

The background of the cover features a water tower on the left side, rendered in a white wireframe style against a blurred background of stacks of coins and US dollar bills. The text is overlaid on the right side of the image.

How to Get Great Rates

The straightforward approach for setting
water, sewer, and other utility rates
that properly support the utility
and treat ratepayers fairly

Carl Brown

Prologue for Skeptics

The scene: You are attending the annual meeting of your state’s rural water association or league of cities. The keynote speaker is about to take the stage. He is charismatic and though he is new to you he has already attracted a wide following to his message. You, like half of those waiting in the audience have yet to see him in person but you are anxious to learn what many in the audience are buzzing about. Finally, he strides to the podium, turns to the audience and speaks.

“The top priority for your utility? ... Fixing your rates... They are too low by 40 percent... You can raise rates by 40 percent and your ratepayers will love you for it... It’s easy to do, but... You must have a plan or you will go down in flames...” He pauses for effect, then whispers,

“Do you want the plan?”

Surprise! That guy doesn’t have your plan and neither does this one. But, you can build your own plan and execute your new rates from the guidance in this book. No, your ratepayers won’t be happy if you raise their rates. But if you do it correctly they will understand and accept the situation. That is the best you can hope for. They will learn from what you present and what they experience that the rate increase won’t hurt much after all. They will even forget about it two months later.

The story? Made up.

The question? Real.

Do you want the plan? Then read on.



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How to Read This Guide Quickly and Effectively

Of course it would be most useful if you read the whole book front to back. But, you are busy. Spend two minutes here and you might cut your reading and learning time drastically. Find the description that best fits you and progress through the book as suggested.

This is you

You are skeptical about the need to base rate setting on a rate analysis.

You are motivated to get great rates but you don't want to learn how to analyze rates yourself.

Your system serves fewer than 400 people, your rates have not been adjusted for a long time and you feel you will have to do it all yourself.

Your system serves more than 10,000 people and you want to learn as much as you can about rate setting.

You did or got a comprehensive rate analysis a year or two ago. Now it's time to do inflationary increases.

You are a system operator with little, if any rate setting duties.

This is what you should do

Read the Introduction and Chapter 1. If that changes your mind about rate setting, return here to find your new description. If your mind is not changed, go about rate setting however you feel is appropriate.

Read Chapter 2 and Chapters 13 through 15. Then, set about hiring your analyst. After you get that underway, read Chapters 8 and 9.

Read the entire book, preferably from beginning to end. Then, read several of the referenced books. Consider getting a do-it-yourself rate analysis program or subscribe to the author's program by visiting www.gettinggreatrates.com/.

Read the entire book, preferably from beginning to end. Read several of the referenced books. Get and use several of the referenced rate calculation tools. Then, analyze and reset your rates very quickly. You are probably losing thousands of dollars each day because your rates need to go up.

Read Chapters 2, 9 and 10 and then other chapters as they appeal to you.

Read at least Chapters 11 and 12. Then, give the book to your system's decision-makers and management to read. Without good rates your job as an operator will be very difficult so you want them to be well-informed rate setters.

Acknowledgments

Where would we be without the thousands of local government elected officials who make our cities and service districts run? Oh sure, some like the notoriety they gain by being the mayor of their home town or the water board chairman of their rural area. But almost all work long, unpaid hours, under-appreciated by those they serve. Why do they do it? They want to help us.

Where would we be without the thousands of men and women who have chosen a career in local government work? Sure, they get paid but compared to what we citizens and service consumers receive, we are getting an amazing bargain and we don't even know it. They too put up with our short tempers and disdain and still they press on. They want to help us, too.

We owe our local government elected officials and staff a huge debt of gratitude. Most of you reading this book now are those very people so I address this to you. Thank you for all that you do for us and for putting up with us.

Since 1991 I have been fortunate to work with hundreds of your fellow local government officials and staff and maybe even you. During that time I have trained thousands and learned from many, too. I know what I'm talking about when I say that, almost without exception, you and your colleagues are wonderful to work with. Many of you have contributed the problem examples, solutions and stories that are told in these pages. It is with you in mind that I decided to write this book for utility rate setting. This is one way that I can help you overcome one of your many challenges – setting and keeping great rates.

Please press on with your work and your service to us. Don't let our complaints and bad behavior get you down. I appreciate you and I know many others do, too. We are a majority that stays pretty silent but just know that we are pulling for you just the same.

Finally, and this is heartfelt, where would I personally be without all the great mentoring, advice, training, rich experiences and more that I have enjoyed over the years. So many things have shaped me in this walk of rate setting:

- The love of my wife.
- Experiences with my clients.
- The wonderful advice of my last boss' boss who told me, "Get out and spread your wings."
(Maybe it wasn't quite that affirmative but that's my story and I'm sticking to it.)

I owe so many people thanks for all they have done to move me forward. Over the years I have been able to help thousands of cities and service districts. That has improved the lives of hundreds of thousands to maybe a few million people. That is VERY satisfying to me. I thank all of you who helped me and all of you who allowed me to help you.

Foreword

Rate setting drives people crazy!

Utility decision-makers fear adjusting rates. They **fear** even bringing the topic up. Well, except for those candidates for office who decided to run on a platform of **slashing** rates.

Ratepayers hate paying higher rates and they can get vocal about it. Ratepayers love voting elected officials out of office if they think those “politicians” raised their rates unfairly.

Rate setting will never become a recreational pastime. But, it doesn’t have to drive anyone crazy, either. With education, a good strategy and proper tools and help, great rates can be yours without all the craziness. If the rate analysis part of rate setting sounds like too much risk and work, and for many it is, just hire a great rate analyst and “buy” great rates. Either way, with great rates you can do everything it takes to provide excellent service to your ratepayers and run a sustainable utility.

There are other books, manuals and tools for rate setting. Some of these resources are useful to and affordable for small and medium sized systems. I offer this suggestion. Read this book. Then, if you find you want to grow your rate setting prowess even more, buy and use several of the other resources referenced in this book. I also offer this warning. Watch out for the siren call of the many short and simplistic guides and pamphlets on rate setting. They are good for introducing people to the need for good rate setting but those pamphlets are simply too brief to help you responsibly set rates.

The goal of this book is to strike a balance between too techie and long versus too simplistic and short; practical, yet complete enough to be responsible. The book also does a lot of hand-holding and mentoring. Hopefully you will find that aspect helpful and not condescending. The book includes descriptive text so you can learn the basic concepts and principles. It includes examples of the main parts of rate setting. And, it gives you access to useful tools and resources for getting the job done fairly soon, fairly easily, very accurately and always defensibly.

This book will help all systems do rate setting that is sane, quick, cheap and effective.

Ready? Let’s go.

Primary audience for this book:

- Rate setting decision-makers
- Board and council members, mayors, chairpersons and presidents
- City and district administration, finance and senior operations staff

Secondary audience:

- Decision-makers in-waiting and lower-tier city and district staff with ambitions of climbing
- Consulting engineers
- Attorneys
- Public accountants
- Agency and association-employed assistance providers

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Introduction

Freeboard – The distance between the surface of the water and the lowest point on the top of the boat hull.
Significance – Insufficient freeboard will lead to sinking.

Picture this. You are very gently paddling your boat across a mirror-smooth lake. There is no possibility that a rock will be tossed in the water near you, that a snake will pop up next to your paddling hand, that the wind will blow, that the rotten plug in the hull will pop out or that your trusty but frisky canine will jump around in the boat. Guess what? You don't need much freeboard to make it to the other side.

Now picture this. You're a teenaged kid paddling down a fast, cool, scenic river on a hot summer day. You might like to get swamped. If you're a teenaged boy with a cute teenaged girl on-board, getting swamped might be the first item on your agenda.

Great rates are rates that are adequate to fill all the short and longer-term needs of the system and they are structured fairly for the ratepayers, too.

Now picture this. You're the manager of a utility that serves 2,000 customers, including 100 businesses. They all depend on your service every day. Do your customers want their utility boat to get swamped? Not on your life! Do they want to pay what it will take to keep the boat from getting swamped? Not on your life! You have some convincing to do and that is just one of the joys of proper rate setting.

Net revenue and reserves are a utility's "freeboard." Without freeboard every utility will get swamped. It's only a matter of time. How to avoid getting swamped? Build freeboard with great rate setting.

Why should you want great rates? You probably have heard about the funding "gap" for water and sewer systems¹. This gap is huge and growing rapidly, largely because rates are too low. Get great rates and you will close most if not all of your funding gap. Adopt advanced asset management strategies and you will close the rest of your gap. In fact, great rates and advanced asset management fit together like hand in glove. Asset management is summarized in its own chapter in this book.

Throughout this book you will find links to resources. You can key each link into your browser address box, but that is too much work. The quick solution is to visit www.carlbrownconsulting.com/ and click on the "Resources" link to access the referenced resources and more.

There is another reason you personally want great rates. Eventually the results of poor rates, a failing system and the need to "jack" rates up painfully, will come home to roost. That means that if you are responsible for your system falling into this situation, you may be facing involuntary departure.

Rate setting is done in many ways – some work great, some are disasters. The most technically difficult part of rate setting is the comprehensive rate analysis. That part is commonly botched by do-it-yourselfers or they don't do it at all and just set rates by the seat of their pants. (This strategy is actually a good one in certain circumstances.) Other parts of rate setting are easy. We still manage to botch those sometimes. This book will help you to get great rates without botching anything.

If you represent a small, simple system you can do the whole analysis and rate setting project just using this book. Well, OK, you should get legal advice on ordinance preparation. And, it wouldn't hurt to pick up a simple rate calculation spreadsheet for calculations, too. The final analysis (more accurately called a calculation) for such systems should usually include certain data and results. That will be discussed in this book. All in all, the rate calculation chore and the rate setting process for small systems are not that hard and all of it is illustrated in the book.

¹ The United States EPA performed an analysis of the gap between how U.S. water and sewer systems are being funded and how they should be funded to remain sustainable. The report is available at <http://www.epa.gov/owm/gapreport.pdf>. The analysis showed a shortfall measured in the hundreds of billions of dollars by 2020 and the gap had grown by some estimates to exceed one trillion dollars in 2008.

About the language in this book

In this book I avoid writing in the third person, passive voice when a more active voice is clearer. A passive voice writer might say, "A system's managers, decision-makers and others involved in rate setting should endeavor to analyze the system's financial needs comprehensively and set rates that will satisfy the needs of the system." I say, "You need to set rates correctly." Shift the gears in your ears for this active voice style.

My primary audience is system managers and decision-makers. Some of you reading this now are not among this group. Just take the decision-maker's point of view as you read along.

Unlike other texts on this topic I use a bit of cynical humor here and there. Other writers copyrighted all the dry text and left me no choice. Actually, they didn't take up ALL the dry text, so I grabbed what was left over. (Hey, this is rate setting, not standup comedy, so don't get your nose out of joint!) Without at least an attempt at some humor, you're not going to make it through a whole book on rate setting.

So read, learn, chuckle a bit and try not to get hacked off when my language is blunt.

The rate calculations are more complex for larger, more complex systems; thus, the term "comprehensive rate analysis." But, the principles for setting rates are the same. If you represent a larger system you will find the guidance here to be very useful. In addition, guidance offered here for getting the right rate analyst and for making sure the analyst performs well will be money in the bank and headaches avoided. Final rate analysis results for these systems will be discussed in this book, as well.

Why is so much space in this book devoted to rate calculations and rate analyses? Simple. Most systems have never comprehensively analyzed their system's financial, operational, capital improvement and rate needs. Why is that? Simple. Back when most of our systems were born, a few decades ago, operations were pretty simple so operating costs were low. Regulatory requirements were simple, meaning cheap to comply with. The federal and some state governments kicked in massive sums of money to pay for capital construction costs. That kept debt costs low. Rates simply didn't need to be very high because the bills were low. When rates are low rate fairness is a non-issue. Besides that, there is the practical matter of not having cheap computers and software programs in the early days for quick crunching of large amounts of data.

Times have changed.

Operating and capital improvement costs are now higher. Grants, if available at all, are lower (although 'bail-outs' and economic stimulus programs may change that temporarily). And computers and software programs are not only available. They are cheap.

Since few systems have truly analyzed their rates, or hired it done, few have ever actually seen a comprehensive rate analysis. Therefore, I show you examples so you will know what your next, or first, analysis needs to include.

I kind of lied in the previous paragraph. Complete rate analysis examples are not in this book, only excerpts. That's because comprehensive rate analyses require more than a few pages of output. Pages in a book are not cheap. So, to view the complete examples you will need to visit some Web sites that will be cited in the book. Actually, because of the nature of analysis output it works better to put that output on a Web site than to put it in a book anyway.

Almost all rates are too low. Almost all are structured unfairly, too. Why is that so commonly true? There are several causes that are detailed later in this book. But, the key causes are the difficulty and complexity of comprehensive rate analysis, and politics. Analyzing rates is hard. Raising rates without the results of a comprehensive analysis to make your proposed rates defensible can be political suicide. It's understandable that our rates are far behind.

This book covers rate setting issues, information and principles that are

Private systems:

Yes, this book will help you, too. You must get your rates approved by your state's public service commission, corporations commission or a similarly named agency. However, the principles of rate setting are the same. Follow the requirements of your regulatory agency but use as many of the strategies in this book as allowed. That will make your rate setting efforts serve you and your customers much better.

common to all systems; large and small, complex and simple, public and private. All systems are subject to the same basic forces. However, how each system decides how to set its rates depends a lot on the system's complexity and size.

Size² matters so let's talk about it.

For rate setting purposes, a "medium sized" system is a system that is large enough to comfortably afford the occasional cost of acquiring comprehensive rate analysis services from a rate setting specialist. That is also this system's best alternative to get this task done well and inexpensively. However, this system is large enough to do its own rate calculations and it could do its own comprehensive rate analysis, given the right training, resources and tools. Still, doing comprehensive rate analysis is rarely the best use of such a system's limited staff time and it taxes their expertise so they usually should farm this task out.

What best defines the medium sized system for rate analysis purposes? On the low end such a city or utility district is just large enough to afford a full-time administrator or manager who has credentials for this specialized position. This manager usually possesses a college degree in public administration, accounting, business administration, engineering or a similar field. Such professionals can do comprehensive rate analyses if they have acquired rate analysis resources, tools and training. Add 2,000 to 5,000 or so in population to this system and it will generally also have a finance director. Such a system should be even more capable of doing its own comprehensive rate analysis.

In round numbers a medium sized system generally has between 500 and 5,000 user connections or populations of about 1,500 to 15,000. Therefore, small systems are smaller and large systems are larger.

Small systems are challenged when it comes to user charge analysis. Most can do simple rate calculations or use simple rate calculation spreadsheets but few can comprehensively analyze rates. They also have more limited funds with which to hire a rate specialist. Small systems should hire a rate setting specialist only occasionally. During the in-between years they should do simple rate calculations on their own. All will be illustrated later. Alternatively, they could use a do-it-yourself rate calculation program.

Very small systems, usually serving a population below 400, can afford to hire such a specialist only in special circumstances. That is usually when the system is building an expensive upgrade. At such times a few thousand dollars for a rate specialist is money well invested to make sure the upgrade is appropriate, affordable and rates will be set fairly. During most other years, very small systems should do a simple rate calculation on their own. Every five years or so they should engage a free service provider to do a more detailed rate calculation. Like their bigger small cousins, they could use a do-it-yourself program, too.

Large systems can and usually do analyze their own rates and may be quite competent at it. However, it is relatively cheap for them to hire it done by a specialist so large systems have all options available to them.

The bottom line is this. However and by whomever you get a user charge analysis done, do it quickly and do it right. This book will teach you how to do both.

Rate Setting Phases:

- Phase 1 - Decide your rate and fee goals - your destination.
- Phase 2 - Develop your own or "buy" a comprehensive rate analysis - a map - that leads to your goals, usually requiring large initial rate adjustments and rate structure changes.
- Phase 3 - Actually make those initial rate adjustments.
- Phase 4 - Make incremental rate adjustments in future years - course corrections that are almost always small increases - to keep net revenues and other financial indicators on track with the projections from the comprehensive rate analysis for as long as possible.

² The United States EPA defines system size like this. Small refers to systems serving between 500 and 3,300 people. Large is greater than that. Very small systems are less than that. This book is about rate setting. Therefore, it uses different size classes that usually correspond to the capability of systems to do their own rate analyses. Do-it-yourself capability is more related to the staff on-board rather than population served by the system.

Do you think rate analysis is irrelevant to your system because your books balance? Join the club. You're **supposed** to have balanced books, even if you're broke. Balanced books don't mean you are bringing in the right amount of revenue, you are collecting it from the right users or you are maintaining, replacing and upgrading your equipment on a sustainable basis. Balanced books simply show that all current costs are offset by current incomes and reserves. Furthermore, your books say nothing about rate fairness. Ferreting out these issues is a function of comprehensive rate analysis, not balancing the books.

Most utility and local government officials; that group almost certainly includes you, are fiscal conservatives regardless of party affiliation. Almost no one can work close to, and provide services directly to citizens and ratepayers without being aware that they want "government" to keep costs down. That usually comes as a message, spoken or just understood, "Keep the rates down." Keeping the cost of government down is all well and good when government is just giving away money or services. But when government is running a business, and utilities are businesses, they are subject to the same laws of business that private enterprise must heed. The first such law is, "If there isn't enough money to run the business, the business won't run." A subpart to that law is, "If the customer wants the service, they must pay the price."

This book shows what needs to be done to get great rates. Some readers of this book will do all of these things themselves, including the comprehensive rate analysis – we are a nation of do-it-yourselfers. Some readers will hire rate setting specialists – they will outsource the hard parts. There is not a blanket right or wrong answer to the question, "Should we do it ourselves or outsource?" In real life, no one should attempt to do everything themselves or outsource everything. The only issue then is what balance you will strike. That depends on your unique situation and talents. This book will help you find the right balance.

Whatever balance you strike, you need to cover the four basic phases of rate setting. Chapter 2 will describe the four phases of rate setting. Other chapters will expand upon aspects of each phase.

Under later chapter titles you will see references to the four phases. These references will help you to understand how each piece of the rate setting puzzle fits in to make a complete picture.

Anytime rate adjustments are proposed, ratepayers are going to challenge you with the "Is the utility well run?" question. This question is generally code for "Is there waste in the budget?" All tax payers and ratepayers believe there is rampant waste in all segments of government. Several chapters will cover issues that you must handle well if you are to claim that your system is well run and the proposed rates were properly calculated and fair.

When you have finished reading this book you should be well prepared to tackle the rate setting task. Your goal? No, it's not to swamp the boat. You want to build adequate freeboard, run a great utility and prove to your ratepayers that all is well.

These tasks will all come together in this book so grab your paddle and let's run some rapids.

Chapter 1 – Getting into the Right Frame of Mind

(Relates to all phases)

I want you to go to a happy place, or time, or event in your life. Recall how that made you feel. When you prepare to analyze and reset your rates, I want you to go back to that place, or time, or event and let those good feelings surround your rate setting efforts. On the count of three you will wake up and feel relaxed and prepared to do that rate setting project.

One... Two... Three...

Summary

As it is with most things, frame of mind makes all the difference. Most rates are currently way behind. That is almost never because people can't afford to pay more. It is almost always because they have a real bad attitude about paying more. They don't have a good appreciation of the value they are receiving for the meager fees they pay for water and sewer services. That is largely the fault of the service providers but don't beat yourself up, there are plenty of contributing factors. This chapter will help you set your frame of mind, and that of your ratepayer's, so you all will view rate setting in a positive way. That won't make your ratepayers enjoy paying higher rates but at least they will understand the need and go along.

Introduction

Rate setting is actually real easy except for a couple of hard parts – figuring out where your rates should be set and figuring out how to convince your ratepayers that's where they should be set. Frame of mind; yours and your ratepayer's, will make or break your rates.

You have probably had some bad rate setting experiences. You may have even sought therapy, or police protection, following one of those events. But seriously, if you will think of rate setting in a positive way, and get your ratepayers to think like that too, it will almost certainly go well for you. No more therapy. No more police.

Captain of Road Prison 36 to Cool Hand Luke, "You run one time, you got yourself a set of chains. You run twice you got yourself two sets. You ain't gonna need no third set, 'cause you gonna get your mind right."

Philosophy of rate setting

Science is about measuring, describing and listing the truth: $2 + 2 = 4$, a body in motion will tend to stay in motion, and the like. Rate calculations, often also called rate studies, include the process of calculating a system's financial position and other calculable criteria under its current rates as well as its financial position under alternative (probably higher and maybe restructured) rates. That process is a science. Some practitioners believe that it is sufficient to simply calculate the needed rates and then say, "By gosh, everybody just needs to 'suck it up' and pay them." Obviously, science itself will not educate and motivate ratepayers to pay higher rates. More is needed.

Philosophy is focused on defining the truth (using science) and determining what is morally right. Different philosophers come up with different definitions of morality. When it comes to rate setting you and others in your community need to function as philosophers. You need to find the truth and also decide what rate levels and structures are morally right for your ratepayers to pay.

In the context of rate setting, morality is called “fairness.” You want to find rates that at least most of your ratepayers, were they fully educated about the issues, they would call them “fair.” If your analysis (the science) will show that rates need to go down, you really won’t have to educate and convince anyone about those rates. Everyone likes to pay less. Unfortunately, that is not likely. Rates need to go up in almost every system right now and they will need to keep going up to pay ever higher costs in the future, too. Rate increases usually require someone to thoroughly educate and convince ratepayers that those rates are in fact needed and fair.

To be convinced most people need to see evidence. In rate setting that evidence primarily is the result of a rate analysis or rate calculation. Unfortunately, the science of rate setting; the math, does not come free and it does not come in one size, flavor or price. How you do it, or how you have someone else do it for you, is up to you. But, as a matter of philosophy you need to decide if, how much and at what cost you will do or get the math done.

I hope this is a revelation to you, that you actually have choices in how to do or have the math done. The right answer for you depends on your needs, staff capabilities and other situation-specific issues. If someone has told you and everybody else in the world, “Use my spreadsheet template or Web site or guide (or other one-size-fits-all tool) and your problems will be solved,” don’t believe them. There is no one-size-fits-all tool for rate calculations. Furthermore, those tools rarely address the philosophy of rate setting at all. You need to:

1. Decide how much and what kind of evidence you will need to educate and convince your ratepayers,
2. Pick the appropriate tools to do that, and
3. Actually do the educating and convincing.

Luckily, there are rate setting specialists who are expert in all areas of rate setting as well as other service providers so you may not need to do much of this work yourself, if you so choose.

As you consider every issue, task and such you need to keep in mind your philosophical notion of fairness. If a tool, calculation method or something else will help you to achieve greater rate fairness you should use it so long as the cost of doing so will not itself cause the rates to be unfair. If that idea is hazy consider these examples.

Example 1: Your system is very small, serving 50 connections. Nothing special is going on in the system. Your operating costs are just going up because of inflation. You have no reserves. Your ratepayers are very skeptical that rates need to go up. To convince them of the need you could hire a “Big-5” accounting firm to do a comprehensive cost of service rate analysis. While the evidence generated from this analysis would be unassailable, it would cost more than a full year’s worth of your operating costs to get it. Adding that expense to your operating costs and then setting rates to pay for it all would itself make the rates unfair in the judgment of most people. Alternatively, you could hire a rate setting specialist for perhaps \$5,000 to do your analysis and guide you in setting new rates. That expense would probably still be too high considering the informational and educational value you would get from it. Or, you could subscribe to a do-it-yourself rate calculation Web site for a few hundred dollars. That may be a reasonable option. Or, you could get a free rate calculation template and, again, do it yourself, also a nice option. Or, you could get a free service provider to do a rate calculation for you, another nice option. Or, you could do it yourself from scratch – labor intensive, but also an option. As you see, you are never without options and there are probably several that will overlap in the area of “reasonable” for your situation.





Example 2: Your system is large, serving 5,000 connections. You have lots of capital improvements coming up, lots of growth and lots of reserves. You can choose from all of the small system options in the previous example and more. You can send some of your staff to rate analysis training so they can do analysis very competently in-house. You can hire a software design firm that specializes in rate analysis to design and license to you a program that will largely automate the process of rate analysis. You can hire a rate setting specialist and put them on staff. Be aware, just because your system has plenty of money on hand to pay for any of these services does not mean that the highest level of service will lead to the greatest rate fairness. But, having money certainly makes more options available.

Throughout this book you will read about the various facets of rate setting. Some are strictly mechanical – the science, the math. Others have more to do with the practicalities of getting proposed rates through the ratepayer gauntlet. While I give lots of advice based upon many years of rate setting experience, and you would do well to

strongly consider this advice, it is still just advice. To set rates well you will need to develop a rate setting philosophy that will serve as your guiding light through the entire process. This book will point out some of these issues but you need to fill in the blanks based on your situation.

Do not under-estimate the power of the “little old lady, widowed, retired, living alone on Social Security.” Headlines about her hardships can make how you plan to adjust rates look like cruel and unusual punishment.

Do not over-estimate the threats of the “captains of industry” when they say your proposed rates will kill their business. If such a small budget item will actually do that, they’re headed down the tubes anyway.

Psychology of rate setting

Now that I have turned you into a rate setting philosopher I want to give you a double major in rate setting psychology, too.

There are two kinds of people: Those who base their decisions on logic and those who base their decisions on emotions. To be fair, none of us is set 100 percent in either camp all the time. We float. But, we tend to feel more comfortable using one decision-making strategy or the other. No doubt you know people from both camps and you should also have a good idea which camp you prefer.

Utilities can be thought of in many respects as “people.” Utilities make decisions, just like the rest of us. However, because utilities cannot escape the effects of the real world very well or for very long, they tend to make decisions more logically than the rest of us. Keep this in mind as you read the following descriptions of people and their states of mind.

Truths concerning utilities

There is a set of principles and truths that frame utility rate setting. All are rooted in logic. They can be described like this:

1. Water, sewer and all other utilities are businesses, regardless of who owns them. Businesses must cash flow properly if they wish to survive, much less thrive. Consider the first law of business: “If there is not enough money to run the business, the business won’t run.”
2. A utility has a responsibility to its customers to nearly guarantee its long-term prosperity for their benefit. Customers demand that the service be there whenever they want to use it. They’re pretty inflexible about that.

Thus, a utility must err on the conservative side by maintaining strong reserves that will enable it to weather financial storms. Most reserves should be built with utility (rate) revenues unless the ratepayers and tax payers are aware of and generally approve of doing otherwise.

3. If a service costs the utility money, the utility should recover that cost from those who use that service if that makes good business and community administration sense. For example, generally “growth should pay for growth.” Developers should fairly pay for their consumption of utility services during the construction process and for the promise of capacity to serve that they exact from the utility when their construction project is done. Likewise, those users that have the capacity to place high or unusual demands on the utility cause the utility to pay extra for that service capacity. Even if those users never actually draw on that unusual or extra volume capacity, they should pay the utility for the added expense of making it available. Consider this analogy. A company operates both taxi and limousine services. A potential client requests limousine service but only wants to pay a taxi cab fare. Would it be fair to the taxi cab riders if the company met his demand, in effect transferring the extra limousine service costs to the taxi cab fares? Clearly the limousine rider should pay the limousine fare.
- Truths 3 and 4 don't always get along.
4. If adjusting a rate, fee or policy will turn currently “good” customers into “bad” customers, decision-makers should consider the necessity of the change carefully before making it. Two contrasting examples illustrate this dilemma:
 - a. While it may be warranted on a cost-to-serve basis, raising the minimum charge markedly may make it difficult for fixed, low-income customers like the stereotypical “little old lady, widowed, retired, living alone on Social Security” to pay their utility bill. (There is no slight intended to anyone who could be described by one of those adjectives.) That may cause more of them to pay late or not pay at all. That may trigger your attorney, at high expense, to write threatening letters to those customers. Eventually you may even shut off their service. Thus, in the attempt to generate more net revenue by raising rates and enforcing them, net revenues may actually go down. Certainly, your local newspaper will jump all over you for “beating up” some disadvantaged citizens over a piddling amount of money. You don't want any of that.
 - b. On the other hand, while in fact it is uncommon for water and sewer rates to significantly figure into a major employer's decision to move to or remain in a particular community, it can happen. Thus, it is possible that, by raising the minimum charge to all users and lowering their unit charges, thus lowering the total bill to a large employer, a system can help that employer to create or retain jobs in a community. Those jobs may be filled by people who would otherwise not be able to pay their water and sewer bills or would have to move out of the community to seek work elsewhere. Therefore, the system would retain more ratepayers and those ratepayers would have income with which to pay their bills. The community would also retain more taxable property value (that's where the real money is) and all the other economic activity associated with it. This is the economic development school of thought for rate setting. Heed this caution before pursuing this course. If the financial capability of a business is so tenuous that a miniscule reduction in its net revenue (increased water or sewer rates) is the difference between surviving and collapsing, look for the collapse to happen soon anyway. As an investor in economic development, the community should be looking for businesses that don't depend on bargain-basement utility rates for survival.

Good customer – One that pays on time and doesn't complain.

Bad customer – One that doesn't and does, respectively

In other words, you owe it to your ratepayers to run a competent, strong, logical and fair utility that is always ready and able to serve them. It takes money – their money – to make that happen. If they are to (relatively) gladly give you that money, you must prove to them that the utility actually does and will continue to serve them well and that the rates are warranted and fair. You can't do that by just saying it. You certainly can't do that by just passing an ordinance or resolution that declares rates with the force of law. You must show them the proof and you must show them you care. Put simply, to get the desired outcome – higher rates – you must show emotional ratepayers that you are managing the utility logically, but that you also empathize with them.

These truths include the ideas of running a sound business, treating ratepayers fairly and looking toward the future when setting rates. Ratepayers; however, are more focused on their immediate issues of concern, many of which are emotionally based.

Truths concerning ratepayers

Just as there are truths about utilities, there are some nearly universal truths about ratepayers, too:

1. Ratepayers want their service.
2. Ratepayers want their service cheap.
3. Almost 100 percent of your ratepayers don't want to think about you or the utility at all, ever.
4. A persistent, tiny minority of your ratepayers want to think about you all the time, and not in a good way, regardless of what you say or do.

Ratepayers, at least many of those who would give you "trouble," make many decisions based upon emotion. Thus, to keep emotions in check and get the outcome the utility desires – higher rates – utility staff and decision-makers must deal with the above issues as follows:

1. Keep the service coming. Stay off their loss of service radar screen.
2. Reassure your ratepayers that rates are and will remain cheap, or at least affordable, if that is true. It almost always is. It may be counter-intuitive but to address the rates issue you actually want to stay ON their rates radar screen. You simply can't keep rates the same forever so showing up on that screen is inevitable. Your goal needs to be to improve your image on the rates radar screen. To do that you can't just talk about rates when it's time to raise them big-time. You need to talk about rates and finances frequently, even when rates are not going up and the finances are in great shape. You should raise and adjust rates frequently keeping your finances in great shape. Frequent increases keep the increases small. That makes your image on the radar screen small. That's important because...
3. Unless something is going wrong; which in your customers' world is their service gets cut off or you jack up their rates big-time, your ratepayers will never think about you. They have lives that keep them plenty busy. Therefore, you want to stay off their service radar screen. You want to stay on their rates radar screen with a small, relatively pleasant image. Thus, they won't think of you unless you are attacked by "CAVE" people...
4. CAVE people, and a few allies they pick up along the way can harm you little if at all, directly. However, if they can drive a wedge between you and all the cool-headed ratepayers, the ones that don't ever want to think about you, they can play havoc. (In reality, CAVE people serve a valuable function. They keep all of us honest.)

Stereotypically, utilities are logical and ratepayers are more emotional. Neither understands the other very well. Logically, it is in the best interest of ratepayers to have some understanding of the utility that serves them. Unfortunately, their emotional minds don't motivate them to do that. Thus, as a utility decision-maker, the burden is on you to bring your ratepayers along. You must exercise logic in your decision-making and service execution. But you must also think on an emotional plane to be able to connect with your ratepayers and get their approval of what the utility, logically, needs to do.

Affordability Index – the monthly rate of a user divided by the monthly income of that user.

Little old lady with a rate of \$25/month and income of \$1,000/month:

Affordability Index = 2.5%

XYZ Corp with a rate of \$500/month and income of \$100,000 per month:

Affordability Index = 0.5%

Which user will be hurt most by a \$10/month minimum charge increase?

Citizens
Against
Virtually
Everything

There is a related hazard you need to watch for. Someday a board or council candidate will run on the emotional platform of cutting rates but keeping service levels where they are, even though that candidate did no analysis to determine if that can be done or not. Emotional voters like such emotional candidates. If the utility does not have on-hand documents that prove where the rates need to be set, that candidate could be elected to the board or council and become an inside CAVE person, wreaking havoc. The comprehensive rate analysis is the proof you need to debunk such emotional claims.

None of the previous principles and truths are one-time events or problems that you can fix and then forget. They go on and on. You need to understand and heed these truths all the time. If you have not been doing this well in the past, your rates are probably too low and need to be jacked up. That will make you show up on your ratepayer's radar screens in a bad way and there is no getting around it. The CAVE people will try to take advantage of this "bad press." You must counter their attack, courteously and professionally. Do it using the following technique.

There is a notion called "systematic development of informed consent" <http://ipmp-bleiker.com/sdicinfo.htm> that is aimed largely at preventing people from opposing you and working against you. To be successful you can't have many people working against you.

Systematic development of informed consent is not about making friends. It's about not making enemies.

To prevent the CAVE people from winning cool-heads to their side to oppose you, you must answer an important question even before it is asked. That question is, "Were the proposed rates cooked up to serve some under-handed purpose?" Your answer must be this:

The rate analysis and rate setting processes were two distinct parts of the rate setting puzzle. They were completed by different people. The rate analyst did the "math." We, your elected officials, did the rate setting based on the analysis results.

The first part of the puzzle, the rate analysis (Phase 2), is the math and science part. While your analyst should be empathetic about the effects adjusted rates will have on the ratepayers, that empathy should only guide them to propose rate adjustment alternatives that will be doable. The analyst's charge is, or should be, to develop utility rates that are adequate and fair. If they can also be cheap, that's a nice side bonus but it should never be the analyst's goal. The analyst's methods must be perceived as unassailable. If the analysis is "tainted" by politics or anything else, your opposition will use it as a weapon against you.

The second part of the puzzle is discussion of the analysis, discussion of how to implement new rates and actual adoption of a new rate ordinance or resolution to effectuate the new rates (Phase 3). This is the political part. This is the part where the rubber meets the road, where the rates will either be made adequate and fair or they won't. This is also the part where your opposition may legitimately question you, debate with you and otherwise try to win converts to their way of thinking. Don't worry about the impending debate. Because you did or got an unassailable analysis, you can substantiate the system's financial need. Solve the fairness issue, hopefully in accord with the rate setting goals you set in Phase 1 and you're on your way home.

As you are looking for your way home, consider this very common dilemma. Should the mayor or board chairman do the rate analysis or be intimately involved? Almost never! Were they to do the analysis and also be a key player in the political

An inconvenient truth about decision-makers:

Board and council members are people. They have feelings. They listen to other people, like ratepayers and voters, who have feelings. Their head tells them to believe the comprehensive rate analysis and raise rates. Their gut tells them to side with the people and keep rates low.

Boards and councils, when faced with the need for a large rate increase and rate restructuring, tend to hesitate, even procrastinate. As many see it, they are forced to take sides with either the utility or the ratepayers. This is a wrenching experience for many. Raising rates makes them feel like they are double-crossing their ratepayers, tax payers and friends.

Don't be surprised if your analysis goes smoothly and quickly, the results clearly show that big changes must be made, but your decision-makers want to go slow with adjustments. Their feelings are being conflicted and that's not entirely a bad thing. But, they do need to get on with it. Postponing the inevitable only makes it worse.

process of adjusting rates, there is no getting around at least the appearance that they “calculated the answer they wanted.” It is far better to have a staff person like the manager or the finance director, or better yet, an outside analyst, do the analysis to avoid potential conflicts.

If the mayor of a small town or the board chairman of a small district is a rate analysis whiz, sure, they can do the analysis. But if they do, they should excuse themselves from the rate ordinance or resolution process. The Cliff’s Notes version is this: The same person should not do Phase 2, the analysis and Phase 3, the rate setting. There will be much more on this later.

One truth about all people

The first big hurdle you must clear is getting your rates up high enough to pay all of your costs plus start building responsible reserves. That is a big hurdle and that is the one most systems are facing right now.

As soon as you get over the first big hurdle, the second will come up real fast. That is, someone is going to notice that you are building reserves and they are going to try to raid them. The raiders may be long-standing elected officials, newly elected officials, those running for office or ratepayers themselves. If the raider is you, this may be your thinking:

“Government is a not-for-profit function. Government owns utilities. Because utilities are owned by government, utilities ARE government. When a utility builds reserves, it is making a profit. Government is not supposed to do that. Thus, we need to roll back rates and wring those profits out of the utility.”

Your correct thinking is that government is not supposed to make a profit. Your erroneous thinking is that utilities ARE government. They are not. They are businesses. Some just happen to be owned by government.

To ward off the reserve raiders you must successfully make this argument. A utility is first a business. Business costs go up and down, mostly up. Incomes go up and down. If the utility is to weather these highs and lows and not have service upsets, the utility must maintain responsible reserves.

When the would-be reserve raiders show up consider using this analogy to explain why they should let you build and keep the reserves:

General Mills makes Cheerios™ . When General Mills puts a box of Cheerios™ on a store shelf, does that company spend its last dime to do so? No. It has reserves so just in case that box doesn’t sell as soon as expected, or the box goes out of date and must be thrown away, the company won’t go bankrupt. General Mills is not betting its long-term survival on selling that box of Cheerios™ . General Mills is looking way down the road.

That outlook is even more important for our (water, sewer, other) utility. Thus, we need responsible reserves to insure our survival and un-interrupted service to you, our customers. We analyzed our rates (a year ago, three years ago) to determine what a responsible reserve level is. Keep a close eye on us to make sure we’re managing the system and its finances properly. But, you need to let us build those reserves.

In Chapter 8 you will find more about how to ward off the raiders.

If you set your rates to break even, you will go broke.

Reality check

If you have been deferring equipment replacement and maintenance and putting off needed capital improvements but you are still only breaking even

with no reserves, your rates will need to go up, probably a lot.

Don't set your rates to break even. It's just not going to happen.

Systems now in this situation could set their rates five to seven percent or so higher for five years until they built a comfortable reserve. After that their rates could be the same or slightly lower than they otherwise would have been and they still would have reserves to fall back on. On a break even, no reserves basis, a residential bill might need to be \$30.00/month. To build the desired reserve level that bill may need to be about \$2.10 higher for five years.

This \$2.10, about the cost of a fast-food cheeseburger or one and a half sodas per month, is a payment to a rainy day fund. It's cheap insurance, a guarantee that your ratepayers' utility service will stay sound and fairly uninterrupted. If you never have to use the fund, it earns interest, lowering the future bills your ratepayers need to pay. It's a "win" all the way around. If you will correctly and convincingly demonstrate why this insurance and savings makes sense and that you will manage it well, your ratepayers will adopt a positive frame of mind and will accept paying this temporary premium.

Unfortunately, the low cost of building reserves may be the rosy part of your picture. You may have been cutting corners on other, more substantial things that, over the long-haul you can't cut³. Your rate increase is going to be bigger, probably a lot bigger⁴. If that is your situation, your message to the ratepayers needs to be something like this:

We have enjoyed unsustainably low rates for a long time by leaving equipment replacements and system upgrades for the future. The future has arrived so it's time to catch up.

By the way, before you give this message to your ratepayers you might want to notify your therapist and the police department. It never hurts to have back up.

Seriously, whoever your analyst is, they should do this explaining for you and that explanation needs to include a description of the effects of the rate increase on ratepayers. Rate increases might be large relative to current rates. However, the final rates are rarely large when compared to other services or when they are considered in light of the value of getting safe, dependable service right from the comfort of your own home.

Conclusion

To set rates well you need to get into the right frame of mind and put your ratepayers into the right frame of mind, too. Develop a workable rate setting philosophy and stick to it. Remember, and use the four facts about utility businesses and the four facts about ratepayers. As much as possible you want to stay off your ratepayers' service radar screen and on their rates radar screen, but with a small, pleasant image. When it comes time to propose a large rate increase, make your business case for the new rates. You need to make that case to your ratepayers convincingly, but empathetically. Almost everyone will initially be shocked. But your ratepayers will weigh your message and find it to be sound. They will also understand that the rate increase will affect them little in real terms (though that may not be the case for some.) Then, they will pay the rate, stop thinking about you and go on with their busy lives.

³ If an existing system is being well managed, there is little it can do to reduce most of its operating costs over the long-term. The floor for most costs is essentially locked in once the system has been built. Operating costs commonly include these items in these cost ranges (they are not cumulative for any one system):

- Twenty-five to 75 percent for debt service for a system that is fairly new and built largely with debt,
- Twenty-five percent or more for debt service for major upgrades,
- Ten to 15 percent for equipment replacement,
- Perhaps 50 percent for personnel expense.

⁴ In the author's experience, most rate adjustments following the first comprehensive rate analysis include an average rate increase in the range of 20 to 45 percent. However, frequently the rate structure is so far from fair that some users' rates will go down modestly while other's rates need to go up even more to achieve the average increase.