Washington Utilities and Transportation Commission

Mission Statement:

The UTC protects consumers by ensuring that utility and transportation services are fairly priced, available, reliable, and safe.

The Cost of Money

Prepared for the Kyrgyz Republic SEA

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UTILITIES AND TRANSPORTATION COMMISSION

Capital Costs

- Rate of return can be defined as a percentage, that when multiplied by the rate base amount, provides the utility the opportunity to earn profits sufficient enough:
  - To meet its debt interest and preferred dividend obligations to current capital investors and,
  - To compete on reasonable terms in the financial markets for future capital requirements.
- Capital Cost is one of the most controversial parts of a rate case largely because of significant dollars involved.

Capital Costs

Cost of debt and preferred are generally based on actual historical cost.

Cost of Equity is based on current and/or forward-looking analysis.

Cost of Capital Components

Debt is borrowed money which must be returned with interest. Usually debt carries a lower interest rate since the money is eventually returned.

Preferred Stock is a hybrid between common stock and debt.

Equity, or common stock represents ownership in the utility.

Capital Structure

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- Capital Structure is the relative portions of debt and equity. Utilities typically have similar amounts of debt and equity, usually between 40% to 60%.

- Capital structure combined with the interest rate of each component determines a utility's target rate of return.

Cost of Capital Example

	BIG ELECTRIC COMPANY			
	Weighted Average Cost of Capital			
		Percent of		Weighted
	Amount	Total	Cost	Average
Long-term Debt	$ 3,000,000	52.6%	8.0%	4.211%
Preferred Stock	$ 200,000	3.5%	9.0%	0.316%
Common Stock	$ 2,500,000	43.9%	11.0%	4.825%
Total	$ 5,700,000	100.0%		9.351%

Return on Equity

Return on Equity is the percentage rate applied to the common equity portion of capital costs. (In the previous example, it is the 11% rate).

Standards of a fair return

- "Under the premise of efficient management, a rate of return must be *adequate* to maintain a utility's financial soundness as it relates to both the ability to support existing credit and the ability to *attract new capital* on reasonable terms as required in the discharge of its public duties."

Return on Equity (continued)

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- The rate of return should be *comparable to* that being currently earned by other companies in the same geographic area with similar business risks.
- Methods to determine return on equity are by a market cost approach or a comparable earnings approach.
- Various models are not neatly classified as one or the other approach. They instead weigh one standard of a fair return more heavily, while giving some consideration to the other approach.

Market Cost Approaches

Market Cost Approaches attempt to determine the rate of earnings (or cash dividends) necessary for investors to be willing to invest in ***new*** common stock at a reasonable market price.

Comparable Earnings Approaches

The primary concern of a *Comparable Earnings approach* is to determine a return on common equity that is fair to ***existing*** common equity investors. These methods attempt to inject a competitive market environment into a regulated enterprise.

Models used to determine return on equity

Market Approaches –

Earnings-price Ratios
Discounted Cash Flow Method

Comparable Earnings Approaches –

Capital Asset Pricing Model (CAPM)
Bond Yield Risk Differential Model
Comparable Earnings Method

Controversy in Approaches

- All models involve a tremendous amount of judgment from both the witness sponsoring the testimony and the Commission in arriving at a decision on the appropriate rate.
- Analysts using the same model often have widely diverse results because of the judgments they make regarding the various inputs to include in the formulae.
- Often more than one model is provided to test the results of the favored model. For instance, Washington relies primarily on the Discounted Cash Flow model, but considers other models to evaluate the reasonableness of the outcome.

Controversy in Approaches (continued)

- Commissions can consider other factors beyond the statistical calculations in setting the rate of return.

- Because of the amount of judgment involved, some argue that there is no point to bother with the time-consuming and expensive analysis involved in determining rate of return.

Cost of Capital – Other Considerations

- Other financial indicators may be considered such as bond ratings, market-to-book ratios, interest and dividend coverages, debt-to-equity ratios, and in times of high construction of new facilities, the percentage of income that is constituted by allowance for funds used during construction.

Cost of Capital – Other Considerations (continued)

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- An insufficient rate of return can affect quality of service because the Company may cut back on maintenance or other operating costs to increase net operating income.
- A perception by the financial market that the Commission is penalizing shareholders may lead to lower debt ratings and may adversely affect the market price of stock. Both could lead to higher interest costs and the need for a greater rate of return.
- Will the results produce a sudden large increase to customers, known as rate shock?

Rate of Return in a Competitive Energy Marketplace

- Regulators have traditionally established cost-of-service rates for vertically integrated utilities as a whole.
- There is likely to be even more controversy in determining the cost of capital for stand-alone Generation, Transmission, and Distribution companies, (sometimes called Genco, Transco, and Disco.)
- The issues involve the necessity to disaggregate business risk of each segment; the types of financial and regulatory risks in the restructured electric industry; as well as an appropriate method to determine the cost of capital for each.

The California experience

In 1994, the California investor-owned utilities requested a higher return on common equity to compensate shareholders for additional risks resulting from electric generation competition. Intervenors argued that the Commission should consider unbundling electric service rates in parallel with unbundling the cost of capital. The premise was that unless this was done customers would overpay for transmission and distribution services and underpay for generation services, giving an unfair advantage to them compared to generation-only competitors. The California Commission was persuaded by the arguments and ruled that any future unbundling of rates include an unbundling of the return on equity.

Rate of Return in a Competitive Energy Marketplace (continued)

Financial Impacts

- Disaggregated utility business units will be smaller than the aggregated utility therefore they will lose the financial benefits on intra-company diversification and vertical integration. They have no track record operating as independent entities.

- A Genco is inherently riskier because of the variability associated with fuel prices and availability and construction risks.

Rate of Return in a Competitive Energy Marketplace (continued)

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Regulatory Impacts

- A Disco is likely operate under traditional regulation with mandated policies such as life-line rates, and customer-oriented disconnect policies.
- The Disco may take on the obligation of provider of last resort for an unknown and varying group of customers which creates risks of resource planning for an uncertain and high-cost customer base.
- Traditional methods of determining cost of capital require identifying and collecting financial data for comparable groups. Comparable groups do not exist for unbundled services – particularly for the Transco and Disco business units.
- The Disco will likely be required to bill customers for “stranded” costs through a “wires” charge to customers.

Cost of Money – Conclusion

- The determination of a fair and sufficient rate of return has a great impact on total revenue requirements.

- The arguments surrounding the capital structure and the cost of equity are quite controversial, and require a large dose of judgment.