

**FORGET THEORY – FIVE COMMON SENSE
RULES GOVERN THE REGULATION OF
ELECTRIC UTILITIES**

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After more than a decade of reasonably stable electric rates, a volcano is about to erupt. A fall 2007 report by the investment bank Stifel Nicolaus predicts a cumulative cost through 2020 of approximately \$1 trillion for needed generating capacity additions and transmission and distribution expansion. That, of course, will drive electricity prices higher. The same report predicts average retail electricity prices will climb 69% from \$0.089/kWh in 2006 to \$0.151/kWh in 2015, over twice the increase that occurred the past nine years. (Stifel Nicolaus, 2007)

Of course, those rate increases will have to be approved by regulators, primarily state utility commissions. Now is a good time, therefore, to consider the way utility regulation really works. To casual observers, the regulation of electric utilities can seem inexplicable. To those steeped in its theory, there often is a disconnect between what theoretically ought to happen and what actually happens. Based on our nearly 50 years of managing rate litigation before state utility commissions, we believe five common sense rules are far better than the given theory in explaining the outcome of such litigation. We will summarize the theory and then discuss the five rules.

THE THEORY

In 1876, dealing with a grain elevator, the Supreme Court found that when private property is devoted to a use in which the public has an interest, the owner must submit to control by the public for the common good. The Court went on to find that, while every owner may fix what price he pleases upon his property, if the public has a right to use it and it exists as a monopoly, then it must be made available on reasonable terms. (Munn v. Illinois, 1876)

In 1974, the Court wrote that electric utilities are “...natural monopolies created by the economic forces of high threshold capital requirements and virtually unlimited economy of scale. Regulation was superimposed on such natural monopolies as a substitute for competition and not to eliminate it.” (Jackson v. Metropolitan Edison Company, 1974) As a natural monopoly, in theory, one large electric utility can achieve a lower unit cost than several smaller ones in competition. If natural monopolies are to be protected from competition, there must be a means to prevent monopoly pricing power – hence government regulation.

State regulation of electric utilities began in the early 1900’s. Because about 90% of electricity sales are regulated by state utility commissions, we are focused on them, as opposed to the Federal Energy Regulatory Commission (FERC) which regulates sales of electricity between utilities in the interconnected transmission grid.

Article V of the Constitution protects private property from confiscation without just compensation. Two Supreme Court cases establish the applicability of Article V to utility ratemaking – the process by which regulators approve the prices a utility can charge for its services. In the first, the Court ruled that a utility is entitled to an opportunity to earn a return equal to returns on investments of similar risk. (Bluefield Waterworks & Improvement

Company v. Public Service Commission, 1923) In the second, the Court held that the scope of judicial review of a rate order challenged as confiscatory is limited to an examination of the end result of the rate order. The Court recognized that ratemaking involves a balancing of investor and consumer interests that is best done by an expert ratemaking body. (Federal Power Commission v. Hope Natural Gas Company, 1944) Subsequent Court cases, such as the Permian Basin cases, necessarily presumed that balancing would produce rates within a zone of reasonableness. (Permian Basin Area Rate Cases, 1968)

Under the typical state regulatory scheme, utility rates are based on actual prudent costs – the “cost of service.” Rates based on cost of service are deemed “reasonable.” The accepted equation, $\text{Cost of Service} = \text{Operating Costs} + (\text{Rate Base} \times \text{Rate of Return})$, does not reveal the complexity of or the effort required by the ratemaking process. Typically, cost of service is determined through a quasi judicial adversary process in which the utility, regulatory staff, a state funded consumer advocate, and various customer and public interest intervenors submit voluminous expert testimony and exhibits. Local hearings are held to receive testimony from customers and others.

Usually there is sharp disagreement about each term of the equation. Determination of operating costs begins with actual costs during a historic 12 month period – the test year. But, to normalize cost of service, actual costs can be adjusted to account for known and measurable post test year events, remove costs deemed imprudent or non-recurring or of no benefit to customers, and reflect varying theories re depreciation charges and income tax obligations. Rate base is the original cost of assets, net of depreciation, used to provide service and can be adjusted for a variety of reasons. Rate of return is the average cost of capital and generally is based upon the actual capital structure and

costs at test year end. Capital structure and costs can be adjusted as well, even to the point of using assumed costs and a hypothetical structure. Calculation of the equity component of the cost of capital often resembles art rather than science and thus is always subject to vigorous dispute.

Rates based upon cost of service are said to be in the public interest and, as a general proposition, regulators are to be guided by the public interest. Many courts have opined as to the meaning of those two words. Justice Brandeis, in Missouri ex rel. Southwestern Bell Telephone Company v. Public Service Commission (1923), wrote this:

The prime needs of the community are that facilities be ample and that rates be as low and as stable as possible. The community can get cheap service from private companies, only through cheap capitalIt can get ample service through private companies only if investors may be assured of receiving continuously a fair return upon the investment. (p. 308)

The public interest theory of ratemaking permits results within exceptionally broad parameters – i.e. “the *zone* of reasonableness” – and it does not account at all for the vicissitudes of political, social, and economic factors. The constitutional standard for determining if rates are confiscatory – and thus violate Article V – is a minimum standard, such that a ratemaking process that systematically resolves disputes on the basis of what will reduce a utility’s proposed cost of service almost always will pass constitutional muster, notwithstanding that the end result may be financially punitive to utility investors. Thus, the actual results of the ratemaking process often dramatically differ from what its underlying theory suggests should happen.

THEORY INTERRUPTED

Many scholars have noted the failure of regulatory agencies to adhere to the public interest theory and, accordingly, have advanced alternative theories in an attempt to explain the factors that in fact drive such regulation. The literature is too voluminous even for summary. We touch various proposed theories through a brief discussion of the criticism of both the public interest theory and the capture theory. But first, to establish context, we note Hilton's (1972) observation:

Economists have come to realize that [r]egulators are not automatons, but men and women who go to baseball games, advocate their political philosophies, have their gallbladders removed, take their cats to the veterinarian, and otherwise behave like the rest of us. To put it into economic jargon, they have utility functions like all men, in which they seek to optimize with calculations concerning the present versus the future in light of the costs and rewards presented to them. (p. 47)

Bernstein's capture theory asserts that regulators systematically favor the industries they regulate. (Bernstein, 1955) Upadhyaya and Mixon note extensive empirical work by others that validates capture theory and present their work with time series estimates as further proof of capture theory. (Upadhyaya & Mixon, 1995) Berry points out, however, that recent studies challenge and even purport to refute the underlying predicates of capture theory. Berry (1984) goes on to say:

If the propositions and findings of these recent studies of regulation are correct, and consequently

the capture theory presents an overly simplistic and thus inaccurate representation of regulatory politics, there is need for the development of post – “capture theory” theories of regulation based on a more realistic view of the regulatory process. (p. 526)

Berry notes the work of others which shows the influence of commission personnel characteristics on the nature of regulatory decisions, the power of commission chairpersons in regulatory policymaking, how the attitudes of commissioners affect decisions, the extent to which professional norms of regulatory personnel lead to policy outcomes, and the impact of commission resources on the effectiveness of regulation. (Berry, 1984)

Based on his research, Berry (1984) finds that:

[S]pecific characteristics of individual commissions do affect the nature of regulatory outcomes; a recognition of variation in both the goals of regulatory commissioners and the resources at a commission’s disposal is needed to explain the variation across state commissions in the nature of regulatory decisions. I also find that intervention in the regulatory process by representatives of consumers and the public exists and does affect the nature of regulatory outcomes. (p. 526)

Of particular note, Berry finds evidence to support his assumption that regulatory commissioners are only *partially* motivated to set prices based on the cost of service standard. (Berry, 1984)

Jarrell (1978) is critical of both public interest theory and capture theory.

Neither theory attempts to explain how or why regulators are motivated to behave as hypothesized. The mechanism that transforms the demand for regulation into regulatory behavior is largely neglected by both theories. The public interest theory asserts that regulation corrects private market failures, and the capture theory asserts that this noble goal is consistently thwarted so that regulation serves the regulated industry.... Neither theory explains the widely observed tendency for regulatory agencies to selectively help and harm certain interest groups. (p. 276)

McCraw concludes that “[n]either ‘public interest’ nor ‘capture,’ nor the two in combination adequately characterize the American experience with regulation over the last century.” (McCraw, 1975)

We submit that there is merit, sometimes more and sometimes less, in all of these attempts to articulate the factors that drive regulation and from them propose a theory with greater explanatory power than the public interest theory. With specific respect to state regulation of electric utility rates, we also note that any attempt to state a single theory must deal with markedly different eras. At least two significant eras can be defined as inception to 1973 and post 1973. In the first, due to rapidly increasing demand and continuously increasing scale in production and transmission facilities, costs were declining throughout. Accordingly, rates declined throughout. In the second, demand growth fell to an annual rate of 2% to 3% from 7%+ and economies of scale were nearly exhausted. Accordingly (and for other reasons as well), rates increased. Within both eras there are numerous “sub” eras, a few of which we mention below. We submit that the following five rules lead to a more accurate explanation of state regulation of electric utility rates than the public

interest or other theories and, importantly, that these rules apply through time.

As noted, these rules are based on our nearly 50 years of managing rate litigation before state utility commissions. Certainly, these rules are empirically testable. One objective in proposing the rules is to justify the effort that such testing would require.

THE FIVE RULES

- Rates will be set at cost of service or whatever it is *perceived* the market will bear, whichever is less.
- When Rule 1, has been satisfied, regulators will do whatever reasonably can be done to assure the financial health of the utilities they regulate.
- When a utility needs a rate increase, the sooner it is granted in full the *lower* its rates will be in the long run.
- Customer intervenors act in their self-interest, not the public interest, and, therefore, acceding to their positions will often damage the public interest.
- It is more difficult to make rates for a financially healthy than a financially sick utility.

Rule 1: Rates will be set at cost of service or whatever it is perceived the market will bear, whichever is less.

Discussion of Rule 1 will focus on the 1970's and early 1980's when electric utilities requested rate increases almost on an annual basis. Relatively speaking, there were few rate increase requests in the 1990's and the first years of the new century. (Rule 1 should be expected to be latent during a period of stable or declining rates.)

Even taking account of cyclical trends in the stock market, given cost of service as the benchmark for

ratemaking, it is difficult to explain the swings in average market/ book value ratios for Moody's 24 Electric Utilities:

1970	1.23x
1975	.68x
1980	.65x
1985	.99x
1990	1.33x

Even allowing for the lag between when a utility requests increased rates and when new rates become effective, we do not believe such wide swings in market performance would have occurred had ratemaking been governed strictly by cost of service. What does explain such results?

The phrase “whatever it is *perceived* the market will bear” describes a process based on political and social as well as economic and legal considerations. (Gerber and Teske summarize theories of regulation based on the influence of interest groups.) (Gerber and Teske, 2000) We believe common regulatory practices during the period in question show the validity of that conclusion.

A factor in shaping perception of what the market will bear is the local hearing testimony of customers as to what they think about a requested rate increase. There is no requirement that customer witnesses be experts in financial or other matters germane to the increase request. And, while cross-examination of such witnesses is permitted, it is discouraged. Consumer advocacy groups, understandably, encourage customers to testify in such hearings. But, if you ask someone: “Do you want to pay 50 cents or one dollar for this head of lettuce?” it should go without saying, the answer will always be 50 cents.

How do regulators set rates at what they perceive the market will bear, particularly when that perception yields rates that are at or below the bottom of the range of

cost of service? Constitutional and statutory constraints prohibit regulators from setting rates by fiat. There must be findings of fact and conclusions of law based upon a record of expert testimony.

In the midst of high inflation, a way to hold rates below cost of service, that is, to what it is perceived the market will bear, is through the use of a historical test year and normalizing adjustments to the cost of service. Through such practices, inflation will deprive a utility of any reasonable chance to earn its allowed rate of return. Indeed, in the late 1970's electric utilities seldom, if ever, earned their allowed rate of return. For many utilities, earned returns were often three to four hundred basis points below allowed returns. And the low returns earned were often of poor quality because, under FAS 71, they included an "allowance for funds used during construction" – a non-cash entry that represented a hypothetical cost of funds invested in construction projects. (In many cases, the ability to earn a cash return on funds invested in construction projects was halted through the work of consumer advocates. The effectiveness of such advocacy is another manifestation of Rule 1.)

In the 1980's, two factors rendered the above practices ineffective in holding rates at or below the bottom of the range of cost of service. First, inflation and interest rates abated. From a high of 20% in 1981, the prime rate fell to 9.5% by 1985 and to 8.5% by 1995. Second, and of greater importance, during the 1980's electric utilities were bringing into operation new coal and uranium fueled power plants. These plants, especially the nuclear plants, cost far more than originally had been estimated. On top of that, the need for many of these plants had been driven by the Industrial Fuel Use Act of 1978 which, among other things, prohibited the use of natural gas as boiler fuel in new plants and in all plants after 1989. The repeal of that provision in 1981 created a prolonged excess of generating capacity. As

the new plants began operating, existing gas plants not only remained in production but also produced at higher levels as the supply and price of natural gas became increasingly favorable. The expensive new plants created a need for unprecedented rate increases a condition that consumer advocates labeled “rate shock.” The use of historical test years and so-called normalizing adjustments to the income statement were not powerful enough to insulate against rate shock, that is, hold utility rates to what regulators *perceived* the market would bear.

That the new plants created excess capacity, however, opened the door for use of a theretofore little used ratemaking tool: the *after the fact* prudence review. Before 1983, regulatory disallowances based on imprudence were unheard of. Between 1984 and 1988, they dominated the regulatory landscape. Pierce (1989), notes this phenomenon, and reaches an obvious conclusion:

A temporal analysis of disallowances based on imprudence provides a good starting point. When I researched this topic for other purposes in 1983, I conducted an exhaustive search for regulatory disallowance based on imprudence. The Federal Energy Regulatory Commission (FERC) and its predecessor, FPC, had never disallowed an investment on the basis of imprudence in the agency’s fifty year history. I could find only a few cases in which state agencies had disallowed investments based on a finding of managerial imprudence. Even in those rare cases – about one per decade – the magnitude of the disallowance was relatively trivial. The aggregate amount disallowed in the history of utility regulation probably did not exceed a few hundred million dollars. By contrast, during the period 1984 through 1988, state agencies disallowed as imprudent significant portions of the

investments in nineteen completed generating plants. The average amount disallowed per plant was \$610 million; the aggregate amount disallowed was \$11.6 billion. If these agency findings are to be believed – that is, if the findings of the past four years are something other than a guise for politically opportunistic exercises of the raw political power to redistribute wealth from a minority to the majority – then they suggest a startling trend in the industry’s management. Apparently, for decades electric utility managers were almost uniformly individuals with outstanding business acumen. At some point in the 1980s, this entire generation of exceptional managers was replaced en masse by a generation of bumbling idiots. (p. 2050)

While Rule 1 affected the entire industry in the 1970’s and early 1980’s, by the mid 1980’s its affect was focused on the large subset of utilities with uranium fueled plants under construction. With declining inflation, sales increases in a recovering economy, and falling interest rates, conditions were favorable for utilities as evidenced by their improving financial and market performance. Importantly, utilities affected by prudence reviews were slower to recover.

In “Energy Security: A Report to the President of the United States” the Department of Energy captured the essence of Rule 1: “Regulators are now under intense pressures to allocate some of the enormous costs of [new generating] plants between ratepayers and investors....” (U.S. Department of Energy, 1987)

By the end of the 1980’s, rate increase requests had substantially abated, so Rule 1 for the most part went dormant. In the late 1990’s and the first years of the new century, however, a new aspect of Rule 1 appeared. During

that period, 17 states elected to deregulate the retail sale of electricity, while leaving its transmission and distribution subject to regulation. In these states, the transition to deregulation was commonly facilitated by a mandated multi-year rate freeze for the incumbent utility to permit new entrants to gain a foothold. At the conclusion of the freeze period, with a competitive market (hopefully) established, the freeze would be lifted and the incumbent utility would have to compete for sales in that market. For a variety of reasons, however, the cost to new entrants of producing electricity typically was far above the price at which the incumbent utilities' rates had been frozen. Consequently, few customers switched providers during the transition period. Providers were ready, however, to enter the market once the freeze period expired and the incumbent utilities' began to charge a market determined price. But the differences between expiring frozen rates and market determined prices were substantial. For example, Ameren estimated upon the expiration of its rate freeze that its Illinois customers would see rate increases ranging from 20% to more than 50%.

Legislators and regulators had not openly considered the possibility of that outcome. The near universal promise years earlier when they endorsed deregulation was that rates would go down in a competitive market. In theory, the market would be a more efficient regulator than a government agency. While the theory might be sound, it does not account for a free-wheeling legislative process. The laws ushering in retail deregulation were not loyal to economic theory. They were a product of compromise among advocates for disparate interest groups. (A cynic might suggest that the rate freeze periods were as much to put distance between unrealistic promises and unknowable outcomes as to facilitate development of a competitive market place.)

Faced with constituents outraged at the prospect of sharp increases in the price of electricity, policy makers, true to Rule 1, forced retrading of the legislative agreements made by their predecessors. Through a variety of maneuvers, rate freezes were extended or only partially lifted. In many cases, the estimated competitive market prices, while higher than the frozen rates, still would have been below national and regional average prices for electricity. It didn't matter, Rule 1 applied, or a variant: Significant price changes matter as much as price levels.

Rule 2: When Rule 1, has been satisfied, regulators will do whatever reasonably can be done to assure the financial health of the utilities they regulate.

When it is within their authority and does not violate Rule 1, regulators adhere to Rule 2. (Of course, there can be substantial tension created by the opposing forces of Rules 1 and 2. Rule 2 should be expected to dominate Rule 1 in periods of stable or declining rates. Thus, we are not surprised that capture theory, at least with respect to electric utility regulation, reached its greatest power prior to 1973. We, however, are focused on Rule 2's operation during the turbulence that followed 1973.)

The purpose of regulation is to assure safe and adequate service of an indispensable commodity at reasonable rates. It follows from the capital intensive nature of an electric utility that a financially healthy utility is better able to provide such service than one in financial distress. Furthermore, electric utilities in financial distress draw attention from the financial community. Credit ratings agencies watch for deteriorating credit quality and stock analysts look for signs of an inability to sustain or increase the dividend. Such weaknesses are expected to be rectified with rate increases. When they are not, regulators are criticized for being hostile to the rights of investors. For

example, following a decision in Arizona, Lehman Brothers described the Arizona regulatory process as challenging; BMO Capital described it as having a negative bias; and CitiGroup alleged a failure to grant timely rate relief or a reasonable rate of return. Even the most customer oriented regulator is agitated by such criticism.

Rule 2 even operates when Rule 1 keeps regulators from approving needed rate increases. While there is no equivalent substitute for the added cash from a rate increase, there are regulatory actions that, at least temporarily, can improve some measures, such as EPS, of financial performance without increasing rates. For example, depreciation/amortization periods for assets can be lengthened. Costs that would otherwise have to be written off can be accounted for as regulatory assets and then held for later inclusion in rate base. These costs can even earn a non-cash return – benefitting the bottom line, but bloating the regulatory asset for future ratemaking consideration.

Rule 3: When a utility needs a rate increase, the sooner it is granted in full the lower its rates will be in the long run.

Electric utilities are capital intensive. The cost of a new generating station often exceeds \$1 billion. (Joyce, 2007) Additionally, a typical utility will spend well over \$100's of million annually just to improve existing facilities. For a typical utility, more is spent on capital than any other input. On average, a utility invests a little more than \$2 for each dollar of revenue. (Edison Electric Institute, 2006) In contrast, Wal-Mart in 2006 had about 30 cents invested for every dollar of revenue. (Wal-Mart, 2007)

If a utility's rates do not cover its costs, including its cost of equity, one of two things happens: potential investors invest elsewhere or they bid down its stock price

until its expected return covers their risk/return expectations. In which case, a utility planning to issue stock is either out of luck or has to issue more shares to obtain the needed amount of capital. In either case, existing investors are harmed and the utility's cost of equity rises. In such circumstances, it also is likely that the utility's credit quality will decline thus increasing the cost of debt. Such outcomes are unfavorable for customers whose growing needs for electricity regularly require fresh capital for new or expanded facilities.

In the short run, setting the price of electricity lower than the level necessary to cover the cost of equity seems to be good for customers – they get an essential commodity for less than cost. In the long run, however, as investors wise up they perceive greater risk in utility investments and consequently require a higher return which, in turn, increases the cost of electricity.

Two factors explain the logic of this rule. First, the passage of time creates uncertainty, uncertainty creates risk, and investors must be compensated for risk. Second, Ben Franklin was right, “A stitch in time saves nine.” This saying showed up in different form in the 1970's commercial when an auto mechanic rolled out from under a car engine clogged with dirty oil, held up an oil filter and proclaimed: “You can pay me now, or you can pay me later.”

In our experience, Rule 1 always trumps Rule 3. In large part, this is due to momentum. Once regulators start down the path of holding rates at or below the bottom of the range of cost of service, it is akin to doubling down. With the passage of time, the cost to correct a wrong turn compounds. Rule 2 smoothes, but does not eliminate the friction between Rules 1 and 3. It is not surprising to find the states, whose regulators Regulatory Research Associates rate most favorable to investors, have average electric rates 12.2% below the national average.

(Regulatory Research Associates, 2008) In a similar study, the five state regulators that Lehman Brothers labeled “most shareholder oriented” had average rates from 15.8% to 37.3% below the national average. The five state regulatory commissions labeled “most consumer oriented” had average rates from 16.6% below to 127.1% above the national average. Just one jurisdiction in the consumer oriented list had rates lower (by 0.8%) than the one with the highest rates in the shareholder oriented list! (Lehman Brothers, 2007)

Rule 4: Customer intervenors act in their self-interest, not the public interest, and, therefore, acceding to their positions will often damage the public interest.

In the ratemaking process, once cost of service is determined, it is allocated among customer classes and between present and future generations of customers. An intervenor has three ways to attempt to reduce its “share” of a utility’s proposed cost of service. It can seek to 1) exclude costs as imprudent, non-recurring, or unrelated to utility service; 2) shift costs to another class of customers; or 3) shift recovery of costs to the future. In a cost conscious world, it seems rational in the short run for an intervenor to seek to minimize its utility bills, even if that would create financial hardship for the utility, an immediate increase for another customer, or a legacy of higher costs for future customers.

In most respects, ratemaking is a zero sum proposition. Thus, capitulating to the interests of a particular customer often comes at the cost of increasing rates for other customers or diminishing the return opportunity for investors. Both options damage the public interest. An example, perhaps anecdotal, from our experience illustrates this. The customers most often unrepresented in the ratemaking process are small

commercial and small industrial customers. The big box chain retailers and the regional and national manufacturing firms are typically very well represented. Residential customers are represented typically by a state funded agency and by advocates for low-income customers. In virtually every study we have seen in which the contribution of each class of customer to the cost of service is calculated, the rates paid by small commercial and small industrial customers are disproportionately high.

In a variety of ways, intervenors add force to Rule 1. Perhaps the best example is the tendency of large industrial customers to tie electricity rates to economic development and employment gains or losses. Often the threat of downsizing or shifting incremental production to other states is used to “win” negotiated, or special rate contracts that provide rates lower than standard rate tariffs. When jobs and property taxes and other development opportunities are on the line, it is difficult to resist such contracts. But the bottom line is that such tactics add to the perception that what the market will bear is something less than the cost of service.

Rule 5: It is more difficult to make rates for a financially healthy than a financially sick utility.

Recall Rule 3: When a utility *needs* a rate increase, the sooner it is granted in full the lower its rates will be in the long run. “Needs,” in contrast to “wants,” conveys necessity. In an ideal world, a utility’s want would match its need and, upon justifying that need to regulators, it would be promptly granted in full. (When regulatory commissions possess the insight necessary to follow Rule 5, they, of course, are exposed to claims that they have abandoned the public interest theory and, in fact, have been captured.) When a utility is in financial distress, as long as accounting rules have been followed, it is relatively easy to

measure the extremity of that condition and to see what is needed to relieve it.

In contrast, the needs of a healthy utility are seldom obvious and look more like wants. Denying a sick utility needed relief can push it into bankruptcy; denying a healthy utility needed relief might only make it sick and the symptoms probably won't show up for a year or more. After all, your car doesn't stop running immediately when you don't change the oil filter.

Most often in reality, a utility requests approval for what it wants and at the conclusion of a lengthy, expensive, and adversary ratemaking process regulators decide what they think the utility needs. Too often this process gives way to gamesmanship and the participants think only of winning or losing in the short-term. For example, if Rule 3 is valid, an intervenor who convinces regulators to cut a requested increase in half wins nothing if the utility needs 75% of its request. Granting 50% when 75% is needed is like changing the oil but leaving the dirty filter in place. It's always more expensive to pay later. Certainly, gamesmanship occurs on both sides of table; utilities employ tactics to overstate their need. It is the difficult responsibility of regulators to see through the games and determine what is needed.

Regulators are more likely to get credit for administering "medicine" to a sick utility, than vitamins to a healthy one. Regulators do not get kudos when they grant a rate increase to a utility reporting growing profits and increasing dividends. For a healthy utility, Rule 1 works against a needed rate increase and in favor of the short term economic needs of customers. Of course, when a utility reports profits in hundreds of millions of dollars, its long term needs do not seem as urgent as the perceived short term needs of customers. That such profits are divided among millions of shares to produce a miniscule return on the billions of dollars invested is easily overlooked.

CONCLUSION

The ratemaking process is lengthy, expensive and highly contentious. The results are often disappointing to utility shareholders and, because the standard of review is very limited, relief is seldom obtained from the courts. Furthermore, a successful appeal usually results only in a remand to the regulators for further proceedings, which may or may not produce a more favorable end result.

In our experience, when a utility achieves a disappointing result in a rate case, it is not due to a fatal departure from theory or a flaw in the litigation of the case. Indeed, if anything characterizes the typical utility presentation of a rate case, it is scrupulous adherence to theory and prescribed procedure, an abundance of testimony and exhibits from well-regarded experts, and effective cross-examination of opposing witnesses. Given the importance, it should not be a surprise that a utility devotes the best available human and technical resources to the litigation of a rate case. Why then are the results so often disappointing?

We submit it is because the outcome of a rate case is more dependent on the operation of the five rules than the flawless presentation of the case. Indeed, even though Pierce did not articulate Rule 1 (or the remaining rules), his research in the late 1980's shows a mountain of support for Rule 1 and nary a mole hill against it. Pierce concluded, however, that "...the judiciary should refrain from intervening in the political ratemaking process because indications are that the political process will arrive at the superior solution of replacing the regulated wholesale electric market with a competitive market." (Pierce, 1989) Pierce's foresight proved accurate and, from its early results, there is every reason to believe that a competitive

wholesale market will do a better job of regulating electricity rates than government administrators.

But the proposition that a competitive market might be the better anodyne for state regulation has proven to be misguided. In the states that have attempted to create a competitive retail market for electricity, the five rules have prevailed. First, enabling legislation was primarily a product of negotiation among the same interest groups that participate in the ratemaking process. Second, when it became clear that in a competitive market prices would go up instead of down, regulators and/or legislatures stepped in to halt or slow down the transition to deregulation. Third, among the most vocal advocates for a return to traditional regulation have been large industrial and commercial customers.

Having proven their mettle in the inflationary environment of the 1970's, the overcapacity conditions of the 1980's, and against the onslaught of retail deregulation advocates in the 1990's, we conclude the five rules will remain superior to theory in predicting and explaining the outcome of the billions of dollars of rate litigation forecasted to occur in the next decade.

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