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# **Pricing Issues and COS**

## **Principles Used to**

### **Establish Retail Rates**

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February 13, 2006

# Costs and Retail Rates

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- ▲ A review of traditional ratemaking practices
- ▲ Resolving differences between embedded costs and marginal costs
- ▲ A look at the role of marginal costs in regulated pricing

# Traditional Rate Making

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- ▲ Pricing practices are “Cost of Service” based
- ▲ Accounting and Engineering focus
- ▲ Cost Causation – Those who cause costs should pay those costs
- ▲ Embedded Costs are “fair”
- ▲ Marginal Costs are “efficient”

# Costing

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- Embedded COS studies – Focus is to divide costs fairly between customers
- Marginal COS studies – Focus is to efficiently allocate limited resources to unlimited wants and needs
- Is one method preferred above another? MCOS vs. ECOS? MCOS and ECOS?
- Most use ECOS to establish the ‘revenue requirement’ for customer groups and MCOS for guidance in developing prices
- Costing is the starting point, not the ending point to develop prices

# Pricing

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- Pricing is your most important communication with your customers.
- Price Structure vs. Price Level
- Costing vs. Pricing – Analogy: It's a coach's decision... Costing provides important statistics about players (height, weight, speed, etc.), but the coach must decide who plays and which players together make the strongest team.
- Remember: if some customers seem undesirable (less profitable), then change the pricing to make them desirable... i.e. "There are no bad loads (customers), only bad pricing."

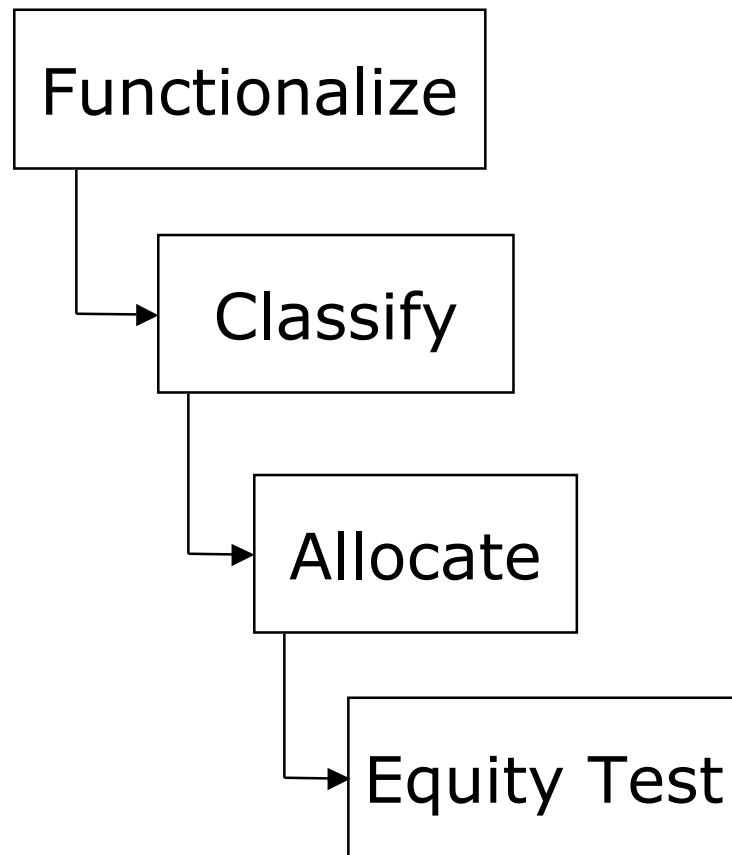
# Cost of Service Principles

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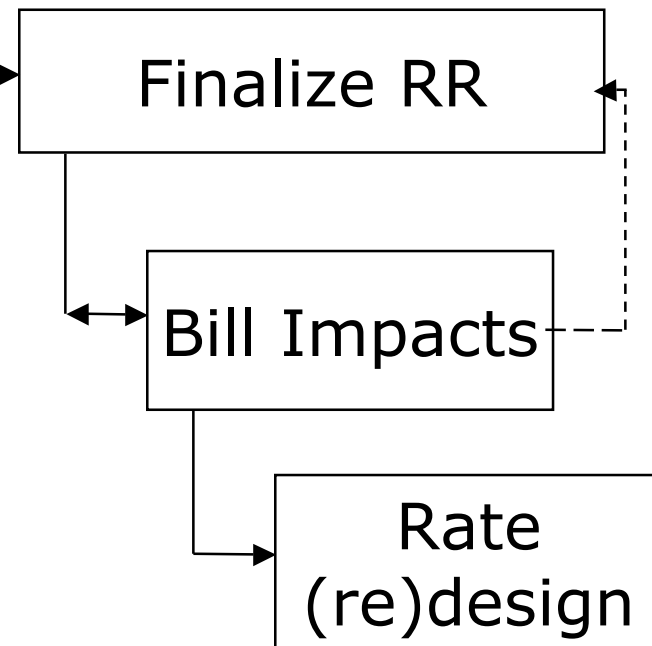
- ▲ In most jurisdiction accounting costs (embedded costs) are used to establish “revenue requirements “
- ▲ Recovery of all (prudent) costs is generally permitted
- ▲ Costs are allocated to customer groups
- ▲ Cost Causation – Those who cause costs should pay those costs

# Steps in an Embedded COS Study

## Test Year Analysis



## Rate Year Analysis



# Cost of Service Rate-Practices

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- ❑ Cost of Service study is a financial model of the accounting costs of the utility
- ❑ COS study categorizes costs by:
  - function - production, transmission, distribution, general
  - classification – demand, energy, customer
  - jurisdiction – wholesale, retail, retail by state
- ❑ COS study divides costs between customer groups based on a “fair” allocation of costs
- ❑ Allocation factors are developed based on customer group usage data

# Cost of Service Drawbacks

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- ▲ Accounting costs (embedded costs) are used to establish “revenue requirements”
  - “Gradualism” principle has been used to delay needed price corrections or adjustments
- ▲ Recovery of (prudent) total costs is permitted
  - Social ratemaking can introduce distortions
- ▲ Costs are allocated to customer groups
  - Customer groups are frequently arbitrarily defined and group definitions are rarely examined

# Marginal Costs of Service

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- ▲ Marginal Costs are the added costs associated with added usage (often referred to as incremental costs)
- ▲ Marginal Costs are independent of current rate codes/customer groupings
- ▲ Do marginal costs matter? What about wholesale market prices

# Marginal Costs of Service - Principles

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- ▲ Production Costs vary by time of use
- ▲ Transmission Costs vary by location (zone or node)
- ▲ Distribution Costs vary by customer size
- ▲ Service Costs vary by metering and customer support requirements
- ▲ A customer's marginal costs are driven primarily by:
  - Load Shape
  - Size and service voltage

# Types of Marginal Cost Studies

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- ▲ Production Energy: Engineering Models of System Dispatch
- ▲ Production Demand:
  - Peaker method
  - Present Worth method
  - Trended Historical Costs
- ▲ Distribution:
  - Area studies
  - Local facilities
- ▲ Transmission: “ISO” method (MCOS to retailer = ISO prices)
- ▲ Customer:
  - Metering
  - Local facilities

## How can Marginal Costs be used to establish rates?

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Marginal Costs can:

- ▲ Provide seasonal cost data
- ▲ Time period cost data
- ▲ For block rates: provide “last step” costing data
- ▲ Establish relationships between prices within a rate
- ▲ Establish Innovative Pricing and DSM program benchmarks

# Marginal Cost Based Rate Design

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## ▲ Paradox

- Rates that reflect MCOS will almost never produce the same revenue as the ECOS revenue requirement
- Resolve through second-best pricing

## ▲ Therefore in Regulated Environments:

- Adjusting Marginal Costs to the Revenue Requirement (RR)
  - Inverse Elasticity Rule
  - Equi-proportional adjustment
- Shifting RR between customer groupings
- Shifting RR among customers within a group

## Second Best: Inverse Elasticity Rule

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- ▲ Establish marginal prices at marginal costs, i.e. set “tail-step” prices at marginal costs
- ▲ Tie to revenue requirement via price adjustments to the base service charge and “1<sup>st</sup> step” prices.
- ▲ Based on belief that prices for **marginal usage** are most effective at influencing customer behavior

# Second Best - Equi-Proportional Adjustments

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- ▲ Scales marginal costs to match revenue requirement
- ▲ As marginal costs are adjusted, price signals become distorted
- ▲ Based on belief that ratios between prices are more effective at changing customer behavior

## Examples of Roles for Marginal Costs in Rate Design

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- ▲ Real Time Pricing (RTP) programs
- ▲ Interruptible rate programs
- ▲ Demand Side Management (DSM) programs
- ▲ TOU pricing
- ▲ Comfort and Convenience programs

# Points for **Regulators** to Consider – **Bundled Service Markets**

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- ▲ Use marginal cost data to influence rate design.
- ▲ Encourage use of marginal costs to evaluate optional program performance.
- ▲ Gradualism principle should not be an excuse to delay needed adjustments.

# Points for **Regulators** to Consider – **Customer Choice Markets**

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- ▲ Set default commodity rates as close as possible to market spot prices
  - ▣ Tie energy prices to day-ahead spot market LMPs
  - ▣ Tie capacity costs to market cost of capacity
  - ▣ Collect wires charges separately to fully recover costs
- ▲ Unbundling must match the degree of customer choice

# Points for **Utilities** to Consider

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- ▲ Conduct a rigorous review of your existing pricing
  - ❑ Are there vulnerabilities to self-supply or competitive poaching (uneconomic bypass)?
  - ❑ Identify and work to eliminate indefensible and potential vulnerable cross-subsidies
- ▲ Use marginal cost data to establish optional pricing programs
  - ❑ Are there opportunities to offer optional rates that are beneficial to customers and the utility?

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UtiliPoint International, Inc.

**Thanks for your  
time!**

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February 13, 2006