

PUBLIC UTILITY COMMISSION

FOREWORD

Over the past several years, there has been a sustained interest among the states in a new concept in legislative review popularly described as sunset. Since 1976, more than half the states have enacted legislation which embodies the primary element of sunset, the automatic termination of an agency unless continued by specific action of the legislature.

The acceptance of this concept has been aided by a general agreement that the normal pressures of the legislative process tend to prevent a systematic review of the efficiency and effectiveness with which governmental programs are carried out. The sunset process is, then, an attempt to institutionalize change and to provide a process by which a review and redefinition of state policy can be accomplished on a regular systematic basis.

The Texas Sunset Act (Article 5429K, V.A.C.S., as amended) was enacted by the 65th Legislature in 1977. Under the provisions of the Act, agencies are automatically terminated according to a specified timetable, unless specifically continued by the legislature.

To assist the legislature in making the determination of whether an agency should be continued and, if continued, whether modifications should be made to its operations and organizational structure, the Act establishes a ten-member Sunset Advisory Commission composed of eight legislative members and two public members. The commission is required to evaluate the performance of the agency in accordance with specific criteria set out in the Act and to recommend necessary changes resulting from the findings of the evaluation.

The process by which the commission arrives at its recommendations moves through three distinct phases beginning with a self-evaluation report made by the agency to the commission. The second phase involves the preparation of a report to the commission by its staff, evaluating the activities of the agency, and proposing suggested changes for commission consideration. The final phase involves public hearings on the need to continue or modify an agency and the development of commission recommendations and legislation, based on the agency self-evaluation, staff report, and public testimony.

The Sunset Commission's findings, recommendations, and proposed legislation are then required to be transmitted to the legislature when it convenes in regular session.

INTRODUCTION AND ORGANIZATION OF AGENCY REVIEW

The Texas Sunset Act abolishes this agency on September 1, 1983 unless it is re-established by the 68th Legislature.

The staff reviewed the activities of this agency according to the criteria set out in the Sunset Act and has based its conclusions on the findings developed under these criteria.

Taken as a whole, these criteria direct the review of an agency to answer four primary questions:

1. Does the state need to perform the function or functions under review?
2. Could the public still be adequately served or protected if the functions were modified?
3. Is the current organizational structure the only practical way for the state to perform the function?
4. If the agency is continued and continues to perform the same functions, can changes be made which will improve the operations of the agency?

The report is structured to present the performance evaluation of the agency. The application of the across-the-board recommendations developed by the commission to deal with common problems are presented in a chart at the end of the report and are not dealt with in the text except in one instance. When the review develops a position which opposes the application of a particular recommendation, the rationale for the position is set forth in the text.

SUMMARY OF STAFF FINDINGS AND CONCLUSIONS

SUMMARY

The Public Utility Commission (PUC) was established in 1975 and is currently active. The function of the agency is to regulate the telephone, electric, water and sewer utilities under its jurisdiction. To accomplish this regulation, the agency is involved in the following basic activities: setting rates, issuing certificates of convenience and necessity, monitoring utility activities, and responding to consumer complaints.

The results of the review indicated that the agency is generally operated in an efficient and effective manner. The review also indicated the need for continued regulation of the utility industry, and concluded that the current organizational setting is a reasonable one for carrying out the regulatory function assigned. If it is decided that the PUC should be continued, several modifications should be made to improve its operations.

Approaches for Sunset Commission Consideration

I. MAINTAIN THE COMMISSION WITH MODIFICATIONS

A. Policy-making structure

1. The statute should be amended to specify clearly that the director of public utilities is the executive director of the agency and is responsible for the day-to-day management of the agency. (statutory change)

B. Agency operations

1. Overall administration

- a. The comptroller should be given the authority to adjust the gross receipts tax as necessary to ensure that tax collections do not exceed appropriations to the PUC by more than the current ratio (about five to one). (statutory change)

2. Evaluation of programs

a. Organizational framework

1. The PUC should develop written guidelines and policies concerning ex parte communications between agency decision-makers and parties to PUC proceedings. (management directive)

2. Elimination of the Two-Year Rule

The PUC has in its statute a two-year post-employment restriction which prevents PUC commissioners or employees from obtaining subsequent employment with any utility or business entity which does a significant portion of business with a public utility. It has been suggested that this rule should be eliminated in that it unfairly singles out PUC employees and ignores other major regulatory agencies such as the Texas Railroad Commission and the State Board of Insurance. It is also argued that the rule makes recruitment of qualified and competitive personnel difficult and is too broad in its application. Major conflicts of interest that are likely to arise could be satisfactorily taken care of through use of a less restrictive approach that would not close future job markets. On the other hand it has been stated that, instead of being eliminated, the two-year rule should be extended to other agencies. The rule is designed to ensure that current employees cannot be influenced in a utility's favor by promises of future employment.

3. Additional Personnel for the Agency

The staff of the agency has remained fairly constant over time while its workload has grown substantially. Increasing PUC staff might improve the thoroughness with which this multi-billion dollar industry is regulated, ultimately saving the ratepayer money and helping ensure quality service. Additional personnel could be financed from a portion of the revenues that the gross receipts tax generates over the agency's current level of appropriations. Opposing this viewpoint, it could be argued that staffing has been sufficient to target and review major problem areas, and that additional resources might not result in any substantial gains over the current process.

4. Dually or Multiply-Certified Areas

In the case of electric utilities, it is estimated that about one-third of the state is certified to two or more companies. This means that service can be provided in those areas by more than one utility. It has been argued that these multiply-certified areas should be eliminated because they result in duplication of facilities and costly competition in an industry which is recognized as a natural monopoly. This duplication might translate into higher cost of service for consumers. In response, it has been stated that, while not a pure approach to certification, allowing more than one utility to be certified to an area was a necessary decision given the short six-month

period of time available for defining service areas in 1976. Although this approach has presented some problems, some multiply-certified areas are slowly being eliminated by voluntary action.

5. Extension of Service Areas for Municipal Electric Utilities

During the certification process in 1976, most cities operating their own electric utilities were generally limited in service area to their 1975 city limits. Efforts by the cities to extend their electric utility service areas into newly annexed areas have been generally unsuccessful. In support of making the necessary changes to allow the municipalities to extend their service areas, it is pointed out that other types of electric utilities were certificated to areas allowing for growth, but that municipalities were not given the same consideration for various reasons, resulting in inequitable treatment. Furthermore, it would seem appropriate for a city to serve all of its tax-paying citizens. The cities also cite the need for revenues from extended areas to help support other city efforts. An opposing argument is made that the cities had the same opportunity to present their cases as did other utilities, and that the PURA gives no special privileges to cities for providing electrical services in newly annexed areas certified to other utilities. These utilities also cite the need for revenue from those service areas in question.

6. Divided Rate Regulation Between Cities and the PUC

The PURA divides the regulatory authority over electric rates and services between the PUC and municipal governments. The PUC has original jurisdiction over electric utilities in unincorporated areas and in municipal areas where the cities have relinquished their jurisdiction. The cities have original jurisdiction over electric utilities operating in their areas. In the past, legislation has been unsuccessfully introduced which would transfer original jurisdiction in electric utility rate cases to the PUC. In support of this proposal is the argument that, as a practical matter, the PUC already has the final say in electric rate decisions through its appellate jurisdiction and the use of the system-wide rate-setting basis. It is argued that participation by the cities is a duplication which wastes time and money and that cities are not technologically or financially equipped to properly analyze rate cases. Also, it is sometimes claimed that dual regulation causes local officials to act irresponsibly by refusing reasonable rate increases, knowing that the PUC will later adopt a workable rate. An opposing argument

suggests that the information available to cities through their regulatory authority is invaluable when the cities intervene in rural rate cases to represent the local rate-payers. It is also argued that loss of rate-setting authority would seriously impair the cities' ability to enforce quality of service requirements. Finally, it is contended that if original jurisdiction is transferred to PUC, media coverage will not initiate public interest at a local level and local officials will not feel pressure to actively participate in proceedings in Austin.

7. Regulation of Gas Utilities

The PURA splits the state's regulation of utilities between two agencies: the PUC regulates certain utilities offering telephone, electric, and water and sewer services, while the Texas Railroad Commission regulates gas utilities. In the past, legislation has been unsuccessfully introduced to transfer authority over gas utilities to the PUC. In support of this proposal, it would seem logical for all utilities regulated under the PURA to be the responsibility of a single agency. This approach would facilitate consistency and clarity in regulation. The PUC would be the reasonable choice for such an agency since it is involved in nothing but utility regulation. An opposing argument can be made that the Railroad Commission should maintain regulatory responsibility over gas utilities. This agency already regulates other aspects of the gas industry, and the current approach thus results in more appropriate and coordinated regulatory decision-making for all segments of the industry.

8. Standards for Admissibility of Evidence in Agency Hearings

The PURA, as well as the APA, require that the PUC follow the rules of evidence for non-jury civil cases in district courts in Texas. The agency's statute provides a narrow exception to the general requirement that evidence must be clear, relevant, and the most reliable information available. This might allow for otherwise inadmissible evidence to be admitted into the record when the determination is made that it would be unreasonable to enforce the general rules of evidence. The agency has been criticized for being too lenient in interpreting this exception and it has been suggested that the agency should tighten its admissibility standards. In support of this suggestion, it is argued that the agency's loose interpretation presents several problems. First, the intervenors already face serious problems in analyzing

pre-submitted evidence in the short time span available. The time pressures inherent in major rate hearings (such as those of Southwestern Bell) are intensified when the intervenors must analyze vast amounts of information which has not been proven reliable. There is also the danger that inaccurate information admitted by the examiner and made a part of the record will be considered by courts in any appeal of the case. An opposing argument is that the 185-day time limit for rate cases would not practically allow a stricter interpretation. Parties would continually challenge each item to be submitted into evidence and the opposing party would then be required to prove up each item. This would extend the already pressured pre-hearing and hearing time span. Moreover, the PUC is not a court of law and consideration should be given to the unsophisticated parties who may not be able to conform with strictly applied procedural rules.

9. Representation for Residential Rate-Payers in Commission Proceedings

In presenting cases before the commission, the agency's general counsel is required by the PURA to represent the interests of all classes of rate-payers -- residential, commercial, industrial and municipal. A concern has been expressed in the past, however, that each of the consumer classes except the residential consumer is able to exert additional influence over the rate proceedings in the form of experienced intervenor advocates. Because residential intervenors may not have access to the financial resources or the expertise available to the other consumer classes, various means have been suggested to allow the residential customers to more effectively compete in rate hearings. Two major methods that have been identified are the use of a public utility counsel and intervenor funding. The idea behind the establishment of a public counsel is that the counsel would be made a party in the hearings and would be able to develop cases and appeal PUC decisions on behalf of the residential rate-payers. Supporters of a public utility counsel say that representation of the residential customers by PUC staff and consumer groups in the past has not been adequate. A public counsel representing the viewpoint of the residential rate-payer might give the general public a more positive attitude toward PUC proceedings. In opposition to this view is the argument that a public counsel is not necessary. The PUC staff, it is stated, is doing a good job to see that rates are just and reasonable. The commission is very lenient in admitting consumer groups and

individuals as intervenors and these intervenors effectively represent residential ratepayers. Any additional representation would be a waste of the taxpayers' money. Another means of increasing residential representation in the rate process is intervenor funding. This method would allow consumer groups, as well as individuals, to be reimbursed for participation in commission hearings. Supporters of this idea believe that residential rate-payers are already ultimately paying for the costs incurred by all of the other consumer classes in rate proceedings and that it is only fair that public money be made available to advocates for residential ratepayers. In opposition to intervenor funding is the argument that, as a practical matter, this approach would not work, primarily because there would be no fair way to determine which group or individual would be funded.

10. Construction Work in Progress

One of the most controversial and complicated issues surrounding the PUC involves the treatment of construction work in progress (CWIP) for electric utilities. The PURA allows a utility to earn a return on CWIP when the PUC determines that it is necessary to the financial integrity of the company. The PUC has defined financial integrity to mean, essentially, the inclusion of enough CWIP to allow a utility to maintain its bond rating. Huge construction projects for new electrical facilities and rising electric bills have stimulated questions as to the appropriateness of PUC policies on CWIP.

In opposition to the current policy, it has been argued that the rate-payer should not be helping to pay for power plants from which they are not yet receiving power. That is the investor's role. As a result of the PUC effort to maintain bond ratings, Texas is one of the most generous states in CWIP allowed, and it is argued that this approach benefits investors at the expense of consumers. Generous CWIP also encourages utilities to build new power plants without considering alternatives for meeting tomorrow's energy demands. In support of PUC's present policy, it is observed that in the long run the consumer is going to be paying roughly the same electric bill over the life of a plant whether CWIP is included or not. With CWIP, the rate increases will be more gradual; without it, rates will jump when the new plant finally goes on line. In addition, supporters claim that while it is hard to put an exact dollar figure to a bond rating, good ratings save the consumer money by lowering the cost of capital. Finally, a strict CWIP policy might make it

difficult or impossible for a utility to raise funds for construction, but it probably would not provide additional incentive for management to keep construction costs low as has sometimes been suggested.

AGENCY EVALUATION

The review of the current operations of an agency is based on several criteria contained in the Sunset Act. The analysis made under these criteria is intended to give answers to the following basic questions:

1. Does the policy-making structure of the agency fairly reflect the interests served by the agency?
2. Does the agency operate efficiently?
3. Has the agency been effective in meeting its statutory requirements?
4. Do the agency's programs overlap or duplicate programs of other agencies to a degree that presents serious problems?
5. Is the agency carrying out only those programs authorized by the legislature?
6. If the agency is abolished, could the state reasonably expect federal intervention or a substantial loss of federal funds?

BACKGROUND

Organization and Objectives

The Public Utility Commission was created in 1975 and is currently active. The commission is composed of three members appointed by the Governor with the advice and consent of the Senate for overlapping six-year terms. To be eligible for appointment as a commissioner, no substantive expertise in the area of public utility regulation is required; however, commission members must meet various other statutory qualifications. Among these, members must be at least 30 years of age and, for two years prior to appointment, must have had no personal or significant financial involvement with a public utility or affiliated interest. Operations of the commission are carried out by a staff of 122 employees and an appropriation for fiscal year 1983 of approximately \$3.9 million in general revenue and an estimated \$164,000 in federal funds for a total of slightly over \$4 million.

The purpose of the Public Utility Commission is to regulate the operations of telephone, electric, and water and sewer utilities within its jurisdiction. As of September 1, 1982, the PUC was involved in some aspect of regulatory activity with 1,622 water utilities, 559 sewer utilities, 73 telephone utilities, and 174 electric utilities. While the PUC was established relatively recently, legislation to create a state utility regulatory body had been proposed as early as 1915. Such regulatory legislation was prompted by the knowledge that utilities operate as monopolies. Being the only available provider of a service to its clientele, a monopoly is theoretically free to charge whatever price the market will bear. The purpose of regulation is to ensure fair prices and services in this type of situation.

Between 1915 and 1960, there was little effort to regulate utilities. During the decade of the 1960s, increases in utility rates and rising consumer concern that utilities were setting exorbitant rates generated new interest in regulation. By 1973 this consumer concern resulted in the introduction of several pieces of legislation aimed at regulating utilities. None of these bills received sufficient support to be enacted, however. The necessary push to gain that support came with several events that occurred in 1973 and 1974. These two years marked the beginning of the energy crisis, which resulted in even more rapid increases in electric utility rates for residential users and the escalation of natural gas rates for farm users. In addition, Southwestern Bell Telephone became involved in a scandal where some of its executives were accused of improprieties. Added to this

problem, Southwestern Bell attempted to increase intrastate telephone rates substantially--an action that was successfully fought by the state's Attorney General. These events gave rise to strong public expressions of concern and the consideration of several regulatory bills by the 64th Legislature in 1975. These legislative efforts culminated in the enactment of the Public Utility Regulatory Act of 1975 (PURA) which, among other things, created the Public Utility Commission and placed Texas among the other 49 states that had already enacted some form of legislation for comprehensive utility regulation.

When compared to the legislation of other states, the Texas legislation has at least two important distinctions. First, state regulatory responsibility is split between two agencies. The Public Utility Commission regulates telephone, electric, and water and sewer utilities. The Texas Railroad Commission regulates gas utilities. Second, the Public Utility Regulatory Act leaves much regulatory responsibility to cities--a division of authority which is unique to Texas.

Under its statute, the agency's operations fall into one of four major areas of responsibility. By statute, the agency's primary regulatory responsibility is to set rates for the telephone, electric, water and sewer utilities under its jurisdiction. The law requires that these rates be "just and reasonable" to both consumers and utilities. The agency has rate setting authority over all telephone utilities operating anywhere in the state. With respect to electric, water, and sewer utilities, however, the agency's primary authority to set rates extends, with some exceptions, to utilities operating outside city limits. Basically, cities have retained original rate making authority for the utilities operating within their boundaries unless choosing to relinquish this responsibility to the PUC. With some exceptions, appeals from city rate making decisions are the responsibility of the Public Utility Commission.

While the setting of rates has a significant impact on the public, there are other types of decisions which also bear heavily on the quality or cost of utility services. Several of these types of decisions are regulated through the agency's second function of certification. Before utilities under the PUC's certification jurisdiction can operate, they must obtain from the agency a certificate of convenience and necessity. By granting this certificate, the PUC acknowledges that the operation of a utility is in the best interest of the public. Then, after entering operation, the utility must apply and receive from the commission an amendment to its certificate if it wishes to change its service area, make

significant additions to its facilities, or engage in the sale, transfer, or merger of the company. In general terms, the commission not only has certification jurisdiction over all the utilities for which it sets rates, but also claims jurisdiction over utilities owned by municipalities for the purpose of certification.

As its third function, the Public Utility Commission is involved in monitoring the ongoing operations of utilities under its jurisdiction. This monitoring effort is to ensure that utilities are providing adequate services to the public and are in compliance with statutory requirements and commission policies, rules, and orders. The agency monitors utility operations through various types of reporting requirements, on-site investigations and audits, and its complaint process. Where non-compliance exists, the agency can initiate enforcement action against a utility. In fiscal year 1982, 296 site visits were conducted. As a result of these and other monitoring efforts, official enforcement action was brought against 42 utilities in that year.

As its final general function, the Public Utility Commission carries out a program of consumer assistance. The primary aim of this effort is to help consumers resolve their specific complaints against utilities under the PUC's authority. In fiscal year 1982, the agency received and acted on over 8,000 complaints from the general public.

The review of the operations of the agency indicated that, in general, the agency has been effective in carrying out its responsibilities. However, various areas were identified and are discussed in the report where modifications can be made which would increase the efficiency and effectiveness of the agency's activities.

REVIEW OF OPERATIONS

The evaluation of the operations of the Public Utility Commission is divided into general areas which deal with: 1) a review and analysis of the policy-making body to determine if it is structured so that it is fairly reflective of the interests served by the agency; and 2) a review and analysis of the activities of the agency to determine if there are areas where its efficiency and effectiveness can be improved, both in terms of overall administration of the agency and in the operation of specific agency programs.

Policy-making Structure

The Public Utility Commission operates through three full-time, salaried commissioners appointed by the Governor with the advice and consent of the Senate for overlapping six-year terms. The primary role of the commissioners is to serve in a quasi-judicial capacity on utility cases which have gone through the agency's hearings process.

In recognition of the quasi-judicial role of the commissioners, the Public Utility Regulatory Act (PURA) establishes strict conflict-of-interest provisions with regard to the commissioners. Eligibility for appointment to the commission requires, essentially, no personal or financial involvement with any utility for the two years prior to appointment, and the commissioners must remain free of such involvement during their term in office. Also, post-employment restrictions apply to the commissioners for two years immediately following the end of their term.

In addition to their role as regulatory decision-makers over public utility rates and services, the commissioners also play a role in the agency's internal administration. The review indicated that this role is largely one of review and approval in matters of overall agency significance. The commissioners review the agency's legislative budget proposals and, as required in statute, are responsible for hiring or firing the director of public utilities, as well as the division directors for engineering, accounting, economic research, hearings, and office of general counsel. Responsibility for the day-to-day administrative operations of the agency are left to the director of public utilities. However, the review identified that the present role of the commissioners has only been in place since fiscal year 1980 and has varied over the seven years of the commission's operation.

Prior to fiscal year 1980, the commissioners were actively involved in the day-to-day management of the agency, at times with the assistance of the

director of accounting. This approach encouraged staff members to bypass the director of accounting and seek direction straight from the commissioners. This resulted in a disorganized system of administrative control. In recognition of the agency's administrative problems, authority for daily operations was given to the director of public utilities in 1980 by action of the commissioners.

Examination of the Public Utility Regulatory Act indicates that these differing administrative arrangements are permissible, and therefore something other than the current structure could again be used in the future. The statute does create the position of director, but does not specify the position's responsibilities. To avoid return to the "multiple-management" approach taken by the commissioners in the past, the statute should clarify the role of the director of public utilities as that of the executive director of the agency responsible for the day-to-day management of the agency.

Overall Administration

The evaluation of overall agency administration focused on the internal management of agency personnel, funds, and support programs. A review of audit reports and other available documents revealed no significant problems in the overall administration of the agency. In the agency's seven-year history, continuous efforts have been made to streamline the operations of the agency administration. As stated previously, the director was given general administrative responsibility in 1980. This action provided for unified administration. Various improvements have also been made in operations provided by support staff such as the consolidation of word processing into a central unit. However, the review did identify two areas of concern.

Staff Turnover. The agency has experienced heavy employment turnover since its creation in 1975. Since 1979 the agency has lost 100 employees out of an overall staff of approximately the same amount. Expressed in terms of a percentage, turnover has ranged from 37 percent in fiscal year 1978 to 29 percent in fiscal year 1981. In an agency such as the PUC, a high level of staff instability is particularly undesirable. The agency has a heavy workload which depends largely on specialized expertise in the areas of engineering, accounting, finance, economics, and law. Turnover is damaging to the accumulation of expertise in the agency and the resulting quality of work.

No single cause could be isolated as the factor responsible for the turnover problem. Available data indicates that most professional employees leave either

before completion of one year of employment or after three to four years. Several possible explanations for this pattern can be offered. The workload for professional employees is generally heavy and associated with a high level of accountability since they serve as "expert witnesses" in agency proceedings. As a result, new employees soon learn whether they are suited for the work, and those that are not usually leave before the end of their first year. Analysis of data for those employees leaving after three to four years reveals that they are often close to the top of the salary range in state employment. Also, in a relatively small agency such as the PUC, only limited advancement opportunities are available since only a few top management positions exist. These factors could combine to make higher level employees seek career advancement opportunities elsewhere.

The review indicated that agency management has made efforts toward reduction in staff turnover rates. The agency has engaged in a number of studies aimed at identifying problems in this area. In response to these studies, the agency has taken various forms of action to reduce and minimize the effects of turnover. In fiscal year 1981 the agency developed extensive training programs with emphasis on improving technical skills and developing managerial skills to assist employees in understanding their jobs, and to close the gap in lack of expertise as quickly as possible. The agency also developed a modified management-by-objectives program to involve all employees in the goal-setting process. To improve internal communications the agency initiated standing committees; staff meetings; a newsletter; and began publishing agendas, updates on final orders and updates on docketed cases. Finally, a formal personnel evaluation system is currently in the developmental stages, and when completed, will include complete job descriptions, career ladders with training plans, and an employee performance appraisal system to ensure communications and feedback between employee and supervisor. These efforts appear to have been at least partially responsible for the recent decline in turn-over from the fiscal year 1981 percentage of 29 to the recent fiscal year 1982 percentage of 18.

Revenues for Agency Administration. The second area of concern relates to the "gross receipts tax" that utilities pay under the provisions of the PURA. The statute requires that the comptroller collect this tax, which amounts to one-sixth of one percent of the utilities' gross receipts during a state fiscal year. These funds are deposited to the general revenue fund of the state. The review showed that funds collected under the tax have historically been much higher than

appropriations to the agency for its operations. For example, in 1981 agency appropriations were \$3.1 million and gross receipts revenues collected were \$16.6 million, about 5.3 times greater than appropriations needed to run the agency. Corresponding figures for 1982 showed collections exceeding appropriations by about 5.6 to one. Projections of gross receipts indicate that revenues from this source will be increasing from between 10 and 12 percent a year over the next five years, with revenues for 1987 estimated at about \$33.8 million. If this rate of increase proves accurate, it is likely that the gap between revenues from gross receipts and appropriations will continue to widen.

In establishing this tax, the PURA states that its purpose is to defray the expenses incurred in administering the act. Given the projected rates of growth and historical experience, it appears likely that a reasonable relationship between costs and revenues will not be maintained in the future unless the tax is adjusted. To ensure that the current relationship is not exceeded, the statute should be amended to stipulate that revenues could not exceed appropriations by more than five times the current figure. If the comptroller projects that this ratio would be exceeded, then the percentage would be cut back to the appropriate amount. No adjustment would be required if revenues were projected to be less than five times the agency's appropriation. This approach would ensure funds to cover future agency growth, but would keep revenues received from increasing disproportionately.

Evaluation of Programs

The review of the PUC's program operations is divided into five parts. The first part sets out the overall organizational framework within which the programs are operated. Other sections cover the four substantive functions of the agency: rate-making, certification, monitoring, and consumer assistance.

Organizational Framework. As stated previously, the purpose of the agency is to regulate specified public utilities as a replacement to market competition. This purpose is accomplished through an organizational structure designed to provide regulation using a quasi-judicial approach. Thus, the various groups and persons involved in a case plead their point of view before the agency in adversary proceedings, and the commission makes a final regulatory decision from among the varying viewpoints and evidence presented. The quasi-judicial method of regulation is commonly used in utility regulation in other states. The examination of the framework set up to carry out this quasi-judicial approach to regulation

focused on whether the organizational arrangement of the agency is generally reasonable to its purpose, and whether procedural requirements governing this type of operation are properly adhered to.

The framework of the agency can be viewed as having two main parts. The first part evaluates requests presented to the agency by utilities and makes recommendations on what should be done with these requests. The second part makes the final decision on how a utility request should be handled. Each of these functions is supported by various organizational divisions of the agency.

To accomplish the evaluation function, the agency has established four operating divisions: accounting, engineering, economic research, and general counsel. The first three of these divisions are responsible for performing the substantive evaluation work on a utility's request. The general counsel's division coordinates this evaluation work and translates the staff's conclusions and recommendations into a case that it will argue. This organizational framework for evaluation is a generally reasonable one. The skills required for the substantive evaluation function break down clearly into the areas of accounting, engineering, and economic research. Since the agency functions in a quasi-judicial manner, there is also a need for a general counsel to argue the results of the staff evaluation. In addition, the PURA requires that the agency employ a chief accountant, chief engineer, director of research, and a general counsel, and specifies the duties of the general counsel. The organizational arrangement used by the agency tracks these statutory provisions.

The decision-making function of the agency is accomplished through the hearings division and the office of the commissioners. Examiners of the hearings division serve as the "eyes and ears" of the commissioners. In this role, the examiners are responsible for making "findings of fact and conclusions of law" on a case and reporting these findings to the three commissioners of the agency. To accomplish this purpose, the examiners preside over formal hearings at which the "evaluation staff", the utility, and other parties and persons present their various points of view. The three commissioners of the PUC have final responsibility for determining how a case should be decided. In making this determination, the commissioners rely on the examiner's report, any further oral arguments from parties in the case, and other documents or evidence available from the record. Given the number of rate increase and certification-related requests that the agency receives each year (515 in fiscal year 1982), the separation of decision-

related responsibilities between the hearings division and the commissioners' offices is appropriate. This approach allows for more thorough consideration of a case and is generally similar to the method used in other quasi-judicial administrative agencies.

The PURA mandates that this organizational framework operate in accordance with various procedural requirements. These requirements are intended to ensure that the agency's decision-making processes provide all parties with fair and equal treatment. Among the most important of these requirements are those concerning the application of the state's Administrative Procedure Act (APA) to the hearing process of the agency.

The APA requires that administrative hearings provide for reasonable notice to all parties. The notice must include a short and plain statement of the matter to be considered. In addition, each party must be afforded an opportunity to respond and present evidence and arguments on all issues involved. According to the APA, the rules of evidence as applied in nonjury civil cases in the district courts of Texas should generally be followed. With regard to ex parte contact, decision-makers of an agency are prohibited from communicating with any party in a case in connection with any issue of fact or law unless all parties have the opportunity to participate.

The review indicated that the agency has defined and set up procedures to comply with the provisions of the APA. With regard to notification, all parties to the case are given notice in writing of an ensuing hearing. In addition, any parties of an earlier hearing of a similar nature are also given notice. The agency's procedural rules provide for intervenors to participate in the hearings process and present testimony and evidence. Concerning evidentiary requirements, the agency has set standards of admissibility that are closely in line with those set out in the APA. It has been suggested by some that the agency is too lenient in its interpretation of admissibility and that sometimes irrelevant or inappropriate evidence is admitted and becomes part of the record. This issue is addressed in the last section of the report.

Because of the private nature of ex parte contact direct compliance with this provision is particularly difficult to determine. As a result, the review focused on whether the commission had developed clear policies and procedures to deal with the ex parte requirement.

Interviews with commission members and staff of the hearings division indicated that no written guidelines on this topic exist for new employees or commissioners. However, the requirements of the law are explained on an informal basis to new personnel in these positions. An unwritten policy also exists with respect to communication with the professional staff responsible for evaluating the requests of utilities. The staff is a party to agency proceedings, and in a strict sense, communication between agency decision-makers and agency evaluators on any matter of a pending case could constitute an ex parte violation. However, commission members and hearings examiners are not always familiar with the more specialized technical concepts that a case may present. In such cases, as a practical matter, communication is permitted between agency decision-makers and expert staff. It was explained that contact should, where possible, be limited to expert staff not directly involved in the particular case, and that the information sought should be for purposes of clarification. This policy appeared to be generally understood by agency personnel. However, to help ensure a clear understanding and awareness of ex parte policies by both new and existing agency personnel, the development of written guidelines and policies would be desirable.

Rate-making. As set out in the PURA, the Public Utility Commission's primary responsibility is to set the rates that utilities under its jurisdiction may charge. The statute gives the PUC two types of rate-making jurisdiction: original and appellate. Under its original jurisdiction, the agency is the immediate rate setting authority for, with some exceptions, telephone utilities operating anywhere in the state; and electric, water, and sewer utilities operating in unincorporated areas. The act allows cities to retain original jurisdiction for setting the rates of electric, water, and sewer utilities operating within their boundaries unless this authority is voluntarily relinquished to the commission. Under its appellate jurisdiction, the commission is responsible for hearing appeals from city rate-making activity, unless the city is setting a rate for a utility that it owns. As one exception to this rule, the PUC does have appellate authority over rates charged by a municipally owned utility to consumers living outside the city limits. Appeals to the commission are heard in the same fashion as a new rate case (on a de novo basis).

To help follow the PUC's ratemaking process, it is first useful to explain in general terms the basic concepts used to develop a rate. The first part of developing a rate is to determine a utility's revenue requirement, which is the total

amount of money that the utility needs to operate for a year. After knowing this amount, then the rate(s) to be charged to each class of consumer to raise the necessary revenue must be calculated. The first question which needs to be answered is, how do you determine the overall revenues that a utility needs for a year? The PURA sets up broad guidelines for determining this amount. Overall revenues are to be set at a level which will allow a utility to recover its operating expenses plus a reasonable return on invested capital (in simplified terms, invested capital represents the investment that bond and stock-holders have made in the utility). This definition of overall revenues thus requires a determination of: 1) operating expenses, 2) invested capital, and 3) some percentage that, when applied to the amount being used for invested capital, will yield a reasonable rate of return.

The statute spells out, to some extent, how these determinations will be made. As a basic starting point, the PURA uses a test year concept. A utility reports its expenditures to the PUC for a previous 12-month period and then requests various adjustments to the test year figures. These adjustments represent increases or changes in expenditures which, in the utility's opinion, entitle it to seek new rates.

After the overall revenue requirement is determined, the actual rates to generate these revenues must be developed. The first step in this process is to allocate the various elements of expense that make up the revenue requirement among consumer classes according to their share of responsibility in generating the expense (cost allocation). A rate, or set of rates, is then designed for each consumer class to cover the expenses (rate design). The PURA requires that rates be "sufficient, equitable, and consistent in application to each class of consumer."

The rate setting process of PUC generally begins when a utility files a request for a rate increase. A utility can make such a request at any time. According to the commission's interpretation of the PURA, the agency then has up to 185 days to act on the utility's request before the rates submitted automatically go into effect. When a utility's rate package is received, the agency begins its process of evaluating the various parts of the rate proposal. After this process is completed, a hearing is held and the commission enters a final order outlining the approach that the utility must use in setting its rates.

In examining this overall process, the review focused on determining whether the agency has developed a systematic routine for its rate-setting

activity, whether the agency accomplishes this task in a timely fashion, and whether its review of rate requests is generally thorough. In addition, it was noted during the review that the PURA gives authority for state regulation of gas utilities to the Railroad Commission of Texas. The division of state-level authority for utility regulation between the PUC and the Railroad Commission creates a situation in which differing rate setting methods could be in use in the two agencies. As a part of the review, a comparison was made using the services of an outside consultant to determine the extent of these differences. Because of the complexity of the subject and its relevance to more than one agency, the results of this comparison are presented as a separate report.

The review of the questions applying specifically to the PUC indicated that the agency has developed a systematic approach to the rate setting function. Starting with the evaluation of utility rate requests, a company is required to file certain standard schedules and information. The evaluation of this information and preparation of the staff case by the accounting, engineering, economic research, and general counsel divisions follow a well established pattern.

The accounting division has the basic responsibility of determining a utility's overall revenue needs. To come up with this figure, the division evaluates the dollar adjustments that a utility is requesting in its operating expenses and invested capital. This evaluation is dependent on information provided in the utility's filing, supplemental data that the division requests, and, in major rate cases, one or two weeks of on-site field work at the utility. In order to calculate the total revenue requirement, the accounting division also needs to know what rate of return should be allowed for the utility as profit. The economic research division provides this percentage to accounting after analyzing the utility's debt structure and financial history through several established methods.

The engineering division is involved to a lesser degree in some elements of the evaluation of the revenue requirement. However, its primary function occurs once accounting has calculated a recommended revenue amount for a utility. The engineering division takes this amount and evaluates the rate structure required to generate the recommended level of revenues. The division analyzes the various methodologies being suggested by the utility and modifies them as it sees appropriate. Engineering is assisted in this effort by the economic research division, which provides specialized data on certain items that affect consumption patterns such as weather.

Once the divisions have evaluated revenue adjustments and rate structure, staff recommendations on a utility's request are translated into testimony under the direction of the general counsel's office. As a matter of routine, the testimony is prefiled before a hearing in written form according to a generally set format for each division. The testimony generally sets forth the exceptions that staff is taking to a utility's rate filing, and methodologies being used are identified and explained.

As in the evaluation phase of a rate proceeding, the decision-making process has also developed into a systematic routine. This part of the rate-making process routinely consists of three primary focal points: prehearing, hearing, and final order meetings. As a general rule, a hearings examiner presides over the prehearing and hearing stages and the commissioners hold final order meetings. At the prehearing meeting, all persons interested in being involved in a rate case formally meet together for the first time. The presiding examiner establishes the overall schedule that will be followed for the submission of testimony, investigation of the utility's rate request, the actual hearing, and various other deadlines. Other "housekeeping" details are also taken care of, such as the granting of intervenor status to persons seeking involvement in the case. The prehearing also affords an opportunity for the parties in a case to informally try to work out their differences.

Even though the parties to a case may settle informally, the agency follows a general policy that, except in special circumstances, all cases go to a formal hearing. At the hearing the examiner listens to testimony from parties in the proceeding. Typically, the parties include the utility, the staff, and, in major cases, often several intervenor groups. Usually on the last day of a hearing the examiner establishes further time frames for the submission of additional briefs by the parties.

Several weeks after the hearing, the examiner issues a report containing recommendations to the commissioners as to how the case should finally be decided. The report is distributed to parties and other individuals requesting the document together with a schedule for filing exceptions. After considering the examiner's report and other information available to them in the record, the three commissioners meet in a final orders meeting to make a final agency decision on the utility's rate structure. At this meeting, further oral argument can be presented by the parties to the case.

The review indicated that the PUC generally goes through its various rate-setting processes in a timely fashion. A strong factor influencing this processing efficiency is the 185-day limit that the PURA places on the agency before it loses its rate-making jurisdiction over a utility's request. The statute prescribes various time limits for different aspects of the rate setting process leading up to the 185-day maximum. In addition, the agency has set internal working deadlines for meeting the time requirements of the PURA. A simplified chart of these time spans is shown on the next page. The hearings examiner assigned to a rate case is responsible for setting up many of these due dates at the prehearing conference.

The review of the agency's performance indicated that the 185-day time limit has rarely been exceeded, and then for exceptional circumstances not involving agency error or inefficiency. It also appeared that the agency was generally timely in meeting initial internal deadlines. One exception to this record was noted in the preparation of parts of staff testimony. The agency requires that testimony of its staff be filed seven days before a rate hearing begins. This time limit allows interested parties a brief period to prepare their cases supporting or attacking the staff's position. It was noted that part of the testimony dealing with rate design is frequently filed several days late in large rate cases. This lateness results from a number of factors. The rate design part of the staff evaluation is, by necessity, the last part of the rate case analysis. Any slippage in internal deadlines is reflected at this stage. Furthermore, the agency is dependent on the assistance of utility computers to provide much of the many calculations required in the rate design phase of a major utility case, and extra time is sometimes required as a natural result of the coordination this process calls for. The agency has taken steps to improve the timeliness of this part of testimony preparation through increased communication among divisions and through plans to develop its own rate design computer programs. While no serious problems were noted to have arisen as a result of late rate design filing, given the short time available for reviewing staff testimony, the agency should continue its efforts to solve this problem.

In addition to timeliness, the review also focused on the thoroughness of the agency's evaluation of utility rate requests. Due to the subjective nature of the rate evaluation activity, a precise determination of agency thoroughness cannot be made. However, an indication of this factor can be gained through looking at various indicators and through interviews with agency staff.

TIMETABLE FOR A TYPICAL MAJOR RATE CASE

Application Filed	Day 1
First Prehearing	Day 15
Discovery	Requests for Information (RFI) Day 20-40 Answers to RFI's Day 40-60
Intervenor Testimony Due	Day 61
Staff Testimony Due	Day 68
Hearing (2 weeks)	Day 75-89
Briefs Due	Day 103
Reply Briefs	Day 110
Bonding Date (set in statute)	Day 125
Examiner's Report	Day 140
Exceptions to Report Due	Day 154
Answers to Exceptions	Day 161
Commissioners' Final Orders	Day 171

This schedule is based on a hearing that lasts two weeks. Day 75 for the beginning of the hearing is fairly standard. The time frames for the other deadlines are frequently adjusted at the discretion of the hearings examiner.

An examination of key workload factors would suggest that the current staff is spread thin. From fiscal years 1979 through 1982, the following table shows that total dollar increases being requested by utilities grew from approximately \$571 million to \$1.6 billion annually. The number of rate cases during this period also increased from 145 to 183. In comparison to this growth rate, the number of employees budgeted by the agency remained relatively constant, varying from 129 in 1979 to 118 in 1982.

**WORKLOAD INDICATORS
PUBLIC UTILITY COMMISSION**

	FY 1979	FY 1980	FY 1981	FY 1982
Number of Rate Cases Docketed	145	182	190	183
Dollar Increases Requested by Utilities	\$ 571 million	\$ 1.2 billion	\$ 1.3 billion	\$ 1.6 billion
Number of Budgeted Employees	129	128	116	118

While a precise figure for staff overtime is not available, agency records indicate that agency personnel in professional positions frequently work overtime hours. A final factor which would aggravate the thoroughness of the rate evaluation function is the high rate of turnover, creating a heavy dependence on inexperienced personnel.

Interviews with agency staff confirmed that, under current workload conditions, evaluation of a major utility's rate request must be carefully prioritized to cover the areas of largest concern. In these cases, a high dependence must also be placed on data submitted by the utility, with little opportunity for independent checking and data collection. Given the major dollar amounts being analyzed by the PUC, it would be desirable to increase the thoroughness of its evaluation process wherever practical or affordable.

One of the major limitations placed on the staff is the 185-day time span for rate cases. A period of between 60 and 70 days is usually blocked out for staff

evaluation of the rate request at the beginning of the 185 days. This evaluation cannot be practically expanded for major rate cases under current circumstances, an action which would increase staff time for analysis. The reason for this limitation lies in the variable nature of the actual hearing which follows the staff evaluation. Generally speaking, the more complex the case, the longer the hearing. Most major electric utility hearings last from two to four weeks, but Southwestern Bell cases typically run for six or seven weeks. As the hearing time requirement takes a larger percentage of the 185-day total allotment, less opportunity is presented for increasing the evaluation period and still meeting the various time constraints placed on the agency. To help provide more time for thorough staff analysis while still maintaining the basic concept of the 185-day limitation, the commissioners should be given the authority to extend the 185-day period when it is anticipated that a utility's rate hearing will extend beyond 20 days.

Another means of helping the agency's evaluation effort would be to increase staff support. Additional personnel could be financed from a portion of the revenues that the gross receipts tax generates over the agency's current level of appropriations. Such an increase could also be justified on the basis of the commission's increasing workload and relatively constant level of staff support. The pros and cons of this issue are discussed in the final section of the report.

Certification. While the PURA places certification in a secondary role to rate-making as the PUC's regulatory focus, certification of utilities is also a major responsibility of the agency. Utilities under the commission's certification jurisdiction include, with some exceptions, those utilities subject to its original rate-making authority plus municipally-owned electric, water, and sewer utilities. As of September 1, 1982, 73 telephone utilities, 174 electric utilities, 1,622 water utilities and 559 sewer utilities had been certificated by PUC.

Before a utility under PUC's jurisdiction can operate, it must get a "license" in the form of a certificate of convenience and necessity from the commission. Receipt of the certificate means that the operation of the utility is judged to be in the public interest by the agency. The certificate also defines the geographical area that the utility will serve. Ownership of the certificate obligates the utility to serve anyone within the area in accordance with interpretations of the PURA. If a utility wishes to change its service area, make major modifications to its facilities, or engage in the sale, transfer, or merger of the company, it must apply to the commission for an amendment to its certificate. The majority of major

utilities in the state received original certification from the PUC shortly after passage of the PURA under grandfather provisions contained in the Act. As a result, most of the certification activity of the commission centers around changes in certificates currently held. The evaluation of this activity focused on whether the agency has developed a systematic approach to its certification responsibilities, whether these responsibilities are carried out within a reasonable time frame, and whether the agency has followed the criteria set out in the statute for judging certification requests.

As with its rate-making operation, utility certification is also carried out in a quasi-judicial fashion. The agency's approach to its certification responsibilities can therefore be divided into the same evaluation and decision-making stages used in rate-making. The review indicated that the various evaluation functions associated with certification proceedings have been systematically divided among agency divisions. In general, the engineering division bears primary responsibility for evaluating the need for most types of certification requests. In conducting its evaluation, the division makes judgments as to the appropriateness of proposed plant and equipment, projected costs, and service areas. As a part of this function, the division maintains and updates detailed maps of the service areas of certificated utilities. The engineering division is supported in its evaluation efforts by the economic research division. Analysts in this division evaluate issues which require specialized financial and statistical techniques. Common topics of attention for the economic research division include analysis of the strength of proposed financing arrangements and projections of demand to be placed on a utility in future years. The accounting division is involved in certification proceedings to a lesser extent than the engineering and economic research divisions. Accounting performs certain limited verifications of cost relative only to the sale, transfer, or merger of facilities. As for rate cases, the general counsel's office prepares the staff's case for presentation to the agency's decision-makers.

With respect to the quasi-judicial decision-making process, the agency has developed a system having many of the same components found in its rate-making activities. In its most complete form, the hearings examiner sets a prehearing for the parties involved, a hearing is held under the supervision of the examiner, an examiner's report is developed, and the commission meets to enter a final order on the certification action being requested. Opportunity for various written responses

and oral argument before the commission is also provided in a generally similar fashion to that used in a rate proceeding.

In its most abbreviated form, the certification process may occur without a hearing or even a prehearing. If an uncontested certification request is filed with the commission and the director of the hearings division determines that the public interest is not involved on a large scale, the case is docketed but no prehearing is scheduled. The request is then reviewed for reasonableness. If judged to be acceptable, then an examiner's report is issued without a hearing and the certificate is acted on at a later final orders meeting of the commission.

An examination of the time frame for agency certification action indicates that this element varies from rate-making procedure. A fundamental difference is the lack of a statutory time limit. This fact coupled with the nature of certification proceedings as a second priority can cause wide variations in the length of time taken on certification cases. A sample of cases for fiscal year 1981 indicated that, from start to finish, a certification docket can run from as little as approximately 30 days to longer than three years in the case of a highly disputed proceeding. However, in general, the average length of time to complete a certification case appears from the sample to be approximately 95 days for water and sewer utility cases, 57 days for telephone utility cases, and 88 days for electric utility cases. This time indicates a general absence of unreasonably long delays.

The PURA requires that, in reviewing applications for certification, the agency examine several factors set out in the law. This includes the adequacy of existing service, the need for additional service, the effect of granting a certificate on the recipient of the certificate and on any utility of the same kind serving the general area, community values, environmental integrity, and probable lowering of cost to consumers in the utility's service area. A major part of the ongoing certification work of the agency in which these criteria should be applied is in the approval of new electrical generating facilities and extension of electrical transmission lines.

The review indicated that the agency does address these criteria in evaluating such major facility expansions. For both generating plant and transmission line cases, the agency has developed specialized certification applications which are intended to, among other things, provide data on the evaluation criteria. A review of selected testimony also indicated that the staff evaluation is directed toward these criteria. With respect to generating facilities, estimates made by the

agency show that, for the 13 facilities certificated by the commission without the automatic approval of the PURA grandfather provision, time spent on staff evaluation varied from a low of approximately 40 hours to a maximum of about 400 hours. However, no judgment could be made on the overall quality of the evaluation work or the appropriateness of the conclusions reached through the evaluation process.

Monitoring. After the basic framework of a utility's operation is decided through the PUC's rate-making and certification authority, it is necessary to monitor these operations to ensure compliance with agency orders and standards. The commission's monitoring activities were examined to determine whether appropriate monitoring methods were in use, whether the agency uses a reasonable approach in the selection of areas to be monitored, and whether penalties available in the PURA are sufficient to ensure compliance.

The review indicated that the PUC monitors utility operations through a variety of approaches. An important part of the monitoring process is based on the receipt of various types of information. The agency receives numerous reports from the utilities it regulates. These include financial reports of various kinds and specialized reports on selected aspects of a utility's operation such as its construction program and cost of fuel. The agency also uses its complaint process, discussed in the next section, to assist in keeping track of the quality of a utility's operation.

Apart from this reported information, the agency has established a formal program of field work for monitoring purposes. The program consists of two parts. The engineering division carries out "quality of service" checks to determine whether a utility meets commission service standards. A second monitoring effort has been initiated within the last year in the economic research division and is aimed at evaluating various aspects of the internal management of a company ("operational" auditing). These various monitoring efforts are appropriate to the agency's regulatory role.

The commission has developed a generally reasonable approach in selecting areas in which to concentrate in its monitoring field work. In the quality of service area, utilities monitored most closely are water and telephone companies since the majority of service problems arise in these utilities. The selection of specific companies to inspect is largely based on the number of complaints received against a utility and the agency's knowledge of potential offenders from past experience.

In addition to this specific selection process, the agency routinely "doubles up" and schedules a quality of service check on a water utility when a site visit is planned to the same facility for rate-making or certification purposes. For fiscal year 1982, approximately 300 quality of service checks were made on telephone, water and sewer utilities.

With respect to operational audit activity, the economic research division has, in its first months of monitoring activity, focused narrowly on utilities' compliance with approved tariffs and substantive rules. Particular attention has been paid to utility handling of fuel cost adjustments. In this first year, these efforts have been concentrated on electric distribution cooperatives. Some of these utilities do not have expertise readily available for dealing with the technical aspects of utility management, yet these utilities typically can impact a large number of consumers. In fiscal year 1982, the division made 20 site visits to electric distribution cooperatives and seven site visits to other types of facilities.

The agency's monitoring process is guided substantially toward areas where problems are known to exist. This reactive procedure results largely from the resources dedicated to field work efforts. A limited number of personnel are available for either quality of service checks or compliance-type audits because of the demands of the rate-setting effort. While movement from a reactive approach to a more active and complete monitoring procedure would probably improve utility compliance, such a change would require a greater allocation of staff resources.

For those areas of non-compliance found through the agency's various monitoring efforts, the PURA establishes a number of enforcement tools. A utility that violates the act or a requirement of the commission or courts is subject to a civil penalty of between \$1,000 and \$5,000 for each day it commits the offense. Furthermore, the agency can use its rate-making authority to levy financial penalties against a utility. The statute also provides authority to enjoin a utility from improper action, and to place water and sewer companies into receivership in extreme cases. Interviews with agency personnel indicated that these penalties have proved to be sufficient to encourage voluntary compliance with the law or to penalize non-compliance appropriately.

Consumer Assistance. The PUC provides a specialized function through its consumer affairs office to assist members of the general public in resolving their problems with utilities under the agency's jurisdiction. In this regard, the

commission frequently acts as an intermediary between a utility and a customer. The review focused on whether the agency has clear and reasonable procedures to deal with consumer complaints and whether the agency makes the general public aware of its authority.

The review showed that complaints are received by telephone, by letter, and sometimes in person. Written correspondence is retained as the official complaint record; otherwise the staff prepares a brief report summarizing the comments of the consumer. Complaints are reviewed initially to determine if any action is required by the utility. Approximately half of the complaints received in fiscal year 1982 were resolved without involving the company through a discussion with the complainant about the utility's tariff or commission rules and policies.

The agency has established a process for prioritizing complaints. A complaint is considered an emergency if the customer is in danger of losing service or if service has already been disconnected. In these situations, the staff telephones the utility immediately to relay the complaint and follows up with a written report to the utility. The utility is requested to investigate these complaints on the same day as their receipt. To speed the process further, the utility is frequently asked to respond to the complaint verbally. Non-emergency complaints are forwarded in writing to the utility within eight working hours of receipt. The utility is asked to investigate the complaint immediately and to take necessary action. As required in commission rules, the utility must also provide a written report on the complaint within 30 days.

Once the utility report is received, the staff reviews the company's response to determine whether or not the company tried to deal fairly with the consumer and resolve the problem to the fullest extent possible within the commission's jurisdiction. This can require further staff review of the utilities' approved tariffs, docket information, and any other applicable data.

Where additional investigation is required, this action often involves other divisions of the commission. The engineering staff provides research and information about utility service boundaries and complex service problems, particularly in telecommunications. The engineering division is also notified of complaints involving quality of service, frequently resulting in a field investigation. The general counsel's office provides assistance with interpretations of the Act and commission rules, and in bringing enforcement action when necessary. The general counsel may seek compliance informally or by filing a formal inquiry, which can

result in bringing the utility before the commission. Complaints generally reach the hearing level only in those cases where authority is outside the scope of the consumer affairs office or where repeated contact by the staff fails to elicit compliance. Fourteen of the 8,238 complaints received in fiscal year 1981 required legal action by the commission. A review of previous years shows a similar trend. However, at any time during the complaint process the consumer may petition for a formal hearing.

The agency has established a procedure for documenting the complaints it handles through the consumer affairs office. Information from the official complaint record is entered into a computer data base where a log number is automatically assigned by the computer. Due to the large number of complaints received each year, the agency has established a retention schedule of three years for hard copies and retains the computer data indefinitely. Information from the computer assists the staff in preparing various reports which are sent to the commissioners and division heads. The "Consumer Affairs Monthly Report" shows the number of complaints received that month in two formats: by utility type and, for each type, by the utility's name. The report also shows a comparison of information collected that month to the previous month, and year to date totals. This report is used to identify any trends or particular problems being experienced by utility customers. Special reports are generated upon request by division staff to assist in conducting compliance investigations. Also, when a utility files for a rate increase, a printout of all complaints relating to the utility company is sent to the hearings examiner division and to the general counsel's office for review during disposition of a case. The commission has also utilized complaint data in rule changes wherever problems could be alleviated in this fashion. These procedures are sufficient to deal with consumer complaints in an efficient manner.

The commission publicizes the availability of these services through several brochures and in its annual report which are distributed to the press and the general public upon request. The commissioners and staff members also frequently address groups of consumers at "town meetings", conventions, and other meetings to discuss the commission's role in utility matters. In addition, the commission operates under a rule which requires utilities to post information about the commission's services in a conspicuous place in each business office, put information about the commission's complaint process in a brochure for each new customer, and inform dissatisfied utility customers of the PUC complaint process.

Given the large number of complaints received each year by the agency, ranging from 5,120 in fiscal year 1978 to 8,238 in fiscal year 1981, the agency's efforts to inform the public appear to be adequate.

EVALUATION OF OTHER SUNSET CRITERIA

The review of the agency's efforts to comply with overall state policies concerning the manner in which the public is able to participate in the decisions of the agency and whether the agency is fair and impartial in dealing with its employees and the general public is based on criteria contained in the Sunset Act.

The analysis made under these criteria is intended to give answers to the following questions:

1. Does the agency have and use reasonable procedures to inform the public of its activities?
2. Has the agency complied with applicable requirements of both state and federal law concerning equal employment and the rights and privacy of individuals?
3. Has the agency and its officers complied with the regulations regarding conflict of interest?
4. Has the agency complied with the provisions of the Open Meetings and Open Records Act?

EVALUATION OF OTHER SUNSET CRITERIA

The material presented in this section evaluates the agency's efforts to comply with the general state policies developed to ensure: 1) the awareness and understanding necessary to have effective participation by all persons affected by the activities of the agency; and 2) that agency personnel are fair and impartial in their dealings with persons affected by the agency and that the agency deals with its employees in a fair and impartial manner.

Open Meetings/Open Records

The review of the agency's compliance with the Open Meetings Act indicated that the agency files timely notices of all hearings and preliminary hearings with the Secretary of State's Office. The review also showed no improper use of executive sessions and general adherence to procedures set out in the Open Meetings Act.

Review of the agency's compliance with the Open Records Act indicated that the agency has denied only one request for information. The material was requested during a rate hearing and consisted of work papers of staff accountants of the commission. The Open Records Act specifies that agency records are generally open to the public, but lists a number of specific exceptions to that rule. Included among the specified exceptions is information relating to litigation of a criminal or civil nature in which the state is a party. The Attorney General affirmed the agency's withholding of this information in Open Records Decision No. 31, stating that the "litigation" exception may be applied to records relating to a contested case before an administrative agency. All other records considered to be confidential by the agency fall clearly within the exceptions set out in the Open Records Act.

EEOC/Privacy

A review was made to determine the extent of compliance with applicable provisions of both state and federal statutes concerning affirmative action and the rights and privacy of individual employees. The commission is operating under a recently revised affirmative action plan which includes formal grievance procedures and personnel selection policies. The agency has appointed an EEO counselor with whom employees may discuss complaints or problems. No charges of discrimination or unfair employment practices are currently filed against the agency with the Equal Employment Opportunity Commission. The result of the review indicated that the agency performs adequately in this area.

Public Participation

In general, the review of public participation consists of an evaluation of the extent to which an agency has kept those persons which it serves and the general public well informed, and is responsive to changing demands and needs of the public. The results of the review indicated that the agency has developed several approaches for informing the utilities it regulates as well as the general public of the activities of the commission.

The commission regularly develops and provides to the news media, on a statewide basis, information about hearings, decisions and other commission activities. This encourages media coverage of agency decisions and contributes to public education and public participation. The commission publishes a Bulletin containing commission decisions. A copy of the Bulletin is placed in the Legislative Reference Library and is available to anyone who requests to be placed on the subscription list. In addition, the commission provides individual notice of hearings to any consumer group which requests such notice. As a general policy, when a hearing is docketed the agency also informs all parties to the prior proceeding involving the utility.

The commission also has responsibility for public participation under the Federal Public Utility Regulatory Policies Act of 1978 (PURPA). As one of five parts in the National Energy Act, PURPA was signed into law to set standards to guide state regulatory agencies and non-regulated electric and gas utilities in designing rates and establishing service rules which promote: 1) conservation of energy, 2) efficient use of utility facilities resources, and 3) equitable rates to consumers. The Act requires each state regulatory authority to evaluate the various standards and to make a determination as to whether or not they should be adopted. The Act further requires that the agency should provide for input into its deliberations on PURPA-suggested standards from consumers, utilities, and representatives of the Department of Energy. In compliance with this requirement, the agency has held several hearings and has utilized public input in developing the approach to be taken on PURPA standards that were finally adopted by the state.

Conflict of Interest

Under state law, appointed state officers are subject to statutory standards of conduct and conflict-of-interest provisions (Article 6252-9b, V.A.C.S.). This includes, in certain circumstances, the filing of financial disclosure statements with the Office of the Secretary of State. A review of the documents filed with

the Secretary of State indicates that each of the agency's commissioners has filed adequate financial statements.

The review showed that the agency has procedures for making employees aware of their responsibilities under general conflict-of-interest statutes. Each new commission member and each new employee receives a copy of the statute on standards of conduct of state officers and employees with a request that the law be read. Each new employee is required to sign an employee affidavit certifying that the employee has received a copy of the statute and has read it. This affidavit is made part of the employee's personnel file. The review indicated that commission employees are also subject to conflict-of-interest provisions contained specifically in the Texas Public Utility Regulatory Act (Article 1446, Section 6, V.A.C.S.). The agency requires that an affidavit be signed certifying that the employee has read and is in compliance with this section of the Act. This affidavit is also made a part of the employee's personnel file. While the agency's procedures for notifying commission members and employees of conflict-of-interest requirements are adequate, it would be more appropriate if these procedures were a part of the statutory framework of the agency. Because of the importance of proper notification to commission members and employees, the agency's statute should be amended to require that the type of procedure currently used by the commission is continued.

As one of its conflict-of-interest requirements, the PURA places an additional two-year post-employment restriction on commissioners and employees. Section 6(b)(1), provides that during the period of service with the commission and for two years thereafter no commissioner or employee may have any pecuniary interest as an officer, director, partner, owner, employee, attorney, consultant, or otherwise, in any public utility (defined to include electric, telephone, radio-telephone, gas, water and sewer companies), or affiliated interest. Likewise, no commissioner or employee may have any pecuniary interest in a person or business entity, a significant portion of whose business consists of furnishing goods or services to public utilities or affiliated interests (excluding non-profit groups). The rationale behind this "revolving door" provision was primarily to avoid the possibility that employees could be influenced in their decisions by offers of employment in the future. While the statute prevents the possibility of improper influence, its blanket prohibitions restrict the activities of all commission employees, including those who may not have participated in the regulatory process

in any substantial way. Likewise, the prohibition restricts future employment with gas utilities, a part of the utility industry not regulated by the commission. In order to narrow the scope of the prohibition and still accomplish the general objectives of the restrictions, the statute should be amended in two ways. First, the restriction as it is now worded should not apply to employees who function in a purely clerical, secretarial, or ministerial capacity. Second, the statute should be amended so that the two-year restriction would not prevent a commissioner or employee from accepting employment with a utility not under the original or appellate jurisdiction of the commission.

**NEED TO CONTINUE AGENCY FUNCTIONS
AND
ALTERNATIVES**

The analysis of the need to continue the functions of the agency and whether there are practical alternatives to either the functions or the organizational structure are based on criteria contained in the Sunset Act.

The analysis of need is directed toward the answers to the following questions:

1. Do the conditions which required state action still exist and are they serious enough to call for continued action on the part of the state?
2. Is the current organizational structure the only way to perform the functions?

The analysis of alternatives is directed toward the answers to the following questions:

1. Are there other suitable ways to perform the functions which are less restrictive or which can deliver the same type of service?
2. Are there other practical organizational approaches available through consolidation or reorganization?

NEED AND ALTERNATIVES

The analysis of need and alternatives is divided into: 1) a general discussion of whether there is a continuing need for the functions performed and the organizational setting used to perform the function; and 2) a specific discussion of practical alternatives to the present method of performing the function or the present organizational structure.

Functions and Agency

The purpose of the Public Utility Commission is to regulate certain electric, telephone, and water and sewer utilities to ensure that fair prices and adequate services are being provided to consumers. This regulatory function was authorized by the enactment of the Public Utility Regulatory Act in 1975. The legislative decision that state regulation of utilities was needed was brought about by a number of factors.

As has been recognized for many years, utility companies generally operate as monopolies. As an unregulated monopoly, a utility would be theoretically free to charge what the market will bear since it would be the only available provider of a service to its clientele. Recognizing the potential for abuse in this situation, as early as 1915 the legislature considered enactment of regulatory statutes. However, the need for regulation to eliminate possible abuses was underscored by the rapid price increases for utility services beginning in the 1960s. In addition, the increasing demand for and reliance on these services in an economy that had become highly industrialized emphasized the importance of reasonable and reliable utility services. Aware of these conditions, the legislature initiated comprehensive utility regulation in 1975.

The conditions creating the need for enactment of regulatory legislation in that year continue in effect today. Utilities continue to press for higher rates during current inflationary times, and utility services are of critical and growing importance to the state's residents and economy. These factors indicate an ongoing need for state regulation--a need that is reflected by the enactment of regulatory legislation by all other states.

Continuation of the PUC as the agency responsible for electric, telephone, and water and sewer regulation is also a reasonable approach. While the Texas Railroad Commission exercises similar regulatory responsibility for gas utilities, the transfer of PUC's functions to that agency would not appear to offer any substantial advantage in cost savings. Furthermore, transfer of these functions

into an agency already having extensive regulatory functions in areas other than utility regulation could reduce the amount of time available for top level consideration of utility matters by commissioners. As a result of these findings, no alternatives to the current approach for carrying out the regulatory functions of the PUC were identified for recommendation.

ACROSS-THE-BOARD RECOMMENDATIONS

PUBLIC UTILITY COMMISSION

Applied	Modified	Not Applied	Across-the-Board Recommendations
			A. ADMINISTRATION
X*		X	1. Require public membership on boards and commissions.
X*			2. Require specific provisions relating to conflicts of interest.
X			3. A person registered as a lobbyist under Article 6252-9c, V.A.C.S., may not act as general counsel to the board or serve as a member of the board.
X		X	4. Appointment to the board shall be made without regard to race, creed, sex, religion, or national origin of the appointee.
X			5. Per diem to be set by legislative appropriation.
X*			6. Specification of grounds for removal of a board member.
X*			7. Board members shall attend at least one-half of the agency board meetings or it may be grounds for removal from the board.
X			8. The agency shall comply with the Open Meetings Act, and the Administrative Procedure and Texas Register Act.
X			9. The board shall make annual written reports to the Governor and the legislature accounting for all receipts and disbursements made under its statute.
X*			10. Require the board to establish skill oriented career ladders.
X			11. Require a system of merit pay based on documented employee performance.
X*			12. The state auditor shall audit the financial transactions of the board during each fiscal period.
X			13. Provide for notification and information to the public concerning board activities.
X*			14. Require the legislative review of agency expenditures through the appropriation process.

*Already in statute or required.

Public Utility Commission
(Continued)

Applied	Modified	Not Applied	Across-the-Board Recommendations
			B. LICENSING
		X	1. Require standard time frames for licensees who are delinquent in renewal of licenses.
		X	2. A person taking an examination shall be notified of the results of the examination within a reasonable time of the testing date.
		X	3. Provide an analysis, on request, to individuals failing the examination.
		X	4. (a) Authorize agencies to set fees. (b) Authorize agencies to set fees up to a certain limit.
		X	5. Require licensing disqualifications to be: 1) easily determined, and 2) currently existing conditions.
		X	6. (a) Provide for licensing by endorsement rather than reciprocity.
		X	(b) Provide for licensing by reciprocity rather than endorsement.
		X	7. Authorize the staggered renewal of licenses.
			C. ENFORCEMENT
X*			1. Authorize agencies to use a full range of penalties.
X			2. Require files to be maintained on complaints.
X			3. Require that all parties to formal complaints be periodically informed in writing as to the status of the complaint.
X*			4. Specification of board hearing requirements.
			D. PRACTICE
		X	1. Revise restrictive rules or statutes to allow advertising and competitive bidding practices which are not deceptive or misleading.
		X	2. The board shall adopt a system of voluntary continuing education.

*Already in statute or required.

OTHER ISSUES

During the review of an agency under Sunset various issues were identified that related to significant changes in the current methods of regulation or service delivery. Most of these issues have been the subject of continuing debate with no clear resolution on either side.

Arguments for and against these issues, as presented by various parties contacted during the review, are briefly summarized. For the purposes of the Sunset report, these issues are set out for information only and do not reflect a position taken by the Sunset review.

OTHER ISSUES

During the review, issues concerning various aspects of the agency were identified. Most of these issues have been the subject of continued debates without clear resolution on one side or the other. This section sets out these issues and summarizes the arguments, for and against, presented by various groups contacted during the review. The major issue(s) identified are the following.

1. Elected or Appointed Commissioners

Currently, PUC commissioners are appointed by the Governor and confirmed by the Senate. However, legislation has been introduced in the past which provided for the election of commissioners, and this issue continues to be debated. Behind the election of commissioners is the idea that this method of selection would make these officials more responsive and accountable to the public. Those persons desiring the election method often feel that, at least in this approach, if the public interest is not being served a commissioner can be directly voted out of office by constituents. Eleven states currently elect their commissioners.

An opposing argument can be made that the election method sounds good in theory, but that elected members could be unfairly influenced by large campaign contributions, probably from utilities. The appointment of commissioners insulates the officials from such pressures and could therefore allow for a more objective balancing of consumer and utility interests. Thirty-nine states currently appoint their commissioners.

2. Elimination of the Two-Year Rule

The PUC has in its statute a two-year post-employment restriction which prevents PUC commissioners or employees from obtaining subsequent employment with a public utility or any business entity which does a significant portion of business with a public utility. It has been suggested that this "two-year rule" be eliminated.

In support of this idea, it is argued that the rule unfairly singles out PUC commissioners and staff. Logically, if the PUC must be subject to such a rule, then so should other major regulatory agencies such as the Texas Railroad Commission and the State Board of Insurance. The rule also causes serious recruitment problems. The agency already has a difficult time attracting qualified individuals because of salary limitations. If potential employees know that future job markets are foreclosed, then many bright and competitive individuals will often

go elsewhere seeking work. The rule is also unnecessarily broad. If a post-employment restriction should be applied, an approach similar to that used by the federal government should be sufficient to eliminate the important areas where conflicts might arise while not foreclosing future job markets. This approach would, in general terms, prohibit an employee from working on a case while at a regulatory agency and then, after leaving, from appearing before the agency on the same matter. In addition, certain employees who exercise substantial influence or policy-making authority while at the agency would be barred for a one-year period from appearing before the agency on any matter.

In opposition to this viewpoint, the two-year rule should not be eliminated but very possibly extended to other agencies. The rule effectively keeps employees from being influenced in their decisions by promises of future employment from the regulated industry, and approaches such as that used by the federal government would not keep this kind of influence from occurring. The two-year rule also keeps the PUC from being a training ground for opportunistic employees who gain skills by working for the state and then, a short time later, walking out the "revolving door" to market their skills in the private sector. It is possible, however, that the rule is too broad in the sense that it applies to all PUC employees, whether they are integrally involved in the ratemaking process or performing clerical duties. Some type of exemption might be appropriate for those persons carrying out essentially non-regulatory duties.

3. Additional Personnel for the Agency

The Public Utility Commission was established in 1975 and by 1977 had developed a staff of around 100 employees. Since 1977, its number of employees have remained relatively constant but its workload has increased substantially. In 1979, utilities requested rate increases of \$571 million, and last fiscal year (1982) this amount had grown to \$1.6 billion. It has been suggested at various times that its staff be increased.

This suggestion has been supported on a number of grounds. With around 120 employees to handle over a billion dollars in rate requests annually, there is only time for the staff to concentrate on the major points in the utilities' filings in the 185-day time limit. A more thorough job might be done and possibly more money saved for the consumer. Also, more attention might be given to the huge electric construction projects that are being certificated to make sure they are really needed and intelligently planned. A particular area which should be emphasized by

additional staff is the monitoring of utilities. Current monitoring through field work is very selective and aimed at covering the most likely trouble spots. This approach could be expanded so that full operational audits of utilities could be conducted. Funds for more people could be financed from a portion of the revenues that the gross receipts tax generates over the agency's current level of appropriations.

From another point of view, the agency has been able to concentrate successfully on the really questionable items being requested. While a more thorough job of evaluating rate filings could be accomplished with more personnel, the gains in increased savings to consumers from more thorough checking of less questionable items might be small. In the area of certification, the staff already does a credible job of evaluating new facilities. As in the case of ratemaking, the agency's reactive monitoring effort is sufficient to catch most of the really significant abuses that people have complained about. There is no real assurance that changing from a highly selective to a more active approach would provide substantial gains over the current method.

4. Dually or Multiply Certified Areas

After its enactment in 1975, the PURA required that utilities become certified by the PUC by September 1976. This requirement gave the utilities and the commission a short time span to work out the appropriate geographic region that each utility would be certificated to serve. In the electric utility area, various regions of the state were sought by more than one utility for purposes of further expansion. Largely to avoid the time delays resulting from lengthy hearings over contested cases, roughly one-third of the state was certified to more than one utility. Many of these dually or multiply certified areas involved electric cooperatives. The issue has been raised, often by the cooperatives, that these multiply certificated areas should be eliminated.

In favor of this proposal, it can be argued that multiply certified areas were not intended to exist under the provisions of PURA. The Act makes no mention of certifying more than one utility to the same service area. The Act does, however, recognize that utilities are natural monopolies and, as such, state regulation is needed as a replacement to competition. The idea of multiple certification contradicts this philosophy since, in sharing service areas, more than one utility can compete for the same customers. A more fundamental concern, however, lies in the duplication of facilities that can occur as a result of this competition and

the legal obligation that a utility serve anyone desiring service within its certified area. As a result of these factors, parallel power lines have in some cases been built by two utilities along the same road. This kind of duplication of facilities might translate into higher electric rates for consumers.

On the other hand, it has been argued that, while not a pure approach to certification, allowing more than one utility to be certified to an area was a necessary decision given the short period of time available for defining service areas. Although this approach has presented some problems, wherever possible, these areas are slowly being eliminated by voluntary action. However, a rapid solution to the problem would probably require large amounts of PUC staff time to determine which utility should be allowed to provide service in these areas -- time that would be taken away from the critical ratemaking function. The relative size of the real problem coupled with the amount of resources currently available probably makes a fair and rapid division of mutual territory impractical.

5. Extension of Service Areas for Municipal Electric Utilities

Sixty-nine cities in Texas own and operate an electric utility. Through PUC's original certification process that ended in September 1976, most cities were generally limited in service area to their 1975 city limits. As cities have grown into newly annexed areas, they have been unsuccessful in their attempts to extend municipal electric services. These areas are generally certificated to other utilities who are willing and able to provide services. Under these conditions and interpretations of the PURA, permission for a city to extend its service is difficult to obtain. The argument has been made that this inability is unfair to the cities and that the necessary changes should be made to allow for the extension of municipal service areas.

In support of this position, it has been argued that the PUC's original certification process had to be completed within a six-month period. Many non-city utilities were represented in these proceedings, and attention was given to allowing these utilities an area for expansion. However, the PURA is unclear whether cities are really subject to the PUC's certification authority at all. As a result, most city electric utilities were not represented in the hasty certification process and no provision was made for their future expansion, therefore creating an inequitable situation. It would also seem appropriate for cities to be able to serve all their citizens. City residents in newly annexed areas pay taxes in support of city services and should be allowed to benefit from utility services. Finally, the

end result of not allowing cities to extend their electric services is a reduction in revenues to the municipality. Cities cite the need for revenue from the electric business to help subsidize other utility services that are net drains on municipal treasuries. Limiting the cities to their 1975 city limits places serious restraints on a needed cash resource.

An opposing argument is made that the city electric utilities had the same opportunity as other utilities to present their cases in the certification hearings. Austin and San Antonio did attend and came away with areas for future expansion. In addition, the PURA gives no special right to cities to provide electrical services to its citizens in newly annexed areas. These areas are already certificated to other utilities who also cite the need for revenues from the area. As a final point, expansion of the city electric utility into the area would possibly result in a duplication of facilities and services resulting from multiple certification.

6. Divided Rate Jurisdiction Between Cities and the PUC

Currently, regulatory authority over electric utility rates and services is divided between the PUC and municipal governments. The PUC has original jurisdiction over electric utility rates and services in unincorporated areas. Cities, except those which have chosen to relinquish authority to the PUC, have original jurisdiction over electric utilities operating in their areas. In most cases, the PUC has appellate jurisdiction over the regulatory decisions of the municipal governments. Because most electric utility systems encompass both municipal and unincorporated areas, a single rate case may involve the regulatory authority of both the PUC and the cities. For all practical purposes, however, the PUC has the final say in most rate decisions. This is so because of the commission's policy of regulating electric rates on a system-wide basis. This policy of determining a single revenue requirement and rate structure for the utility's entire system, rather than establishing different rates for different areas within the utility system's territorial boundaries was upheld by the Texas Supreme Court in 1978. The application of this policy, in conjunction with the PUC's appellate jurisdiction, affects the ratemaking process in the following way. The utility files a rate increase application with the PUC and the municipalities within its service area. The PUC usually processes rate cases more quickly than the cities and so sets the rates for the unincorporated areas, while the local case is still pending. The cities later adopt a rate ordinance for the municipal areas, often awarding a lesser rate increase than that approved by the PUC for the unincorporated service area of the

utility. The utility routinely appeals the municipal decision to the PUC. The PUC, using its system-wide policy on appeal, applies the rate increase for unincorporated areas to the municipalities.

Legislation has been introduced in the past to eliminate this two-tiered system of utility regulation and place original jurisdiction over electric utility rate cases completely in the PUC. In support of transferring original jurisdiction, it has been argued that this practice of dual regulation is a waste of time and the tax payer's money. Since PUC, through its system-wide rate policy, has the final say in electric ratemaking, regulatory decisions made by the cities are just a duplication of the PUC's process. Besides, the cities are just not technically or financially equipped to perform the analysis necessary to properly examine utility rate cases. Finally, it is sometimes claimed that dual regulatory authority has promoted irresponsible behavior on the part of local officials. City council members will turn down rate requests from the utilities in order to gain the favor of the public, knowing that the PUC will ultimately grant the necessary increase.

In opposition to transferring original jurisdiction is the idea that local participation in the ratemaking process is necessary to keep electric rates from increasing more rapidly than they already are. The cities' current status as utility regulators gives them statutory authority to gain access to information about electric utility finances and operations which is important in analyzing requests for rate increases. As intervenors in rural rate cases, the cities can use information gained through their regulatory authority to act as effective advocates for local ratepayers. If regulatory authority is removed, the cities will lose access to this information and their ability to be effective advocates for the local ratepayers will be seriously impaired. Also, if the cities lose jurisdiction over ratesetting, it will seriously impair their effectiveness in enforcing quality of service requirements. The utilities are much more likely to cooperate with the cities in service matters if they know that they will face the cities in rate requests. Transferring original jurisdiction to the PUC would move the rate setting process out of the public view since local media attention would not be as concentrated as it currently is. In addition, since hearings would be held in Austin, there would be less participation by the general public and local officials in rate proceedings.

7. Regulation of Gas Utilities

The PURA splits the regulation of utilities between two agencies: the PUC regulates certain utilities offering telephone, electric, and water and sewer

services, while the Texas Railroad Commission regulates gas utilities. Senate Bill No. 4 and House Bill No. 453 of the 65th Legislature would have transferred authority over gas utilities to the PUC if it had been enacted.

In support of the transfer, since the PURA provides for the regulation of gas utilities as well as the various other utilities assigned to PUC, it would seem appropriate for a single agency to carry out the requirements of the Act. The transfer would help ensure similar treatment for all types of utilities regulated under the PURA. Furthermore, gas utility regulation is, overall, a small part of the diverse activities carried out by the Railroad Commission. The PUC is involved in nothing but utility regulation and, therefore, might be able to concentrate attention more effectively on this industry.

In opposition to this idea, it can be argued that, besides regulating the distribution of gas to retail customers, the Railroad Commission also is responsible for regulating other aspects of the gas industry. This approach may result in more appropriate and coordinated regulatory decision-making for all segments of the industry. In addition, any real benefits in cost savings or more efficient regulation resulting from the transfer are questionable and unknown. Thus, there is no assurance that the concrete problems inherent in such a change would be offset by any gain.

8. Standards for Admissibility of Evidence in Agency Hearings

The agency is required both by the APA and the PURA to follow the rules of evidence as applied in non-jury civil cases in the district courts of Texas. The Texas rules generally require that for evidence to be introduced into a proceeding and made a part of the record, it must be clear, relevant and the most reliable information available. This means that hearsay, unsupported summaries of information, conclusionary and opinion testimony and unqualified "expert" testimony cannot be admitted into evidence. However, the agency's statute also provides an exception to the general rule. This might provide that when necessary to ascertain facts not reasonably susceptible of proof under the general rules, evidence not ordinarily admissible may be admitted if it is of a type commonly relied on by reasonable men. This exception could be used, for example, where hundreds of thousands of billing records of a repetitive nature would be almost impossible to assemble and present in an understandable form. In such a case, summaries of the information could be admitted. The issue has sometimes been raised that in interpreting the requirements of the exception, the agency has been

too liberal and will admit almost anything. It has been suggested that the agency tighten its standards and interpret this exception more strictly.

In support of this suggestion is the idea that a loose interpretation of the evidentiary requirements presents several problems. First, intervenors face serious problems in analyzing evidence that is presubmitted by the utilities. The time pressure that they already face are intensified in a major rate case when the examiner allows a large utility such as Southwestern Bell to introduce vast amounts of information that has not been proven reliable and which must be sifted through by intervenors. In addition, when this information is admitted it becomes a part of the record and will go up on an appeal of the case. This means that the appellate court, in applying the substantial evidence rule, may uphold the decision of the PUC based on information that may be inaccurate. Finally, complaints have been made in the past regarding the informality of the PUC proceedings. A stricter interpretation of the rules of evidence would add to the formality of the hearings process.

In opposition to the idea is the fact that as a practical matter the 185 day limit would not reasonably allow a stricter interpretation of the exception to the general rules of evidence. If parties were required to prove up each individual item of information to be submitted, the hearings would be much longer than they already are. In addition, parties would continually challenge each item to be pre-submitted and this would drag out the pre-hearing time span. Also, the PUC is not a court of law. A stricter interpretation would be harmful to unsophisticated parties who are not equipped to comply with rigid procedural rules of evidence. To force these people to retain a lawyer to assist them in preparing evidence would be a deterrent to the already inadequate amount of public participation. Finally, the examiner is trained to consider only relevant evidence in making a final recommendation anyway, and therefore can disregard any information that has been admitted but that has little probative value.

9. Representation for Residential Rate-Payers in Commission Proceedings

The PUC is charged by statute to protect the "public interest" in the regulation of utility rates and services. The general counsel for the PUC interprets the "public interest" to include all classes of consumers residential, commercial, industrial and local government. This means that the PUC staff attorney must balance all these interests in presenting its case at hearings. However, some say that the residential rate-payers may not receive adequate representation because

intervenors on behalf of commercial and industrial consumers as well as local government intervention destroys this balance. Intervenors on behalf of the residential rate payers are fewer, not as well funded, and simply cannot compete with the experienced advocates these other classes are able to obtain. Various means have been suggested in the past to enable residential rate-payers to effectively compete in the commission rate making proceedings. Two major methods that have been identified to solve this problem are the establishment of a public utility counsel and intervenor funding.

Several states provide for a residential utility consumer advocate, and there have been attempts to institute such a counsel in Texas. The counsel would have party status in the hearings and would therefore be able to appeal PUC decisions to the courts. In addition, the counsel could monitor the activities of the utilities and obtain information necessary to present an effective case on behalf of residential customers.

Supporters of the creation of a public utility counsel emphasize the need for each class of rate-payer to be fully represented in the hearings process. While industrial and commercial customers have the resources to obtain competent representation, residential customers do not. These smaller consumers cannot afford to pay for private attorneys, and consumer advocate groups are already overworked and underfunded. The PUC staff, as noted above, cannot represent the residential customers interest to the exclusion of the other classes of rate-payers. Additionally, the existence of a public counsel might give the general public a more positive attitude about what is going on a PUC. The public would have someone they could point to who was an active advocate for their view-point in the hearings process.

In opposition to the development of a public counsel, it has been expressed that the residential rate-payer is already adequately represented in the hearings process. The general counsel is charged with protecting the public interest and is doing a good job to see that rates are just and reasonable and not unduly preferential or discriminatory. The addition of a public utility counsel would be a duplication of representation and a waste of the taxpayers money. The commission is very lenient in admitting intervenors and consumer advocate intervenors have done well in the past in representing residential customers. Instituting a public utility counsel would probably necessitate hiring a staff to help develop cases for presentation. It would be very difficult to find one person who has the expertise

necessary to fully develop a complex rate case presentation. Finally, it has been expressed that competition could arise between the public utility counsel and the general counsel of the PUC. Each would want to win public favor by recommending the lowest rate increase and the result might be a recommendation that does not take a long range view of the public interest.

Another means suggested to increase residential consumer representation is intervenor funding. This method would allow consumer group advocates as well as individual intervenors to be reimbursed for expenses incurred in representing the residential consumers before the commission.

Supporters of this idea believe that residential consumers are paying for the representation of every group but themselves in the commission proceedings since the utilities pass along to the rate-payers the costs involved in preparing and presenting their cases. Commercial and industrial consumers pass their costs along in the price of their products and services. Local government recoup their expenses through taxes. Fairness would suggest that representatives of the residential customers be reimbursed through public funding for their contribution to the hearings process.

Opponents of intervenor funding say that, as a practical matter, this approach will not work. There would be no fair way to decide which group or individual would be funded and what standard would be used. Some states use a "positive contribution" standard and fund those parties who are deemed to have contributed in some positive way to the hearing. This is a hard standard to apply, however. Also, some special interest "consumer" groups may intervene who do not really represent the entire residential class, but only a small part of it.

10. Construction Work in Progress

One of the most controversial and complicated issues surrounding the PUC involves the treatment of construction work in progress (CWIP) for electric utilities. The PURA provides that construction work in progress can be considered in the value of invested capital if necessary to the financial integrity of a utility. This provision does not mean that, where CWIP is included, the ratepayer is directly providing construction funds. Rather, inclusion of CWIP allows the utility to earn a rate of return on capital raised for construction. In effect, this return is intended to pay for the "cost of money" that the utility has to raise to build a new facility. This cost is then passed on to the consumer of utility services in rates.

As noted above, the PURA allows inclusion of CWIP when necessary to maintain "financial integrity." The act, however, does not define this term. The PUC has taken the position that financial integrity means the utility's ability to raise capital in the money market at the same competitive level that it has traditionally held. This position simplifies down to the idea that the utility should be able to maintain its past bond rating. In general, the commission will allow enough CWIP into the calculation of invested capital to produce the level of cash flow projected as sufficient to maintain this rating.

The issue that has developed from this approach stems largely from the enormous construction programs for electric facilities that are planned or currently underway. These programs are requiring literally billions of dollars a year to be raised from money markets by Texas utilities. The cost of these financing efforts are currently being passed on to consumers in part through the CWIP policy, and the impact on electric bills can be substantial. These impacts have brought the CWIP provision into public view, and the general wisdom and fairness of the current approach has been questioned. Because of the complexity of the issues surrounding the treatment of CWIP, special attention was given to its role in utility rates and construction programs using the services of an outside consultant. Results of the review are set out in detail in a separate report. The paragraphs below summarize in simplified form some of the arguments that have been made for and against the current approach to CWIP.

In opposition to current policy, it has been stated that CWIP should be restricted. Many persons believe that the rate-payer should not be helping to pay for power plants from which they are receiving no power yet. In addition, it is pointed out that Texas is one of the most generous states when it comes to inclusion of CWIP. This generosity results from the policy that utilities should receive a CWIP amount sufficient to maintain their bond rating. This policy is good for the financial health of the utilities and their investors, but it could be benefitting investors at the expense of consumers. This conclusion is based on the idea that the increases in a consumers's utility bill resulting from generous CWIP are not necessarily offset by decreases resulting from the lower interest rates that a utility with a good bond rating pays. Another fundamental point about the generous CWIP allotment is that it encourages utilities to build without proper regard to sound construction plans. The more construction that can be included as invested capital, the larger the base on which to earn a rate of return and thereby

increase profits. This type of incentive discourages alternative approaches to large power plants for meeting tomorrow's power needs. Instead, it encourages wasteful construction which may not be needed or properly planned and which rate-payers will have to pay for in the future.

In contradiction to this position, it is argued that CWIP is not properly understood in some respects. Over the life of the plant, the consumer is going to have to pay approximately the same total electric bill. Inclusion of CWIP in the construction phase simply spreads out rate increases rather than causing a big jump in rates when the new plant goes on line. As far as maintaining bond ratings, this approach does benefit consumers through lower cost of capital, although it is hard to put an exact dollar amount on the value of a certain bond rating. This approach also helps ensure that companies will be able to raise the large amounts of capital necessary to finance the new construction that will be required to meet the energy needs of the state's growing economy and population. Finally, it has been suggested that restricting CWIP would motivate utilities to keep construction costs low through efficient management decisions. However, from the utility's point of view, the main way that CWIP affects new construction is that it impacts the cost of capital. A strict CWIP policy might make it difficult or impossible to raise capital, but it would probably not provide additional incentive to make efficient management decisions.

**A COMPARISON OF RATE SETTING METHODS
AND AN ANALYSIS OF THE ROLE OF
CONSTRUCTION WORK IN PROGRESS**

FOREWORD

During the review of the Public Utility Commission and the Railroad Commission of Texas, two topics related to the rate-making operations of these agencies arose which deserved separate and detailed attention. Both of these agencies have rate-making responsibilities assigned to them under the provision of the Public Utility Regulatory Act of 1975--the Railroad Commission over gas utilities, and the Public Utility Commission over certain telephone, electric, and water and sewer utilities. The sunset reports on both these agencies examine their respective rate-making functions in separate sections on rate setting. However, a comparison of the methods used by the two agencies in setting rates is important to an understanding of different regulatory approaches. Equally important, particularly in the case of PUC is an understanding of the complex and controversial area dealing with construction work in progress. Both the comparison of the regulatory approaches and the material on construction work in progress were developed through the use of an outside consultant.

The first part of the report makes a comparison of the regulatory approaches and concludes that the two rate setting methodologies are quite similar in most aspects. In general, the report on CWIP suggests that CWIP probably is not as effective or appropriate a tool for encouraging management efficiencies as are more direct methods that either mandate or identify for correction those management problems that might exist.

**COMPARISON OF THE RATE-MAKING PROCEDURES EMPLOYED BY THE
RAILROAD COMMISSION OF TEXAS FOR NATURAL GAS UTILITIES
AND THE
PUBLIC UTILITY COMMISSION OF TEXAS FOR ELECTRIC UTILITIES**

Part I INTRODUCTION

In 1975, Texas created a dual system of utility rate making under a single law. The Public Utility Regulatory Act established the central framework of utility regulation in Texas. Under the terms of the act, the regulation of most public utilities was divided between the Railroad Commission of Texas and the Public Utility Commission of Texas. Utilities involved in natural gas distribution or transmission remained under the general control of the Railroad Commission as had been the case for 50 years. All other public utilities came under the supervision of the newly established Public Utility Commission. Utilities operated directly by cities were excluded from most, but not all, regulation by the state commission.

Under the laws governing the Railroad Commission, the functions of production, transmission, and distribution are separated even when a single company is involved in all three aspects. This distinction arises from the legal basis of the Railroad Commission as established over a 50-year period. In contrast, the electric utility industry is regulated on the basis of a total corporate entity often involving all three basic functions--production, transmission, and distribution. This major distinction between the two agencies arises in part from law and practice and, in part, from the nature of the two types of energy providers. When comparing the technical procedures employed by the Railroad Commission in considering the final rates of a distributor of natural gas to the procedures used by the PUC in setting the final rates of a company involved in production, transmission, and distribution, differences occur in part because of the nature of the companies concerned. A second major area of difference evolves from the jurisdictional setting of the two agencies. The Railroad Commission acts primarily as an appellate body from the decisions of individual cities over the rates imposed by those cities on companies distributing natural gas. The Public Utility Commission has effective original jurisdiction over the rates for utility systems as a whole.

Railroad Commission policies clearly reinforce the power of local jurisdictions to set natural gas rates for not only the city, but for the "environs" to the city. Under the commission's environs rule (7.6 - (051.04.02.035), the commission will automatically apply the rates approved for a city to the unincorporated area surrounding the city. Although the commission retains original jurisdiction for other areas, the total number of customers in these areas represents less than 1.5

percent of total domestic gas service customers. Despite the appellate jurisdiction of the Railroad Commission, the commission and its staff have sought to bring standardization to some procedures. This has been accomplished by: 1) attempts to maintain independent review status in appellate cases rather than being solely limited to the record as presented, and 2) by publication of the "Municipal Assistance Packet" to assist cities and advise them as to commission policy in appeals cases based on historical performance as well as formal adopted rules.

The procedures of the Public Utility Commission (which operates under statutes providing cities with original jurisdiction over electric rates in a manner similar to gas rates) are directed to evaluation of system-wide costs and revenues to determine rate structure, design, and level. Under its appellate jurisdiction, the PUC will normally reverse any city-established rate not in conformance with rates for unincorporated areas already established by PUC. As a result, PUC effectively has the power of original jurisdiction in electric rate matters.

The differences between current administration and of the act by the two agencies are reflected in the workload, staffing level, and related support of the sectors of the two agencies. The greater sophistication in utility rate setting procedures demonstrated by PUC in areas such as economic research and tariff examination are examples of these differences. Areas also exist where differences between the utilities dictate greater or lesser attention to procedures employed. The practice of utilizing separate contracts for high volume industrial and commercial users of natural gas reduces the problems of traditional cost of service studies and allocation among classes for the Railroad Commission. The problem of allocating company costs to individual jurisdiction, on the other hand, is potentially a greater problem for the Railroad Commission than for the Public Utility Commission, which must face the question only in multi-state concerns. The high volume of capital requirements for new plant construction requires PUC staff to give substantially greater weight than RRC staff to questions of construction work in progress.

Part II REVENUE REQUIREMENT PROCEDURES

The basis for technical rate-making procedures is within the Public Utility Regulatory Act, the substantive rules of the agencies, areas of consistent rulings by the commissions, and in practices employed by the commission staff. In addition, practices and procedures by national agencies or groups setting accounting standards, analyzing securities, or establishing rates also effectively contribute to the rate-making procedure.

Although rate-making procedures may vary widely among different regulatory bodies, all attempts at rate making must ultimately address two fundamental concerns. First, the overall cost of service and revenue requirement must be established at a specific level. This involves establishing returns, cost of service, and revenue base. Second, rate structures for individual classes of customers must be designed. To set these levels of future rates, analysis of data supplied by the company, usually for a 12-month period, is required. The data is drawn initially from the accounting system of the utility. Often, as in the Texas case, the accounting system is under the broad control of the regulatory commission.

Adjusted Test Year: Prior to determining the final data for analysis, a test year must be selected--either historical or projected--to provide a basis for decision as to the amount of revenue required. The revenue and expense data from this test year are adjusted for several possible reasons. Conditions during a particular test year may well be inappropriate as a basis for decisions. Thus, consideration is given to such items as weather normalization, fuel prices at the end of the year, etc. The key to these types of adjustments is that they must be known and measurable. Modifications in procedures used for the test year may be modified, thus, resulting in changes from the book entries within the company's accounting system. Data is often adjusted for the recommended level of return or other factors. The calculation of income taxes is a proper example of this type of modification. Income taxes are increased based on the level of income projected.

Return on Value: A variety of court cases as well as Texas law provides that revenue should include a reasonable or fair return on invested capital. The critical elements to fixing this return in dollar terms are the establishment of the value of invested capital and the percentage rate of return against the value. The value of capital typically includes a value for plant in service, adjustments to that plant,

working capital, and plant held for future use. Adjustments are made to this value for accumulated deferred taxes, customer deposits, and other "cost free" capital. Construction work in progress may be included in part or in total.

The rate of return in percentage terms is calculated as a composite of capital costs for debt, preferred stock and common equity or stock. The rates for debt and preferred stock are set by the terms of such items and are relatively easily calculated. Often, these costs are simply the embedded or actual costs for the appropriate year.

The return on equity becomes, together with the level of CWIP, the primary point for judgment in setting the dollar amount of return. Various methods are utilized in examining this question. Most often the standard of preserving the financial integrity of the company becomes the focus of debate. A variety of measures, none of which are absolute, are used in this determination. These include interest coverage ratios (the percentage by which interest payments are "covered" by revenue), price earnings ratio, comparable risk, etc.

Cost of Service: The cost of service is the sum of a series of elements including operating expense, depreciation, tax expense, and appropriate return on the value of the property of the utility. Major elements within each of these areas are shown below:

Operating Expenses - These include expenses for wages, benefits, maintenance, materials, fuel, advertising donation, and other costs.

Depreciation - This cost is that portion of the investment in plant and equipment which was or will be recovered in charges to cost of service during the period in question. Depreciation is generally a straight line approach with an equal percentage of cost charged to each year. As a result, the depreciation used for rate setting may be substantially different than that charged for income tax purposes.

Depreciation rates on various plant and equipment, treatment of negative salvage value and related factors may all provide a basis of disagreement as to the amount of depreciation utilized.

Taxes - These expenses represent the cost charged for federal corporate income taxes, state taxes and local taxes. Two primary approaches, flow-through accounting and normalized accounting, are utilized by regulatory commissions. Texas uses the normalized approach which provides a charge to consumers of actual tax liability adjusted for use of long-term depreciation as used above, in

place of accelerated depreciation. The flow-through approach emphasizes actual tax expenses with no adjustment. Other taxes include state gross receipts, PUC assessments, local ad valorem, state franchise, other local taxes and fees, federal wage taxes and other taxes.

The calculation of these other taxes are generally on the basis of test year relationships other than modifications caused by changes in gross receipts or law.

Revenues: In a similar fashion to determining the cost of service factors, the level of revenue for the test year must also be established. Revenues are, with certain exceptions, concentrated in two major areas - fuel and base rate. Fuel revenues are directly the result of price of fuel costs passed on to consumers. Base rate revenues are those generated by the cost of rates applied to the consumer base of the company. In Texas, the primary question for regulatory authorities is the methodology for adjusting test year data in an appropriate manner. The total cost of service plus return become the revenue requirement for the company. This requirement is then adjusted for fuel revenue and other revenue to determine base rate revenue on which actual utility rates are set.

Texas Procedures

Application of this general structure to the request for a rate increase by a particular company involves both general and company specific rules. However, using general sources, as well as the results of case reviews and interviews generalizations of RRC and PUC procedure can be determined. With a few exceptions, however, the commission reserves the right to provide exceptions based upon the characteristics of individual companies. Modification may be made not only to the specific procedures, but also to the overall level of return based on extraneous factors to normal calculations, such as provision of adequate service, disasters or emergencies.

Test Year and Accounting Policy: The PURA defines the test year as an historical year to include the most recent 12-months for which operating data is available, beginning with a calendar or fiscal year quarter. The act provides broad authority to the commissions for the promulgation of accounting policy and the procurement of all necessary information.

Both commissions adopt the test year set for in law. However, the commissions have chosen to adopt different sets of accounting principles. The Railroad Commission has adopted for gas utilities the accounting system prescribed by the National Association of Regulatory Utility Commissioners (NARUC). The

Public Utility Commission has adopted the accounting system described by the Federal Energy Regulatory Commission. With respect to these accounting systems, however, major issues in utilities accounting are apparently treated in a similar fashion by both the NARUC system and the FERC system.

With respect to the test year issue, the other major alternative is the use of a partially or completely forecasting test year. The historic test year called for by the Public Utility Regulatory Act is modified by a series of adjustments for known and measurable items which has the effect of eliminating some of the problems of an historic test year. Use of a projected test year involves a substantial level of speculative projection of costs and items not known and measurable.

Return on the Value of Capital: The elements of return on the value of capital constitute the major basis for disagreement both between utility and the commissions and on those commenting or intervening in utility rate cases. The PURA states that "utility rates are to be based on the adjusted value of the property used by and useful to the public utility in providing service, including where necessary to the financial integrity of the utility construction work in progress at cost as recorded on the books of the utility" (section 41A). The act goes on to provide that "the adjusted value of such property will be a reasonable balance between original cost less depreciation and current cost less an adjustment for both age and condition. The balance is set at a range of 60 - 75 percent original cost and 25 - 40 percent current cost less adjustment." Although the rules of both the PUC and the RRC recognize the adjusted value as the final statutory base upon which to make this calculation, neither agency utilizes this method but rather both use an original value method to determine the return base. After the return is calculated on this base, a recalculation against adjusted value is made. This revaluation has been held as in conformance with the statute. The analysis contained in this report is restricted to the original value basis and ignores the adjusted value basis.

The original value of a utility plant in service is comprised of the value, usually as recorded on the books of the company, at the time the plant is first placed in service. This value is reduced by accumulated depreciation since the plant was first placed in service. PUC rules set forth the elements of invested capital. Although the rules of the RRC do not generally speak to the definition of invested capital, the Municipal Assistance Packet of the commission provides a similar basis to the rules of the PUC. With regard to plant in service, both agencies use similar definitions. However, the RRC is required additionally to

provide a basis for allocation of plant accounts to individual cities or districts. The Municipal Assistance Packet notes that the allocation of functional plant accounts may be on the basis of linear feet of pipe, or other bases. In the case of general plant, the commission notes the most frequent allocation method is based on the number of customers. Finally, the commission notes a Massachusetts formula of allocation involving sales revenue, plant in service, operating expenses excluding overhead, number of personnel and number of operating units as a possible mechanism to provide the allocation. In the PUC, the problem of allocation is not pertinent except in the case of multi-state corporations where a variety of different allocation methods are used to allocate different elements of both plant and cost of service.

With regard to provision for a working capital allowance as part of the value of plant, the PUC and the RRC both use an allowance of up to one-eighth of total operations and maintenance expenses as normal practice. In addition to this amount, an average or reasonable amount for inventory of materials and supplies and pre-payments is included. Procedures for excluding accumulated reserves for income taxes, unamortized investment tax credits, property insurance reserves and customer contributions in aid of construction from the value of plant are similar in application by the two agencies.

CWIP: The final element in determination of the rate base is the extent to which, if any, construction work in progress (CWIP) is included in the rate base. An affiliated, although sometimes unrecognized decision, is the extent to which allowance for funds used during construction is included in the base. The PURA states that "the property included in the rate base may include construction work in progress as recorded on the books of the utility where necessary to the financial integrity of the utility." (Section 41a). The rules of both agencies follow this particular dictate, with some slight differences in language which may or may not be of great substance. Construction work in progress for an electric utility is a far greater account than construction work in progress for a gas utility in most cases. This may account for some of the apparent differences in language and approach. Under the RRC rules,

"a utility may be permitted to include CWIP in its rate base only where necessary to the financial integrity of the utility. CWIP shall be deemed necessary to the financial integrity of the utility only where shown by clear and convincing evidence that its inclusion is necessary in order to maintain a sufficient financial liquidity so as to meet all capital obligations and to allow the utility to raise needed capital or is

necessary to prevent the impairment of a utility's service. A mere averment or demonstration that exclusion of CWIP would result in an increase in the cost of funds to the utility or general assertions that the financial integrity of the utility would be impaired shall not be deemed sufficient to permit such inclusion." (Section 7.35).

Under the provisions of the rules of the PUC, "construction work in progress, where necessary to the financial integrity of the utility, at original cost as recorded on the books of the utility." (Section 052.02.03.031)

This variation in language is in part the result of differences utilized by the two commissions and in part the result of the different nature of the industries as noted above. The application, however, of the rule as stated by the RRC would certainly be interpreted as a more confining statement concerning inclusion than the current practice of the PUC. Further, RRC rules suggest the recognition of a single decision to include or not to include construction work in progress. The practice in the PUC, however, is to include, where deemed appropriate, a dollar amount based upon a percentage of CWIP. Definition of CWIP in utility accounting includes cash expenditures for a given project, overhead cost, and allowance for funds used during construction (AFUDC) or interest on those expenditures accrued during the time period and for the amounts which are not included in the rate base. Both the PUC and the RRC follow this approach.

Calculation of Return on Equity: Once the rate base has been determined, the amount of actual return is calculated by applying the percentage return on invested capital set by the regulatory authority to the dollar amount of invested capital. "Return" is, in effect, the product of several calculations. First, under the procedures followed by each agency the embedded (or average of existing) cost of debt and preferred stock is utilized. Differences regarding equity yields appear to occur between RRC methodology and PUC methodology. These differences may be the result of several factors, including the level of staff expertise and the demand for calculation. However, the PUC utilizes a broad definition of return on common equity approaches, effectively examining all available methods, providing a range of possible returns, and then choosing an appropriate amount which when combined with CWIP decisions will maintain the financial integrity of the company. The RRC appears to take the approach that the analysis will be confined to two methods - discounted cash flow or comparable earnings. This will generally provide a narrower range than the methods employed by the PUC. The approach is

consistent with the stricter definition of financial integrity and CWIP appears to be utilized by the RRC.

In considering this stricter definition, it is appropriate to note that the RRC operates largely only in cases of appeals registered by the company in response to a ruling of the city. Operating only with an appellate jurisdiction the tighter financial definition of financial integrity employed by the RRC may well be appropriate.

Treatment of Operating Expenses and Revenues: The PURA provides the basis for broad authority to the commissions for the classification of operating expenses and revenues for inclusion and for exclusion when appropriate. Costs or expenses determined to be not in the public interest, specifically including legislative advocacy expenses, are not to be allowed as costs or expenses for rate-making purposes. (Section 30). Revenues not related to utility operations are also deducted. Additionally, the act provides that expenses will include "all reasonable necessary expenses as determined by the regulatory authority." (Section 41). Particular attention is drawn to the problem of transactions with affiliated interest and to the necessity for appropriate accounting adjustments.

Advertising Cost - The RRC and the PUC follow general outlines of the law in their operating policies. Each agency addresses the prohibition for inclusion of inappropriate expenses for advertising and donations by the specific provisions. Under the provision of the rules of the Gas Utilities Division, expenditures for legislative advocacy, social, recreational, fraternal, religious or charitable organizations are excluded. Other expenditures for advertising and donations are limited to two-tenths of one percent (.2 percent) of the gross receipts of the utility. Under the provisions of its rules, the Public Utility Commission limits eligible advertising contributions and donations to three-tenths of one percent (.3 percent) of the utility gross receipts and prohibits any allowance for funds for legislative advocacy, political, religious, social, recreational, or fraternal organizations.

Modifications to Test Year Data: As noted earlier, both the RRC and the PUC recognize an historic test year with modifications. The practice by both commissions is to recognize modifications to test year revenue and expense data for such items as growth during the test year, weather and price modifications and other known and measurable factors affecting the test year. In effect, these adjustments often have the effect of converting annual cost data to an annual number which would result at year-end cost levels. Prices for purchased fuels are adjusted by both agencies, in practice, to the latest available known level even if it

is beyond the test year in some cases. In addition, the RRC provides special treatment for lost and unaccounted for gas. Wage, salary and benefit is also normally converted to an annualized equivalent based on year end levels. If a future wage rate has already been set, the new rates may also be taken into account.

Revenues are also adjusted for a variety of charges. Each agency uses a methodology for the normalization of weather conditions and the impact on revenues with respect to the test year. This procedure may result in an increase or decrease to test year data. Normalizations are the result of mathematical adjustments designed to normalize costs over a period of years. Different methods are utilized for weather adjustments by the staff units of the two agencies. The PUC staff uses complex models to measure appropriate weather levels by month. The results of the model are compared to the actual data for the year. Revenue exceptions are then adjusted to coincide with normalized as opposed to actual weather. The RRC practice as expressed in the Municipal Assistance Packet of the RRC, is to obtain degree days from the U.S. Weather Bureau to provide data for the normal year and compare this information to local weather conditions for the test year. This difference, at least in part, stems from the single city treatment of the RRC and the system-wide treatment of the PUC. Both agencies also permit adjustment to revenues for growth on a consistent basis utilizing year-end customer load. Appropriate adjustments are also made excluding income from non-utility sources, including late payment penalties and excluding AFUDC as other income for rate base consideration.

In the case of both agencies, other test year data and proposed company adjustments are examined for appropriateness and relative correctness. Test year data as originally drawn is, of course, from the books of the company. Both agencies emphasize the examination of proposed adjustments to the test year. However, both agencies retain the power and the ability for a separate examination of the books if considered necessary.

Depreciation: Depreciation, as a cost within the utility process, reflects the consumer's payment for the actual value of utility plant in service. The PURA (Section 27B) states that the PUC or RRC shall fix proper and adequate rates and methods of depreciation, amortization, or depletion of the several classes of each property of each public utility and shall require every public utility to carry a proper and adequate depreciation account in accordance with such rates and

methods. Furthermore, the act states "such rates, methods, and accounts shall be utilized uniformly and consistently throughout the rate setting and appeal proceedings." (Section 27b). Under the rules of the RRC straight line depreciation is to be used for rate making purposes. The rules of the PUC also call for depreciation expense based on original cost and computed on a straight line basis as approved by the commission, although the amounts which are drawn from the books of the company state the original cost according to the company's books of used and useful items. The authority to modify this base remains vested in the regulatory authorities. Values set in the original cost of plant are subject to question, verification, or modification by action of the PUC or the RRC.

Taxes: Tax calculations have two effects within the setting of utility rates. First, existing taxes or a normalized estimate of existing taxes, are part of the cost of service under the current rate structure. Second, any increase in utility rates must take into account the tax liability of the corporation if the return on equity is to be an appropriate feature. The major issues within the tax treatment are whether to use a normalized or flow-through approach and how to treat investment tax credits. The law is silent on the general treatment of income taxes with certain exceptions. Specific detail is provided under the law in terms of the treatment of income taxes of affiliated groups of companies including the public utilities. The law also states that "the allocation of tax savings derived from the application of methods such as liberalized depreciation and amortization and investment tax credits shall be equitably balanced between the interests of present and future customers, and shall apportion the benefits between consumers and the public utilities accordingly." (Section 27E). This area of tax treatment specified in state law has been modified by the treatment of investment tax credits in revisions of the U.S. Internal Revenue Code. However, both agencies are in conformance with the federal law regarding current credits.

The regulations of the PUC call for the normalization of income taxes permitting differing treatment of depreciation. The RRC rules do not speak to a particular calculation of income taxes. Calculations recommended in the Municipal Facilities Packet, and used by RRC staff in past cases follow the same procedures. Although applied in two steps, the outcomes are identical to PUC calculations. An inspection of procedures employed by the two agencies reveals no significant differences.

Under the Public Utility Regulatory Act, rates charged consumers for electric and gas utilities are under the control of the regulatory authority. In addition, public utilities regardless of type are prohibited from allowing "any unreasonable preference or advantage to any corporation or person within any classification, or subject any corporation or person within any classification to any unreasonable prejudice or disadvantage." (Section 45, PURA).

The process of setting utility rates for electric utilities is a highly complex structure involving a series of steps. These include:

1. The establishment of cost components and customer classes;
2. the performance of cost of service studies to allocate costs among classes of customers;
3. the establishment of bases of allocation of capacity costs as a special case in allocation; and
4. the design of rate structures for the customer classes.

The rules of the Public Utility Commission provide a broad coverage of the rate design and tariff, structure and modification. The rules provide for non-discrimination, recovery of fuel costs and control of service rules and regulations.

The nature of the natural gas utility rate structure is considerably less complicated than that imposed for electric utilities. This is recognized in part by the PURA which provides for automatic approval of sales to transportation, industrial and other similar large volume customers if a series of minimal conditions are approved.

The rules of the Railroad Commission provide specific guidelines for rates in the area of fuel cost adjustment. In contrast to the relatively automatic provisions of the PUC, the RRC provision provides 1) for adjustments based on all or part of additional gas costs and 2) for placing the burden of proof on the company to demonstrate the necessity for the gas expense allowance.

Practice of the commission as noted in the Municipal Assistance Packet does not normally include the general area of rate design, "but has opted to generally apply a percentage increase or decrease to the existing rate schedules to the extent not clearly in violation of the public interest." (Page 34). However, the guide also provides four possible bases of allocation for consideration by cities.

CONSTRUCTION WORK IN PROGRESS

THE ROLE OF CONSTRUCTION WORK IN PROGRESS IN UTILITY RATE STRUCTURES AND RELATED ISSUES

Introduction

During the last decade, electric utilities in Texas have been engaged in an unprecedented expansion of utility plant, especially in generating capacity. The state's growing economy has demanded an increasing level of energy supply necessary for the strong economic growth during the decade. High utilization of natural gas as a boiler fuel prior to 1975 was judged to be contrary to both economic self interest and national energy policy. Utilities using natural gas engaged in programs of developing alternative sources such as lignite, coal, and nuclear based power. Concern over the future reliability of the electric system as demonstrated by problems in various northeastern states led to new standards within the industry for substantial reserve generating capacity.

The unprecedented growth in construction programs have led to similarly unprecedented financing effort to develop the necessary capital flow for construction programs, both underway and planned for the future. Each year literally billions of dollars in additional funds had to be raised from natural securities markets by utilities in Texas to finance the expanding construction program. The total cost of this program has risen far above originally planned levels as a result of two major changes in American economics.

First, inflation levels in construction, as in all other elements of the national economy, seriously depreciated the value of the available construction dollar. The ten-year plus period to construct a new generating facility dictates substantial growth in expenditures, particularly if these levels of cost increases were not recognized early in the construction planning process. This level of inflation may account for much of the cost overruns experienced in many utility building programs. Second, at the same time construction demand and costs were combining to produce higher cost levels, the cost of money also reached previously unrecognized levels. Fed by increasing federal deficits and related factors, the cost of new funds, equity or debt, exceeded any prior level known in the industry.

Unlike governmental borrowing, which is often keyed to a particular facility, major electric utility borrowing is scheduled on the basis of need for funds at regular intervals during the course of building programs. Thus, additional funds must be raised through the issuance of bonds or stock on a timed schedule with

relatively little room for error if construction programs are to continue. Failure to meet these money timetables forces the utility to borrow traditionally higher cost short-term debt.

As a regulated industry, especially after the formation of the Public Utility Commission of Texas in 1975, the electric utilities were forced early to consider both the appropriate financing of the massive construction programs and the methodologies to be used in passing these costs on to the ultimate consumers of electricity, the rate-payers. In addition, faced with the massive borrowings in the years ahead, companies were also placed in the position of attempting to ensure access to capital market to provide needed funds at a reasonable cost.

Access to these markets requires the establishment of financial indicators satisfactory to market analysts. In effect, the rule may be stated: The better the financial indicators, the better the bond rating, the better the access to the market.

The Public Utility Commission was formed at the crucial turning point in this process of plant expansion. Fuel costs were just about to enter another cycle of rising costs. Interest rates were soon to begin the rise from below 10 percent to 16 percent and above. Construction inflation was rapidly moving from the less than eight percent level to well over that. Even without these construction costs, utility rates were on the rise as the increasing cost of fuel was passed on to the customers.

The authors of the Public Utility Regulatory Act recognized that the increased construction programs would be an issue before the Public Utility Commission and provided that construction work in progress (CWIP) could be considered in the value of invested capital if necessary for the financial integrity of the company. Since the act was passed, a portion of construction work in progress has generally been included in the rate base of electric utilities. The debate over the appropriateness of this decision, the level of CWIP, the alternatives to current CWIP financial methodology in rate making and the appropriate meaning of financial integrity, has continued from the day the act was passed. In addition, other concerns involving the timing and cost of additional generating facilities, the ability and desire of management to control costs and the nuclear power debate have all touched on the debate over CWIP.

ROLE OF CWIP IN RATE STRUCTURE

Accounting for CWIP. If only the basic accounting mechanics of construction work in progress is considered, the item is relatively straightforward. Utility plant is a series of asset accounts on the balance sheet. The accounts provide for both tangible and intangible property, including land, easement, structures and improvements, appropriate organization expenses, franchises and other items appropriate for asset capitalization. Detailed rules are provided under an accounting system as to how those costs are to be allocated. The basis of all such accounts is the work order which both initiates and controls all charges to plant accounts. The accounts also contain provision for accumulated depreciation used to reduce the value of original plant for rate base purposes. Construction work in progress (CWIP) is a temporary plant account to record certain asset costs prior to placement in the permanent account of electric plant in service. The CWIP account includes balances of all work orders for utility plant in the process of construction.

One of the expenses associated with the CWIP account is Allowance for Funds Used During Construction, or AFUDC. This is an overhead item allocated to the plant account. This charge is effectively an interest rate charged for those debt and equity funds utilized during construction. Interest rates are calculated separately for debt and equity funds. Interest rates for short-term and long-term debt are utilized for long-term debt charges. Cost rates for preferred stock and common equity are predominant in the calculation of rates for other funds.

AFUDC comprises an increase in the cost of a construction project. The basis of this charge is that investors, be they bondholders or purchasers of stock, have supplied funds for long-term construction projects which in turn produce no return until placement of the plant in service unless CWIP is in the rate base. In effect, the charge is a recognition that a part of any construction program is the cost of borrowing money to build the facility.

The method of calculation as well as the application of AFUDC rates is a matter of serious debate and discussion within the accounting and the regulatory profession. This is especially true with regard to the element of AFUDC for inputting interest on equity funds. The calculations and discussion used in this report are generally based on current Texas PUC and Federal Energy Regulatory Commission practice. These practices are, of course, subject to change and their appropriateness is not endorsed by the applications used in this report.

As noted above, the inclusion of all or part of CWIP in the rate base impacts the ultimate amount of CWIP to the charge. If CWIP is included in the rate base, then a rate of return is charged on this amount, which in turn is included in the cost of service used for setting of rates for customers. Since this revenue replaces the need for AFUDC as an element of construction cost, no charge is made to CWIP or ultimately cost of plant.

Several other elements of accounting enter into discussions of CWIP. First, once the costs of a plant with or without AFUDC are transferred to Electric Plant in Service, annual depreciation costs are charged to this amount. These costs serve to increase the cost of service, which includes long-term depreciation expense, and reduce the rate base, thereby reducing the amount of return charged to cost of service.

Second, accounting for AFUDC impacts net income even though no cash is involved. This occurs as a result of two transactions. First, allowance for equity funds used during construction is treated as an element of other income in addition to operating income (the difference between revenues and operating expenditures). Second, the allowance for borrowed funds used during construction is treated as a reduction to interest expense in the calculation of net income (operating income plus other income less interest charges equals net income). The result is that AFUDC serves to increase income even though no cash revenue is generated. This factor relates to the quality of income or earnings as viewed by securities analysts. If a high proportion of net income results from AFUDC transactions, then the quality of the earnings is severely reduced.

Finally, the income tax treatment of AFUDC and depreciation impacts the final earnings of a company in a given year.

Impact of CWIP Treatment in Rate Base Consumer Costs. The magnitude of importance to individual companies of regulatory treatment of CWIP differs with the dimensions and relative importance of the current construction program. Companies with little or no generating capacity and companies with no major construction program are affected only slightly by the regulatory treatment of CWIP. Companies with substantial building programs, conversely, are dramatically impacted by CWIP treatment.

A similar situation exists for consumers of electric power. Those consumers served by companies with no construction program are not impacted in current terms with regard to rate modifications through CWIP treatment. This does not

preclude any long-range impact, however. For instance, if the lack of a building program is based on inability to procure funds in financial markets which was in turn based in part on the regulatory treatment of CWIP, then the consumer could be dramatically impacted in the future by curtailment of service or related factors.

Consumers served by companies with substantial construction programs also are impacted in both short- and long-term ways by treatment of CWIP. Inclusion of CWIP in the short term will have the impact of raising rates -- not to pay for construction -- but rather to pay (in accounting terms) for the funds used for construction. However, failure to include CWIP in the rate base coupled with inclusion of capitalized AFUDC in electric plant in service at a future point will serve to produce higher dollar values of plant, and thus, higher levels of depreciation expense and returns on capital which in turn is passed on to the consumer in the form of higher rates. As a result, over the life of the construction and operation of a utility plant, the consumer will have a greater total bill if CWIP is not included in the rate base than if CWIP is included in the rate base. If the size of the facility represents a large scale plant, especially a nuclear plant, the failure to include CWIP in the rate base combined with the capitalization of AFUDC can, in fact, lead to substantial increases over which major controversy would (and has in other states) arise.

The basic impact of CWIP on the revenue requirements (revenue from consumers) of a utility can be demonstrated through the following hypothetical situation.

1. A company is building a utility plant with a basic construction cost of \$1.5 billion with costs allocated over a ten-year period as follows:

(in millions)

Year	1	\$10	6	100
	2	20	7	200
	3	30	8	250
	4	40	9	300
	5	50	10	500

Total \$1,500

2. A combined AFUDC rate of 10 percent.

3. A method of calculation of revenue requirements allowing year-end projected balance in CWIP and Plant in Service to be used for calculation of current year. (Note: This is to simplify the calculation, not to suggest a practice which is contrary to Texas practice. The basic conclusions are unchanged.)
4. The application of AFUDC to prior year CWIP not included in the rate base and average new construction expenditures for the current year.
5. Depreciation at five percent per year of original cost.
Note: The more detailed calculations are shown in Tables I-IV.

Given these factors, four alternative CWIP programs were priced:

1. All CWIP in the rate base;
2. No CWIP in the rate base;
3. Last year of CWIP in the rate base, and;
4. Fifty percent of CWIP in the rate base.

Given these considerations, the plant will take place over a ten-year period with a 20-year period of depreciation. The plant would go in service on the first day of the 11th year of the 30-year series.

The results on revenue requirements of this analysis are displayed below in five year intervals:

Comparison of Total Revenue Requirements

(Return and Depreciation Only)

Under Four Methods of Treating Construction Work in Progress (CWIP)

For Sample \$1.5 Billion Plant

(in millions of dollars)

Revenue Requirement Given Amount CWIP in Rate Base

<u>Years</u>	<u>All</u>	<u>None</u>	<u>Last Year</u>	<u>Fifty Percent</u>
1 - 5 (const)	\$ 35	\$ -	\$ -	\$ 19
6 - 10 (const)	390	-	261	219
11 - 15 (op)	1,012	1,265	1,174	1,143
16 - 20 (op)	825	1,031	957	931
21 - 25 (op)	638	796	740	720
26 - 30 (op)	450	566	522	507
1 - 10 (const)	425	-	261	238
11 - 30 (op)	<u>2,925</u>	<u>3,658</u>	<u>3,393</u>	<u>3,300</u>
Grand Total	<u>\$3,350</u>	<u>\$3,658</u>	<u>\$ 3,654</u>	<u>\$ 3,539</u>

The results of the analysis are directly related to the time-table of construction shown on the prior page. A greater percentage of construction cost in the latter years would reduce the variation shown above. A lesser percentage in the latter years would increase the variation. This analysis displays the pre-tax data. Application of income factors would increase the differential in the totals shown.

Under the inclusion of all CWIP in the rate base, consumers would pay \$425 million during the time of plant construction most of which would be in the latter part of construction. These funds would not be used for actual construction cash expenditures at the plant site, but would flow to investors (bondholders and stockholders) as a major part of the carrying of the borrowed funds. After the plant goes in operation, customers pay an additional \$2.925 billion over the useful life of the plant. This cost results from depreciation and return of capital investment less accumulated depreciation. The total paid over the 30-year period would be \$3.350 billion.

Alternative approaches all reduce the cost during construction and increase the cost during operation. This is the result of the capitalization of AFUDC during the construction period, which serves to increase the value of the cost of the plant placed in service at the beginning of year 11.

<u>CWIP Treatment</u>	<u>Value of Plant at End of Year 10 (in millions)</u>
All	\$ 1,500
None	1,874
Last Year	1,740
50 percent	1,693

Despite the higher cost levels imposed by failure to include CWIP in the rate base, the long run direct financial position of the consumer will be the net of the economic behavior over a period of 30 or more years. However, if the consumer invests (either directly or through debt reduction) his "savings" resulting from the failure to include CWIP in the rate base during the construction period, and if inflation and interest rates remain relatively stable, then the "economically rational" utility consumer would have about the same cost over the entire period of construction and operation regardless of the role of CWIP in setting the rate base. This behavior requires a collective degree of sophistication on the part of the consumer which may or may not be present.

Financial Integrity. The importance of CWIP, as set forth in the Public Utility Regulatory Act, is to function as a balance in determining the financial integrity of the company. The term "financial integrity" removes CWIP and related factors from the finite world of plant accounting to the more imprecise world of securities analysis. Few would disagree that a company involved in a massive construction program (where CWIP is 100 percent or more of electric plant in service and the new plant is five years away from completion) has a serious problem in raising the needed capital from investors (debt and equity) if CWIP is entirely excluded from the rate base. Conversely, few would argue that a company with only a minor construction program with no need to expand or replace generating facilities would be damaged by the failure to include CWIP in the rate base. In the first case, CWIP treatment is directly related to financial integrity and in the second case, financial integrity is unaffected by CWIP treatment.

The dispute, in part, centers on the definition of financial integrity. If the focus is on the ability of the company to pay current and prospective obligations only, then less CWIP is needed. If the definition is set as a series of standard financial indicators at a specific level at the high end of the scale, then more CWIP is needed. The variation adopted by current PUC action is to provide a range within certain indicators as a target, and to attempt to keep a company within the same general area of these indicators as determined on prior occasions. Thus, the approach has come to be expressed by some as an attempt to maintain current bond ratings, especially if the current rating is "A", or higher on the Moody scale. The PUC uses 1) the percentage AFUDC is of net income available to common stock, 2) interest coverage ratio or the ratio of interest payments to total earnings before taxes, and 3) the percentage of construction programs generated internally rather than through new debt on equity issues.

The inclusion of large percentages of CWIP in the rate base clearly provides better rating in each of these financial indicators, and thus improves the competitive position of the company when seeking funds for continued plant construction, as well as reducing the need for borrowing and allowing greater use of internal funds for construction programs.

The balance for consumers, with regard to financial integrity, relates to the ability of the company to provide adequate and reliable service at low cost in the long term. Again, judgment applied to the future plays a major part in making this decision. To the extent that CWIP inclusion in the base is related to the ability of the company to provide service in the future, relatively little dispute over the inclusion of a portion of CWIP exists. However, the construction programs of public utilities are in part related not only to the provision of service, but to the cost and national economic impacts of service. To reduce foreign oil imports or to conserve natural gas for use as a home heating fuel are national economic policy decisions not directly related to immediate consumer costs. To predict that the ultimate cost to the consumer of nuclear power will be lower than available alternatives involves a host of economic assumptions seriously in dispute. To the extent that the treatment of CWIP enlarges or restricts the ability of the company to borrow funds at reasonable rates, CWIP impacts these policy decisions. However, CWIP cannot be considered as the sole and determining factor in making these decisions.

Management Issues. Another aspect of construction programs which has been increasingly an element of the conflict over public utilities is the role, efficiency and motivation of management. Inclusion of all CWIP in the rate base encourages management, in the view of some, to promote unneeded and inefficient plant construction of the most costly type available. According to this view, inclusion of construction in the rate base removes any motivation for management to use efficient methodology to maintain low construction cost. Finally, this view holds that CWIP serves to prevent management from consideration of less costly alternatives, especially in the area of developing technologies and conservation.

Others hold alternative views of the role of management and the role of CWIP in the rate base. This view is that CWIP in the rate base permits the manager to provide lower cost energy in the future by allowing better access to financial markets and lower long-term utility rates.

There is no doubt that the modern utility manager is placed in the role of internal conflict. The manager is charged with the responsibility to provide efficient and economical service. But the management also has responsibility for attempting to maximize returns for the stockholders. This conflict could indeed lead to decisions detrimental to the customer or the stockholder if an even balance is not maintained.

Again, this dispute, just as that involved in the issue of financial integrity, is subject to debates outside of the scope of this report. But the analysis presented in this report clearly suggests that CWIP alone is not the appropriate focal point for this discussion, at least in terms of the issue of inclusion in the rate base. If the goal of management is the inclusion of inefficient and unnecessary generating plants in the rate base so as to maximize ultimate returns, then the goal is to include as much plant value in the rate base over a long-term period. Since failure to include CWIP in the rate base precludes (all other factors equal) return until the increase is used and a useful plant takes place, CWIP inclusion may have little impact on management decisions. This is especially true when the inclusion of AFUDC in the rate base is considered.

Only if the construction is prevented as a result of failure to obtain financing will the treatment of CWIP impact an inappropriate management decision to build the plant. Otherwise, mistakes in current construction programs, failure to consider alternative technologies, and overbuilding in general, will not be affected by CWIP treatment other than to influence the cost of capital.

This analysis is not to suggest that the regulatory process cannot or should not react to management inefficiency or related problems. Procedures designed to establish need for construction programs, methods to investigate and modify plant costs to compensate for waste and inefficiency, and mandates to provide conservation and related programs to encourage alternative technologies, all provide mechanisms more directly related to potential management deficiencies than treatment of CWIP in the rate base.

TABLES

- I. Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With CWIP in Rate Base
- II. Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With No CWIP in Rate Base
- III. Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With Last Year of CWIP in Rate Base
- IV. Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With 50 Percent of CWIP in Rate Base

Table I

Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With CWIP in Rate Base
(in millions of dollars)

<u>Year</u>		<u>Construction Cost*</u>	<u>Cumulative Construction Cost</u>	<u>Rate Base</u>	<u>Return at 10%</u>	<u>Depreciation at 5%</u>	<u>Revenue Annual</u>	<u>Requirement Cumulative</u>	<u>Year</u>
1	Construction	10	10	10	1.0	-	1.0	1.0	1
2	"	20	30	30	3.0	-	3.0	4.0	2
3	"	30	60	10	6.0	-	6.0	10.0	3
4	"	40	100	100	10.0	-	10.0	20.0	4
5	"	50	150	150	15.0	-	15.0	35.0	5
6	"	100	250	250	25.0	-	25.0	60.0	6
7	"	200	450	450	45.0	-	45.0	105.0	7
8	"	250	700	700	70.0	-	70.0	175.0	8
9	"	300	1000	1000	100.0	-	100.0	275.0	9
10	"	500	1500	1500	150.0	-	150.0	425.0	10
1	Operation			1425	142.5	75	217.5	642.5	1
2	"			1350	135.0	75	210.0	852.5	2
3	"			1275	127.5	75	202.5	1055.0	3
4	"			1200	120.0	75	195.0	1250.0	4
5	"			1125	112.5	75	187.5	1437.5	5
6	"			1050	105.0	75	180.0	1617.5	6
7	"			975	97.5	75	172.5	1790.0	7
8	"			900	90.0	75	165.0	1955.0	8
9	"			825	82.5	75	157.5	2112.5	9
10	"			750	75.0	75	150.0	2262.5	10
11	"			675	67.5	75	142.5	2405.0	11
12	"			600	60.0	75	135.0	2540.0	12
13	"			525	52.5	75	127.5	2667.5	13
14	"			450	45.0	75	120.0	2787.5	14
15	"			375	37.5	75	112.5	2900.0	15
16	"			300	30.0	75	105.0	3005.0	16
17	"			225	22.5	75	97.5	3102.5	17
18	"			150	15.0	75	90.0	3192.5	18
19	"			75	7.5	75	82.5	3275.0	19
20	"			0	0	75	75.0	3350.0	20

Totals 30 Years
*with no AFUDC

Table II
Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With No CWIP in Rate Base
 (in millions of dollars)

Year		Construction Cost*	Cumulative Construction Cost	Rate Base	Return at 10%	Depreciation at 5%	Revenue Annual	Requirement Cumulative	Year
1	Construction	10.5	10.5	10.5	-	-	-	-	
2	"	22.1	32.6	32.6	-	-	-	-	1
3	"	34.7	67.3	67.3	-	-	-	-	2
4	"	48.5	115.8	115.8	-	-	-	-	3
5	"	63.4	179.2	179.2	-	-	-	-	4
6	"	121.3	300.5	300.5	-	-	-	-	5
7	"	237.1	537.6	537.6	-	-	-	-	6
8	"	311.2	848.8	848.8	-	-	-	-	7
9	"	391.1	1239.9	1239.9	-	-	-	-	8
10	"	634.1	1874.0	1874.0	-	-	-	-	9
1	Operation			1780.3	178.0	93.7	271.7	271.7	10
2	"			1686.6	168.7	93.7	262.4	534.1	1
3	"			1592.9	159.3	93.7	253.0	787.1	2
4	"			1499.2	150.0	93.7	243.7	1030.8	3
5	"			1405.5	140.6	93.7	234.3	1265.1	4
6	"			1311.8	131.2	93.7	224.9	1490.0	5
7	"			1218.1	121.8	93.7	215.5	1705.5	6
8	"			1124.4	112.4	93.7	206.1	1911.6	7
9	"			1030.7	103.1	93.7	196.8	2108.4	8
10	"			937.0	93.7	93.7	187.4	2295.8	9
11	"			843.3	84.3	93.7	178.0	2473.8	10
12	"			749.6	75.0	93.7	168.7	2642.5	11
13	"			655.9	65.6	93.7	159.3	2801.8	12
14	"			562.2	56.2	93.7	149.9	2951.7	13
15	"			468.8	46.9	93.7	140.6	3092.3	14
16	"			374.8	37.5	93.7	131.2	3223.5	15
17	"			281.1	28.1	93.7	121.8	3345.3	16
18	"			187.4	18.7	93.7	112.4	3457.7	17
19	"			93.7	9.4	93.7	106.7	3564.4	18
20	"			-	-	93.7	93.7	3658.1	19
Totals 30 Years									20
*with full AFUDC									

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Table III
Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With AFUDC in Years 1 - 9
 (in millions of dollars)

Year		Construction Cost*	Cumulative Construction Cost	Rate Base	Return at 10%	Depreciation at 5%	Revenue Annual	Requirement Cumulative	Year
1	Construction	10.5	10.5	-	-	-	-	-	1
2	"	22.1	32.6	-	-	-	-	-	2
3	"	34.7	67.3	-	-	-	-	-	3
4	"	48.5	115.8	-	-	-	-	-	4
5	"	63.4	179.2	-	-	-	-	-	5
6	"	121.3	300.5	-	-	-	-	-	6
7	"	237.1	537.6	-	-	-	-	-	7
8	"	311.2	848.8	-	-	-	-	-	8
9	"	391.1	1239.9	-	-	-	-	-	9
10	"	500.0	1739.9	1739.9	174.0	87	261.0	261.0	10
1	Operation			1652.9	165.3	87	252.3	513.3	1
2	"			1565.9	156.6	87	243.6	756.9	2
3	"			1478.9	147.9	87	234.9	991.8	3
4	"			1391.9	139.2	87	226.2	1218.0	4
5	"			1304.9	130.5	87	217.5	1435.5	5
6	"			1217.9	121.8	87	208.8	1644.3	6
7	"			1130.9	113.1	87	200.1	1844.4	7
8	"			1043.9	104.4	87	191.4	2035.8	8
9	"			956.9	95.7	87	182.7	2218.5	9
10	"			869.9	87.0	87	174.0	2392.5	10
11	"			782.9	78.3	87	165.3	2557.8	11
12	"			695.9	69.6	87	156.6	2714.4	12
13	"			608.9	60.9	87	147.9	2862.3	13
14	"			521.9	52.2	87	139.2	3001.5	14
15	"			434.9	43.5	87	130.5	3132.0	15
16	"			347.9	34.8	87	121.8	3253.8	16
17	"			260.9	26.1	87	113.1	3366.9	17
18	"			173.9	17.4	87	104.4	3471.3	18
19	"			86.9	8.7	87	95.7	3567.0	19
20	"			-	-	87	87.0	3654.0	20

Totals 30 Years

*With AFUDC in Years 1 - 9

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Table IV

Calculation of Total Revenue Requirement for Addition of \$1.5 Billion Utility Plant With AFUDC Applied in 50% of CWIP
(in millions of dollars)

<u>Year</u>		<u>Construction Cost</u>	<u>Cumulative Construction Cost</u>	<u>Rate Base</u>	<u>Return at 10%</u>	<u>Depreciation at 5%</u>	<u>Revenue Annual</u>	<u>Requirement Cumulative</u>	<u>Year</u>
1	Construction	10.3	10.3	5.2	.5	-	.5	.5	1
2	"	21.0	31.3	15.7	1.6	-	1.6	2.1	2
3	"	32.3	63.6	31.8	3.2	-	3.2	5.3	3
4	"	45.2	108.8	54.4	5.4	-	5.4	10.7	4
5	"	57.9	166.7	83.4	8.3	-	8.3	19.0	5
6	"	110.8	277.5	138.8	13.9	-	13.9	32.9	6
7	"	218.9	496.4	248.2	24.8	-	24.8	57.7	7
8	"	281.7	778.1	389.1	38.9	-	38.9	96.6	8
9	"	346.4	1124.5	562.2	56.2	-	56.2	152.8	9
10	"	568.7	1693.2	846.6	84.7	-	84.7	237.5	10
1	"			1608.5	160.9	84.7	245.6	493.1	1
2	"			1523.8	152.4	84.7	237.1	720.2	2
3	"			1439.1	143.9	84.7	228.6	948.8	3
4	"			1354.4	135.4	84.7	220.1	1168.9	4
5	"			1269.7	127.9	84.7	211.7	1380.6	5
6	"			1185.0	118.5	84.7	203.2	1583.8	6
7	"			1100.3	110.0	84.7	194.7	1778.5	7
8	"			1015.6	101.6	84.7	186.3	1964.8	8
9	"			930.9	93.1	84.7	177.8	2142.6	9
10	"			846.2	84.6	84.7	169.3	2311.9	10
11	"			761.5	76.2	84.7	160.9	2472.8	11
12	"			676.8	67.7	84.7	152.4	2625.2	12
13	"			592.1	59.2	84.7	143.9	2769.1	13
14	"			507.4	50.7	84.7	135.4	2904.5	14
15	"			422.7	42.3	84.7	127.0	3031.5	15
16	"			338.0	33.8	84.7	118.5	3150.0	16
17	"			253.3	25.3	84.7	110.0	3260.0	17
18	"			168.6	16.9	84.7	101.6	3361.6	18
19	"			83.9	8.4	84.7	93.1	3454.7	19
20	"			-	-	83.9	83.9	3538.6	20

Totals 30 Years

*With AFUDC Applied
in 50% of CWIP