

Rate Policy, Cost of Service and Cost-based Rates

KENTUCKY RURAL WATER ASSOCIATION

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Those were the days....

- ▶ Plenty of grants and low interest loans!
- ▶ Cheap water/wastewater!
- ▶ Few security issues!
- ▶ Customers were happy!



Today's Reality

- ▶ Security Issues
- ▶ Customer Education
- ▶ Affordability
- ▶ Regulations (SDWA/CWA)
- ▶ Infrastructure Improvements
- ▶ **Funding**

Funding Gap

- ▶ EPA estimates there is a \$31 billion gap between current capital funding levels and water infrastructure capital needs.
- ▶ The Water Infrastructure Network, EPA and the Congressional Budget Office have all estimated that rates will have to be increased by 100% to meet projected needs.

Decreasing Subsidies

- ▶ Argument for subsidies reflects the belief that water/wastewater service is a public good and infrastructure must be maintained.
- ▶ Argument against federal subsidies is that it rewards past inefficiency by allowing artificially low rates for service.

Why Future Infrastructure Costs are so Large?

- ▶ Demographics - service in less dense areas is more expensive
- ▶ Denial - ignoring the problem of aging infrastructure
- ▶ Deferral - we can wait another few years
- ▶ Diversion - we need to use the money elsewhere

Road to Financial Peril

- ▶ Living off of Depreciation
- ▶ Operating in the "Red"
- ▶ Not meeting bond reserve requirements
- ▶ Frequent non-compliance
- ▶ Vendors require COD
- ▶ Arrears to funding agency
- ▶ **RECIVERSHIP**

Rate Policies and Procedures

- ▶ All policies and procedures should be in writing and available for review.

Should comply with federal and state regulations.

Should ensure that all customers are treated in an equitable manner.

Federal Policy

- ▶ Better management of water and wastewater infrastructure and resources
- ▶ Increased efficiencies in utility services
- ▶ Asset Management
- ▶ **Full-cost pricing**

Role of Financial Planning

- ▶ Provides a Framework for Decision Making
- ▶ Assures Financial Viability
- ▶ Use as a Capital Planning Tool
- ▶ Use as a Strategic Planning Tool
- ▶ Use as a Basis to Develop and Minimize Rates

Need for a Capital Budget

- ▶ Over 700,000 miles of pipe that deliver water to US households.
- ▶ Capital Needs - \$31.8 billion for water infrastructure needs.
- ▶ \$25.7 billion for sewer infrastructure.

Capital Planning Issues

- ▶ Customer's ability and willingness to pay for new facilities
- ▶ Return on investment (customers per mile of line)
- ▶ Review of financing alternatives

Capital Planning and Rates

- + Total Capital Projects
 - Revenue Bonds or Loans
 - Grants
 - Customer Contributions

= Capital Projects Funded from Rates

Revenue Requirement

► Operating and Maintenance Revenue Requirement:

+ Operation and Maintenance Expenses

+ Debt Service and Coverage

+ Depreciation

= Total Revenue Requirement

Rates are set to equal revenue

Cost-based Rates

- ▶ Allocates true costs to various types of customers:
 - Residential
 - Commercial
 - Industrial

5 Steps to Cost Based Rates

- ▶ Load forecast - billing analysis to determine customer usage patterns
- ▶ O & M and Capital Budget
- ▶ Revenue Requirement
- ▶ Cost of Service Study
- ▶ Rates

O & M Expenses

- ▶ Treatment
- ▶ Pumping
- ▶ Transmission
- ▶ Distribution/Collection
- ▶ Customer
- ▶ Administrative and General

Classification of Expenses

- ▶ Commodity
- ▶ Demand
- ▶ Customer
- ▶ Fire protection
- ▶ Wholesale

Commodity Costs

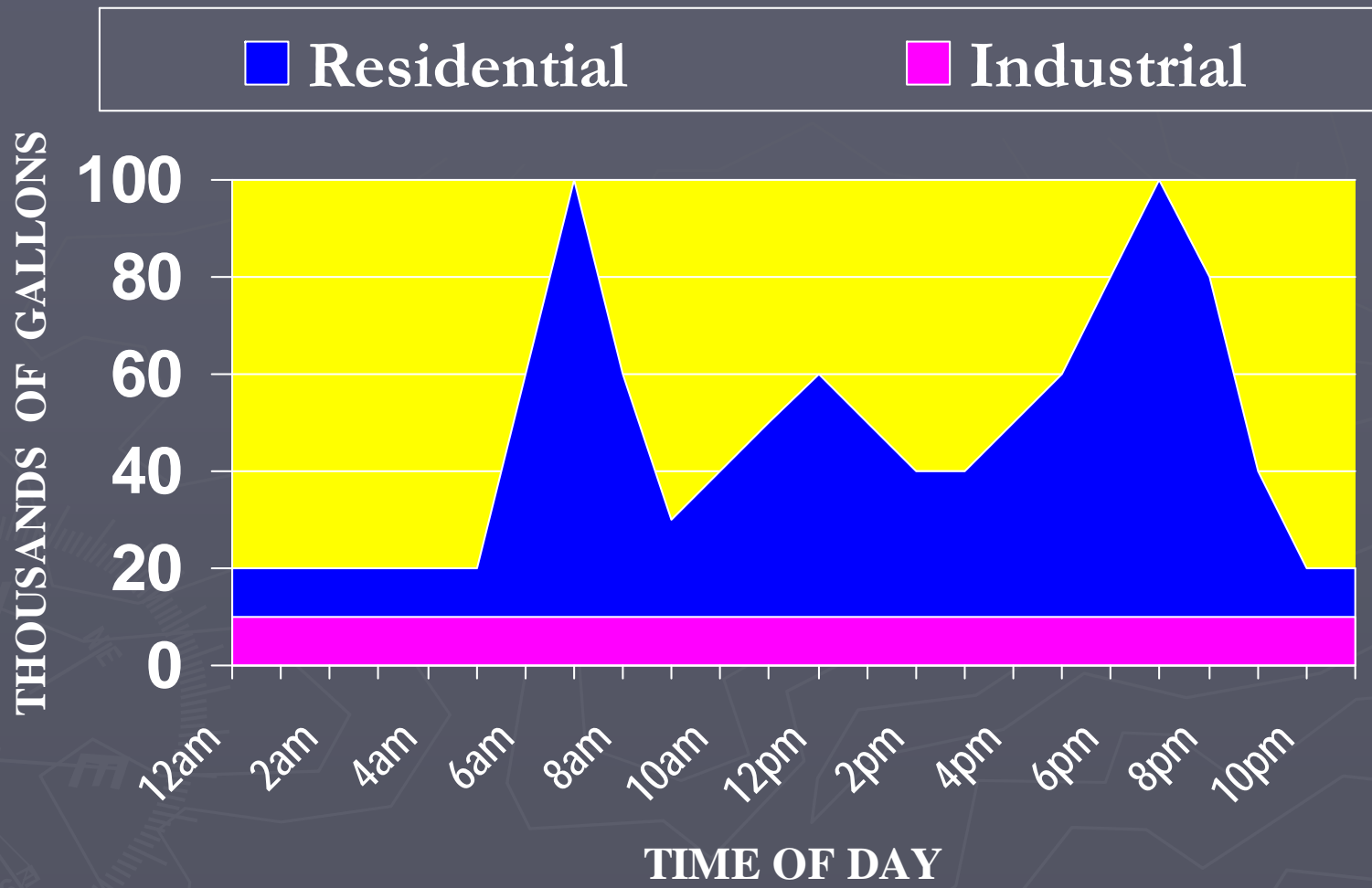
- ▶ Costs that vary with the amount of water/wastewater treated.
 - Power for pumping
 - Chemicals
 - Purchased water/wastewater

Demand Costs

- ▶ Costs associated with providing the facilities to meet the peak demands placed on the system.

Rate Considerations

- ▶ The demand the customer places on the system is an important consideration when designing water and wastewater rates.



Peak Demand Considerations

- ▶ Your plant must be sized to meet peak demands.
- ▶ But you only generate revenue when plant is being used.
- ▶ Which customers cause you to have idle plant during non-peak times?
- ▶ In many cases, large usage customers may not contribute to peak day demands.

Customer Costs

- Costs incurred to serve customers without regard to usage.
 - Meter reading
 - Billing and collections
 - Meters and service lines

All Expenses

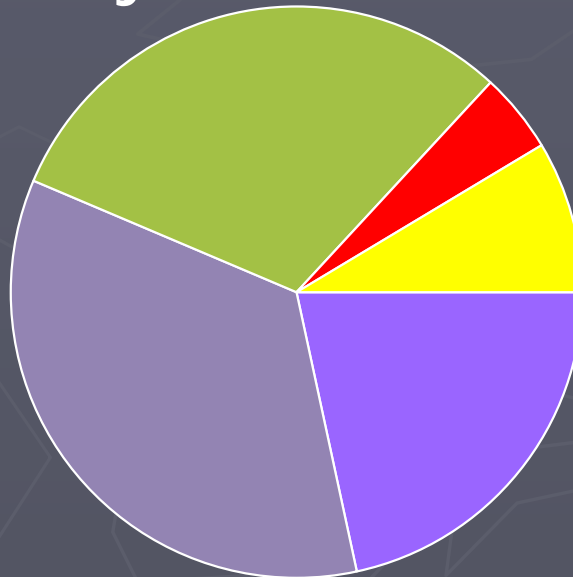
Commodity

Wholesale

Fire Protection

Demand

Customer



Cost of Service Study

- ✓ Load Forecast or Billing Analysis
- ✓ O & M and Capital Budget
- ✓ Allocated expenses by function (treatment, pumping, collection and distribution and customer)

What Does This Mean

- ▶ Cost based rates usually mean higher rates.
- ▶ Higher rates have political implications.
- ▶ Raise affordability issues.
- ▶ Education is needed.

Utility Education

- ▶ Utility managers, boards, councils and commissioners must be made aware that:
 - Government funding will be scarce,
 - They will be required to charge cost based rates if they obtain financing
 - Rates are going to increase
 - They must educate their customers.

Customer Education

- ▶ Customers need to be educated about the important role water and wastewater utilities play in...
 - maintaining health and well being.
 - providing a basis for economic growth.

Why is Water and Wastewater Undervalued?

- ▶ Because they are under priced.
- ▶ Infrastructure is hidden.
- ▶ Customers do not know the process of getting water from source to tap or wastewater from toilet to stream?

Our Utility Services are a Bargain

Cable Television	\$45.00
Cellular Phones	50.00
Broadband	50.00
Drinking Water	25.00
Wastewater	30.00

Willingness to Pay v. Willingness to Charge

Water/WW Service Is Affordable

- ▶ In the 1990's average bills for drinking water and wastewater services combined represented 0.5 percent of average household income.
- ▶ By 2019 average household water/ww bills will account for 0.6 to 0.9 percent of household income.

Source: Congressional Budget Office

Water/WW Service is Affordable

- ▶ The markup cost for a private water company on tap water is around 10 percent.
- ▶ The markup cost on bottled water is around 600 percent.

10 WAYS TO FIND MONEY

- ▶ Collect overdue accounts and enforce shutoff policies
- ▶ Reduce Leaks and I/I
- ▶ Make sure meters are working
 - Keeps track of water used
 - Leaks vs. Free water to customers

10 WAYS TO FIND MONEY

- ▶ Update fees, deposits and charges
- ▶ Send bills on time
- ▶ Find and stop thieves
- ▶ Buy supplies in bulk

10 WAYS TO FIND MONEY

- ▶ Add new customers
- ▶ Run pumps and blowers at off peak hours to save electricity costs
- ▶ Invest wisely – Borrow wisely

Washington State Department of Health – Water Tap Newsletter

Summary

- ▶ Low-cost funding is harder to obtain
- ▶ Gap between funding and needs grows
- ▶ Rates should be cost-based
- ▶ Customers need to be educated

Summary

- ▶ Water and wastewater services are in the public interest.
- ▶ Utilities must be run like a business - the people's business.
- ▶ Good customer relations skills must be utilized.