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# Workshop on Regional Electricity Trade and Market Development (LMI)

Cost Based Tariffs in Florida

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# Cost of Service Regulation

- Florida and most U.S. states set rates for electric utility service based on Cost of Service Regulation as a substitute for rates based on competitive markets.
- Underlying premise - The electric industry is most efficiently served by a single provider (monopoly), which requires a third-party regulator to set rates based on the careful examination of the cost of providing service.
- Some states allow market rates to be set by competing sellers for some portions of electric service (e.g. power generation, transmission) in what is termed “restructured” regulation, while other portions of service (e.g. distribution) remain under cost of service regulation.



## Objectives of the Cost of Service Ratemaking Process

- First, to determine the utility's "revenue requirement", or the utility's cost of providing service.
- Second, to set rates to recover the "cost of service".
  - A "Cost of Service Study" is used to allocate (spread) the utility's revenue requirement to the customer classes (e.g., residential, commercial, industrial).
  - Rates are designed to recover the utility's revenue requirement from the customer classes.



# What is the Revenue Requirement?

- “Revenue Requirement” (RR) is the cost of providing service as determined by the regulator.
- RR is the total amount of money that must be collected by the utility so that it can recover its costs and earn a reasonable return on its investment.
- RR typically excludes certain volatile costs, such as fuel costs, and such costs are collected through separate rate adjustment proceedings conducted periodically.
- Basic ratemaking formula:

$$\text{RR} = \text{Operating Expenses} + (\text{Rate Base} \times \text{Rate of Return})$$



# What are Operating Expenses?

- Operating Expenses include operation and maintenance costs (O&M), depreciation, and all taxes.
- O&M components include:
  - Power production expenses
  - Transmission and distribution expenses
  - Customer service and informational expenses
  - Labor expenses
  - Administrative and general expenses



## What is Rate Base?

- Rate Base is the amount of investment in utility plant and other assets used to provide utility service. The utility is allowed to earn a reasonable return on investment on its rate base.
- **Rate Base = Plant in Service + Working Capital - Accumulated Depreciation**
  - Plant in Service: The portion of a utility's plant which is devoted to the operations of the company.
  - Working Capital: Money utility needs to pay expenses until revenues are received.



# What is the Allowed Rate of Return?

- The Rate of Return, stated as a percentage rate, for private utility companies is typically a weighted average of the cost of debt and the cost to get capital from investors who buy shares in the company.
- The Rate of Return for government-owned companies is typically the cost of government or agency issued debt, stated as a percentage rate.
  - In Florida, rate ranges from 9.0 – 12.0%.
- **Return on Rate Base = Rate Base x Rate of Return** (this is the total amount of money required to be collected to support the rate base).



# Cost Standards

- 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
- Key Point: A non-utility third party (e.g. a regulatory commission) is typically assigned to evaluate the performance of the utility to ensure cost standards are met.





# Setting Rates Based on Cost of Service

*After the utility's revenue requirement is established, the next steps are:*

1. Allocate revenue requirements to customer classes using a “cost of service study”.
2. Design rates by customer class to recover revenue requirements by customer class.



# Rate Design: Role of Rates/Rate Attributes

- Role of Base Rates
  1. Base Rates are the prices charged by the utility to collect the revenues sufficient to cover its cost of providing service.
  2. Base Rates encourage / discourage particular usage behaviors on the part of customers.
- Attributes of a Good Rate Design
  1. Rates should be fair, reasonable and not unduly discriminatory.
  2. Rates should be based on cost.
  3. Rates should be equitable.
  4. Rates should be stable (limit the absolute or percent change).
  5. Rates should be easily understood by customers.
  6. Rates should not encourage wasteful behavior.



# Rate Design: Rate Elements

The fundamental rate elements of base rates include:

- Demand Charge  
Based on costs to meet peak demand
- Energy Charge  
The actual energy used
- Customer Charge  
Customer specific expenses, such as billing



# Rate Design: How are rate classes determined?

Customers are grouped together into a rate class based on common characteristics (meter type, demand size, voltage level, others).

Typical rate classes include:

1. Residential: Single Family
2. Residential: Multi-family dwelling
3. General Service or Commercial Class: small, medium, large (usually based on kilowatt demand and/or voltage level)
4. Industrial Rate Class
5. Others: Street Lighting, Irrigation, Water Pumping, Standby Service



## Establishing Rates: When are Base Rates Changed?

Base Rates are adjusted when:

- 1.The Company's earnings (return on equity) falls outside of the allowed range set by the regulator;
- 2.Often occur at the time of a major expansion in plant; or
- 3.Other extraordinary event that requires revenue to maintain economic viability of the utility (example: severe storm damage).

- Typically, the base rates of most Florida utilities are reset, on average, every 4 years.



## Other Rates

- Fuel and Purchased Power Clause
- Energy Conservation Cost Recovery Clause
- Natural Gas Conservation Cost Recovery Clause
- Environmental Cost Recovery Clause
- Nuclear Cost Recovery Clause



## How It Works in Practice

- Utility files Minimum Filing Requirements (MFR's) and any other information to justify costs
- Intervenors file appearances
- Testimony is filed by all parties
- Regulators hold a hearing on the issues
- Regulators issue an order
- Total time ~ 8 months



## Examples of Past Rate Cases

Utility	What the MFR's requested	What the Commission ordered
<b>FPL</b>	Base rate increase of \$528 million with an ROE of 11.25%	Settlement agreement for base rate increase of \$350 million with an ROE of 10.50%
<b>TECO</b>	Base rate increase of \$134.8 million	Settlement agreement for base rate increase of \$70 million with an ROE of 10.25%
<b>Gulf</b>	Base rate increase of \$90.8 million with an ROE of 11.50%	Settlement agreement for base rate increase of \$55 million with an ROE of 10.25%