Valorem Tax Purposes*, National Association of Tax Administrators, 1954, p. 23

Exhibit 1

Minnesota Department of Revenue's Public Testimony

Initial Unit Value Rules

August 1975

8/28/75

PUBLIC HEARING TESTIMONY

WHY WE NEED REGULATIONS

As a direct result of the Minnesota Supreme Court decision, filed October 19, 1973, our Department was charged with the responsibility of developing a new method for valuing the various types of public utilities operating within ~~our State.~~ Minn.

In reviewing the court decision it became quite clear that our so-called Minnesota Hatfield Formula for valuing public utilities, using only orig. cost less limited depctn., was no longer to be used. The Supreme Court did not specifically reject the use of the Hatfield Formula, but did express its disapproval of it as the sole criterion for valuing public utility property. The Court felt that the Formula gave no weight to all the ~~other~~ factors affecting market value. ~~The Court~~ It noted that the statutes require that property be assessed at market value. In With the abandonment of the Hatfield Formula, it was ~~made~~ clear that the assessment of public utility property would require the use of other factors and methods in addition to that which we had been using.

The Court stated: in part

> "The difficulty we have with the formula approved by the Tax Court is that it makes market value synonmous with original cost, taking into account limited depreciation, and gives no weight to other factors affecting market value. As we have indicated in numerous decisions, original cost is only one of several relevant factors which should be considered in determining market value.

After citing several cases, the court ~~then~~ continued:

> "The reason other factors such as reproduction costs, earning capacity and comparable sales prices should also be considered is because the statutes require that assessing authorities 'consider and give due weight to every element and factor affecting market value thereof.

The Supreme Court noted that the Formula makes for simplicity of administration; nevertheless, it did not consider this effect of sufficient weight as to exclude other criteria. It stated:

> "However, in the absence of express legislative authority to employ a unique formula for valuing utility properties distinct from other taxable properties, admininstrative considerations cannot justify completely ignoring the statutory mandates that due weight be given to all factors affecting market value."

The ~~Supreme~~ Court then concluded that its chief concern is that the Tax Court's decision conceivably might be interpreted as holding that in all similar cases the market value of all utility properties could be determined by the application of the Formula, and this, as the Court had stated in its opinion, was not acceptable.

~~The Supreme Court~~ they then ~~sent~~ remanded the case back to the Tax Court for further proceedings in accordance with the decision, ~~or~~ In other words, ordering ~~the Tax~~ Court INFORMING THAT THEY WOULD PREFER ~~to make~~ a decision which would give due weight to the other factors relevant to market value.

WHY WE NEED CENTRAL ASSESSMENT.

After a very thorough study of local assessment verses state assessment we concluded that:

1) Local assessments would bring about a multitude of court cases stemming from either appeals by the utilities assessed from orders they felt were excessive assessments or appeals from the order of the Commissioner reducing assessments under the authorities granted him by statutes.

2) The assessment of public utility companies and large scale electric generating plants would require a high degree of expertise which often is ~~normally~~ not available to numerous local assessors.

At this point we felt the assessment of public utility property should continue to be done by the state.

WHY WE USE UNIT VALUE METHOD.

The process by which an assessor appraises ~~or anyone else, for that matter~~ arrives at his opinion of the value of a property is the appraisal or valuation process. In public utility valuation, it is customary to use what is known as a unit appraisal. "This is an appraisal of an integrated property as a whole without any reference to the estimate value of its component parts. It is to be distinguished from a fractional appraisal which is the valuation estimate of one of the parts without reference to the value estimate of the whole, and from a summation appraisal, which is a valuation estimate of the whole derived by adding two or more fractional appraisals."

Unit appraisals are usually preferable to summation appraisals in all types of valuation work. They are markedly superior where there is considerable obsolescence or considerable going-concern value because there is no good method by which to

measure obsolescence or going-concern value as such. Unit appraisals are preferable to summation appraisals in utility valuation work for the added reason that the evidences of unit value are more readily available for utility properties than the evidences of fractional values.

Another reason why a unit appraisal is usually preferable to a summation appraisal has been aptly illustrated by asking the value of the left hind leg of a horse. If the horse has a going-concern value, it is obvious that the animal's worth could not be ascertained by placing a value on the several parts of its anatomy and adding up these values. Another illustration is the luxury hotel in an unattractive, desolate setting. Its value is obviously much less than the amount that one would estimate by separately valuing the materials and labor that went into its construction and adding these separate values. The only way in which the horse or the hotel can be valued in any realistic sense of the word is by unit appraisal methods.

Therefore, it is our intention to assess the value of the utility system as a whole, then to apportion to Minnesota that portion lying within its borders. This is not contrary to the due process clause of the Constitution. In Wallace v. Hines, 253 U.S. 66, 69 (1920), Justice Holmes, speaking for the Court said:

> "The only reason for allowing a state to look beyond its borders when it taxes the property of foreign corporations is that it may get the true value of the things within it, when they are part of an organic system of wide extent, that gives a value above what they would otherwise possess."

Before going into the rationale for our valuation process it should be noted that in the development of this method two factors were uppermost in our minds. One: input.

The method was not developed unilaterally but through a long series of meetings at which both industry and assessors were well represented and encouraged to express their ideas. Two: stability. Stability for both taxpayer and tax district. We feel we have achieved this goal in that no taxing district should have less than 90% of the utility valuation it received last year at a minimum, and under the provisions of the new Omnibus Tax Bill, no utility's valuation will rise more than 10% over what it was last year - excluding new construction.

VALUATION PROCESS:

WHY WE DON'T USE MARKET INDICATOR.

MARKET APPROACH: Market value implies a price for which an entire public utility enterprise might reasonably change hands between willing and informed buyers and sellers. The term presupposes a market of normal activity, no urgency to buy or sell on the part of either buyer or seller, and continued operation of the utility as a single entity. Public utility property is seldom transferred as a whole unit under these circumstances. Consequently, WE FEEL valuation of utility properties by this method is speculative and unreliable.

A substitute for the Market Approach to Value which can be used is called the Stock and Debt or Band of Investment Method. It relies on the accounting principle of assets equal liabilities plus ownership. Thus, if we ascertained the market value of the common and preferred stock and the market value of the various issues of bonds and deducted therefrom the current liabilities, we have the value of the assets. After excluding non-operating assets and exempt assets, i.e. automobile, etc., we would arrive at a unit value for the operating property of the utility. There are, of course, problems if certain property is leased, whether or not it should be

included in the assessment is a question. The criticisms of the stock and debt approach are, of course, the difficulty in its use with reference to the method allowing for the influence of non-operating assets; of estimating the value of non-operating securities; and to the inclusion or exclusion, as the case may be, of current liabilities in the computation. In addition, the objections that the Court found in Northern Pacific Railway v. Addams County, 1 FED. SUPP. 163 (1932), may be summarized as follows:

1) The stock market does not deal in values; stock (and debt) prices are not to be confused with values.

2) The securities traded do not reflect the value of the untraded securities in the same issue; market price ignores value of control.

3) The value of the securities is not the same as the value of the underlying property.

Therefore, while both the Market Approach and its substitute, the Stock and Debt Method, were considered for the valuation process they were rejected.

WHY WE USE COST APPROACH.

The Cost approach to value ~~states~~? that the original cost of the property is a good indicator of value. Since cost is the expense incurred in the acquisition, it is assumed that the person paying this expense will not ordinarily expend more than what he thinks the property is worth. The cost data for utilities is easily gathered from various reports, and in ~~many~~ most instances it is carefully scrutinized by regulatory agencies. We, therefore, feel that is is a reliable, accurate approach to value.

For this reason we have assigned the most weight to the cost indicator of value in our valuation process. In the case of Electric utilities we have assigned an even larger than usual weight (85%) to the cost indicator of value due to the depressed earnings in this industry. The fact that most electric utilities have applied, or

are in the process of applying for higher rates is a good indicator of these low earnings. At such time as the earnings of electric utilities return to more normal levels, greater credence would be given to the income indicator of value and consequently, less weight would be applied to the cost. appraisal.

WHY WE APPLY DEPRECIATION TO COST.

The original cost of any utility property must be reduced by certain amounts of depreciation to allow for obsolescence and general wearing out. We have allowed the cost to be reduced by the book depreciation or certain maximums whichever is less. The holding of the depreciation at a certain maximum acts as a hedge against inflation. Even though a company's property may be old the cost of replacing the facility at todays prices would no doubt cost more than the original cost at the time of installation. Holding the depreciation at a specified maximum recognizes the that a facility may be wearing out while also making an allowance for the fact to replace or reproduce the facility would produce more value. The electric industry has an overall depreciation rate of approximately 25%. This rate is due in part to the fact that the state of the art in electric power generation and transmission has advanced rapidly over the past years., witness the advent of nuclear power plants, and the companies have replaced to keep up with technology. We are allowing the electric companies a maximum depreciation rate of 15%. Gas distribution and pipeline companies have a larger overall rate of depreciation due partly to the type of business they are engaged in. The technology used in a pipeline has not changed markedly for a number of years. A buried pipe is after all a buried pipe and while it might be preferable to have a larger or smaller pipe at certain times, once a pipeline is installed it is usually kept in place for a long period of time. This tends to build up large depreciation allowances. We

recognize this fact but still only allow these utilities 45% depreciation

WHY WE USE "AVERAGE COST PER KILOWATT OF INSTALLED CAPACITY FACTOR".

The cost indicator of value as used in our valuation method refers to original cost. In the course of our meetings certain taxing authorities raised the question of using some form of replacement or reproduction cost, especially when dealing with electric utilities, to adjust the values for inflation. We then considered using various methods to allow for inflation including: replacement cost, reproduction cost, indexed original cost, inflation factor percent, acquisition adjustment, and major plant update. All of these approaches were rejected for one reason or another. We then adopted the "Average Cost per Kilowatt of Installed Capacity" approach. This method computes a five year national average cost of building a major generating plant. This average is then applied to all major plants operated by the utilities If the average is higher than the original cost of the plant the original cost is brought up to the average; if the average is lower no adjustment is made.

We feel this is a fair workable method for a number of reasons:

1) It makes no adjustment on smaller standby type units which are often kept in working condition by a utility for emergency use only.

2) By using a national average the utility in Minnesota gets the benefit of warm weather building methods which are usually less costly.

3) The method gives the utility the advantage of the most advanced technology used in building power plants, and refutes the argument "We wouldn't build a plant like that today"

4) It typically produces an additional value only for older plants and does not produce an across the board increase for the newer plants built in times of higher costs

WHY WE USE INCOME INDICATOR OF VALUE.

A cardinal principle in appraisal theory is: It is the income which a property is expected to yield that determines its value. For this reason we have adopted an income indicator of value. In order to measure the expected earnings of a utility an average of past earnings is used as a guide. We use an average to provide stability and avoid abrupt peaks and valleys in valuation. We are of the opinion that while the income indicator is a good measure of value it is not as reliable in a regulated industry as the cost factors, hence we have assigned it less weight.

WHY WE USE VARIOUS CAPITALIZATION RATES.

In computing our capitalization rates, or the amount of return a company would be expected to earn on its investment, we had a number of ideas in mind. We first wanted to compute an <u>average</u> cap rate for an <u>average</u> utility. We then wanted to apply this rate in such a way that all companies within one industry would be given the same rate; this was done in order to demonstrate that all members of any industry were being treated alike. In computing our rate we used three sources; Moody's Public Utility Manual, Federal Reserve Bulletins and the National Tax Journal. We studied the average capital structure (debt, stocks, bonds) of utilities for ~~20~~ 10 YEARS, THE INTEREST AND BOND YIELDS OF UTILITIES FOR 20 years (as many companies have long term bonds and loans of up to 30 years), and stock yields of utilities for 10 years. All of this data combined to give us an average cap rate for an average utility of 8.02%. We then interpolated this rate to our three industries. We determined that gas distribution companies were probably the most "average" utilities and so assigned a rate of 8% to them; electric utilities were better than average in that they normally had slightly lower interest rates and, therefore, assigned a rate of 7 3/4% to them; pipelines are a bit more risky in that they are not a monopoly operation but a common carrier, hence we have given them a rate of 8 1/4%

WHY COOPERATIVES USE COST ONLY.

The reasons we have cited for not using market, or stock and debt indicators in the valuation of investor-owned utilities hold true also for cooperatives. In addition we find that we can give no credibility to the income approach to value because cooperatives, by definition, are not profit oriented. One cooperative may have the philosophy of high rates - high dividends while a comparable cooperative may want rates - low patronage dividends. Therefore, in the valuation of cooperatives we use cost only and believe it to produce satisfactory valuation.

WHAT METHOD OF VALUATION IS USED FOR INTEGRATED COMPANIES.

Integrated companies, those involved in two or more utility operations, will be valued by using that method of valuation and allocation which applies to the larger of the operations. Within Minnesota there are three such operations AND in all cases smaller utility operation is less than 10% of the total. When an integrated company issues bonds, borrows money, or sells stock it does so not on an operation basis but on a company-wide basis. These factors of bond yield, interest rates and stock yield affect the capitalization rate. To assign two different cap rates to an integrated company would be unrealistic, therefore, we assign only that rate which the major operation indicates. Similarly such a company may well have many plant items which are common to both operations. It may be almost impossible to separate these items, therefore, we feel using that method of cost valuation which applies to the major operation is the most feasible way to proceed.

ALLOCATION

WHY WE USE DIFFERENT ALLOCATION WEIGHTS.

In the process of allocation the unit value we had a number of considerations in mind. These considerations included:

1) The allocation factors used must be readily available.

2) The allocation factors must be a raw statistic and not an allocated statistic in itself.

3) The allocation factor should be either one of Quantity (Property) or Quality (Use).

4) Since it is property which is being allocated the most weight should be given to the property factor. The Western States Association of Tax Administrators in its 1960 report on Utility Allocation recommends a weighting of 75% on property and 25% on use as being ideal.

5) Different industries and different types of operations require different methods of allocation.

With these ideas in mind, we allocated the three industries as follows:

Gas Distribution companies are allocated in the basis of 75% gross plant and 25% gross revenue. In this industry sales normally are in a direct relation to the distribution plant. It would be most uncommon if not impossible to have a large investment in distribution plant in one state and a large proportion of a company's sales in another. We have therefore used the weighting as suggested by the WSATA.

Electric utilities are allocated on the basis of 90% gross plant and 10% gross revenue. It is becoming more and more necessary in the electric industry to build plants not where a company wants them built, but where they are allowed to build them. This may mean that a company serving one state almost exclusively and hence having most of its revenue in that state may in fact have a large investment in generating plants in another state.

Placing a large weight on sales would, therefore, distort the allocation, hence we place most of our weight on property.

Pipeline companies are allocated on a 75% gross plant, 5% revenue, 20% weighted pipe line miles basis. One problem in pipeline allocation is that of geographical boundries. A pipeline may lie in one state for practically its total length, except that it crosses a state line to deliver all its product in a second state. One state has all the property, the second has all the ~~use~~ SALES. Clearly in the pipeline industry the property factor must have the most weight. We have tempered the straight gross plant factor with a weighted pipeline miles approach. Normally areas of most use would have larger diameter pipes which result in a greater weighted pipe line miles factor; larger diameter pipes usually cost more to install THAN SMALLER DIAMETER PIPE. THIS FACTOR STRIKES A BALANCE between gross plant and gross revenue.

DEDUCTION OF NEW FORMULA ASSESSED PROPERTY

WHY WE DEDUCT CERTAIN ITEMS.

The theory of unit value appraisal is that all property of a company is valued. Some of the property within this unit may be non-taxable, exempt or valued by some other method. These items are deducted from the unit before apportionment. In the case of depreciable plant items; general plant and pollution control devices; the depreciation applied to the item when it went into the unit value will again be applied when it is taken out. In the case of non-depreciable items; land, for instance, no depreciation will be used. It has been suggested that items ~~valued~~ VALUED LOCALLY SHOULD BE TAKEN OUT OF THE UNIT VALUE at whatever market value is placed on them by the local authority. This cannot be done for ~~the~~ TWO reasons: One, if a property is included in the value at

X dollars it must come out at X dollars not Y dollars. To do otherwise is not only faulty arithmetic but could in extreme cases even result in negative or unrealistic residual values. Two, the local appraisal is done on a fractional basis not a unit basis; to subtract a fractional value from a unit value is like comparing apples and oranges.

APPORTIONMENT

WHY DO WE USE THE APPORTIONMENT METHOD.

The process employed in spreading the unit value among the various taxing districts is used for only one reason - stability. As stated previously, stability for taxing districts was one of our primary concerns in this process. By using prior values as a base for the distribution of the new unit values, the stability of the utility tax base for the various taxing districts ~~for the various taxing districts~~ is insured. There are many systems and methods of apportionment which could have been adopted for use but at this point in time we felt it vital to protect the interests of the local districts.

9c

Exhibit 2

NSP Depreciation Rates

As Authorized by the

Minnesota Public Utilities Commission

Depreciation Rates for NSP(MN)*

	Plant Balance as of 1/1/2003	Estimated 2003 Accrual	Composite Depr Rate	
Electric Utility				
Steam	1,722,994,577	65,565,650	3.81	
Nuclear	1,451,527,074	46,304,902	3.19	
Hydro	7,566,235	118,862	1.57	
Other	282,318,366	9,615,883	3.41	
Transmission	841,078,745	23,199,162	2.76	
Distribution	1,843,730,957	55,630,848	3.02	
General	582,916,020	26,357,238	4.52	
Total Electric	6,732,131,974	226,792,545		3.37
Gas Utility				
Production	13,463,180	404,014	3.00	
Storage	30,312,272	833,657	2.75	
Transmission	25,639,223	778,160	3.04	
Distribution	522,241,172	15,204,397	2.91	
General	109,699,208	5,395,433	4.92	
Total Gas	701,355,055	22,615,661		3.22
Common Utility	356,370,374	33,947,593		9.53
Total NSP(MN)	7,789,857,403	283,355,799		3.64

* Report is based upon 1/1/2003 Plant Balances, and estimated accruals using 2003 approved depreciation rates.

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218 739-8200
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FEB 18 2004

OTTER TAIL POWER COMPANY

February 13, 2004

Harriet Sims
Appeals and Legal Services Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, Minnesota 55146-2220

RE: Request for Comments on Possible Amendment of Rule Governing Valuation and Assessment of the Property of Utility Companies, Minnesota Rules, chapter 8100

Thank you for the opportunity to respond to your request for comments on possible amendment of Rules Governing Valuation and Assessment of the Property of Utility Companies, Minnesota Rules, chapter 8100.

Below are areas of concern Otter Tail Power Company would like to submit for your consideration:

Depreciation limits in the cost indicator of value formula:

- The Minnesota Department of Revenue's cost indicator of value formula arbitrarily limits the amount of depreciation considered. We feel this is inconsistent with Minnesota Statute Sec. 273.11, Subd. 1 which states that "...all property shall be valued at its market value" and Section 272.03, subd. 8 which defines "market value"
- Otter Tail Power Company feels the loss in value from physical obsolescence is best measured by the regulated depreciation recorded on the Company's books. This depreciation has been reviewed and ordered by the MN PUC.
- Not only is the depreciation artificially limited, there is a difference in limitations between types of utilities. This discriminatory treatment can significantly affect our ability to compete with alternate energy providers available to the customers we serve.

Weighting for the value indicators and Minnesota allocation calculation:

- The current valuation weightings (75% cost, 25% income) fail to adequately consider the income approach to valuation. We feel the income approach is a more accurate measurement of value and should be weighted accordingly. A movement to a 50/50 weighting would be more appropriate.

An alternative would involve a reconciliation between the two valuation methods to arrive at assessed value. This would allow an appraiser to determine why differences exist between each indicator, make any necessary corrections, and determine a credible assessed value.

- The current Minnesota allocation weighting of 90% cost and 10% income also fails to adequately consider the income approach. With utility operations in three states, Otter Tail Power Company sees disparity in the Minnesota allocation when compared to other states.

Capitalization Rate:

- The capitalization rate is determined by DOR staff with little or no review or input from the Utilities.
- Otter Tail Power Company would like the opportunity to have input on the computation of the rate by the Minnesota Department of Revenue along with a review process of the rate.
- The capitalization rate may be out of touch with today's nature of utilities and financing structures.

We realize there will be an economic impact concern on various taxing jurisdictions. We're confident an equable phase in plan could be arrived at to implement any amendment of rules.

Otter Tail Power Company would like to thank you again for the opportunity to comment on this issue and trust that our and our industries concerns will be seriously considered.

Jeff Legge, CMA
Controller
Otter Tail Power Company

Aquila
DEC 12 2002

20 West Ninth Street
Kansas City, Missouri 64105-1711

December 10, 2002

Alan G. Whipple, Manager
State Assessed Property Section
Property Tax Division
Minnesota Department of Revenue
600 North Robert Street
St. Paul, MN 55146-3340

Dear Alan

I would like to thank you for the opportunity to attend the open forum meeting to discuss possible utility property valuation rules changes.

would like to submit written comments about important issues to Aquila.

1 Economic Obsolescence
Current Rule – Minnesota rules do not recognize obsolescence.
Proposed Rule Change – Allow for economic obsolescence as prescribed by standard appraisal practices. See attached calculation example for People's Natural Gas.

Why?
An Economic Obsolescence adjustment is critical to achieving the fair market value of a public utility. Many states expressly require consideration of this adjustment. *See, e.g.*, K.S.A. 79-503a (Kansas). Appraisal texts are in agreement on its importance. According to *The Public Utility Basic Appraisal Course* textbook by Tegarden & Associates, Inc.,

> External obsolescence is defined as loss in value from causes outside the property itself. Strict governmental regulations as to the rate base and the earnings power can cause a loss in value that is outside the property boundaries of a regulated utility system. The appraiser must take this type of depreciation into consideration when apprising a regulated public utility company.

According to Woolery's text, *Valuation of Railroad and Utility Property*,

> *Economic or External Obsolescence.* This is the loss in value resulting from causes outside the property itself. Changing economic conditions or changing environmental protection and

> labor safety requirements might contribute to value losses in this classification. One of the more frequently cited causes is strict government regulation of rate base and rates of return and the consequent restriction in earnings of public utility property.

See also, APPRAISAL INSTITUTE, THE APPRAISAL OF REAL ESTATE, 11th ed., pp. 365-66.

2. Depreciation Ceiling (Removal phased-in at 60-70-100) –
Current Rule – For Gas Distribution Companies, depreciation shall not exceed 50 percent according to Subpart 3 of 8100.0300.
Proposed Rule Change – Remove depreciation ceiling with no phase-in.

Why?
Failure to recognize the entirety of any and all depreciation assures that fair market value cannot be achieved. Since Minnesota law requires FMV, the current regulation is contrary to law and would not survive a challenge in the tax court. There is absolutely no recognized appraisal or legal authority to support this arbitrary rule. Capping the depreciation keeps a higher value on the older properties. There is not a floor on a utility property value. Utility property value increases and decreases as net operating income and net book value changes.

3. Allocation -
Current Rule – 75% Original Cost, 25% Gross Revenue.
Proposed Change – 50% Net Book Value, 50% Pipe Miles.

Why is the gross revenue factor an invalid allocation method?
State revenues should not be used as an allocation method because they can fluctuate based on how often a rate case is filed. For example, a rate case in Kansas for People's Natural Gas lets say increases revenues while all other state's revenue remain constant. According to the Minnesota rules, system revenue (the denominator) will go up and the revenue factor for Minnesota will go down. Should Minnesota lose value because a rate case was filed in Kansas? This allocation method shifts value in and out of states incorrectly.

Original Cost is a particularly poor measure of allocation because unless the depreciated status of each property throughout the system (and from state to state) is precisely identical (which is never the case), original cost allocation assures that true contribution (or value) of assets within a given state will not be measured properly. Original cost allocation has been abandoned by most states, has been prohibited by some courts (Mississippi), and cannot withstand legal challenge. Appraisal texts recognize that net book is the far superior approach. The Woolery text (*supra*) states:

> The Federal Energy Regulatory Commission employs an original cost less depreciation rate base for natural gas pipelines. When

> properties are regulated on this basis and all property contributes to system earnings regardless of productivity, original cost less depreciation is a logical allocation basis. Throughput data is generally not available on a state-by-state basis. Certain pipelines have variable sources of supply and it is quite possible that gas may flow in different directions at different times of the year. It is difficult to identify any use factors which could serve as a basis for allocating interstate natural gas pipeline values.
>
> The composition of natural gas pipeline property is quite diverse and it would be difficult to identify one type of property which would be representative of the entire system. Producing properties are located only in those states with sources of natural gas. Storage properties are located only in states with natural underground gas reservoirs or where above-ground LNG tanks have been built. Liquid extraction plants are expensive and few in number, yet they may constitute a major part of the value of a given pipeline system. Delivery points are not placed evenly throughout a pipeline system and some states would have a large amount of delivery property and little else. Choosing any given type of property or any given use of property as the basis for allocating value would not treat all states fairly since investment tends to be concentrated in a few specific locations. This argues strongly for the use of cost or investment as the basis for allocating natural gas pipeline value. Strong arguments can be made for employing the same cost basis as is used in determining the rate base of the company. This would dictate the use of net book value as the basis for allocating natural gas pipeline values even though certain old, useful, and still productive property may be fully depreciated.

According to *The Public Utility Basic Appraisal Course* textbook by Tegarden & Associates, Inc.,

> Ideally, the best allocation factor for a net cost regulated utility would net-to-net cost. It is logical to base the allocation of a system value on the thing that most closely resembles system value – net cost. The earnings are based on a form of book value (rate-base). Net utility operating income capitalized produces a net valuation.

Why use Pipe Miles?
Aquila Inc. has installed a GIS system and has mapped our entire system of pipes. We have specific location information and pipe length of our mains. As you know the utility business is capital intensive and the majority of cost come from installing and maintaining pipes. What better way to allocate value to a state than this measure?

4. Correlation Weighting -
   Current Rule – 75% Cost Approach, 25% Income Approach.
   Proposed Change – 50% Cost Approach, 50% Income Approach.

   Why?
   If generally accepted appraisal standards are used the cost and income approach are approximately equal weighting becomes irrelevant. However until that is the case these weighting should be 50-50.

Conclusion

In summary we are asking the depreciation ceiling to be removed, external obsolescence to be recognized, the correlation weighting to be adjusted to a 50-50 split, and net book value and pipe miles be considered for the allocation factor. The time frame for implementation of any rules change as stated in the meeting was at the earliest two years. Aquila management cannot accept this delay in implementation and has authorized a full legal challenge in tax court unless the rules are changed in time for relief in payment of tax year 2002 taxes.

Thank you for your consideration,
Daniel B. Rippee

Aquila Inc. dba Peoples Natural Gas and Northern Minnesota Utilities
Calculation of Obsolescence Using Standard Appraisal Methods

	Current Yr NOI ---->	29,055,240
	12/31/2001	12/31/2000
Plant In Service	820,792,720	789,510,159
Acquisition Adjustment	59,203,343	59,203,343
Property Held for Future Use		
CWIP	4,901,884	5,492,953
Total Gas Plant	884,897,947	854,206,455
Less - A/D	377,835,800	370,268,959
Net Gas Plant	507,062,147	483,937,496
Add - Materials & Supplies (Account 154 & 156)	2,415,690	2,541,444
Add - Fuel Stock (Account 151)	634,719	768,418
Net Plant + Fuel + M & S	510,112,556	487,247,358

Average Net Plant In Service	
Net Plant + M & S - 1/1 Prior Year	487,247,358
Net Plant + M & S - 1/1 Current Year	510,112,556
Average Net Plant In Service =	498,679,957

Return on Average Net Plant	
Current Year Return on Average Net Investment	5.83%
Rate of Return Required by Investors (Cost of Capital)	9.75%
Percent Actual Rate of Return of Investor Required Rate of Return =	59.76%
Percent Obsolescence in Existing Plant:	40.24%

Obsolescence	
(Avg Net Plant X Percent Obsolescence in Existing Plant)	200,668,815

Source - Public Utility Basic Appraisal Course by Tegarden

APPENDIX 6

PROFESSIONAL QUALIFICATIONS

BRENT EYRE
5198 S. Persille Dr.
Taylorsville, Utah 84118
801-966-5453 dbeyre@hotmail.com

Education:

Bachelor's of Science Degree in Accounting from Brigham Young University - 1973, Courses included: Accounting Theory & Practice, Auditing, Business Taxes, Financial Theory, Economics, Business Law, Marketing, Statistics, etc.

Employment History:

Employed by the Utah State Tax Commission 1973 - 2000.

Positions Held: Field Auditor (1973-77), Supervising Auditor (1977-79), Information Analyst (1979-84), Assistant Director - Operations Division (1984-87).

Last Position (1987 - Dec. 2000): Assistant Director - Property Tax Division, responsible for the appraisal of all centrally assessed companies in the State of Utah. Managed a staff of 16 professional appraiser/analysts.

Current Position (Dec. 2000 - Present): Self-Employed Appraiser & Consultant

Professional Licenses and Designations:

Accredited Senior Appraiser (ASA), American Society of Appraisers, Dual Designation – Machinery & Tech. Specialties (Public Utilities), Appraisal Review & Management

Certified General Appraiser, Utah State Division of Real Estate, #5465286-CG00

Professional Affiliations:

Member, Committee on Centrally Assessed Property - Western States Association of Tax Administrators (WSATA) 1987 - 2000
Vice-Chairman, Committee on Centrally Assessed Property - Western States Association of Tax Administrators (WSATA) 1994 - 96
Chairman, Committee on Centrally Assessed Property – WSATA, 1996
Member, National Conference on Unit Valuation Standards (NCUVS) 1987 - 2000
Member, International Association of Assessing Officers (IAAO) 1987 - Present
Chairman, WSATA Education Committee, 1994-2000
Member, NCUVS Administrative Committee, 1987 - 2000
Member, Multi-State Tax Commission Joint Property Tax Audit Comm., 1995 - 2000
Member, Planning Committee for the Wichita Workshop, 1995 – 2001

Professional Affiliations, Con't:

Member, American Society of Appraisers, 1996 - Present
Member, Editorial Board for IAAO Assessment Journal, 1997 - Present

Awards Earned

Utah Chapter - International Association of Assessing Officers: Outstanding Assessment Specialist for 1999

Appraisal Courses Completed:

International Association of Assessing Officers - 1988, Salt Lake City, Utah, Course 1, 2, & 4

WSATA School on the Appraisal of Utilities and Railroads - 1990, 1992, 1993, Logan, Utah

Wichita Workshop, Appraisal of Public Utilities & Railroad Property for Ad Valorem Taxation - 1987, 1988, 1989, 1990, 1991, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000 Wichita, Kansas

Lincoln Institute of Land Policy - 1987, Cambridge, Massachusetts, "The Effects of the Tax Reform Act on the Appraisal of Utilities & Railroads", 1989, Scottsdale, Arizona, "The Use of Expert Systems in the Valuation of Utilities & Railroads", 1990, Scottsdale, Arizona, "The Appraisal of Utilities & Railroads - Money Market Symposium", 1991, Scottsdale, Arizona, "The Hows & Whys of Utility & Railroad Appraisal", 1999, Cambridge, Ma., "Impacts of Electric Dereg. On Property Tax Valuation"

American Bar Association / Institute of Property Taxation - Annual Property Tax Seminar - 1993, Salt Lake City, Utah

Appraisal Courses Taught:

WSATA School on the Appraisal of Utilities and Railroads - 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2001, 2002 Logan, Utah "Basic Course on the Appraisal of Utilities and Railroads"

Utah State Tax Commission - Property Tax Division - 1991, Salt Lake City, Cedar City, and Price, Utah "Course on Centrally Assessed Property Valuation for County Officials"

Utah State Tax Commission - Property Tax Division - 1992, Price, Utah "Course on Oil & Gas Property Valuation for County Officials"

Appraisal Courses Taught, Con't:

Utah State Tax Commission - Property Tax Division - 1993, Salt Lake City, "Course on Centrally Assessed Property Valuation for State Tax Commissioners"

Idaho State Tax Commission - Appraisal School - 1995, Boise, Idaho, "Public Utilities, Railroads & Unitary Appraisal", 2003, Boise, Idaho, "Unitary Appraisal Issues"

Idaho State Tax Commission - Assessors Summer Workshop - 1999, Boise, Idaho, "The Valuation & Taxation of Intangible Property", 2001, Boise, Idaho, "Discounted Cash Flow Valuation"

Nevada Department of Revenue – Property Tax Division – 2001, Carson City, Nevada, "The Appraisal of Utilities & Railroads"

Texas Comptroller of Public Accounts – Property Tax Division – 2001, Austin, Texas, "The Appraisal of Utilities & Railroads"

Presentations Made:

Western States Association of Tax Administrators - 1989, Juneau, AK "Railroad Litigation -or- How Do You Spell Relief?", 1995, Austin, TX "The Changing Regulatory Environment - Does It Affect Valuation Practices?", 1996, Park City, UT "Intangibles - A States Perspective"

WSATA Committee on Centrally Assessed Property - 1989, Port Hadlock, WA, "Railroad Litigation -or- How Do You Spell Relief?", 1992, Monterey, CA, "Construction Work In Progress - Is It Worth The Investment?", 1993, Hood River, OR, "Determining the Proper Comparables for the Calculation of Equity Rates", 1995, Santa Fe, NM, "AICPA Recommendations for Enhanced Financial Reporting", 1996, White Fish, MT, "Intangibles - A States Perspective", 1997, Stevenson, WA, "An Overview of the Wiltel Case in Utah", 1998, Boise, ID, "The Intangible Saga - A Utah Experience"

Wichita Workshop, Appraisal of Public Utilities & Railroads for Ad Valorem Taxation – Wichita KS - 1990, "Hot Issues in Appraisal - What Constitutes the Unit?, Do Capitalized Earnings Capture Intangible Value?, Does Book Value Have Any Role in Appraisal?,

Deferred Federal Income Taxes, Correlation", 1991, "Is There a Tangible Way to Identify and Value Intangible Assets?", "Mock Trial Presentation -Issue- Deferred Federal Income Taxes in the Cost Approach", "The Role of the State Administrator in the Property Tax Appeal Process", 1993,

"Resolving Myths Concerning the Stock & Debt Approach - It Is Meaningful", "Standards of Appraisal Practice - The WSATA Experience", 1994 "The Proposed IAAO Public Utility Standard - A Critique", 1995 "Public Utility Standards - Controversial Issues",

Presentations Made, Con't:

1996 "Valuation in the New Age - Crossfire Panel", "Mock Trial Presentation -Issue- The Validity of Adjusting Discount Rates for Property Specific Risk Characteristics", 1997 "Unit Valuation: Surviving the Changing Environment - Crossfire Panel", "Alternative Dispute Resolution - Mock Mediation Presentation", 1998 "A Review Centrally Assessed Property Practices in Utah - Panel Discussion", 1999 Moderator "The Income Approach and Intangible Property Exemptions - Are They Compatible?"

Rocky Mountain Tax Institute - 1992, Salt Lake City, UT "Taxation of Natural Resources: Oil & Gas Production", 1995, Salt Lake City, UT "Update on Property Taxation in Utah"

Lorman Business Institute - State Taxation Seminar - 1993, Salt Lake City, UT, "Taxation of Centrally Assessed Property in Utah", 1998, Salt Lake City, UT, "Utah Property Tax: An Overview and Update", 1999, Salt Lake City, UT, "Centrally Assessed Property in Utah - An Overview", 2000, Salt Lake City, UT, "Centrally Assessed Property in Utah - An Overview", 2002, Salt Lake City, UT, "Special Valuation Issues", 2003, Salt Lake City, UT, "Property Tax in Utah"

Utah Tax Executives Conference - 1993, Salt Lake City, UT, "Taxation of Centrally Assessed Property in Utah"

Utah Association of Counties - Newly Elected Officials Workshop - 1995, Ogden, UT, "Taxation of Centrally Assessed Property in UT"

IAAO Public Utility Council Seminar - 1995, New Orleans, LA, "Resolving the Myths With the Stock & Debt Approach", 1997, Nashville, TN, "Intangibles - How Do We Properly Apply Their Influences Relative to Value", 2001, Reno, NV, "Intangible Litigation & Legislation – A Utah Perspective", 2002, New Orleans, LA, "The Effects of Deregulation on Electric Utilities – An Appraiser's Perspective"

Property Tax Division - Assessors School - 1995, Salt Lake City, UT, "The Effects of Regulation on Value", 1996, Salt Lake City, UT, "The Valuation of Intangible Property - Utah's Perspective"

Center for Business Intelligence - Managing Taxation - 1998, Scottsdale, AZ., "Valuation of Intangible Property - The Utah Experience," Electric Asset Valuation 1999, Orlando, FL., "Intangible Property Valuation - State Government Perspective"

Kentucky Utility Tax Task Force - 1999, Frankfort, KY, "The Intangible Property Saga - Utah's Experience"

Western Counties Centrally Assessed Taxation Seminar - 1999, Salt Lake City, UT., "Unitary Valuation Methodologies"

Presentations Made, Con't:

Utah Assessors Summer Workshop - 1999, Sundance, UT, "The Assessment of Telecom Cos."

Lincoln Institute of Land Policy - 1999, Cambridge, MA, "The Application of the Cost Approach to Electric Power Generating Plants - A Critique"

Testimony Given Before the Utah State Tax Commission

Kennecott Copper v. Property Tax Division, 1988, 2002, 2003
Mountain States Tel. & Tel. v. Property Tax Division, 1988
ANR Production Co. v. Property Tax Division, 1989
A.T.& T. v. Property Tax Division, 1990
Union Pacific Railroad v. Property Tax Division, 1990
MCI v. Property Tax Division, 1991-92
Union Pacific Railroad v. Property Tax Division, 1991-94
Barrick Mercur Gold Mines v. Property Tax Division, 1992
Delta Air Lines v. Property Tax Division, 1992
Andalex Resources Inc., et. al. v. Property Tax Division, 1992
Pacificorp v. Property Tax Division, 1992
Questar Pipeline Co. v. Property Tax Division, 1988-93
Mountain Fuel Supply Co. v. Property Tax Division, 1989-93
AMOCO Rocmount Inc. v. Property Tax Division, 1993
Northwest Pipeline Co. v. Property Tax Division, 1993
Union Pacific Resources Co. v. Property Tax Division, 1993
Deferred Federal Income Taxes - Pre-Rule Making Hearing, 1994
Southern Utah Fuel Co. v. Property Tax Division, 1994
Soldier Creek Coal Co. v. Property Tax Division, 1994
Salt Lake Southern Railway v. Property Tax Division, 1994
Airline Value Apportionment - Rule Making Hearing, 1994, 1995
Salt Lake City & Salt Lake School Dist. v. Property Tax Division, 1994, 1995
Williams Telecommunications v. Property Tax Division, 1995
Utah Railway v. Property Tax Division, 1995-96
Alliant Techsystems v. Salt Lake County, 1995-96
Kern River Gas Transmission Co. v. Property Tax Division, 1996
Colorado Interstate Gas Co. v. Property Tax Division, 1996-99
Delta Airlines v. Property Tax Division, 1996-99
Northwest Airlines v. Property Tax Division, 1997
Questar Gas Management v. Property Tax Division, 1997
Canyon Fuel v. Property Tax Division, 1997
Skyline Telecom v. Property Tax Division, 1997
Emery County Telephone Association v. Property Tax Division, 1997
Centrally Assessed Valuation Rule - Public Hearing, 1998, 1999
Kern River Gas Transmission Co. v. Property Tax Division, 1999
Pacificorp v. Property Tax Division, 1999

Testimony Given Before the Utah State Tax Commission, Con't:
Alliant Techsystems, Inc. v. Salt Lake County, 1997-1999
Intermountain Power Agency v. Property Tax Division, 1999, 2001

Testimony Given Before the Utah Tax Court
Amoco Rocmount v. Property Tax Division, 1993

Testimony Given Before Oklahoma District Court
GPM Gas Corporation v. Blaine County, Oklahoma, 1998,1999
Transok Gas Gathering v. Custer, Roger Mills, and Beckham County, Oklahoma, 2000

Testimony Given Before Montana State Board of Tax Appeals
ASARCO v. Montana Dept. of Revenue, 1999
PPL – Montana v. Montana Dept. of Revenue, 2000, 2001, 2002
Plum Creek Timber, Inc. v. Montana Dept. of Revenue, 2003

Testimony Given Before Arkansas Public Service Commission
In the Matter of an Objection to the 2002 Property Tax Assessment for Pine Bluff Energy, LLC

Testimony Given Before Idaho District Court
Amalgamated Sugar, LLC v. Canyon County, Idaho, 2002
Qwest Corporation v. Idaho State Tax Commission, 2001, 2002, 2003

List of Clients

Utah State Tax Commission – Property Tax Division
Utah Association of Counties
Salt Lake, Morgan, Weber, and Emery Counties, Utah
Granite School District – Salt Lake County, Utah
West Valley City, Utah
Western States Association of Tax Administrators – Centrally Assessed Property
Montana Department of Revenue
Texas Comptroller of Public Accounts
Idaho State Tax Commission
Nevada Department of Revenue
Arkansas Public Service Commission – Tax Division
Blaine, Custer, Roger Mills, and Beckham Counties, Oklahoma
Nez Perce, Canyon, Twin Falls, and Minadoka Counties, Idaho
Louisiana State Tax Commission
Oklahoma State Tax Commission
Michigan Dept. of Revenue
Minnesota Dept. of Revenue
Wakeshma Township, Michigan
Washington Dept. of Revenue
Yakima County, Washington