



Mike Kadas
Director

Montana Department of Revenue



Steve Bullock
Governor

April 3, 2015

Wayne Hitt
Director – Corporate Tax
Northwestern Energy
3010 W. 69th Street
Sioux Falls, SD 57108

RE: DOR Response to Comments on Cap Rate Study

Dear Mr. Hitt:

On behalf of the Montana Department of Revenue I would like to thank you for reviewing our Cap Rate Study and providing comments on our methodology. We continue to strive for transparency in our calculation and methods and welcome industry input. However, the department has determined that no adjustments to our Cap Rate Study are appropriate based on the comments provided. Our reasoning is discussed below.

The department does not dispute the fact that the cost of debt when calculating the revenue requirement for rate making purposes is before tax and is equivalent to the interest rate. This cost of debt ensures enough revenue is collected to pay the interest expense on debt. However, the department is not calculating a cost of capital for ratemaking purposes. Our study is calculating an industry weighted average cost of capital (WACC) to be used as a discount rate for converting a future benefit stream into present value. For further clarification, the department is discounting a net cash flow to invested capital (cash flow available to both debt and equity holders) and this cash flow is after-tax.

Net cash flow to invested capital is before interest expenses are removed, so because we are discounting an after-tax benefit stream the WACC has to be adjusted for the deductibility of interest expense when calculating income taxes. Because the cost of equity is derived from after-tax inputs no adjustment is necessary. However, the cost of debt is measured prior to the tax affect and an adjustment needs to be made when calculating an after-tax cost of debt.

Shannon and Grabowski explain this concept in great detail in their book *Cost of Capital: Applications and Examples*:

Because interest expense is a tax-deductible expense to a business, the net cost of debt to the business is the interest paid minus the tax savings resulting from the deductible interest payments. The value of the tax shield equals the present value of the expected tax deductions on interest payments for the debt capital financing.

The cost of debt capital is measured prior to the tax affect... as the value of the tax deduction on the interest payments equals the value of the tax shield... this pretax cost of debt and the value of the tax shield can be combined into the after-tax cost of debt. (p. 67)

This is consistent with the methodology used by the department in calculating our after-tax cost of debt and is summarized as:

$$\text{After-tax cost of debt} = (\text{Pretax cost of debt}) \times (1 - \text{tax rate})$$

In summary:

- Our cost of debt is used differently than the cost of debt calculated for ratemaking purposes
 - The ratemaking cost of debt is used to establish the revenue requirement to ensure enough revenue is collected to pay the interest expense on debt.
 - The Departments cost of debt is used to establish an industry WACC to be used to discount Net Cash Flow to Invested Capital to present value.
- Because the department is discounting an after-tax benefit stream, our cost of debt is adjusted for the reduction in taxes due to interest being a tax-deductible expense.
- The formula used by the department is summarized as:
 - After-tax cost of debt = (Pretax cost of debt) x (1 – tax rate)
 - After-tax cost of debt = 4.60% x (1-35%) = 2.99%

The Department did make a change to the method used to calculate the cost of debt for tax year 2015. This change was made due to an inconsistency in prior years of using a pretax cost of debt to discount an after-tax benefit stream. This caused a mismatch between the discount rate and the income measure being discounted and was corrected this year by adjusting the cost of debt.

The Department welcomes the opportunity to discuss this and other issues in more detail during the appraisal process. If you have further questions or concerns my contact information is below.

Thanks,



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