Tariff Development : REVIEW of The Basic Ratemaking Process

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Purpose of this presentation segment is to:

- Provide a general REVIEW of rate regulation and the ratemaking process
- Provide a general understanding of ratemaking components and related issues

Cost Recovery for Regulated Investor-Owned Utilities

- In Texas, Sec. 36.051 of the Public Utility Regulatory Act (PURA) states that:
  - "In establishing an electric utility's rates, the regulatory authority shall establish the utility's overall revenues at an amount that will permit the utility a reasonable opportunity to earn a reasonable return on the utility's invested capital used and useful in providing service to the public in excess of the utility's reasonable and necessary operating expenses."

Statement of Financial Accounting Standards (SFAS) 71—"Accounting for the Effects of Certain Types of Regulation"

- Applies to entities that have regulated operations only if certain criteria are met:
  - Rates subject to regulatory approval
  - Rates designed to recover specific costs
  - Rates can be charged to and collected from customers
- SFAS 71 is the primary utility accounting pronouncement
  - Accounting by public utilities generally follow ratemaking treatment

What Triggers A Rate Case?

- Earned return is too low
  - Company initiates a rate case
- Earned return is too high
  - PUCT Staff reviews annual PUC Earnings Monitoring Reports and makes recommendation to the Commission to require a company to file a rate case
  - Intervenor group files petition to initiate a rate case

Basic Purpose of the Ratemaking Process

- Develop the utility's revenue requirement (i.e., the utility's reasonable cost of service)
- Design rates to recover cost of service
  - Cost of Service study is developed to allocate the utility's revenue requirement to various customer classes (e.g., residential, commercial, industrial)
  - Rates are designed, based on the Cost of Service study, to recover the utility's revenue requirement from the various customer classes

➔ This is a conceptually simple process, but a massive undertaking in relation to effort and information required to complete process

The Rate Filing Package Prepared Testimony

- A Rate Filing Package (RFP) must be accompanied by the applicant's prepared testimony
  - Examples: General policy issues, Rate of Return, Accounting, Cost of Service, Rate Design, etc.
- Testimony and other forms of evidence (e.g., responses to requests for information) of the applicant and all other parties must be filed with the Commission, with copies to each party of record

The Parties—Applicant/Utility

- The utility must:
  - Develop and review schedules and work papers
  - Develop and review testimony
  - Coordinate submission of the RFP including testimony, work papers and schedules
  - Conduct research and respond to discovery
  - Assist in development of direct and cross-examinations of witnesses for all parties
  - Maintain records and supporting documentation

The Parties—Intervenors

- Parties interested in playing an active role in proceedings
  - Involved parties may be friends of the utility or foes
  - Could include customer groups, rate/consumer advocates, other utilities, competitors
- Interested intervenors must file motion, and have motion granted, to formally intervene in a rate proceeding

The Parties—PUCT Staff

- Inter-departmental representatives on Commission's case review team
- Requires expertise in:
  - Electric and energy industry issues
  - Economics
  - Accounting and Finance
  - Legal and regulatory issues and analysis
  - Engineering

The Ratemaking Formula and Basic Components

What is "Cost of Service" Regulation?

In Cost-of-Service regulation, the regulator determines the Revenue Requirement—i.e., the "cost of service"—that reflects the total amount that must be collected by the utility so that it can recover its costs and earn a reasonable return.

Basic ratemaking formula:

Rate Base
x Allowed Rate of Return
= Required Return
+ Operating Expenses
= Cost of Service (Revenue Requirement)

Basic COS Components: Rate Base and Rate of Return

- The Rate Base is the net amount of investment, funded by investors, in utility plant and other assets devoted to the rendering of utility service upon which a reasonable rate of return may be earned

- The Rate of Return is the percentage rate that the commission finds should be earned on the rate base in order to cover the costs related to the financing provided by the company's capital investors.
  - The rate of return on invested capital is based upon the concept of the cost of capital—i.e., the compensation that investors require for exposing their capital to risk.

Basic COS Component: Operating Expenses

- Allowable Operating Expenses include operation and maintenance costs (O&M), depreciation, and all taxes, including income taxes.

Test-Year Concepts

- Identification of test year
  - Historical test year – generally based on financial data for the most current 12 months for which information is available during the preparation of the rate application
  - Historical test year adjusted for known and measurable changes to develop test period
    - Example: A signed new labor contract is a known & measurable change, but simply knowing that at some point in the future the contract will change in some way is not a known and measurable change.

Basic Component #1: Rate Base

Rate Base

- Represents the investor-supplied capital used to pay for plant facilities and other investments required in supplying utility service to consumers
- Rate Base generally consists of the investment in net utility plant and other items, such as regulatory assets and working capital, devoted to the rendering of utility service and funded by investors upon which a fair return may be earned
- Typically, Rate Base excludes Construction Work in Progress (CWIP), non-utility property, and plant held for future use
- Deductions from rate base are made to reflect the capital funds provided by others (such as the government) that have been used for investments in net utility plant and other assets

Criteria for Inclusion of Cost in Rate Base

- "Used and useful" concept – only plant currently providing or capable of providing utility service to customers is included in rate base
- "Prudent investment" concept – only plant prudently purchased or constructed is includable in rate base
  - Construction of nuclear generation plants in 1980s led to state commission prudence reviews of construction management and costs associated with construction of nuclear facilities
    - In some cases, these prudence reviews led to disallowance of plant costs for ratemaking purposes

Rate Base Components

- Plant in service
  - Largest component of a company's rate base
  - Generally, one of the least controversial aspects of a rate proceeding unless the prudence of construction is an issue or excess capacity is at issue
- Accumulated depreciation
  - Typically not a controversial component of rate base unless the reasonableness of the depreciation rates (or a new deprecation) study is an issue in the rate proceeding

Rate Base Components

- Construction Work in Progress (CWIP)
  - Typically not included in rate base because it is not yet "used and useful" in providing electric service
  - In rare cases, CWIP may be included in rate base if necessary to help maintain financial strength of the utility company

Rate Base Components

- Plant Held for Future Use ("PHFU") represents plant facilities that are currently not in service, but that are ready for use in the utility system, or land and land rights owned and held to meet future service requirements
  - Most regulatory commissions do not include PHFU in rate base because it fails the "used and useful" test

Other Rate Base Components

- Fuel inventories consisting of gas in storage, coal, and nuclear fuel inventories
- Materials and supplies
- Cash Working Capital—the average amount of capital provided by investors, over and above the investment in plant and other specific rate base components, to bridge the gap or lag between the time expenditures are required to provide services and the time payment is received for such services

Regulatory Assets/Liabilities

- Regulatory Assets
  - Regulators can provide reasonable assurance regarding the existence of an asset if:
    - The regulator intends to provide for specific recovery of an incurred cost rather than provide for expected levels of similar future costs
  - Examples of regulatory assets include: unrecovered fuel, rate case expenditures; storm-damage costs
- Regulatory Liabilities
  - Regulators may impose a liability on an enterprise. Examples of reasons for which a liability may be imposed include:
    - Refunds or credits to customers
    - Gains on sales of regulated assets may be deferred and amortized to decrease future rates

Rate Base Deduction – Accumulated Deferred Federal Income Taxes

- Accumulated Deferred Federal Income Taxes (ADFIT) – represents the deferred federal income taxes resulting from timing differences related to when revenues for taxes are received from customers and when these funds are then paid to the government. Until these funds are paid to the government, the utility has the use of the funds. ADFIT is therefore considered a source of interest-free funds (cost-free capital) provided by the U.S. Treasury to the utility.
  - Because ADFIT balances are considered to be "cost-free capital," they are deducted from the return-earning rate base

Basic Component #2: Rate of Return

Rate of Return

- What is meant by the phrase "allowed rate of return"?
  - In the utility industry, the phrase "allowed rate of return" is generally synonymous with "the cost of capital." It refers to the rate of return on rate base required to recover the utility's:
    - Cost of long-term debt
    - Cost of common stock
    - Cost of preferred stock
  - The total dollar amount of return, or earnings, is calculated by multiplying the allowed rate of return by the utility's total dollar amount of rate base
  - The Allowed Rate of Return can be considered as the rate of return that is permitted, but not guaranteed.

Rate of Return

- The principles of a fair rate of return were established in two U.S. court cases, one in 1923, and one in 1944.
  - Legal criteria established by the two court cases:
    - A utility's allowed Rate of Return should be sufficient to maintain the utility's financial integrity
    - Return should enable utility to attract additional capital on reasonable terms
    - Return should be equal to that earned by other companies with comparable risks

Rate of Return

- Several approaches are predominantly used in estimating the cost of equity
  - Discounted Cash Flow (DCF) method
    - considers certain aspects (such as growth and dividends) of investors' expectations regarding future earnings
  - Capital Asset Pricing Model (CAPM)
    - a well-known theoretical technique that attempts to measure the return expected by investors for a specific stock based on the risk assigned to that stock relative to the overall market
  - Bond yield risk differential method
    - Indicates the cost of equity by comparing the current returns on bonds and stocks and then determining the risk premium associated with a common equity position
  - Comparable earnings (not commonly used in Texas)
    - Estimates the cost of equity by comparing the earned accounting returns (rather than expected market returns) of firms with comparable risk

The Rate of Return on Invested Capital—Additional Points

- The allowed rate of return is set by the regulatory authority in the determination of a utility's cost of service; it is set prospectively and there is no guarantee that the utility will actually earn this rate of return.
- The earned rate of return is measurable only after an accounting period has passed; it the rate of return that the utility actually earns on its invested capital.
  - The earned rate of return can be affected by interest-rate changes, inflation, changes in accounting principles, changes in consumption, weather, and other factors, and can (will almost certainly) be more or less than the allowed rate of return.

Basic Component #3: Expenses

Operating Revenues and Expenses

- Requirements for inclusion of costs in revenue requirement
  - Costs must be just and reasonable
  - Costs must be prudently incurred
  - Cost adjustments must be known and measurable

Operations & Maintenance Expense

- O&M expense includes:
  - Power production expenses
  - Transmission expenses
  - Distribution expenses
  - Customer accounts expenses
  - Customer service and informational expenses
  - Sales expenses
  - Administrative and general expenses

Taxes Other Than Income Taxes Expense

- Non-revenue-related taxes—taxes that are not dependent on or that do not change as a result of the utility's revenues
  - Payroll taxes
  - Property taxes
  - Franchise taxes (may be based on various elements such as payroll, cost of goods sold, capitalization, etc.)

To summarize one more time…

In Cost-of-Service regulation, the regulator determines the Revenue Requirement—i.e., the "cost of service"—that reflects the total amount that must be collected by the utility so that it can recover its costs and earn a reasonable return.

Basic ratemaking formula:

Rate Base
x Allowed Rate of Return
= Required Return
+ Operating Expenses
= Cost of Service (Revenue Requirement)

OK…

Before we apply these concepts,

Any questions?