

A QUALITATIVE INDICATOR SYSTEM
FOR ASSESSING UTILITY MANAGEMENT PRACTICES
AND PERFORMANCE

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June 1986

This report was prepared by The National Regulatory Research Institute (NRRI) under a contract with the Public Utilities Commission of Ohio. The views and opinions of the authors do not necessarily state or reflect the views, opinions, or policies of the Public Utilities Commission of Ohio or the NRRI.

TABLE OF CONTENTS

FOREWORD ii
PREFACE. iii
ACKNOWLEDGMENTS. v

Part

1 INTRODUCTION 1
2 DEVELOPMENT OF THE DIAGNOSTIC GUIDELINES 5
3 AN ILLUSTRATIVE EXAMPLE OF THE UTILIZATION OF THE DIAGNOSTIC
GUIDELINES BY PUCO STAFF 15
4 DIAGNOSTIC GUIDELINES AND PERFORMANCE INDICATORS FOR SEVEN
FUNCTIONAL AREAS 27
 Utility Executive Management Process. 29
 Construction Project Management and Control 121
 Internal Auditing 149
 Rate Program Analytical Process 183
 Customer Service and Information. 219
 Management Information Systems. 239
 Work Force Productivity 287
5 REFERENCE BIBLIOGRAPHY OF MANAGEMENT AUDITS USED TO PREPARE
THE LISTING OF PERFORMANCE INDICATORS AND DIAGNOSTIC GUIDELINE
QUESTIONS IN SEVEN FUNCTIONAL AREAS. 305

FOREWORD

From time to time NRRI does contract work for particular commissions which is extensible for use by others. Such a product is this report on diagnostic guidelines for management analysis of utility operations done for the Public Utilities Commission of Ohio.

In authorizing the release of this report the PUCO wrote in part,

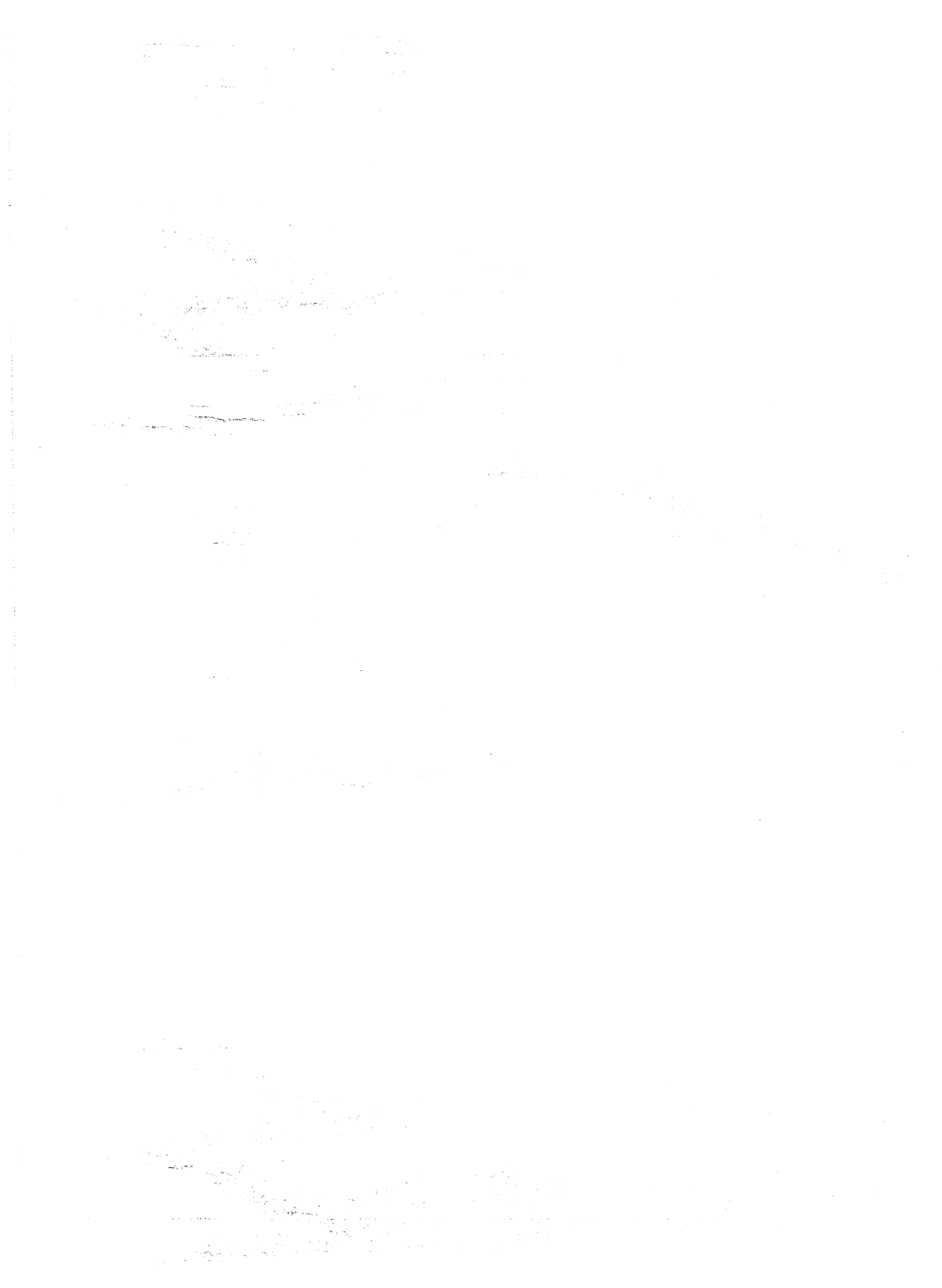
We are extremely pleased with the report. It is particularly notable because the methods formulated are so straight forward and the applications so relevant, that having read it, it's obvious that it describes a reasonable, "do-able" mechanism.

What may not be so obvious is that it required considerable imagination and innovation to develop such a plan. I am confident that PUCO staff will be able to effectively use the methodology to change the management quality issues and, most important, to make valid recommendations of the need (or lack of need) to pursue focused management audits.

I encourage the Institute to make this report available to others. I believe the methods will find immediate applications in utility company management evaluations, both by Commissions and by utilities themselves.

We commend the report to your attention.

Douglas N. Jones
Director
Columbus, Ohio
June 1986



PREFACE

The work described in this report is exploratory, innovative, and conservative. It is exploratory because it represents the NRRI's first attempt to develop a set of diagnostic performance indicators for assessing utility management practices and procedures. It is innovative because it represents the first publicly available report that systematically identified and categorizes the standards or performance indicators used by management consultants in their evaluation of the management performance of regulated utilities contained in published management audit reports. It is conservative because the method developed allows the user to "backtrack" from any diagnostic guideline question to the original audit text from which the diagnostic guideline question was extracted.

The approach is exploratory but does offer the promise of allowing commissioners and commission staff to identify whether the management practices of a jurisdictional utility conform to "generally accepted management practices." A breakthrough in identifying generally accepted practices could be very useful to state commissions. Presently a commission must rely on incomplete and inconsistent evidence in order to establish what generally accepted practices are for the utility industry. Our first inspection of the performance indicators reveals a remarkable degree of consistency across all management experts as to what constitutes an accepted management practice.

The report is, however, more than a theoretical explication of a process for converting the information found in commission-ordered management audits into a diagnostic system. It is "turn-key" in the sense that several hundred workable performance indicators and diagnostic guideline questions are displayed for each of the following utility functional areas.

- Utility executive management processes
- Construction project management and control
- Internal auditing
- Rate program analytical processes
- Customer service and information
- Management information systems
- Workforce productivity

The actual process and forms used for converting the textual information in the audit reports are described in detail sufficient to allow either replication or critical evaluation of the process. A complete bibliography of the management audits which served as the source of the reports is found at the end of the report.

With the exception of some of the frontal material, the report is in the same format as it was when it was sent to the sponsor of the work, the Public Utilities Commission of Ohio. Accordingly, the letter report style necessarily describes the research process in the context of the contracted for scope of work. The letter report has been accepted by the Public Utilities Commission of Ohio and incorporated into its management oversight of jurisdictional utilities.

The diagnostic system described herein was designed to meet the specific needs of the Ohio commission. However, the actual management performance indicators and diagnostic guideline questions may be used in any number of ways to provide useful regulatory information. They may be used to design an ongoing surveillance system. They may be used in conjunction with a utility's request for a rate adjustment. The qualitative performance indicators may be used to enrich our understanding of the quantitative performance indicators developed in several states.

Raymond Lawton
Associate Director
June 1986

ACKNOWLEDGMENTS

A special note of appreciation is appropriate from the authors to the NRRI's dedicated and expert typists, Karen Myers and Jan Hilt who were especially helpful throughout the long process of converting thousands of indicators into useable diagnostic guidelines. Mary Murphy, Barbara Mazzotta, Karen Flesch, and Wendy Windle provided valuable assistance in integrating the material for the final draft.

The report also benefited from the cooperation and invaluable assistance of the following PUCO staff: John Borrows, Douglas Maag, David Hodgden, and Earl Green. We thank the Public Utilities Commission of Ohio for giving us permission to disseminate this report to state commissions and other members of the regulatory community.

PART ONE

INTRODUCTION

On November 20, 1984 the Public Utilities Commission of Ohio (PUCO) ordered (in Case No. 84-152-AU-ORD) that the Ohio jurisdictional utilities include certain management information in their rate case filings. Based on a series of discussions with the PUCO staff, The National Regulatory Research Institute (NRRI) undertook to develop a diagnostic method that the PUCO could use in evaluating the management information submitted by Ohio utilities. The purpose of the undertaking is to provide PUCO with sufficient information to determine the need for an audit focusing on a specific area of utility management practices or policies. This letter report describes briefly the tasks undertaken in developing the diagnostic method. The letter report contains the complete set of performance indicators and diagnostic guidelines for each of the seven utility function areas agreed to by NRRI and PUCO staff. Recommendations are also included on how the PUCO staff can use the diagnostic guidelines. The recommendations are illustrative of how the diagnostic guidelines may be used, as appropriate to PUCO regulatory responsibilities, either in whole or in part. The report concludes with a reference bibliography of management audits used to prepare the diagnostic guidelines.

Approaches to Reviewing Utility Management, Policies, Practices, and Organization

As documented in an earlier report published by The National Regulatory Research Institute,¹ the management audit--a diagnostic

¹Raymond Krasniewski, Robert Backoff, and Vivian Witkind, The Management Audit As A Regulatory Tool: Recent Developments and Prospects For the Future. The National Regulatory Research Institute, Columbus, Ohio, 1981.

examination by a skilled and objective analyst of how well a utility manages each of several functions--has taken on greater significance in the regulatory world. Clearly, one approach the PUCO could consider to carry out its legislative mandate is to order a comprehensive (across all utility functional areas) management audit of every utility in its jurisdiction. However, this approach would be expensive. A management audit can easily become a costly exercise (often with a utility's customers bearing the burden of such costs) and, because of the length of time involved from commission order to issuance of a final report, a management audit typically is not well suited to the usual schedule of rate cases that can overload the commission's docket.

Another approach would be to order a series of reconnaissance audits that cover a large number of utility functions, but do so in less detail than a comprehensive audit. This approach has been applied in the 1982 Management Review of the Ohio Edison Company. A reconnaissance audit identifies problem areas which may then be examined in greater detail by a focused (or function-specific) management audit.

A third approach is the focused audit, which may or may not be used in conjunction with a reconnaissance audit. Examples of focused audits are the 1983 examination of the fuel procurement practices of Columbia Gas of Ohio and the 1984 study of construction costs at the Zimmer nuclear plant.

A fourth approach is tied directly to the ongoing rate case process of the commission. In this approach the review of management policies, practices, and organization is based upon information provided by the utility companies as part of the standard filing requirements (SFR). Based upon the review, the PUCO could chose to order a focused management audit to examine a particular functional area.

The PUCO has chosen to complement the "one-time audit" focus of the first three approaches with the focus of the fourth approach. The PUCO has developed a two-pronged strategy to assess management performance and identify opportunities for improvement in management

policies, practices and organization. First, the commission has at times ordered management audits of specific utilities where there was a pressing need for such review. Second, the commission has chosen to require submission of pertinent management information as part of the regular routine of the rate case process.

PART TWO

THE DEVELOPMENT OF DIAGNOSTIC GUIDELINES

The NRRI proposed that it assist the PUCO in evaluating the management information contained in a utility's SFR through a method that would produce diagnostic guidelines. First, it was proposed that based on the collective expertise contained in recent, high quality management audit reports from Ohio and other states, the NRRI would identify the most widely treated areas in management of electric, gas, telephone, and water utilities, and would identify the associated indicators of performance used by the auditors. The NRRI would identify functional areas that appear to be feasible to review in a rate case and likely to yield significant benefits in management improvement. Second, based upon a review of these areas with PUCO staff the NRRI would select one to five functional areas. Third, the NRRI would establish, in conjunction with PUCO staff, diagnostic guidelines for assessing management performance in the selected area or areas.

The activities undertaken by NRRI to complete the tasks are described below.

Task 1 To identify management performance indicators contained in recent, published management audits and to organize these by utility functional areas.

Recent published management audit reports ordered by other state commissions contain the results of millions of dollars worth of expert consultant work in identifying indicators of management performance. It was felt some of the indicators and performance measures contained in these management audits could provide a useful yardstick against

which to improve, evaluate, or supplement the indicators used by the PUCO staff and those submitted by Ohio's utilities.

By applying of management performance indicators to the information supplied in the SFRs, it is possible to draw conclusions as to the strengths of current management policies, practices, and organization, as well as to identify areas where there are opportunities for improvement.

Based upon its prior management audit work, the NRRI updated its existing set of published, commission-ordered management audit reports. Key staff at the state commissions with the most active management audit programs were contacted and the most recent published audit reports were obtained. A listing of those used in the study is found in part five of this letter report. A total of 25 audits of telephone, electric, gas, and water utilities were used.

In implementing the order in Case No. 84-152-AU-ORD, the PUCO developed a comprehensive listing of functional areas that encompassed all of the activities of jurisdictional utilities. Use of the functional areas allows utilities and PUCO staff to organize and analyze management information on utility policies, practices, and organization in a common format. At a meeting in May 1985, of the PUCO and NRRI staff it was agreed that instead of identifying performance indicators in all functional areas and developing diagnostic guidelines in one to five functional areas as originally proposed, NRRI would identify performance indicators and develop diagnostic guidelines in seven of the functional areas. The PUCO staff identified the seven priority function areas as

1. Utility Executive Management Process
2. Construction Project Management and Control
3. Internal Auditing
4. Rate Program Analytical Process
5. Customer Service and Information
6. Management Information Systems
7. Work Force Productivity

The performance indicators for each of the seven functional areas were analyzed and are included in this letter report. All performance indicators identified in the published management audit reports were

(1) categorized according to thirteen generic management activities (GMA), (2) rated for their usefulness, and (3) categorized according to other useful attributes.

Generic Management Activities

The PUCO functional areas are intended as categories to be used in describing all of the activities a utility performs. The generic management activities categories focus exclusively on the generic types of management activity that exist. The generic management activities (GMA) apply equally to all PUCO functional areas. The GMA conform to generally accepted categories used in the management sciences and public administration, and are listed below.

Generic Management Activities

Planning

1. Policy and Philosophy
2. Planning and Forecasts
3. Scope of Function
4. Priorities
5. Roles and Responsibilities

Organizing

6. Resource Capabilities
7. Resource Allocation
8. Program Plan
9. Implementation

Controlling

10. Program and Project Control
11. Reports and Reviews of Progress
12. Output Evaluation
13. Impact Evaluation

Accordingly, within a given PUCO functional area all those performance indicators that deal with "Implementation" are grouped together. The groupings should allow PUCO staff to better assess the management information submitted by Ohio utilities in their rate case filings. Some indicators, however, are found in more than one generic management area.

Rating Performance Indicators for Usefulness

In order for a performance indicator to be useful in designing diagnostic guidelines, it must deal with a significant activity, be measurable, and it must be relatively easy to gather information about it. All candidate performance indicators contained in the selected, published management audit reports were reviewed and rated according to the criteria listed below.

Performance Indicator Rating Criteria

1. Significance to PUCO and to utility operations
2. Measurability
3. Ease of data collection

To be included in our study a performance indicator had to meet all three criteria.² With only a few exceptions, only those indicators rating "A" are contained in this letter report. "B" rated indicators were included only when the cost of data gathering was thought to be acceptable.

Other Categories Used

Each performance indicators was also categorized as to (1) the "scope" of the management function, (2) the audit report from which it was extracted, and (3) whether it was a positive or negative performance indicator. In categorizing the scope of the management function, each indicator is categorized as follows:

Scope of Management Function

U = Universal management characteristic, potentially applicable to more than one functional area, and

²The scoring for the rating system was as follows
A=meets all three criteria C=meets one of three criteria
B=meets two of three criteria F=meets none of the three criteria.

FS = Management characteristic specific to one function

Citation

All citations immediately follow each performance indicator and indicate the report and page number. A shorthand code was used for each published management audit report. The code and the accompanying full citation are located in part five of this letter report. All indicators are direct quotes from the cited management audits.

Whether a Positive or Negative Indicator

Both negative and positive performance indicators were used by management audit consultants. Thus one positive performance indicator might note "... the presence of an audit plan ...", whereas in another report a negative performance indicator would be used, "... company does not have an audit plan ...". All of the performance indicators in our report are categorized as to whether or not they are positive or negative performance indicators.

Utility Sector

Where appropriate, the performance indicators were categorized by the type of utility examined: electric, gas, telephone and water. Generally the indicators were not categorized if the indicators were thought to be generalizable to other types of utilities.

A sample performance indicator is shown in figure 1, along with a description of the information encoded with the indicator.

Task 2. To select in conjunction with PUCO staff one to five priority areas for development of guidelines.

This task was accomplished when PUCO staff and NRRI staff agreed to focus on seven functional areas both for the performance indicators and for the diagnostic guidelines.

Interpretation	As Displayed in This Letter Report
1. Performance indicator in one of the seven PUCO functional areas. In this case "Construction Project Management"	Performance Indicators For Construction Project Management and Control
2.0 Within the "Construction Project Management" function, 13 generic management activities, (GMA) are identified. On this line GMA No. 8, "Program Plan," is identified.	VIII. <u>Program Plan</u>
2.1 This indicator is the second one dealing with program planning for construction projects.	2. "Clear and precise procedure manuals are published [and] maintained." A/U (GA1, IV-10)
2.2 A/U = The indicator scored positively on all three rating criteria. The "U" means that the indicator (e.g., the use of procedure manuals) could be used in all functional areas.	
2.3 The GA1 citation refers to the Georgia Public Service Commission Management Audit Playscript (May, 1981) found in part 5 of this letter report.	
2.4 The page citation (IV-10) is section 4, page 10 of the audit report.	

Figure 1: A Detailed Description of the Information Contained in Performance Indicators Listed In This Letter Report

Task 3. To prepare, in conjunction with PUCO staff, diagnostic guidelines for assessing management practices, policies, and organization in the selected functional areas.

The NRRI staff developed a sample set of diagnostic guidelines and met with PUCO staff in September 1985 to discuss the usefulness of the format and its suitability for PUCO staff in assessing management practices and policies. The format of the diagnostic guidelines was modified, and then agreed to, and the process for converting performance indicators to diagnostic guidelines confirmed.

The conversion process entailed converting each performance indicator into a question that could be answered by either a "yes" or "no." Both negative and positive performance indicators were converted into the same question format. However, the diagnostic guidelines remained categorized in the same seven functional and thirteen management areas they had originally been categorized as performance indicators.

As can be seen in figure 2, the diagnostic guidelines are set in a question format that will allow PUCO staff to conduct a "desk audit" of the management information submitted by Ohio utilities.

As the diagnostic guideline questions are based on performance indicators that were selected based on their measurability, the PUCO staff analyst should be able to determine directly from the management information submitted whether a utility does or does not have the desired documented policy or management practices attribute ("such as ... a policy statement endorsed by the chief executive officer...") as measured by the diagnostic guideline. (In part 3 of this letter report we have indicated the process PUCO staff could go through in using the diagnostic guideline questions.)

The diagnostic guideline questions can be used with or without weighting the responses. As shown in figure 2, we have designed the guidelines sheet so that the "yes/no" responses can be weighted. Weighting allows the PUCO to decide how important each item is in evaluating the management practices and policies of jurisdictional

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
<u>I. Policy and philosophy</u>			
A. Does Company have a <u>formal</u> , written corporate policy stating the purpose, responsibility and authority of internal auditing? (I.1, I.4)	_____	_____	_____
<u>II. Plan and forecasts</u>			
B. Has the internal auditing department prepared an audit plan? (I.2)	_____	_____	_____
<u>III. Scope of function</u>			
C. Are resources devoted to auditing of data processing, fuels, construction and equipment leasing/purchasing, as well as finance, physical inventory and preparation of outside auditors' work papers? (I.3)	_____	_____	_____

Figure 2: Illustrative Examples of Diagnostic Guidelines
Included in This Letter Report

utilities. It is recommended that the PUCO staff give serious consideration to weighting the scores.³

Note also in figure 2 that each diagnostic guideline has a number enclosed in parentheses following the question mark. This number is a citation that refers to the performance indicator from which the diagnostic guideline was directly derived. An analyst needing more information than that provided by the diagnostic guideline alone may check the original performance indicators. In figure 2, for example, the citation for the first diagnostic question is (I.1, I.4). This means that the item was derived from the first and fourth performance indicators in the same section (I) for internal auditing. As the performance indicators also have source citations, the analyst could obtain the original management audit report for further background information.

The diagnostic guideline questions for each of the seven functional areas are included in part four of this letter report. The diagnostic guideline questions will allow PUCO staff to assess the management information provided in a utility filing for each of the seven selected functional areas; to draw inferences as to management policies, practices, and organization in each of the seven functional areas; and to suggest additional information to be provided by the utility and/or opportunities for improvement. Use of the guidelines is described in part three.

Task 4. To prepare a letter report summarizing the work performed under each task and make recommendations as appropriate.

Acceptance of this letter report accomplishes this task. Recommendations have been made as appropriate in the preceding material. Part three of this report is, in a sense, a recommendation, based on our discussions with PUCO staff, on one way to use the

³See Luc Anselin and J. Stephen Henderson, A Decision Support System for Utility Performance Evaluation (Columbus, Ohio: The National Regulatory Research Institute, April 1985) for a discussion of how weights may be assigned and analyzed.

diagnostic guidelines. It is not the only way, however, and the recommendations can be used in whole or in part or a more appropriate procedure can be designed. The implementation by PUCO staff is properly beyond the scope of work of the contract, but does fall legitimately within the area where recommendations may be appropriate and useful.

PART THREE

AN ILLUSTRATIVE EXAMPLE OF THE UTILIZATION OF DIAGNOSTIC GUIDELINES BY PUCO STAFF

Armed with the diagnostic guidelines for each of the selected seven functional areas, PUCO staff can assess the management information submitted by Ohio utilities. In this section we present a recommended process for using the guidelines. The PUCO, of course, can modify the recommended process as appropriate to meet its regulatory objectives.

Figure 3 contains a flow chart depiction of how a PUCO analyst might actually use the guidelines. The text for the remainder of this part of the report is keyed to the flow chart.

Step 1: For each diagnostic guideline question

The process begins with each guideline question. The process can be used for a part of a functional area or for all functional areas. The process repeats until all diagnostic guideline questions are answered.

Step 2: Does the rate filing contain information sufficient to answer the diagnostic guideline question?

The PUCO analyst inspects the management information submitted by the utility in its rate case filing to see if it contains the information needed to answer the diagnostic question. Given (1) the different ways utilities could organize their management information, and (2) that including management information is a relatively new procedure for utilities, the inspection of the materials submitted is a necessary first step.

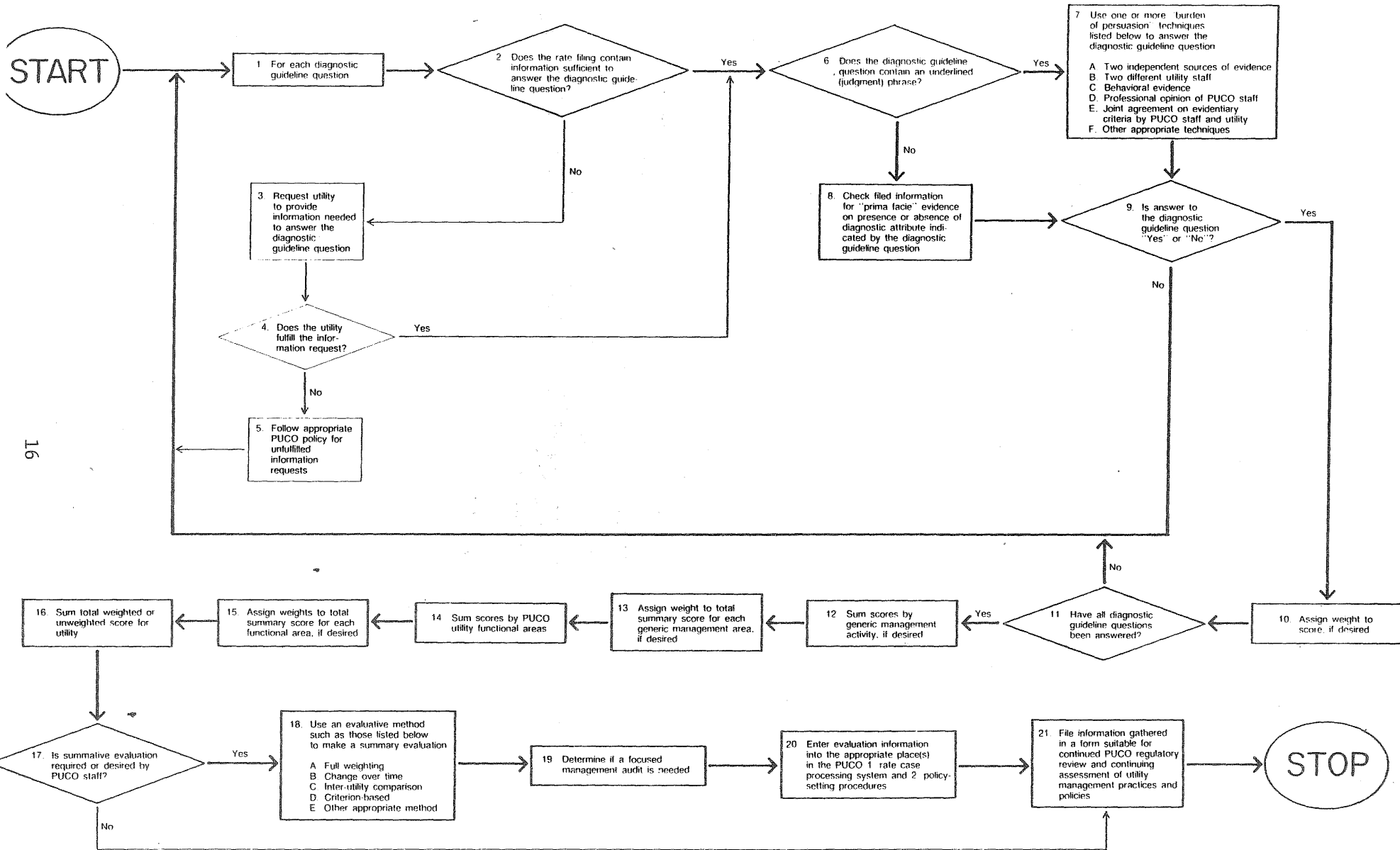


Figure 3: An illustrative example of a process for using the diagnostic guideline questions by PUCO staff

Step 3: Request utility to provide information needed to answer the diagnostic guideline question

Steps 3 - 5 are used only when the PUCO staff analyst feels that sufficient information has not been provided. Requesting information from utilities in a rate case is a relatively standard procedure requiring no further elaboration here.

Step 4: Does the utility fulfill the information request?

Same as step 2.

Step 5: Follow appropriate PUCO policy for unfulfilled information requests

Commission information requests can go unfulfilled for good and bad reasons. Staff should follow standard PUCO procedures for determining how to respond if the request is not adequately complied with by the utility.

Step 6: Does the diagnostic guideline question contain an underlined (judgment) phrase?

A number of performance indicators and diagnostic guidelines have judgmental phrases in them. Examples include:

- ... integrated project schedule ...
- ... well documented ...
- ... clearly defined ...
- ... effective use ...

We believe that the management experts employed to conduct the management audits intended that the modifying phrases listed above require stronger evidence than a similar unmodified guideline. For example, an "integrated project schedule" requires more substantiation than would be necessary if only a "project schedule" were required.

Without overdrawing the analogy, an un-modified diagnostic guideline requires only prima facie ("on the face of it") evidence. In the example above, a document entitled Project Schedule would be prima facie evidence that the desired management practice was present. The diagnostic guideline would then be answered "yes."

Step 7: Use one or more "burden of persuasion" techniques to answer diagnostic guideline question

If an underlined, judgment phrase is included in the diagnostic guideline, then the "burden of persuasion" requires the utility to present a higher, more definite, quality of evidence. An "integrated project schedule" might be demonstrated by a document (as above) and other evidence such as any one of the following: (1) a second document from another division indicating integration of project scheduling, (2) another utility employee independently confirming the integration, (3) behavioral evidence such as a memo showing integration, (4) judgment by a PUCO staff that his or her experience indicates that integration occurs, and (5) agreement by PUCO and utility on specific substantive criteria by which to judge if a project schedule is integrated, followed by verification of whether those criteria had been met.

One or more of the following burden of persuasion techniques (used in the above example) should be used to answer those diagnostic guideline questions requiring judgment or a higher standard of evidence:

- A. Two independent sources of evidence
- B. Two different utility staff
- C. Behavioral evidence
- D. Professional opinion of PUCO staff
- E. Joint agreement on evidentiary criteria by PUCO staff and utility
- F. Other appropriate technique

Step 8: Check filed information for "prima facie" evidence on the presence or absence of diagnostic attribute indicated by the diagnostic guideline question

All those diagnostic guidelines without underlined, judgment phrases can be answered by looking at the management information provided by the utility. Visible evidence of a document entitled Project Schedule would be sufficient proof that a utility had a "project schedule" in a given functional area. "Terms of art" are not judgemental and are not defined in the diagnostic listing. A "project schedule" is not, for example, defined. However, the word "formal" is defined herein to mean "written."

Step 9: Is the answer to the diagnostic guideline question "Yes" or "No?"

All diagnostic questions have been structured to be answerable as "Yes" or "No". If the answer is "no", then the analyst should go back to step one and restart the process for to the next diagnostic question.

Step 10: Assign weight to score, if desired

All of the "yes" responses to the diagnostic guideline questions can be weighted or not depending on the needs of PUCO staff. Weighting, while requiring more work "up front", will give more valid summary scores.⁴

Step 11: Have all diagnostic guideline questions been answered?

This step sends the analyst back to restart the process with the next diagnostic question. The analyst can decide whether to answer all questions, or just a part of them.

⁴See Luc Anselin and J. Stephen Henderson, A Decision Support System For Utility Performance Evaluation (Columbus, Ohio: The National Regulatory Research Institute, April 1985) for a discussion of how to assign and analyze weighted scores.

Step 12: Sum scores by generic management activity, if desired

Depending upon the analytical needs of the PUCO staff, the scores can be summed for each of the 13 generic management activities in each functional area.

Step 13: Assign weights to total summary score for each generic management area, if desired

The total score for each generic management activity may be weighted whether or not the individual scores to each diagnostic indicator question are weighted.

Step 14: Sum the scores by PUCO utility functional areas

The responses to the individual diagnostic questions or for generic management activities may be summed. These scores may be weighted or not, as desired.

Step 15: Assign weights to the total summary score for each functional area, if desired

The total score for each functional area may be weighted, if the PUCO staff feel the importance of any particular area should be stressed.

Step 16: Sum total weighted or unweighted score for utility

The total score is the sum of the weighted or unweighted responses to the diagnostic guideline questions. The summing can be accomplished several ways: by summing (1) all individual responses, (2) all generic management total scores, or (3) all functional area total scores.

Step 17: Is summative evaluation required or desired by PUCO staff?

The data gathered to this point may be used just to provide a benchmark for the next rate case filing by the utility (such as described in step 18 for the "change over time method"). If this is the case, then step 20 would be the next step and the end of the process.

Step 18: Use an evaluative method such as those listed below to make a summary evaluation

"Numbers do not speak for themselves." This statement is particularly appropriate given the history of efforts by regulators to compare utilities with other utilities. Four simple evaluative methods are briefly described below. These methods avoid many of the difficulties faced by previous efforts at comparing utilities.

A. Full weighting method

If every diagnostic guideline question is weighted according to its importance in demonstrating "good management" and every diagnostic guideline or practice developed by the utility (but not found in the listing NRRI extracted from published audits) is weighted, then reasonable data would be available to evaluate the utility. These data could be for the utility as a whole, or by functional area, or by generic management activity.

If all the weighted scores for each diagnostic question singly or grouped by functional or generic management area, are entered into the correct cell below, a formula-based evaluation can be made.

Using the evaluative formula of $(A+C+I) > (F+H+N)$ it may be argued that: if the sum of the scores in cell A ("conforms") plus the

TABLE ONE
FULLY WEIGHTED EVALUATIVE MATRIX

	Diagnostic Guideline Question is In NRRI Prepared List		Diagnostic Guideline Question is Not In NRRI Prepared List		
	Question is Answered "Yes"	Question is Answered "No"	Question is Answered "Yes"	Question is Answered "No"	
Diagnostic Guideline Question is In Utility Prepared List*	Question is Answered "Yes"	A. <u>Conclude utility conforms with generally accepted practices and with its own formal practices</u>	B. <u>Null set as no logical response likely</u>	C. <u>Conclude utility has a practice different than other generally accepted practices</u>	D. <u>Null set as no logical response likely</u>
	Question is Answered "No"	E. <u>Null set as no logical response likely</u>	F. <u>Conclude utility does not conform with generally accepted practices and with their own formal practices.</u>	G. <u>Null set as no logical response likely</u>	H. <u>Conclude utility conforms with generally accepted practices, but does not conform with own formal practices</u>
Diagnostic Guideline Question is Not In Utility Prepared List*	Question is Answered "Yes"	I. <u>Conclude utility conforms with generally accepted practices and surpasses its own formal practices</u>	J. <u>Null set as no logical response likely</u>	K. <u>Null set as question was not on either list and would not likely be asked</u>	L. <u>Null set as no logical response likely</u>
	Question is Answered "No"	M. <u>Null set as no logical response likely</u>	N. <u>Conclude utility does not conform to generally accepted practices</u>	O. <u>Null set as no logical response likely</u>	P. <u>Null set as question was not on either list and would not likely be asked</u>

* For the purpose of this example, the utility-provided management information has been converted into diagnostic guideline questions in the same manner as described in this letter report.

sum of the scores in cell C ("different") and cell I ("conforms and surpasses") is greater than the sum of the scores in "does not conform" cells F, H and N, then PUCO can conclude the utility conforms with generally accepted utility management practices. In this formulation we assume practices in cell C, while different, are on net worthwhile and that practices in cell H are discongruent and are to be investigated. If the assumption is not used, the evaluative formula would become $(A+I) > (F+N)$. If the sum of $(A+C+I) = (F+H+N)$, then PUCO can also conclude the utility conforms with generally accepted utility management practices.

If the sum of $(A+C+I)$ is less than $(F+H+N)$, then PUCO could conclude that the utility does not conform with generally accepted utility management practices.

Cell K + P are empty or null sets only at this point in time. If subsequent efforts by PUCO or the utility produce a diagnostic guideline not presently on either the PUCO list or the utility list, the new guideline would be sorted into one of the other cells. The usefulness of cells K and P would be in instances where some interested party urged a new diagnostic guideline. PUCO could act to either (1) refuse the new guideline as it does not conform to generally accepted utility management practices, or (2) accept it and thus initiate a new management guideline (which would immediately move it into one of the other cells).

B. Change over time method

All data gathered in the first rate filing would be appropriately catalogued and stored for the next filing. In all subsequent filings, the utility's management practices would be compared to its previous practices. Improvement would be the goal.

Summing scores in the same manner as above, the evaluative formula would be

$$U_{T_2} > U_{T_1}$$

Where U_{T_2} is the utility's management practices at the time of the second filing and U_{T_1} the practices and policies at the first filing. If the numerical score in the second filing (T_2) was greater than the first filing, PUCO could conclude that utility management practices are improving. Depending on an unknown (how "good" the utility really was in T_1), PUCO could say that however good or bad various parties assert the utility to be, it is at least improving and that improvement satisfies PUCO.

If $U_{T_2} < U_{T_1}$, PUCO can conclude that management practices are deteriorating and that the PUCO is not satisfied with existing (T_2) utility management policies and practices.

If $U_{T_2} = U_{T_1}$, PUCO can conclude that the management practices are unchanged. PUCO cannot draw any other conclusions, except in two instances. First, if the U_{T_1} management practices were judged either very good or good, then an equivalent U_{T_2} rating would allow PUCO to draw the same conclusion as it had for U_{T_1} . The second instance is where the U_{T_1} rating was judged very bad or poor. The problem, in both instances, of course, is trying to draw the U_{T_1} conclusion in the first place.

C. Inter-utility comparison method

The same approach used in method B would be used, only the comparison would be with other utilities. The evaluation formula would be

$$U_c > \bar{X} = \frac{\sum U_1 \dots U_n}{N}$$

If the summed scores of the utility being compared (U_c) exceeded the average scores of all other sector utilities, then PUCO could conclude that the utility management practices exceed generally accepted practices.

If the summed scores of the utility being examined are less than the average of all other sector utilities, then PUCO could conclude the utility's management practices do not conform with generally accepted practices and policies.

If the U_c score is equal to the average, the PUCO could conclude conformance with generally accepted practices: unless PUCO considers the management practices and policies of all jurisdictional utilities to be unacceptable or not in conformance with the management practices of other utilities selected on either a regional or national basis.

D. Criterion-based method

The present study deliberately avoided the use of any criterion-based evaluative method. The criterion-based method requires that experts in each subject area reach consensus on the score or profile of scores needed to judge the management practices or policies of jurisdictional utilities. A level of effort far beyond the scope of this contract (and one requiring thousands of research hours) would be required if final criteria were to be developed for each diagnostic guideline question.

PUCO may decide, however, to have experts design criteria in selected areas (areas of high disagreement or high payback potential).

E. Other appropriate method

The PUCO may design other equally valid ways of evaluating the management information.

Step 19: Determine if a focused management audit is needed.

PUCO staff may use the information provided in step 18 to recommend whether a focused management audit is needed. PUCO staff may also use any other appropriate information in preparing a recommendation.

Step 20: Enter evaluation information into the appropriate place(s) in the PUCO rate case processing system and policy setting process

The management information gathered may to be incorporated into the PUCO rate case processing system or be used as part of rulemaking or policy making at PUCO. As this management information is new in format and priority, PUCO will have to explicitly examine how and where to make best use of the data. As "data are not self-explanatory", some PUCO staff will have to have the responsibility and authority to use the data and incorporate it into the rate case process. Other participants in the process will need some retraining in order to appropriately utilize this nontraditional source of data.

Step 21: File information gathered in a form suitable for continued PUCO regulatory review and continuing assessment of utility management practices and policies.

After the management information has been used (or not used--step 17), the data need to be organized and stored in a way that ensures its most appropriate use by PUCO.

PART FOUR

DIAGNOSTIC GUIDELINES AND PERFORMANCE
INDICATORS FOR SEVEN FUNCTIONAL AREAS

The information contained in part four is organized accordingly.

	<u>Page</u>
A. Utility Executive Management Process	
1. Diagnostic guideline questions.	31
2. Performance indicators.	47
B. Construction Project Management and Control	
1. Diagnostic guideline questions.	123
2. Performance indicators.	135
C. Internal Auditing	
1. Diagnostic guideline questions.	151
2. Performance indicators.	159
D. Rate Program Analytical Process	
1. Diagnostic guideline questions.	185
2. Performance indicators.	195
E. Customer Service and Information	
1. Diagnostic guideline questions.	221
2. Performance indicators.	229
F. Management Information Systems	
1. Diagnostic guideline questions.	241
2. Performance indicators.	259
G. Work Force Productivity	
1. Diagnostic guideline questions.	289
2. Performance indicators.	295

A. Utility Executive Management Process

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Has the Company developed formal policies? (I.3)	_____	_____	_____
B. Does the Company use a formal approach to policy development? (I.2)	_____	_____	_____
C. Has senior management established corporate objectives which define the overall mission of the company? (I.6)	_____	_____	_____
D. Are corporate objectives general in nature? (I.6)	_____	_____	_____
E. Do corporate objectives appropriately reflect the interests of the various groups that have an impact on and are affected by the operations of the Company, that is, customers, employees, stockholders, governmental bodies, and the community? (I.6)	_____	_____	_____
F. Has the Company developed a set of strategic principles that address customers, employees, main business, importance of fuel (electric and gas utilities only), flexibility, financial basics, reserves (except for telecommunications utilities), staffing, conservation (except for telecommunications utilities), uncertainty, innovation, and pluralism? (I.5)	_____	_____	_____
G. Where there is a parent company and subsidiary are there formal policies for the holding company relationship? (I.10)	_____	_____	_____
H. Is Company management fully cognizant of the nature and scope of strategic challenges? (I.4)	_____	_____	_____
I. Has Company management taken action to address strategic challenges where feasible? (I.4)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
J. Does the Company show a <u>desire</u> to remain <u>flexible</u> ? (I.1)	_____	_____	_____
K. Does the Company have a <u>proactive</u> stance in its relationship with its environment? (I.7)	_____	_____	_____
L. Is Company strategy responsive to a changing environment? (I.8)	_____	_____	_____
M. Are Board of Directors policies <u>adequate</u> and <u>current</u> ? (I.9)	_____	_____	_____
II. <u>Plan and Forecasts</u>			
A. Is there a <u>disciplined</u> long-range planning process that results in a documented long-range plan? (II.1)	_____	_____	_____
B. Does the Company's strategic planning process contain the elements <u>essential</u> to provide overall direction of the Company? (II.2)	_____	_____	_____
C. Is the approach to strategy development <u>consistent</u> ? (II.3)	_____	_____	_____
D. Is the approach to strategy development <u>reasonable</u> ? (II.4)	_____	_____	_____
E. Has the Company developed an <u>integrated</u> corporate strategy that balances the financial, operating, marketing, and regulatory components of the utility? (II.81)	_____	_____	_____
F. Is there a planning timetable? (II.5)	_____	_____	_____
G. Is the planning timetable <u>reasonable</u> under current conditions? (II.6)	_____	_____	_____
H. Is the planning process <u>comprehensive</u> ? (II.7)	_____	_____	_____
I. Is the strategic planning process <u>consistent</u> with recommended formats and techniques? (II.15)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
J. Is there an <u>integrated</u> strategic plan that addresses the diverse functional implications of a corporate strategy? (II.82)	_____	_____	_____
K. Is the strategic plan <u>well</u> documented? (II.16)	_____	_____	_____
L. Is the strategic plan published? (II.83)	_____	_____	_____
M. Is the strategic plan revised every three to five years? (II.8, 16)	_____	_____	_____
N. Do revisions to the strategic plan incorporate changes in projections and concepts? (II.16)	_____	_____	_____
O. Is the strategic plan reviewed, critiqued, and approved by the Board of Directors? (II.9)	_____	_____	_____
P. Have corporate goals been established? (II.10)	_____	_____	_____
Q. Are long-range goals and objectives <u>clearly</u> defined? (II.14)	_____	_____	_____
R. Are corporate goals <u>reasonable</u> and <u>attainable</u> ? (II.13)	_____	_____	_____
S. Are major financial and engineering corporate goals quantified? (II.11)	_____	_____	_____
T. Are there formal procedures for setting goals at different levels of management? (II.12)	_____	_____	_____
U. Are there formal procedures for evaluating performance with respect to goals at different levels of management? (II.12)	_____	_____	_____
V. Is the strategic plan communicated <u>effectively</u> ? (II.45)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
W. Are the various Company plans, ranging from the corporate strategic plan through the annual management-by-objectives targets and operations and maintenance budgets, <u>fully</u> integrated and mutually consistent? (III.51, 52)	_____	_____	_____
X. Does the strategic plan translate to a tactical business plan? (II.108)	_____	_____	_____
III. <u>Scope of Function</u>			
A. Is there a structured approach to issue management? (III.1)	_____	_____	_____
B. Do current strategic planning activities make formal provision for contingency planning? (III.25)	_____	_____	_____
C. Do current strategic planning activities make formal provision for evaluating alternative planning scenarios? (III.25)	_____	_____	_____
D. Do current strategic planning activities make formal provision for tracking the status of planning assumptions and assessing the implications of changes in them? (III.25)	_____	_____	_____
E. Do current strategic planning activities make formal provision for assessing the range and distribution of possible outcomes of important variables? (III.25)	_____	_____	_____
F. Do current strategic planning activities make formal provision for ensuring that operations planning occurs within the context of an approved strategic plan? (III.25)	_____	_____	_____
G. Has the Company undertaken a <u>wide range</u> of internal and external management analyses? (III.2, III.8)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
H. Has the Company taken advantage of ways to strengthen marketing approaches? (III.28)	_____	_____	_____
I. Does the Board of Directors have a standing committee devoted to social issues, including equal oppportunity, consumerism, environmental matters, charitable contributions, public image, and regulatory relations? (III.11)	_____	_____	_____
J. Does the mission of the Audit Committee of the Board of Directors include initiation of internal audits? (III.34)	_____	_____	_____
K. Does the Company <u>recognize</u> and work towards maintaining <u>good</u> working relationships with regulatory agencies? (III.17)	_____	_____	_____
L. Does the Company seek forums with the Commission that permit comprehensive review of the Company's strategic directions? (III.18)	_____	_____	_____
M. Is responsibility for and the activity of containing and reducing costs associated with providing adequate levels of service <u>recognized</u> in the Company's organizational scheme and addressed within the Company in a formal manner? (III.35)	_____	_____	_____
 IV. <u>Priorities</u>			
A. Does a <u>comprehensive</u> program of objectives and goals play an important role in the Company's management system? (IV.1)	_____	_____	_____
B. Does planning have visibility in the organization? (IV.13)	_____	_____	_____
C. Are there <u>high</u> levels of management commitment and involvement in planning? (IV.14)	_____	_____	_____
D. Are planning priorities established? (IV.6)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
E. Are critical functions visible? (IV.7)	_____	_____	_____
F. Do current organizational arrangements provide for <u>concentrated</u> management support for strategic planning activities? (IV.16)	_____	_____	_____
G. For telecommunications utilities, does marketing strategy compete on an <u>equal</u> basis with finance, operations, and regulatory strategy? (IV.2)	_____	_____	_____
H. Is there <u>adequate</u> emphasis on <u>long-term</u> goals? (IV.18)	_____	_____	_____
I. Does top management review organizational structure sufficiently <u>frequently</u> ? (IV.10)	_____	_____	_____
J. Is <u>sufficient</u> effort devoted to external communications? (IV.22)	_____	_____	_____
K. Has the Company <u>focused</u> on overall performance measurement? (IV.24)	_____	_____	_____
<u>V. Roles and Responsibilities</u>			
A. Has a <u>formal</u> program assigning responsibility for accomplishing major programs for individual departments been established? (V.1, V.7)	_____	_____	_____
B. Is long-range planning effort <u>supervised</u> by top management? (V.2, V.3)	_____	_____	_____
C. Is any one senior person responsible for Company's strategic planning? (V.4, V.5, V.6, V.125, V.126, V.127, V.129, V.130., V.10, V.11)	_____	_____	_____
D. Are electric system planning and strategic planning activities integrated? (V.133)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
E. Is Company's organizational structure <u>suitable</u> to Company's present size and objectives? (V.14, V.17, V.18, V.19, V.142, V.30)	_____	_____	_____
F. Does Board <u>formally</u> discuss major strategic and organizational items at their meetings? (V.135, V.1367, V.91, V.92, V.94, V.103)	_____	_____	_____
G. Does the Board have a <u>planning</u> or finance committee? (V.138)	_____	_____	_____
H. Does a focal point exist within the Company for dealing with the most pressing issues presently before the Company? (V.26)	_____	_____	_____
I. Do reporting relationships provide <u>ready</u> access to top company management? (V.27)	_____	_____	_____
J. Are departmental functions <u>clearly</u> understood by managers and employees? (V.35, V.29, V.146)	_____	_____	_____
K. Has authority been delegated to department managers after a <u>thorough</u> analysis of the requirements of the job? (V.37)	_____	_____	_____
L. Are managers <u>encouraged</u> to make and implement decisions in their own areas of responsibility? (v.38, V.39, V.40, V.149, V.152)	_____	_____	_____
M. Are reporting relationships <u>clearly</u> defined and understood? (V.41, V.42, V.153, V.154)	_____	_____	_____
N. Do managers' job descriptions <u>adequately</u> describe the work performed? (V.44, V.166)	_____	_____	_____
O. Are all related functions grouped under a single <u>accountable</u> management officer? (V.50, V.162, V.163, V.164)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
P. Are the responsibilities of each department expressed in a <u>formal</u> written statement? (V.165, V.66)	_____	_____	_____
Q. Are Company's organizational charts up to <u>date</u> ? (V.55, V.56)	_____	_____	_____
R. Are task forces or committees used in an <u>effective</u> manner to study problems? (V.57, V.59, V.60, V.61)	_____	_____	_____
S. Are organizational responsibilities for budgeting and reporting <u>defined</u> ? (V.62, V.63, V.64)	_____	_____	_____
T. Is the performance review of company goals <u>conducted</u> by either the Chairman of the Board or the CEO? (V.70)	_____	_____	_____
U. Do written job descriptions exist for <u>top</u> managers? (V.170, V.171, V.172)	_____	_____	_____
V. Are managerial spans of control <u>appropriate</u> ? (V.174, V.175, V.176, V.177, V.178, V.179, V.180, V.183, V.184, V.185, V.115, V.116, V.117, V.118, V.119, V.120, V.121, V.122, V.123, V.124)	_____	_____	_____
W. Are criteria used for system planning <u>appropriately</u> established by management? (V.73)	_____	_____	_____
X. Is the division of planning responsibilities between the operating Company and the holding Company <u>appropriate</u> ? (V.77, V.78, V.79)	_____	_____	_____
Y. Are the respective roles and responsibilities of the holding Company and operating Company <u>clearly</u> defined? (V.185, V.186, V.187, V.188, V. 189, V.190, V.191)	_____	_____	_____
Z. Does Board <u>actively</u> participate in major policy decisions? (V.85, V.86, V.90, V.93, V.98)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
AA. Are outside Board members <u>actively</u> involved in Board meetings? (V.93)	_____	_____	_____
AB. Have <u>formal</u> guidelines for the input of information into the corporate planning model from other functional areas of the Company been established? (V.196)	_____	_____	_____
AC. Has the Board played an <u>active</u> role in planning for succession for top management? (V.97)	_____	_____	_____
AD. Have <u>actions</u> been taken to increase the independence of the Board? (V.99, V.100, V.101)	_____	_____	_____
AE. Does the Board have an <u>effective</u> committee structure? (V.194, V.105, V.106, V.107, V.108, V.109, V.110)	_____	_____	_____
 VI. <u>Resource Capabilities</u>			
A. Is there a <u>formal</u> management development program for senior management? (VI.4, VI.5, VI.6)	_____	_____	_____
B. Are a <u>sufficient</u> number of staff assigned to the strategic planning function? (VI.58)	_____	_____	_____
C. Are all divisions <u>adequately</u> staffed? (VI.56, VI.57, VI.58, VI.59, VI.60, VI.61, VI.62, VI.63)	_____	_____	_____
D. Does Company have a management succession program? (VI.8, VI.9, VI.10, VI.12)	_____	_____	_____
E. Does Company make <u>effective</u> use of outside consultants? (VI.14)	_____	_____	_____
F. Is size of Board <u>comparable</u> to other similar utilities? (VI.17, VI.18, VI.19, VI.20, VI.21, VI.22)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
G. Does Board have an <u>appropriate</u> mix of internal and external directors? (VI.15, VI.18, VI.21, VI.22, VI.23, VI.24, VI.25, VI.26, VI.27, VI.28, VI.29, VI.30, VI.31, VI.32)	_____	_____	_____
H. Are Board committees <u>adequately</u> staffed? (VI.46)	_____	_____	_____
I. Does member selection <u>avoid</u> possible conflicts of interest in selecting Board members? (VI.49)	_____	_____	_____
 <u>VII. Resource Allocation</u>			
A. Does a program exist to <u>assure</u> the availability of the resources required to fulfill the long range plan? (VII.2)	_____	_____	_____
B. Is managerial compensation <u>consistent</u> with that of similar utilities? (VII.5, VII.6, VII.7, VII.8, VII.9, VII.10)	_____	_____	_____
C. For holding Companies, is centralized purchasing and data processing support provided to the operating Companies? (VII.11)	_____	_____	_____
D. Is the amount and type of administrative support provided to the Board of Directors <u>generally appropriate</u> ? (VII.14)	_____	_____	_____
E. Are there <u>executive</u> staff resources to meet the following needs:			
1. Assist senior management in assessing the business environment, resolving issues, analyzing alternatives, and consolidating plans?	_____	_____	_____
2. Provide <u>close</u> scrutiny of operational planning, budgeting, and performance in all functions of the Company?	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
3. Supply staff support in directing or participating on task forces and in monitoring special programs that might affect Company operations?	_____	_____	_____
4. Provide developmental opportunity to selected strong performers in middle management?	_____	_____	_____
5. Provide an initial position for individuals who might enter the Company at a <u>high</u> level from the outside? (VII.15)	_____	_____	_____
 VIII. <u>Program Plan</u>			
A. Are corporate objective <u>explicitly</u> reflected in annual goals? (VIII.49)	_____	_____	_____
B. Are long-term goals <u>well</u> defined? (VIII.48)	_____	_____	_____
C. Are standard operating procedures <u>adequately</u> documented? (VIII.56)	_____	_____	_____
D. Does Company have corporate policies and procedures <u>adequately</u> documented? (VIII.56)	_____	_____	_____
E. Does Company make <u>effective</u> use of management by objectives? (VIII.14, VIII.15, VIII.16)	_____	_____	_____
F. Does Company have a <u>formal</u> goal-setting and review process that helps management focus on short-term planning priorities? (VIII.17, VIII.19)	_____	_____	_____
G. Are system plans <u>tied</u> into corporate objectives? (VIII.21)	_____	_____	_____
H. Are management information systems in place for measuring departmental performance? (VIII.9, VIII.27, VIII.30)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
I. Does Company have a <u>well</u> established budget program? (VIII.26, VIII.27, VIII.30)	_____	_____	_____
J. Are cost centers and cost elements <u>formally</u> defined? (VIII.33)	_____	_____	_____
K. Are guidelines issued <u>prior</u> to budget preparation? (VIII.35)	_____	_____	_____
L. Are existing accounting policies documented and communicated? (VIII.36)	_____	_____	_____
M. Is generation plan based on a <u>well-developed</u> set of reliability factors, measures, and standards? (VIII.40, VIII.41, VIII-42, VIII.43, VIII.44)	_____	_____	_____
N. Are objectives of the Company's load management programs <u>clearly</u> stated and <u>understood</u> ?	_____	_____	_____
IX. <u>Implementation</u>			
A. Is there <u>clear</u> evidence that the Company corporate plan is being followed? (IX.1)	_____	_____	_____
B. Has the Company's long-term plan been <u>formally</u> presented to the Commission? (IX.6)	_____	_____	_____
X. <u>Program and Project Control</u>			
A. Is progress against goals monitored? (X.1, X.2, X.3, X.4, X.9)	_____	_____	_____
B. Does Company have a <u>formal</u> program for comparing Company's overall operating performance with other companies? (X.31, X.8)	_____	_____	_____
C. Does Company have reward systems based on incentive compensation? (X.11)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
D. Does Company have an <u>objective</u> management performance measuring system? (X.36, X.37, X.12)	_____	_____	_____
E. Are managers held accountable for budget variances? (X.17)	_____	_____	_____
F. Are <u>significant</u> variances between budgeted and actual expenses documented regarding cause, corrective action, and any impact on the remainder of the fiscal year? (X.23, X.24)	_____	_____	_____
G. Are corporate changes <u>formally</u> evaluated at the division level?	_____	_____	_____
H. Is the selection process for the Board members in compliance with the Company's stated policies? (X.47, X.49, X.50)	_____	_____	_____
I. Do Board members <u>regularly</u> attend Board meetings? (X.48)	_____	_____	_____
<u>XI. Reports and Reviews of Progress</u>			
A. Does the company enforce administrative discipline in both budgeting and control activities? (XI.1, XI.2, XI.27, XI.28)	_____	_____	_____
B. Has there been a review of the executive level reporting processes with the objective of providing management with summary reports that are <u>useful</u> and <u>reliable</u> ? (XI.4, XI.5, XI.6, XI.7, XI.28, XI.30, XI.31)	_____	_____	_____
C. Is there a <u>good</u> flow of management communications at <u>every</u> level? (XI.8, XI.9, XI.10, XI.19, XI.31)	_____	_____	_____
D. Is there a formal process for evaluating performance with respect to goals? (XI.11)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
E. Does the Board of Directors receive an <u>ample</u> amount of routine financial and operating information? (XI.13, XI.14, XI.15, XI.16, XI.17, XI.18, XI.20, XI.21, XI.22)	_____	_____	_____
F. Is the financial and operating information <u>complete, useful, relevant and timely</u> ? (XI.14, XI.15, XI.16, XI.17, XI.20, XI.21, XI.24)	_____	_____	_____
 XII. <u>Output Evaluation</u>			
A. Is the Company meeting service criteria established by the Commission? (XII.1, XII.3, XII.14, XII.15)	_____	_____	_____
B. For a telecommunications company, has the Company improved its management of a strategic agenda that <u>fully</u> recognizes the issues of divestiture? (XII.2, XII.17, XII.18)	_____	_____	_____
C. Are the financial needs of the Company planned <u>effectively</u> ? (XII.6, XII.7, XII.8)	_____	_____	_____
D. Does the Company have the capacity to respond <u>quickly</u> to <u>short-term</u> issues? (XII.9)	_____	_____	_____
E. Has Company's forecasting been <u>reliable</u> ? (XII.10, XII.11, XII.12, XII.13)	_____	_____	_____
 XIII. <u>Impact Evaluation</u>			
A. Are corporate goals and objectives reviewed as conditions <u>change</u> ? (XIII.1, XIII.2, XIII.5, XIII.6)	_____	_____	_____
B. For a telecommunications company, has the Company made <u>efforts</u> to inform customers about the changes taking place in the telecommunications industry? (XIII.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES
UTILITY EXECUTIVE MANAGEMENT PROCESS

	Yes/ No	Weight	Score
C. Has the Company's <u>apparent</u> operational <u>efficiency</u> been reflected in corporate <u>profitability</u> ? (XIII.3, XIII.4, XIII.10, XIII.11, XIII.12)	_____	_____	_____
D. Has the Company been provided a <u>satisfactory</u> level of service as measured by the level of complaints and inquiries by rate-payers? (XIII.7)	_____	_____	_____
E. Has the Company been <u>effective</u> in its external communications efforts? (XIII.8)	_____	_____	_____

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "The Company's desire to remain flexible facilitates strategic planning activities." A/FS (FL2, II-4)
 2. "The Corporation has moved from a period of informal policy development to a more formal approach." A/FS (FL2, II-3)
 3. "Develop formal policies and procedures." A/U (GA1, 4)
 4. "[Company] management is fully cognizant of the nature and scope of [strategic] challenges and has taken initiatives to address them, where feasible." A/FS (OH1, III-13)
 5. "The Company has recently developed a set of strategic principles which address the following subjects:
 - Customers;
 - Employees;
 - Main Business;
 - Importance of Fuel;
 - Flexibility;
 - Financial Basics;
 - Reserves;
 - Staffing;
 - Conservation;
 - Uncertainty;
 - Innovation;
 - Pluralism."A/FS (FL2, II-3-4)
 6. "Senior management established corporate objectives which define the overall mission of the Company. These objectives are general in nature and appropriately reflect the interests of the various groups that
9. "Board policies are inadequate and outdated." A/FS (AK1, III-2)
 10. "Lack of formal...policies [for holding company relationship]" A/FS (GA1, 4)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

have an impact on and are affected by the operations of the Company, i.e., customers, employees, stockholders, governmental bodies, and the community." A/FS (PA3, III-14)

7. "Company has moved from a reactive posture, in which its response to crises was largely ineffectual, to a new posture dominated by the will to survive." A/FS (CA1, 28)
8. "Responsiveness of strategy to a changing business environment." A/FS (GA1, 3)

II. Plan and Forecasts

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| <ol style="list-style-type: none"> 1. "A disciplined long-range planning process that results in a documented long-range plan." A/FS (CO1, XII-6) 2. "the Company's strategic planning process contain[s] the essential elements to provide overall direction of the Company." A/FS (PW, 11) 3. "Consistency of approach to [strategy] development." A/U (GA1, 3) 4. "Reasonableness of approach to strategy development." A/U (GA1, 3) 5. "There [is] a planning timetable." A/U (PA1, 18) 6. "[The planning timetable] is... reasonable in light of current conditions." A/U (PA1, 18) 7. "the planning process [is] comprehensive and responsive to changing conditions." A/U (PW, 12) | <ol style="list-style-type: none"> 78. "Lack of a well defined strategy" A/U (GA1, 3) 79. "Lack of adequate planning" A/U (GA1, 3) 80. "No documentation of strategy development" A/U (GA1, 3) 80A. "Because the company lacks an overall strategy and formal planning process, for major systems development, it is difficult for senior management to: <ul style="list-style-type: none"> .Assess the role automated systems can fill in helping to achieve company objectives. .Provide guidelines concerning how information resources should be allocated to best serve the Company's needs. .Provide direction for the acquisition of hardware, software, and office automation equipment and the development of new systems. .Ensure that expenditures made for information systems will be cost-effective. .Determine how best to solve anticipated computer capacity problems. |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
8. "...the long range plan [is] updated on a timely basis." A/U (PA1, 17)	.Establish consistent criteria for evaluating user needs." (OH1, IX-11-12)
9. "[Company] management should prepare strategic business plan for presentation to the Company's Board of Directors, which should review, prepare a critique, and approve its contents. • The plan itself should then be subject to periodic review and refinement at specified intervals (for example, every three or five years, or more frequently if warranted by unforeseen developments). A/FS (CO1, XII-13)	81. "The Committee's two major weaknesses are (1) the process and formulation of marketing strategy; and (2) the development of an integrated corporate strategy that balances the financial, operating, marketing, and regulatory components of the business." A/FS (CA1, 32)
10. "Corporate goals [have] been established" A/U (PW, 12)	82. Although the Company has developed electric system plans, financial plans, fuel supply plans, operating plans, and other plans, it has no integrated strategic plan that addresses the diverse functional implications of a corporate strategy...Specifically (the company) lacks a documented plan that effectively integrate the following: .Corporate mission and objectives .Corporate guidelines (covering economic guidelines and business requirements, such as growth, earnings per share, net income, and rate of return) .Business and market analyses (including customer analysis and segmentation, market characteristics, major trends and changes, and Company self-assessment) .Strategic alternatives (encompassing functional strategy implications and approximate financial implications of alternatives). A/FS (CO1, XII-10)
11. "It is significant that the major financial and engineering goals (capital requirements) are quantified." A/U (PA4, III-6)	
12. "The Company has established formal procedures for setting goals at different levels of management and for evaluating performance with respect to goals." A/U (PA3, III-14)	
13. "[Corporate goals] are reasonable and attainable" A/U (PW, 12)	
14. "Management's long-range goals and objectives are clearly defined." A/U (PA6, IV-5)	
15. "The strategic planning process follows a logical, consistent program and is consistent with recommended formats and techniques." A/U (PA6, IV-6)	83. "There is no published corporate plan, though there are individual plans such as the five-year forecast and the energy forecast." A/FS (KY1, V-7)
16. "The Company follows an orderly process in its long-range planning, starting with the previously mentioned Comprehensive Planning Study, which is well documented and revised on a three to five year basis, incorporating changes in both projections and concept." A/FS (PA4, III-6)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

17. "Under the direction of the chief executive officer and with the assistance of the vice president -corporate planning, [the company] should develop and implement an integrated strategic planning process with the following general characteristics:
- A balanced combination of top management guidance, central coordination, and effective participation by key line and staff personnel
 - An iterative, structured, and formal approach, including a published schedule with milestone dates
 - A documented strategic plan
 - A framework for preparing functional and operating plans
 - Continual revisions to the strategic plans as warranted by changes in the assumptions on which they are based." A/FS (C01, XII-12)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>18. "In some utilities planning is an esoteric exercise - at [Company] it is an integral part of the management process. Detailed business planning in such areas as generation projects, distribution engineering and operations is dependent upon corporate planning outputs." A/FS (FL2, III-3)</p> <p>19. "Company goals and objectives are communicated to the entire organization through the planning process." A/FS (FL1, 34)</p> <p>20. "the [Company's long-range] objectives and strategy [are] understood by all involved in long range planning." A/U (PA1, 17)</p> <p>21. "The strategic planning process should encompass: <ul style="list-style-type: none"> •The establishment of planning assumptions •The assessment of the range and distribution of possible outcomes of important variables •The evaluation of alternative scenarios •The development of contingency plans •The tracking of the status assessment of planning assumptions and the implications." A/FS (C01, XII-12) </p> <p>22. "strategic plan should contain the following general items: <ul style="list-style-type: none"> •A statement of corporate mission and objectives •Corporate guidelines <ul style="list-style-type: none"> -These guidelines should include both economic guidelines (covering both general economic assumptions for the service territory and specific assumptions on geographic regions) and a statement of corporate require- </p>	<p>84. "Certain of the corporate objectives are imprecise: for example, no objective references are made to the interests of [Company's] shareholders ...[and] the goals and guidelines are too detailed and lack adequate focus." A/U (C01, XII-9)</p> <p>85. "The Company is not strong in the area of coordinated corporate planning. Many of the key elements of corporate planning have been addressed by [company] management, but no process is currently in place which integrates these elements into a corporate plan." A/U (PA4, V-1)</p> <p>86. "An integrated planning process does not exist within [Association]." A/U (AK1, V-2)</p> <p>87. "While the top executives at [company] have in-depth knowledge of the telephone industry and a thoughtful sense of its future, a formal long-range strategic planning process is not in effect." A/FS (PA5, 3-19)</p> <p>88. "[Company] has a variety of plans, but it does not have an integrated plan or an organizationally comprehensive planning ethic. Planning is not yet done for key topics and, in aggregate, is not organizationally comprehensive. The audit consultants have been unable to indentify any department or division within the Company that has a documented plan for all, or most, of the activity it is performing." A/FS (CA1, III-28-29)</p>

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

- ments (covering target growth rates, earnings per share, net income, and rate of return.)
- Business and market analyses
 - This analysis should entail: (1) a customer analysis addressing the mix and type of customers and trends in their respective energy use; (2) an assessment of market characteristics discussing the overall trends in the energy (or any other) market which the company services; (3) a discussion of trends addressing regulatory, financial, human resources, and other factors that affect [the company]; and (4) a Company self-assessment analyzing corporate strengths and weaknesses in light of the previously mentioned factors.
 - Strategic alternatives
 - These alternatives should discuss the functional and approximate financial implications of each strategic alternative.
 - Recommended strategy
 - This item should involve a discussion of the strategy's congruence with market requirements, contingency plans (and triggers for them), and the broad steps required to implement the chosen strategy. A/FS (C01, XII-13)
23. "The long range planning activity include[s] an analysis of the present condition of the company, the economic area served, the nature of current and future competition, the industrial development and trends, the customers served by obtaining data through surveys, [and] the historical growth patterns." A/FS (PA1, 19)
89. "Strategic planning is conducted informally, and there is little documentation relating to the issues being addressed and the Company's planned response to these issues." A/U (KY1, V-7)
90. "The policies, which the Company describes as its corporate goals and objectives, that have been developed are generally broad and unmeasurable and are not formally linked to the departmental operating plans." A/FS (KY1, V-7)
91. "Although management has begun to address some strategic issues, the Company's positions on many of these issues have either not yet been resolved or not yet developed into clear statements of direction." A/FS (KY1, V-7)
92. [Company] has not yet developed a strategic planning process, and the company has no formal integrated strategic business plan;
- To illustrate, [the company] lacks a sound mechanism to ensure that the functional plans developed within the Company are consistent with a corporate strategic plan, or that the physical and financial aspects of these plans are integrated.
 - Examples of functional plans with strategic implications are the electric system plans, financial plans, fuel supply plans, and conservation plans. A/FS/E (C01, XII-9)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

24. "The company should establish a more formal corporate planning program...The planning process, once developed, should have the following features:
- Measurable corporate objectives and goals should be developed annually.
 - These objectives and goals should be communicated to line management so that they can be incorporated in their planning processes.
 - A sophisticated management reporting system should be developed to keep senior management abreast of performance versus plan.
 - Measurable department goals must be developed through the planning process. •Strategic issues should be addressed and resolved in the form of a documented corporate strategy.
 - An annual corporate plan." A/FS (KY1, V-16)
25. "Parent Company should adopt a formal approach to strategic planning. Each subsidiary should provide input to the process and be aware of the results, particularly as related to the status and mission of the subsidiary and how it is expected to acquire and deploy resources within the [Company] system." A/FS (PA5, 3-19)
26. "...important to ensure [in the coordinated financial planning process] that all significant future events (e.g., proposed or anticipated changes to meter reading and billing requirements, changes to the standards for water quality, changes and/or growth in send-out, etc.) are considered, planned for, and acted upon by management of the Company." A/FS/W (PA4, V-4)
93. "There is no formal method to ensure that goals support or are supported by the energy forecast, demand forecast, generation plan, budget, or five-year forecast.
- There are no written procedures describing how goals should be developed or reviewed.
 - No formal time table for reviewing progress towards achieving goals has been established. Some departmental goals are less than comprehensive. Often the stated goals are not measurable." (KY1, V-8)
94. "The Company has been run as a functional organization, with few strategic integrating processes of its own. Some integration has been accomplished through operational systems, such as budgeting and control. These tend, however, to be tactical in terms of the planning horizon and content of planning objectives and assumptions and reactive with respect to control." (See also "Roles and Responsibilities" and "Program and Project control" below) A/FS (CA1, 32)
95. "Both the analytics and the processes for sound marketing strategy are essentially absent." A/FS (CA1, 49)
96. "The analytics to develop useful market segmentation and cost assignment are essentially nonexistent. Because of this, it is difficult to formulate pricing initiatives that are useful in developing a portfolio-based approach to the financial management of the business." A/FS (CA1, 49)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

27. "The Company follows an orderly process in its long-range planning, starting with the previously mentioned comprehensive planning study, which is well documented and revised on a three to five year basis, incorporating changes in both projections and concept." A/FS (PA4, III-6)
28. The Company is following an orderly long-range planning process related to the growth and facility requirements of the area it serves. Starting with a comprehensive plan which is well documented and revised on a three to five year basis, changes in service requirements, sources, and facilities are evaluated to form the basis for planning capital projects and maintenance of the system. A/FS (PA4, II-2)
29. "The Company has also intensified efforts to develop a long-range strategic planning process and developed a preliminary version of a corporate plan in late 1981, thereby reflecting a commendable effort by [company] to project and anticipate developments in the external environment which may evolve in the future and to prepare the Company to address them constructively." A/FS (OH1, IV-3)
30. Since 1970 the Company has maintained a comprehensive planning study which is periodically updated. (PA4, III-5)
31. "The Company's long-term planning and budgeting processes provide a framework for allocation of [company's] resources in a manner consistent with its objectives, goals, and plans." A/U (NC1, V-2)
32. "Anticipate PUC and intervenor group concerns early in its planning process." A/U (CA1, 47)
97. "Many of [Company's] goals could be made more valuable through greater specificity. For instance, some goals refer to improving capabilities in a particular activity or continuing the development of improved procedures. More specific goals in these areas would provide better guidance in planning activities and a clearer basis for evaluating progress toward these goals." A/U (PA3, III-17)
98. "The establishment of annual goals is primarily a 'bottom-up' process at [the company]. A 'top-down' approach would assure that division, department, and section goals were more directly supportive of overall company goals." A/FS (PA3, III-16)
99. "The qualitative nature of a number of goals, however, necessitates a subjective evaluation of performance and weakens the impact of the goal-setting process as a tool for management control." A/U (PA3, III-17)
100. "Financial, budgetary, and engineering goals are quantified, however, service, quality and individual performance or efficiency goals are not." A/FS (PA4, II-2)
101. "No...measurement or yardstick is identified in the goals relating to quality, service or management efficiency." A/U (PA4, III-6)
102. "Presently, there are no computer models to support adequately a sophisticated strategic planning process, but the company is in the process of evaluating long-range strategic planning models."

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>33. "Economic research operates and maintains a corporate model. The corporate model is comprehensive and provides useful and essential management information." A/FS (FL2, III-4)</p> <p>34. "A corporate model was well advised and, properly developed, should prove beneficial as a planning tool to support a strategic planning process: This model will provide a useful vehicle for evaluating the diverse implications of alternative strategies [the company] should consider for its future." A/FS (CO1, XII-7)</p> <p>35. "A long-range planning model to support the planning process." A/FS (CO1, XII-6)</p> <p>36. "Establish formal procedures for the input of information into the corporate model from other functional areas of the Company. Information needs should be reviewed and a distribution list established." A/FS (MO1, IV-23)</p> <p>37. "...planning inputs [are] validated." A/U (PA1, 18)</p> <p>38. "We reviewed independent population and employment projections to verify if data used by the Company in its planning will meet future service requirements and satisfied ourselves that growth assumptions are realistic." A/FS (PA4, II-3)</p> <p>39. "Mechanisms [have] been established for assessing long-term implications of alternative operations strategies." A/U (Kearney, 8)</p> <p>40. "Objectives, goals and strategies [have] been established in writing for the major operations of the Company, and...they [are] updated and communicated." A/U (Kearney, 6)</p> | <p>. Almost two weeks are required to evaluate a scenario on the current financial planning model." A/FS (KY1, V-7)</p> <p>103. "The dynamic process of forecasting organizational changes and management requirements and matching these with current and developable management resources is only in the early stages of development." A/U (PA3, III-30)</p> <p>104. "Lack of formal policies and procedures for management communications, planning efforts, and information systems. A/U (GA1, 6)</p> <p>105. "[Company] and [planning unit] have not developed a formal business plan...Business planning processes are normally characterized by:</p> <ul style="list-style-type: none"> •Explicit consideration and analysis of key aspects of the environment in which the Company operates •Development and use of a common set of assumptions for all business planning efforts •Analysis of variances in key assumptions in order to test their sensitivity, which leads to the development of a series of alternative business scenarios •Formal selection and documentation of a business strategy from the alternative scenarios •Creation of a hierarchical set of goals and objectives supporting the strategy selected •Implementation of management actions in line with the goals and objectives •Establishment of a formal process to monitor assumptions and management actions to determine what modifications may be required." A/FS (PA2, III-8) |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
41. "Corporate objectives, strategies and goals [have] been documented." A/U (Kearney, 6)	106. "[Business] plan is inconsistent with long range strategies and objectives." A/FS (GA1, 7)
42. "The Company [has] corporate policy and procedure manuals." (See also "Program Plan" below) A/U (Kearney, 6)	107. "Lack of integration [of business plan] with other planning functions." A/FS (GA1, 7)
43. "[Corporate policies and procedure manuals] are...regularly updated." (See also "Program plan" below) A/U (Kearney, 6)	108. "Strategy does not translate to tactical business plan." A/FS (GA1, 3)
44. "[Corporate objectives, strategies and goals] have been updated and communicated." A/U (Kearney, 6)	109. "the Company has developed an operating planning process which is exemplary in many respects; but at the present juncture, the company lacks a well-defined strategic business plan and has only recently commenced the development of a strategic planning process." A/FS (CO1, IV-2)
45. "The plan [is] being communicated effectively." A/U (PW, 12)	110. "Limited analysis has been conducted to determine the impact on load factor, system reliability and production cost." A/FS/E (FL2, III-15)
46. "The five year year plan is comprehensive, carefully prepared, and rigorously reviewed prior to authorization by parent company." A/U (FL1, 56)	111. "The objective of the load management program to control 500 MW by 1985 may be difficult to achieve." A/FS/E (FL2, III-14)
47. "Because the elements of the six-year plan capture virtually all of the operating dimensions of the company, the use of the plan to focus management's energy on [the company's] operational and financial needs has been very effective. As a result, the six-year planning process is the most well-understood management process within the company, and it has been instrumental in programming [the Company's] planned recovery." A/FS (CA1, 56)	112. "Analysis of the individual load management programs have included only a limited review of potential social and behavioral inconveniences." A/FS/E (FL2, III-15)
48. "The Company is strong in terms of documented policy and practice in the management areas. Much of the practice is established by precedent and followed by department heads or supervisors....We do not believe that the overall question of documented policy or practice creates a serious current problem in the administration and operation of the Company." A/U (PA4, III-8)	113. "Point forecasts are used instead of bands." B/FS (GA1, 4)
	114. "Short term loads used for tactical plans are not in agreement with long term forecasts." A/FS/E (GA1, 4)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>49. "The Company [has] formal planning processes. •Corporate long-range plans •Expense and capital budgets •Management by objectives system" A/FS (Kearney, 9)</p>	<p>115. "Forecasting effort is not integrated with business plans or other Company efforts which may affect demand." A/FS (GA1, 4)</p>
<p>50. "...The planning system provide[s] for coordination of the planning for demand (sales) forecasting, facilities planning, capital and financial planning, rate planning, [and] resources." A/FS (PA1, 18)</p>	<p>116. "Inadequate staffing or modeling resources are devoted to forecasting effort." A/FS (GA1, 4)</p>
<p>51. "Various [company] plans and decision-making systems (ranging from the corporate strategic plan through the annual MBO targets to basic capital and O&M budgets) are fully integrated and mutually consistent." A/FS (OH1, VI-5)</p>	<p>117. "A forecast of new gas customers by district and sales category is needed as a basis for future operating and construction budget forecasts." A/FS/G (MO1, IV-7)</p>
<p>52. "...Individual or functional plans [are] integrated into a total plan." A/U (PA1, 18)</p>	<p>118. "[Company's] load forecasting techniques are limited to rudimentary customer demand and energy predictions, as opposed to the more sophisticated, state of the art, econometric models utilized by many generating utilities." A/FS/E (MO1, IV-2)</p>
<p>53. "An organizational plan covering the next five years. This plan should incorporate organizational structure and staffing alternatives that take into account future business needs as well as the personal skills and development needs of new and potential candidates for executive positions." A/FS (PA3, III-26)</p>	<p>119. "Although significant improvements have been made in [Company's] load forecasting methods, forecast accuracy could be enhanced through additional refinements. • First, while the long-term sales and energy requirements forecast encompasses a high and low estimate of the expected load, probabilities are not assessed to determine the likelihood that the best estimate, or any other load, will occur. • Second, the short-term sales and peak load forecast provide only a 'best estimate' of energy sales, and thus do not reflect uncertainties in the underlying assumptions. • Third, current analyses of forecast errors are not sufficiently detailed to provide feedback for making improvements in forecasting methods." A/FS/E (NY2, III-8)</p>
<p>54. "The Company [should] develop and document a revised organizational plan. This plan should define the overall organizational structure of the company and incorporate consideration of: optimal span of control, delegation of responsibility, organizational communications, and coordination and succession planning, particularly for key executive personnel." A/U (PA4, V-5)</p>	<p>120. "Analysis conducted to date have included only a limited review of diversity factor and the potential impact of load management on the distribution system." A/FS/E (FL2, III-16)</p>

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>55. "[Company] should carry out a comprehensive organization study</p> <ul style="list-style-type: none"> •A phased plan, to govern steps to be taken over the next five years, should be developed. •The plan should address <ul style="list-style-type: none"> •[Company] corporate philosophy •Key steps •Manpower development and training needs •Timing •Responsibilities •Spans-of-control and management layers. •[Company] should retain qualified outside consulting services to help in this process. •The plan should be designed around [Company's] environment and resources. •In should take full advantage of the lessons learned by the balance of the industry." A/U (KY1, IV-12) <p>56. "Formal management planning process covering all senior management positions down to the level of department head. The process should include systems for projecting future management needs, assessing current managerial resources, and identifying and closing gaps with programs for development and recruiting. The chairman of the board should be responsible for the management of this process, and the compensation committee of the board of directors should be responsible for the review and approval of it." A/FS (PA3, III-27)</p>	<p>121. "The Company currently lacks an actionable strategy for meeting the probable future electric power needs of the service area." A/FS/E (CO1, III-3)</p> <p>122. "Variability in demand scenarios is not considered in evaluating risks or alternatives [for system planning]. A/FS (GA1, 5)</p> <p>123. "The economic results of analyses are inadequately incorporated into the final [system planning] evaluations." A/FS (GA1, 5)</p> <p>124. [System] planning assumptions with respect to reserves or availabilities are overly optimistic. A/FS/GEW (GA1, 5)</p> <p>125. "[System] planning effort does not provide realistic lead time for implementation." A/U (GA1, 5)</p> <p>126. "The criteria used in generation planning are not formally and firmly established." A/FS/E (GA3, IV-11)</p> <p>127. "The more rapid retirement rates, particularly at senior levels, will require a more structured succession planning process.</p> <ul style="list-style-type: none"> •Development times will be longer. •Sequential moves may be required." A/FS (KY1, IV-8) <p>128. "It would appear that the organization has grown over the years without organizational or succession planning. With the exception of the top position, it is an organization that has grown from within, with many of the current executive officers being individuals who joined the Company in the lower ranks and over the years worked themselves to the top." A/FS PA4, III-5)</p>

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
57. "There [is] a business plan which defines the nature, scope, and character of the business." A/FS (PW, 12)	
58. "[Business] Plan is sufficiently flexible to address contingencies." A/U (GA1, 7)	
59. "We recommend that the Company develop and implement a coordinated financial planning process. This process should be monitored and administrated by the financial organization but must, to be effective, include the active participation of all senior executives of the Company. The process should incorporate a long range perspective (i.e., a five-year period) in which the primary focus is on assessment of the economic and regulatory environment, identification of long-range financial goals and development of operating strategies and tactics to respond to the environmental factors and accomplish its objectives. The process should be undertaken on an annual basis." A/FS (PA4, V-3)	
60. "Long-term financial plans [are] prepared in support of corporate objectives and goals." A/U (Kearney, 6)	
61. "[Long-term financial plans are] supported by computer models." A/U (Kearney, 6)	
62. "Computer based models [are] used [to plan for financial needs]." A/U (Kearney, 12)	
63. "Business planning involves the integration of several discrete activities: load forecasting and rate design; generalization, transmission, and distribution capacity planning; and long-range financial planning." A/FS/E (PA3, IV-1)	
64. "Forecasting and system planning techniques meet a state-of-the-art standard." A/FS (Keaney, 9)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

65. "Significant improvements in load forecasting methods have been achieved in recent years." A/FS/E (NY2, III-6)
66. "[For load forecasting] advantage has been taken of technical resources available through industry groups. [Company] personnel have been active participants in groups such as the (New York Power Pool], with the result that the technical skills of these Company personnel have been strengthened." A/FS/E (NY2, III-7)
67. "The company has a well-documented and reasonably effective forecasting process [for energy and demand]." A/FS/GE (KY1, V-10)
68. "The company is investigating ways to improve its forecasting techniques [for energy and demand]." A/FS/GE (KY1, V-13)
69. "[Company] is appropriately seeking to continually upgrade the level of its forecasting effort." A/FS (GA3, IV-9)
70. "The load forecasting group at Georgia power uses state-of-the-art forecasting methods." A/FS/E (GA2, IV-8)
71. "Proceed to develop a forecast of the number of new gas customers. The forecast should include, for each forecast period, an estimate of new customers by district and by class for the total forecast period." A/FS/G (MO1, IV-21)
72. "Parent company's approach to allocating new capacity also appears reasonable in that it attempts to allocate new capacity to match each operating company's expected need at the time that the capacity is brought on line." A/FS/E (PA2, III-30)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

73. "Generation planning is performed efficiently." A/FS/E (GA3, IV-9)
74. "Power production personnel make periodic assessments of the major long-term options in sources and uses of power.
- Joint projects
 - Buy/sell/build
 - Pooling
 - Generation mix
 - Reserves
 - Outages/reliability" A/FS (Kearney)
75. Responsiveness [of system planning] to a variable environment (GA1, 6)
76. "Integration [of system planning] with business and strategic plan. A/FS GA1, 6)
77. "The following should specifically be included in succession planning at [the Company] on an annual basis:
- .Analysis of the managerial requirements of the Company over a five-year period
 - .Comparative assessment of the performance and potential of each of the top managers and candidates for their positions
 - .Establishment of a management plan to include specific development programs and recruiting needs" A/FS (PA3, III-31)

III. Scope of Function

1. "Structured approach to issue management should be developed and implemented. Under the direction of the President, [the company] should formulate and document a strengthened issues management process. This process should provide for:
25. "Current strategic planning activities make few provisions for formally:
- Undertaking contingency planning so that the Company can respond effectively to unexpected conditions
 - Evaluating alternative planning scenarios (such as generating capacity, availability of gas supply, economic conditions, and regulatory circumstances)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

- Means by which key issues which pose significant opportunities or risks to the Company can be identified (for example, through suggestions made by individual officers)
 - Initial discussion of prospective strategic implications by the proposed Executive Management Committee to assess their parameters
 - Assignment, when warranted, of responsibility for further staff-level analysis of these issues by existing elements of [Company] organization or interim working groups
 - Review of such staff analysis and resulting recommendations by the Executive Management Committee, as a precursor to final decision-making by the President, or to conveyance of proposed decisions to the Board through its corporate planning and finance committee, where appropriate.
 - Subsequent documentation of the Company's position, with provision for conveying this information to interested internal or external audiences (where such dissemination is in the Company's best interests).
 - The Vice President - Corporate Planning should be assigned primary responsibility for supporting the President in the development and subsequent use of this issues management approach." A/FS (C01, IV-23)
2. "The company has taken numerous initiatives to strengthen its management systems In recent years...a wide range of internal and external management analyses which [the company] has undertaken, ranging from an assessment of planning processes and a general survey of employee attitudes to more focused studies of the effectiveness of the Company's transportation functions and the efficiency of its meter-reading activities. A/FS (C01, IV-19)
- Tracking the status of planning assumptions and assessing the implications of changes in them.
 - Assessing the range and distribution of possible outcomes of important variables.
 - Ensuring that operations planning occurs within the context of an approved strategic plan." A/FS (C01, XII-10)
26. "In order to establish a new strategic direction [Company] needs to redefine its current businesses to establish a baseline for formulating an integrated corporate strategic plan. This re-definition should consist of the following specific steps:
- Define the full range of current products and services.
 - Define the pricing structure, cost structure, and profit contribution of existing products and services.
 - Examine market potential for current businesses: market segments, market size, projected growth, and competitive threats.
 - Reconfigure existing products and services into defined strategic business units based on end-use characteristics. This definition should focus on the reasons consumers buy telecommunications products and services, and should lead to a deeper understanding of the value perceived by those consumers." A/FS (CA1, 63-64)
27. "The company must move swiftly to develop mature management processes that support thoughtful policy formulation in the four critical dimensions of its business:
- Corporate affairs, including the external and regulatory relationships of the company.
 - Financial strategy, including the balance of debt/equity variables required by independence.

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
3. "The development of strengthened management systems." A/U (C01, III-2)	•Marketing strategy, which will require a thoughtful reorientation of [Company's] management energy toward a competitive marketplace.
4. "The introduction of new forms of organization." A/U (C01, III-2)	•Operational planning, which will increasingly come under the constraints of financial affordability." A/FS (CA1, 53-54)
5. "The Company is effective in assembling temporary matrixed organizations to address problems that affect multiple disciplines." A/U (CA1, 31)	28. "Significant opportunities appear to exist to strengthen the Company's marketing approaches in ways which could benefit both its jurisdictional and non-jurisdictional ventures." A/FS (NY3, III-6)
6. "Task forces and committee are used in an effective manner to study problems and emerging issues. (See also "Roles and Responsibilities" below) A/U (FL2, II-2)	29. "[The Company's] planning processes are driven toward single-point objectives; planning for contingencies is underutilized as a management technique. The six-year planning process appears to suffer from two weaknesses. The first is the lack of strategic content in the plan itself. Managerial attention is focused on short-term detail, generally the first eighteen to twenty-four months of the planning horizon. The second major area of concern in the planning process is in the underutilization of contingency planning, which is partly due to the preferred management style of [the Company's] executives." A/FS (CA1, 59)
7. "New committees have been added as significant problems meriting board attention have become apparent." (NC1, V-2)	30. "The Company must identify viable market segments that can support pricing initiatives based on the value of services to the user. It must also develop a portfolio approach to products and services that will support both its financial and regulatory objectives." A/FS (CA1, 32)
8. "The commissioning of a series of improvement-oriented analyses, undertaken by both internal staff groups and outside consultants." A/U (C01, III-2)	
9. "Strategies have been evolved to meet federal requirements related to fuel consumption and environmental requirements." A/FS/EG (Kearney, 6)	
10. "Although the equal employment opportunity committee [of the Board] may make a valuable contribution in overseeing EEO matters, this is just one of a number of social issues facing [the Company] that warrant Board time and attention, the charter of this committee might be expanded to cover other social issues." A/FS (PA3, III-8)	
11. "'Social responsibility' or 'public responsibility' committee [of the Board]; a standing committee. Its scope should encompass the full range of social issues facing [the company]. These initially might include the following:	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

- Consumerism
 - Environmental matters
 - Charitable contributions
 - Public image
 - Regulatory relations."
- A/FS (PA3, III-13)
12. "[The Company] has undertaken progressive and constructive initiatives in many areas which have both strengthened administrative and operational effectiveness and (in several instances) led to important cost reductions." A/FS (C01, IV-1)
13. "Develop a statement of strategic mission, and corporate goals and objectives to guide the strategic planning process... This direction coupled with supporting goals and objectives, should include the following elements:
- The types of businesses [Company] wants to be in
 - The reasons for pursuing those businesses, based upon the identification of [Company's] distinctive competencies.
 - Objectives for financial growth and profitability.
 - Objectives for servicing the marketplace, including market position and quality of products and services.
 - Objectives for meeting [Company's] responsibilities to the customers.
 - A statement of philosophy for the management of the business, including such characteristics as profit and cost management, rewards through incentive, and the pursuit of businesses that are consistent with long-term financial affordability."
- A/FS (CA1, 64-65)
31. "The senior policy processes of [the Company] have resisted full integration of the regulatory perspective... Integration of the regulatory perspective in the planning process has generally been after the fact." A/FS (CA1, 46)
32. "The bulk of communication between [Company] and PUCO involves rate or fuel case proceedings which are adversarial in nature and poorly suited forums for the discussion of strategic challenges,... Matters of particular concern within this context include the most suitable approaches to meeting [company's] financing needs and their short-and long-term implications for Company ratepayers." A/FS (OH1, III-14)
33. "[The Company's] reluctance to expose the major dimensions of the planning process to the [Commission] and seek its input; and (2) the failure of [the company] to integrate regulatory realities and assumptions into its planning processes." A/FS (CA1, 47)
34. "The mission of the Audit Committee of the Board of Directors is currently limited to that of reviewing the results of audits identified as necessary and initiated by others." A/FS (PA5, 3-6)
35. "Responsibility for and the activity of containing or reducing the costs associated with providing adequate levels of service is not recognized in [Company's] organizational scheme nor does it appear to be addressed within the Company in a formal manner." A/FS (PA5, 3-10)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

14. "The company should reshape its financial strategy to accommodate the requirement of independence... This strategy will require specific changes in the way in which [the Company] manages its business. These changes include:
- Development of financial growth objectives, including the rate of sustainable growth that is achievable through a combination of debt, equity, and internal cash generation.
 - Development of a profit-centered concept of management based upon defined strategic business units.
 - Development of a portfolio approach to financial management that allows (the company) to balance its products and services against a defined, sustainable growth objective.
 - Definition of financial affordability parameters to guide investment in existing and future businesses." A/FS (CA1, 62-63)
15. "Market segmentation techniques should be developed based on greater understanding of the value as perceived by the user. Pricing strategy can then reflect that perceived value as closely as possible." A/FS (CA1, 49)
16. "[Company] has historically been aggressive and foresighted in identifying and exploiting strategic opportunities offered by the telecommunications market. [Company] has been a leader in entering new markets [created primarily by technological advances and industry deregulation]." A/FS/T (NY3, III-4)
17. "The Company recognizes and works toward maintaining good working relations with the various regulatory agencies." A/FS (PA4, II-7)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

18. "The Company's must continue to seek forums with the Commission that permit comprehensive review of the company's strategic direction." A/FS (CA1, 31)
19. "The Company has now exposed the Commission to the projected financial results of the six-year plan. The effect of this can only be positive, and should enhance the quality of rate proceedings in the future." A/FS (CA1, 42)
20. "Sharing the basic dimension of the plan (corporate 6 years) with the [Commission] can accomplish two important opportunities for the [Commission] to participate in the development of [Company] programs that are consistent with the Commission's protection of the public interest. This would provide a structured process for the [Commission] to provide input during the planning process. The difficulty involved in monitoring (the company's) activities in this regard would be far more effective by such front-end involvement on the part of the [Commission]." A/FS (CA1, 60)
21. "Develop an approach to regulatory policy that increases the [Commission's] understanding and participation in the planning of [the Company's] business. In a very real sense, [the Company] cannot change its strategic course without [Commission] involvement and concurrence. This can only be achieved through deepening understanding of the needs of [the Company's] business, and the incorporation of input from the [Commission] in terms of its own public-interest responsibilities." A/FS (CA1, 65)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

22. "Opportunities for more extensive and informal dialogue between [Company's] management and regulators regarding the Company's strategic challenges and approaches could be beneficial. Accordingly, both [Company] and the [Commission] should explore feasible vehicles for achieving such communications. For example, the potential application to their state regulation of practices now followed in an adjacent state-- which provides for periodic structured, but informal, consultation between utilities and regulators outside the adversarial environment--should be explored." A/FS (OH1, III-14)
23. "For Company and the [Commission] to jointly effect a transition to independence that sufficiently serves the interests of both entities, a deeper and more thoughtful mutual understanding must be a continuing objective." A/FS (CA1, 31)
24. "The company has joined a group of other water companies who, with themselves, feel the need for (activated charcoal filtration) has not been proven." A/FS/W (PA4, II-8)

IV. Priorities

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| <p>1. "A comprehensive program of objectives and goals plays an important role in the Company's management system." A/FS (NCl, V-2)</p> <p>2. "Marketing strategy should compete on an equal basis with finance, operations, and regulatory strategy." A/FS/T (CA1, 50)</p> | <p>13. "Planning lacks visibility in the organization." A/FS (AK1, IV-2)</p> <p>14. "Low levels of management commitment or involvement [in planning]." A/U (GA1, 2)</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

3. "Senior management agendas, which are now dominated by operational issues, must instead concentrate on questions of strategy: what business to participate in, the extent and affordability of that participation, the new management philosophy of the Company, and the mechanisms through which [the Company] can formulate and manage extensive strategic change." A/FS/T (CA1, 53)
4. "The Company must direct its organizational focus toward its external constituencies and develop a balance between its traditional internal orientation and the market forces that will have a significant impact on its future." A/FS/T (CA1, 54)
5. "Parent Company has assigned the highest priority to the the development and continuity of its management team." A/U (FL1, 39)
6. "[Planning] priorities [are] established." A/U (PA1, 18)
7. "Critical function visibility." A/U (GA1, 4)
8. "The President should explore options for elevating the organizational status of those staff functions that are critical to overall corporate performance and that would benefit from the direct support of top management.
•Operational Audit/Analysis
•Productivity Analysis" A/U (PA1, II-2)
9. "Organizational arrangements...provide for a fulltime planning officer reporting directly to the President and Chief Executive Officer." A/FS (CO1, XII-6)

Negative Performance
Indicators

15. "The Company's present top management structure tends to reinforce existing emphasis on operational activities and to limit [the Company's] capacity to establish and pursue critical business strategies." A/FS (CO1, IV-11)
16. "Current arrangement do not provide adequate organizational visibility and concentrated management support for strategic planning activities... .Of critical importance, [the Company's] Chief Executive Officer is not currently a member ... although the responsibilities of his position are inherently directed toward planning for the future of the Company." A/FS (CO1, XII-8)
17. "Relatively few officer positions concentrate on general management of the enterprise or planning for the future on an intensive basis." A/FS (CO1, IV-13)
18. "Goal-setting activities could be improved, however, by giving increased emphasis to long-term goals and by setting more specific goals." A/FS (PA3, III-14)
19. "Short-term responses to financial stringency could preclude the development of longer-term approaches to ensuring cost-effective [Company] operations." A/U (OH1, IV-7)
20. "The Company must reorient power, traditionally dominated by the operating components of the organization, toward new marketing values." A/FS/T (CA1, 50)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

10. "How often the [organizational] structure is reviewed by top management." A/U (PA1, 10)
11. "Management within [Company] and [planning unit] also continues to focus on cost-effectiveness issues and utility fundamentals which produce tangible benefits to ratepayers." A/U (PA2, III-6)
12. "Ongoing programs indicate that [Company's] commitment to load management is strong and well-grounded." A/FS (FL2, III-13)

Negative Performance
Indicators

21. "The concept of issue management, although recognized, is too embryonic. At [Company], the term, 'Issue management' refers to temporary arrangements of organization and staff, made to deal with an external issue for which a multifunctional response is needed... Issue management apparently is not accorded sufficient weight. Some of these less successful outcomes, and a reported tendency to move too slowly, appear to reflect a condition generically similar to that of major project management -the issue-oriented responsibility not into sufficient balance with long established functional responsibilities. Several division managers commented to the consultants upon slowness by the general office in responding to issues, and alleged frustrations felt by work group leaders in seeking accomplishments." A/FS (CA1, III-27, 28)
22. "[Company] and [planning unit] have not devoted sufficient efforts to external communications." A/FS (PA2, III-1)
23. "APS and WPP have not devoted sufficient attention to the formalization and documentation of certain management processes." A/FS (PA2, III-9)
24. "A shortage of technical and professional resources has apparently inhibited the Company from focusing on overall performance measurement, particularly in the production area." A/U (KY1, IV-10)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

V. Roles and Responsibilities

1. "A formal program assigning responsibility for accomplishment of major programs in the five Year Plan to individual departments needs to be established. Responsibility and accountability reporting features should include:
 - .The designation of a department of primary responsibility
 - .The establishment of time frame for completion.
 - .The establishment of interim benchmark/milestone dates
 - .The establishment of evaluative criteria for completion
 - .The establishment of a formal reporting mechanism to monitor progress." A/U (FL1, 58)
2. "...the long range planning effort [is] receiving top management support and supervision." A/U (PA1, 17)
3. "The long-range planning effort receives adequate top management support and supervision." A/U (PA6, IV-6)
4. "Integrated corporate policy-formulation process." A/U (CA1, 66)
5. "The position of Vice President-Corporate Planning should become the focal point for full-time staff support of the Company's strategic planning process." A/U (CO1, XII-10)
6. "The Company's Chief Executive Officer would...serve as chairperson of [the Company's] principal planning group." A/U (CO1, CII-11)
125. "The corporate planning process is fragmented and, although the planning process has been defined, no single area within [company] has overall corporate planning responsibility." (KY1, V-6)
126. "The annual development of corporate goals and guidelines,...does not ensure an integrated exchange of thinking among senior Company managers." (CO1, XII-9)
127. "Lack of coordination of goals and objectives throughout the organization." A/U (GA1, 2)
128. "Many of [the Company's] internal governance processes appear to be overly tactical. It is in the nature of a regulated utility company to be somewhat tactical and reactive in the way it runs its business. The management style of the company is characterized by a focus on the requirements of implementation: an action-orientation, a strong reactive capability, rapid response to tactical issues, and rigorous attention to control." A/U (CA1, 53)
129. "There is no one person outside the management group responsible for coordinating the planning activities who has a broad enough perspective to embrace and consider the many factors influencing the Company's investment and operating decisions." A/U (PA3, IV-25)
130. "Overall, [the company's] planning activities could be better integrated. There is no procedure for ensuring that alternative strategies are evaluated on a regular basis." A/U (PA3, IV-25)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
7. "Senior management provides direction and guidance to corporate planners." A/U (FL2, III-3)	131. "The Company's approaches to addressing major issues are insufficiently structured...[the company] currently lacks a formal approach to identifying and resolving major issues which may arise internally or externally, and key elements of such a system are underdeveloped, for example:the Company has yet to crystallize a strategic business plan, which could provide a baseline against which other developments and pressures could be measured. .At present, no effective organizational forum is in place to deliberate such issues. .Limitations in decision-making processes...further restrict the effectiveness of potential approaches to issue management." A/U (C01, IV-20)
8. "Major decisions relating to such items as capital and operating budgets, financial planning, company policy and dividend distributions have the full participation of the C.E.O., President, and Board of Directors (including the Executive Committee)." A/U (PA4, III-11)	132. "[the company's] present and future challenges warrant better structured issue management approaches in ways which will effectively involve corporate top management." A/U (C01, IV-21)
9. "The Company has been able to develop a high degree of cohesion and teamwork within its top management group." A/U (OH1, IV-2)	133. "Electric system planning, strategic planning, and operating planning processes should be more closely integrated." A/U/E (C01, V-22)
10. "The Vice President - Corporate Planning would provide full-time officer-level leadership to the development of [the company's] strategic planning process and long-range business plans." A/U (C01, IV-15)	134. "Operating decisions are typically made by officers at the Presidential and Vice Presidential level with minimal participation in the decision-making process below this level." A/U (PA4, II-2)
11. "Responsibilities for long-range planning are clearly assigned and appear to be understood by all those involved in the long-range planning process." A/U (PA6, IV-5)	135. "The Board is not effectively carrying out its planning and policy-making responsibilities." A/U (AK1, III-2)
12. "Management systems for planning, administration and control effectively support, both in concept and application, the achievement of corporate policies and objectives" A/U (PW, 12)	
13. "Management systems [are] fully consistent with the organization structure and vice-versa." A/U (PW, 12)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

14. "The organization structure is suitable to Company's present character, size and objective." A/U (PA1, 10)
15. "Responsibilities and authorities [are] clearly defined." A/U (Kearney, 10)
16. "There [is] a focal point in the organization for dealing with each of the Company's most pressing issues." A/U (Kearney,10)
17. "The organization structure [is] suitable to the Company's present character, size and objectives." A/U (Kearney, 10)
18. "Organizational structure to fit its redefined businesses." B/U (CA1, 67)
19. "the corporate organization structure [is] conducive to meeting stated corporate goals" A/U (PW, 12)
20. "Duties, authorities, responsibilities, and working relationships [are] well defined and understood." A/U (PW, 12)
21. "...responsibilities and authorities are clearly defined." A/U (PA1, 11)
22. "...key personnel have the authority commensurate with the responsibility and accountability of their position." A/U (PA1, 11)
23. "The assignment of authority and responsibility provide[s] prudent checks and balances." A/U (Kearney, 10)
24. "Company's President should pinpoint organizational responsibility for future leadership of corporate planning activities and for strengthening the integration of [company's] planning, goal-setting, and budgeting activities." B/U (OH1, IV-8)

Negative Performance
Indicators

135. "Although many items are brought to the board's attention over the course of a year, there is no time when the full range of major strategic and organizational issues facing the Company is presented in a comprehensive fashion." A/U (PA3, III-11)
136. "There has not been a meeting [of the board] dedicated to a comprehensive discussion of the full range of major strategic and organizational issues facing [the company]." A/U (PA3, III-8)
137. "Communications among several board members are marginal." A/U (AK1, III-3)
138. The Board's role in charting the future course of the company may be restricted by the absence of a planning and finance committee. A/U (CO1, IV-4)
139. We question, however, to what degree the Board has participated in the selection, measurement, and setting of standards of management. A/U (PA4, III-8)
140. The management committee does not currently serve as a useful vehicle for crystallizing and analyzing key issues and strategic alternatives or assessing the prospective implications of key Company decisions. A/U (CO1, IV-13)
141. "The Board displays an unfortunate tendency to air its internal differences publicly." A/U (AK1, III-2)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

25. "Delegations of authority should be further refined to ensure maximum utilization of capabilities at all echelons of the management hierarchy." A/U (CA1, III-36)
26. "...a focal point exists in the organization for dealing with each of the Company's most pressing issues." A/U (PA1, 10)
27. "Reporting relationships provide ready access and visibility of ... important staff functions to the top management of the Company." A/U (PA3, III-22)
28. "reporting relationships provide ready access and visibility of ... important staff functions to the top management of the Company." A/U (PA3, III-22)
29. "The responsibilities of individual departments at [the Company] are generally clearly defined and understood by management. Very little organizational overlap or duplication of activities was observed." A/U (PA3, III-21)
30. "A functional organizational structure is common in the utility industry and particularly appropriate for a utility with a small geographic service territory." A/U (PA3, III-19)
30. "The basic organizational structure of the Company promotes operational efficiency through functional groupings...which relate to workflow and commonality of function." A/U (PA6, 11-12)

Negative Performance
Indicators

142. "With regard to structure, there may be several opportunities for improvement.
- The number of divisions and districts appears excessive and lacking a rationale other than history and, perhaps, local sensitivities...
 - Organization arrangements within divisions and districts provide functionally counterpart staffs at each management level...
 - The position of Vice President - Division Operations is somewhat anomalous.
 - In relation to his line responsibilities for the entire field organization, the Vice President has 13 immediate subordinates and only a very modest immediate staff." A/U (CA1, III-24-25)
143. "While the decentralized structure yields the benefits cited earlier in this section, the precise arrangements being used appear to:
- Possibly underutilize the capabilities of large divisions
 - Require General Office attention to smaller divisions and districts that may be out of proportion to their size and impact on the Company as a whole
 - Place very heavy external burdens on smaller divisions from time to time
 - Provide more points for review and concurrence than are needed
 - Create an anomalous role for the Vice President - Division Operations." A/U (CA1, III-25)
145. Lack of formal structure. A/U (GA, 2)
146. [A number of key company management processes]...are not fully integrated across functional lines or on a corporatewide basis. A/U (NY3, III-27)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
32. "The organization is effectively tiered to represent all departments and sub-departments by a management function." A/U (PA6, II-13)	147. Unclear role definitions, responsibilities, and accountabilities. A/U (GA1, 3)
33. "The line and staff positions currently represented in the Company avoid conflict or duplication of effort." A/U (PA6, II-13)	148. "When (emphasis is on advancement from within it) put together with average years of service (28 years), span of control of the President, functional duplications, and a challengeable mixture of geographical --Eastern Division V.P.--responsibilities, and overlapping operating of functional responsibilities, the present organization structure should be questioned. It is reasonable to assume that patriarchal attitude employees has led partially to this structure." A/U (PA4, III-5)
34. "Both [parent company and subsidiary] benefit from an organization structure which, in general, is based on the allocation of reasonable levels of responsibility to key managers." B/U (PA2, III-5)	149. Some operating decisions are delegated to and made by officers at the Vice President level, with minimal participation in the decision-making process below this level. The decisions affect the quality of water, service to customers, utilization of resources, and operating costs. A/U (PA4, III-11)
35. "The departmental functions are clearly understood by the managers and employees." A/U (PA6, II-14)	150. Insufficiently precise management definition of staff department roles within the Company. A/U (OH1, IV-6)
36. "Appropriate division of responsibilities among three Executive Vice Presidents." B/U (AZ1, II-1)	151. "The rationale underlying the present configuration of Company field divisions and districts appears to be more closely linked to OEC's corporate history than to careful assessment of current service needs." A/U (OH1, IV-5)
37. "Authority has been delegated to managers after an examination of departmental needs...responsibilities have not been assigned in a haphazard fashion but have been clearly defined and then delegated after an analysis was made of the requirements of the job." B/U (PA6, II-15)	152. "Management activity very frequently lacks suitable pinpointing of authority and accountability." A/U (CA1, III-31)
38. "Management is encouraged to reach, implement, and enforce decisions in their areas of responsibility." B/U (PA6, II-16)	
39. "[Company's] President should direct his subordinates to develop specific responsibility statements or management charters for key staff units." A/U (OH1, IV-8)	
40. "The establishment of formal decision grids to more clearly define roles and responsibilities - and partially offset the impact of organizational fragmentation." A/U (CO1, IV-19)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>41. "Reporting relationships are clearly defined and understood." A/U (FL2, II-2)</p> <p>42. "The individuals in senior management interviewed have clear and appropriate concepts of the requirements of their positions and appear to be very knowledgeable with respect to the functional activities for which they are responsible." A/U (PA5, 3-4)</p> <p>43. "All functional heads have clearly delineated responsibilities and work well together." A/U (PA5, 3-10)</p> <p>44. "...job descriptions adequately describe the work performed." A/U (PA1, 10)</p> <p>45. "A task force should be appointed and charged with developing a plan to integrate those management systems that are closely related.</p> <ul style="list-style-type: none"> •O&M and capital budgeting •Facilities planning (including headquarters offices) •Financial planning •Management by objectives •Performance review •Strategic planning" <p>A/U (AZ1, II-2)</p> <p>46. "Top management should...carefully appraise proposals...for an in-depth review of overall division operations and customer service organizational arrangements and the underlying rationale of the present field division and district configuration." A/U (OH1, IV-8)</p> <p>47. "The number of functional departments at [the Company] is reasonable given the size and geographic configuration of the Company. Furthermore, the scope of activities covered by most departments conforms to general utility practice." A/U (PA3, III-21)</p> | <p>153. "There is considerable fragmentation and overlap of functions, and certain instances of duplication, among the general office departments." A/U (CA1, III-32)</p> <p>154. Ineffective use of coordinators and committees, resulting in additional confusion over lines of authority, communication channels, and accountabilities. A/U (CA1, 6)</p> <p>155. "the company has been run as a functional organization, with few strategic integrating processes of its own. Some integration has been accomplished through operational systems, such as budgeting and control. These tend, however, to be tactical in terms of the planning horizon and content of the planning objectives and assumptions, and reactive with respect to control." (See also "Plan and forecasts" above and "Program and project control" below). A/U (CA1, 32)</p> <p>156. "There is limited accountability for decisions" and virtually no objective method of determining if one officer is performing better than another." A/U (PA4, III-11)</p> <p>157. "High levels of decentralization and autonomy exist in power plant and division operations at [Company]. The utility industry, in general, has been moving towards the centralization of key staff support functions at a senior management level." A/U (KY1, IV-8)</p> <p>158. "Several "support" functions are inappropriately grouped." A/U (AK1, IV-20)</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
48. "[Company] has successfully overcome or avoided organizational difficulties frequently noted elsewhere in the industry, such as excessive organizational layering or the proliferation of assistant-to types of administrative positions." B/U (OH1, IV-2)	159. Duplication of management effort. A/U (GA, 7)
49. "For the most part, the decentralized concept of the corporate organization is sound for a combined utility having very large business and geographic dimensions". A/U (CA1, III-14)	160. Inadequate definitions of responsibilities (for planning). A/U (AG1, 2)
50. "Related functions are grouped under a single accountable senior management officer." A/U (NC1, V-1)	161. "The responsibilities of each department are not expressed in a formal written statement." A/U (PA6, II-18)
51. "The Company's efforts to decentralize management responsibility for most field service activities have engendered favorable results." A/U (CO1, IV-10)	162. "Position responsibilities, indicated by written position descriptions, are not completely accurate in describing position responsibilities." A/U (PA6, II-18)
52. "(The Company) has consciously avoided the creation of large numbers of "Assistant To" or "Administrative Assistant" positions." A/U (CO1, IV-9)	163. Inappropriate separation or assembly of functions. A/U (GA1, 3)
53. "The reorganization in 1977 into four business units (Financial Services, Engineering and Construction, Operations and Corporate Services) has resulted in an effective, cohesive well-coordinated management structure." B/U (FL2, II-2)	164. Management responsibility for control and direction of many closely related (company) functions is unduly fragmented or diffused for example, formal organizational linkages between the Public Affairs and Government Affairs Divisions are lacking; the former reports to the President, while the latter reports to the Executive Vice President. A/U (CO1, IV-12)
54. "The Corporate Planning department is organized in a logical and efficient manner. The grouping of rates, system planning and project scheduling is unique among major electric utilities. This arrangement facilitates communication and enhances overall financial management." EA/S (FL2, III-3)	165. "The responsibilities of each department are not expressed in a formal written statement." A/U (PA6, II-14)
	166. "Position responsibilities are indicated by written position descriptions, are not completely accurate in describing position responsibilities." A/U (PA6, II-14)
	167. "Titles of managers reporting to the General Manager are inappropriate." A/U (AK1, IV-2)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

55. "The Company's organizational charts are up to date." A/U (PA6, II-16)
56. "The formal organization chart does not represent informal relationships... Although there exists many informal relationships with the organizational structure the organization chart does not promote conflict of effort." A/U (PA6, II-13)
57. "Task forces and committees are used in an effective manner to study problems and emerging issues." (See also "Scope of functions" above) A/U (FL2, II-2)
58. "The Company's committee structure [is] an effective organization strategy" A/U (PW, 12)
59. "Committees [are] effectively used...they permit functional insights into key business issues." A/U (Kearney, 10)
60. "Preference has generally been given to the task force approach, to avoid the creation of administrative vehicles which could outlive their usefulness." A/U (OH1, IV-2)
61. "Effective use has been made of committees and task forces within the Company." A/U (OH1, IV-2)
62. "The importance of maintaining financial integrity is well understood among [the Company's] senior management." B/U (CA1, 42)
63. "Modify the budgeting system such that... responsibility for budgeting is placed in the hands of responsible managers." A/U (M01, IV-23)
64. "Define organizational responsibility for budget analysis and reporting. Guidelines for variance reporting and follow-up activities should be established and communicated." (See also "Program Plan" below) A/U (M01, IV-23)

Negative Performance
Indicators

168. Unclear roles and responsibilities relative to required communications, internal and external to organizational units, and planning efforts. A/U (GA1, 6)
- 169A. "Accountability for major programs and functions is difficult to pinpoint within [the company's] present structure, which:
 - .Forces executives to become involved in the resolution of relatively routine matters that cannot be addressed within the scope of responsibility of their subordinates
 - .Encourage reliance on informal consensus for decision-making at lower organizational levels.
 - .Impedes the delegation of authority and development of managers accustomed to acting decisively under conditions of uncertainty and business risk
 - .Results in insufficiently intensive management direction of key activities, ranging from the Company planning activities (as earlier noted) to the troubled general services functions.
 - .Makes the development of cohesive teamwork, and a sense of common direction within (the company's) management group, difficult to develop or sustain." A/U (CO1, IV-14)
169. "The officers of the Corporation have many years of experience within the Company, with most having progressed from lower level positions. While this has provided a very high experience factor, it has also led to a structure characterized by overlap and duplication, with questionable mixtures of geographic responsibilities." A/U (PA4, II-1)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
65. "Members of top management must be involved in the business planning process to ensure the quality and technical feasibility of the selected business plan." A/U (PA3, IV-1)	170. "There is no written job description nor position outline for the position of President/Regional Manager. The job descriptions that do exist do not focus on the output requirements of the positions." A/U (PA5, 3-12)
66. "Requirements of business planning unit are unambiguous and well documented." A/U (GA1, 7)	171. "Currently, there are no written position descriptions for senior management positions." A/U (PA5, 3-6)
67. "An organization and management systems strategy built around the desired business plan exist[s]." A/U (PW, 12)	172. "Problems in titling appear to occur mostly with the position of 'director'. Most of the 'one-over-none' instances are directors who are specialized staff positions and who supervise no one." A/U (KY1, IV-7)
68. "[An organization and management systems strategy built around the desired business plan] is conceptually sound." A/U (PW, 12)	173. Within the Company's present structure, evidence exists that diffusion of organizational roles characterizes a number of staff support groups assigned exclusive responsibility for managing functions from an overall corporate perspective. A/U (NY3, III-26)
69. "Top down direction and guidance must be provided at the initiation of the annual budgeting cycle." B/U (PA4, V-9)	174. "Managerial spans of control may be inappropriate at several levels within the company." A/U (FL1, 34)
70. "The performance review process is conducted by the chairman and the president for companywide goals, and by division vice presidents for divisional goals." A/U (PA3, III-17)	175. "Eight separate functions and twelve different members of management report directly to the President/Regional Manager. This span of control is too broad for most effective operations. The Regional staff Engineer faces a similar situation." A/U (PA5, 3-12)
71. "Responsibilities [are] separated for (a) the establishment and promulgation of [accounting] procedures and (b) for monitoring adherence to procedures." A/U (Kearney, 13)	
72. "Load and energy forecasting activities are carried out in parallel by holding company". EA/FS (GA2, IV-8)	
73. "The criteria used for system planning are appropriately established by management." A/U (GA2, IV-11)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>74. "The use of centralized groups to provide purchasing and data processing support to the operating companies has eliminated any possibility of triplication of these functions by [the parent company and its subsidiaries]." A/U (See also "Resource allocation" below) (PA2, III-4)</p> <p>75. "The centralization of key corporate services within Central Services and the operation of a single integrated power system benefits the ratepayers of all of the APS Operating Companies. A/U (PA2, III-4)</p> <p>76. "[Company] has achieved clear accountability over its environmental activities by consolidating them in a single department." A/U (NY2, III-16)</p> <p>77. "The reporting relationship between the President of (Company) and the Executive Vice President-Operations for Parent Company are clearly delineated and effective on a personal basis which sets the tone for reporting relationships between the two companies." A/U (PA5, 3-17)</p> <p>78. "Although both [Company] and [Holding Company] executives participate in establishing goals and objectives, the overall direction of the planning process is appropriately assigned to the President of [Company]." A/U (GA2, IV-6)</p> <p>79. "The division Of planning responsibilities between [Company] and [Holding Company] is appropriate." B/U (GA2, IV-11)</p> <p>80. "Several important factors warrant regulatory reexamination of the holding company form of organization for [the Company]... and important distinction must be observed... (1) The exercise of guidance and oversight which, although it requires the assumption of some risk, can help to shape the direction of enterprises in whole</p> | <p>176. The span of control of the President, in particular, is unduly broad...all corporate vice presidents report to the President for certain aspects of their responsibilities, thus broadening his actual span of control to 12. A/U (CO1, IV-11-12)</p> <p>177. The span of control of the Vice President - Division Administration is...too broad; his span is currently 12. A/U (CO1, IV-12)</p> <p>178. "In time, the chairman may become overburdened by the existing structure.
.The chairman has nine immediate subordinates, including the Vice President and Assistant to the Chairman." A/U (CA1, III-19)</p> <p>179. "The President carries direct responsibility for too many activities"
.The President has nine immediate line subordinates and one staff assistant. A/U (CA1, III-18)</p> <p>180. Inappropriate managerial spans of control, in terms of breadth and depth. A/U (GA1, 2)

The President has eight vice Presidents plus an Assistant Vice President reporting directly to him, creating a span-of-control problem, especially critical without more formal performance goals. A/U (PA4, II-2)</p> <p>181. "The General Manager's span of control is excessive. Nine positions currently report to the General Manaer. This is excessive</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

- or in part subject to regulatory jurisdiction, and thus can compliment and be consistent with developments in a dynamic industry. (2) The imposition of controls and the establishment of restrictions of an effort to avoid any regulatory risk which can impede the exercise of initiative and creativity in a changing environment. A/U (NY3, III-1))
81. "Should re-petition [the company] for authorization to adopt the holding company form of corporate organization (a suitable form of corporate organization for resolving difficulties on regulatory relationships in the new telecommunications environment)." T A/FS (NY3, III-17)
82. "[Parent company's] relationship with [Company] should be more formalized. While excessively detailed role definitions should be avoided, steps should be taken to delineate more explicitly respective parent/subsidiary responsibilities and authorities, especially as these regard engineering and construction activities."
•To further identify areas in which such delineation could be beneficial, the [parent company] President should establish a joint [company] task force and charge it with responsibility for exploring ways in which formalization of working relationships and decision-making thresholds could foster the most productive division of responsibilities between [Company] and its subsidiary." A/U (OH1, IV-9)
83. "The Executive Vice President-Operations approaches his responsibilities with informality, flexibility, and a high reliance on face-to-face contact. He communicates with his subordinates on a regular basis." A/U (PA5, 3-3)
- considering his regular interface with the Board of Directors and parties outside the Association." A/U (AK1, IV-2)
183. "One-over-one spans of control, in which a supervisor/manager has only one individual reporting to him, with the balance of the supervisor/manager's group reporting through that single subordinate, can cause confusion among subordinates as to the responsibilities and authorities of the two superiors." A/U (KY1, IV-6)
184. "The span of control of the Senior vice President charged with supervision of the field division and customer service operations appears to be overly broad." A/U (OH1, IV-4)
185. Centralized control (by holding company) is excessive, thus hampering operating company performance. A/U (GA1, 4)
186. Lack of formal structure (for holding company relationship). A/U (GA1, 4)
187. Unclear role definitions and responsibilities (for holding company relationship). A/U (GA1, 4)
188. Within the new industry environment, moreover, significant strategic disadvantage are inherent in [company's] present form of overall corporate organization and associated regulatory circumstances.
•Jurisdictional and nonjurisdictional activities are presently comingled among [company] and its current affiliates and subsidiaries, and virtually all financial transactions of significance - whether jurisdictional or not - must be reviewed

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
84. "In addition to his current duties [president] is active in the affairs of United States Independent Telephone Association (USITA) as its current Treasurer, a member of the Board of Directors since 1967 and chairman of the Separations and Settlements Committee since 1974." A/FS (PA5, 3-3)	by the PSC; this situation results in important impediments both to the efficient conduct of business affairs and the discharge of regulatory responsibilities. A/U (NY3, III-13)
85. "The Board, based on interviews and from the reading of minutes, appears to be well informed and participated in major policy decisions." A/U(PA4, II-1)	189. "Interface agreements defining the service relationship between central telephone company and parent corporation are not current and do not define CTS's service responsibilities adequately." A/FS (FL1, 48)
86. The Board meets quarterly with a somewhat standardized agenda that includes review and approval of Board reports covering: <ul style="list-style-type: none"> •Operating revenue deductions •Net income •Labor costs •Chemical and fuel costs •Mains, services, and meters •Customers' advances for construction •Complaints and/or inquiries" B/U (OA4, III2-3) 	190. [Company's] relationships with its...subsidiary could benefit from greater formalization... Ambiguities exist regarding the respective roles and responsibilities of [Company] and [subsidiary] executives at lower organizational levels, especially in the areas of engineering and construction." A/FS (OH1, IV-7)
87. "The Board is actively involved in all strategic decisions." A/U (FL2, II-5)	191. Need for more extensive communications between the two organizations (parent company and subsidiary) and more active participation of PSC in PSWC's planning process. A/FS (PA4, III-30)
88. "The Board fills a useful public relations role in the communities served and provides management with community perspective." B/U (PA5, 3-16)	192. Responsibility for the management of the company's financial activities is highly diffused: for example, organizational units concerned with [Company's] financial planning, budgeting, and accounting functions report to three separate officers. A/FS (CO1, IV-12)
89. "[Parent Company] communicates effectively with management and provides appropriate policy guidance." A/U A/FS (PA5, 3-6)	193. Inadequate participation of personnel to use a "top-down" - "bottom-up" process to synthesize a realistic (business) plan. A/FS (GA1, 7)
90. "[The] board of directors meets monthly. The companies in the general panel [nine utilities surveyed] met an average of 11.7 times in 1980, with a range of 9 to 15 meetings." A/U (PA3, III-8)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

91. "A special annual meeting to review the Company's strategic and operating plans. Some of the topics that could usefully be covered during the board's annual planning meeting are:
•The business and regulatory environment
•Demand forecasts
•System development plans
•Capital and operating budgets
•Financing requirements
•Organization and management development plans" A/U (PA3, III-11-12)
92. "Periodic meetings devoted to review of the Company's strategic and operating plans would greatly strengthen the board's role." A/U (PA3, III-8)
93. "The outside directors are active in the management process." A/U (PA6, II-17)
94. "The Board should begin to focus its attention on long-term and strategic issues as well as policy development. Specifically, the leadership must continue its efforts to see that the Board reexerts its proper influence and develop official Association positions on key issues. Further, the Board must recognize that it has neither the technical expertise nor the responsibility for operating the Association, and in this regard, should limit its activities to an exception basis while maintaining a broad focus." A/U (AK1, III-4)
95. "The Board's commitment to provide the membership with a greater role in the management of the Association is commendable." A/U (AK1, III-3)

Negative Performance
Indicators

194. The Company is also perceived to have been reluctant to review alternative solutions with - as opposed to presenting preferred solutions to - the PUC staff. A/U (III-14)
- 195A. "Possibilities exist for greater interdepartmental coordination on substation forecasts, load duration curve development, and specification of financial assumptions." A/U (PA3, IV-25)
195. "Responsibilities for the planning and development of Natural Energy Resources are not sufficiently defined and rationalized.
.The [Company's] structure fragments responsibility for determining both the the relative use of these resources and means of securing them." A/U (CA1, III-21-22)
196. Formal guidelines for the input of information [to the corporate model] from other functional areas of the company have not been established. (M01, IV-10)
197. "Structural arrangements dilute the officer guidance provided to human resources management." A/U (CA1, III-23)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

96. "Their Board of Directors increasingly effective public appearances on behalf of the Association are good." (AK1, III-2)
97. "The Board has played a commendably active role in planning for succession to top management." B/U (PA2, III-3)
98. "The Board appears to be well informed and participates in the resolution of major policy decisions." A/U (PA4, III-8)
99. "There has been a definite move to increase the number of outsiders on the Board over the last few years; however, there has been an effort over the longer period to maintain an "independent" Board even though the Parent as sole shareholder can control members named to the Board." (PA4, III-2)
100. "It can be concluded that an effort has been made to maintain a responsible, independent board of Directors that is not 'rubber stamping' management's actions." A/U (PA4, III-3)
101. "Actions to increase the independence of the Board (6 outsiders)." A/FS (PA4, III-4)
102. "The Board of Directors has taken an increasingly active role in corporate governance in recent years." A/U (OH1, IV-1)
103. "As the strategic choices and challenges facing the Company have grown more complex in recent years, the Board has become more active in reviewing corporate goals, management proposals, and the performance of [Company's] top management team; and this Board-level oversight has been encouraged and supported by [Parent Company's] top management." (OH1, IV-1)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

104. "Committee arrangement, coupled with the activities of the full board, provide an excellent means for manageable accomplishment of the work of the board as a whole
.The structure provided by the committees suitably subdivides the totality of Board work into manageable packages.
.There appear to be sound lines of informal communication between members of the Executive Committee and other non-employee directors that are used appropriately to prepare for full-Board deliberations.
.The respective roles of the Board and Executive Committee are generally in good balance." A/U (CA1, III-3)
105. "The structure of the Board, including its committees, is generally appropriate." B/U (AK1, III-3)
106. "The committee structure of the Board of Directors is an effective way to allow outside directors to participate in and influence the Company's management processes." A/U (NC1, V-1)
107. "The Executive Committee of the Board and the Senior Management Committee are sound mechanisms for formulating policy, building the internal management team, coordinating the activities of the functional groups, and making key policy operating decisions." A/U (NC1, V-2)
108. "The Board of Directors is active in the management process through four standing committees." A/U (PA5, 3-5)
109. "The Executive committee meets on the two months in each quarter when the Board does not meet and is authorized to act for the Board; however, major resolutions are taken to the Board." B/U (PA4, III-3)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

110. The board should establish a corporate planning and finance committee;...
"This Committee should consist of five members of the Board: the Chief Executive Officer and, eventually, the Senior vice President and Chief Financial Officer...together with three outside Directors and its responsibilities should encompass review, critique (where necessary), and approval of [Company's] strategic planning process and eventual strategic business plans. Assessment of and concurrence with the Company's financial goals and plans and financing activities." A/U (CO1, IV-5)
111. "The duty of the EEO committee is to review the Company's progress toward the attainment of the following corporate objective: equal opportunity in the application of Company policies relating to the employment, development, training, and promotion of personnel." A/FS (PA3, III-7)
112. "The pension committee [of the board] is charged with reviewing the Company's retirement plans and their administration." B/U (PA3, III-7)
113. "The compensation committee [of the Board] has traditionally reviewed the officers' salaries and has recommended changes in these salaries to the board of directors based on compensation and performance information supplied by the chairman." B/U (PA3, III-7)
114. "The audit committee [of the Board] meets at least four times each year. It oversees the activities of both the inside and the outside auditors and ensures compliance with the Company's code of ethics." B/U (PA3, III-7)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

115. "Present top-level organizational arrangements provide for logical placement of executive responsibilities and allow, in most cases, for suitable spans of control." A/U (OH1, IV-2)
116. "The top management organization of [Company] was carefully examined for span of control and adherence to normally accepted guidelines; no problems were currently noted in this area." (See also "Program and Project Control" below) A/U PA5, 3-4)
117. "The spans of management control of most Company executives are appropriately broad" A/U (CO1, IV-9)
118. "Spans of control and the number of levels in the top management organization [are] reasonable." A/U (Kearney, 10)
119. "Leanness, evidenced by reasonable spans of control." A/U (AZ1, II-1)
120. "Correct small or large span of control problems." A/U (GA1, 4)
121. "...an effective span of control for executive management positions should be within the range of three to eight subordinates reporting directly to one manager." A/U (PW, 10)
122. "The span of control of the President would be reduced to seven." A/U (CO1, IV-15)
123. "The Company has consciously sought to avoid the relatively narrow spans of control (for example, ratios of one or two subordinates per executive) found to exist in some utilities elsewhere. Thus this structure reduces the number of requisite [company] management layers, provides more direct lines of authority and communication, and holds down the administrative costs of the Company." A/U (CO1, IV-9)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

124. "Most managers and supervisors have between three and seven people reporting to them. This range is generally considered acceptable, and spans of control outside that range warrant closer examination."
A/U (KY1, IV-6)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

ORGANIZING

VI. Resource Capabilities

1. "... the company [has] the talent it needs to fulfill the planning function." A/U (PA1, 18)
2. "The most effective use of these [human resource management] systems will depend on the following specific elements:
 - Understanding the corporate values required to support [the company's] new strategy.
 - Defining the relationship between those values and the desired attributed of [the company's] management and craft personnel.
 - Designing human resource management systems that effectively recruit people having the new corporate values and reinforce those values through training and career-pathing.
 - Establishing organizational development processes that orient [the company] toward a competitive and entrepreneurial management style more consistent with the requirements of [the company's] future." A/U (CA1, 55)
3. "[Executive company policies and practices] effectively support the Company's requirement to attract, retain, and develop future management talent." A/U (PW, 12)
4. "Formal management development program for senior management. The total management development program should ... have several dimensions:
 - Selected job rotation through different functions, locations, and operations to gain a multi-disciplined perspective
56. "Staff resources at the officer level are limited when viewed against the backdrop of an increasingly complex and analytically demanding business environment." A/U (PA3, III-25)
57. "The efforts of the Company to control costs ... they appear to have led to resource support shortfalls in key analytical and operational areas, ranging from power plant preventive maintenance activities to the staff oversight functions." A/U (OH1, IV-7)
58. "Staff support for strategic planning is insufficient.
 - The assignment of only two strategic analysts to this function limits the ability of the Company to direct and manage effectively a strategic planning process and to examine strategic issues.
 - This level is minimal when compared to levels found useful and appropriate by other well-managed utilities of comparable size." A/U (C01, XII-8)
59. "Under-resourcing of some existing staff functions and the absence of others." A/U (OH1, IV-6)
60. "Many departments "run lean", and some of them were observed to be understaffed and overextended." A/U (PA3, III-23)
61. "Unlike most utilities, [company] has not significantly expanded its staffing levels in recent years." A/U (KY1, IV-8)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

- High-level "learning positions" such as assistant to the chairman or president to acquire an organizational overview
 - Continuing classroom education to learn of new ideas or become reacquainted with basic technical and managerial principles
 - Sabbatical leaves for extended periods to undertake unique occupational or developmental experiences in selected cases." A/U (PA3, III-32)
5. "Programs [are] available for supervisory training." A/U (Kearney, 10)
 6. "Current programs designed to develop the leadership potential of many of the younger members of FPC's management team should provide effective in maintaining an excellent pool of talent." A/U (FL2, II-5)
 7. "...the functions where key personnel will soon retire and ... the availability of adequate replacements." A/U (PA1, 11)
 8. "Three persons appear to be particularly critical to the [Company] decision-making process: the President, the Vice-President-Treasurer, and the Regional Staff Engineer. This situation could present a problem with respect to management succession, but inasmuch as [company] can draw on the [holding company] system for future managers, succession does not appear to be a problem at this time." A/U (PA5, 3-10)
 9. "A management succession program currently exists in the organization and is very effective in cross training techniques." A/U (PA6, II-15)

Negative Performance
Indicators

62. "The Association is understaffed in many areas, thus resulting in numerous critical activities not being performed effectively." A/U (AK1, IV-3)
63. "The Company's financial stringency appears to be reflected in the under-resourcing of many aspects of company management and operations ... [company's] unsatisfactory earnings performance, and consequent pressures to hold down near-term costs, may have contributed to a real -albeit relatively invisible -degradation of the Company's service capabilities ... maintenance activities have been curtailed in many areas of the Company, in an effort to maintain minimal degrees of current profitability ... (There are) instances of significant maintenance backlogs at (company's) generating stations and unusually protracted maintenance cycles in certain transmission and distribution (T&D) activities ... Similarly, inter-utility comparative data indicate that (company's) maintenance expenditures: (1) are remarkably low in comparison to the other utilities surveyed and (2) have barely kept pace with inflationary trends." A/FS (CO1, III-6)
64. "Budgetary restraints, restrictive salary policies, and similar factors appear to be eroding the Company's base of suitably trained and experienced personnel." A/U (III-7)
65. "The engineering and construction branch ... appears to be somewhat large and unwieldy." A/U (FL2, II-3)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>10. "Management succession [is] adequately provided for ... Top management succession candidates [are] identified." A/U (Kearney, 10)</p> <p>11. "... [A] ll current officers, vice-presidents and general managers were promoted to their present positions from jobs of lesser responsibilities within the company ... All 61 employees showed an orderly progression to the position currently held." A/U (PW, 10)</p> <p>12. "Although we found no formally defined succession plan, we believe that several candidates having high potential are currently in each branch of the organization." A/U (FL2, II-5)</p> <p>13. "Promotional opportunities through-out the system enable parent company to retain a valuable pool of executive management talent." A/U (FL1, 39)</p> <p>14. "Emphasis on individual performance as a major criterion for promotion, compensation, and retention of executives." A/U (AZ1, II-1)</p> <p>15. "The company has made frequent and generally effective use of outside consultants." A/U (OH1, IV-3)</p> <p>16. "The decision to change the number of outside directors from 6 to 9 provides greater objectivity and better balance." A/U (FL2, II-4)</p> <p>17. "The size and numerical composition of the company's board of directors is well suited to the governance needs of the enterprise ... small enough to be workable and cohesive, yet large enough to provide for the presence of diverse backgrounds and expertise." A/U (CO1, IV-3)</p> | <p>66. "Most of the management group have had very little training or prior experience in management. The executives, in general, have engineering or technical backgrounds rather than management backgrounds other than that gained at [company]." A/U (PA4, III-4)</p> <p>67. "With the increasing rate of change in the telephone industry, a more formalized approach to organizational development and motivation will be required to maintain and improve effectiveness and job satisfaction, and thus to provide for the company's overall management needs." A/U (PA5, 3-11)</p> <p>68. "The Company's external directors do not include persons with extensive industry-specific technical background. None of the outside directors has direct experience in large-scale utility engineering and construction programs or in nuclear operations, however." A/U (NC1, V-3)</p> <p>69. "Only one of the outside directors of [company] has a technological background. As the board becomes increasingly more involved with technically complex issues, such as nuclear power, alternative energy sources, and computerization, an outside director with experienced in the management of technology would be a valuable resource." A/U (PA3, III-12)</p> <p>70. "In view of the Board's role, its composition is not sufficiently representative of the special interest groups within the communities services." A/U (PA5, 3-16)</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

18. "Board has consisted of 3 internal and 7 or 8 external members during the last five years, the [nine visiting] panel average is 3.2 internal directors and 9.3 outsiders." A/U (PA3, III-4)
19. "Board has consisted of either 10 or 11 members during the last five years. In comparison, the boards of the companies that make up the general panel range in size from 9 to 15 members, averaging 12.5 members." A/U (PA3, III-4)
20. "The size of the [Company], Board of Directors and the balance between officer and nonofficer representation are appropriate. The 10-member Board is large enough to accommodate diversity in backgrounds and skills, and yet small enough to permit individual director participation in Board meetings. Limiting officer representation to one member promotes the concept of a Board that is independent of management." A/U (PA2, III-3)
21. "The Composition and Size of [Company's] Board of Directors are Appropriate for a Utility of its size.
•A nine-member board is adequate." A/U (KY1, IV-4)
22. "[The company's] Board of Directors is of the highest quality and executes its governance responsibilities well. The Board represents the many constituencies served by [the company] and it brings exceptional director-level experience to the governance process of the company." A/U (CA1, 51)

Negative Performance
Indicators

71. "The board may lack sufficient technological expertise among its outside directors." A/U (CA1, III-8)
72. "The Board does not include any individuals who have major current corporate responsibilities in companies the size of [company] or larger." A/U (PA5, 3-16)
73. "The management committee may lack sufficient staff support." A/U (CA1, III-21)
74. "The department is not staffed to evaluate properly the implementation process of an econometric model." A/U (FL2, III-7)
75. "We agree with the Company's decision to formally establish a system planning department.... The historical information and analytical tools available to him, however, fall short of current and future needs." A/U (MO1, IV-19)
76. "The development of a formal [electric] system planning function has established a need for more centralized and accessible record sources." A/U (MO1, IV-20)
77. "Insufficient analytical support is provided to staff units that oversee certain field functions." A/U (OH1, IV-4)
78. "[Association] is dependent upon outside consulting engineers for planning, but [Association] lacks any formal internal reviews and integration." A/U (AK1, V-2)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
23. "The Board is composed of outstanding civic, commercial and industrial leaders." A/U (FL2, II-5)	79. "Inadequate or inefficient use of externally available data." A/U (GA1, 4)
24. "The criteria for selection of the Board of Directors fosters a diverse yet knowledgeable group of individuals for the maintenance of Company policy." A/U (PA6, II-16)	80. "Inadequate hardware or software support [for system planning]. A/U (GA1, 5)
25. "Board has a reasonable mix of internal and external directors." A/U (PA3, III-3)	81. "Lack of accurate and updated [system] planning information." A/U (GA1, 5)
26. "External directors bring a diversity of backgrounds and experience to the operations of the board. Expertise in industry, law, education, social service, and banking resides in the outside directors. Since these individuals are drawn largely from the local business community, they are knowledgeable about the Company's service area." A/U (PA3, III-4)	82. "System-wide services and systems provided by [holding company] are too general to adequately meet individual Company requirements." A/U (GA1, 4)
27. "(The Board) contains members with diverse backgrounds who are concerned about and interested in the well-being of the Company." A/U (PA3, III-2)	
28. "The exercise of the Board's responsibility has been enhanced by the recruitment to its membership of persons with diverse backgrounds and in, in particular, individuals with top-level executive experience in other industries characterized by strategic uncertainties and growing degrees of business risk. •Thus, the Board has increasingly been in a position to provide knowledgeable counsel to top management as the Company's environment has changed." A/U (OH1, IV-2)	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

29. "While the selection process for the new Board members is not formalized, certain recent additions show sensitivity to the appropriateness of geographic and functional diversification." A/U (PA5, 3-5)
30. "Relevant skill and experience requirements - especially those pertaining to the application of strategic and corporate planning methodologies and analysis of complex financial planning and financing issues -should be given appropriate consideration in the selection criteria [the Company] uses in nominating future candidates for Director." A/U (CO1, IV-6)
31. "Actions to ... strengthen [the Board] through a mixture of personnel with specialist's background." A/FS (PA4, III-4)
32. "High proportion of outside directors with long tenure on the board and diverse backgrounds is an asset." A/FS (PA5, 3-6)
33. "Human resource requirements [are] regularly appraised from the viewpoints of both the company and the employee." A/U (Kearney, 6)
34. "[Company] possesses a strong and dynamic management team that is well directed and committed to improvement." A/U (GA3, III-3)
35. "Overall, [company's] approach to strategy development appears to be appropriate, although it is premature to attempt to measure concrete results. The organization, mix of skills, and degree of top management involvement and attitude appear to be adequate for effective strategy development." A/U (GA2, IV-5)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

36. "Managers involved in the planning process have high levels of both comprehension and commitment to the planning concept at [company]." A/U (GA2, IV-6)
37. "Staffing levels appear reasonable and sufficient to accommodate current workloads." A/U (FL2, III-5)
38. "In general, the academic education of the executive officers tends to be in the engineering or technical fields, rather than in business administration. On the other hand, [Chairman and Chief Executive Officer] has an advanced degree from the Wharton Graduate Division, as well as diversified experience." A/U (PA4, III-4-5)
39. "[The company's] success in the future will depend, in large part, on the ability of the company to recruit, train, and reward its personnel in ways that will encourage and reinforce changes in organizational behavior." A/U (CA1, 54)
40. "Formal appraisals [are] used and ... management development plans [are] available." A/U (Kearney, 10)
41. "The education, experience and technical training listed on each employee's record appears to provide the capability for competent performance of his job." A/U (PW, 10)
42. "Willingness to recruit from outside the Company and outside the utility industry, when appropriate." A/U (AZ1, II-1)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

43. "Given the dimensions of proposed growth in the Company's executive complement, [the company] should consider external as well as internal candidates when filling ... new officer-level positions." A/U (C01, IV-17)
44. "Most of the members of the Board of Directors are very knowledgeable with respect to the telephone business. Many of them have important community relationships and business orientation. Many of the outside Board members have or have had business affiliations with organizations considerably smaller than the current scale of [Company]." A/FS (PA5, 3-5)
45. "The Board appears to be well informed and participates in the resolution major policy decisions." A/U (PA4, III-8)
46. "The standing committees [of the Board] are adequately staffed and directed to fulfill their charters." A/U (PA3, III-7)
47. "The minutes of meetings of the Board of Directors also indicate full discussion of special items which may be introduced by the Treasurer's Report, the President's report, or the Chairman. The minutes indicated special reports to the Board such as the Company's Corporate Strategy for 1978. Capital and Operating budgets are also submitted to the Board for approval." A/U (PA4, III-3)
48. "Directors generally appear to be satisfied with ... arrangements and diligent in their attention to Board affairs." A/U (CA1, III-3)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

49. "The methods utilized for selection of the Board members are designed to avoid possible conflicts of interest." A/U (PA6, II-16)
50. "[The company's] outside directors are paid a monthly retainer of \$600, \$300 per board meeting, and \$250 per committee meetings attended. These amounts are similar to those of the general panel (9 utility companies) which averaged \$482 for the monthly retainer and \$272 for the meeting fee (the range was \$300 to \$750 and \$50 and \$500, respectively.)" A/U (PA3, III-4)
51. "The advisory director concept is an excellent means of preparation for full Board of director responsibilities." A/U (CA1, III-3)
52. "Organization provides for the efficient collection of data used in developing [business] plan." A/U (GA1, 7)
53. "The Company should initiate a major program to redefine their financial and accounting systems to more adequately respond to the information needs of management." A/U (PA4, V-7)
54. "The company should acquire a Corporate macro computer model to support the planning process." A/U (KY1, V-16)
55. "Appropriate controls exist to ensure the integrity of the output of the corporate model. Formal scenario runs are made at SCSI's Data Center at the Company request. The data files and program revisions are then maintained by SCSI. This ensures that when and if a scenario has to be reconstructed, rerun or used for other purposes, it will be available." A/U (GA2, IV-8)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

VII. Resource Allocation

1. "Resource allocation process to support the new strategy." A/U (CA1, 66)
 2. "... a program exist(s) to assure the availability of the resources required to fulfill the long range plan." A/FS (PA1, 19)
 3. "The Company functions with an unusually lean executive organizational structure." A/U (CO1, IV-9)
 4. "Groupings maximize economies." A/U (GA1, 4)
 5. "... managerial compensation is consistent with that of similar utilities." A/U (PA1, 11)
 6. "The compensation committee [of the Board of Directors] has exercised noteworthy initiative
 - Working with management, the Committee has spearheaded actions in recent years to ensure reasonable competitiveness of [company's] salary programs." A/U (CA1, III-6)
 7. "Executive compensation policies and practices [are] sound." A/U (PW, 12)
 8. "Executive Compensation is evaluated by the Hay & Associates system used for all exempt positions on the basis of these evaluations and survey data for similar organizations provided by Hay. We found only one case where the officer position was compensated at a higher level than was justified by the survey and evaluation data." A/U (FL2, II-6)
16. "[Company] has not established internal organizations in order to replace outside service firms or to increase internal capabilities for certain specialized functions." A/U (KY1, IV-9)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

9. "Executive perquisites are reasonable. The perquisite and benefits provided the executive staff of [company] are consistent with those provided by similar sized electric utilities." A/U (FL2, II-6)
10. "The Executive Compensation Program is well managed. Executive Compensation and Perquisites often offer potential for abuses through provision of more favorable treatment than is provided to other employees. We say no indication of such abuse at [company]." A/U (FL2, II-6)
11. "The use of centralized groups to provide purchasing and data processing support to the operating companies has eliminated any possibility of triplucation of these functions by WPP, MP, and PE." (See also "Roles and responsibilities" above) A/U (PA2, III-4)
12. "Analytical and data processing resources should be made available to the system planning and engineering functions. Specific programming and technical needs should be defined with the objective of upgrading current economic and reliability analysis criteria." A/U (MO1, IV-20)
13. "The proportion of inside and outside Directors likewise appears to be appropriate and permits a suitable balance at the Board level between the availability of technical knowledge of [company's] industry and the operations of the Company, and the broader perspective and degrees of objectivity and independent judgments which can be contributed by members not directly associated with day-to-day management." A/U (CO1, IV-4)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

14. "The amount and type of administrative support (i.e., secretarial, legal, etc.) provided to the Board is generally appropriate." A/U (AK1, III-3)
15. "Executive staff resources to meet the following needs:
- Assist senior management in assessing the business environment, resolving issues, analyzing alternatives, and consolidating plans.
 - Help management by providing closer scrutiny of operational planning, budgeting and performance measurement in all functions of the company.
 - Supply staff support in directing or participating in task forces and in monitoring special programs that might affect all Company operations."
 - Through exposure to a broad range of top management issues, provide developmental opportunity to selected strong performers in middle management.
 - Provide an initial position for individual who might enter the Company at a high level from the outside." A/U (PA3, III-24)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

VIII. Program Plan

1. "Annual Development of the planning goals and guidelines
 - The process creates a framework for executives to reassess periodically [the company's] mission and objectives
 - Executives are given an opportunity to evaluate some of the important issues facing the company
 - Finally, a precedent for a repetitive cycle of strategic planning activities is established. A/U (C01, XII-7)
2. "Provide tighter linkages between objectives and goals at different levels in the organization. Senior management should link annual goals more explicitly to corporate objectives and should improve the integration of companywide goals with divisional and departmental goals." A/U (PA3, III-18)
3. "Individual functional plans [have] been established in writing and in line with corporate plans"
 - Staff departments (e.g., finance, personnel, etc.)
 - Operating departments (power plants, gas operations, T&D departments)" A/U (Kearney, 9)
4. "Use of the six-year planning [time frame] throughout the Company to program and drive activities." (See also "Implementation" below) A/U (CA1, 28)
5. "Effective direction of a business enterprise of (the company's) scale is heavily dependent upon the availability and use of structured decision-making approaches and management systems.
 - These approaches and systems
47. "While the corporate model has been in existence for nearly three years, formal procedures regarding its utilization have yet to be established." A/U (M01, IV-10)
48. "The short-term nature of the goal-setting process does not adequately support longer term planning. Although some goals have time horizons greater than one year, the longer term goals and the milestones for making progress toward them over the coming year are not well defined." A/U (PA3, III-16)
49. "Corporate objectives are not explicitly reflected in annual goals for the overall company and in most down-the-line organizational units." A/U (PA3, III-16)
50. " ... departmental goals are essentially based upon each department's perception of what they must accomplish for the upcoming year." A/U (KY1, V-8)
51. "Short-term planning, or more specifically the annual budgeting cycle, is based on the recognition that the operating environment of company demands 24-hours per day, seven days per week service and operations. Within this environment most operating costs are "fixed" with revenue projections and financial goals (ROI) providing the expense limitation for the annual cycle. This methodology or modifications of it do not provide the catalyst for improving cost effectiveness. The Company has recognized the weaknesses of this form of planning and is currently implementing Zero Base Budgeting in three pilot areas to test its effectiveness." A/U (PA4, II-2)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
include, for example, methodologies for establishing basic business plans and priorities, together with essential capital and operating budgetary process and similar resource allocation and utilization controls." A/U (CO1, IV-19)	52. "A number of key [Company] management processes are highly informal." A/U (NY3, III-27)
6. "The development of an Operations Control Program to improve management direction of key field activities performed by Division Administration." A/U (CO1, IV-20)	53. "Decision-making approaches are likewise too informal in many instances ... existing processes present the appearance of heavy reliance on intuitive decision-making and provide relatively minimal documentation of the rationale underlying corporate policies and decisions." A/U (CO1, IV-21)
7. "The Company is developing a broad range of useful management systems." A/U (OH1, IV-2)	54. "Lack of formal ... procedures [for holding company relationship]." A/U (GA1, 4)
8. "The Company is not strong in terms of documented policy and practice in the management areas. Much of the practice is established by precedent and followed by department heads or supervisors ... We do not believe that the overall question of documented policy or practice creates a serious current problems in the administration and operation of the Company." A/U (PA4, III-8-9)	55. "Certain [company] practices and procedures appear to restrict productive communication with the Commission, thereby further limiting the PUC's ability to comprehend fully the Company's needs, programs, and plans." A/U (III-14)
9. "Information systems should strengthen its project management systems. <ul style="list-style-type: none"> • The annual budgeting system and accompanying expense reporting systems should be consistent and based on the systems being developed and maintained. • While conforming to the annual budgeting format, the expense reporting system should: <ul style="list-style-type: none"> • Report all costs incurred for developing and maintaining a system on a monthly basis. • Identify expenditures made for external consulting services and charge them to the systems. Projects for which they were incurred.	56. "Standard operating procedures at the Division level are not adequately documented." A/U (FL1, 44)
	57. "The Company has neither formal policy nor documented standards relative to the quality of its finished water." A/U (PA4, V-18)
	58. "Operating budgets are not set on a monthly nor quarterly basis." A/U (PA4, III-10)
	59. "Generation planning is not adequate. [Company] has simply added combustion turbines whenever needed -- without an adequate cost/benefit analysis of conventional steam plants on a fuels-mix study for coal utilization." A/FS (AK1, V-3)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p style="text-align: center;">• Show variances between the project; budgeted and actual costs incurred." A/U (OH1, IX-18-19)</p> <p>10. "Develop formal policies and procedures." A/U (GAI, 4)</p> <p>11. "The Company [has] corporate policy and procedure manuals." (See also "Plan and forecasts" above). A/U (Kearney, 6)</p> <p>12. "Corporate policies and procedure manuals are ... regularly updated." (See also "Plan and forecasts" above) A/U (Kearney, 6)</p> <p>13. "There is available an operations manual which details mandatory policy and suggested policy as dictated by UTSI." A/U (PA6, II-17)</p> <p>14. "In recent years, ... Company has introduced and has made increasingly effective use of the management-by-objectives (MBO) concept." A/U (OH1, IV-2)</p> <p>15. "(Management by objectives system has been) relied upon by developing a suitably concise series of essential corporate goals and objectives, which are reviewed and revised annually." A/U (OH1, IV-3)</p> <p>16. "Systems and methodology for management by objectives are in place and well utilized in several departments." A/U (FL1, 37)</p> <p>17. "[The Company] employs a formal goal-setting and review process that has helped management focus on short-term planning priorities." A/U (PA3, III-17)</p> | <p>60. "Areas such as Power Production, Transmission and Distribution, and Customer Service lack useful performance indicators." A/U (KY1, V-9)</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

18. "Application of the management by objectives concept has been extended down to the departmental level, and in many cases below that." A/U (OH1, IV-3)
19. "Incorporate long-term goals into the goal-setting process to provide guidance throughout the Company over a longer planning horizon." A/U (PA3, III-18)
20. "Corporate goals [are] effectively translated into functional objectives." A/U (PW, 12)
21. "System plans include operating improvement plans ... they [are] tied into the achievement of overall corporate objectives." A/U (Kearney, 9)
22. "Establish goals against which performance can be objectively measured. Management should ensure that the annual goals-setting process produces clearly defined and preferably quantitative goals that guide planning activities and allow for objective measures of end-product and interim performance." A/U (PA3, III-18)
23. "Has systems in place for measuring departmental performance." A/U (PA3, III-21)
24. "Within each division, [the company] uses an interactive goal-setting process to ensure that goals reflect consistent priorities." A/U (PA3, III-16)
25. "The creation of an Integrated Management Control System (IMCS) to strengthen the usefulness of [the company's] accounting systems." A/U (CO1, IV-19)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

26. "There [is] a well established budget program for:
(a) Expense budgets
(b) Capital budgets
(c) Special projects." A/U
(Kearney 14)
27. "The budget review process [is] adequate and timely." A/U
(Kearney 14)
28. "Zero base budgeting [is] used."
A/U (Kearney, 14)
29. "The Company is establishing a zero base budgeting program." A/U (PA4, III-10)
30. "Budget submission documentation requirements should be standardized, with justification requirements [for budgeted expenditures] also prescribed." A/U (PA4, V-10)
31. "Budgets should be prepared on a periodic basis." A/U (PA4, V-10)
32. "Define organizational responsibility for budget analysis and reporting. Guidelines for variance reporting and follow-up activities should be established and communicated." (See also "Roles and responsibilities" above) A/U (M01, IV-23)
33. "Modify the budgeting system such that cost centers and cost elements are formally defined." A/U (M01, IV-23)
34. "The Company is establishing a zero base budgeting program as well as revising salary administration practices with outside assistance."
A/U (PA4, III-10)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

35. "Guidelines [are] issued prior to budget preparation ... They [are] adequate and timely." A/U (Kearney, 14)
36. "Existing [accounting] policies [are] documented and communicated." A/U (Kearney, 13)
37. "[Accounting] systems and procedures, both manual and automated, adequately support user and departmental needs." A/U (Kearney, 13)
38. "There [is] an effective responsibility accounting system." A/U (Kearney, 13)
39. "Short-term planning takes place within the continuing or on-going plan and reasonably reliable revenue projections to "back" into expense limitations of which a sizeable portion are fixed." A/U (PA4, III-7)
40. "The company should develop a more formal and technically sophisticated generation planning process ... a good generation plan should be based upon a well-developed set of reliability factor measures and standards, including:
- Minimum required and optimum reserve margins
 - Determination of the transfer capabilities of the Company's power grid
 - An evaluation of the amount of power that can be imported/exported from the neighboring utilities.
- Also, to support generation planning, a detailed analysis of the demand and supply of energy by neighboring utilities and municipalities should also be developed. The generation planning

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

process should focus on identifying the least cost service strategy consistent with the minimization of risk, maintenance of reliability of service and maintenance of flexibility." A/U (KY1, V-18)

41. "[Company] is in the process of upgrading its generation planning capability
- Historically, generation planning at [Company] has been a reactive process that focuses on changes to the long-range demand forecast.
 - The company is in the process of investigating four different computer models for use in this area." A/U (KY1, V-14)
42. "[Associate's] system planning is appropriately based upon trigger point milestones of achieved load, rather than upon rigid timetables." A/U (AK1, V-3)
43. "We recommend strongly that the Company develop specific criteria for evaluation of capital project proposal. Such criteria should include, but not necessarily be limited to, the following:
- Conformance to new regulatory requirements
 - Cost-benefit analysis, including payback period and/or rate of return
 - Ratepayer benefits in terms of quantified measure of improved service.
- After evaluation and ranking criteria are developed, the Company should then develop a standardized format for presentation of capital project requests to the capital budgeting committee. The format should define clearly. The nature and extent of supporting documentation required to justify a capital project." A/U (PA4, V-5)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

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44. "System plans [have] been translated into specific functional plans and requirements?"
• Generation
• Dispatch
• Transmission and distribution."
A/U (Kearney, 9)
45. "The objectives of the load management program are clearly stated and well-conceived." A/U (FL2, III-13)
46. "The Company has a written retirement plan." A/U (PA5, 3-4)

IX. Implementation

1. "[The plan] is being followed." A/U (PW, 12)
2. "Users of the six-year plan provide a discipline throughout Company to perform and drive activities." (See also "Program Plan" above) A/U (CA1, 28)
3. "[An organization and management systems strategy built around the desired business plan] is being effectively implemented." A/U (PW,12)
4. "The Operational planning department is a cohesive, well functioning group." A/U (FL1, 51)
5. "The general management of the Company, as exemplified by the President, is efficient, competent, dedicated, somewhat informal, but highly professional in style." A/U (PA5, 3-10)
6. "The formulation and execution of [the company's] regulatory strategy has been steadily improving. [Company] has been developing an increasing awareness of the actions required to establish a rational
8. "Management activity is too transaction-oriented, ... as a result, is often too ponderous." A/U (CA1, III-31)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

regulatory relationship with the PUC. Positive actions have included the following:

- Presentation of the concluding oral arguments in the general rate case by [the company] Chairman.
- The presentation of the Six-Year Financial Plan to the PUC staff by [the company's] Chief Financial Officer.
- The presentation of [the company's] Six-Year Operational Plans, including modernization, by the Company's senior operational planning officers." A/U (CA1, 48)

7. "The board is an active group which considers a wide range of issues."
A/U (PA3, III-2)

X. Program and Project Control

1. "Progress against goals and objectives [is] monitored." A/U (PW, 12)
2. "There [is] a process for measuring and evaluating performance relative to stated goals." A/U (PW, 12)
3. "Systems [are] in place to monitor progress against plans and budgets." A/U (Kearney, 9)
4. "[Company] appropriately uses key operating indices to measure operating efficiency." A/U (FL1, 37)
5. "There [is] an effective responsibility accounting system." A/U (Kearney, 14)
6. "Efforts have been extended to assess the effectiveness of, and upgrade where necessary, a wide range of corporate management processes, specifically including both the capital and the operating and maintenance budgeting system." A/U (OH1, IV-3)

31. "The Company does not have a formal program for comparing [Company's] overall operating performance with other firms in the industry." A/U (KY1, V-9)
32. "Management processes undercut the potential of decentralization."
 - The processes used for planning, budgeting and control are weak ...
 - The weaknesses lead to a management control focus on transactions rather than against previously agreed upon results and limits." A/U (CA, III-26)
33. "The Company has been run as a functional organization with few strategic integrating processes of its own. Some integration has been accomplished through Operational Systems, such as budgeting and control. These tend, however, to be tactical in terms of the planning horizon and content of the planning objectives and assumptions and reactive with respect to control." (See also "Plan and Forecasts" and

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
7. "In reviewing the Company's financial strategy, the linkages among financial performance ratios appear sound and the market effects of movement in those ratios are well-understood." A/U (CA1, 41)	"Roles and responsibilities" above) A/U (CA1, 32)
8. "[Company] should establish a formal program to monitor corporate performance indicators for all segments of its business and, as appropriate, compare results to similar utilities <ul style="list-style-type: none"> • In implementing this recommendation, the company should, at a minimum, monitor performance versus plan for: Heat rate, equivalent availability, Plant O&M expense per KWH, fuel expense per KWH, Transmission and distribution O&M expenses per KWH, Fuel inventory, number of customers per employee, return on equity, return on assets, interest coverage ratio." A/U (KY1, V-17)	34. "The concept of staff management oversight needs further development with [Company]. <ul style="list-style-type: none"> • Given the prevailing structural characteristics of utilities (which are generally organized on a functional basis) and those of OEC (which is also organized on a decentralized basis), requirements exist for assigning certain technical and managerial oversight responsibilities to key staff units. • In several instances within OEC, such staff oversight is not now provided in a sufficiently aggressive manner." A/U (OH1, IV-5)
9. "Corrective actions [are] taken when necessary [to ensure progress towards corporate goals and objectives]." (PW, 12)	35. "Managerially oriented oversight is either underdeveloped or not exercised; such instances range from cash management, through field transmission and distribution operations, to materials management." A/U (CO1, IV-22)
10. "The performance management program, well established and continually refined in the divisions, is a very sound concept <ul style="list-style-type: none"> • In essence, the program embodies management-by-objectives concepts and serves to integrate personal and organizational performance through repetitive cycles of documented planning and evaluation and follow-up discussion." A/U (CA1, III-17)	36. "One possible impact of inadequate staffing has been that [Company] has not developed an effective performance management process." A/U (KY1, IV-9)
11. "Reward systems to maximize the benefits of incentive compensation." A/U (CA1, 67)	37. "There is ... virtually no objective method of determining if one officer is performing better than another." A/U (PA4, III-11)
	38. "One of the major elements of a viable management process is the degree to which significant variances from plan or budget are analyzed to provide feedback. The nature of [Company's] operations does not

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>12. "The Division has also taken the management by objectives process a step further by tying achievement of established objectives to promotions and pay increases." A/U (FL1, 37)</p>	<p>lend itself to highly developed variable budgeting and analytical techniques; however, significant costs such as contractor costs are controllable and subject to variance evaluation. Other costs subject to variance analysis include transportation, maintenance, overtime, etc. During the course of our audit we saw very little evidence of formal variance analysis as an integral part of the management process." A/U (PA4, III-12)</p> <p>39. "No revised [budget] assumptions or detailed budget revisions are made throughout the year." A/U (PA4, III-10)</p> <p>40. "There is limited accountability for decisions and virtually no objective method of determining if one office is performing better than another." A/U (PA4, III-11)</p> <p>41. "Heightened top-level emphasis on continuing management effectiveness in day-to-day operations appears warranted by the results of this audit. • In a number of functional areas where opportunities for improvement have been detected - ranging from potential consolidation of field divisions through improved management of purchasing and stores activities to the need for more effective information systems planning - the nature and scope of existing difficulties or problems have previously been identified through internal or external analytical resources. • In several cases, however, definitive corrective actions have not yet been planned or undertaken." A/U (OH1, IV-6)</p>
<p>13. "Managerial compensation [is] consistent with industry compensation levels." A/U (Kearney, 10)</p>	
<p>14. "... the assignment of authority and responsibility provides prudent checks and balances." A/U (PA1, 11)</p>	
<p>15. "Senior managers at [Company] do not have written job descriptions; however, each member of top management has the authority required to execute his responsibilities and is held accountable for results." A/U (PA5, 3-4)</p>	
<p>16. "The top management organization of [Company] was carefully examined for span of control and adherence to normally accepted guidelines; no problems were currently noted in this area." (See also "Roles and responsibilities" above) A/U (PA5, 3-4)</p>	
<p>17. "Managers [are] held accountable for budget variances." A/U (Kearney, 14)</p>	
<p>18. "In comparison to possible alternatives, the methods used by APSC for allocating expenses among the Operating companies are reasonable." A/U (PA2, III-26)</p>	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
19. "Install an integrated financial discipline in all decision-making activities of the company." A/U (CA1, 42)	42. "Although state-wide budget dollars and other objectives are carefully tracked, performance against target plan objectives is not monitored by operational planning for departmental results." A/U (FL1, 57)
20. "The process of constraining expenditures in favor of objective long-term financial performance is steadily improving." A/U (CA1, 42)	43. "Services provided [by holding company] are not well controlled in terms of cost and direction." A/U (GA1, 4)
21. "Stringent cost containment efforts have been directed toward many aspects of company operations in recent years." A/U (OH1, IV-3)	44. "Corporate charges to company are allocated in a manner that makes it difficult for the division to budget and control their expenditures for services provided by parent company." A/U (FL1, 46)
22. "As significant changes become known, the relevant organization's budget should be modified (increased or decreased) to reflect that change for the remainder of the year." A/U (PA4, V-10)	45. "Corporate charges are not formally evaluated at the division level." A/U (FL1, 48)
23. "Significant variances (between actual and budgeted expenses) should require documented explanation of cause, corrective action (if any) taken, and impact (if any) on the remainder of the year ..." A/U (PA4, V-10)	46. "Imbalances and inconsistencies are evident in the ways certain transactions between jurisdictional and nonjurisdictional components of the company are currently processed • Different bases exist for intercompany charges, depending on the nature of the transaction. • Certain other intercompany transactions do not appear to reflect underlying economic considerations." A/U (NY3, III-37)
24. "Variances between actual and budgeted expense should be formally analyzed, with policy guidelines established to define "significant variances" (e.g., greater than 10% of budget and greater than \$500) at various levels of the organization." A/U (PA4, V-10)	47. "... the selection processes [for the Board of Directors] were in, compliance with the Company's stated policies and procedures." A/U (PW1, 10)
25. "Company continues to make appropriate efforts to ensure that its relationship with [parent company] is based upon sound business management principles ... SCSI provides a number of services to [Company], as well as the other members of the Holding	48. "Director attendance at Board meetings, both regular and special, is occasionally a problem." A/U (AK1, III-3)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>Company. All work performed by SCSI for [Company] is based upon a contract between the two entities that essentially requires SCSI to provide any service requested by the Company. Charges for all services provided by SCSI are to be billed at cost, though the cost of such service may be determined by one of several methods specified in the contract." A/U (GA2, III-9)</p>	<p>49. "In reviewing the composition of the Board of Directors, no conflict was apparent." A/U (PA5, 3-5)</p> <p>50. "There are no family relationships between any directors and/or officers of the Company." A/U (PA6, II-17)</p>
<p>26. "The degree of centralized control from parent company appears appropriate and seems to assure adequate direction, coordination, and control of subsidiary company activities." A/U (PA5, 3-3)</p>	
<p>27. "Effectiveness in monitoring forecasts versus actual performance." A/U (GA1, 4)</p>	
<p>28. "We observed no inconsistency in policies from branch-to-branch, nor misunderstanding as to the intent of the corporate policy." A/U (FL2, II-3)</p>	
<p>29. "FPC's decision to separate project monitoring from the Engineering and Construction department and locate the function within the financial branch is innovative. This provides for an independent, ongoing check on project progress and enables financial management to freely participate in the corporate management process." A/U (FL2, III-11)</p>	
<p>30. "Periodically assessing the overall performance of the Company from the perspective of its shareholders' interests, weighing [Company's] accomplishments against its corporate goals and objectives, and comparing these attainments against concrete indicators." A/U (CO1, IV-5)</p>	

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

XI. Reports and Reviews of Progress

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| <p>1. "Company enforces administrative discipline in both budgeting and control activities, and this results in quick reaction time to perceived or measured changes in forecasts." A/U (CA1, 31)</p> <p>2. "Budgeting and control processes are exceptional, both in complex logistics and in the ability of the company to focus quickly on variances and adjust accordingly." A/U (CA1, 30)</p> <p>3. "The Directors and the Chief Executive Officer of the Company receive adequate information to monitor and control the activities of the Company." A/U (PW, 11)</p> <p>4. "A summary of progress toward company-wide and divisional goals is prepared for senior management and [Company's] board of directors." A/U (PA3, III-17)</p> <p>5. "Review executive level reporting processes with the objective of providing management with summary reports that are useful and reliable." A/U (MO1, IV-23)</p> <p>6. "Information [is] factual, timely, organized, and generally useful in enabling senior management to effectively identify problems and make decisions." A/U (PW, 12)</p> <p>7. "Communication of senior management with subordinates is accomplished on a regular basis to review normal activities and the status of projects and programs." A/U (PA5, 3-4)</p> <p>8. "Verbal communications among officers, among division managers, and generally between the general office and the field are unusually</p> | <p>26. "Excessive paperwork." B/U (GA1, 7)</p> <p>27. "[Company] has budgets, but it does not have a budget or a budgetary control ethic. All of the Company's budget processes have serious deficiencies in concept, or in application, or both. Budget related reports have little managerial value." A/U (CA1, III-29)</p> <p>28. "Statistical forms of information are collected at various sections of the organization at or below the department level. Very little of this data is passed on in report form; much of it remains in the departments. Much of this data may be useful in establishing non-monetary units of measure and performance, carrying the concepts of control and cost containment below the Vice President levels." A/U (PA4, III-11)</p> <p>29. "Need for more extensive communications between the two organizations (parent company and subsidiary) and more active participation of [parent company] in [subsidiary's] planning process." A/U (PA4, III-30)</p> <p>30. "The monthly report [to the Board] does not contain operating budget data. Directors have had no benchmarks other than the data of the prior year to help them judge results." A/U (PA3, III-9)</p> <p>31. "Although the volume of this information is adequate, opportunities exist to improve the timeliness and quality of information provided to [Company's] directors." A/U (PA3, III-11)</p> |
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PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

sound for such a large, dispersed organization

•This accomplishment refers both to structured and individualized informal, or random, communications.

• A variety of structured arrangements are used, including:

•The Chief Executive Officer's Advisory Committee - which meets weekly and involves all officers as well as selected other managers

•The Management Committee-which also meets weekly

•Division Managers' Meeting-which occurs quarterly; involves the Vice President- Division Operations, all division managers, selected other vice presidents and GO department heads upon invitation and executive management as appropriate; and incorporates informal as well as structured discussions

•Functional management meetings-which occur periodically and bring together field managers with their functional GO counterparts at managerial and officer levels

•Organizational staff meetings, usually weekly or monthly and involving the officer or senior manager concerned together with his immediate staff." A/U (GA1, III-16)

9. "There appears to be a good flow of management communications (at the executive officer level)." A/U (PA4, III-9)
10. "Recent realignments in internal reporting relationships (which have increased direct communication between the President and Vice President - Employee Relations) have enhanced prospects for the development of more effective [Company] human resource management policies and processes." A/U (CO1, IV-10)

32. "Limited data are available indicating the impact of the individual load management programs on KW demand and KWH sales." E A/FS (FL2, III-15)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

11. "The Company has a formal process for evaluating performance with respect to goals. Progress toward goals is reviewed at midyear and at year-end."
A/U (PA3, III-17)
12. "The chairman should write a monthly report specifically for the directors, summarizing key developments, results, expectations, and issues." A/U (PA3, III-12)
13. "A consolidated package of financial and operating information should be prepared and circulated to the directors prior to the [annual] board meeting [to review the Company's strategic and operating plans]."
A/U (PA3, III-12)
14. "A key aspect of the functioning of any board is the quality of information it receives. Quality encompasses completeness, clarity, and most importantly, timeliness."
A/U (PA3, II-8)
15. "The board of directors receives an ample amount of routine financial and operating information during monthly meetings." A/U (PA3, III-11)
16. "Management [budget] reports [are] timely, useful and relevant?"
A/U (Kearney, 14)
17. "Audit interviews with Board members indicate that (Board members) are generally well informed regarding the most important issues confronting the Company and benefit from a timely flow of appropriately detailed information regarding [Company] operations." A/U (OH1, IV-2)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

18. "The minutes [of meetings of the Board of Directors] also indicate full discussion of special items which may be introduced by the Treasurer's report, the President's report, or the Chairman. The minutes indicated special reports to the Board such as the Company's Corporate Strategy for 1978. Capital and Operating budgets are also submitted to the Board for approval." A/U (PA4, III-3)
19. "Better communications among the holding company and all of the operating companies." A/U (GA1, 6)
20. "Accounting information [is] presented on a timely basis [and is] responsive to user needs." A/U (Kearney, 13)
21. "A monthly in-depth analysis [is] performed of actual results and variances against [budget] plan?" A/U (Kearney, 14)
22. "The Operational planning department should compile a monthly report summarizing all operations." A/U (FL1, 57)
23. "Attendance records of directors, at Board and committee meetings, are good." B/U (CA1, III-3)
24. "Specific attention should be given to developing a construction results reporting system that relates budget to actual performance in terms of physical progress, commitments and expenditures by category and major project. Operating reports should indicate variances from current as opposed to original estimates." A/U (MO1, IV-23)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance Indicators	Negative Performance Indicators
25. "Candor is evident in the results of many internal studies." A/U (CO1, IV-20)	
XII. <u>Output Evaluation</u>	
1. "The Company has been meeting the service criteria established by the Commission. Service criteria which are measured include: Dial Tone Delay; Call Completions; Answer Times; Adequacy of Directory Assistance; Adequacy of Intercept Service; Public Telephone Service; Customer Billing Accuracy; Equipment Utilization; Line Fill; Response to Incorrectly Dialed Calls; Telephone Directories; Company Personnel; Materials and Supplies; Availability of Service; 911 Service; Power; Repair Service; Subscriber Loops. In 1980, the Company met all of the above service standards." T A/FS (FL1, 39)	14. "Structure or process wheel is non-responsive to planning objectives." A/U (CA1, 2)
2. "The Chairman's state group particularly, has steadily improved in its management of a more strategic agenda that fully recognizes the issues of divestiture." T A/FS (CA1, 30)	15. "The objectives that have driven the corporation ... must be implemented more quickly." A/U (CA1, 29) "[The Company's] present and future challenges warrant better structured issue management approaches which ... result in more timely crystallization of Company positions which can be conveyed uniformly to audiences within and outside." B/U (CO1, IV-21)
3. "The company has accomplished substantial improvement in operational performance." A/U (CA1, 56)	16. "Changes that rational managers prefer to be evolutionary in nature must also be accelerated, and the resulting consequences of these rapid changes must be well-managed to minimize organizational turbulence." A/U (CA1, 29)
4. "As the sole shareholder, [the parent company] could exercise extensive control over the operations of [its subsidiary], including Board elections and management decisions. It is also possible that the Parent could pressure the Board/management group to generate profits to the detriment of the ratepayer. There is, however, reasonable evidence that this is not happening." B/U (PA4, II-8)	17. "The Company lags the Bell system in building strong marketing competence in markets where it now faces strong competition, such as in CPE (customer premises equipment) and long-haul transmission." T A/FS (CA1, 32)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

5. "[Company's] membership in the southern system has been advantageous over the long-run, though there is some evidence that membership in a holding company has its disadvantages." B/U (GA2, III-7)
6. "Financial needs [are] planned [effectively]?" A/C (Kearney, 12)
7. "The Company [is] adequately capitalized." A/FS (Kearney, 12)
8. "The long term debt load [is neither too heavy nor too light in relation] to total capitalization." A/U (Kearney, 12)
9. "Capacity to respond quickly to short-term issues is quite good." A/U (CA1, 31)
10. "Though the Company's reserve margins are high in an absolute sense, the overall impact of the expansion program has been to displace high cost energy with lower cost energy." E A/FS (GA3, IV-10)
11. "[Company's] forecast [for energy and demand] are generally consistent with the forecasts of an independent outside consultant retained by the [Commission]." E A/FS (KY1, V-13)
12. "... prior planning (forecasting) [has] been reliable." A/FS (PA1, 18)
13. "The methods of forecasting customer and kilowatt-hour sales have produced fairly accurate projections." E B/FS (FL2, III-6)

PERFORMANCE INDICATORS FOR
UTILITY EXECUTIVE MANAGEMENT PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

XIII. Impact Evaluation

1. "[Corporate goals and] objectives [are] reviewed as conditions change." A/U (PW, 12)
2. "Operating requirements [are] regularly reappraised in the light of changing financial and consumer needs." A/U (Kearney, 6)
3. "The ratings of the Company's debt securities [are] ... improving." A/U (Kearney, 12)
4. "The Company's record of return on investment [is] ... improving." A/U (Kearney, 12)
5. "The Company is beginning to integrate performance measurement and evaluation with achievement of goals and objectives." A/U (GA2, III-5)
6. "[Parent Company and its subsidiary] are well positioned to address future challenges. Past decisions made by [the Parent Company and its subsidiary] have led to many of the benefits enjoyed by system ratepayers." A/U (PA2, III-5)
7. "Measured in terms of complaints and inquiries by rate-payers, the Company is providing a very satisfactory level of service. This is verified by data provided by the Public Utility Commission which receives complaints, as well as from information collected by the Company's automated Customer Information System." A/U (PA4, II-2)
8. "The effectiveness of the Company's external communications efforts has also been strengthened in recent years." A/U (OH1, IV-4)
9. "[Company's] efforts to inform customers and service area residents about the dramatic changes taking place in the telecommunications industry, and of the Company's changed role in the industry, have not yet achieved desirable levels of public comprehension." T A/FS (NY3, III-6)
10. "[Company's] apparent operational efficiency has not been reflected in corporate profitability, and the Company's earnings performance [as measured by return on shareholders' equity and net income as a proportion of operating revenue] has been comparatively poor." A/U (CO1, III-4)
11. "While numerous options are currently available to forestall [a shortfall in electric supply capacity] [ranging from the construction of new power plants to long-term purchased power commitments], substantial investments would be required in any likely eventuality - investments that the Company is poorly positioned to undertake in view of its recent financial experience." E B/FS (CO1, II-7)
12. "[Company's] profitability has consistently fallen short of those rates of return authorized by the PUC in recent years." A/U (CO1, III-4)

B. Construction Project Management and Control

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Does Company have policies and procedures manuals for construction of new facilities? (I.1)	_____	_____	_____
<u>II. Plan and Forecasts</u>			
A. Is documentation available for preliminary project planning? (II.12)	_____	_____	_____
B. For preliminary project planning, is analysis <u>sufficiently</u> thorough and formalized? (II.13)	_____	_____	_____
C. Are environmental requirements included in preliminary project planning? (II.14)	_____	_____	_____
D. Is there an <u>integrated</u> project schedule showing both engineering design and construction activities? (II.15)	_____	_____	_____
E. Is the project divided into <u>manageable</u> segments? (II.2)	_____	_____	_____
F. Are projects planned by <u>modern</u> management techniques? (II.3, II.2)	_____	_____	_____
G. Are construction cost estimating procedures <u>effective</u> ? (II.2)	_____	_____	_____
H. Are estimating procedures <u>well</u> documented? (II.6)	_____	_____	_____
I. Are estimating standards, including escalation figures, <u>realistic</u> ? (II.7)	_____	_____	_____
J. Are contingencies planned for and based upon risk analysis? (II.5)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
K. Is the construction budget plan horizon of <u>sufficient length</u> to help management set priorities, explore alternatives, and plan financing and revenue requirements? (II.1)	_____	_____	_____
L. Are planning assumptions <u>realistic</u> ? (II.10)	_____	_____	_____
M. Are <u>potential</u> constraints (e.g., capital/labor) recognized? (II.11)	_____	_____	_____
N. Does the Company coordinate with municipalities and other utilities with regard to excavation, current and future planning, etc.? (II.4)	_____	_____	_____
O. Are operability/maintainability requirements factored into plant design? (II.8)	_____	_____	_____
P. Are reliability/availability data factored into equipment standards? (II.9)	_____	_____	_____
III. <u>Scope of Function</u>			
A. Does project planning receive <u>wide</u> organization focus? (III.1)	_____	_____	_____
IV. <u>Priorities</u>			
A. Is there a formalized set of operating priorities? (IV.1)	_____	_____	_____
B. Are a project's <u>key success</u> variables defined and attention paid to them? (IV.2)	_____	_____	_____
C. Is construction equipment treated as a significant cost center? (IV.3)	_____	_____	_____
V. <u>Roles and Responsibilities</u>			
A. Are levels of responsibility and authority <u>appropriate</u> ? (V.1)	_____	_____	_____
B. Are approval levels and positions for construction projects <u>appropriate</u> ? (V.2)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
C. Is there <u>appropriate</u> organizational <u>visibility</u> for <u>critical</u> functions? (V.3)	_____	_____	_____
D. Are responsibilities <u>clearly</u> defined? (V.4)	_____	_____	_____
E. Does any single individual have <u>too much</u> control? (V.10)	_____	_____	_____
F. Does the organizational structure support the <u>early</u> identification and resolution of project problems? (IV.5)	_____	_____	_____
G. Is there <u>appropriate</u> delegation of authority to make field decisions? (V.18)	_____	_____	_____
H. Is there an <u>appropriate</u> level of support from corporate service groups? (V.11)	_____	_____	_____
I. Does the engineering department <u>effectively</u> use administrative support services to reduce the clerical and administrative activities of engineers? (V.6)	_____	_____	_____
J. Are the responsibilities for the architect/engineer and contractors <u>completely</u> defined? (V.12)	_____	_____	_____
K. Is the allocation of engineering responsibility between the architect/engineer and the utility delineated? (V.14)	_____	_____	_____
L. Is design/construction liaison <u>effectively</u> defined across all disciplines? (V.15)	_____	_____	_____
M. Is responsibility for updating plans <u>specific</u> and <u>clear</u> ? (V.13)	_____	_____	_____
N. Is there a methodology to ensure <u>clear</u> understanding throughout the project group of each unit's responsibility? (V.9)	_____	_____	_____
O. Is the organizational structure <u>effective</u> in providing <u>adequate</u> coordination among diverse engineering and drafting specialties? (V.21)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
P. Does quality assurance have organizational independence? (V.16)	_____	_____	_____
Q. Does licensing have a <u>well</u> defined organization mission? (V.8)	_____	_____	_____
R. Is licensing <u>sufficiently</u> coordinated with plant construction schedules? V.17)	_____	_____	_____
S. Are roles and responsibilities between construction and start-up forces <u>clearly</u> defined? (V.20)	_____	_____	_____
T. Is there <u>sufficient</u> linkage of materials management with accounts payable? (V.19)	_____	_____	_____
U. Are there <u>several</u> levels of review of labor data? (V.7)	_____	_____	_____
VI. <u>Resource Capabilities</u>			
A. Are <u>sufficient</u> resources available to accomplish projects within the allotted time? (VI.1, VI.2)	_____	_____	_____
B. Is there <u>sufficient</u> technical talent to meet the engineering/construction workload? (VI.2, VI,11)	_____	_____	_____
C. Are there <u>few</u> changes in key personnel? (VI.12)	_____	_____	_____
D. Are personnel trained to check construction drawings? (VI.13)	_____	_____	_____
E. Is there a <u>well-developed, well-trained, and effective</u> contract management group? (VI.3, VI.14)	_____	_____	_____
F. Are personnel <u>skilled</u> in using project management systems? (VI.4)	_____	_____	_____
G. Are personnel <u>adequately</u> trained in quality assurance requirements? (VI.15)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
H. Are there <u>professional</u> warehouse and purchasing personnel for materials management? (VI.5)	_____	_____	_____
I. Is there a system to evaluate the performance of materials management personnel? (VI.6)	_____	_____	_____
J. Are there <u>skilled</u> and <u>experienced</u> start-up personnel? (VI.7)	_____	_____	_____
K. Are warehouse facilities <u>clean</u> and <u>well</u> managed? (VI.8)	_____	_____	_____
L. Does the company have a record of <u>quick</u> maintenance/repair turn-around for construction equipment? (VI.9)	_____	_____	_____
M. Are vendor performance records <u>acceptable</u> ? (VI.16)	_____	_____	_____
N. Are formal communications systems established for project management and control? (VI.17)	_____	_____	_____
VII. <u>Resource Allocation</u>			
A. Is the construction effort <u>properly organized</u> to permit <u>effective</u> handling of internal projects and management of contracted projects? (VII.1)	_____	_____	_____
B. Has an <u>experienced</u> , <u>qualified nucleus</u> of engineering talent been assigned to all <u>specialty</u> areas? (VII.7)	_____	_____	_____
C. Is there a <u>cost-effective matching</u> of engineering and drafting resources with workload? (VII.6)	_____	_____	_____
D. Is there a documented comparison of costs for performing engineering/construction work using outside contractors versus acquiring or using company resources to do the same work? (VII.2)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
E. Does Company have a program for the financial analysis of lease-purchase-rent decisions? (VII.3, VII.4, VII.5)	_____	_____	_____
VIII. <u>Program Plan</u>			
A. Is there an <u>integrated</u> project management approach? (VIII.1)	_____	_____	_____
B. Are <u>clear</u> and <u>precise</u> procedure manuals published and maintained? (VIII.2)	_____	_____	_____
C. Are engineering standards developed and maintained? (VIII.3)	_____	_____	_____
D. Are there formal productivity measures? (VIII.23)	_____	_____	_____
E. Are there formal work standards? (VIII.24)	_____	_____	_____
F. Is the planning process based on a work breakdown <u>useful</u> for cost control? (VIII.9)	_____	_____	_____
G. Does the account structure facilitate cost control? (VIII.9)	_____	_____	_____
H. Are contingencies factored into cost estimates? (VIII.32)	_____	_____	_____
I. Are foremen provided with mechanisms for monitoring productivity and updating estimates of the time required to complete various tasks? (VIII.18)	_____	_____	_____
J. Are engineering and construction schedules <u>well integrated</u> ? (VIII.4)	_____	_____	_____
K. Are alternative designs evaluated? (VIII.5)	_____	_____	_____
L. Are plant designs standardized <u>to the extent possible</u> ? (VIII.6)	_____	_____	_____
M. Are there <u>formal</u> systems for planning, scheduling and estimating engineering and drafting work? (VIII.26)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
N. Is there a <u>formal</u> process for revising engineering progress to reflect changes, rework or revision? (VIII.36)	_____	_____	_____
O. Is there a data base for making <u>realistic</u> estimates of work? (VIII.27)	_____	_____	_____
P. Is there a priority system to check construction drawings? (VIII.24, VIII.37)	_____	_____	_____
Q. Is there a <u>formal</u> process for selection of outside contractors, including <u>adequate</u> evaluation criteria? (VIII.7, VIII.28)	_____	_____	_____
R. Do contracts contain <u>adequately</u> defined terms and conditions? (VIII.29)	_____	_____	_____
S. Do contracts contain <u>sufficiently simple</u> change control procedures? (VIII.30)	_____	_____	_____
T. Is there <u>judicious</u> reliance on cost plus contracts? (VIII.31)	_____	_____	_____
U. Are there <u>clear, well-written</u> procedures for quality assurance? (VIII.7)	_____	_____	_____
V. Does the construction schedule <u>adequately</u> support quality assurance? (VIII.33)	_____	_____	_____
W. Is there a formal procedure for estimating project equipment needs? (VIII.11)	_____	_____	_____
X. Have objectives for use and standards of performance for equipment been developed? (VIII.12)	_____	_____	_____
Y. Have life cycle costs of equipment been considered? (VIII.34)	_____	_____	_____
Z. Is there an automated system for managing equipment? (VIII.13)	_____	_____	_____
AA. Are there <u>clear, effective</u> procedures for ensuring preventive maintenance is performed on construction equipment? (VIII.14)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
AB. Are there <u>systematic, orderly</u> procedures for continuous repair and servicing of equipment? (VIII.35)	_____	_____	_____
AC. Are there formal procedures for materials management? (VIII.15)	_____	_____	_____
AD. Is there an automated system of materials management? (VIII.16)	_____	_____	_____
AE. Are there controls to ensure <u>minimum</u> materials remaining after job close? (VIII.17)	_____	_____	_____
AF. Are <u>effective</u> controls in place for recording and processing labor data? (VIII.19)	_____	_____	_____
AG. Is there <u>early</u> identification of start-up activities? (VIII.20)	_____	_____	_____
AH. Is there a milestone schedule for start-up? (VIII.21)	_____	_____	_____
AI. Are construction and start-up schedules <u>integrated</u> ? (VIII.22)	_____	_____	_____
AJ. Are there procedures for tracking the costs of regulatory licensing actions? (VIII.38)	_____	_____	_____
IX. <u>Implementation</u>			
A. Are procedures manuals <u>used</u> ? (IX.1)	_____	_____	_____
B. Are <u>timely, responsive</u> decisions made in support of design engineering? (IX.4)	_____	_____	_____
C. Are schedules met in support of design engineering? (IX.5)	_____	_____	_____
D. Is there an on-site, design engineering <u>perspective</u> on field problems? (IX.6, IX.7)	_____	_____	_____
E. Is there a bottleneck created because of an attempt to check all construction drawings with <u>limited</u> manpower? (IX.8)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
F. Are delivery dates met for construction drawings? (IX.9)	_____	_____	_____
G. Are engineering change orders processed <u>quickly</u> and <u>efficiently</u> ? (IX.10)	_____	_____	_____
H. Are there <u>frequent</u> presentations to operating and construction groups to explain the role of quality assurance? (IX.2)	_____	_____	_____
I. Has the company undertaken programs to control air and water pollution? (IX.3)	_____	_____	_____
J. Is start-up <u>properly integrated</u> with plant operations? (IX.11)	_____	_____	_____
<u>X. Program and Project Control</u>			
A. Are engineering and construction standards recommended by <u>professional</u> engineering and utility associates practiced for design, work management, and quality control? (X.1)	_____	_____	_____
B. Does work conform to existing procedures? (X.13)	_____	_____	_____
C. Are performance indicators <u>meaningful</u> and <u>accurate</u> ? (X.19)	_____	_____	_____
D. Is the project controlled using PERT and critical path techniques? (X.2)	_____	_____	_____
E. Does management analyze construction cost overruns/underruns and document them for historical comparison? (X.4)	_____	_____	_____
F. Does management <u>adequately</u> identify causes of overruns? (X.11)	_____	_____	_____
G. Are schedules revised when <u>necessary</u> ? (X.3, X.10, X.12)	_____	_____	_____
H. Are specifications updated in a <u>timely</u> manner? (X.9)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
I. Does commercial evaluation of bids consider operating costs, time value of money, effect of taxes and other costs as well as initial costs? (X.8)	_____	_____	_____
J. Are procedures <u>adequate</u> for identifying, measuring and controlling engineering rework? (XI.6, XI.7)	_____	_____	_____
K. Is the procurement process <u>well</u> documented? (X.14)	_____	_____	_____
L. Are there <u>adequate</u> controls pertaining to materials acquisition and receiving? (X.5)	_____	_____	_____
M. Is equipment use <u>closely</u> monitored? (X.15)	_____	_____	_____
N. Is there <u>close</u> control over inventories? (X.16)	_____	_____	_____
O. Is there <u>sufficient</u> control over field purchasing? (X.18)	_____	_____	_____
P. Are materials <u>steadily</u> available to meet construction needs? (X.17)	_____	_____	_____
XI. <u>Reports and Reviews of Progress</u>			
A. Do management reports correspond to productivity measures? (XI.13)	_____	_____	_____
B. Is reporting <u>timely</u> and <u>accurate</u> ? (XI.4)	_____	_____	_____
C. Do management reports have <u>appropriate</u> detail? (XI.14)	_____	_____	_____
D. Is there a management control mechanism which <u>effectively</u> summarizes the current status of major projects with respect to original estimates and anticipated future progress? (XI.15)	_____	_____	_____
E. Is there formal feedback relative to plan, schedule and cost performance? (XI.17)	_____	_____	_____
F. Are systems to report productivity <u>efficient</u> and <u>sophisticated</u> ? (XI.12)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
G. Is the contractor bid and selection process documented? (XI.18)	_____	_____	_____
H. Are project schedules updated monthly? (XI.1)	_____	_____	_____
I. Are schedule status reports posted and monitored daily? (XI.3)	_____	_____	_____
J. Does inspection of construction include payment verification with inspector's report showing type and amount of work done by contractor each day, including equipment and materials used? (XI.2)	_____	_____	_____
K. Is there a status reporting system for construction drawings? (XI.10)	_____	_____	_____
L. Do construction drawings designated 100% complete have <u>all essential</u> information? (XI.11)	_____	_____	_____
M. Is there an automated records management system for quality assurance? (XI.5)	_____	_____	_____
N. Are quality assurance documents supplied on vendor equipment? (XI.6, XI.16)	_____	_____	_____
O. Are there <u>accurate, meaningful</u> management reports on <u>costs</u> and <u>use of construction equipment</u> ? (XI.7)	_____	_____	_____
P. Are there <u>informative, timely</u> reports on materials management? ((XI.8, XI.22)	_____	_____	_____
Q. Are there records comparing actual materials usage to estimated usage by job segment? (XI.19)	_____	_____	_____
R. Are statistics maintained on use of major equipment and cost per hour of use? (XI.9, XI.21)	_____	_____	_____
S. Are perpetual inventory records audited annually or cyclically to obtain physical verification? (XI.20)	_____	_____	_____

DIAGNOSTIC CHECKLIST FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

	Yes/ No	Weight	Score
<u>XII. Output Evaluation</u>			
A. Is Company constructing new plant at a <u>reasonable</u> cost? (XII.1, XII.4, XII.5, XII.6, XII.8, XII.9)	_____	_____	_____
B. Is Company building new facilities in a <u>timely</u> manner? (XII.7, XII.10)	_____	_____	_____
C. Does the Company have a history of <u>successful</u> start-ups? (XII.2)	_____	_____	_____
D. Is the Company in <u>compliance</u> with environmental regulations? (XII.3)	_____	_____	_____

XIII. Impact Evaluation

No performance indicators meeting our study criteria were found.

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "Develop policies and procedures manuals." A/U (GAI, IV-4)

II. Plan and Forecasts

1. "Construction budget plan horizon of sufficient length to help management set priorities, explore alternatives, [and] plan financing and revenue requirements." A/U (PA1, 37)
2. "[Effective] construction cost estimating procedures." A/U (PA1, 37)
3. "Projects [are] planned...by modern project management techniques." A/U (Kearney,37)
4. "Coordination with municipalities and other utilities with regard to excavation, current and future planning, etc." A/FS (PA1,36)
5. "Contingencies are prepared for and based upon risk analysis." A/U (GA1, IV-14)
6. "Estimating procedures well documented." A/FS (GA1, IV-14)
7. "Estimating standards, including escalation figures, are realistic." A/FS (GA1, IV-14)
12. "Documentation is not available [for preliminary project planning]." A/U (GA1, IV-5)
13. "Analysis is sketchy and not formalized [for preliminary project planning]." A/FS (GA1, IV-5)
14. "Failure to plan for environmental requirements [in preliminary project planning]." A/FS (GA1, IV-5)
15. "Absence of an integrated project schedule showing both engineering design and construction activities." A/FS (GA1, IV-8)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
8. "Operability/maintainability requirements factored into plant design." A/FS (GA1, IV-9)	
9. "Reliability/availability data factored into equipment standards." A/FS (GA1, IV-9)	
10. "Planning assumptions are realistic." A/U (GA1, IV-14)	
11. "Potential constraints (e.g. capital or labor) are recognized." A/U (GA1, IV-14)	
III. <u>Scope of Function</u>	
1. "Project planning receives wide organizational focus." A/U (GA1, IV-14)	
IV. <u>Priorities</u>	
	1. "No formalized set of procedures or operating priorities." A/U (GA1, IV-8)
	2. "Inattention to and lack of definition of a project's key success variables." A/U (GA1, IV-3)
	3. "Treatment of equipment as a significant cost center." B/FS (GA1, IV-26)
V. <u>Roles and Responsibilities</u>	
1. "Appropriate levels of responsibility and authority." A/U (GA1, IV-4)	10. "Too much control by a single individual." A/U (GA1, IV-3)
2. "[Realistic] approval levels and positions [for construction projects]." B/U (PA1, 31)	11. "Too much interference . . . [or] too little support from corporate service groups." A/U (GA1, IV-3)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
3. "Organizational visibility of critical activities." A/U (GA1, IV-4)	12. "Failure to scope out complete responsibilities for [architect/engineer] and contractors." A/FS (GA1, IV-5)
4. "Clear charters of responsibility." A/U (GA1, IV-4)	13. "Responsibility for updating plans unclear and/or unspecified." A/FS (GA1, IV-12)
5. "Organization structure supports in the early identification and resolution of project problems." A/U (GA1, IV-4)	14. "Failure to delineate engineering responsibility between [architect/engineer] and utility." A/FS (GA1, IV-6)
6. "Engineering department effectively use[s] administrative support services to reduce the clerical and administrative activities of engineers." B/U (PA1, 34; Kearney, 37)	15. "Failure to define . . . effective design-construction liaison across all disciplines." A/FS (GA1, IV-6)
7. "Several levels of review [of labor data] exist." B/U (PW, 18)	16. "Lack of organizational independence [for quality assurance]." B/FS (GA1, IV-21)
8. "Well defined organizational mission [for licensing]." B/U (GA1, IV-20)	17. "Insufficient coordination of licensing with plant construction schedules." B/FS (GA1, IV-19)
9. "Methodology to ensure clear understanding throughout the project group of each unit's responsibility." A/U (GA1, IV-4)	18. "Lack of authority to make field decisions." B/U (GA1, IV-3)
	19. "Insufficient linkage [of materials management] with accounts payable." B/FS (GA1, IV-23)
	20. "Roles and responsibilities between construction and start-up forces are not clearly defined." B/FS (GA1, V-18)
	21. "Organizational structure ineffective in providing adequate coordination between diverse engineering and drafting specialties." A/FS (GA1, IV-6)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

VI. Resource Capabilities

- | | |
|--|---|
| 1. "Necessary resources to accomplish projects within allotted time. A/U (PA1, 34) | 10. "Insufficient resources." A/U (GA1, IV-3) |
| 2. "Availability of technical talent to meet the [engineering/construction] workload." A/U (PA1, 35) | 11. "Shortage of key engineering personnel." B/U (GA1, IV-8) |
| 3. "Well-developed, effective contract management group." B/FS (GA1, IV-28) | 12. "Frequent changes in key personnel which hurt the continuity and quality of the project." A/U (GA1, IV-6) |
| 4. "Personnel skilled in utilizing [project management] systems." A/U (GA1, IV-14) | 13. "Personnel not trained to check [construction] drawings." B/FS (GA1, IV-6) |
| 5. "Professional warehouse and purchasing personnel [for materials management]." B/FS (GA1, IV-24) | 14. "Untrained contract negotiators." B/FS (GA1, IV-27) |
| 6. "System to evaluate performance of materials management personnel." B/FS (GA1, IV-24) | 15. "Inadequate personnel training in [quality assurance] requirements." B/U (GA1, IV-21) |
| 7. "Skilled and experienced start-up personnel." B/FS (GA1, IV-19) | 16. "Poor vendor performance records." B/FS (GA1, IV-23) |
| 8. "Clean, well-managed warehouse facilities." B/U (GA1, IV-24) | 17. "Informal communications systems in areas which can lead to misunderstandings about project design, scope, and cost." A/U (GA1, IV-6) |
| 9. "Record of quick maintenance/repair turn-around [for construction equipment]." B/FS (GA1, IV-26) | |

VII. Resource Allocation

- | | |
|--|---|
| 1. "[Proper organization of effort] to permit effective handling of internal projects and management of contracted projects." A/FS (PA1, 34) | 6. "Failure to provide a cost-effective matching of engineering and drafting resources with workload." B/FS (GA1, IV-7) |
|--|---|

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
2. "Documented comparison of costs for performing engineering/construction work using outside contractors versus acquiring or using company resources to do the same work." A/FS (PA1, 35)	7. "Failure to assign an experienced, qualified nucleus of engineering talent to all specialty areas." B/FS (GA1, IV-6)
3. "Company [has] developed a cost-benefit schedule of major equipment showing a comparison of ownership versus leasing." B/FS (PA1, 36)	
4. "Program for the financial analysis of equipment lease/purchase/rent decisions." B/FS (GA1, IV-26)	
5. "[Whether] company [has] considered the availability and cost per hour of major equipment from outside contractors." B/FS (PA1, 36)	

VIII. Program Plan

1. "Integrated project management approach." A/U (GA1, IV-4)	23. "Lack of formal productivity measures." A/U (GA1, IV-7)
2. "Clear and precise procedure manuals are published [and] maintained." A/U (GA1, IV-10)	24. "No effective cost control over work performance due to absence of work standards." A/U (GA1, IV-7)
3. "Engineering standards are developed and maintained." A/U (GA, IV-10)	25. "Lack of a priority system for checking drawings." B/FS (GA1, IV-6)
4. "Engineering and construction schedules are integrated." A/U (GA1, IV-10)	26. "No formal systems (i.e., CPM) for planning, scheduling, and estimating engineering and drafting work." A/FS (GA1, IV-7)
5. "Alternative designs [are] evaluated." A/FS (PA1, 38)	27. "Lack of data base for making realistic estimates of work." A/U (GA1, IV-7)
6. "Plant designs . . . standardized to the extent possible." A/FS (GA1, IV-10)	28. "Poor bid letting and evaluation procedures and criteria [for contracts]." A/FS (GA1, IV-27)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
7. "Formal process for selection of outside contractors, including adequate evaluation criteria." A/FS (Kearney 37)	29. "Lack of defined terms and conditions [in contracts]." A/FS (GA1, IV-27)
8. "Clear, well-written procedures [for quality assurance]." A/FS (GA1, IV-21)	30. "Cumbersome change control procedure [in contracts]." B/FS (GA1, IV-27)
9. "Planning process is based on a work breakdown useful for cost control." A/U (GA1, IV-12)	31. "Excessive reliance upon cost-plus contracts." B/FS (GA1, IV-27)
10. "Account structure facilitates cost control." B/U (GA1, IV-14)	32. "Contingencies are not factored into estimates." B/U (GA1, IV-27)
11. "Formal procedure for estimating project equipment needs." A/FS (GA1, IV-26)	33. "Inadequate support of construction schedule [for quality assurance]." B/FS (GA1, IV-21)
12. "Develop objectives for use and standards of performance for operating costs [of equipment]." A/FS (GA1, IV-26)	34. "Lack of consideration of equipment life cycle costs." B/FS (GA1, IV-23)
13. "Develop an automated system for managing equipment." A/FS (GA1, IV-26)	35. "Lack of systematic, orderly procedures for continuous repair and servicing of equipment." B/FS (GA1, IV-25)
14. "Clear, effective procedures for ensuring preventative maintenance is performed [on construction equipment]." A/FS (GA1, IV-26)	36. "No formal process for revising engineering progress to reflect changes, rework or revision." A/FS (GA1, IV-7)
15. "Formal procedures [for materials management]." B/FS (GA1, IV-24)	37. "No criteria for checking of construction drawings." B/FS (GA1, IV-6)
16. "Automated system [of materials management]." B/FS (GA1, IV-24)	38. "Lack of procedures for tracking costs resulting from regulatory [licensing] actions." B/FS (GA1, IV-19)
17. "Controls to ensure minimal material remaining after job close." B/FS (GA1, IV-24)	

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
18. "Foremen are provided with mechanism for monitoring productivity and updating estimates of the time required to complete various tasks." B/FS (PW, 18)	
19. "Effective controls in place for the recording and processing of labor data." B/U (PW, 18)	
20. "Early identification of start-up activities." B/FS (GA1, IV-19)	
21. "Milestone-punchlist schedule [for start-up]." B/FS (GA1, IV-19)	
22. "Integrated construction and start-up schedules." B/FS (GA1, IV-19)	
<u>IX. Implementation</u>	
1. "Clear and concise procedure manuals are . . . utilized." B/U (GA1, IV-10)	4. "Failure to make timely, responsive decisions in support of design engineering." B/FS (GA1, IV-6)
2. "Frequent presentation to operating and construction groups to explain role of [quality assurance]." B/U (GA1, IV-22)	5. "Failure to . . . meet schedules in support of design engineering." A/FS (GA1, IV-6)
3. "Company [has] undertaken programs to control pollution of air and water . . . designed to meet EPA standards." A/FS (Kearney 37)	6. "Lack of on-site design engineering coordinator." B/FS (GA1, IV-7)
	7. "Failure to provide utility with engineering perspective of field problems." B/FS (GA1, IV-8)
	8. "Bottleneck created because of attempt to check all [construction] drawings with limited manpower." B/FS (GA1, IV-6)
	9. "Inability to meet promised delivery dates for drawings." B/FS (GA1, IV-7)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

X. Program and Project Control

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. "Practice [of] standards recommended by professional engineering and utility associations (design, work measurement, quality control)." A/FS (PA1, 37) 2. "Project is divided into manageable segments which are scheduled and controlled using critical path and PERT techniques." A/U (PW, 18) 3. "Schedules are revised when necessary." B/FS (GA1, IV-14) 4. "Construction cost overruns/underruns [are] analyzed by management and documented for historical comparison." A/FS (PA1, 36) 5. "[Adequate] controls pertaining to materials acquisition and receiving. An approved purchase order is required for all materials; purchase order follow-up mechanisms are in place and used; all materials are subject to inspection before being received; and all materials are received into a secure warehouse at each plant site." B/FS (PW, 18) | <ol style="list-style-type: none"> 10. "Construction delays caused by inability to process engineering change orders quickly and efficiently." B/FS (GA1, IV-6) 11. "Start-up properly integrated with plant operations." B/FS (GA1, IV-18) 6. "Rework is not sufficiently controlled." B/FS (GA1, IV-8) 7. "Inadequate procedures for identifying and measuring engineering rework." B/FS (GA1, IV-8) 8. "Commercial evaluation of bids considers only initial costs and disregards operating costs, time value of money, effect of taxes, etc." B/FS (GA1, IV-5) 9. "Failure to update specifications in a timely manner, resulting in previous problems being repeated." B/FS (GA1, IV-6) 10. "Schedule slippages are not recognized in a timely manner." B/FS (GA1, IV-12) 11. "Causal factors for overruns are not adequately identified." B/FS (GA1, IV-12) 12. "Planners do not adjust work flow to schedule dynamics." B/FS (GA1, IV-12) 13. "Work does not conform to existing procedures." A/U (GA1, IV-21) 14. "Procurement process is not well documented." B/U (GA1, IV-5) |
|---|--|

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
	15. "Equipment utilization is not closely monitored." B/U (GA1, IV-25)
	16. "Poor control over inventories." B/U (GA1, IV-23)
	17. "Construction delays caused by material stock-outs." B/FS (GA1, IV-23)
	18. "Insufficient control over field purchasing." B/U (GA1, IV-23)
	19. "Unrealistic, inaccurate performance indicators." B/U (GA1, IV-7)
 <u>XI. Reports and Reviews of Progress</u>	
1. "Project schedules are updated monthly." A/FS (PW, 18)	10. "Lack of status reporting system for [construction] drawings, eg. on "hold," "50% complete, etc." B/FS (GA1, IV-6)
2. "Construction [is] adequately inspected. . . The basis for payment [is] verified [with] inspector's report show[ing] the type and amount of work done by the contractor each day, to include equipment and materials used." B/FS (PA1, 38)	11. "Drawings designated as 100% complete lack essential information." B/FS (GA1, IV-7)
3. "Schedule status reports are posted and monitored on a daily basis." B/FS (PW, 18)	12. "Reliance upon inefficient, crude manual systems to report productivity." A/U (GA1, IV-7)
4. "Reporting is timely and accurate." A/U (GA1, IV-14)	13. "Lack of management reports [corresponding to formal productivity measures]." A/U (GA1, IV-7)
5. "Automated records management system [for quality assurance]." B/FS (GA1, IV-22)	14. "Management reports have inappropriate detail." B/U (GA1, IV-13)
6. "Documentation of vendor [quality assurance] performance." B/FS (GA1, IV-22)	15. "[Absence of] a management control mechanism which effectively summarized the current status of major projects with respect to original estimates and anticipated future progress." A/FS (PW, 18)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance Indicators	Negative Performance Indicators
7. "Accurate, meaningful management reports on costs and utilization [of construction equipment]." B/FS (GA1, IV-26)	16. "[Quality assurance] documents not supplied on vendor equipment." B/FS (GA, IV-21)
8. "Informative, timely management reports [on materials management]." B/U (GA1, IV-24)	17. "Lack of formal feedback relative to plan, schedule, and cost performance." A/U (GA1, IV-12)
9. "Statistics [are] maintained on use of major equipment items and statistics [are] developed for the cost per hour of usage." B/FS (PA1, 35)	18. "Documentation of contractor bid evaluation and selection process." B/FS (GA1, IV-29)
	19. "No evidence of records comparing actual materials usage to estimated usage by job segment." B/U (PW, 18)
	20. "Requisitioning and recordkeeping controls - perpetual inventory records are audited neither annually nor cyclically to obtain physical verification." B/U (PW, 18)
	21. "Inadequate management reporting of operating costs [for construction equipment]." B/FS (GA1, IV-25)
	22. "Poor documentation of material receipt." B/U (GA1, IV-23)
	23. "Failure to report rework responsibility." B/FS (GA1, IV-8)

XII. Output Evaluation

1. "Company [is] building generating units at both a reasonable cost and one which is comparable to that experienced by other utilities building similar units." E A/FS (PW, 15)

Measure: Costs over 16-year time period with impact of inflation and environmental requirements taken into account. E A/FS (PW, 15)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

2. "History of successful start-ups."
B/FS (GA1, IV-19)
3. "Compliance with environmental regulations." A/FS (PA1, 39)
4. "Extent to which differences in forecasted costs and estimated costs are explainable by (1) additional regulatory requirements imposed by state and federal regulatory agencies, (2) design changes where company was convinced that long-range improvements would result from the change, (3) site work estimating errors, (4) under-estimation of annual rate of cost escalation, (5) added interest costs resulting from the other cost increases, and (6) costs incurred due to planned and unplanned schedule delays." A/FS (PW, 17)
5. "Comparisons with other electric utilities in the region of costs of construction of distribution substations. Comparative costs over four years were measured in dollars per Kilovolt-ampere (Kva), the measure commonly used to designate sub-station capacity. (This same analysis could not be done for transmission substations because of lack of homogeneity in design and lack of enough construction per year to make average cost figuring meaningful." E A/FS (PW, 22)
6. "For substation construction projects, actual versus estimated cost, as specified on General Work Order, for projects completed over four years: (1) high--percentage of

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

projects where actual cost exceeded estimated cost by 15% (2) close--percentage of projects where actual cost was within plus or minus original 15 percent of estimated cost; and (3) low--percentage of projects for which actual cost was more than 15 percent below estimated cost." E A/FS (PW, 21)

7. "Improved timeliness over four years with which substation construction projects have been completed (categories were "completed as scheduled," "less than four weeks late," "four to eight weeks late," and "more than eight weeks late.") Factors responsible for substation construction delays were analyzed: percentage of project in each year delayed by manpower shortages, adverse weather, poor site conditions, materials delays, delays due to lack of action by major industrial customers which the substation will serve, and difficulties in scheduling system interruptions to test new substations--last three factors were the most important." E A/FS (PW, 21)

8. "For transmission line construction performance, comparative cost data for similar lines constructed during the past three years by other electric utilities in the region. Cost comparisons were made after classifying the lines according to their capacity (voltage), length and structure type." E A/FS (PW, 20)

PERFORMANCE INDICATORS FOR
CONSTRUCTION PROJECT MANAGEMENT AND CONTROL

Positive Performance
Indicators

Negative Performance
Indicators

9. "For transmission line construction performance for projects costing more than \$15,000 (not including right-of-way acquisition), comparison of actual versus estimated cost of projects over four years. High--actual cost exceeds estimated cost by more than 15%; Close--actual cost is within 15% of estimated cost; Low--actual cost is more than 15% below estimated cost. Factors causing delays are then considered: inclement weather, right-of-way acquisition problems, materials delays, manpower shortages, and difficulties in scheduling system interruptions to permit construction and testing of new lines." E A/FS (PW, 19)
10. "For transmission line construction performance: actual versus scheduled completion dates for projects completed in past four years, with percentage of projects delayed by uncontrollable factors (inclement weather, and problems in acquiring rights-of-way) taken into account. (Other problems include materials delays, manpower shortages and difficulties in scheduling system interruptions to permit construction and testing of new lines." E A/FS (PW, 19)

XIII. Impact Evaluation

No performance indicators meeting our study criteria were found.

C. Internal Auditing

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
PLANNING			
I. <u>Policy and Philosophy</u>			
A. Does Company have a formal, written corporate policy stating the purpose, responsibility, and authority of internal auditing? (I.1, I.4)	_____	_____	_____
B. Is the policy statement endorsed by the chief executive officer? (I.2)	_____	_____	_____
C. Is unrestricted access to records, personnel, and physical properties relevant to the audit process <u>formally</u> authorized by top management? (I.3)	_____	_____	_____
II. <u>Plan and Forecasts</u>			
A. Does an internal audit plan exist? (II.1)	_____	_____	_____
B. Has the audit plan been approved by the manager of internal auditing and reviewed by the executive vice president for finance? (II.1)	_____	_____	_____
C. Are planned audits determined <u>primarily</u> through the use of guidelines for intervals between internal audits for particular audit areas? (II.2)	_____	_____	_____
D. Are the audit guidelines established <u>based</u> on the estimated dollar exposure of an audited activity? (II.2)	_____	_____	_____
E. Does the audit committee of the board of directors review the annual audit plan? (II.5)	_____	_____	_____
F. Does the audit committee of the board of directors suggest changes to the audit plan? (II.5, II.6)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
G. Does the audit committee of the board of directors give <u>specific</u> direction to the auditors on the scope of audits? (II.6)	_____	_____	_____
H. Is the annual audit plan approved by the audit committee of the board of directors prior to beginning the audit year? (II.3)	_____	_____	_____
I. Is the work program of the internal auditing division developed <u>in conjunction</u> with the company's outside auditor? (II.4)	_____	_____	_____
J. Does the work program of the internal auditing division include <u>some</u> departmental requests? (II.4)	_____	_____	_____
 III. <u>Scope of function</u>			
A. Are resources used to audit:			
1. all areas of the company?	_____	_____	_____
2. <u>effectiveness</u> and <u>efficiency</u> with which activities are performed	_____	_____	_____
3. data processing operations and systems development activities?	_____	_____	_____
4. the performance of outside construction contractors?	_____	_____	_____
5. fuels procurement?	_____	_____	_____
6. transportation?	_____	_____	_____
7. salvage and scrap sales?	_____	_____	_____
8. equipment leasing/purchasing?	_____	_____	_____
9. financial records?	_____	_____	_____
10. accounting records? (III.1, III.2, III.9)	_____	_____	_____
B. Does Company have a <u>comprehensive</u> construction audit program? (III.7)	_____	_____	_____
C. Does Company use risk assessment to determine what items to audit? (III.10)	_____	_____	_____
 IV. <u>Priorities</u>			
A. Is there a formal risk assessment analysis to justify the allocation of resources for audits? (IV.1)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
B. Does the risk evaluation method consider <u>objectively</u> :			
1. dollar exposure?	_____	_____	_____
2. internal control?	_____	_____	_____
3. legal or statutory exposure?	_____	_____	_____
4. recent changes in policy or procedures?	_____	_____	_____
5. degree of senior management concern?	_____	_____	_____
6. technical complexity of the audited activity?	_____	_____	_____
7. results of prior audits? (IV.13, IV.10)	_____	_____	_____
C. Is there a <u>significant</u> orientation toward operational auditing reviews? (IV.2)	_____	_____	_____
D. Is there a <u>significant</u> orientation toward data processing control reviews? (IV.16)	_____	_____	_____
E. Does internal auditing routinely focus on big dollar items such as fuel, outside contracts and large equipment purchases? (IV.5)	_____	_____	_____
F. Are internal audits to test the effectiveness of and compliance with internal controls <u>coordinated</u> with the outside auditor's tests of such controls? (IV.7)	_____	_____	_____
V. <u>Roles and responsibilities</u>			
A. Does the manager of internal auditing report directly to the chief financial officer and indirectly to the chief executive officer and the audit committee of the board of directors? (V.2)	_____	_____	_____
B. Is internal auditing <u>independent</u> from other corporate functions? (V.34, V.28, V.29 V.3, V.10)	_____	_____	_____
C. Does internal auditing have a direct and <u>frequent</u> reporting relationship with the board of directors? (V.5)	_____	_____	_____
D. Does the audit committee of the board of directors receive reports on the outcome of major audits? (V.4, V.6)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
E. Are the activities of the audit committee of the board of directors in conformance with SEC requirements? (V.12)	_____	_____	_____
F. Are internal auditing's projects <u>coordinated</u> with those of outside auditors? (V.14)	_____	_____	_____
G. Does internal auditing provide <u>assistance</u> to outside auditors? (V.14)	_____	_____	_____
H. Does the manager of internal auditing attend most meetings of the audit committee of the board of directors? (V.14)	_____	_____	_____
I. Are meetings of the audit committee of the board of directors held at least quarterly? (V.16)	_____	_____	_____
J. Does the manager of internal auditing prepare an annual report of departmental activity which is submitted to the audit committee for its review? (V.16)	_____	_____	_____
K. Are summaries of all internal audit reports, including unresolved audit findings, <u>routinely</u> sent to the chief executive officer for review? (V.25)	_____	_____	_____
L. Is internal auditing unit responsible for operations audits? (V.1)	_____	_____	_____
M. Is internal auditing responsible for non-financial audits? (V.1)	_____	_____	_____
N. Is responsibility for auditing the accounting control systems <u>separate</u> from those responsible for operating the accounting control system? (V.35)	_____	_____	_____
O. Does either the internal auditor or the outside auditor formally comment to top management or audit committee on how their activities complement or duplicate each other? (V.37)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
ORGANIZING			
VI. <u>Resource capabilities</u>			
A. Does internal auditing have an <u>adequate</u> number of staff? (VI.1)	_____	_____	_____
B. Does the internal audit staff have <u>broad, functional</u> experience, especially in operational and EDP auditing? (VI.19)	_____	_____	_____
C. Are there auditors with degrees in data processing? (VI.20)	_____	_____	_____
D. Are there auditors with engineering degrees? (VI.21)	_____	_____	_____
E. Are there auditors with CPA, CIA, or CISA certification? (VI.22)	_____	_____	_____
F. Is training provided for existing staff? (VI.6)	_____	_____	_____
G. For holding companies, do internal audit managers and their staffs maintain office space in each of the operating companies? (VI.8)	_____	_____	_____
VII. <u>Resource allocation</u>			
A. For subsidiaries of holding companies, is there a method for charging the operating companies for internal auditing services based on direct costs of services received? (VII.3, VII.8)	_____	_____	_____
B. Are internal auditing resources <u>exclusively</u> used for internal auditing rather than other activities or special projects? (VII.9)	_____	_____	_____
C. Have internal and external auditor projects been <u>coordinated</u> in order to better control audit fees? (VII.6)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
<u>VIII. Program Plan</u>			
A. Is there an <u>explicit</u> audit plan for <u>most</u> projects? (VIII.1)	_____	_____	_____
B. Are audit schedules and programs prepared in <u>advance</u> ? (VIII.3)	_____	_____	_____
C. Do the internal auditor and the company's independent outside auditors review and comment to management and the audit committee of the board of directors on each other's proposed audit programs? (VIII.7)	_____	_____	_____
D. Is internal audit work conducted in accordance with the established audit plan? (VIII.6)	_____	_____	_____
 CONTROLLING			
<u>IX. Implementation</u>			
A. Are there <u>appropriate</u> mechanisms to insure implementation of internal auditing's recommendations? (IX.1)	_____	_____	_____
B. Has internal auditing established a <u>formal</u> system for tracking the progress of departments in resolving problems identified during internal audits? (IX.2)	_____	_____	_____
C. If recommendations are <u>significant</u> , can the internal audit manager modify the guidelines for intervals between audits for a particular audit to provide for a more formal postaudit implementation review? (IX.3)	_____	_____	_____
<u>X. Program and project control</u>			
A. Are time estimates developed for each project step? (X.4)	_____	_____	_____
B. Is actual time reported by auditors against those audit steps? (X.1)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
C. Is the work of the internal and external auditors <u>coordinated</u> ? (X.1)	_____	_____	_____
XI. <u>Reports and reviews of Progress</u>			
A. Prior to preparation of a final audit report are audit findings reviewed with the <u>appropriate</u> functional manager? (XI.4)	_____	_____	_____
B. Is the functional manager required to respond <u>formally</u> to audit exceptions within a specified time period and, where necessary, provide an implementation timetable for any changes recommended? (XI.1)	_____	_____	_____
C. Does the internal auditing manager receive a copy of the response of the functional manager, take whatever follow-up action is necessary and file the response with the audit work papers? (XI.1)	_____	_____	_____
XII. <u>Output Evaluation</u>			
A. Is a final written report prepared for each audit? (XII.3)	_____	_____	_____
B. Are internal audit reports <u>well</u> written and <u>substantive</u> ? (XII.5)	_____	_____	_____
C. Is the final internal audit report distributed to the:			
1. manager of the group audited? (XII.9)	_____	_____	_____
2. line managers in his area? (XII.9)	_____	_____	_____
3. company president? (XII.9)	_____	_____	_____
4. comptroller? (XII.9)	_____	_____	_____
5. external auditors? (XII.9)	_____	_____	_____
6. (if applicable) the parent holding company's senior vice president for rates and accounting? (XII.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR INTERNAL AUDITING

	Yes/ No	Weight	Score
<u>XIII. Impact evaluation</u>			
A. Within six months following issuance of the final audit report, does internal auditing review progress towards implementation of agreed upon corrective actions? (XIII.1)	_____	_____	_____
B. Does the internal audit manager follow implementation of recommendations and report any deviations from planned implementation schedules through channels to the audit committee of the board of directors? (XIII.2)	_____	_____	_____
C. Does internal auditing monitor implementation or recommendations? (XIII.4)	_____	_____	_____

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "[Existence of] a formal policy stating the purpose, responsibility and authority of internal auditing." A/U (FL1, 134)
2. "[Parent holding company should] develop a policy statement, endorsed by the chief executive officer, which clearly delineates the purpose, responsibility, and authority of internal auditing... The policy statement should describe the scope of the activities for which the department is responsible and provide the authority necessary to perform those activities." A/FS (FL1, 137)
3. Unrestricted access to records, personnel, and physical properties relevant to the audit process should be authorized formally by top management." A/FS (FL1, 137)

II. Plan and forecasts

1. "... the internal auditing department has prepared an audit plan, which has been approved by the manager-internal auditing and reviewed by the executive vice president-finance." A/U (OH1, VIII-25)
2. "Planned activities are determined primarily through the use of guidelines for intervals between [internal] audits for particular audit areas. The guidelines, which are an implicit risk assessment based primarily on the estimated dollar exposure of an audited activity, are established based on the judgment of the division and EDP audit managers and the director-system internal audits." A/FS (PA2, VI-39, VI-40)

4. "A formal policy stating the purpose, responsibility, and authority of internal auditing does not exist. In order to be fully effective, internal auditing must be independent and free of any organizational or managerial pressures which may limit objectivity in selecting areas for study and in evaluating those areas... Development and implementation of such a policy will encourage overall cooperation and support of all levels of management and aid internal auditing in performing its duties." A/FS (FL1, 135-136)

5. "While the audit committee of the board does review the annual [internal] audit plan, it appears that there has been little change in the plan over the past few years, and that little, if any, specific direction has been given to the auditor regarding the scope of audits." A/FS (NY2, IX-44)
6. "The present process for review and approval of the annual internal audit plan is not sufficiently timely... [Since] the annual plan is not approved by the audit committee of the board of directors until halfway through the audit year, it [is] difficult for the ... committee to exercise fully its

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

3. "The annual audit plan should be approved prior to beginning the audit year by the audit committee of the board of directors ... the audit committee will [then] be in a better position to provide guidance on the appropriate direction of department activities in line with defined fiduciary responsibilities." A/FS (PA2, VI-45)
4. "The work program of the internal auditing division is developed in conjunction with the company's outside auditor and the audit committee of the board of directors, and includes some departmental requests." (See also "Program plan" below) A/FS (PA7, XI-20)

III. Scope of function

1. "During the past five years ... the scope of [internal auditing's] work has expanded to include reviews of:
 - Data processing controls and security
 - The performance of outside construction contractors in complying with the terms of their contracts and with controls on expenditures for labor and materials
 - The operational effectiveness and efficiency of various other activities, such as transportation, salvage and scrap sales, and fossil fuels procurement." A/FS (PA7, XI-19)
2. "[Internal auditing's] current plans call for more extensive involvement in three areas:
 - Assessing the effectiveness and efficiency with which various activities are performed
 - Examining the engineering and design controls and procedures used by contractors
 - Reviewing data processing operations and systems development activities." A/FS (PA7, XI-19)

Negative Performance
Indicators

- fiduciary responsibility, particularly in circumstances where it might believe that the audit orientation outlined in the plan is incorrect." A/FS (PA2, VI-43)
8. "More resources should be directed towards auditing of the following:
 - fuels
 - data processing
 - construction
 - equipment leasing and purchasing." (KY1, X-63)
 9. "... the scope of internal auditing's activities has been limited to the following:
 - financial audits
 - observation of physical inventory counts at division stores areas
 - various reconciliations, including major bank accounts, general ledger and detailed ledgers, etc.
 - preparation of outside auditors' workpapers." A/FS (KY1, X-60, X-61)
 10. "No analysis, based upon a risk assessment, has been undertaken to justify the extent of the [internal auditing] department's concentration on financial and accounting controls to the exclusion of other areas." (See also "Priorities" below) A/FS (NY2, IX-44)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

3. "The ongoing efforts of internal auditing division management to broaden the scope of its activities and upgrade its staff are commendable and have produced positive results." A/FS (PA7, XI-20) (See also Resource capabilities A. human below.)
4. "In examining compliance with procedures and controls, internal auditing has moved beyond the traditional auditing of the cashiering and finance areas into broad assessments of activities such as salvage and scrap sales, and fuel procurement." (See also Resource Capabilities, below) A/FS (PA7, XI-20)
5. "With the help of its outside auditor, the company initiated the development of a comprehensive construction audit program.
 - Initially concentrated on compliance with contracts and operational controls, this program has yielded savings amounting to more than \$6 million during the past five years.
 - By assigning staff to this area, management has developed expertise which has enabled the company to monitor major construction projects, such as [a] nuclear generating station." A/FS (PA7, XI-21)
6. "Plans to transfer responsibilities for taking physical inventories to the stores division are desirable and will enable the internal auditing division to concentrate on auditing activities." A/FS (PA7, XI-21)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

7. "The scope of internal auditing and consulting responsibilities should be clearly defined, with auditing assigned to the manager-internal auditing, and consulting assigned to the manager-corporate planning. [The Company] should delineate the scope of operational auditing and consulting, and should establish a mechanism for resolving any areas of uncertainty which may arise. In general, the internal auditing division should be the locus for reviews of the effectiveness of [the company's] operations.

- Current plans to expand construction, data processing, and operational auditing should be pursued aggressively.
- The scope of the operational audit program should be expanded to cover all areas of the company." A/FS (PA7, XI-23)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

IV. Priorities

1. "[Existence of] a process by which internal auditing identifies 'risk' areas and directs its resources to review those areas." A/U (KY1, X-60)
2. "the current audit plan reflects a significant orientation toward operational auditing and EDP control reviews." A/FS (OHL, VIII-25)
3. "[Parent holding company should] expand the management and operations review role of the internal auditing staff... Internal auditing's activities should be coordinated with department heads responsible for conducting operational reviews to avoid duplication of audit effort and assure sufficient audit coverage." A/FS (FL1, 138)
4. "...[internal auditing] routinely audits major contracts and subsequent invoices." (See also "Roles and responsibilities" below) A/FS (Kearney, 15)
5. "... the internal auditing activity focuses on big dollar items such as fuel, outside contracts and large equipment purchases." A/FS (Kearney, 15)
6. "Once its functional audit scope has been increased, [the company] should take steps to establish an operations auditing (operations improvement) capability within the internal auditing department." A/FS (KY1, X-63)
7. "Routine financial audits should be undertaken only when the potential risks to corporate assets are
12. "[Internal auditing] concentrates too narrowly on accounting systems." A/FS (GAL, VII-10)
13. "Internal auditing has not performed an operational audit of [the company] during the past five years. Audits of [the company] performed by internal auditing during the past five years have been basically financial in nature ... reviews of internal accounting controls, purchasing practices, inventories, working funds, business offices, compliance audits, etc... [parent holding company's] internal audit group has not yet moved into a significant level of operational auditing at [the company]." A/FS (FL1, 136)
14. "No analysis, based upon a risk assessment, has been undertaken to justify the extent of the [internal auditing] department's concentration on financial and accounting controls to the exclusion of other areas." (See also "Scope of Function" above) A/FS (NY2, IX-44)
15. "The methodology used by systems internal audits for assessing relative engagement audit risk is not sufficiently formal ... Even though planned audit activities now include both financial and nonfinancial elements,... traditional approaches for assessing relative engagement audit risk tied specifically to dollar exposure still predominate... supplemented by department managers' inherent assessments of risk. Although the department is in the process of reviewing risk assessment procedures promulgated by the Institute of

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

- significant; audits to test the effectiveness of, and compliance with, internal controls in less critical areas should be performed on a more infrequent basis, and should be coordinated with the outside auditor's tests of such controls." A/FS (NY2, IX-45)
8. "Operational audits directed toward assessing the effectiveness and efficiency with which organizational units carry out their responsibilities should receive greater emphasis; such audits should include an assessment of existing procedures, staffing levels and mix, appropriateness of organizational structure, and departmental responsibilities." A/FS (NY2, IX-47)
9. "The [internal] auditing department should place increased emphasis on EDP and operational auditing and should be allocated the resources necessary to successfully undertake this effort." (See also "Resource capabilities" below) A/FS (NY2, IX-49)
10. "System internal audits should adopt a more formal methodology for evaluating relative engagement audit risk ... would consider objectively not only such variables as dollar exposure, but also such issues as internal control, legal or statutory exposure, recent changes in policy or procedures, degree of senior management concern, technical complexity of the activity audited, and the results of prior audits... For each candidate audit, the mix of variables should be ranked from most to least important, and each variable weighted based on objective standards established ... by the consensus of division audit managers.
- Internal Auditors and other utility internal audit groups, it does not consider these procedures totally applicable to [the parent holding company's] circumstances. As a result, no formal change in the audit risk methodology has been adopted. Given changes in the mix of the department's activities, the lack of a formal methodology for assessing audit risk for both financial and nonfinancial activities hinders attempts to rank candidate audit areas against available department resources on a reasonable basis, [to assess more accurately] whether or not internal audit efforts are being expended in the most efficient and effective manner, and [to] lessen the possibility of areas of audit risk being ignored." A/FS (PA2, VI-42, VI-43)
16. "[Internal auditing] has not yet conducted an audit of the overall systems and procedures used in the data processing system. Thus, regardless of the degree of security over a particular application, the controls over unauthorized access by data processing personnel have not been verified." A/FS (PA3, XI-49, XI-50)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

- The total of the variable weights should then be determined for each potential audit.
 - All of the potential audit candidates should then be force ranked based on the total of the weights.
 - Using this forced ranking, audit department personnel could then assign available audit resources to candidate audits based on determined risk." A/FS (PA2, VI-44, VI-45)
11. "[Internal auditing] should evaluate the controls used by the data processing organization. This particular auditing program should evaluate the controls over the input, processing, and output of the system; the procedures used to safeguard data and programs; and the change control procedures and the adequacy of documentation." A/FS (PA3, XI-51)

V. Roles and Responsibilities

1. "Internal audit is responsible for operations and non-financial audit functions." A/F (GA1, VII-11)
2. "... the general staff manager internal auditing should report directly to the chief financial officer and indirectly to the chief executive officer and the audit committee of the board of directors to ensure maximum visibility, independence, and leverage throughout the company." A/FS (FL1, 136)
3. "... independence of internal audit from other corporate functions." A/FS (GA1, VII-10)
27. "In prior years audit planning was conducted through informal discussions with [the company's] external auditors and reviews of requests made by finance department managers." A/FS (OH1, VIII-25)
28. "[Internal auditing] reports too low within the organization to give the necessary appearance of independence." A/FS (GA1, VII-10)
29. "Internal auditing's reporting relationship to the controller limits its authority, visibility by senior management, and perceived independence." A/FS (KY1, X-62)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance Indicators	Negative Performance Indicators
4. "[Existence of] working relationship between the internal audit function and the board of directors." A/FS (GA1, VII-10)	30. "Internal auditing has very limited interaction with the board of directors and senior management." A/FS (KY1, X-62)
5. "[Existence of a] direct and frequent reporting relationship with the board of directors." A/FS (GA1, VII-11)	31. "The Board of Directors is insufficiently aware of and involved with internal audit activities." A/FS (GA1, VII-10)
6. "The audit committee should approve internal auditing's annual work plan [and] ... receive reports on the outcome of major audits." A/FS (KY1, X-63)	32. "The board audit committee is primarily concerned with outside auditors." A/FS (KY1, X-62)
7. "[Parent holding company should] change the organizational position of internal auditing by having the department report directly to the chief financial officer and indirectly to the chief executive officer and the audit committee of the board of directors. [The current] dual responsibility [for the operation of an important portion of the internal accounting control system and for its review by internal auditing, assigned to the assistant controller, accounting controls and methods] is inherently incompatible because of the potential adverse effect on audit objectivity and independence... The suggested change will ... improve communication with top management and insure maximum visibility, independence, and management support." A/FS (FL1, 138)	33. "The audit committee does not review internal auditing's annual audit plan." A/FS (KY1, X-62)
8. "[The company should] review and evaluate the adequacy of [its parent holding company's] internal auditing coverage of [company] operations and, if necessary, take appropriate management action to obtain the desired level of internal audit coverage. Management should assure itself that adequate audit coverage of	34. "... internal auditing's projects have not been closely coordinated with the outside auditors in order to better control audit fees." (See also "Resource Allocation" below). A/FS (KY1, X-61)
	35. "Internal auditing's organizational placement is not optimal. The general staff manager, internal auditing, currently reports to the assistant controller, accounting controls and methods, who also has responsibility for the operation of an important part of the accounting control system. Failure to separate responsibility for accounting controls and the auditing of those controls is an internal control weakness." A/FS (FL1, 136)
	36. "[Parent holding company's] internal auditing coverage of [the company] is limited. The internal auditing staff performed two audits of [the company three years ago] and one [two years ago]. No audits were performed of [the company last year]. Current internal audit coverage of

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

- its operating units is being provided by the professional internal auditing staff. Consideration should be given to frequency of audit coverage desired, coverage from other sources, relative risk, budget, number of personnel, and potential impact on other operating units." (See also "Resource Allocation" below) A/FS (FL1, 138)
9. "Operations reviews performed by [parent holding company] and division personnel, from departments other than internal auditing, are beneficial ... The operations review program is innovative and has produced operational improvements, primarily in customer services." A/FS (FL1, 137)
10. "... the internal auditing department [is] independent of the functions being audited." A/FS (Kearney, 15)
11. "... [internal auditing has] sufficient access to senior management and to the board of directors." A/FS (Kearney, 15)
12. "... [existence of] an audit committee of the board of directors. ... [audit committee's] activities [are] in conformance with SEC requirements. ... [nature of] relationship of the internal auditing department to [the audit] committee." A/FS (Kearney, 15)
13. "... [internal auditing] routinely audits major contracts and subsequent invoices." (See also "Priorities" above) A/FS (Kearney, 15)
14. "... internal auditing's projects should be better coordinated with the work of the outside auditors." A/FS (KY1, X-63)
- [the company] is limited, and it appears unlikely that a significant increase in internal auditing's coverage of the [company's] operations will occur in the near future." (See also "Resource allocation" below) A/FS (FL1, 136)
37. "Neither the [internal] auditor nor the company's independent outside auditor is routinely required to comment to management or the audit committee on how their respective activities complement, duplicate, or otherwise interact with one another." A/FS (NY2, IX-44)
38. "Separate and distinct missions have not been defined for the ... groups involved in internal auditing and consulting. Both auditing and consulting responsibilities are shared ... Failure to define missions clearly usually leads to confusion, and may cause costly duplication of efforts." A/FS (PA7, XI-22)
39. "[Company] management recognizes the need to resolve this matter, which appears to result from two situations:
 • The creation of [the] corporate analysis [unit] and the pending completion of two of its major tasks
 • The broadening of internal auditing activities into operational areas." A/FS (PA7, XI-22)
40. "Managers ... in various departments indicated uncertainty about the exact responsibilities of these auditing and consulting entities." A/FS (PA7, XI-22)
41. "The present reporting relationship for the internal auditing function hampers its effectiveness. Under the present arrangements, with the manager-internal

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

15. "In order to ensure that the [internal auditing] department maintains a high degree of independence, the director has direct access, at any time, to the audit committee of the board of directors and the chairman and CEO." A/FS (PA2, VI-38)
16. "The manager of the [internal auditing] department ... works closely with the audit committee of the board of directors ... attends all meetings of that committee, which are held at least quarterly, and prepares an annual report of departmental activity which is submitted to the audit committee for its review." A/FS (PA3, XI-50)
17. "The establishment of an internal consulting resource is desirable and progressive. B/FS (PA7, XI-21, XI-22)
18. Having a focal point for company liaison with outside consultants also is desirable. B/FS (PA7, XI-21, XI-22)
19. [The company] is using the staff in this function effectively as part of its management development program." B/FS (PA7, XI-21, XI-22)
20. "The scope of internal auditing and consulting responsibilities should be clearly defined, with auditing assigned to the manager-internal auditing, and consulting assigned to the manager-corporate planning. [The company] should delineate the scope of operational auditing and consulting, and should establish a mechanism for resolving any areas of uncertainty which may arise.
- auditing division reporting to a third-level management position, and with audit reports going only to the vice president level, the effectiveness of the internal auditing function may be impaired. In the absence of an arrangement truly reflecting the importance which top management in fact attaches to this function, managers may give too little attention to taking prompt corrective actions concerning audit findings." A/FS (PA7, XI-23)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

21. In general, the internal auditing division should be the locus for reviews of the effectiveness of [the company's] operations. A/FS (PA7, XI-23)
22. • Current plans to expand construction, data processing and operational auditing should be pursued aggressively. A/FS (PA7, XI-23)
23. • The scope of the operational audit program should be expanded to cover all areas of the company." A/FS (PA7, XI-23)
24. "The internal auditing function should report administratively directly to the vice president-finance and accounting. In addition to continuing to have access to the chief executive officer and to the audit committee of the board of directors, the manager-internal auditing division should look to the vice president-finance and accounting for personnel and administrative matters. A/FS (PA7, XI-24)
25. Summaries of all internal audit reports, including unresolved audit findings, should be routinely sent to the chief executive officer for his review. A/FS (PA7, XI-24)
26. Such arrangements should help to ensure the effectiveness of the internal auditing function by strengthening its importance as perceived by managers throughout the company and by facilitating direct attention on the part of the chief executive officer, when this is appropriate." A/FS (PA7, XI-24)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

ORGANIZING

VI. Resource capabilities

1. "[Internal auditing has adequate] depth and breadth of staff." A/U (GA1, VII-11)
2. "[Existence of] the expertise of the staff available to perform the function." A/U (GA1, VII-10)
3. "The staff resources of the internal auditing department should be strengthened promptly and maintained on a continuing basis." A/U (KY1, VIII-29).
4. "A list of prospective candidates to fill future vacancies is maintained and periodically updated." (OH1, VIII-29)
5. "The [internal] auditing department should place increased emphasis on EDP and operational auditing and should be allocated the resources necessary to successfully undertake this effort." (See also "Priorities" above) A/FS (NY2, IX-49)
6. "The [internal] auditing department should ... take steps to increase its engineering and technical competence for undertaking operational audits by:
 - Hiring new personnel with expertise and experience in both the operational and technical aspects of the company's business...
 - Providing additional training for the existing staff." A/FS (NY2, IX-50)
18. "... the existing staffing is a limitation to expanding internal auditing's scope." A/U (KY1, X-61)
19. "Beyond staff shortages, the internal audit function does not appear to have sufficient experience and expertise..." A/U (OH1, VIII-27)
20. "Internal audit section lacks staff skilled in operations on EDP auditing" A/FS (OH1, VIII-27)
21. Auditing section does not have at least one auditor with a degree in data processing? A/FS (OH1, VIII-27)
22. Auditing section does not have at least one auditor with an engineering degree A/FS (OH1, VIII-27)
23. No auditors with CPA, CIA, or CISA certifications. A/FS (OH1, VIII-27)
24. "The internal auditing department is understaffed both in terms of manpower and capabilities." A/U (OH1, VIII-27)
25. Are authorized positions vacant?
26. "The department's present mix of skills is not sufficiently broad to maximize benefits of operational audit opportunities. Although the system internal audits department is auditing operational elements, its present personnel complement does not include any individuals with engineering backgrounds or appropriate utility operating experience. Currently, [the department] is not adequately staffed to maximize verification of the degree of compliance with procedures used by corporate staff groups to conduct various reviews, including:

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

7. "For convenience and to minimize expenses, [the three division internal audit] managers and their staffs maintain office space in the headquarters building of each of the operating companies. [The parent holding company] does use these employees in other geographic areas within the system, however, which allows the company to capitalize on an individual's particular abilities regardless of location." A/FS (PA2, VI-38, VI-39)
8. "The system internal audits department should take steps to ensure the effectiveness of operational audits ... [Parent holding company] senior management and the audit committee should authorize system internal audits to modify its procedures to make certain that such audits are conducted by individuals with either a background in engineering or appropriate utility operating experience. Implementation of this recommendation would also result in system internal audits being in a position to provide better management information to senior management, which should lead to greater operating efficiency and effectiveness. A/FS (PA2, VI-46)
9. "The internal auditing department is developing a program for acquiring the skills and tools necessary to improve its effectiveness in auditing the data processing function. This program includes sending the audit staff members to educational seminars and increasing the use of software packages in the audit process. A/FS (PA3, XI-51)
27. Line crew, substation, engineering, and storeroom reviews, which are conducted by the engineering and construction department in each company
28. •Safety reviews, which are conducted by the compensation and accident prevention division in each company
•Safety and security and fuel sampling reviews, which are conducted by the operating practices department of [the parent holding company] ... Neither [the parent holding company's] senior management nor the audit committee ... has authorized the [internal auditing] department to hire individuals having knowledge of or experience in dealing with the activities in question." A/FS (PA2, VI-43, VI-44)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

10. "The ongoing efforts of internal auditing division management to broaden the scope of its activities and upgrade its staff are commendable and have produced positive results." (See also "Scope of Functions" above) A/FS (PA7, XI-20)
11. "In examining compliance with controls procedures and controls, internal auditing has moved beyond the traditional auditing of the cashiering and finance areas into broad assessments of activities such as salvage and scrap sales, and fuel procurement." (See also "Scope of Functions" above) A/FS (PA7, XI-20)
12. "With the help of its outside auditor, the company initiated the development of a comprehensive construction audit program: A/FS (PA7, XI-21)
13. Initially concentrated on compliance with contracts and operational controls, this program has yielded savings amounting to more than \$6 million during the past five years. A/FS (PA7, XI-21)
14. By assigning staff to this area, management has developed expertise which has enabled the company to monitor major construction projects, such as [a] nuclear generating station." (See also "Scope of Functions" above) A/FS (PA7, XI-21)
15. "Plans to transfer responsibilities for taking physical inventories to the stores division are desirable and will enable the internal auditing division to concentrate on auditing activities." (See also "Scope of Functions" above) A/FS (PA7, XI-21)
16. "... [internal auditing's] procedures [are] adequate for the auditing process." A/FS (Kearney, 15)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

17. "For convenience and to minimize expenses, [the three division internal audit] managers and their staffs maintain office space in the headquarters building of each of the operating companies. [The parent holding company] does use these employees in other geographic areas within the system, however, which allows the company to capitalize on an individual's particular abilities regardless of location." A/FS (PA2, VI-38, VI-39)

VII. Resource Allocation

1. "By increasing the department to full strength, [the company] would be in a position to fulfill planned audit activities. Further, [the company] could also provide assistance to outside auditors, with a potential reduction in annual audit fees." A/FS (OH1, VIII-29)
2. "[The company should] review and evaluate the adequacy of [its parent holding company's] internal auditing coverage of [company] operations and, if necessary, take appropriate management action to obtain the desired level of internal audit coverage. Management should assure itself that adequate audit coverage of its operating units is being provided by the professional internal auditing staff. Consideration should be given to frequency of audit coverage desired, coverage from other sources, relative risk, budget, number of personnel, and potential impact on other operating units." (See also "Roles and responsibilities" above) A/FS (FL1, 138)
5. "[Internal auditing's] resources have not kept pace with new corporate requirements such as those of the Foreign Corrupt Practices Act." A/FS (GA1, VII-10)
6. "...internal auditing's projects have not been closely coordinated with the outside auditors in order to better control audit fees." (See also "Roles and responsibilities" above). A/FS (KY1, X-61)
7. "[Parent holding company's] internal auditing coverage of [the company] is limited. The internal auditing staff performed two audits of [the company three years ago] and one [two years ago]. No audits were performed of [the company last year]. Although recent staff additions have increased the number of audit person-days available, factors such as rapid [parent holding company] growth, system diversification, and an aggressive acquisition program have broadened the audit scope and

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>3. "[Parent holding company should] develop and implement a methodology for charging [the company] for internal auditing services on the basis of direct costs of services received." A/FS (FL1, 138)</p> <p>4. "... [the way that internal auditing's] time [is] split between financial and operational auditing ... [internal auditing's] staff [is] appropriately qualified." A/FS (Kearney, 15)</p> | <p>significantly increased the demands placed on the internal auditing staff. Current internal audit coverage of [the company] is limited, and it appears unlikely that a significant increase in internal auditing's coverage of the [company's] operations will occur in the near future." (See also "Roles and responsibilities" above) A/FS (FL1, 136)</p> <p>8. "Payments to support [parent holding company's] internal auditing staff are not based on direct audit services received." A/FS (FL1, 137)</p> <p>9. "... [internal auditing's] resources [are] diverted into other activities, special projects, etc." A/FS (Kearney, 15)</p> |
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VIII. Program plan

1. "Audit programs exist for most projects." A/FS (KY1, X-62)
2. "Audit programs approved by the manager-internal auditing are used to conduct the audit." A/FS (OH1, VIII-26)
3. "... [internal] audit schedules and programs [have] been prepared in advance." A/FS (Kearney, 15)
4. "The [internal] audit program planning process should be strengthened. [The company] should install a more rigorous process for audit program planning... First, auditing should establish explicit criteria for selecting projects, such as: management and audit committee direction, analysis of the costs and probable benefits of alternative

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

projects, periodic review of certain functions, the company's financial exposure, the audit plans of the external audit firm, [and] requests for audits. Second, the potential projects should be identified, evaluated according to the criteria, and ranked. The rationale for selecting each audit should be documented, along with the associated resources required. Third, a proposed audit program should be developed. The recommended program should specify the relative priority of each proposed audit and the impact of adding or reducing audit resources. Fourth, the [internal] auditor and the company's independent outside auditors should review and comment to management and the audit committee on each other's proposed audit programs. The review should focus on ways in which the internal and external audits can be coordinated to achieve optimum results at the lowest cost. Finally, the internal and independent audit programs should be reviewed with management, and then submitted to the audit committee for review, adjustment, and approval." A/FS (NY2, IX-47, IX-48)

5. "Final approval of the [internal] audit planning memorandum and audit program does not occur until after the in-charge auditor or division internal audit manager meet with the manager of the group to be audited to review the overall scope and nature of the audit. A/FS (PA2, VI-40)
6. "[Internal] audit field work is conducted in accordance with the established audit program. Audit working papers and related findings are reviewed by the in-charge auditor and, to the extent appropriate, by the division audit manager." A/FS (PA2, VI-41)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

7. "The work program of the internal auditing division is developed in conjunction with the company's outside auditor and the audit committee of the board of directors, and includes some departmental requests." (See also "Plan and forecasts" above) A/FS (PA7, XI-20)

CONTROLLING

IX. Implementation

1. "[Existence of appropriate mechanisms to ensure] implementation of recommendations." (See also "Output evaluation" below). A/U (GA1, VII-11)
2. "A formal reporting system should be developed to monitor the implementation of internal audit recommendations. The auditor should establish a formal system for tracking the progress of departments in resolving problems identified during internal audits. As part of the departmental response to internal audit report findings and recommendations, a formal reporting schedule should be proposed. The [internal] auditing department and others involved in the review ... should identify those actions to be monitored and should modify and approve the formal reporting schedule prepared by the relevant department. The department should then report on implementation progress according to the schedule. The formal progress reporting system should be used to monitor implementation progress and to identify potential problems. Problems identified should be reported to the audit committee and others, and corrective action should be initiated as required." A/FS (NY2, IX-49)
5. "The procedures for monitoring the implementation of [internal] audit recommendations are too informal ... there is no formal requirement for departments to respond to an audit report within a predetermined time frame, nor to develop a mutually acceptable implementation plan... The existing situation appears to be the result of the limited and routine scope of internal audit activities in the past." A/FS (NY2, IX-45)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

3. "Depending on the significance of the recommendations, the division audit manager can modify the guidelines for intervals between audits for a particular audit to provide for a more formal postaudit implementation review." (See also "Output Evaluation" below) A/FS (PA2, VI-41)
4. "[Internal auditing's] recommendations are taken seriously and acted upon." (See also "Impact Evaluation" below) A/FS (PA3, XI-51)

X. Program and project Control

1. "Internal auditing's projects should be better coordinated with the work of the outside auditors." (See also "Roles and responsibilities" and "Resource allocation" above) A/FS (KY1, X-63)
2. "Internal auditing should implement improved project time controls." A/FS (KY1, X-63)
3. "The manager of the group audited is required to respond formally within 60 days to the recommendations made in the final [internal] audit report, and, where necessary, to provide an implementation timetable for any changes recommended. The division audit manager receives a copy of this response, takes whatever follow-up action is necessary, and files it with the audit work papers." (See also "Impact evaluation" below) A/FS (PA2, VI-41)
4. "... time controls [for internal auditing's projects] are not adequate." A/FS (KY1, X-62)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

XI. Reports and reviews of progress

1. "Present procedures require that six months following issuance of the final audit report, the internal audit function must review progress against implementation of the agreed-upon corrective actions." (See also "Impact evaluation" below) A/FS (OH1, VIII-26)
2. "... [the internal] audit review process [is] effective." A/FS (Kearney, 15)
3. "... [internal audit] reports [are] well written and substantive. A/FS (Kearney, 15)
4. "The final [internal] audit report, once reviewed by the division audit manager and the director-system internal audits, is then distributed to manager or director of the group audited, the line managers in his area up to and including the appropriate company president, comptroller, the [parent holding company's] senior vice president-rates and accounting, and the external auditors." (See also "Output evaluation" below) A/FS (PA2, VI-41)
5. "Follow-up [by internal auditing to determine if implementation has been appropriate] does not occur until the next audit of the area, which may be far in the future." (See also "Impact evaluation" below) A/FS (KY1, X-62, X-63)

XII. Output evaluation

1. "[Existence of appropriate mechanisms to ensure] implementation of recommendations." (See also "Implementation" above) A/FS (GA1, VII-11)
14. "Follow-up on audit exceptions is not complete. There is no subsequent formal follow-up by internal auditing to determine if implementation has been appropriate." (See also "Reports and Reviews of Progress" above) A/FS (KY1, X-62)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

2. "Audit findings are reviewed with the appropriate member of management, and corrective actions are agreed upon prior to preparing a final audit report." A/FS (OH1, VIII-26)
3. "An audit memo is prepared for each exception noted during an audit and is submitted to the functional manager to whom it applies. The manager must respond by indicating the corrective action to be taken or which has been taken." A/FS (KY1, X-62)
4. "... for significant audit exceptions, internal auditing should review the adequacy of corrective action taken by the applicable manager." A/FS (KY1, X-63)
5. "A final written report is prepared for each audit." A/FS (OH1, VIII-26)
6. "The final written report and supporting workpapers are reviewed by the manager-internal auditing prior to the release of the report." (OH1, VIII-26; KY1, X-62)
7. "The final audit report is then sent to the appropriate member of management, the executive vice president-finance and the audit committee." A/FS (OH1, VII-26)
8. "... operational reviews performed by company personnel independent of internal auditing ... cover compliance with established policies and procedures, and a review of operating efficiency." (See also "Roles and responsibilities" above) A/FS (FL1, 137)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

9. "The final [internal] audit report, once reviewed by the division audit manager and the director-system internal audits, is then distributed to the manager or director of the group audited, the line managers in his area up to and including the appropriate company president, comptroller, the [parent holding company's] senior vice president-rates and accounting, and the external auditors." (See also "Report and Reviews of Progress" above) A/FS (PA2, VI-41)
10. "Depending on the significance of the recommendations, the division audit manager can modify the guidelines for intervals between audits for a particular audit to provide for a more formal postaudit implementation review." (See also "Implementation" above) A/FS (PA2, VI-41)
11. "The division audit manager follows recommendation implementation and reports any deviations from planned implementation schedules to the director-system internal audits ... [who], in turn, includes this information in his annual report to the audit committee." A/FS (PA2, VI-41)
12. "The tangible cost savings resulting from internal audit activities relating to contractual compliance reviews have served to reduce costs to ratepayers ... Because these savings relate to construction, fuel, and maintenance contract audits, they serve to reduce not only current costs but also the potential rate base." A/FS (PA2, VI-41, VI-42)

PERFORMANCE INDICATORS FOR
INTERNAL AUDITING

Positive Performance
Indicators

Negative Performance
Indicators

13. "Cost recoveries and related avoidances of cost increases directly resulting from internal audit efforts in the contractual compliance review area have totaled \$2.2 million and \$1.2 million in [the year before last] and [last year], respectively. Over the past ten years, savings from these efforts have averaged approximately \$2.50 for each \$1 spent on the auditing function."
A/FS (PA2, VI-41, VI-42)

XIII. Impact evaluation

1. "Present procedures require that six months following issuance of the final audit report, the internal audit function must review progress against implementation of the agreed-upon corrective actions." (See also "Reports and reviews of progress" above) A/FS (OH1, VIII-26)
2. "The manager of the group audited is required to respond formally within 60 days to the recommendations made in the final [internal] audit report and, where necessary, to provide an implementation timetable for any charges recommended. The division audit manager receives a copy of this response, takes whatever follow-up action is necessary, and files it with the audit work papers." (See also "Program and project control" above) A/FS (PA2, VI-41)
3. "[Internal auditing's] recommendations are taken seriously and acted upon." (See also "Implementation" above) A/FS (PA3, XI-51)
4. "Follow-up by internal auditing to determine if implementation has been appropriate] does not occur until the next audit of the area, which may be far in the future." (See also "Reports and reviews of progress" above) A/FS (KY1, X-62, X-63)

D. Rate Program Analytical Process

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Does the Company use rates as an economic tool to encourage usage patterns in its own <u>best long-term benefit</u> ? (I.1)	_____	_____	_____
B. Is there <u>complete</u> development of the Company position and rationale for potential major issues in rate cases? (I.4)	_____	_____	_____
C. Is the rate structure designed to promote corporate goals such as conservation and load management? (I.2)	_____	_____	_____
D. Has Company developed a <u>comprehensive</u> strategic plan? (I.3)	_____	_____	_____
<u>II. Plan and Forecasts</u>			
A. Are expenditure forecasts used for rate-making purposes <u>adequately linked</u> to the budget? (II.7, II.23)	_____	_____	_____
B. Does the Company budget cover three years? (II.8, II.24)	_____	_____	_____
C. Do departmental budget projections take into account and explain anticipated productivity, improvements and operational or program changes? (II.9)	_____	_____	_____
D. Is the budget reconciled to historical expenditure levels? (II.10, II.24)	_____	_____	_____
E. Is the company conducting research on alternatives to existing rate designs? (II.1)	_____	_____	_____
F. Is the company conducting load research? (II.6)	_____	_____	_____
G. Does the company use a <u>sound</u> method for load forecasting? (II.19, II.21)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
H. Does the Company compare it's annual ten-year forecast of peak load with an annual forecast of the national average? (II.20, II.22)	_____	_____	_____
I. Are inputs to the load forecasting model generally <u>reasonable</u> ? (II.21)	_____	_____	_____
J. Does the management group alter load forecasts to reflect expectations and historical trends that may not have been <u>adequately</u> captured in the modeling process? (II.22)	_____	_____	_____
K. Is projected financial operating information used in rate filings <u>linked</u> to budget information? (II.15)	_____	_____	_____
L. Is the financial information filed in a rate case <u>generally</u> accurate? (II.18)	_____	_____	_____
M. Does the Company use information from its budgeting system to identify the cause of the variance between actual expenditures and those allowed by the Commission? (II.33)	_____	_____	_____
N. Does Company have an <u>effective</u> forecasting method for fuel costs? (II.33)	_____	_____	_____
III. <u>Scope of Function</u>			
A. Does the rate department <u>regularly</u> examine innovative rate designs? (III.1)	_____	_____	_____
B. Is the ratemaking function <u>responsive</u> to the needs and characteristics of large customers? (III.2)	_____	_____	_____
C. Is the company taking advantage of depreciation and other tax benefits to enhance cash flow? (III.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
D. Does the rate department participate in load management programs with engineering and distribution personnel? (III.4)	_____	_____	_____
E. Has the company conducted rate design experiments in its service territory? (III.7)	_____	_____	_____
IV. <u>Priorities</u>			
A. Does the rate department have <u>detailed</u> load information on commercial customers? (IV.1)	_____	_____	_____
B. Has the Company conducted any rate design experiments within its service territory? (IV.2)	_____	_____	_____
C. Does the Company use information from rate design experiments in its long-range forecasting method? (IV.2)	_____	_____	_____
V. <u>Roles and Responsibilities</u>			
A. Is the director of rates responsible for administering rates and service contracts? (V.35)	_____	_____	_____
B. Does the director of rates keep rate schedules <u>up to date</u> ? (V.5)	_____	_____	_____
C. Does the director of rates provide technical advice to the field staff by interpreting rate schedules? (V.7)	_____	_____	_____
D. Does the director of rates prepare and file reports with regulatory commissions? (V.9)	_____	_____	_____
E. Does the senior vice-president, the financial vice-president and the vice-president of rates and contracts monitor projected rate deficiencies to determine when to file rate cases? (V.10, V.13)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
Does the company have an organizational focal point to:			
F. • coordinate contacts with the Commission? (V.38)	_____	_____	_____
G. • ensure that consistent and accurate information is forwarded to the Commission? (V.38)	_____	_____	_____
H. • ensure the inquiries received from the Commission are responded to in a timely manner? (V.38)	_____	_____	_____
I. Are economic studies <u>consolidated</u> within the rate department? (V.16, V.34)	_____	_____	_____
J. Is in-house counsel used in preparing and reviewing planned testimony for regulatory proceedings? (V.21)	_____	_____	_____
K. Does a computer program analyst <u>assist</u> in gathering and analysis of data for rate cases? (V.19)	_____	_____	_____
L. Does the company have a case manager to direct preparation and presentation for each rate case? (V.44)	_____	_____	_____
M. Does the rate division manager examine budgets to determine conformance with company standards? (V.28)	_____	_____	_____
N. Does head of rates division review the testimony of Company's witnesses? (V.33)	_____	_____	_____
 ORGANIZING			
VI. <u>Resource Capabilities</u>			
A. Is the rate department <u>adequately</u> staffed, including an <u>adequate</u> complement of rate analysts, statisticians, and economists? (VI.1)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
B. Is there an <u>appropriate</u> balance between in-house expertise and outside assistance in the work of the rate division? (VI.20)	_____	_____	_____
C. If future test years are used, does the rate division have staff who are familiar with company budgeting procedures? (VI.30)	_____	_____	_____
D. Is the company taking advantage of depreciation and other benefits to enhance cash flow? (VI.5)	_____	_____	_____
E. Is Company <u>adequately</u> staffed to perform load forecasting with in-house staff? (VI.19)	_____	_____	_____
F. Is Company conducting research into the price inputs for its load forecasting model? (VI.28, VI.29)	_____	_____	_____
G. Is Company conducting research into the price response of consumers to alternative rate designs? (VI.14, VI.28)	_____	_____	_____
H. Is <u>adequate</u> use made of electronic data processing systems to perform repetitious calculations and report production tasks? (VI.4)	_____	_____	_____
I. Are <u>adequate</u> analytical tools available for cost-of-service studies and innovative rate structures? (VI.6)	_____	_____	_____
J. Is a company-specific price variable used in the load forecasting model? (VI.28, VI.29)	_____	_____	_____

VII. Resource Allocation

No performance indicators meeting our study criteria were found.

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
<u>VIII. Program Plan</u>			
A. Is a schedule developed showing planned start and completion dates of all rate case filing tasks? (VIII.1, VIII.4)	_____	_____	_____
B. Are <u>structured</u> mechanisms in place to formulate a <u>cohesive</u> and <u>disciplined</u> strategy regarding the major issues associated with industrial cases? (VIII.3)	_____	_____	_____
 CONTROLLING			
<u>IX. Implementation</u>			
A. Does the rate department <u>effectively</u> prepare and present rate cases? (IX.3, IX.9)	_____	_____	_____
B. Are rate cases <u>well</u> documented? (IX.3)	_____	_____	_____
C. Does the company present witnesses with detailed familiarity with technical aspects of company planning, operations, and finance? (IX.35)	_____	_____	_____
D. Does Company have a five-year summary of requested revenue requirements and the amount approved by the commission? (IX.6, IX.12)	_____	_____	_____
E. Does Company have a summary of the major changes in assumptions or techniques used in its cost of service studies for the past five years? (IX.7)	_____	_____	_____
F. Did Company meet scheduled filing dates in present rate case? (IX.10, IX.13)	_____	_____	_____
G. Can Company's budget be directly used as the basis for projecting expenses during the rate period? (IX.32)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
H. Do Company witnesses undergo a dry-run questioning prior to appearing before the Commission? (IX.7, IX.14)	_____	_____	_____
I. Does Company have an <u>appropriate</u> number of distinct rate schedules? (IX.36)	_____	_____	_____
J. Does Company have a <u>clear</u> description of its policy goals, contained in its rate relief request? (IX.20)	_____	_____	_____
K. Does the Company use case summaries which highlight the Company's position in terms which can readily be grasped by a non technical audience? (IX.23)	_____	_____	_____
L. Has the Company <u>streamlined</u> or <u>consolidated</u> its existing rate schedules? (IX.24)	_____	_____	_____
<u>X. Program and Project Control</u>			
A. Are witnesses <u>properly</u> prepared for rate cases? (X.6, X-24)	_____	_____	_____
B. Does company go through a <u>rigorous</u> question and answer session which simulates on-the-stand testimony? (X.24)	_____	_____	_____
C. Does counsel review with each witness, prior to examination on the stand, testimony and possible issues to be raised? (X.24)	_____	_____	_____
D. Is the Company's schedule for planned rate proceedings adjusted if changes occur regarding when forecasted revenue deficiencies will occur? (X.4)	_____	_____	_____
E. Is there a <u>uniform</u> understanding by Company staff of the Company's essential objectives on major issues of each rate case? (X.21)	_____	_____	_____
F. Do planned versus actual starting and completion dates for major tasks match? (X.21)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
G. Does company prepare and file rate cases within a <u>reasonable</u> time? (X.21)	_____	_____	_____
H. Does vice president of rates and counsel do final review of company witnesses' written testimony? (X.21)	_____	_____	_____
I. Is the load forecast review process <u>adequate</u> ? (X.5)	_____	_____	_____
J. Does Company respond in a <u>timely</u> fashion to Commission information requests? (X.19)	_____	_____	_____
K. Are depreciation rates <u>appropriate</u> for the expected pace of technological change in the field? (X.25, X.26)	_____	_____	_____
<u>XI. Reports and Reviews of Progress</u>			
A. Does the rates department survey other utilities' bills for several types of service? (XI.5)	_____	_____	_____
B. Does the rates department compare Company's bills to other utilities? (XI.5)	_____	_____	_____
C. Are rate cases <u>well</u> documented? (XI.6)	_____	_____	_____
D. Does the Company <u>appropriately</u> track projected revenue deficiencies in order to determine when to file rate cases? (XI.3)	_____	_____	_____
E. Is estimated return on common equity published monthly? (XI.4)	_____	_____	_____
F. Do formal rate case submittals provide summaries of relevant information? (XI.6)	_____	_____	_____
G. Do formal rate case submittals clearly portray company's financial circumstances in ways which can readily be grasped by the broad range of audiences interested in company's rate filings? (XI.7)	_____	_____	_____

DIAGNOSTIC GUIDELINES
FOR RATE PROGRAM ANALYTICAL PROCESS

	Yes/ No	Weight	Score
<u>XII. Output Evaluation</u>			
A. Is there a <u>reasonable</u> number of separate rate schedules? (XII.4)	_____	_____	_____
B. Do Company's rates compare <u>favorably</u> with those of other <u>similar</u> Companies? (XII.1)	_____	_____	_____
C. Have rate increases over the last five years been gradual? (XII.3)	_____	_____	_____
<u>XIII. Impact Evaluation</u>			
A. Are Company rates <u>comparable</u> to others in the industry? (XIII.4)	_____	_____	_____
B. Is the ratemaking function <u>responsive</u> to the needs and characteristics of all customer classes? (XIII.5)	_____	_____	_____
C. Does earned return on common equity match approved return? (XIII.1, XIII.3)	_____	_____	_____

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. " ... company [uses] rates as an economic tool to encourage usage patterns in its own best long-term benefit." A/FS (GA1, VII-13)

2. "Rate structure [is] not designed to promote corporate goals such as conservation and load management." A/FS (GA1, VII-12)

3. "A comprehensive strategic approach to the issues [facing the industry] has not yet emerged. A/U (SC1, VII-7)

4. "Complete development of the company position and rationale for potential major issues." B/FS (KY1, X-46, X-47)

II. Plan and Forecasts

1. "The Company is planning to conduct a considerable amount of rate research ... alternatives to existing rate design, including: A/FS (KY1, X-43)

23. "The expenditure forecasts used for ratemaking purposes are not adequately linked to the budget... A/FS (NY2, IX-38, IX-39)

2. Transition from declining blocks A/FS (KY1, X-43)

24. The financial analysis staff within the rate and economic research department should develop a three-year expenditure forecast based upon historical expenditures, [based on] reports received from department heads, and assumptions regarding inflation and other cost-related factors. A/FS (NY2, IX-38, IX-39)

3. Combination of rate schedules with respect to commercial and industrial tariffs A/FS (KY1, X-43)

4. Evaluation of load management time-of-day rate experiments. A/FS (KY1, X-43)

25. The current year's operating forecast (the budget) is not used as the foundation on which to build these [expenditure] estimates." A/FS (NY2, IX-38, IX-39)

5. An analysis ... of various rate classes in order to rationalize the differences in rates of return ... A/FS (KY1, X-43)

6. "Although no longer subject to load research and reporting requirements [of PURPA], [Company] is continuing with its program of load research ... original load research plan ... included the acquisition of metering

26. "... lack of reliance on the budget [as a foundation for the expenditure forecasts used for ratemaking purposes] results from: A/FS NY2, IX-39)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

- equipment and metering of [various] types of retail service [on a four-year rotation basis]. [Company] will continue gathering load research data for required retail case filings." A/FS (KY1, X-44)
7. "The expenditure forecasts used for rate purposes should be based on data from the budget. A/FS (NY2, IX-40)
 8. The budgeting process should be expanded to cover three years, ..., with departments required to budget for the first year by month and by quarter for the second and third years. A/FS (NY2, IX-40)
 9. Departmental budget projections should take into account and explain anticipated productivity improvements and operational or program changes. A/FS (NY2, IX-40)
 10. The budget should be reconciled to historical expenditure levels as required by the PSC." A/FS (NY2, IX-40)
 11. "The effective linkage of the company's operating forecast and financial planning for rate matters should result in: A/FS (NY2, IX-40, IX-41)
 12. Increased accuracy in rate requests A/FS (NY2, IX-40, IX-41)
 13. Simplification of data gathering for rate case purposes A/FS (NY2, IX-40, IX-41)
 14. The focusing of management's attention on the budgeting process and the resulting forecasts as the company's primary short-term financial planning and control tool." (See also Implementation") A/FS (NY2, IX-40, IX-41)

Negative Performance
Indicators

27. The limited time horizon of the budget which usually does not include the full rate case test year A/FS (NY2, IX-39)
28. The historical lack of focus on the forecast [budget] as a meaningful estimate of expectations A/FS (NY2, IX-39)
29. The historically predictable nature of operating expenditures." A/FS NY2, IX-39)
30. "The inability to use the budget as the basis for projecting expenses during the rate period: A/FS (NY2, IX-39)
31. Results in the duplication of efforts which would not be necessary if the budget process were modified appropriately A/FS (NY2, IX-39)
32. Leads to rate case requests which are significantly below actual expenditures, contributing to a shortfall in earned rate of return below the allowed rate." (See also "Implementation") A/FS (NY2, IX-39)
33. "... The lack of reliance on the budgeting system for rate case preparation impairs the company's ability to identify, in a timely and comprehensive fashion, the causes of variances between actual expenses and those allowed by the PSC ... such as: A/FS (NY2, IX-39, IX-40)
34. ineffective forecasting methodologies for such items as fuel costs or inflation A/FS (NY2, IX-39, IX-40)
35. inadequate operational planning, which results in less than adequate budget requests A/FS (NY2, IX-39, IX-40)
36. inadequate rate relief A/FS (NY2, IX-39, IX-40)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance Indicators	Negative Performance Indicators
<p>15. "Projected financial operating information used in rate filings is linked to budgeted information. [This effective linkage] results in: A/FS (OH1, VIII-24)</p>	<p>37. The inability to identify the cause of variances precludes the company's taking corrective action expeditiously. For example, for [a recent] rate year ..., a significant portion of the company's \$18 million shortfall was due to ineffective forecasting... The causes for approximately \$2.5 million in operating expense variances were not readily explainable." (See also "Resource capabilities") A/FS (NY2, IX-39, IX-40)</p>
<p>16. Reasonable expectations on the part of senior management that the rate relief requested will be sufficient to cover anticipated operating costs and generate reasonable returns to [the company's] equity and debt holders. A/FS (OH1, VIII-24)</p>	
<p>17. Simplification of data gathering for rate case purposes. A/FS (OH1, VIII-24)</p>	
<p>18. Improved accuracy in financial information filed in rate requests." A/FS (OH1, VIII-24)</p>	
<p>19. "Overall, [company's] load forecasting methodology is sound and continually improving... The implementation of the [econometric and end-use] forecasting process was a significant improvement over past practices. The resultant forecasts provide the company with a better understanding of the determinants of demand and are more defensible before regulatory agencies." A/FS (PA3, IV-8)</p>	
<p>20. "Forecast average annual growth rates in peak load over a ten-year time horizon... compares [Company's] forecast of growth over the next ten years with the national average rates of growth over the same time period." A/FS (PA3, IV-5, FIG. IV-2)</p>	
<p>21. "The inputs to the load forecasting model are generally reasonable, and parameter estimates are statistically significant and in the range of industry experience." (See also "Resource capabilities") A/FS (PA3, IV-8)</p>	

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

22. "The management group often alters the [load] forecast to reflect expectations and historical trends that may not have been adequately captured in the [econometric and end-use] modeling process. The reasonableness of such adjustments (which have typically been downward) is supported by the fact that most industry forecasts have consistently overestimated demand growth in the past." (See also "Report and Reviews of Progress") A/FS (PA3, IV-7)

III. Scope of Function

1. "... rate department [is] innovative in new rate design (time of use, peak-load, seasonal, etc.)" (See also "Implementation", below) A/FS (Kearney, 19)
2. "... ratemaking function [is] responsive to the needs and characteristics of large customers (i.e., industrial, commercial and wholesale)." (See also "Role and Responsibilities and "Output Evaluation", below) A/FS (Kearney, 19)
3. "... company [is] taking advantage of favorable depreciation and other tax benefits to enhance cash flow." (See also "Roles and Responsibilities, below) A/FS (Kearney, 19)
4. "... the rate department participates in load management programs with engineering and distribution personnel." A/FS (Kearney, 19)
5. "[Company is unable] to adjust to new requirements such as PURPA induced rate design techniques." (See also "Implementation", below) A/FS (GA1, VII-12)
6. "Rate design assumptions [are] unintentionally favoring one class of customers compared to another." (See also "Implementation", below) A/FS (GA1, VII-12)
7. "[Company] has not conducted any rate design experiments within its service territory. Such experiments could provide estimates of expected price elasticities under current and alternative rate structures. This information would improve [Company's] long-range load forecasting capabilities." (See also "Priorities" below) A/FS (PA3, IV-6)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

IV. Priorities

1. "The rate department has recently begun a program aimed at providing more detailed load information on commercial and industrial customers. The program is designed to dis-aggregate commercial and industrial customers by standard industrial classification code. This should help the company better understand the factors influencing demands within each sector and enable adjustments in response to customer-specific information." A/FS (PA3, IV-8)
2. "[Company] has not conducted any rate design experiments within its service territory. Such experiments could provide estimates of expected price elasticities under current and alternative rate structures. This information would improve [company's] long-range load forecasting capabilities." (See also "Scope of Functions", above) A/FS (PA3, IV-6)

V. Roles and responsibilities

1. "... ratemaking function [is] responsive to the needs and characteristics of large customers (i.e., industrial, commercial and wholesale)." A/FS (Kearney, 19)
2. "... company [is] taking advantage of favorable depreciation and other tax benefits to enhance cash flow." (See also "Scope of Functions", above) A/FS (Kearney, 19)
3. "... the rate department participates in load management programs with engineering and distribution personnel." (See also "Scope of Functions", above) A/FS (Kearney, 19)
4. "Rates and service contracts are properly administered. The director of rates is responsible for administering rates and service contracts, which entails the following activities:
 5. Ensuring that rate schedules are up to date
 6. Calculating line extension and special lighting charges
35. "A one-on-one reporting relationship exists within the rates department. With the exception of one secretary, everyone in rates reports to the director of rates and economic research A/U (KY1, X-46)
36. "... individuals below the director of rates and economic research sometimes receive directions from the vice president of rates. In addition to the potential confusion from this structure, too many management layers exist. [Company] should clarify this organizational anomaly and evolve away from the one-on-one reporting relationship." A/U (KY1, X-46)
37. "Rate design assumptions [are] unintentionally favoring one class of customers compared to another." A/FS (GA1, VII-12)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

7. Providing technical advice to the field by interpreting rate schedules, researching unusual situations, and informing field of current events (e.g., PSC regulations). B/FS (KY1, X-45, X-46)
8. Preparing and checking contracts for leased electrical facilities.
9. Preparing and filing various reports with regulatory commissions." B/FS (KY1, X-45, X-46)
10. Revenue deficiencies are projected by the [company's] financial planning model. A/FS (KY1, X-45) A/FS (KY1, Exh. X-23)
11. When conditions change, ... the model [is] rerun to determine if revenue deficiencies are projected to occur sooner than planned. A/FS (KY1, X-45) A/FS (KY1, Exh. X-23)
12. Where revenue deficiencies will develop sooner, the schedule for any planned rate proceedings is adjusted accordingly. Estimated return on ... common equity is also published monthly in the [Company's] budget package report. A/FS (KY1, X-45) A/FS (KY1, Exh. X-23)
13. This is monitored by the senior vice president (CFO), the financial vice president, and the vice president of rates and contracts." A/FS (KY1, X-45) A/FS (KY1, Exh. X-23)
14. "[Company] should clarify the organization structure of the rates department. The one-on-one reporting relationship should eventually be eliminated. A/U (KY1, X-47)
38. "[The Company's] regulatory activities could benefit from more structured oranzizational support. [The Company] does not have an organizational focal point to coordinate Company contacts with the PUC, to ensure that consistent and fully accurate information is forwarded to the PUC, and to ensure that inquiries received from the PUC are responded to in a timely manner. The need for such a focal point for continuing liaison with the PUC (and other regulatory agencies) is further underscored by [the fact that] ... the organizational relationships and assignment of functional responsibilities among [the company] and its corporate affiliates ... are not clearly understood outside the enterprise. As turnover occurs within the regulatory community, a recurring need is created for the company to familiarize new officials with the nature of and the rationale underlying its structural arrangements." A/U (PA2, VI-34)
39. "[The Company's] ability to prepare rate cases, using prospective test years, can be strengthened.
40. The rate division has recognized the substantial impact on case preparation which this procedural change may have and accordingly has added a staff member familiar with [the Company's] budgeting procedures. However, [the] full implications [of switching to prospective test years] may not be fully recognized. While the rate division has the capability to assist other elements of the company in adapting to ... requirements [for prospective test year data], it has not yet been directed to do so." A/FS (PA7, X-20, X-21)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

15. "This will reduce the number of management layers and provide subordinates with one person from whom to take directions." A/U (KY1, X-47)
16. "The consolidation of the economic studies section within the rate department will enhance [the company's] ratemaking capability. This restructuring should further strengthen the company's capacity to assess (and pursue where appropriate) evolving rate design concepts and innovations and related trends in such fields as customer cogeneration." A/FS (OHI, VIII-23)
17. "Initiatives have recently been undertaken to strengthen the company's rate making functions and relationships with regulatory agencies, especially the PUC. Two specialized staff members recently added to the ... rates department now provide needed support in key areas. A/FS (PA2, VI-33)
18. The attorney-rates assists ... in preparing and reviewing planned testimony, thereby improving its content and allowing others in the department to concentrate their efforts on technical and analytical matters involved in the filing ... recently initiated an index of all rate case testimony by subject and witness, which should improve the consistency of testimony and the ability of [the company] to anticipate or constructively respond to issues that may arise during rate hearings. A/FS (PA2, VI-33)
19. The computer program analyst assists ... in data gathering and analysis, thereby augmenting the quality and timeliness of rate case information. A/FS (PA2, VI-33)

Negative Performance
Indicators

41. "Continued reliance on a centralized administrative approach could prove counterproductive." B/U (SC1, VII-16)
42. . . . [Centralization] has of necessity limited the extent to which regulatory affairs personnel can be fully sensitive to the unique circumstances prevailing in the major jurisdictions served by [Company]." B/U (SC1, VII-16)
43. "Existing institutional arrangements may not be well suited for effectively addressing the broad-ranging regulatory and public policy issues now affecting the telecommunications industry, [Company] and the State." A/FS/T (SC1, VII-27)
44. "The company has not yet adopted the 'case manager' concept for the direction of rate case preparation and presentation; thus, the efforts of numerous personnel involved in the case may not benefit from suitable degrees of coordination and policy guidance." A/FS (PA2, VI-35, VI-36)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

-
20. ... the president of [the Company] recently assumed responsibility for developing closer working relationships and improved communications with the PUC and for providing a direct link between the commission and senior management. A/FS (PA2, VI-33)
 21. ... there has been an improvement in the quality of [the Company's] regulatory proceedings partially as a result of more extensive use of in-house counsel." A/FS (PA2, VI-33)
 22. "[The Company] should crystallize responsibility for staff support of regulatory affairs activities. An organizational focal point should be established to: A/FS (PA2, VI-36)
 23. Coordinate communications between [the company] and various regulatory agencies, especially the PUC. A/FS (PA2, VI-36)
 24. Ensure that such communications are processed in a timely and expeditious manner, and with suitable policy level oversight." A/FS (PA2, VI-36)
 25. "The rate division should be assigned a more active role in preparing the company for filing rate cases based on prospective test years. The manager-rate division should assist ... in: A/FS (PA7, X-21)
 26. Ensuring that all [Company] executives having budgeting responsibilities are fully cognizant of the increased importance of accuracy in forecasting which prospective test year rate filings will entail A/FS (PA7, X-21)
 27. Revising budgetary procedures to include two years of data by month A/FS (PA7, X-21)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance Indicators	Negative Performance Indicators
28. Conducting prototype budget audits to ensure that existing company systems will withstand such scrutiny." A/FS (PA7, X-21)	
29. "Generally positive ratemaking climate between the Company and Commission." B/FS (PA6, V-3)	
30. "Good working relationship with the [Commission]." B/FS (PA5, 4-20)	
31. "The [Regulatory] Department's relations and communications with the [Commission], state legislature, local, city, and county governments, and community groups are appropriate." B/FS (FL1, 153)	
32. "[There is] an organizational focal point of responsibilities for guiding and supporting (but not controlling) regulatory communications involving a wide range of [Company] personnel." A/FS (NY3, VI-9)	
33. "Final review of company witnesses' written testimony ... to ensure understandability and consistency ... is performed by vice president of rates and contracts and [company's] outside counsel." A/FS (KY1, X-45, X-46)	
34. "The consolidation of the economic studies section within the rate department will enhance [the Company's] ratemaking capability. This restructuring should further strengthen the company's capacity to assess (and pursue where appropriate) evolving rate design concepts and innovations and related trends in such fields as customer cogeneration." A/FS (OH1, VIII-23)	

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

ORGANIZING

VI. Resource Capabilities

1. "[Company should] augment the staff capabilities as necessary in the rate department. [Company's] plans to incorporate conservation and load management into its overall operating strategy will increase the demands on the rate department. To develop the sophisticated rate structures necessary to promote conservation and load management, [company] will probably need, at the very least, a rate analyst, a statistician, and another economist. These additional staff members would allow [the company] to rely less heavily on outside consultants, to incorporate more service-territory-specific information into the load forecasting process, and to conduct more extensive rate research." A/FS (PA3, IV-9)
2. "The rate division appears to be generally effective, operating with a high degree of professionalism and teamwork. Despite exponential increases in the complexity of regulatory case preparation and reporting requirements ..., the staff ... has grown modestly, with only two positions added in five years ... steps have been taken to limit cost increases and to improve productivity. A/FS (PA7, X-20)
3. "... duties formerly performed by engineers have been reassigned to analysts (often former clerical personnel who have been upgraded to professional status through suitable training). A/FS (PA7, X-20)
4. Increasing use is being made of electronic data processing and word
19. "Compared with similar-sized utilities, [company] has a small load forecasting and rate design staff ... [it] includes only one economist. Because of this small staff, [Company] relies heavily on outside assistance. Although [Company's] consultants are qualified, they do not have the opportunity to develop a detailed understanding of service-territory-specific conditions, which may be useful in modeling future load patterns. Given the heavy emphasis of the current load forecasting methodology on economics and statistics, the addition of staff capabilities in these areas would enable [company] to perform more load forecasting activities in-house." A/FS (PA3, IV-7)
20. "[Company] relies too heavily on outside consultants for load forecasting support and could more fully develop its in-house load forecasting expertise." A/FS (PA3, IV-9)
21. "Much of the work in developing alternative rate designs is also assigned to outside consultants, as [Company's] staff in this area contains only two professionals. While reliance on outside assistance can, in some instances, be cost effective, continued reliance on outside consultants limits the company's ability to develop in-house expertise. Such expertise would allow for the incorporation of [Company]-specific information in the development and evaluation of alternative demand management strategies. A/FS (PA3, IV-7, IV-8)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

- processing systems to perform repetitious calculations and report production tasks." A/FS (PA7, X-20)
5. "... Company [is] taking advantage of favorable depreciation and other tax benefits to enhance cash flow." A/FS (Kearney, 19)
6. "... [Existence of adequate] analytical tools available for development of cost of service studies." A/FS (GA1, VII-11)
7. "... [Company is in a] position and [is able] to implement innovative rate structures such as marginal costing and time-of-day rates." A/FS (GA1, VII-11)
8. "[Company] is aware of and has available various [flexible] analytic techniques in determining rate design." A/FS (GA1, VII-12)
9. "... rate department [is] innovative in new rate design (time of use, peak-load, seasonal, etc.)" A/FS (Kearney, 19)
10. "... [Existence of adequate] analytical tools available for development of cost of service studies." A/FS (GA1, VII-11)
11. "... data bases and sources for cost of service information, the incidence of magnetic tape meters for example." A/FS (GA1, VII-12)
12. "Regulatory lag and implementation of a rate information system." A/FS (GA1, VII-12)

Negative Performance
Indicators

22. "... the lack of reliance on the budgeting system for rate case preparation impairs the company's ability to identify, in a timely and comprehensive fashion, the causes of variances between actual expenses and those allowed by the PSC ... such as: A/FS (NY2, IX-39, IX-40)
23. Ineffective forecasting methodologies for such items as fuel costs or inflation A/FS (NY2, IX-39, IX-40)
24. Inadequate operational planning, which results in less than adequate budget requests A/FS (NY2, IX-39, IX-40)
25. Inadequate rate relief A/FS (NY2, IX-39, IX-40)
26. The inability to identify the cause of variances precludes the company's taking corrective action expeditiously. A/FS (NY2, IX-39, IX-40)
27. For example, for [a recent] rate year ..., a significant portion of the company's \$18 million shortfall was due to ineffective forecasting ... the causes for approximately \$2.5 million in operating expense variances were not readily explainable." A/FS (NY2, IX-39, IX-40)
28. "... the price variable used [in the load forecasting model] and the estimates of potential price responses under alternative rate designs are not as fully developed as they might be." A/FS (PA3, IV-8, IV-9)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

13. "The inputs to the load forecasting model are generally reasonable, and parameter estimates are statistically significant and in the range of industry experience." A/FS (PA3, IV-8)
14. "[Company should] conduct additional research in the areas of price inputs into the load forecasting model and price responses to alternative rate designs. Prices should be tied to [company]-specific business plans rather than to regional price expectations. Additional rate design work will be required if potential demand management options are to be considered and evaluated. A/FS (PA3, IV-9)
15. "The rate division should be assigned a more active role in preparing the company for filing rate cases based on prospective test years. The manager-rate division should assist ... in: A/FS (PA7, X-21)
16. Ensuring that all [company] executives having budgeting responsibilities are fully cognizant of the increased importance of accuracy in forecasting which prospective test year rate filings will entail A/FS (PA7, X-21)
17. Revising budgetary procedures to include two years of data by month A/FS (PA7, X-21)
18. Conducting prototype budget audits to ensure that existing company systems will withstand such scrutiny." A/FS (PA7, X-21)

Negative Performance
Indicators

29. "[Company's] load forecasting model uses a price variable ... which reflects national and regional price expectations. This price variable may not reflect future prices in [the company's] service territory. Use of a [company]-specific variable would increase the accuracy of the forecasting process." A/FS (PA3, IV-5)
30. "[The company's] ability to prepare rate cases, using prospective test years, can be strengthened. A/FS (PA7, X-20, X-21)
31. The rate division has recognized the substantial impact on case preparation which this procedural change may have and accordingly has added a staff member familiar with [the company's] budgeting procedures. However, [the] full implications [of switching to prospective test years] may not be fully recognized. While the rate division has the capability to assist other elements of the company in adapting to ... requirements [for prospective test year data], it has not yet been directed to do so." A/FS (PA7, X-20, X-21)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

18A. "... length of time needed to prepare and file a rate case." (See also "Program Plan" below) A/FS (GA1, VII-11)

VII. Resource Allocation

No performance indicators meeting our study criteria were found.

VIII. Program Plan

1. "The preparation process for retail rate case filings is appropriate... A schedule is developed showing planned start and completion dates for all tasks. (See also "Implementation" below) A/FS (KY1, X-45, X-46)
2. During the last retail rate case, [the company] missed its original filing date by less than two weeks, over the course of a 3.5 month undertaking. (See also "Implementation" below) A/FS (KY1, X-45, X-46)
3. Prior to examination on the stand, [company's] outside counsel reviews, with each witness, the testimony and possible issues to be raised." (See also "Implementation" below) A/FS (KY1, X-45, X-46)
4. "... a comparison of planned versus actual start and completion dates for major tasks in the last rate filing preparation." B/FS (KY1, X-46, EXH. X-25)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

5. "Use of the 'remaining life' rather than 'average life' method of determining the allowable annual depreciation accrual is preferable in view of increasing competition, technological changes and deregulation of customer premises equipment." B/FS/T (PA6, V-8)
6. "In response to this anticipated shortfall [in depreciation reserves], [Company] has worked with representatives of the PSC to develop alternative depreciation methodologies." B/FS/T (NY3, VI-8)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance Indicators	Negative Performance Indicators
IX. <u>Implementation</u>	
1. "New tariff strategies have been implemented." B/FS (PA5, 4-20)	29. "Rate design assumptions [are] unintentionally favoring one class of customers compared to another." A/FS (GA1, VII-12)
2. "[Company's Regulatory] Department has recently initiated and implemented a number of changes in tariffs which have benefitted the Company and its customers." B/FS (FL1, 153)	30. "Revenue requirements and rate case data [are] poorly represented to Commission, interviewers and the general public." A/FS (GA1, VII-12)
3. "[Company] endeavors to prepare rate cases and supporting documentation on a complete and factual basis." B/FS (PA5, 4-20)	31. "[Company is unable] to adjust to new requirements such as PURPA induced rate design techniques." A/FS (GA1, VII-12)
4. "[Company] is sensitive to balancing the preferences of the public for increases in non-recurring components such as installation and usual utility preference for increasing those components which will recur periodically or continuously." B/FS (PA5, 4-20)	32. "The inability to use the budget as the basis for projecting expenses during the rate period:
5. "... length of time needed to prepare and file a rate case." A/FS (GA1, VII-11)	33. Results in the duplication of efforts which would not be necessary if the budget proces were modified appropriately
6. "Five-year summary of requested revenue requirements and Commission granted rates." A/FS (GA1, VII-12)	34. Leads to rate case requests which are significantly below actual expenditures, contributing to a shortfall in earned rate of return below the allowed rate." A/FS (NY2, IX-39)
7. "Major changes in assumptions or techniques in cost of service studies, rate design, for the last five years and for the foreseeable future." A/FS (GA1, VII-12)	35. "... the company's witness selection and preparation practices could be refined in ways which would facilitate the conduct of regulatory proceedings... [the company needs] to present witnesses with detailed familiarity with technical aspects of company planning, operations, and finance [and] ... thorough preparation ... for cross-examination. A/FS (PA2, VI-36)
8. "... rate department [is] innovative in new rate design (time of use, peak-load, seasonal, etc.)" A/FS (Kearney, 19)	

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

9. "The preparation process for retail rate case filings is appropriate... A schedule is developed showing planned start and completion dates for all tasks. A/FS (KY1, X-45, X-46)
10. During the last retail rate case, [the company] missed its original filing date by less than two weeks, over the course of a 3.5 month undertaking. Final review of company witnesses' written testimony ... to ensure understandability and consistency ... is performed by vice president of rates and contracts and [Company's] outside counsel. A/FS (KY1, X-45, X-46)
11. Prior to examination on the stand, [Company's] outside counsel reviews, with each witness the testimony and possible issues to be raised." A/FS (KY1, X-45, X-46)
12. "Summary of retail rate requests and orders [for the last ten years]." B/FS (KY1, Exh. X-24)
13. "... a comparison of planned versus actual start and completion dates for major tasks in the last rate filing preparation." B/FS (KY1, X-46, EXH. X-25)
14. "Dry run questioning of each witness under realistic conditions (i.e., in front of an audience, being asked adversarial questions)." B/FS (KY1, X-46, X-47)
15. "The effective linkage of the company's operating forecast and financial planning for rate matters should result in: A/FS (NY2, IX-40, IX-41)
16. Increased accuracy in rate requests A/FS (NY2, IX-40, IX-41)

Negative Performance
Indicators

36. "... 11 distinct rate schedules are maintained for closely related street, highway, and outdoor lighting service (including athletic field and carnival/fair services). Total ... revenues for 6 of [the company's] 18 distinct rate schedules amounted to less than \$100,000 each, thus bringing into question the rationale for retention and administration of such schedules from a cost/benefit perspective." A/FS (PA2, VI-36)
37. "[The company's] ability to prepare rate cases, using prospective test years, can be strengthened.
38. The rate division has recognized the substantial impact on case preparation which this procedural change may have and accordingly has added a staff member familiar with [the company's] budgeting procedures. However, [the] full implications [of switching to prospective test years] may not be fully recognized. While the rate division has the capability to assist other elements of the company in adapting to ... requirements [for prospective test year data], it has not yet been directed to do so." A/FS (PA7, X-20, X-21)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

17. Simplification of data gathering for rate case purposes A/FS (NY2, IX-40, IX-41)
18. The focusing of management's attention on the budgeting process and the resulting forecasts as the company's primary short-term financial planning and control tool." A/FS (NY2, IX-40, IX-41)
19. "The company should more formally structure its approaches to major rate cases. [The company] should adopt more systematic methods and procedures for preparing and presenting rate relief requests; these should encompass: A/FS (PA2, VI-37)
20. Clear delineation of the company policy goals and strategies for each case A/FS (PA2, VI-37)
21. Formal adoption of the 'case manager' concept A/FS (PA2, VI-37)
22. Selection, orientation, and intensive preparation of witnesses fully prepared to address technical issues and questions A/FS (PA2, VI-37)
23. The use of case summaries (accompanied by graphics where appropriate) which highlight the company's positions in terms which can be readily grasped by nontechnical audiences." A/FS (PA2, VI-37)
24. "A review should be undertaken of the company's existing rate schedules. The objective of this review should be the formulation by [the company] of proposals to streamline and consolidate existing schedules. Such schedule consolidation should result in reduced long-term administrative costs for both the company and the PUC." A/FS (PA2, VI-37)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

25. "The rate division should be assigned a more active role in preparing the company for filing rate cases based on prospective test years. The manager-rate division should assist ... in: A/FS (PA7, X-21)
26. Ensuring that all [company] executives having budgeting responsibilities are fully cognizant of the increased importance of accuracy in forecasting which prospective test year rate filings will entail A/FS (PA7, X-21)
27. Revising budgetary procedures to include two years of data by month A/FS (PA7, X-21)
28. Conducting prototype budget audits to ensure that existing company systems will withstand such scrutiny." A/FS (PA7, X-21)

CONTROLLING

X. Program and Project Control

1. "Rate proposals by the Company and the resulting Commission orders are generally consistent with accepted ratemaking standards and procedures, and with evolving regulatory changes as they affect intrastate operations." A/FS (PA6, V-7)
2. "When conditions change, ... the model [is] rerun to determine if revenue deficiencies are projected to occur sooner than planned." A/FS (KY1, EXH. X-45)
3. "This is monitored by the senior vice president (CFO), the financial vice president, and the vice president of rates and contracts." A/FS (KY1, X-45)

21. "[Company requires] excessive time to prepare and file a new rate case." A/FS (GA1, VII-12)
22. "... existing formal arrangements do not appear to result in sufficiently uniform understanding of, and support for, the company's essential objectives in each instance." A/FS (PA2, VI-35, VI-36)
23. "The Company's approaches to the formulation and presentation of rate relief requests could be improved. Structured mechanisms are not now in place to formulate a cohesive and disciplined strategy regarding the major issues associated with individual cases." A/FS (PA2, VI-35, VI-36)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance Indicators	Negative Performance Indicators
4. "Where revenue deficiencies will develop sooner, the schedule for any planned rate proceedings is adjusted accordingly." A/FS (KY1, X-45)	24. "... Company does not go through a rigorous question and answer session which simulates on-the-stand testimony." B/FS (KY1, X-46)
5. "The [load forecast] review process is adequate and consistent with industry practice. The process allows the various levels of the organization to concentrate on those aspects of the load forecast that they are best suited to address." A/FS (PA3, IV-7)	25. "[Company requires] excessive time to prepare and file a new rate case." A/FS (GA1, VII-12)
6. "... [rate] department effectively prepares and presents rate cases. ... rate cases [are] well documented. ... witnesses [are] properly prepared." A/FS (Kearney, 19)	26. "Potential depreciation reserve resulting from premature equipment writeoff" [because "significant portions of networks have become technologically obsolete before their physical useful life has expired."] B/FS/T (NY3, VI-7)
7. "Company follows the FCC's <u>Separations Manual</u> ." A/FS/T (PA6, V-6)	27. "Levels of depreciation for telephone plant and equipment allowed for regulatory rate-making purposes have not fully reflected the recent pace of technological change, which has tended to render certain assets commercially obsolescent well before their physical capacity to perform is exhausted." A/FS/T (SC1, VII-13)
8. "Conformity with the <u>Separations Manual</u> (FCC 1971) for allocations of costs between toll and local services." A/FS/T (PA6, V-3)	28. "The current separations and settlements agreement does not provide for compensation to [Company] for settlements retained by Bell. . . Since 1975, Bell's payments to [Company] during the year have generally been significantly lower than amounts earned." B/FS/T (FL1, 155)
9. "Company uses a full cost allocation method to determine separations of toll versus local costs and revenues, rather than relying on the less precise national average." A/FS/T (PC6, V-6)	29. "The current [separations and settlements contract] does not provide for interest payments to [Company] for settlements retained by Bell." B/FS/T (FL1, 159)
10. "Conformity [of rates practices] with state law and with Commission regulation and orders." A/FS (PA6, V-2)	
11. "Adherence to federal law and Federal Communications orders as they pertain to interstate activity." A/FS/T (PA6, V-2)	

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

12. "Anticipation of imminent changes resulting from Computer Inquiry II and the 1982 consent decree requiring that AT&T divest the Bell operating companies." B/FS/T (PA6, V-2)
13. "Anticipation of changes in separations and settlements that will result from the Federal/ State Joint Board on Separations Procedures, convened by the FCC (Docket 80-286)." A/FS/T (PA5, 4-25)
14. "Compliance with detariffing of customer premises equipment by January 1, 1983." B/FS/T (PA6, V-2)
15. "Synchronization of test period rate base, operating results, and associated adjustments, including known and measurable adjustments extending beyond the test period." B/FS (PA6, V-2)
16. "Consistency with prevailing ratemaking trends in the telephone industry." B/FS/T (PA6, IV-2)
17. "Adherence to the 'end result' criterion stemming from Federal Power Commission vs. Hope Natural Gas, which granted considerable regulatory latitude to the states, and established that ' . . . it is the end result reached, not the method, which is controlling . . . unless rates are . . . unjust and unreasonable.'" A/FS (PA6, V-2)
18. "Consistency with prevalent ratemaking principles espoused by NARUC." A/FS (PA6, V-2)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

19. "Timeliness, thoroughness and credibility of company responses to requests for information by the Commission and its staff." A/FS (PA6, V-3)
20. "Depreciation policies and accounting appear to be prudent and fairly reflect the asset accounts on a cost basis." A/FS (PA5, 4-25)

XI. Reports and Reviews of Progress

1. Settlement data are calculated monthly and reconciled every quarter." B/FS/T (PA6, V-6)
2. "The management group often alters the [load] forecast to reflect expectations and historical trends that may not have been adequately captured in the [econometric and end-use] modeling process. The reasonableness of such adjustments (which have typically been downward) is supported by the fact that most industry forecasts have consistently overestimated demand growth in the past." A/FS (PA3, IV-7)
3. "The company appropriately tracks projected revenue deficiencies in order to determine when to file a rate case. Revenue deficiencies are projected by the [company's] financial planning model." A/FS (KY1, EXH. X-23)
4. "Estimated return on ... common equity is also published monthly in the [company's] budget package report." B/FS (KY1, Exh. X-23)
6. The company's formal rate case submittals, while technically correct in most important respects, do not provide convenient summaries of relevant information; not do they graphically portray [the company's] circumstances and requirements in ways which can readily be grouped by the broad range of audiences (beyond the technical staff units of the PUC) likely to have interest in [company] rate relief filings... Reluctance to go beyond the technical requirements for information in rate cases can adversely affect the company's ability to present its case in a cohesive and effective manner and can contribute to delays in the processing of cases within the regulatory framework." A/FS (PA2, VI-35, VI-36)
7. "... [although] the company prepared and distributed internally to its employees a well-structured 'rates fact sheet' which presented a cogent synopsis of the reasons underlying a rate relief request ..., no such readable summary accompanied the company's formal application to the PUC itself, though such a synopsis might have been of interest to many." A/FS (PA2, VI-36)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

5. "[Company's] rates compared favorably with those of comparable neighboring utilities. The rates department conducts a quarterly survey of other utilities' bills for several types of service. This information is compiled and a computer-generated report is prepared comparing [company's] bills to the comparison group." B/FS (KY1, X-42)

XII. Output Evaluation

- | | |
|--|---|
| <p>1. "[Company's] rates compare favorably with those of other companies . . . In particular, [Company's] rates are competitive for the Company's exchange group with access to the highest number of telephones." A/FS/T (NY3, VI-7)</p> <p>2. "... ratemaking function [is] responsive to the needs and characteristics of large customers (i.e., industrial, commercial and wholesale)." A/FS (Kearney, 19)</p> <p>3. "Gradual user rate increases as opposed to large, erratic increases." A/FS (PA6, V-2)</p> | <p>4. "The number of separate ... rate schedules appears to be unduly large. Audit interviews with [company] executives and PUC officials indicated the existence of common recognition that consolidation of the company's rate schedules could be beneficial; however, an overall plan for accomplishing this purpose has not yet been proposed by either." A/FS (PA2, VI-36)</p> |
|--|---|

XIII. Impact Evaluation

1. "Avoidance of earnings erosion and attrition in the rate base." A/FS (PA6, V-2)
2. "Company appears to have suffered no significant earnings erosion or rate base attrition." A/FS (PA6, V-8)
3. "Fair return on used and useful investment, including interest on debt and stock dividends." B/FS (PA6, V-2)

PERFORMANCE INDICATORS FOR
RATE PROGRAM ANALYTICAL PROCESS

Positive Performance
Indicators

Negative Performance
Indicators

4. " ... general level of rates as compared to others in the ... industry." B/FS (GA1, VII-11)
5. " ... allocation of revenue requirements among major customer classes including residential, commercial, and industrial." A/FS (GA1, VII-11)

E. Customer Service and Information

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Does Company have a "service philosophy" and a <u>clear</u> definition(s) of its role in customer services? (I.1)	_____	_____	_____
<u>II. Plan and Forecast</u>			
A. Are there quality standards for types of services? (II.1)	_____	_____	_____
B. Has the customer service division been given <u>explicit</u> responsibilities or the resources required to develop and monitor uniform policies, procedures and systems for managing? (II.2)	_____	_____	_____
C. Does Company consider individual customer usage or weather patterns when it is unable to get an actual reading rather than using an algorithm to estimate customer bills? (II.3)	_____	_____	_____
<u>III. Scope of Function</u>			
A. Is there <u>sufficient</u> functional direction and oversight in provision of customer operation activities? (III.1)	_____	_____	_____
<u>IV. Priorities</u>			
A. Does preventive maintenance carry a priority classification <u>strong enough</u> to ensure that the program functions in practice as well as theory? (IV.1)	_____	_____	_____
B. Does customer service management make a <u>significant commitment</u> to train and develop its personnel? (IV.2)	_____	_____	_____
C. Is management <u>concerned</u> with quality of service and use monitoring tools to evaluate service? (IV.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
<u>V. Roles and Responsibilities</u>			
A. Is there an <u>effective</u> working relationship between local operating units, field management and general office staff? (V.1)	_____	_____	_____
B. Are reports prepared <u>frequently</u> which are comparative in nature and established along responsibility lines? (V.2)	_____	_____	_____
C. Do customer service personnel operate within a <u>clear</u> set of objectives established by the general office? (V.3)	_____	_____	_____
D. Are Company's field dispatch and control systems <u>effective</u> ? (V.4)	_____	_____	_____
E. Does Company have <u>good</u> customer and community relations? (V.5)	_____	_____	_____
<u>VI. Resource capabilities</u>			
A. Have <u>significant</u> efforts been made to <u>strengthen</u> the training and development of customer service personnel? (VI.1, VI.2, VI.9)	_____	_____	_____
B. Have additional instructors been hired and are <u>advanced</u> instructional techniques used? (VI.3)	_____	_____	_____
C. Are meter readers <u>adequately</u> trained in meter reading and customer relations? (VI.4)	_____	_____	_____
D. Has Company taken advantage of recent improvements in the electronic field? (VI.5, VI.6, VI.10)	_____	_____	_____
E. Have efforts been made for meter standardization? (VI.7)	_____	_____	_____
F. Is maintenance management <u>routinely</u> supplied with current and <u>suitable</u> cost information? (VI.8)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
<u>VII. Resource Allocation</u>			
A. Have regional offices been consolidated or closed because of use of pay stations, automatic payment plans, or a toll-free number for customer complaints? (VII.1, VII.2)	_____	_____	_____
B. Does Company use <u>tangible</u> evidence and analysis of cost-effectiveness to justify opening or continuance of customer offices? (VII.14, VII.15, VII.16)	_____	_____	_____
C. Is there a central contact point for customers to determine status of request for service? (VII.17)	_____	_____	_____
D. Is the customer office staffed for average volume (not just for peak volume)? (VII.18)	_____	_____	_____
E. Does computer processing of customer bills take place on the weekend? (VII.3, VII.19)	_____	_____	_____
F. Are meter reading routes <u>efficiently</u> laid out and recycled <u>frequently</u> ? (VII.4, VII.21)	_____	_____	_____
G. Does Company use after-hour meter reading to gain access to meters inaccessible during normal working hours? (VII.5, VII.22)	_____	_____	_____
H. Are the frequencies for preventive maintenance inspections determined by technical and economic data? (VII.6)	_____	_____	_____
I. Is preventive maintenance identified as a separate category of maintenance expense? (VII.7)	_____	_____	_____
J. Are new service estimates <u>consistent</u> and <u>regularly</u> updated? (VII.8, VII.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
K. Is there a method for manpower planning and work scheduling based on estimates of time required to handle complaints, service requests and special projects? (VII.10)	_____	_____	_____
L. Are work performance criteria available for work crews? (VII.11)	_____	_____	_____
M. Are service requests handled <u>promptly</u> ? (VII.12)	_____	_____	_____
N. Has the management of division operations and customer services purposely rotated professional staff and management employees through staff and line positions? (VII.13)	_____	_____	_____
VIII. <u>Program Plan</u>			
A. Does a formal preventive maintenance program exist which is aimed at avoiding <u>costly</u> repairs and <u>excessive</u> cost? (VIII.1)	_____	_____	_____
B. Do Company's emergency procedures ensure <u>prompt</u> response to customer requests? (VIII.2)	_____	_____	_____
C. Is there a <u>well-defined</u> system by which the mechanics of <u>daily</u> maintenance scheduling are controlled? (VIII.3)	_____	_____	_____
D. Is there an <u>effective</u> program for complaint handling? (VIII.4)	_____	_____	_____
E. Does Company use an <u>appropriate</u> service order issuance process for controlling the installation of customer-premised equipment? (VIII.5)	_____	_____	_____
F. Are meter cards forwarded to corporate headquarters by midnight of the day they are read? (VIII.6, VIII.7, VIII.8, VIII.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
G. Is there a <u>short</u> time lag in updating account records after a transaction? (VIII.10)	_____	_____	_____
H. Are <u>effective</u> programs which are developed in one division <u>consistently</u> transferred to other divisions? (VIII.11)	_____	_____	_____
I. Does Company submit procedures for processing inquiries and record all inquiries? (VIII.12)	_____	_____	_____
J. Are service orders passed through a <u>minimum</u> number of departments so that control of process is not lost? (VIII.13)	_____	_____	_____
K. Are all types of complaints <u>consistently</u> reported throughout all districts? (VIII.15)	_____	_____	_____
IX. <u>Implementation</u>			
A. Is the field organization <u>properly</u> organized? (IX.1))	_____	_____	_____
B. Is there a <u>low</u> percentage of lost customer calls? (IX.2)	_____	_____	_____
X. <u>Program and Project Control</u>			
A. Are maintenance work orders reviewed to determine whether engineering attention is required? (X.1)	_____	_____	_____
B. When considering outside contractors to handle special maintenance programs does Company make an evaluation which includes cost comparison, stabilization of equipment and contractual agreements with the union? (X.2)	_____	_____	_____
C. Is the time lag between meter reading and customer billing <u>excessive</u> ? (X.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
<u>XI. Reports and Reviews of Progress</u>			
A. Is the maintenance department making <u>maximum</u> use of the Company's electronic data processing capabilities? (XI.1)	_____	_____	_____
B. Are customers' needs for information <u>routinely</u> recorded, categorized and summarized? (XI.10)	_____	_____	_____
C. Are reports <u>timely enough</u> to afford managers opportunity to take corrective action? (XI.2)	_____	_____	_____
D. Are all maintenance jobs in process reviewed against the schedule daily? (XI.3)	_____	_____	_____
E. Does management use monitoring tools to evaluate the quality of service? (XI.4)	_____	_____	_____
F. Does Company use a specialized network and switching equipment to allow information such as average operators' work time, calls per board-hour, and percent occupancy to be compiled every thirty minutes? (XI.5)	_____	_____	_____
G. Does Company monitor its consumer complaints? (XI.6)	_____	_____	_____
H. Does Company use a developmental book which records monthly goals and attendance reports to aid in improving operator performance? (XI.7)	_____	_____	_____
I. Does the Company compare meter reader productivity across divisions? (XI.8)	_____	_____	_____
J. Does Company review and evaluate policies and/or procedures pertaining to:			
- follow-up customer inquiries?	_____	_____	_____
- customer application for service and deposits?	_____	_____	_____
- initiation, flow and follow-up of work/service orders? (XI.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
XII. <u>Output Evaluation</u>			
A. Has Company consolidated directory assistance traffic to reduce costs and improve service to customers? (XII.1)	_____	_____	_____
B. Is maintenance activity organized with controls over <u>efficiency</u> and quality of service? (XII.2)	_____	_____	_____
C. Are there <u>high levels</u> of meter reader accuracy and productivity? (XII.3, XII.16)	_____	_____	_____
D. Have causes for deviations from maintenance schedules been determined and followed up? (XII.4)	_____	_____	_____
E. Are there a <u>significant</u> number of disconnect notices mailed to customers because collectors did not have time to visit account available? (XII.17)	_____	_____	_____
F. Have <u>critical</u> workload indicators concerning the performance, utilization and efficiency of operations been developed? (XII.18)	_____	_____	_____
G. Is customer complaint information reported from all divisions and districts? (XII.19)	_____	_____	_____
H. Are there <u>limited</u> numbers and types of customer complaints? (XII.5)	_____	_____	_____
I. Is there <u>expedient</u> complaint resolution? (XII.7)	_____	_____	_____
J. Does Company use a specialized network and switching equipment to allow information such as average operators' work time, calls per board-hour and percent occupancy to be compiled every thirty minutes? (XII.8)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
CUSTOMER SERVICES AND INFORMATION

	Yes/ No	Weight	Score
K. Does Company use an <u>appropriate</u> service order issuance process for controlling the installation of new telephones? (XII.9)	_____	_____	_____
L. Are estimated versus actual comparisons made for labor and materials? (XII.10)	_____	_____	_____
M. Are performance measures accumulated and reported on a <u>consistent</u> basis? (XII.11)	_____	_____	_____
N. Is there an updated status report of unfilled requests by customers for new service, regrades and repair of equipment? (XII.12)	_____	_____	_____
O. Are installation appointments met <u>on time</u> ? (XII.13)	_____	_____	_____
P. Does Company use an incentive program to increase operator motivation? (XII.15)	_____	_____	_____
 XIII. <u>Impact Evaluation</u>			
A. Are there inter-company comparisons with other comparable utilities of maintenance and operating costs? (XIII.1)	_____	_____	_____
B. Are there quality standards for types of services delivered? (XIII.2)	_____	_____	_____
C. Is there quality monitoring of customer needs? (XIII.3)	_____	_____	_____

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "Company has no 'service philosophy' and lacks a definition of the role of customer services." A/U (NY1, VII-6)

II. Plan and Forecasts

1. "No quality standards for type of service delivered." A/U (GA1, VI-13)
2. "Customer service divisions have not been given explicit responsibilities or the resources required to develop and monitor uniform policies, procedures and systems for managing." A/U (OH1, VII-18)
3. "The Company's estimating program is based on customer usage pattern (CUP) factors. When the Company is unable to obtain an actual reading, it employs an algorithm to estimate customers bills." A/FS/GWE (NY1, VII-13)

III. Scope of Function

1. "Insufficient functional direction and oversight is provided to customer operations activities." A/U (OH, VII-18)

IV. Priorities

1. "...preventive maintenance carr[ies] a priority classification strong enough to ensure that the program functions in practice as well as theory." A/U (PA1, p. 28)
2. "...customer service management has made a significant commitment to training and developing its personnel." A/U (OH1, VII-4)
3. "Management [is] concerned with the quality of service provided to customers and uses monitoring tools to evaluate service." A/FS (FL1, p. 9) (See also "Reports and Reviews of Progress".)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

V. Roles and Responsibilities

1. "...the organization is suitable to encourage effective working relationships between local operating units, field management and general office staff (engineering, planning, materials management)." A/U (Kearney, 40)
2. "Reports [are] prepared frequently and are of a comparative nature and established along responsibility lines." A/U (PA1, 29)
3. "...customer service personnel operate within a clear set of objectives established by the general office." A/U (Kearney, 41)
4. "...the company has an effective field dispatch and control system." A/FS (PA1, 31)
5. "...customer and community relations are good." A/U (Kearney, 41)

ORGANIZING

VI. Resource Capabilities

1. "Significant efforts have been made to strengthen the training and development of customer services personnel." A/FS (AZ1, VII-2)
2. "...formal training given to non-supervisory employees has increased considerably." A/U (OH1, VII-4)
3. "Additional instructors have been hired and advanced instructional techniques, such as role playing and video taping are used." A/U (OH1, VII-4)
9. "Inadequate training of customer service representatives." A/FS (GA1, VI-13)
10. "Most of the Company's four-dial meters are among the older meters in service. As consumption rates increase, there is a greater risk that the meter will cycle (i.e., rollover and begin a new cycle at zero) between readings. This problem is aggravated by bi-monthly readings and estimated billing. For a bi-monthly customer with several

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

4. "...meter readers [are] adequately trained in meter reading and customer relations." A/FS/GWE (Kearney, 42)
5. "[Company] takes advantage of recent improvements in the electronic field. It will provide [Company] with the capability to not only increase service, but also reduce the number of operators." A/U (FL1, 142) (See also Resource allocation.)
6. Use of customer records information system (CRIS) which "automatically generates service orders and provides easy access to information already stored in computer's memory. The many applications of this system can improve service representative efficiency by eliminating time-consuming paper-work." A/FS (FL1, 146)
7. "...efforts have been made for meter standardization." (i.e., tamper proof meters, TOD and other load control meters) A/FS/GWE (Kearney, 28)
8. "...maintenance management is routinely supplied with current and suitable cost information." A/FS (PA1, 28)

VII. Resource Allocation

1. "In order to take advantage of the reduced costs related to pay stations, the Company could review potential station candidates, establish formal relationships, and publicize the existence of new stations in the local media." A/FS (AZ1, VII-10)
14. "Although the desire to maintain favorable customer relations is commonly cited as justification for opening or continuance of customer offices, tangible evidence of office need, such as might be obtained by a survey of customer attitudes towards costs and benefits, is lacking." A/FS (AZ1, VII-8)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance Indicators	Negative Performance Indicators
2. "In order to take advantage of the reduced costs related to automatic withdrawal plans, the Company could consider undertaking a joint campaign with local banks to advertise these arrangements..." (AZ1, VII-10)	15. "...no analysis of the cost-effectiveness of [customer] offices was performed." (AZ1, VII-8)
3. "[Company] takes advantage of recent improvements in the electronic field. It will provide [Company] with the capability to not only increase service, but also reduce the number of operators." A/U (FL1, 142) (See also "Resource capabilities".)	16. "...customers in more urban areas and those who do not use customer offices are subsidizing the minority of customers who enjoy the convenience." A/FS (AZ1, VII-8)
4. "... meter reading routes [are] efficiently laid out ... and work is planned and monitored." A/FS/GWE (Kearney, p. 42)	17. "No central contact for customer to determine status of request for service." A/FS (GA, VI-13)
5. "Use of after-hour meter reading." ... in this approach can provide access to many meters otherwise inaccessible during normal working hours." A/FS/GWE (NY1, VII-16)	18. "Customer office staffed for peak volume not average volume." A/U (GA1, VI-13)
6. "...the frequencies for preventive maintenance inspections are determined by technical and economic data." A/FS (PA1, 29) (See also "Implementation".)	19. "Computer processing for customer billing is not performed on weekends." A/FS (OH1, VI-17)
7. "...preventive maintenance is identified as a separate category of maintenance expense." A/FS (PA1, 29)	20. "The number of disconnect notices not mailed to customers because collectors did not have time to visit the account is unavailable." A/FS (OH1, VII-18) (See also "Output evaluation".)
8. "New service estimates are consistent." A/FS (PA1, 88)	21. "[Metering] routes recycled too infrequently." A/FS/GWE (GA1, VI-13)
9. "Estimating standards [for new service] are regularly updated to represent actual conditions." A/FS (PA1, 88)	22. "Over 40 percent of [Company's] meters are located inside the customers' premises, and many bills must be estimated because of access problems." A/FS/GWE (NY1, VII-16)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

10. "...there is a method for manpower planning and work scheduling based on some rough estimates of time required to handle complaints, service requests and special projects." A/FS (Kearney, 41)
11. "...work performance criteria, such as standards, [are] available for work crews." A/FS (Kearney, 40)
12. "...service requests are handled promptly." A/FS (Kearney, 41)
13. "...the management of division operations and customer services has purposely rotated professional staff and management employees through staff and line positions as promotional opportunities have developed. Thus... management and professional staff employees generally possess a broad understanding of and experience in various aspects of division operations." A/U (OH1, VII-5)

VIII. Program Plan

1. "...a formal preventive maintenance program aimed at avoiding costly repairs and excessive cost exists." A/U (PA1, 27)
2. "...company's emergency procedures ensure prompt response to customer requests." A/FS (PA1, 30)
3. "...there is a well defined system by which the mechanics of daily (maintenance) scheduling are controlled." A/FS (PA1, 28)
7. "The Company's meter reading and billing process does not provide timely billing to customers." A/U (NY1, VII-18)
8. "...results [of readings] are held at field locations for several days to provide time to secure information regarding meters not read on schedule." A/FS/GWE (OH1, VII-17)
9. "Meter cards held until day after read, delaying billing." A/FS/GWE (GA1, VI-13)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance Indicators	Negative Performance Indicators
4. "...there is an effective program for complaint handling (particularly high bill complaints)." A/FS (Kearney, 41)	10. "Time lag in updating account record after transaction." A/FS/GWE (GA1, VI-13)
5. "[Company] uses an appropriate service order issuance process for controlling the installation of new telephones. Operational reviews of the process are conducted twice a year to ensure compliance with corporate guidelines." A/FS/T (FL1, 146)	11. "...effective programs developed in one division are not consistently transferred to other divisions." A/U (OH1, VII-18)
6. "Meter cards should be forwarded directly to corporate headquarters by midnight of the day on which they are read." A/FS/GWE (OH1, VII-20)	12. "[Company] does not submit procedures for processing inquiries. [Company] does not record inquiries." A/FS (MO1, X-44)
	13. "Service order passes through several departments; control of process is lost." A/FS (GA1, VI-13)
	14. "Customer accounts are updated through remittance processing before the billing process begins." (lengthens time lag between reading and billing). A/FS (OH1, VII-17)
	15. "The 'types' of complaints that are recorded depend upon the district auditor's definition of complaint." A/FS (MO1, X-45)

IX. Implementation

1. "... field organization is properly organized." A/FS (Kearney, 40)
2. "...the frequencies for preventive maintenance inspections are determined by technical and economic data." A/FS (PA1, 29) (See also "Resource allocation".)
3. "Low percent of lost customer calls; number of blocked calls (all trunks busy)." A/FS (GA1, VI-16)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

CONTROLLING

X. Program and Project Control

1. "...maintenance work orders [are] reviewed as routine to determine whether engineering attention is required (i.e., design change)." A/FS (PA1, 28)
2. "When outside contractors have been considered to handle special maintenance programs an evaluation takes place which includes cost comparison, stabilization of equipment and contractual agreements with the unions." A/FS (PA1, 27)

3. "Time lag between meter reading and customer billing is excessive. Under Company's current procedures, customer bills are mailed seven days after meters are read." A/FS/GWE (OH1, VII-17)

XI. Reports and Reviews of Progress

1. "The maintenance department [is] making maximum use of the company's electronic data processing capabilities in controlling reporting and evaluating its operations." A/U (PA1, 28)
2. "...reports [are] timely enough to afford managers opportunity to take corrective actions." A/U (PA1, 29)
3. "...all (maintenance) jobs in process [are] reviewed against the schedule daily." A/FS (PA1, 28)
4. "Management [is] concerned with the quality of service provided to customers and uses monitoring tools to evaluate service." A/FS (FL1, p. 9) (See also "Priorities.")
5. "[Company uses] a specialized network and switching equipment which allows information such as average operator's work time, calls per

10. "Customers' needs for information are not routinely recorded, categorized and summarized, and used as bases for developing advertising messages." A/FS (MO1, X-43)

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

board-hour, percent occupancy, and others to be compiled every thirty minutes." A/FS/T (FL1, 145) (See also "Output evaluation.")

6. "[Company] monitors its consumer complaints." A/FS (FL1, 19)
7. "Supervisors maintain a developmental book on each operator to aid in improving their performance." A/FS (FL1, 145)
8. "Compare meter reader productivity across divisions in areas such as:
 - total meters to be read
 - percent actually read
 - percent estimated readings
 - customer readings
 - percent unfinished routes
 - percent meters read late"A/FS (GAL, VI-15)
9. "Review and evaluate policies and/or procedures pertaining to:
 - follow-up customer inquiries
 - customer application for service
 - initiation, flow and follow-up of work/service orders"A/FS (PA1, 87)

XII. Output Evaluation

1. "Consolidating directory assistance traffic will reduce costs and improve service to customers." A/FS/T (FL1, 142)
2. "...the maintenance activity is organized with controls over efficiency and quality of service." A/U (PA1, 27)
16. "Meter reader productivity is too low." A/FS/GWE (GAL, VI-13)
17. "The number of disconnect notices not mailed to customers because collectors did not have time to visit the account is unavailable." A/FS (OH1, VII-18) See also "Resource allocation."

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance Indicators	Negative Performance Indicators
3. "High levels of meter reader accuracy and productivity." A/FS/GWE (GA1, VI-16)	18. "Critical workload indicators concerning the performance, utilization, and efficiency of operations have not been developed." A/U (OH1, VII-18)
4. "...causes for deviations from work [maintenance] schedules are determined and followed up." A/FS (PA1, 29)	19. "Customer complaint information...is not reported from all divisions and districts." A/FS (OH1, VII-18)
5. "Limited numbers and types of customer complaints." A/FS (GA1, VI-16)	
6. "Appropriate length of time in service queue." A/FS (GA1, VI-16)	
7. "Expedient complaint resolution." A/FS (GA1, VI-16)	
8. "[Company uses a] specialized network and switching equipment which allows information such as average operator's work time, calls per board-hour, percent occupancy, and others to be compiled every thirty minutes." A/FS/T (FL1, 145) (See also "Reports and reviews of progress".)	
9. "Company uses an appropriate service order issuance process for controlling the installation of new telephones. Operational reviews of the process are conducted twice a year to ensure compliance with corporate guidelines." A/FS/T (FL1, 146)	
10. "Estimated/actual comparisons are made for labor and materials." A/FS (PA1, p. 88)	
11. "Performance measures are accumulated and reported on a consistent basis." A/FS (FL1, 9)	

PERFORMANCE INDICATORS FOR
CUSTOMER SERVICE AND INFORMATION

Positive Performance
Indicators

Negative Performance
Indicators

12. "Status of unfilled requests by customers for new service, regrades and repair of equipment." A/FS (PA1, 29)
13. "Installation appointments met on time." A/FS (PA1, 30)
14. "Percentage of long distance calls completed without information." FS/T (PA1, 30)
15. "Company uses an incentive program to increase operator's motivation. To combat low motivation, [Company] has instituted a series of incentive programs aimed at recognizing outstanding operators... By maintaining a high level of operator motivation, the Company benefits from increased efficiency and improved employee [morale]." A/FS/T (FL1, 145)

XIII. Impact Evaluation

1. "...there are inter-company comparisons with other...telephone utilities of maintenance and operating costs." A/U (PA1, 31)
2. "No quality standards for type of service delivered." A/FS (GA1, VI-13)
3. "No quality monitoring of customers served." A/FS (GA, VI-13)

F. Management Information Systems

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Is there an information system strategy? (I.1)	_____	_____	_____
B. Is there an <u>effective</u> planning process (I.1)	_____	_____	_____
C. Are there long-range plans? (I.1)	_____	_____	_____
D. Do corporate policies provide <u>sufficient</u> guidelines for long-range plans to ensure integrated systems? (I.2)	_____	_____	_____
E. Does the information systems unit receive <u>explicit</u> direction on how aggressively to pursue system development efforts, so that automation opportunities are met? (I.3)	_____	_____	_____
<u>II. Plan and Forecasts</u>			
A. Is there a formal <u>integrated</u> documented, long-range MIS plan? (II.2, 2, 3, 4, 5, 6, 7, 8, 12, 16, 17, 19, 20, 21, 26, 27, 30, 34, 38)	_____	_____	_____
B. Does the MIS plan encompass:			
• Formal objectives for computer systems development? (II.12, II.17)	_____	_____	_____
• Business and technical assumptions (II.7)	_____	_____	_____
• Identification of system requirements (II.7)	_____	_____	_____
• Definitions of system functions (II.1)	_____	_____	_____
• Estimations of resource requirements (II.1)	_____	_____	_____
• Cost-benefit analysis of each system (II.2, 35)	_____	_____	_____
• Identification of Company-wide information needs (II.9)	_____	_____	_____
• Formal prioritization of requirements on the basis of cost and benefit (II.3)	_____	_____	_____
• User involvement in prioritization of requirements (II.3)	_____	_____	_____
• Delineation of software alternatives (II.1)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
• Impact of anticipated technological developments (II.4)	_____	_____	_____
• A <u>detailed</u> schedule of systems to be computerized, including dates for completion of each stage of development and assignments (II.2, II.32, II.36)	_____	_____	_____
• Schedule and completion dates for development of documentation controls administrative controls and procedural controls (II.2, 22)	_____	_____	_____
• Provision for project re-evaluation and approval for continuation of development effort at the end of each phase (II.22)	_____	_____	_____
• Determination of hardware sizing requirements and requisition/installation times (II.3)	_____	_____	_____
• Estimation of data processing personnel requirements and annual operating costs (II.3)	_____	_____	_____
• A <u>detailed</u> design for an organizational structure to support long-range systems development objectives (II.1, II.17)	_____	_____	_____
• Facilities acquisition plans (II.7)	_____	_____	_____
• Provision for post-implementation reviews (II.22)	_____	_____	_____
C. Does the long-range plan cover a period of from three to five years? (II.10)	_____	_____	_____
D. Is <u>sufficient</u> attention given to the overall financial implications of the plan to the company, including spending as a percentage of Company revenues? (II.11, II.21, II.31)	_____	_____	_____
E. Does information systems management have sufficient knowledge of Company's long-term business objectives and strategies? (II.25)	_____	_____	_____
F. Do executives outside the information systems unit understand the language and format of the long-range plan? (II.21)	_____	_____	_____
G. Are the proportions of new development and maintenance workload described <u>explicitly</u> ? (II.33)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
H. Are the proportions of new development and maintenance workload <u>sufficiently related</u> to data processing unit plans for replacement of obsolete or obsolescent applications and software? (II.33)	_____	_____	_____
I. Are the linkages between information systems unit's planned activities, company business objectives and units weaknesses spelled out <u>concretely</u> ? (II.18, II.23)	_____	_____	_____
J. Are capacity plans coordinated or mandated by the parent company? (II.24)	_____	_____	_____
K. Does the planning process ensure hardware decisions are reached with consideration of equipment compatibility? (II.34)	_____	_____	_____
L. Does the Company have a <u>comprehensive</u> plan for continuing operation in the event of a disaster affecting data processing resources? (II.28, II.37)	_____	_____	_____
M. Are disaster plans <u>well documented</u> and <u>accurate</u> ? (II.14, II.15)	_____	_____	_____
 II. <u>Scope of Function</u>			
A. Are activities in the unit's long range plan and, consequently, the projected spending levels identified <u>precisely enough</u> with user functional areas served by the unit? (III.1)	_____	_____	_____
B. Has the nature of evolving information processing requirements been <u>fully</u> determined? (III.2)	_____	_____	_____
C. Is the unit able to respond to prospective changes in requirements? (III.2)	_____	_____	_____
D. Does the company have an <u>effective</u> strategy or role for the unit in word processing and office automation? (III.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
E. Are security and back up arrangements complete? (III.4)	_____	_____	_____
<u>IV. Priorities</u>			
A. Have criteria been established for evaluating and prioritizing project requests on a company-wide basis? (IV.1, IV.2, IV.9, IV.10, IV.11, IV.12)	_____	_____	_____
B. Is there a users' group consisting of the General Manager and managers of a few areas which regularly use data processing services that is formally charged with establishing unit's general priorities? (IV.3)	_____	_____	_____
C. Is all application development work, whether new development or maintenance, supported by a cost-benefit analysis? (IV.4)	_____	_____	_____
D. Are program priorities based on return on investment? (IV.5)	_____	_____	_____
E. Are program priorities based on measures? (IV.6)	_____	_____	_____
F. Are program priorities <u>consistently</u> applied? (IV.9)	_____	_____	_____
G. Has the information systems unit conducted <u>broadly based</u> user surveys to identify, justify and relate the information systems needs of Company as a whole with the current and proposed capabilities of the unit? (IV.13)	_____	_____	_____
H. Does the information systems unit <u>effectively</u> emphasize data security in the design of its systems? (IV.7)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
<u>V. Roles and Responsibilities</u>			
A. Is top management involved in planning and design? (V.21)	_____	_____	_____
B. Is there an <u>appropriate</u> mechanism for involving Company top management in directing data processing resources? (V.1)	_____	_____	_____
C. Is there an <u>ideal</u> reporting point in the present top management organization structure? (V.23)	_____	_____	_____
D. Are responsibilities and authorities for project approval <u>appropriate</u> to the level of implementation effort? (V.2)	_____	_____	_____
E. Does the MIS plan reflect <u>conscientious and effective</u> efforts on the part of top management, including <u>numerous</u> informal discussions with unit's users and <u>carefully reasoned</u> technical strategy? (V.5)	_____	_____	_____
F. Is there a <u>clear</u> delineation of responsibilities and accountability? (V.29)	_____	_____	_____
G. Are information systems integrated, so that there are not <u>numerous</u> independently functioning information systems? (V.22)	_____	_____	_____
H. Are information system activities <u>appropriately</u> consolidated or separated? (V.6, V.7, V.8)	_____	_____	_____
I. Is the division of responsibilities among staff members <u>clear</u> and <u>appropriate</u> ? (V.3)	_____	_____	_____
J. Are interfaces and reporting relationships <u>clear</u> ? (V.35)	_____	_____	_____
K. Is the division of responsibilities between systems analysts and programmers <u>clear</u> and <u>appropriate</u> ? (V.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
L. Have the roles, responsibilities and authorities of technical support personnel been <u>clearly defined</u> ? (V.30, 31)	_____	_____	_____
M. Are job descriptions <u>up to date</u> ? (V.19)	_____	_____	_____
N. Is the span of control of the manager of the information systems unit appropriate for the variety of activities performed? (V.33)	_____	_____	_____
O. For holding companies, are the roles and responsibilities of each affiliate <u>clearly defined</u> ? (V.34)	_____	_____	_____
P. Is there a unit or person within the information systems unit who is <u>responsible</u> for carrying out companywide technical support activities, including development and implementation of company hardware and software plans, establishment and enforcement of companywide technical standards and procedures, and review of the technical quality of information system unit's systems? (V.6, V.25)	_____	_____	_____
Q. Are user roles, responsibilities, and resource requirements to support information systems unit's plan <u>specified</u> and <u>clear</u> to users? (V.41)	_____	_____	_____
R. Is there a user group or committee composed of managers of areas which regularly use information systems? (V.9, V.10, V.11, V.13, V.27)	_____	_____	_____
S. Does the users' committee identify and coordinate data processing needs? (V.11, V.24, V.46)	_____	_____	_____
T. Does the users' committee establish general priorities? (V.12)	_____	_____	_____
U. Is user management involved in the early stages of plan development, applications design, the process of screening and ranking unit's development work, and implementation? (V.37,V.38,V.42,V.43, V.45)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
V. Does the information systems unit seek out potential data applications, as well as relying on users to identify potential opportunities? (V.44)	_____	_____	_____
W. In developing systems to serve departmental needs, is consideration given to whether they duplicate other systems, can be used by more than one department, or require support and resources from other departments? (V.26, V.32)	_____	_____	_____
X. Do responsibilities and authorities for project approval ensure a <u>prompt</u> response to user requests? (V.17)	_____	_____	_____
Y. Are the user departments required to develop data processing plans and budgets? (V.40)	_____	_____	_____
Z. Are Company operating and staff units <u>aware of and concerned about</u> costs incurred by the information systems unit on their behalf? (V.36)	_____	_____	_____
AA. Are there formal arrangements that foster an <u>effective</u> long-term strategy for user-friendly software support? (V.39)	_____	_____	_____
AB. Does the information systems unit have an information systems center to support user friendly software applications and to aid users with other problems? (V.15)	_____	_____	_____
AC. Does the information systems unit attempt to educate users regarding their roles and responsibilities through the business proposal process? (V.14)	_____	_____	_____
AD. Has the information systems unit maintained <u>close</u> and <u>rewarding</u> contacts with computer professionals in academic and industry circles? (V.20)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
<u>VI. Resource Capabilities</u>			
A. Is the current staffing level <u>sufficient</u> to meet present and future demands for systems development and program maintenance? (VI.1, VI.11, VI.12, VI.13, VI.14, VI.15, VI.16)	_____	_____	_____
B. Are personnel <u>appropriately</u> matched with assignments? (VI.13)	_____	_____	_____
C. Are predefined training and education requirements for a given position prepared? (VI.21)	_____	_____	_____
D. Are skills of information systems staff <u>adequate</u> ? (VI.1, VI.2)	_____	_____	_____
E. Is staff turnover low? (VI.3)	_____	_____	_____
F. Does unit have a <u>sound</u> human resources management program? (VI.17)	_____	_____	_____
G. Does information systems unit have the processes to identify the staff skills needed to support existing and future information systems unit activities? (VI.18)	_____	_____	_____
H. Is there a formal, routinized plan for staff education courses? (VI.5, VI.21)	_____	_____	_____
I. Is there a <u>comprehensive</u> training plan describing what training is being offered, who should attend what specific training activities and what schedule has been established? (VI.19)	_____	_____	_____
J. Is there <u>appropriate</u> management training? (VI.4)	_____	_____	_____
K. Has the information systems unit <u>aggressively</u> recruited seasoned data processing personnel for middle management and senior technical positions? (VI.22)	_____	_____	_____
L. Has information systems unit established <u>clear</u> career paths for its personnel by defining the requirements for advancement from one position to another? (VI.23)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
M. Is a formal employee performance and education monitoring system in place? (VI.20)	_____	_____	_____
N. Do performance evaluations result in <u>specific</u> plans for improving performance? (VI.24)	_____	_____	_____
O. Are performance evaluations used to establish individualized training programs? (VI.24)	_____	_____	_____
P. Is machine use monitored and capacity established for each system component? (VI.6, VI.25)	_____	_____	_____
Q. Is unit <u>frugal</u> in supporting its own operations with equipment and facilities? (VI.7)	_____	_____	_____
R. Are current hardware lease arrangements <u>appropriate</u> ? (VI.8)	_____	_____	_____
S. Are technical capabilities embodied in a <u>full</u> complement of software, both internally developed and externally acquired? (VI.9)	_____	_____	_____
T. Is hardware and software technology <u>current</u> ? (VI.28)	_____	_____	_____
U. Are opportunities for automation being met? (VI.26)	_____	_____	_____
V. Are the company's business systems reasonably new? (VI.27, VI. 29)	_____	_____	_____
W. Is a computer-based reporting system used to track programming requests? (VI.10)	_____	_____	_____
X. Is there fireproof storage in the information systems unit? (VI.30)	_____	_____	_____
Y. Is there off-site storage for programs and data? (VI.31)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
VII. <u>Resource Allocation</u>			
A. Are resources assigned among competing requirements by a logical method? (VII.1)	_____	_____	_____
B. Are the numbers and skill levels of managerial, technical, support and operations staff needed by support unit activities known? (VII.2)	_____	_____	_____
C. Is resource management performed formally? (VII.12)	_____	_____	_____
D. Is duplication of effort avoided? (VII.10, VII.13)	_____	_____	_____
E. Where applicable, are systems used by more than one department? (VII.10)	_____	_____	_____
F. Has the Company developed and adopted a strategy to define an appropriate mix of hardware and software applications? (VII.2, VII.6)	_____	_____	_____
G. Is there a <u>reasonable</u> allocation of resources to large-scale, centralized computing? (VII.5)	_____	_____	_____
H. Is there a <u>balance</u> of emphasis on equipment productivity, labor productivity and user service? (VII.5)	_____	_____	_____
I. Is there <u>sufficient</u> attention to output distribution costs? (VII.5)	_____	_____	_____
J. Is there <u>timely</u> substitution of new technology? (VII.5)	_____	_____	_____
K. Is information systems unit <u>sufficiently aggressive</u> in determining automation opportunities? (VII.8)	_____	_____	_____
L. Are existing systems reviewed to determine whether they are using equipment resources efficiently, or whether manual processes used to support the systems can be streamlined? (VII.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
M. Are the proportions of new development and maintenance workload sufficiently related to plans for replacement of obsolete or obsolescent applications and software? (VII.16)	_____	_____	_____
N. Does the information systems unit have the <u>ability</u> to respond to prospective changes in requirements and focus resources on a current basis? (VII.18)	_____	_____	_____
O. Are estimated resource needs <u>uniformly</u> forecasted and documented at the inception of projects? (VII.17)	_____	_____	_____
P. Are mechanisms used by the Company to control the cost and quality of computing outside the information systems unit <u>adequate</u> ? (VII.14)	_____	_____	_____
Q. Is ongoing information services support provided when user-friendly software is expanded? (VII.15)	_____	_____	_____
R. Does the unit use a <u>broader</u> criterion than an internal rate of return calculation, based on direct labor displacement or avoidance of direct costs? (VII.11)	_____	_____	_____
S. Is there <u>regular</u> and <u>close</u> scrutiny of user requests for new systems? (VII.4)	_____	_____	_____
T. Does the unit have a documented policy for selecting hardware and software vendors? (VII.19)	_____	_____	_____
U. Do lease or buy decisions for facilities and equipment result in the <u>most favorable</u> costs? (VII.3)	_____	_____	_____
 VIII. <u>Program Plan</u>			
A. Has the information systems unit developed <u>specific</u> plans for hardware, software and communications capabilities to support the long range systems architecture? (VIII.5, VIII.10, VIII.13, VIII.14)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
B. Is there a fully operational annual operating plan? (VIII.9)	_____	_____	_____
C. Is the annual operating plan <u>comprehensive</u> ? (VIII.12)	_____	_____	_____
D. Is there a <u>fully operational</u> annual budget? (VIII.9)	_____	_____	_____
E. Are systems programming standards documented, including: <ul style="list-style-type: none"> • testing and implementation procedures • systems performance measurement and tuning • documentation for all systems changes • standard test decks • guidelines for sensitive utilities (VIII.23)	_____	_____	_____
F. Is there a formal, documented phased design and development process? (VIII.16)	_____	_____	_____
G. Have standards and procedures for project management control been developed and installed? (VIII.7)	_____	_____	_____
H. Have systems development standards and procedures been developed? (VIII.6)	_____	_____	_____
I. Have design standards been developed? (VIII.4, VIII.17)	_____	_____	_____
J. Is operating documentation <u>adequate</u> ? (VIII.2)	_____	_____	_____
K. Is user documentation <u>current</u> ? (VIII.26)	_____	_____	_____
L. Are technical standards documented? (VIII.3)	_____	_____	_____
M. Do operator manuals exist for all systems? (VIII.27)	_____	_____	_____
N. Are design standards and conventions communicated to affected personnel? (VIII.4)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
O. Have standards for data entry productivity been determined? (VIII.1, VIII.28)	_____	_____	_____
P. Is there a specific plan for implementing data base technology? (VIII.15)	_____	_____	_____
Q. Have structured design and programming techniques been adopted as standard? (VIII.2)	_____	_____	_____
R. Is the standards manual <u>regularly</u> updated? (VIII.22)	_____	_____	_____
S. Is the standards manual designed to facilitate <u>easy</u> reference? (VIII.22)	_____	_____	_____
T. Are estimated resource needs for systems development uniformly forecasted and documented at the inception of projects? (VIII.25)	_____	_____	_____
U. Is there specification in annual operating plans of projects that can be performed only if requested staff additions are authorized? (VIII.23)	_____	_____	_____
V. Have standards and procedures for time management control been developed and installed? (VIII.7)	_____	_____	_____
W. Are there project schedules including detailed/discrete activities with scheduled completion dates and estimated programmer/analyst hours required for each step? (VIII.8)	_____	_____	_____
X. Have timetables been established for overall information systems development projects and for the major sequential steps within them? (VIII.18)	_____	_____	_____
Y. Is there formalized scheduling of jobs to be run on the computer? (VIII.19)	_____	_____	_____
Z. Do users and the information systems unit have a <u>thorough understanding</u> at the outset of when specific projects can be realistically expected to be complete? (VIII.20)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
<u>IX. Implementation</u>			
A. Are standardized processes for preparing user requests followed? (IX.1)	_____	_____	_____
<u>X. Program and Project Control</u>			
A. Are project and productivity controls in place? (X.1, X.2, X.7, X.30)	_____	_____	_____
B. Are monitoring and controls on unit's work, including new development and maintenance work, sufficiently formalized? (X.19, X.31, X.36)	_____	_____	_____
C. Is control over development and major enhancement projects <u>adequate</u> ? (X.20)	_____	_____	_____
D. Is there a process for monitoring unit progress in meeting departmental objectives and plans? (X.24)	_____	_____	_____
E. Are systems and programs reviewed once they are operational? (X.14)	_____	_____	_____
F. Are there <u>appropriate</u> project management techniques to control major systems design efforts? (X.29)	_____	_____	_____
G. Can information systems unit <u>accurately</u> identify who is providing departmental data processing services, what applications are in place or under development, what benefits are being achieved, or whether efforts are duplicated in other departments? (X.28)	_____	_____	_____
H. Does planning and control process permit unit to direct relatively short-term data processing activities? (X.24)	_____	_____	_____
I. Are systems and programs reviewed in the development stage? (X.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
J. Is a standards and control coordinator or the internal auditing group consistently involved in performing quality control checks during systems development engagements? (X.17)	_____	_____	_____
K. Is there an EDP audit capability? (X.12)	_____	_____	_____
L. Does unit management enhance the unit's standard systems methodology? (X.18)	_____	_____	_____
M. Is machine utilization monitored? (X.4, X.5)	_____	_____	_____
N. Is data entry productivity monitored? (X.15)	_____	_____	_____
O. Are user levels monitored? (X.9)	_____	_____	_____
P. Is there formal user signoff at various stages of development and implementation? (X.6)	_____	_____	_____
Q. Do responsibilities and authorities for project approval ensure a prompt response to user requests? (X.14)	_____	_____	_____
R. Is each employee required to account for 100 percent of his/her time in the systems planning and implementation area? (X.8)	_____	_____	_____
S. Does the Company use a chargeback system to allocate information system costs? (X.10, X.11, X.32)	_____	_____	_____
T. Are the costs of systems development and maintenance included in the chargeback system for allocating data processing costs? (X.25)	_____	_____	_____
U. Does the cost allocation mechanism for departments which share hardware include a charge for all corporate overheads? (X.26)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
V. Does the cost allocation mechanism include a charge for personnel benefit expenses? (X.27)	_____	_____	_____
W. Is financial analysis applied to user requests for upgrades to the system? (X.33)	_____	_____	_____
X. Are resources such as programming billed in the month that the service or activities occurred? (X.34)	_____	_____	_____
Y. Are standard resource rates applied? (X.35)	_____	_____	_____
Z. Are <u>adequate</u> mechanisms used to control the cost and quality of computing done by outside service bureaus or other resources? (X.16, X.21)	_____	_____	_____
<u>XI. Reports and Reviews of Progress</u>			
A. Does the information systems unit have mechanisms for tracking the costs of maintaining existing systems? (XI.7)	_____	_____	_____
B. Does the unit have mechanisms for reviewing the efficiency of existing systems? (XI.7)	_____	_____	_____
C. Does the unit have mechanisms for determining whether system products are meeting user needs? (XI.7)	_____	_____	_____
D. Does the unit have <u>fully operational</u> monthly status reports? (XI.1)	_____	_____	_____
E. Does the unit have <u>periodic</u> management review sessions? (XI.1)	_____	_____	_____
F. Does the unit track actual versus estimated schedule and labor hours? (XI.2)	_____	_____	_____
G. Is time of programmer/analysts recorded by project and activity? (XI.3)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
H. Have user levels been determined? (XI.4)	_____	_____	_____
I. Is operating documentation available and adequate? (XI.5)	_____	_____	_____
J. Do problem reporting mechanisms exist? (XI.6)	_____	_____	_____
K. Can actual application/development maintenance and production costs be determined? (XI.8)	_____	_____	_____
L. Is the user community provided <u>early</u> with information on proposed system operation? (XI.9)	_____	_____	_____
M. Do information systems users have <u>adequate</u> knowledge of the status of their projects? (XI.10)	_____	_____	_____
N. Are there <u>timely</u> reports giving costs compared to project budget for construction work? (XI.12)	_____	_____	_____
O. Have information systems reports been reviewed to determine their usefulness or need for modification? (XI.13)	_____	_____	_____
XII. <u>Output Evaluation</u>			
A. Are Company's hardware and operating systems operationally <u>effective</u> ? (XII.2)	_____	_____	_____
B. Is information systems unit <u>responsive to</u> users of its services? (XII.3)	_____	_____	_____
C. Does unit meet with users to determine whether system products are still needed, or, if needed, require modification? (XII.18)	_____	_____	_____
D. Are post-implementation reviews conducted? (XII.16)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
MANAGEMENT INFORMATION SYSTEMS

	Yes/ No	Weight	Score
E. Is there a framework for performance of post-implementation reviews? (XII.15)	_____	_____	_____
F. Has unit been <u>timely</u> in completing projects? (XII.6, XII.7, XII.14)	_____	_____	_____
G. Are development times for system standard applications <u>reasonable</u> ? (XII.17)	_____	_____	_____
H. Has unit service been <u>reliable</u> ? (XII.5, XII.17)	_____	_____	_____
I. Has the level of service provided to user departments been <u>consistent</u> ? (XII.11, XII.12)	_____	_____	_____
J. Are the costs of unit's services <u>reasonable</u> ? (XII.4)	_____	_____	_____
K. Are the costs of unit's services <u>reasonably allocated</u> ? (XII.4, XIII.13)	_____	_____	_____
L. Are the costs of unit's services <u>fully visible</u> ? (XII.4)	_____	_____	_____
M. Are the costs of unit's services regularly reviewed by operating personnel? (XII.4)	_____	_____	_____
N. Is information input and output limited to what is <u>necessary</u> and <u>productive</u> ? (XII.10)	_____	_____	_____
O. Have <u>important</u> organizational and managerial recommendations contained in the Company's information systems plan been implemented? (XII.1)	_____	_____	_____
P. Is the relationship of unit data processing activities to unit and company objectives <u>clear</u> ? (XII.9)	_____	_____	_____
XIII. <u>Impact Evaluation</u>			
A. Has data base management system been operating <u>dependably</u> over time, so that business applications are <u>relatively immune</u> to changes in data? (XIII.1)	_____	_____	_____

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "The absence of an information system strategy, effective planning process, long-range plans, and annual operating plans inhibits the company's ability to plan and manage the information systems function." (See also "Program Plan" below) A/U (C01, X-10)
2. "Corporate policies do not provide sufficient guidelines or long-range plans to ensure integrated systems." A/FS (GA1, VIII-2)
3. "Since the [information systems unit] receives no explicit direction on how aggressively to pursue systems development efforts, automation opportunities may go unmet." A/FS (NY3, VIII-25) (See also "Resource Capabilities" below)

II. Plan and Forecasts

1. "An integrated MIS Plan. The work plan for the project is appropriate and delineates the need to:
 - Identify system requirements
 - Define system functionality
 - Determine software alternatives
 - Estimate resource requirements
 - Develop an implementation plan
 - Recommend organizational/management structure." A/U (KY1, XII-8)
2. "Plan should include at least the following:
 - A detailed schedule of systems to be computerized, including dates for completion of each stage of development and responsibility assignments.
16. "Long range systems planning is lacking." A/U (AK1, XI-45)
17. "[Company lacks] a comprehensive long-range plan for the EDP and methods department ... [including] formal objectives for computer systems development at [company] and a detailed design for an organizational structure to support these objectives." A/U (M01, IX-58)
18. "[In the unit's long-range plan], the linkages between [unit's] planned activities, [Company] business objectives and [unit] weaknesses [opportunities] are not spelled out concretely." A/U (CA1, IX-35)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

- Cost-benefit analysis of each system to assist management in establishing priorities.
 - Schedule and completion dates for development of the following:
 - Documentation controls covering the system, individual programs, and operations.
 - Administrative controls to ensure consistency and continuity of programming and program testing
 - Procedural controls for input, processing, and output
 - Establishment of a permanent committee to direct and control the EDP function." A/FS (FL1, X-199)
3. "Many companies have developed some form of long range planning process which generally has the following elements:
- Protection of system requirements (development, enhancements, or modifications) by current or potential user groups
 - Formal prioritization of those requirements on the basis of cost/benefit, by a committee comprised of selected users
 - Development of an implementation schedule for the prioritized system requirements
 - Determination of hardware sizing requirements and requisition/installation times
 - Estimation of data processing personnel requirements and annual operating costs
 - Preparation of a long range systems plan document." A/FS (AK1, XI-45)
19. "The Company has no formal planning process to define ... roles and responsibilities for information systems, to identify information systems on continuing basis, and to develop a strategy to meet those needs." A/FS (NY3, VIII-24)
20. "The Company has not undertaken the rigorous analytical steps needed to identify effectively its information system requirements and to develop a long-range strategy to meet these requirements." A/U (CO1, X-9)
21. "The long range plan that [the Information Systems Unit] has developed is insufficient in terms of supporting a strategy or justifying the [Unit's] significant expenditure proposals; important weaknesses in the current plan are illustrated by the following examples:
- [1] Only one element of the current plan--hardware planning--is given significant attention; even in this area, conclusions concerning hardware requirements are not well supported ...
 - [2] user needs are not discussed.
 - [3] Insufficient analysis is presented regarding both the systems development work that is to be undertaken and the expected costs and benefits of this work ...
 - [4] Insufficient attention is given to the overall financial implications of the plan to the company
 - [5] some non-[Information Systems Unit] executives have difficulty understanding the language and format of the long-range plan." A/U (CO1, X-9)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
<p>4. "Long-range business systems plan should include a documented description of proposed systems development activities including:</p> <ul style="list-style-type: none"> • Relative priorities; • Impact of anticipated technological developments; • Anticipated due dates; • Manpower estimates/backlogged personnel demands; • Additional skill requirements; <p>and</p> <ul style="list-style-type: none"> • Responsiveness of specific project to corporate needs." A/U (PA6, XIII-30) <p>5. "A processing resources plan should be a long-range plan which covers anticipated needs for hardware, software, personnel, and facilities, and which covers:</p> <ul style="list-style-type: none"> • Volume increases; • Cost effectiveness; • Business systems; • Integration with other long-range corporate plans; • Impact on other operational units; • Migration to various facilities changes; and • Technological changes." A/U (PA6, XIII-30) <p>6. "[Information systems unit] has implemented effective planning and project management systems to guide information systems development.</p> <ul style="list-style-type: none"> • Several sound principles underlie the annual information system planning process and contribute to its effectiveness in providing direction to [unit] efforts; these principles include: • Assessing the costs and benefits of possible new applications • Formulating an integrated resource requirements plan 	<p>22. "The systems development methodology should be redefined to include:</p> <ul style="list-style-type: none"> • phased design approach with definitive requirements of each phase; • major milestone completion dates; • project re-evaluation and approval for continuation of development effort at the end of each phase; and • post-implementation reviews. A/U (PA6, XIII-36) <p>23. "The relationship of departmental data processing activities to departmental and Company objectives and plans is not clear." A/U (See also "Output Evaluation" below) (NY2, X-40)</p> <p>24. "[Information systems unit] has not developed a long-range facility plan, with the result that [Company's] long-range facility plans may not reflect [unit's] needs, and [unit's] financial needs are not accurately known." A/U (NY2, X-37)</p> <p>25. "The effectiveness of [information systems unit's] long-range planning for [Company's] information systems function is critically (dependent on) its knowledge of the company's long-term business objectives and strategies; however, [unit's] knowledge of corporate objectives and strategies is limited by the lack of a formal corporate long-range plan." The [corporate information system plan] therefore does not define such objectives and strategies. No mechanism exists that compels [Company] management to communicate them to [unit] in timely fashion. A/U (NY2, X-35)</p>

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
<ul style="list-style-type: none"> • Obtaining top management approval and commitment." A/U (PA2, VII-5) 	26. "The [corporate information system plan] does not contain many elements that are usually found in a comprehensive long-range information systems plan." A/U (NY2, X-34)
7. "Plan contains: <ul style="list-style-type: none"> • Business and technical assumptions • [Information systems unit] long-range objectives, and strategies for meeting the objectives • Data management plans • Technical strategies and related hardware, software, and communications plans • Adequate staffing and organization projections and plans • Facilities acquisition plans • A financial summary" A/FS (NY2, X-35)	27. "The direction and growth of the data processing organizations servicing [Company] are not governed by an information systems plan." A/U (PA5, XIII-29)
8. "The corporate information system plan has been developed and approved and \$6 million has been allocated for its implementation." A/U (NY2, X-33)	28. "A contingency plan has been developed by the regional data center only." A/FS (PA6, XIII-11)
9. "[Company] has identified companywide information systems needs, and developed an approach to meeting them." A/U (NY2, X-33)	29. "Capacity plans are not coordinated or mandated by the parent company." A/U (PA5, XIII-11)
10. "The plan should cover a period of three to five years. Methodologies should be developed to update the plan every year." A/U (NY2, X-45)	30. "[Company] does not have a formal plan for utilizing computer services." A/U (FL1, X-199)
11. "The five-year plan indicates a strong [unit] awareness of spending as a percentage of [company] revenues." A/U (CA1, IX-30)	31. "The financial implications of the [unit's long-range] plan are not spelled out in sufficient detail to facilitate review by senior management, and possible modification of the resources allocated in the plan." A/U (CA1, IX-35)
12. "Data systems plans [are] documented." A/U (Kearney, 16)	32. "There are not enough explicit milestones in the [unit's long-range] plan, enabling periodic review of actual progress." A/U (CA1, IX-35)
13. "Data systems plan objectives [are] spelled out." A/U (Kearney, 16)	33. "The proportions of new development and maintenance workload are not described explicitly enough [in the unit's long-range plan] and are insufficiently related to [unit] plans for replacement of obsolete or obsolescent applications and software." (See also "Resource Allocation" below) A/U (CA1, IX-35)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

14. "The Company's disaster planning initiatives represent noteworthy efforts both to prevent disasters and to recover quickly should disasters occur." A/FS (NY3, VIII-22)
15. "Disaster plans [are] well documented and accurate." A/FS (Kearney, 16)

34. "Absence of a senior oversight body and continuing planning process appears to have resulted in hardware decisions being reached without consideration being given to such critical issues as equipment compatibility." (See also "Roles and Responsibilities" below) A/FS (NY3, VIII-24)
35. "Management plans for computer hardware and software acquisition have not been subjected to vigorous analysis." A/FS (CO1, X-11)
36. "Poor planning and systems development (See also "Schedules") A/U (GA1, VIII-3)
37. "The [data processing unit] does not have a comprehensive plan for continuing operation in the event of a disaster affecting data processing resources." A/FS (PA6, XIII-31)
38. [Information systems unit] has not developed a clear concept of a long-range systems architecture and specific plans for hardware, software and communications capabilities to support the architecture; consequently:
- The accuracy of long-range financial projections is diminished
 - The technical environment in which systems will operate is unknown
 - Internal technical projects such as conversions cannot be identified, and thus cannot be integrated into information systems plans." (See also "Program Plan" below) A/FS (NY2, X-36)

III. Scope of Function

1. "The activities in the [unit's long-range plan] and, consequently, the projected spending levels are not identified precisely enough with user functional areas served by [unit]." A/U (CA1, IX-35)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

2. "The [Information Systems Division] is limited in its knowledge of and ability to meet Company information needs. [1] The nature of evolving information processing requirements (including the need for new, modified, or enhanced systems) has not been fully determined. [2] The ability of [the Division] to respond to prospective changes in requirements and to focus resources efficiently on a current basis is restricted." (See also "Resource Allocation" below) A/FS (C01, X-10)
3. "The Company lacks an effective strategy or role for [the Information Systems Division] in word processing and office automation." A/FS (C01, X-14)
4. "Certain security and backup arrangements are not complete." A/FS (AK1, XI-47)

IV. Priorities

1. "Criteria have been established for evaluating and prioritizing project requests." A/U (PA1, p. 57)
2. "Criteria [have been] established for evaluating and prioritizing project requests on a company-wide basis." A/FS (Kearney, 16)
3. "Users' group consisting of the General Manager and Managers of a few areas which regularly utilize Data Processing Services. This group is formally charged with establishing Data Processing's general priorities, thus eliminating the need for Data Processing having to arbitrate conflicting demands." (See also "Roles and Responsibilities" above). A/FS (AK1, XI-46)
8. "Authority to approve or disapprove all user requests [for data processing support] is assigned solely to the Manager [Information Systems Division]. This requires the Manager (a data processing professional) to reach judgment on issues calling for a more general perspective on [Company's] business strategy and priorities. This arrangement leads to widespread perceptions that decisions regarding the priorities set for requests are not consistently well founded." (See also "Roles and Responsibilities" below) A/FS (C01, X-12)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
4. "All application development work, whether new development or maintenance, should be supported by a cost benefit analysis." A/FS PA6, XIII-35)	9. "The projects [in the annual operating plan] are not consistently assigned priorities; and, in some cases, priorities are omitted." A/U (C01, X-10)
5. "Program priorities [are] based on return on investment." A/U (Kearney, 16)	10. "No uniform methodology or criteria exist for evaluating the various project requests [for data processing support] that are received." A/FS (C01, X-12)
6. "Program priorities are based on ... measures." A/U (Kearney, 16)	11. "[Company] lacks a formalized process for approving and prioritizing users' system requirements." A/U (AK1, XI-46)
7. "The [Energy Management Systems] division has effectively emphasized data security, both in terms of data retention and the control of user access, in the design of its systems." A/FS (C01, X-8)	12. "Poor planning and systems development. (See also "Priorities") A/U (GA1, VIII-3)
	13. "[The Information Systems Unit] has not conducted broadly based user surveys to identify, justify and relate the information systems needs of the Company as a whole with the current and proposed capabilities of the [Unit]." A/FS (C01, X-10)
 V. <u>Roles and Responsibilities</u>	
1. "Review board has been created, establishing an appropriate and much needed mechanism for involving [Company] top management in directing data processing resources." B/FS (NY2, X-33)	21. "Lack of top management involvement in planning and design." A/U (GA1, VIII-3)
2. "Responsibilities and authorities for project approval [are] appropriate to the level of implementation effort." A/U (Kearney, 16)	22. "Lack of system integration; numerous independently functioning information systems." A/U (GA1, VIII-3)
	23. "An ideal reporting point does not exist in the present top management organization structure. * Data processing should continue to be independent from accounting or other major user groups.

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>3. The division of responsibilities between systems analysts and programmers [is] clear and appropriate." A/FS (Kearney, 17)</p> <p>4. "Division of responsibilities among staff members is clear and appropriate." A/U (PA1, p. 56)</p> <p>5. "The first five-year plan ..., recently released and covering 1980-1984, reflects conscientious and effective efforts on the part of the Vice President and his key subordinates. In particular it reflects numerous informal discussions with [unit's] users and a carefully reasoned technical strategy." A/U (CA1, IX-30)</p> <p>6. "The consolidation two years ago of four separate units into one [computer systems and services] organization was a significantly positive step." A/U (CA1, IX-29)</p> <p>7. "Consolidation of information system activities was soundly conceived." A/U (NY3, VIII-22)</p> <p>8. "The programming group should be separated into two units.
 <ul style="list-style-type: none"> • A development group should concentrate on new systems and applications. • A maintenance group should ensure the effective operation and documentation of existing systems." B/FS (KY1, XII-10)</p> <p>9. "The data processing steering committee has been reactivated also." B/FS (KY1, XII-7)</p> | <p>• The officer to whom data processing reports should have a sufficiently narrow span of authority to permit him to spend adequate time on data processing issues." A/U (KY1, XII-10)</p> <p>24. "Authority to approve or disapprove all user requests [for data processing support] is assigned solely to the manager [Information Systems Division]. This requires the Manager (a data processing professional) to reach judgment on issues calling for a more general perspective on [Company's] business strategy and priorities. This arrangement leads to widespread perceptions that decision regarding the priorities set for requests are not consistently well founded." (See also "Priorities" above) A/FS (CO1, X-12)</p> <p>25. "More significantly, no unit or person within [information systems unit] is responsible for accomplishing companywide technical support activities. No person or group develops and implements companywide hardware and software plans, establishes and enforces companywide technical standards and procedures, or reviews the technical quality of departmental and [unit] systems." A/FS (NY2, X-45)</p> <p>26. "Systems are developed to serve departmental needs without consideration of whether they duplicate other systems, can be used by more than one department, or require support and resources from other departments." (See also "Resource Allocation" below) A/FS (NY2, X-40)</p> |
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PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
10. "[There is] an effective arrangement to provide interface with users." A/FS (Kearney, 16)	27. "[There is no functioning] applications review committee with primary responsibility for accepting all program requests, performing the necessary evaluation, and submitting proposals to the corporate review committee for approval." A/FS (MO1, IX-54)
11. "A user committee has been established to identify and coordinate data processing needs." A/FS (KY1, XII-7)	
12. "Users' group consisting of the General Manager and Managers of a few areas which regularly utilize data processing services. This group is formally charged with establishing data processing's general priorities, thus eliminating the need for data processing having to arbitrate conflicting demands." (See also "Priorities" above) A/FS (AK1, XI-46)	28. "Absence of a senior oversight body and continuing planning process appears to have resulted in hardware decisions being reached without consideration being given to such critical issues as equipment compatibility." (See also "Plan and Forecasts" above) A/FS (NY3, VIII-24)
13. "[There is] a common arrangement to provide interface [for users]." A/FS (Kearney, 16)	29. "No clear delineation of responsibility and accountability." A/U (GA1, VIII-2)
14. "The Director and the Manager-Systems Planning are attempting to educate users regarding their roles and responsibilities, through the business proposal process." B/FS (NY2, X-41)	30. "Moreover, the roles, responsibilities and authorities of the technical support personnel have not been clearly defined." A/U (NY2, X-45)
15. "[Information systems unit] should establish an information center to support user friendly software applications and to aid users with other problems." B/FS (PA2, VII-9)	31. "The fragmentation of technical support responsibilities results in a narrow, ad hoc, and poorly coordinated approach to the technical support activities that are accomplished." A/U (NY2, X-44)
16. "Established a formal support group to provide ongoing assistance to users." A/FS (PA2, VII-7)	32. ". . . duplication of effort." (See also "Resource allocation" below) A/U (PA5, XIII-29)
	33. "The span of control of the manager [for] EDP operations is too broad given the wide variety of activities performed." A/U (PA2, VII-8)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
17. "Responsibilities and authorities for project approval ... ensure a prompt response to user requests." (see also "Program and Project Control" below) A/FS (Kearney, 16)	34. "Current organizational arrangements engender a cumbersome relationship among affiliates in which the role and responsibilities of each affiliate are not clearly defined." A/U (NY3, VIII-25)
18. "The formation of task forces to study challenges facing information services." B/U (PA2, VII-5)	35. "Unclear interfaces and reporting relationships." A/U (GA1, VIII-2)
19. "Review and update the current job descriptions." A/U (PA6, XIII-32)	36. "There appears to be little awareness or concern on the part of many [Company] operating and staff units of the costs incurred by [unit] on their behalf. Consequently, the burden of cost control falls almost exclusively on [unit]." A/FS (CA1, IX-33)
20. "[Unit] has maintained close and rewarding contacts with computer professionals in academic and industry circles." A/U (CA1, IX-32)	37. "The [long-range] planning process does not require sufficient involvement of [unit] users in the early stages of plan development." A/U (CA1, IX-36)
	38. "There is insufficient participation of user management in the process of screening and ranking unit's development work." A/U (CA1, IX-33)
	39. "Continued reliance on informal arrangements does not appear to be an effective long-term strategy for user-friendly software support." Such an approach diverts [information systems] staff from their primary responsibilities. Moreover, responsibility for ensuring that users take full advantage of the user-friendly software is diffused." A/U (PA2, VII-7)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

40. "The departments are not required to develop data processing plans and budgets, with the result that valuable information for control and coordination is lacking." (A/U NY2, X-39)
41. "User roles, responsibilities, and resource requirements to support [information systems unit's] plans are not specified, and are not clear to users." A/FS (NY2, X-38)
42. "Lack of user involvement in applications design, development, and implementation." A/FS (GA1, VIII-3)
43. "[Information systems unit] does not have adequate mechanisms for involving user management and staff in systems development and data processing operations activities. ... The roles and responsibilities of users in the systems development process and in support of the operation of existing systems have not been defined." A/FS (NY2, X-41)
44. "[Information systems unit] does not seek out potential data processing applications, but instead relies to a great extent on users to identify potential opportunities." A/FS (PA2, VII-6)
45. "Lacking ... user management involvement and a formal planning process to define data processing priorities, information systems activities have been duplicated by [Company] and its affiliates." A/U (NY3, VIII-24)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

46. "Senior executives of major user departments do not now assume an active role in providing counsel on the allocation and utilization of data processing resources ... This situation has left unclear the role and responsibilities of the Information Systems [unit]." A/FS (NY3, VIII-23)

ORGANIZING

VI. Resource Capabilities

1. "The present staff [is] adequate in terms of number and skills to perform job requirements." A/U (Kearney, 17)
2. "Internal staff is adequate in terms of numbers and skills." A/U (PA1, 56)
3. "Staff turnover [in energy management systems] has been low." A/U (CO1, X-8)
4. "The Vice President-General Services and the Manager-[Information systems unit] should request the assistance of the Employee Relations Division in securing appropriate management training for incumbent [information systems unit] executives, ensuring that managerial as well technical knowledge and skills are carefully considered in future management succession and development planning." A/U (CO1, X-15)
5. "Develop a formal education plan." A/U (PA6, XIII-32)
11. "The current staffing level in the methods department is insufficient to meet present and future demands for systems development and program maintenance." A/U (MO1, IX-54)
12. " ... [unit] seems to be understaffed in relation to its scope of work." A/U (CA1, IX-32)
13. "There appear to be areas of serious understaffing in [unit] as well as some overstaffing and mismatching of personnel with assignments." A/U (CA1, IX-32)
14. "In view of its rather massive backlog (12-18 months), the [unit] staff of 106 would ... appear to be insufficient people." A/U (CA1, IX-32)
15. "The staff complement in [unit] appears to be excessive." A/U (CA1, IX-32)
16. "Overstaffed." A/U (GA1, VIII-2)
17. "Division ... does not have a sound human resources management program to support the development of a skilled and technically proficient data processing staff." A/U (NY2, X-43)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

6. "Machine utilization [is] monitored and ... capacity [is] established for each system component." (See also "Program and Project Control" below) A/FS (Kearney, 17)
7. "[Unit] is ... frugal, perhaps to a fault, in supporting its own operations with equipment and facilities." A/U (CA1, IX-30)
8. "Current hardware lease arrangement is appropriate." A/FS (AK, XI-48)
9. "Technical capabilities are embodied in a full complement of software, both internally developed and externally acquired." A/FS (CA1, IX-31)
10. "A computer-based reporting system [is] used to track programming requests." A/FS (KY1, XII-5)

Negative Performance
Indicators

18. "[Information systems unit] lacks the processes to identify the staff skills needed to support existing and future unit activities." (NY2, X-43)
19. "[Information systems unit] has not implemented an effective staff training program."
 - No comprehensive training plan exists, describing what training is being offered, who should attend what specific training activities, and what schedule has been established." A/U (NY2, X-43)
20. "A formal employee performance and education monitoring system is not in place." A/U (PA6, XIII-32)
21. "Personnel training is conducted primarily 'on the job.' Formal education courses are usually taken on an "as needed" basis. Predefined training and education requirements for a given position are not prepared." A/U (PA6, XIII-10)
22. "[Information systems unit] has not aggressively recruited seasoned data processing personnel for middle-management and senior technical positions." A/U (NY2, X-44)
23. "[Information systems unit] has not established clear career paths for its personnel. The requirements for advancement from one position to another have not been defined." (NY2, X-43)
24. "Performance evaluations do not result in specific plans for improving performance, nor are they used to establish individualized training programs." A/U (NY2, X-44)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

25. "Machine utilization is not available on EDP equipment." A/FS (M01, IX-51)
26. "Since the information systems [unit] receives no explicit direction on how aggressively to pursue systems development efforts, automation opportunities may go unmet." (See also "Policy and Philosophy" above) A/FS (NY3, VIII-25)
27. "Many of the company's business systems are old, and much of the programming effort in recent years has been devoted to smaller programs and to program maintenance." A/FS (KY1, XII-5)
28. "Hardware and software evolution has been slow, and the company is in the process of catching up with current technologies." A/U (KY1, XII-6)
29. "The existing payroll and general ledger systems are antiquated." B/FS (AK1, XI-47)
30. "There is presently no fireproof storage in the EDP and methods department." B/FS (M01, IX-50)
31. "... off-site storage for methods department programs and data does not exist." B/FS (M01, IX-50)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

VII. Resource Allocation

1. "The planning process is complemented by the project management system, which assigns resources among competing requirements by a logical method." A/U (PA2, VII-5)
2. "By developing and adopting a strategy to define an appropriate mix of hardware and software applications, the company will be in a better position for the future." A/FS (PA2, VII-6)
3. "Lease or buy decisions [for facilities and equipment] result in the most favorable costs." A/U (Kearney, 17)
4. "There is regular and close scrutiny of user requests for new systems." A/U (CA1, IX-30)
5. "The guidelines currently used by [unit for the acquisition, deployment, and use of computer-related equipment], as evidenced by installed equipment and its patterns of usage, suffer from the following defects: excessive orientation toward large-scale, centralized, computing; emphasis on equipment productivity, at the expense of labor productivity and user service; insufficient attention to output distribution costs; some lag in substitution of new technology." A/U (CA1, IX-36)
6. "The absence of sound decision and effective policies for hardware and software can result in the company acquiring costly resources with an inappropriate configuration." (See also "Resource Allocation" below) A/FS (CO1, X-11)
7. "Documented staffing plans are limited to the analyst, programmer, and user resources needed to develop and implement [computer information system plan] projects.
• The numbers and skill levels of managerial, technical, support (for example, data base administration) and operations staff needed to support [unit] activities are not known." A/FS (NY2, X-36)
8. "[Information systems unit] has not been sufficiently aggressive in identifying potential automation applications." A/FS (PA2, VII-6)
9. "Existing systems are not reviewed to determine whether they are using equipment resources efficiently, or whether manual processes used to support the systems can be streamlined." A/U (NY2, X-42)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

10. "Systems are developed to serve departmental needs without consideration of whether they duplicate other systems, can be used by more than one department, or require support and resources from other departments." (See also "Roles and Responsibilities" above) A/U (NY2, X-40)
11. "The Department uses an internal rate of return calculation, based on direct labor displacement or avoidance of direct costs." A/U (CA1, IX-33)
12. "Resource management, a technique used to monitor and maintain optimum data processing component performance and efficiency, is generally performed in an informal manner." (PA6, XIII-20)
13. "... duplication of effort." A/U (PA5 IX-29)
14. "Mechanisms used by the Company to control the cost and quality of computing outside of [unit] are inadequate." (See also "Program and Project Control" below) A/U (CA1, IX-38)
15. "Expansion of the use of user-friendly software without ongoing information service support is inappropriate." A/FS (PA2, VII-7)
16. "The proportions of new development and maintenance workload are not described explicitly enough [in the unit's long range plan and are insufficiently related to [unit] plans for replacement of obsolete or obsolescent applications and software." (See also "Plan and Forecasts" above) A/FS (CA1, IX-35)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

17. "Estimated resource needs [for systems development] are not uniformly forecasted and documented at the inception of projects." (See also "Program Plan" below) A/FS (CO1, X-13)
18. "The absence of sound decisions and effective policies for hardware and software can result in the Company acquiring costly resources with an inappropriate configuration." (See also "Resource Capabilities" above) A/FS (CO1, X-11)
19. "The [Information Systems Division] is limited in its knowledge of and ability to meet Company information needs. [1] The nature of evolving information processing requirements (including the need for new, modified, or enhanced systems) has not been fully determined. [2] The ability of [the division] to respond to prospective changes in requirements and to focus resources efficiently on a current basis is restricted." (See also "Scope of Function" above) A/FS (CO1, X-10)
20. "... [The Information Systems Division] lacks a documented policy for selecting hardware and software vendors. Audit interviews indicate that Division staff tend not to consider seriously alternative vendors for hardware and software products." A/FS (CO1, X-11)

VIII. Program Plan

1. "Standards [for data entry productivity] have been determined." A/FS (Kearney, 17)
10. "The absence of ... annual operating plans inhibits the company's ability to plan and manage the information systems function." A/U (CO1, X-10 (See "Policy and Philosophy" above)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
2. "Operating documentation is adequate." A/U (PA1, p. 57)	11. "[Information systems unit] has not developed a clear concept of a long-range systems architecture and specific plans for hardware, software and communications capabilities to support the architecture; consequently: • The accuracy of long-range financial projections is diminished. • The technical environment in which systems will operate is unknown. • Internal technical projects such as conversions cannot be identified, and thus cannot be integrated into information systems plans." (See also "Plan and Forecasts") A/FS (NY2, X-36)
3. "[Unit] has done an impressive job of documenting technical standards." A/FS (CA1, IX-31)	12. "[Information systems unit] has not developed a comprehensive operating plan to accomplish approved [corporate information system plan] projects or other activities." A/U (NY2, X-37)
4. "Design standards and conventions [are] documented and communicated to affected personnel." A/FS (Kearney, 16)	13. "[Information systems unit] has not developed the monitoring, planning and policy-setting mechanisms necessary for adequate direction and control of the significant departmental data processing activities." A/U (NY2, X-38)
5. "Tactical actions [are] identified to meet program objectives." A/U (Kearney, 16)	14. "Without a short-term plan, ISD cannot effectively: • Allocate resources to critical needs • Coordinate activities • Establish accountability for results • Monitor progress against the plan to identify and resolve problems." A/U (NY2, X-38)
6. "The establishment of a production control function, the creation of systems development standards and procedures, and the development of a problem-reporting mechanism will improve [information systems unit] operations." (See also "Program and Project Control" and "Reports and Reviews of Progress" below) (NY2, X-34)	
7. "Standards and procedures for time and project management control should be developed and installed." A/U (PA6, XIII-35)	
8. "Development of a project schedule including detailed/discrete activities with a scheduled completion date and estimated programmer/analyst hours required for each step." A/U (AK1, XI-46)	
9. "The data processing installation has fully operational annual budgets, annual plans, monthly status reports, periodic management review sessions, and formal systems	

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

and equipment evaluation procedures." A/U (See also "Reports and Reviews of Progress" below) (PA4, 7-42)

Negative Performance
Indicators

15. "Even though the [corporate information system] proposed a data base approach to systems design and operations, [information systems unit] to date has not developed a specific plan for implementing data base technology, with the result that:
 - The impact of data base technology on the [corporate information systems plan] systems design and implementation schedules has not been assessed.
 - Policies and procedures are not in place to reduce the inefficient and costly duplication of data collection and maintenance activities." A/FS (NY2, X-36)
16. "[Information systems unit] does not have a formal, documented, phased design and development process." A/U (NY2, X-40)
17. "No system development or design standards exist at the [data center]. Standards installed at the [regional data center] are not always enforced." A/U (PA6, XIII-25)
18. "Timetables are not established for overall [information systems development] projects or for the major sequential steps within them." A/U (CO1, X-13)
19. "... [T]here is no formalized scheduling of jobs to be run on the computer." A/FS (MO1, IX-52)
20. "Users and the [information systems unit] do not have a thorough understanding, at the outset, as to when specific projects can realistically expect to be completed." A/U (CO1, X-14)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

21. "Structured design and programming techniques have not yet been adopted as standard for the [information systems unit]." A/FS (NY3, VIII-26)
22. "The Standards manual, which defines programming standards, is not regularly updated, nor is it designed to facilitate easy reference." A/U (NY3, VIII-26)
23. "There is no specification [in the annual operating plan] of those projects that can be performed only if requested staff additions are authorized." A/U (CO1, X-10)
24. "The system development projects proposed by the [information systems unit] for the year [in the annual operating plan] are not clearly articulated, justified, or scheduled." A/U (CO1, X-10)
25. "Estimated resource needs [for systems development] are not uniformly forecasted and documented at the inception of projects." (See also "Resource Allocation" above) A/FS (CO1, X-13)
26. "User documentation for CAS is not current." B/FS (AK1, XI-48)
27. "Operator manuals do not exist for all systems." A/U (AK1, XI-48)
28. "More efficient means of data entry should be evaluated." B/FS (AK1, XI-49)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

CONTROLLING

IX. Implementation

1. "Standardized processes for preparing user requests [for data processing] are not followed. Because of this weakness, the support for and importance of the user requests are not always made clear." A/FS (C01, X-12)

X. Program and Project Control

1. "Project and productivity controls [are] in place." A/U (Kearney, 16)
2. "Controls over project development are in place." A/U (PA1, 57)
3. "Systems and programs [are] reviewed in the development stage." A/U (Kearney, 16)
4. "Machine utilization [is] monitored and ... capacity [is] established for each system component." (See also "Resource Capabilities" above) A/FS (Kearney, 17)
5. "Machine utilization is monitored." A/FS (PA1, 57)
6. "Formal user signoff at various stages of development and implementation." B/FS (AK1, XI-46)
7. "The establishment of a production control function, the creation of systems development standards and procedures, and the development of a problem-reporting mechanism will improve [information systems unit] operation." (See also "Program plan" above and "Reports and Reviews of Progress" below) A/U (NY2, X-34)
17. "... The standards and control function is not sufficiently developed. Neither the standards and control coordinator nor the internal audit group are consistently involved in performing quality control checks during systems development engagements." A/U (NY3, VIII-26)
18. "... [Information systems unit] management does not enhance the [unit's] standard systems development methodology; thus, few of the project managers follow it in practice." A/FS (C01, X-13)
19. "Controls on [unit's] work appear to be insufficiently formalized." A/U (CA1, IX-38)
20. "Control over development and major enhancement projects is inadequate." A/U (AK1, XI-46)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
8. "Require each employee to account for 100 percent of his/her time in the systems planning and implementation area." A/U (PA6, XIII-32)	21. "Mechanisms used by the Company to control the cost and quality of computing outside of [unit] are inadequate." (See also "Resource Allocation" above) A/U (CA1, IX-38)
9. "User levels [are] monitored." A/FS (Kearney, 17)	22. "There appears to be little awareness or concern on the part of many [Company] operating and staff units of the costs incurred by [unit] on their behalf. Consequently, the burden of cost control falls almost exclusively on [unit]. See also "Roles and Responsibilities" above) A/FS (CA1, IX-33)
10. "The company's decision to use a chargeback system to allocate information system costs reflects an appropriate approach to highlighting the cost of service to users and for fostering management control over these costs." A/FS (NY3, VIII-25)	23. "Technical support, that is, systems programming standards and procedures, are not documented. Systems programming standards normally include: testing and implementation procedures; systems performance measurement and tuning; documentation for all systems changes; standard test decks; guidelines for sensitive utilities; guidelines for use of performance degrading facilities (i.e., software monitors). Programming standards promote more controlled and effective system testing, implementation, documentation, and performance measurement." A/FS (PA6, XIII-18)
11. "The company's decision to use a chargeback system for allocating data processing costs represents a suitable approach for highlighting the cost of service by user department and for fostering management control over these costs." A/FS (CO1, X-15)	24. "A process for monitoring [informatics unit] progress in meeting departmental objectives and plans has not been established." A/U (NY2, X-38)
12. "[There is] an EDP audit capability." A/FS (Kearney, 16)	25. "[Information systems unit] does not have a planning and control process that permits it to direct relatively short-term (one to two years) data processing activities." A/U (NY2, X-37)
13. "Systems and programs [are] reviewed once they are operational." A/U (Kearney, 16)	
14. "Responsibilities and authorities for project approval ... ensure a prompt response to user requests." (See also "Roles and Responsibilities" above) A/FS (Kearney, 16)	
15. "Data entry productivity [is] monitored." A/FS (Kearney, 17)	
16. "[There is] sufficient control over [outside service bureaus or other resources]." A/FS (Kearney, 17)	

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

26. "The chargeback system [for allocating data processing costs] ... excludes the costs for systems development and maintenance and, in so doing, provides an incomplete statement of user costs." A/FS (CO1, X-15)
27. "The cost allocation mechanism for departments which share hardware resources does not include a charge for all corporate overheads; further, it is based on fixed percentages which appear to be outdated and do not reflect actual usage cost." A/FS (NY3, VIII-26)
28. "The cost allocation mechanism does not include a charge for personnel benefit expense." A/FS (NY3, VIII-26)
29. "Means have not been developed whereby [information systems unit] and [Company] top management could accurately identify the scope, objectives and resources of departmental data processing activities. [Unit] cannot easily and accurately identify who is providing departmental data processing services, what applications are in place or under development, what benefits are being achieved, or whether the departmental efforts duplicate [unit's] or other departments' efforts. A/U (NY2, X-39)
30. "[Information systems unit] lacks appropriate project management techniques to control major systems design efforts." A/U (NY2, X-41)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

31. "The absence of production control mechanisms impedes [information system unit's] ability to ensure the quality, reliability, timeliness, and accuracy of the products from the various systems." A/U (NY2, X-42)
32. "No formal management controls are used for new development or maintenance work at the [unit]." A/U (PA5, XIII-25)
33. "The algorithm used for distributing costs is based on the actual costs of the data processing function. While the costs of operating the data center(s) will be recovered, the approach does not provide the user any mechanism to manage and to control their data processing costs." A/FS (PA6, XIII-14)
34. "Upgrades to the system to accommodate user requests have occurred without benefit of financial analyses." A/FS (PA6, XIII-19)
35. "Some resources used [such as programming] are not billed in the month that the service or activities occurred." A/U (PA6, XIII-14)
36. "Standard resource rates are not applied; rather, rate per unit processed fluctuates by month." B/FS (PA6, XIII-14)
37. "Poor planning and systems development." A/U (GA1, VIII-3)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

XI. Reports and Reviews of Progress

1. "The data processing installation has fully operational annual budgets, annual plans, monthly status reports, periodic management review sessions and formal systems and equipment evaluation procedures." (See also "Program Plan" above) A/U (PA4, 7-42)
2. "Tracking of actual versus estimated schedule and labor hours." A/U (AK1, XI-46)
3. "Recording of time by programmer/analyst, by project and activity." A/U (AK1, XI-46)
4. "User levels [have] been determined." A/FS (Kearney, 7)
5. "Operating documentation [is] available and adequate." A/U (Kearney, 17)
6. "The establishment of a production control function, the creation of systems development standards and procedures, and the development of a problem-reporting mechanism will improve [information systems unit] operations." (See also "Program Plan" and "Program and Project Control" above) A/U (NY2, X-34)
7. "[Information systems unit] has no mechanisms for tracking the costs of maintaining existing systems, reviewing their efficiency, or determining whether the system products are meeting user needs." A/U (NY2, X-41)
8. "Actual application development/maintenance and production processing costs cannot be determined." A/U (PA6, XIII-14)
9. "The entire user community involved in the proposed system operation is not provided with any information until the end of the third phase. Typically, the document provided is voluminous and very detailed in its content. User feedback (which is expected) does not always happen because of lack of understanding. User requirements may have been overlooked requiring extensive modifications." B/FS (PA5, XIII-25)
10. "[Information systems unit] users have limited knowledge of the status of their projects." A/FS (CO1, X-14)
11. "The departments are not required to develop data processing plans and budget, with the result that valuable information for control and coordination is lacking." (See also "Roles and Responsibilities" above) A/U (NY2, X-39)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
	<p>12. "The cost vs. project budget report for construction work is issued for a monthly period about mid-month following the period covered. This circumstance causes the information reported to be more than two to six weeks old by the time the report is available to users, thus limiting the usefulness of the report as a tool to control work in progress." B/FS (PA4, 7-42)</p> <p>13. "Current EDP reports have not been reviewed to determine their usefulness or need for modification." A/FS (M01, IX-53)</p>

XII. Output Evaluation

1. "Important organizational and managerial recommendations contained in the [corporate information system] have been implemented." A/U (NY2, X-33)
2. "[Company's] hardware and operating systems can be classified as operationally effective." A/U (AK1, XI-47)
3. "Data processing is responsive to the users of its services." A/FS (PA4, 7-42)
4. "We found no evidence that the cost of the data processing services was unreasonable or that it was being unreasonably allocated with respect to the services provided to each of the regions. The costs are fully visible and regularly reviewed by operating personnel." A/U (PA4, 7-42)
5. "[Unit] has provided service that has been, on the whole, highly reliable." A/U (CA1, IX-31)
8. "Measures [used to assess the performance of unit] do not focus sufficient management attention on key aspects of [unit] performance such as productivity, service levels, reliability, [and] cost control. Furthermore, they do not provide sufficient guidance for such vital [unit] activities as planning of equipment capacity, acquisition of staff, training and development of staff, [and] management of installed operations." A/U (CA1, IX-34)
9. "The relationship of departmental data processing activities to departmental and Company objectives and plans is not clear." (See also "Plan and Forecasts" above) A/U (NY2, X-40)
10. "Excessive, non-productive information input and output." A/FS (GA1, VIII-3)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance Indicators	Negative Performance Indicators
6. "Programming response time has been excellent." A/U (KY1, XII-5)	11. "Wide variability in level of service to departments and divisions." A/FS (GA1, VIII-2)
7. "Turnaround time on requests has been good." A/U (KY1, XII-5)	12. "Varying levels of service given to user departments." A/FS (PA6, XIII-29)
	13. "Excluding personal computing, user costs for production processing are based on batch processing. User departments with significant teleprocessing activity are underbilled. Conversely, users with significant batch processing are overbilled." A/FS (PA5, XIII-14)
	14. "The [information systems unit] has not been timely in completing projects in accordance with its informal due dates." A/U (C01, X-14)
	15. "The [information systems unit] lacks a framework for the performance of post completion reviews." A/U (C01, X-14)
	16. "Post-implementation reviews are never conducted." A/U (PA6, XIII-25)
	17. "Unusually long development times for system standard applications." (PA5, XIII-29)
	18. "[Information systems unit] does not attempt to meet with users to determine whether system products are still needed - or, if needed, require modification." A/FS (NY2, X-42)

PERFORMANCE INDICATORS FOR
MANAGEMENT INFORMATION SYSTEMS

Positive Performance
Indicators

Negative Performance
Indicators

XIII. Impact Evaluation

1. "The File Management Systems, a pioneering data base management system, has been operating dependably for almost ten years. As a consequence, many [Company] business applications are relatively immune to changes in data." B/FS (CA1, IX-31)

G. Work Force Productivity

DIAGNOSTIC GUIDELINES FOR
WORK FORCE PRODUCTIVITY

	Yes/ No	Weight	Score
<u>I. Policy and Philosophy</u>			
A. Has the company taken a <u>positive</u> and <u>proactive</u> role toward developing and implementing work force management programs? (I.1)	_____	_____	_____
<u>II. Plan and forecasts</u>			
A. Are the <u>most accurate and useful</u> labor estimating standards engineered to reflect <u>optimum</u> crew size and man-hours required to complete a <u>well-defined quantity</u> of direct work? (II.2, II.10)	_____	_____	_____
B. Is planning and estimating done by trained and experienced personnel? (II.2)	_____	_____	_____
C. Are manpower requirements calculated and <u>known sufficiently in advance of necessary</u> increases and decreases? (II.3, II.11, II.12, II.13)	_____	_____	_____
D. Is there a <u>regular</u> review and updating of job standards? (II.4, II.14)	_____	_____	_____
E. Do the criteria for determining crew sizes include minimizing total man hours, adhering to all safety rules and maintaining <u>acceptable</u> work quality? (II.5)	_____	_____	_____
F. Is there increasing uniformity of job estimating by planners/estimators? (II.6)	_____	_____	_____
G. Are labor estimating standards developed in-house? (II.7)	_____	_____	_____
H. Is there a <u>consistent</u> method to determine the amount of indirect work required to accomplish a specific job? (II.8)	_____	_____	_____
I. Are time and motion studies used for development of engineered labor standards? (II.9)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
WORK FORCE PRODUCTIVITY

	Yes/ No	Weight	Score
<u>III. Scope of Function</u>			
A. Has there been development and implementation of work force management systems in additional functional units? (III.1)	_____	_____	_____
<u>IV. Priorities</u>			
A. Is there an organization charged with the responsibility to develop, help implement and monitor use of <u>effective</u> work force management techniques? (IV.1, IV.2)	_____	_____	_____
B. Is there <u>adequate</u> attention given to identification of work method improvements? (IV.3)	_____	_____	_____
<u>V. Roles and Responsibilities</u>			
A. Is a corporate-level staff established to design, help implement, and audit the use of <u>comprehensive</u> work force management systems? (V.1)	_____	_____	_____
<u>VI. Resource Capabilities</u>			
A. Is there a full-time estimating staff and a formal estimating procedure for the preparation of individual job estimates? (VI.1, VI.11)	_____	_____	_____
B. Is planning and estimating done by <u>trained</u> and <u>experienced</u> personnel? (VI.2, VI.3, VI.11)	_____	_____	_____
C. Do employees receive <u>adequate</u> instruction and training to achieve <u>maximum</u> production? (VI.4, VI.5, VI.6)	_____	_____	_____
D. Are manpower requirements calculated and known <u>sufficiently</u> in advance of <u>necessary</u> increases and decreases? (VI.7)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
WORK FORCE PRODUCTIVITY

	Yes/ No	Weight	Score
E. Is there an <u>appropriate</u> information and storage method established to support productivity measurement? (VI.9, VI.10, VI.13)	_____	_____	_____
F. Are systems in place to track man-hour expenditures and compare them to estimates? (VI.10)	_____	_____	_____
G. Are there specific workload measures? (VI.14)	_____	_____	_____
<u>VII. Resource Allocation</u>			
A. Is there <u>sufficient</u> cross training to provide <u>adequate</u> flexibility when planning staff assignments? (VII.1)	_____	_____	_____
B. Is there <u>adequate</u> planning, scheduling and/or control to promote <u>proper</u> worker utilization? (VII.2)	_____	_____	_____
<u>VIII. Program Plan</u>			
A. Have performance standards been developed? (VIII.1, VIII.9, VIII.10)	_____	_____	_____
B. Are there formal work force management practices? (VIII.2, VIII.11)	_____	_____	_____
C. Are labor <u>estimating</u> standards established to cover a <u>large</u> portion of the workload? (VIII.3, VIII.4, VIII.12)	_____	_____	_____
D. Are man-hour estimates made prior to undertaking work? (VIII.13)	_____	_____	_____
E. Is there a backlog control system in effect that is responsive to shifts in workload which enables supervisory personnel to move employees to critical areas? (VIII.5, VIII.6)	_____	_____	_____
F. Have the divisions employed a <u>variety</u> of work force management techniques to plan and control clerical and meter reading manpower levels? (VIII.7)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
WORK FORCE PRODUCTIVITY

	Yes/ No	Weight	Score
G. Are time targets made known to laborers? (VIII.8)	_____	_____	_____
H. Have substation construction and maintenance labor estimating standards been developed? (VIII.14)	_____	_____	_____
I. Are there <u>effective</u> procedures for processing employee grievances? (VIII.15)	_____	_____	_____
<u>IX. Implementation</u>			
A. Do supervisors plan work assignments and follow up on progress? (IX.1)	_____	_____	_____
B. Has Company established and administered <u>effective</u> work rules? (IX.2)	_____	_____	_____
<u>X. Program and Project Control</u>			
A. Has Company developed an automated work order control system? (X.1, X.2)	_____	_____	_____
B. Are there daily or weekly preassigned goals? (X.7)	_____	_____	_____
C. Have <u>appropriate</u> crew sizes for various tasks been formally evaluated? (X.8, X.9)	_____	_____	_____
D. Is labor performance reported on a daily basis? (X.3)	_____	_____	_____
E. Are actual versus estimated man-hour requirements reported and reasons for less than expected performances analyzed? (X.4, X.10)	_____	_____	_____
F. Are delays reported on a daily basis? (X.5, X.11)	_____	_____	_____
G. Does the control process trigger corrective action? (X.6)	_____	_____	_____
<u>XI. Reports and Reviews of Progress</u>			
A. Are separate reports designed to measure productivity versus adherence to budget/schedule man-hour estimates? (XI.1, XI.8)	_____	_____	_____

DIAGNOSTIC GUIDELINES FOR
WORK FORCE PRODUCTIVITY

	Yes/ No	Weight	Score
B. Are total man-hours expended compared to the optimum at the completion of each job to measure crew productivity? (XI.2, XI.3)	_____	_____	_____
C. Does system reporting include all available performance indicators? (XI.4, XI.9)	_____	_____	_____
D. Is there specific worker or supervisory accountability? (XI.5, XI.10)	_____	_____	_____
E. Are supervisors' evaluations based partially on labor performance? (XI.6)	_____	_____	_____
<u>XII. Output Evaluation</u>			
A. Does Company prepare comparative performance analyses across divisional and <u>distinct</u> lines as well as with other comparable entities? (XII.1)	_____	_____	_____
B. Is there steady or increasing utilization/productivity? (XII.2, XII.3, XII.4, XII.5)	_____	_____	_____
C. Is the operating management/supervision able to <u>adequately</u> assess work backlog? (XII.6)	_____	_____	_____
D. Is there a <u>clear</u> delineation between line and staff functions? (XII.7)	_____	_____	_____
E. Is there a <u>sufficient</u> supply of <u>skilled</u> labor? (XII.8)	_____	_____	_____
<u>XIII. Impact Evaluation</u>			
A. Is there, or has there been, a <u>major</u> rerouting of all meter reading routes? (XIII.1)	_____	_____	_____
B. Have <u>appropriate</u> crew sizes for various maintenance and construction tasks been formally evaluated? (XIII.2)	_____	_____	_____
C. Is there a <u>balance</u> of crew size to work assignment? (XIII.3)	_____	_____	_____

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

PLANNING

I. Policy and Philosophy

1. "The company has taken a positive and proactive role toward developing and implementing WFM (work force management) programs." A/U (NY1, VIII-1)

II. Plan and Forecasts

1. "The most accurate and useful labor estimating standards are engineered to reflect the optimum (most cost-effective) crew size and the man-hours required to complete a well-defined quantity of direct work. Engineered standards are developed using industrial engineering analytic techniques." A/FS (AZ1, IV-1)
2. "Planning and estimating must be done by trained and experienced personnel who are proficient in the correct application of labor estimating standards and appropriate allowances for indirect work and work site conditions." A/U (AZ1, IV-2) (See also "Resource capabilities".)
3. "...manpower requirements [are] calculated and known sufficiently in advance of necessary increases and decreases." A/U (PA1, p. 26) (See also "Resource capabilities".)
4. "Regular review and updating of job standards." A/FS (GA1, I-11) (See also "Resource capabilities".)
10. "Inability to adequately forecast manpower requirements compatible with workload." A/FS (GA1, I-9)
11. "Labor estimating standards are outdated and do not cover major portions of the work performed by division and system crews." A/FS (AZ1, IV-9)
12. "Distribution man-hour estimating standards have not been updated recently and do not reflect significant changes in methods, crew size and composition, and equipment." A/FS (AZ1, IV-9)
13. "...no man-hour estimating standards have been developed for line maintenance activities, which constitute 30 to 40 percent of the total line crew workload." A/FS (AZ1, IV-9)
14. "Failure to set meaningful work performance guidelines." A/FS (GA1, IV-15)

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

5. "The criteria for determining optimum crew sizes should encompass the following:
 - minimize total man-hours
 - adhere to all safety rules
 - maintain acceptable work quality."A/FS (AZ1, IV-15)
6. "Increasing uniformity of job estimating by planners/estimators." A/FS (GA1, I-11)"
7. "Labor estimating standards should be developed in-house to ensure commitment to them by plant personnel. This approach should help to ensure that the standards are tailored to the plants, work methods and equipment configurations." A/FS (AZ1, IV-17)
8. "A consistent method is needed to determine the amount of indirect work required to accomplish a specific job. Indirect work includes time for acquiring materials, traveling, job site planning, preparation and clean-up time." A/FS (AZ1, IV-1)
9. "...time and motion stud[ies] recommended for development of engineered labor standards should be expanded to include determination of the most cost-effective crew sizes." A/FS (AZ1, IV-15)

III. Scope of Function

1. "Development and implementation of WFM [work force management] systems in additional functional units." A/FS (GA1, I-11)

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

IV. Priorities

1. "A productivity analysis section was established to measure and help improve employee productivity. [It] was created to provide a centralized industrial engineering capability to support various efforts to measure and improve the productivity of human resources throughout the Company." A/FS (AZ1, IV-7)
2. "...no organization is charged with the responsibility to develop, help implement and monitor the use of effective work force management techniques and systems throughout company." A/FS (AZ1, IV-11)
3. "Inadequate attention to the identification of work method improvements." A/FS (GA1, IV-15)

V. Roles and Responsibilities

1. "A corporate-level staff should be established to design, help implement, and audit the use of comprehensive work force management systems." A/FS (AZ1, IV-18) (See also "Resource capabilities.")
2. "Regular review and updating of job standards." A/FS (GA1, I-11) (See also "Plan and forecasts.")

ORGANIZING

VI. Resource Capabilities

1. "There is a full-time estimating staff and a formal estimating procedure for the preparation of individual job estimates for line construction budgets and schedules." A/FS (AZ1, VI-3) (See also "Program plan.")
11. "Specialization exist[s] to the degree that flexibility is lost." A/U (PA1, p. 26)
2. "Planning and estimating must be done by trained and experienced personnel who are proficient in the correct application of labor estimating standards and appropriate allowances for indirect work and work site conditions." A/U (AZ1, IV-2) (See also "Plan and forecasts.")
12. "Lack of documented standard data base reduces accuracy of job/time estimates." A/FS (GA1, I-9)
13. "Substation construction and maintenance labor estimating standards have not been developed for productivity measurement purposes. ...data [kept by substation engineers] do not provide sufficient detail nor the optimum labor resources required to complete each sub-task." (AZ1, IV-9)

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>3. "A corporate-level staff should be established to design, help implement, and audit the use of comprehensive work force management systems." A/FS (AZ1, IV-18) (See also "Roles and responsibilities.")</p> <p>4. "...employees receive adequate instruction and training to achieve maximum production." A/U (PA1, p. 24)</p> <p>5. "...employees [are] sufficiently trained to assure the same method is used for any given job. (Standardization of work methods.)" A/U (PA1, p. 24)</p> <p>6. "...there [is] sufficient cross training to provide adequate flexibility when planning staff assignments." A/U (PA1, p. 24) (See also "Resource allocation.")</p> <p>7. "...manpower requirements [are] calculated and known sufficiently in advance of necessary increases and decreases." A/FS (PA1, p. 26) (See also "Plan and forecasts.")</p> <p>8. "An appropriate information collection and storage method must be established to support productivity measurement. The standard or optimum man-hours, the actual man-hours expended on the job, as well as additions or deletions of work, or delays encountered, should be reported on the work order." A/FS (AZ1, IV-16) (See also "Reports and reviews of progress.")</p> <p>9. "Work order system provide[s] documentation for job cost controls, job progress reports, repair history, records and closeout or completion control." A/FS (PA1, p. 26) (See also "Reports and reviews of progress.")</p> | <p>14. "Lack of specific workload measures - number of customer calls, number of new services, etc." A/FS (GA1, I-9)</p> |
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PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance Indicators	Negative Performance Indicators
<p>10. "Systems are in place to track man-hour expenditures and compare them to estimates of construction jobs. Computerized monthly reports compare year-to-date man-hour expenditures with the total man-hours estimated for each planned construction job." A/FS (AZ1, IV-4)</p>	
<p>VII. <u>Resource Allocation</u></p>	
<p>1. "...there [is] sufficient cross training to provide adequate flexibility when planning staff assignments." A/U (PA1, p. 24) (See also "Resource capabilities.")</p>	<p>2. "Poor worker utilization caused by inadequate planning, scheduling and/or control." A/FS (GA1, IV-15)</p>
<p>VIII. <u>Program Plan</u></p>	
<p>1. "...performance standards have been developed." A/FS (PA1, p. 26)</p>	<p>9. "Failure to establish and administer effective work rules." (GA1, IV-15) (See also "Implementation.")</p>
<p>2. "Systems to measure labor utilization or performance." (GA1, IV-17)</p>	<p>10. "Lack of documented operating procedures and standards manuals." (GA1, I-9)</p>
<p>3. "Labor estimating standards should be established to cover a large portion (70 to 80 percent) of the workload." A/FS (AZ1, IV-16)</p>	<p>11. "Informal work force management practices." A/FS (GA1, IV-15)</p>
<p>4. "There is a full-time estimating staff and a formal estimating procedure for the preparation of individual job estimates for line construction budgets and schedules." A/FS (AZ1, VI-3) (See also "Resource capabilities.")</p>	<p>12. "The company does not have power plant maintenance labor estimating standards." A/FS/E (AZ1, IV-11)</p>
<p>5. "[There] is a backlog control system in effect that is responsive to shifts in workload and enables supervisory personnel to move employees to critical areas." A/FS (PA1, p. 25)</p>	<p>13. "Man-hour estimates are often not made prior to undertaking work." A/FS (AZ1, IV-11)</p>
	<p>14. "Substation construction and maintenance labor estimating standards have not been developed for productivity measurement purposes." A/FS (AZ1, IV-9)</p>

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

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| <p>6. "There [is] an action program and policy to eliminate excess manpower (hiring freezes, job reassignments, early retirements, etc.)" A/FS (PA1, p. 26)</p> <p>7. "The divisions have employed a variety of work force management techniques to plan and control clerical and meter reading manpower levels." A/FS/GWE (AZ1, IV-5)</p> <p>8. "Time targets made known to laborers." A/FS (GA1, IV-17)</p> | <p>15. "Ineffective procedures for processing employee grievances." A/FS (GA1, IV-16)</p> |
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IX. Implementation

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| <p>1. "... supervisors plan work assignments and follow-up on progress." A/FS (PA1, p. 26)</p> | <p>2. "Failure to establish and administer effective work rules." A/U (GA1, IV-15) (See also "Program plan.")</p> |
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CONTROLLING

X. Program and Project Control

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| <p>1. "The Company is developing an automated work order control system. The anticipated benefit of this system is strengthened job performance through better estimating, scheduling, cost and schedule reporting, materials planning, and productivity improvement." A/FS (AZ1, IV-5)</p> <p>2. "Maximum usage of performance reporting systems by management and supervision." A/FS (GA1, I-11)</p> <p>3. "...labor performance reported on a daily basis." A/FS (PA1, p. 23)</p> <p>4. "Actual versus estimated times should be reported and reasons for less than expected performances should be analyzed." A/FS (AZ1, IV-16)</p> | <p>7. "Lack of daily or weekly preassigned goals may result in sub-standard performance as a result of self-pacing." A/FS (GA1, I-9)</p> <p>8. "Control and measurement of maintenance work tends to be informal." A/FS (AZ1, IV-11)</p> <p>9. "Appropriate crew sizes for various maintenance and construction tasks have not been formally evaluated." A/FS (AZ1, IV-10)</p> <p>10. "Even when estimates of man-hour requirements are prepared, actual man-hours expended are not compared routinely with the original estimates to measure performance." A/FS (AZ1, IV-11)</p> |
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PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance Indicators	Negative Performance Indicators
5. "...delays [are] reported on a daily basis." A/FS (PA1, p. 24)	11. "Poor control of delay time generally results in increased job labor expense." A/FS (GA1, I-9)
6. "...degrees to which the control process triggers corrective action." A/FS (GA1, I-8)	
XI. <u>Reports and Reviews of Progress</u>	
1. "Separate reports should be designed to measure productivity versus adherence to budget/schedule man-hour estimates. Productivity measurement reports should be directed to individual crew foreman and subforemen, and appropriate levels of supervision and management. Budget/schedule adherence reports should be directed to those who requested the work and the appropriate management, but not to crew foremen." A/FS (AZ1, VI-14)	3. "Existing labor performance reports measure variances between budgeted and expended man-hours; they do not measure productivity." A/FS (AZ1, VI-10)
2. "At the completion of each job, the total man-hours expended should be compared to the optimum in order to measure crew productivity." A/FS (AZ1, IV-14)	9. "System reporting may be limited in scope and not include all available performance indicators." A/FS (GA1, I-9)
3. "An appropriate information collection and storage method must be established to support productivity measurement. The standard or optimum man-hours, the actual man-hours expended on the job, as well as additions or deletions of work, or delays encountered, should be reported on the work order." A/FS (AZ1, IV-16) (See also "Resource Capabilities.")	10. "Reporting systems may be producing accurate and timely data, but without specific worker or supervisory accountability." A/FS (GA1, I-9)
4. "...work order system provide[s] documentation for job cost controls, job progress reports, repair history, records and closeout or completion control." A/FS (PA1, p. 26) (See also "Resource capabilities.")	11. "...creeping methods changing result[s] in runaway standards." A/FS (PA1, p. 25)
	12. "Excessive time spent on rework." A/FS (GA1, IV-15)
	13. "High labor turnover." (GA1, IV-15)

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

5. "...labor performance reporting [is] timely enough to facilitate corrective action during a job." (Not when job is completed.) A/FS (PA1)
6. "Supervisors' evaluations [are] based partly on labor performance." A/FS (GA1, IV-17)
7. "Ten to one managerial control spans (not an absolute measure.)" C/U (GA1, IV-17)

XII. Output Evaluation

1. "Comparative performance analyses across divisional and district lines as well as other comparable entities..." A/FS (GA1, I-11)
2. "Steady or increasing utilization/productivity." A/FS (GA1, I-11)
3. "Steady or increasing ratio of number of customers to employees." A/FS (GA1, I-11)

4. "Poor awareness of labor performances." A/FS (GA1, IV-15)
5. "...there appears to be excess, idle or non-productive time. A/FS (PA1, p. 25)
6. "Operating management/supervision is unable to adequately assess work backlog." A/FS (GA1, I-9)
7. "No clear delineation between line and staff functions." A/FS (GA1, I-9)
8. "Insufficient supplies of skilled labor." A/U (GA1, IV-15)

XIII. Impact Evaluation

1. Implementation of a "major rerouting to all meter reading routes. The objective of this project is to balance workloads, reduce overtime, and redirect manpower for the pursuit of payment of delinquent accounts." A/FS/GWE 9AZ1, IV-6)

2. "Appropriate crew sizes for various maintenance and construction tasks have not been formally evaluated. Consequently, crews assigned to various jobs may be larger than required, leading to considerable variations in total man-hours expended on similar jobs." A/FS (AZ1, IV-10)

PERFORMANCE INDICATORS FOR
WORK FORCE PRODUCTIVITY

Positive Performance
Indicators

Negative Performance
Indicators

3. "Imbalance of crew size to work assignment." A/FS (GA1, IV-15)

PART FIVE

REFERENCE BIBLIOGRAPHY OF MANAGEMENT AUDITS USED
TO PREPARE THE LISTING OF PERFORMANCE INDICATORS AND
DIAGNOSTIC GUIDELINE QUESTIONS IN SEVEN FUNCTIONAL AREAS

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- PA7 Phase I of a Management Audit of Philadelphia Electric Company. Prepared for the Pennsylvania Public Utility Commission. Cresap, McCormick and Paget, Inc. (November 1979).
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