

Utility Rate Setting Basics for Newly Elected Officials

Association of
Washington Cities

Presented by
Brooke Tacia, Project Manager

August 21, 2020

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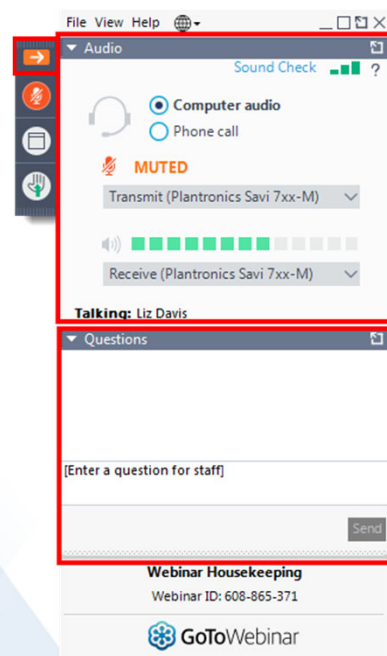
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Agenda

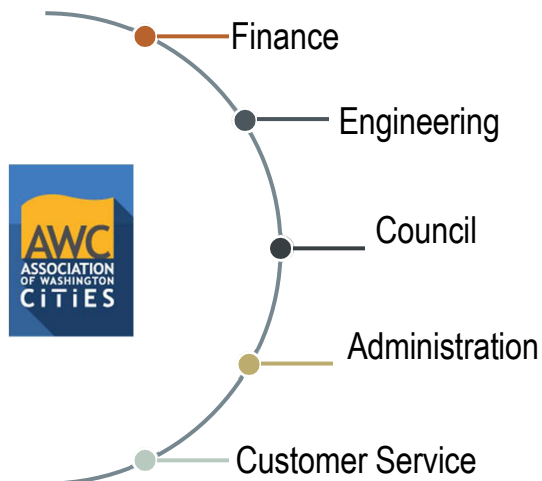
- ◆ What is a rate study? Why is it important?
- ◆ Setting the framework – Financial Policies
- ◆ Defining overall needs – Revenue Requirement
- ◆ Equity evaluation – Cost of Service
- ◆ Collecting the target revenue – Rate Design
- ◆ Questions / Discussion

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A Successful Rate Study is...










Not simply just a
financial exercise

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Why are Rate Studies Important?

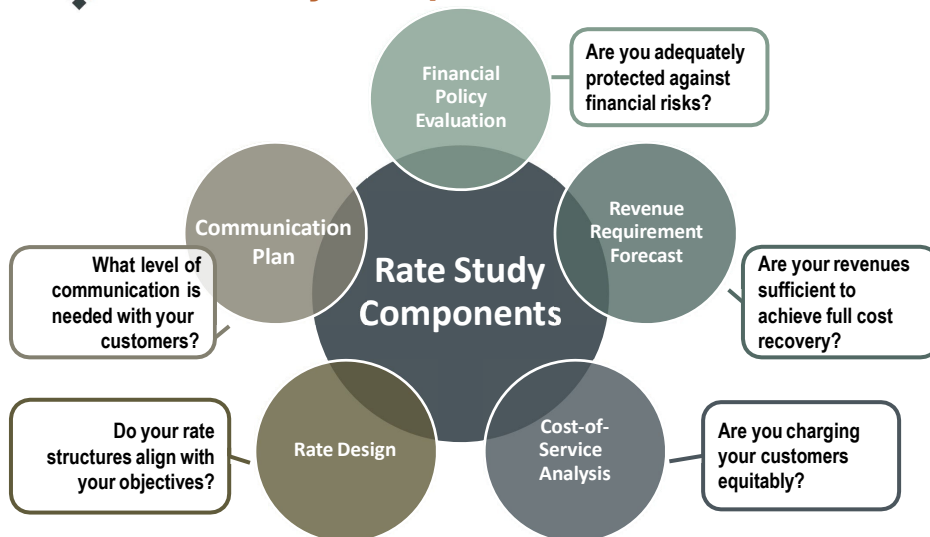
-  Maintain the long-term health and integrity of utility systems
-  Quantify policies, priorities, and initiatives
-  Tell the “true” cost of providing service
-  Track cost information
-  Evaluate equity between customer groups
-  Communicate financial decisions and their impact
-  Management tool

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Rate Study Components



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Understand Sensitivities And Priorities

- ◆ Understanding priority of management sets the stage for your rate study
- ◆ Policies, strategies and rate structures can be developed or refined to align with priorities



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Financial Policies

Balance Sheet

Assets

Current Asset

Cash

80,642

\$1,332,75

342

005

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Are you Adequately Mitigating Risks?

Financial policies serve to:

- ◆ Promote financial stability
- ◆ Improve ability to weather financial disruptions
- ◆ Establish foundation for consistent financial / rate decisions
- ◆ Help stabilize rates over time

Formally adopted
documented
financial policies
are ideal!

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Choosing your Financial Policies

	Purpose	Target
Operating Reserve	Liquidity cushion to accommodate cyclical cash flow fluctuations	Water = 90; Sewer = 45-90 Storm/Solid Waste = 30 Days O&M
Capital Contingency Reserve	To meet emergency repairs, unanticipated capital, and project cost overruns	1% - 2% of Original Cost Asset Values
Capital Replacement Funding	Annual contribution from rate revenue toward the accumulating replacement liability - utility infrastructure	Annual Depreciation Expense; Replacement Cost Depreciation
Equipment Reserve Funding	To fund ongoing vehicle and equipment replacement	Based on estimated replacement value
Debt Service Coverage	Compliance with existing debt covenants and maintain credit worthiness for future debt needs.	Target 2.0 or higher; Minimum Requirement 1.25
Rate Setting	Multi-year financial plan	2-6 years for rate-setting, 20-yr Comp plans
Revenue Sufficiency	Set rates to meet the total annual financial obligations of the utility and be self supporting	Rates shall be set to cover O&M, debt service, replacement reserves and fiscal policy achievement

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Revenue Requirement

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Overview of Revenue Requirement

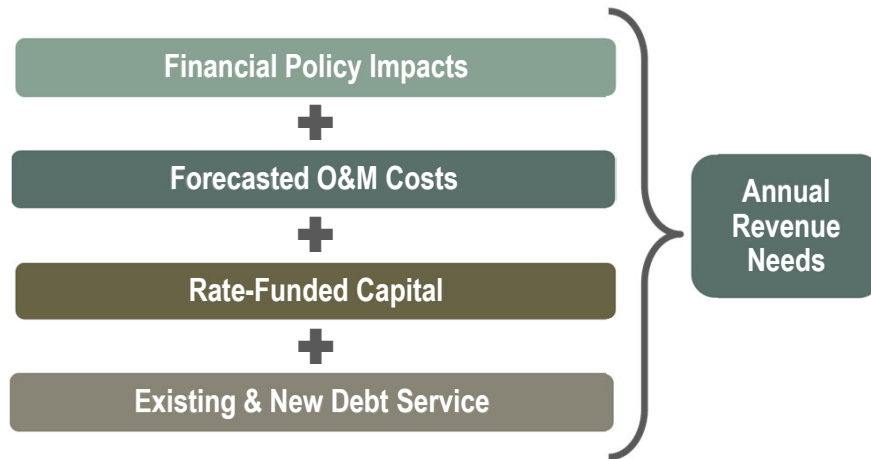
- ◆ Determines the amount of annual revenue necessary to meet all utility financial obligations
- ◆ Evaluates sufficiency of current rates on a standalone basis
- ◆ Develops annual rate adjustment strategy
 - Multi-year financial plan

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How Much Revenue is Needed?



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Two Key Cost Areas

Operations & Maintenance	Capital Infrastructure
<ul style="list-style-type: none"> Regular, ongoing activities Highly time/schedule sensitive More predictable spending patterns More predictable funding sources 	<ul style="list-style-type: none"> Large, discrete projects Limited time/schedule sensitivity Less predictable spending patterns Less predictable funding sources

Separating operating and capital activities facilitates more accurate forecasting

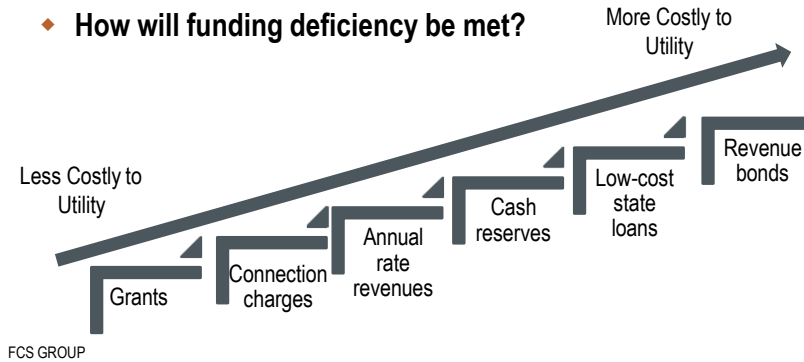
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Capital Funding Considerations

- ♦ **Understanding nature of capital projects can determine if funding should be cash, debt or a combination**
 - Debt financing spreads costs between existing and future ratepayers
 - Existing customers should pay for assets currently in use - appropriate to rate (cash) fund
- ♦ **How will funding deficiency be met?**



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Capital Funding Philosophy

Cash (pay-as-you-go)

- Higher near term rates
- Existing customers pay 100% of initial costs

Debt Financing

- Lowest near-term rates
- Mitigates immediate rate impacts of costly capital
- More closely matches costs to useful life of asset
- Spreads costs between existing and future ratepayers
- Debt capacity may be an issue

Hybrid

- Define a reasonable basis for cash/rate funding (R&R projects?)
- Evaluate need for debt (large, long life projects)
- Aligns funding with nature of capital project

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Replacement Funding – How Much?

- ◆ Is asset inventory available?
- ◆ Do you know original cost of assets?
 - If answer is no, you can still move ahead!
- ◆ Gather staff resources and historical documents to begin the process of creating system value
 - Critical information for understanding replacement funding needs and setting system connection charges

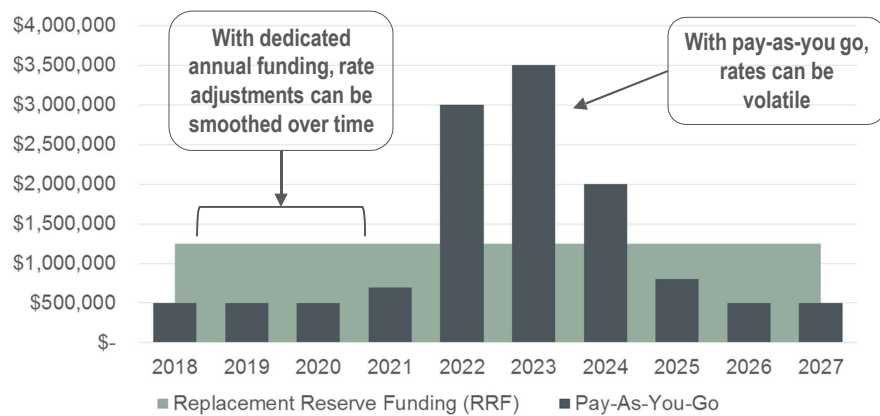
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Replacement Reserve Funding (RRF)

- ◆ Annual capital spending may not be uniform




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Revenue Considerations

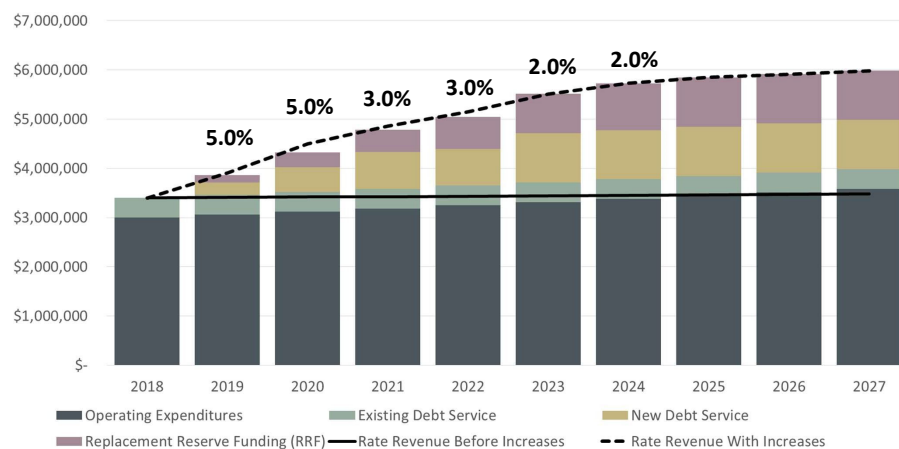
Revenue Considerations	
Rate Revenue	<ul style="list-style-type: none"> Review historical trends Anticipate growth (but be conservative) Annexation / service area expansion New, large customer
Other Revenue	<ul style="list-style-type: none"> Miscellaneous fees One time or recurring Increase w/ customer growth or flat
Fund Balance	<ul style="list-style-type: none"> Not an on-going resource Can mask revenue shortfalls 

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Summary of Rate Revenue Requirement



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Decision Point for Utility – Can We Stop Here?

- ◆ Little diversity exists in customer base?
- ◆ Satisfied with current class equity?
- ◆ Current rate structure adequately meets goals?
- ◆ If no rate structure change is needed: simply apply indicated rate increases across the board to existing rate structure

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Cost of Service = Equity Evaluation

- ♦ **An equitable distribution of cost shares that considers utility specific data:**
 - Industry standard methodologies
 - Unique usage characteristics (use and demands)
 - Unique facility requirements (planning and design criteria)
- ♦ **Total cost by class (equity)**
- ♦ **Unit costs (\$/usage; \$/customer)**
- ♦ **Determines the cost difference to serve different customer classes of service**

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Sample Water Customer Classes

Single Family Residential (SFR)

- Typically largest customer group
- Relatively low usage per unit
- High peak demand
- Lowest fire flow requirement

Multi-family Residential (MFR)

- Lower usage per dwelling unit
- Usually master metered
- Relatively constant use
- Fire flow requirement between SFR & commercial

Commercial/ Industrial

- Diversity in use per account
- Relatively constant use
- Highest fire flow requirement

Parks, Irrigation, & Agriculture

- Often smallest customer classes in terms of accounts
- Majority of use in peak season
- No fire flow requirement
- Economic sensitivity

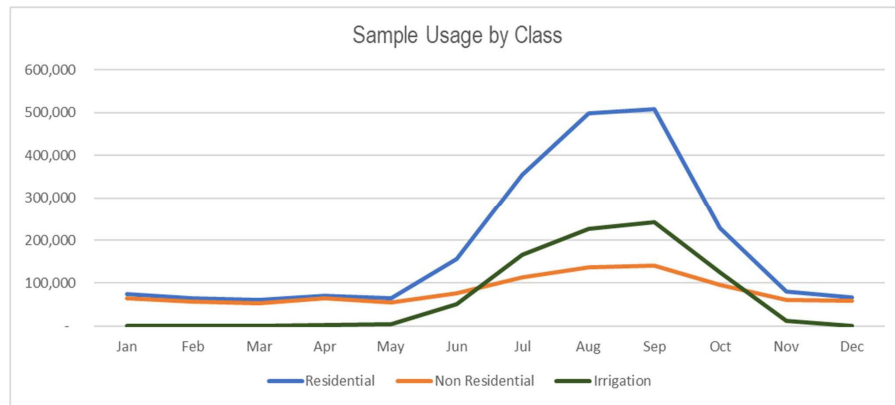
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Sample Customer Class Demand Profiles



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Determining Your Customer Class Cost Shares

- ◆ **Cost-of-service analysis identifies how costs should be equitably distributed among customer classes**

Class	Existing 2017 Revenue	COSA 2017 Revenue	\$ Difference	% Difference
Residential	\$ 5,635,687	\$ 5,818,285	\$ 182,598	3.24%
Multifamily	1,359,847	1,009,157	(350,690)	-25.79%
Commercial	2,548,590	2,716,682	168,092	6.60%
Total	\$ 9,544,124	\$ 9,544,124	\$ -	0.00%

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Overview of Rate Design

- ◆ **Creation of rate structures that recover the target level of revenue**
- ◆ **Primary communication with customers**
- ◆ **Composed of fixed and/or variable charges**
- ◆ **Considers industry trends and current pricing goals**

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Does Rate Structure Align with Your Objectives?

Example Rate Structure Goals		Ranking
Financial Sustainability	<ul style="list-style-type: none">• Sufficient and predictable revenue to recover costs• Stable and predictable impacts to customers• Adaptable to changing demands	?
Conservation and Efficiency	<ul style="list-style-type: none">• Promote conservation and efficiency of use• Protect natural resources	?
Transparency and Simplicity	<ul style="list-style-type: none">• Easy to understand, explain and administer• Compatible with billing system / meter reading	?
Fairness and Equity	<ul style="list-style-type: none">• Correlation of rates with costs• Reflect customer usage patterns and service requirements	?
Affordability	<ul style="list-style-type: none">• Provide affordable water to "lifeline" users• Support economic development / preservation	?

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Fixed and Volume Rate Recovery

Fixed Charges	Volume Charges
<p>Addresses revenue stability</p> <ul style="list-style-type: none">♦ Imposed on each meter, account, or ERU♦ Do not vary with the amount of use♦ Provides a predictable source of revenue	<p>Addresses equity & conservation</p> <ul style="list-style-type: none">♦ Imposed on each unit (ccf or 1,000 gallons) of use/flow♦ Recover a greater share of revenue from customers who place the greatest demand on the system♦ Encourage conservation and efficiency in use♦ Introduces additional revenue volatility and seasonality

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Example Rate Structures

Water Example	
Base Charge - All Classes	
5/8" or 3/4"	\$ 16.46
1"	\$ 20.15
1.5"	\$ 33.68
2"	\$ 48.46
3"	\$ 87.93
4"	\$ 132.28
6"	\$ 255.43
8"	\$ 403.27
Residential	
Usage Charge (in gallons)	
1,000-10,000	\$ 1.19
11,000-20,000	\$ 3.16
20,000+	\$ 4.50
Multi-Family / Commercial	
Usage Charge (in gallons)	
All usage	\$ 3.50

Sewer Example	
Residential / MF - Option 1	
Flat Charge (per month)	\$ 57.40
Residential - Option 2	
Fixed Charge (per month)	\$ 35.00
Winter Average Usage Charge (per ccf)	\$ 3.25
MF / Commercial - Option 1	
Fixed Charge (per month)	\$ 35.00
All usage (per ccf)	\$ 3.25
Commercial - Option 2	
Fixed Charge (per month)	\$ 35.00
Low Strength (per ccf)	\$ 3.25
Medium Strength (per ccf)	\$ 4.50
High Strength (per ccf)	\$ 5.75
Stormwater Example	
Per Equivalent Residential Unit (ERU)	\$ 16.75

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Concluding Comments

- ◆ The level of complexity required for your rate study will depend on what questions you are trying to answer
- ◆ Having a representative from key departments improves results
- ◆ Understanding the outcome of each rate study component can help you focus on solving your problems taking into consideration resource availability
- ◆ A rate study provides a financial planning tool that is vital for prudent fiscal management and financial sustainability

Where do
want to go?

How are you
going to get
there?

What will it
cost?

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