Rate-Setting Methods: ROR and PBR
Purposes of Rate-Setting

➢ To recover, but not over-recover, the revenue requirement
  ❖ Prudently incurred costs for used-and-useful investments

➢ To provide a fair return on investment

➢ To fairly allocate costs among customers and customer classes

➢ To satisfy other stated policy goals
Rate-of-Return Regulation

- Rate-of-return regulation is also referred to as cost-of-service regulation
- The Rate Case
  - Revenue Requirement = Cost of Service
  - Test Year: the period in which expenses are compared with revenues
ROR Formula

\[ RR = E + d + T + [r \times (V - D)] \]

- \( E \) = Total operating expense
- \( d \) = Annual depreciation expense
- \( T \) = Taxes
- \( V \) = Original book value of plant
- \( D \) = Accumulated depreciation
- \( (V - D) \) = Net rate base
- \( r \) = Weighted average cost of capital (debt and equity)
Collecting the Revenue Requirement: Prices

- Simple Formula:
  - Price = RR / total kWh sales

- Issues:
  - Cost allocation: who pays?
    - Customer classes?
    - Low- or high-usage consumers?
  - Economic efficiency
    - Production efficiency
    - End-use efficiency
Performance-Based Regulation

- A different way of setting prices
- Links utility's revenues to changes in a defined cost index, instead of to actual changes in its costs
- Rewards utility for improvements in efficiency
- Better allocation of risk between investors and consumers
Basic formula for price or revenue cap index:

\[ \% \text{ change in Index} = Pt - Xt + Zt \]

- \( Pt \) = external inflation measure
- \( Xt \) = expected trend in productivity
- \( Zt \) = exogenous events (plus or minus)
Why PBR?

- Dissatisfaction with traditional regulatory tools
  - Management audits
  - Prudence reviews
  - Used-and-usefulness determinations
- Transition or alternative to competition
Incentive Regulation

- All regulation is incentive regulation
- Trick is to understand what incentives your chosen form of regulation is providing
ROR vs. PBR

- Whether COS or PBR, the power is in
  - The method's marginal impact of performance on profits
  - The time between rate cases, i.e. regulatory lag

- PBR is not necessarily more powerful than PBR/COS
  - The structure of the PBR matters!
Service Quality

- The incentive to reduce costs may encourage a utility to reduce service quality
- Consider setting specific financial incentive/penalty provisions
  - Performance standards for:
    - Outage hours
    - Customer service, complaints
    - Safety
  - Stricter standards over time