THE REGULATORY ASSET BASE

Regulation for Practitioners

Building Capacity through Participation

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What is it?

- What is the Regulatory Asset Base?
  - Compilation and summation of the assets used in providing the regulated service
    - Generally only includes those assets funded with investor money
    - Excludes customer contributed assets
  - The investment base upon which the provider is permitted to earn a reason return

Valuation Methods

- Actual Cost (Original Cost)
  - Based on the actual cost at the time that the asset first went into service
    - Commonly includes financing costs
    - Requires no subjective assessment (other than prudency)

	Opening Values
+	Prudent Capital Expenditures
-	Asset Disposals or Retirements
=	Ending Asset Balance
-	Regulatory Accumulated Depreciation
=	Net Asset Balance

Valuation Methods

- Indexed Historic Cost
  - Historic or original cost that is adjusted by inflation or some other industry-specific index

	Opening Values
+	Prudent Capital Expenditures
-	Asset Disposals or Retirements
+	Index Allowance
=	Ending Asset Balance
-	Regulatory Accumulated Depreciation
=	Net Asset Balance

Valuation Methods

- Indexing Incentive
  - Reductions or control on capital expenditure
    - Limits the amount to be included in rates so limits the amount management wants to actually spend
      - **Are regulators looking for ways to cap construction expenditures or expand construction expenditures?**

How does the issue of forecasting fit into this?
Forecast expenditures?
Forecast Indices?

Valuation Methods

- Replacement Cost
  - Sum of the current cost of replacing each asset with similar assets that replicate the capacity and service levels of the existing assets
  - Simply updates the cost and not the overall efficiency, capacity, etc.

DOES THE AUTHORIZED RETURN CHANGE DEPENDING ON WHICH VALUATION METHOD IS USED?

Valuation Methods

- Depreciated Optimized Replacement Cost
  - Different from Replacement Cost in that it does take into account the inefficiencies that may be part of the current set of assets
    - Removes excess capacity, duplication, redundancy, etc.
    - Requires judgment about how to reconfigure in an optimal manner

What happens to the sunk cost of all those assets that are no longer deemed economic or necessary?

Valuation Methods

- Fair Market Value
  - Sum of the prices that would be obtained from selling each of the assets in a competitive market
    - What a third party would pay in an arm's length transaction
      - Difficult if no active market, especially for large, specialized items
    - Tries to value the asset on the basis of its next best use

Valuation Methods

- Net Present Value
  - Sum of the discounted cash flows associated with each asset
    - Predict the cash flows expected to be generated, then discount it back to present values using appropriate risk-adjusted discount rate
      - Discount rate is often a key determinant of the result
    - Trying to measure the asset's *economic value*

Valuation Methods

- Deprival Value
  - Minimum loss to the provider if it was deprived the revenue streams associated with the asset
    - The deprival value is the minimum of its replacement cost plus its economic value

- Optimized Deprival Value
  - The sum of the lesser of the depreciated optimized replacement cost of each asset plus the economic value of each asset
    - Eliminates the cost of poor historical investments decisions that resulted in inefficiencies or over-capacity.

Other Considerations

- Used and Useful
  - Assets often “lumpy objects” rather than being able to be added in smaller increments
    - Excess Capacity
- Prudence
- Acquisition Cost Adjustments
  - If price of a purchased asset is different from book value, what happens to the difference?
- Treatment of Assets Under Construction
- Treatment of Assets Contributed by Others
  - Not funded by equity or borrowings

Depreciation

- What is it?
  - A systematic and rational process of distributing the cost of tangible assets over the life of the assets
    - Commonly one of the largest expenses of a provider
  - Basic elements
    - Cost / Value of the asset
    - Estimated Life (Remaining Life? Obsolescence?)
    - Salvage Value
    - Cost of Removal

Depreciation Methods

- Straight Line
  - Equal amounts of depreciation in each accounting period in the useful life of the asset

Depreciation = (**Undepreciated** Cost + Cost of Removal – Salvage)/Asset Life

Accumulated Depreciation is the sum of the depreciation expense from the prior years of the asset

- Remaining Life
  - As need arises to adjust the life estimate during the useful life of the asset

Depreciation=(**Net** Cost of Asset + Cost of Removal–Salvage)/Remaining Life

Depreciation Methods

- Depreciation Based on Activity
  - X amount of depreciation for each unit of production
- Depreciation to Match the Financing Period and/or the Borrowing Payments
- Accelerated Methods
  - Shorter lives for expected for the use of the asset (Taxing Authorities)
  - Front-end loaded (more in early years than later years)

Working Capital & Other Assets

- Other Items for Consideration to be included in Regulatory Asset Base
  - Customer Deposits
  - Prepayments
  - Materials and Supplies
  - Accumulated Deferred Income Taxes

Discussion Questions

- Are you receiving adequate data to compute the regulatory asset base? If not, what would you change?

- What is the appropriate index to use, or is there one, for determining the regulatory asset base using your preferred valuation method?