Proposal:

Case 08-E-0827
Comprehensive Management Audit of Niagara Mohawk Power Corporation d/b/a National Grid

nationalgrid

Submitted to:

State of New York
Department of Public Service

August 15, 2008

Submitted by:

WCI

Williams Consulting, Inc.

August 14, 2008

Ms. Jaclyn A. Brilling, Secretary
New York State Department of Public Service
3 Empire State Plaza
Albany, New York 12223-1350

Re: Case 08-E-0827, Comprehensive Management Audit of Niagara Mohawk Power Corporation d/b/a National Grid

Dear Ms. Brilling,

Williams Consulting, Inc. (WCI) is please to submit our proposal for consulting services in connection with the above noted request for proposals. Our offer is a firm offer valid for at least a 180 day period.

We have structured our proposal to address all the points expressed in the RFP. We have identified a senior team of consultants who have worked together on similar assignments numerous times.

WCI has extensive experience in the utility industry and has completed numerous assignments with components similar to the work efforts requested in the RFP. Our consulting team has collectively nearly 200 years of utility and consulting experience and is able to bring this experience and industry knowledge to benefit this project.

We attest to the accuracy of all the information in our proposal. We have the ability to perform all of the work contained in the proposal and we are committed to making this project our highest priority if awarded. We have complied with all RFP requirements. We have included one copy of each of two recent assignments that contain elements similar to the work requested in this audit.

We are not performing nor have we performed any work for National Grid nor have we performed any work for other organizations associated with the energy industry in the State of New York.

We appreciate the opportunity to propose on this important project and look forward to working with the Department.

If you should have any questions regarding our proposal, please do not hesitate to contact me via telephone at 904-940-6041 or via email at mike.rafferty@williamsconsultinginc.com.

Very truly yours,

Michael F. Rafferty
Vice President

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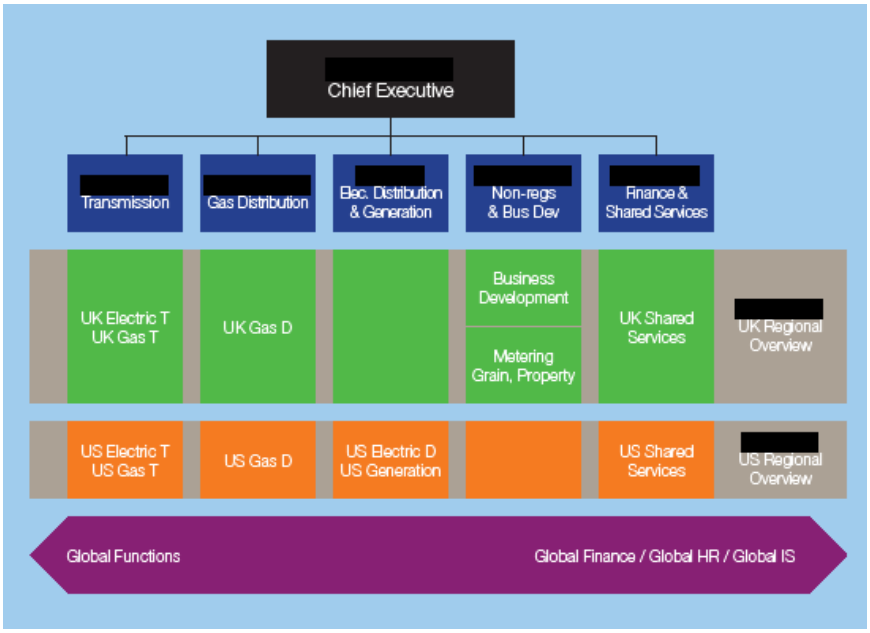
1. Introduction

1.1. Background

The State of New York Department of Public Service has requested proposals from qualified firms to conduct a comprehensive management audit of The Niagara Mohawk Power Corporation d/b/a National Grid electric business. The audit will be performed in accordance with Public Service Law, Section 66(19) which states that the "commission shall have the power to provide for management and operations audits of gas corporations and electric corporations. Such audits shall be performed at least every five years for combination gas and electric companies…" The Law also states that "the audit shall include, but not be limited to, an investigation of the company's construction program planning in relation to the needs of its customers for reliable service and an evaluation of the efficiency of the company's operations." While the audit will be comprehensive, it will focus on electric construction program planning, operational efficiency and performance, including reliability and will be limited to electric transmission and distribution in New York State.

National Grid has an international corporate structure that differs from the other electric/gas utilities in New York State. National Grid's Executive Management is located in Great Britain (U.K.) including the Board of Directors, Chief Executive, and the Executive Directors for each of five separate lines of business—Transmission, Gas Distribution, Electric Distribution & Generation, Business Development & Non-Regulated, and Finance & Shared Services. Within each line of business there is an Executive Vice President for U.S. Operations which includes operations in New York and New England. National Grid's high level organization chart is shown below[1].

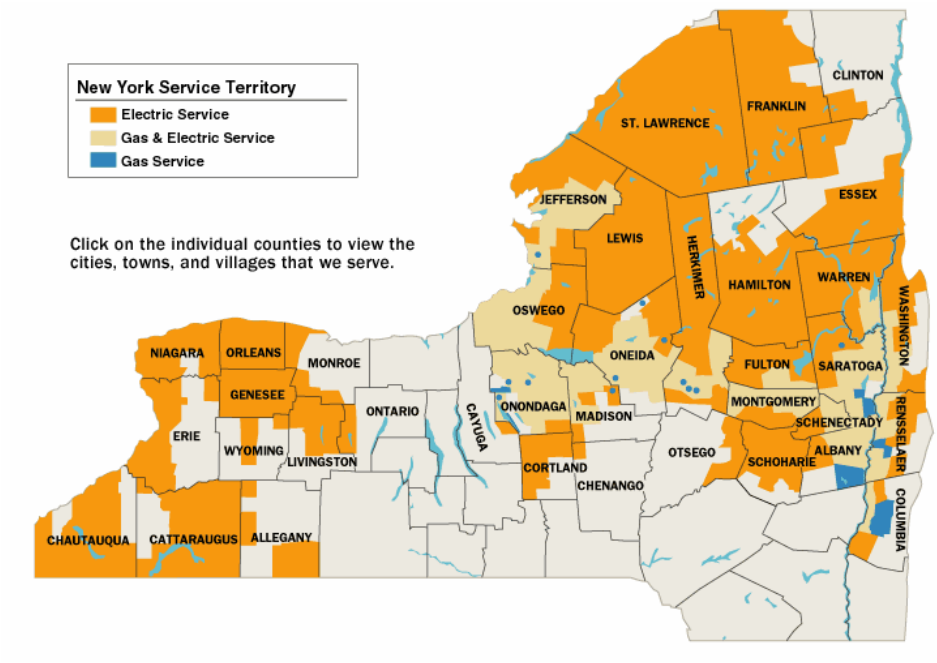


In 2007, National Grid began centralizing work processes and locations in support of their corporate goals and operating model. The physical location of the US facilities

[1] Case 08-E-0827, Attachment 1

include main offices which are centralized for employees who don't need to be geographically located with operations; special purpose facilities including data centers, control centers, call centers and training facilities; and operations sites for field operations. For electric operations, New York is divided into three regions—Central, East and West (geographically this includes parts of eastern upstate NY, Central NY, Western NY, Brooklyn and Long Island).

National Grid's New York service area is depicted in the map below.



1.2. About Williams Consulting, Inc.

Williams Consulting, Inc. (WCI) headquartered in Jacksonville, Florida provides management consulting services to Investor-owned Utilities, State Regulatory Agencies, Municipal Governments and Utilities, as well as Rural Electric Cooperatives. Williams Consulting, Inc has provided specialized services to the utility industry since 2000. Our mission is to serve customers with integrity and trust and to provide sound, innovative and creative advice. Our principal consultants and associates have over 200 years of experience in government, municipal and utility industries. This experience is the result of previous employment and consulting assignments within the government, municipals, investor-owned utilities and utility-consulting firms. Our understanding of the issues associated with current utility operations as well as those derived from the on-going deregulation efforts across the U.S. brings a depth of knowledge and industry best practices to all consulting assignments providing effective business solutions.

1.3. Understanding

Williams Consulting has undertaken numerous general and focused management audits as well as operational performance reviews. For this audit, we bring significant experience and understanding of the issues to be addressed. We understand that this

audit is focused on the asset construction program in particular and all of the processes that support and drive asset construction. We believe that policies and decision processes must be driven down through the organization from the top. In addition, the corporation's culture relative to projects, budgets and performance is also set by top management and must also be driven down through the organization. We also believe that the projects required for maintaining reliable operation of the system and to accommodate system growth and new resource technologies must be derived from the bottom up and be subject to cost/benefit analysis and economic justification.

There are numerous opportunities through the policy and governance activities and project development cycle to provide feedback mechanisms to permit timely and appropriate modifications to elements within the cycle. For example, system performance metrics can be used to help define asset management practices and to serve as a guide to efficient operation. Benchmarking of system performance and system operations against prior performance and against a panel of other utilities often can identify practices that may develop as "best" practices to improve operational efficiency and performance.

Within the overall cycle, each function must use proven and effective methods, models and decision criteria to assure consistency and optimum decisions. This is particularly important in the areas of load forecasting and system planning. Further in today's energy marketplace, it is crucial to consider alternate energy resources, both from the supply side as well as from the demand side. In the case of "wires only" operations, optimized supply procurement, risk management and hedging are essential to avoid market imbalances that could and have collapsed a reasonable energy market and to ultimate cost of providing energy.

Given optimum selection of asset projects, their proper and timely execution is the last element in providing a secure and reliable system. Program and project management practices and processes must be aligned with the strategies of the company and must be supported by efficient and effective deployment of resources and the ability of flex as circumstances dictate. Quality assurance at the program and project level is an important element, especially where outside contract resources are employed.

We believe that a multi-disciplined and highly experienced consulting team is essential to an audit such as this. The team that we are proposing has this experience and has worked together in a matrix style organization on many prior projects and audits.

2. Scope and Objectives

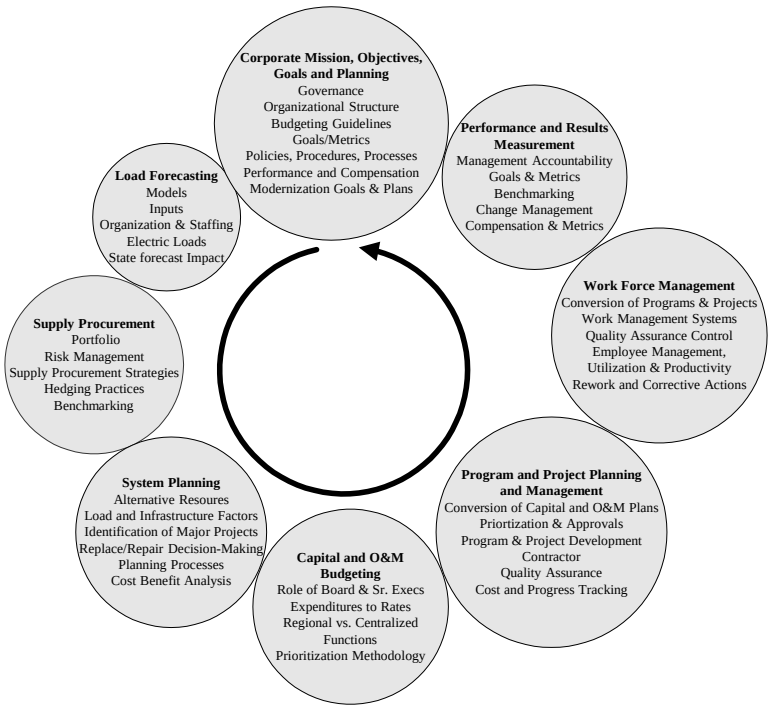
We understand the Commission's objectives for this audit center on the principle that process improvements lead to performance improvements. We subscribe to this philosophy and further understand that the Commission's objectives can include:

1. Identifying specific opportunities for improving: planning, organizational design, business processes, management practices, systems and operations;
2. Identifying specific opportunities to improve performance, including operational reliability, organizational effectiveness cost controls and savings, work quality, customer service, safety and other measurable elements;
3. Developing recommendations for implementing changes or undertaking the studies necessary to achieve performance improvements. These recommendations should, where appropriate, be supported by benefit/risk and benefit/cost analyses;
4. Receiving a comprehensive written report that meets the scope and objectives of the RFP, including factual findings, conclusions and recommendations,

With these objectives in mind, we have structured our proposal in the following pages to address the following functional areas for electric transmission and distribution:

1. Corporate Mission, Objectives, Goals and Planning
2. Load Forecasting
3. Supply Procurement
4. System Planning
5. Capital and O&M Budgeting
6. Program and Project Planning and Management
7. Work Force Management
8. Performance and Results Measurement

These functional areas can be viewed as sequential in nature and provide a natural feedback loop that should facilitate changes and improvements that should result in improved performance. There are components of each of these areas that should interact among functional areas, providing intermediate feedback loops to permit the overall cycle to self-improve within its overall operation.



WCI has developed a detailed scope of work according to the parameters expressed in the RFP. For each functional area, we have included an Objective and certain Best Practices Criteria against which we propose to further develop as we evaluate the organization. As part of this work effort, we will expand these objective tables using a series of Key Questions, Input Data Requests, Typical Analysis, Findings from Similar Audits and Deliverables to fully asses each functional area. We have included a sample completed Objective table in Exhibit 1.

2.1. Corporate Mission, Objectives, Goals, and Planning

Objective:	To assess the roles, effectiveness, and relationships of the Board of Directors and utility management in determining objectives, policy, and strategy.

Best Practices Criteria:

- Sufficient strategic objectives are established.
- The Board is properly organized and informed to provide sufficient direction and oversight of senior management's actions and plans.
- Board members have the requisite background and experience to provide effective oversight.
- Long-range goals and the corporate plan are comprehensive and realistic.
- The strategic plan reflects the specific needs of ratepayers.
- Management exercises appropriate controls over its use of external professional firms.
- Achievements and progress in meeting strategic objectives are appropriately monitored.
- Comprehensive strategic and organizational tactical business plans are subject to reasonable scrutiny and approved after adequate review.
- Capital and operating and maintenance budgeting processes as appropriately integrated into the overall organizational plan.
- Principles of cost reduction and control are stressed as a part of the underlying philosophy to organizational managers.
- Executive management's breadth and depth of experience is commensurate with the requirements of the overall organizational design.
- Staffing levels are routinely assessed in light of current and foreseeable requirements.
- The specific basis, direction, and objectives of major programs are clearly defined and carefully stated.
- Performance of achievement is appropriately monitored and reported throughout the organization.
- Executive Management at each level is:
  - involved in strategic level of operations,

- involved in assessing the performance of achieving objectives,
- involved in assessing the performance of operations management, and
- appropriately representative of the community being served.

2.2. Load Forecasting

Objective:	To review and assess load forecasting models, assumptions and integration of the forecast into other business areas.

Best Practices Criteria:

- Formal, documented load forecasting procedures are maintained.
- Load forecasts represent reasonable year to year accuracy.
- Inclusion of energy use optimization initiatives, such as demand side management and energy efficiency.
- Load forecast(s) are integrated into other related business functions.

2.3. Supply Procurement

Objective:	To review and assess supply procurement and portfolio management for mass market default customers.

Best Practices Criteria:

- Formal, documented supply portfolio principles and procedures are maintained.
- Sound risk management strategies.
- Established and proven hedging practices.

2.4. System Planning

Objective:	To review and assess the system planning process for asset management.

Best Practices Criteria:

- Formal, documented system planning procedures are maintained.
- Cost/benefit analyses are incorporated
- Alternative resource mixes are considered

2.5. Capital and O&M Budgeting

Objective:	Evaluate effectiveness of budget preparation, budget management and control.

Best Practices Criteria:

- The budget preparation process is straightforward and easy to use.
- The system is efficient and used consistently throughout the entire Client organization.
- The budgeting systems are linked with other accounting and operations systems.
- The budget monitoring and control processes and systems compare actual amounts to budgeted amounts and produces reports that are timely, accurate, and conducive to management by exception.

2.6. Program and Project Planning and Management

Objective:	To review project prioritization, execution and resourcing.

Best Practices Criteria:

- Contractor usage is defined by project type and other parameters to maximize the use of and effectiveness of in-house crews.
- Quality assurance programs in place to monitor in-house and contracted work adequacy and conformance to standards and design.
- The project management tools used for managing construction projects should include planning, scheduling, and resource techniques, and have a level of detail sufficient for adequate control, including;
    - Logical project work breakdown structures
    - Resource considerations with some leveling capabilities
    - Progress reporting based on the work breakdown structure
    - Consideration of earned value techniques
    - Modification of techniques based on specific project needs.

2.7. Work Force Management

Objective:	To evaluate workforce management systems, procedures, and work scheduling.

Best Practices Criteria:

- The work management tools used for directing work activities should encompass planning efforts, scheduling controls, resource allocation capabilities.
- Actual work measurement and performance should compare favorably to targets with variances being routinely scrutinized.
- The overall organization of employee-intensive functions is efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload and service-level driven, and adequate consolidation of activities.

2.8. Performance and Results Measurement

Objective:	To evaluate the implementation, usefulness and adequacy of performance metrics and to assess how these metrics are developed and used.

Best Practices Criteria:

- Are company results benchmarked?
- Existence of accountability linkages to performance levels and feedback processes exist

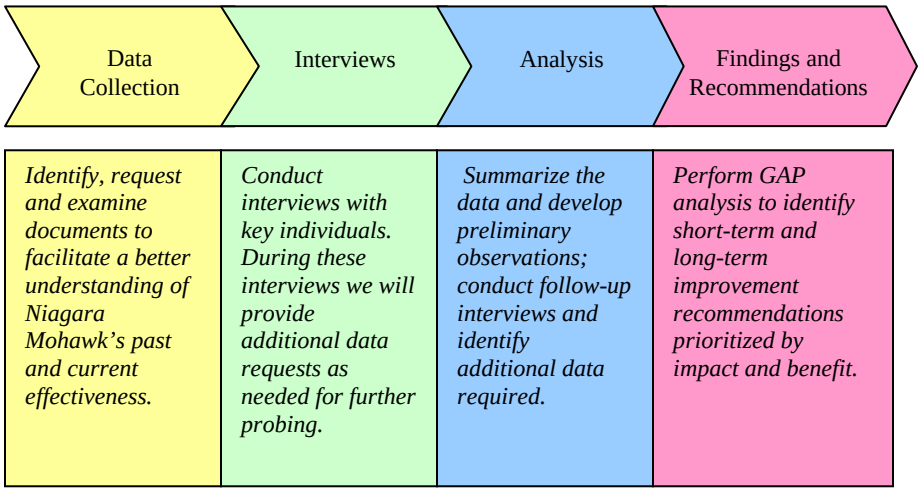
3. Approach, Methods, Procedures and Audit Management

WCI believes that a clearly defined approach and methodology permits a project to be undertaken with high confidence of a successful and timely completion and ensures achievement of the goals and objectives of the project.

3.1. Approach

WCI has successfully employed its Four-Step Delivery Process on previous client assignments. The following graphic illustrates this approach and indicates the typical work streams that comprise each of the steps:

Four-Step Delivery Process



Throughout each work step, we will compile findings leading to the development of supportable conclusions and recommendations. These conclusions and recommendations will be grouped, described, and prioritized.

Our high level approach to this project includes:

- Issuing data requests for documents to support the review efforts.
- Issuing interview requests for structured interviews throughout the functional areas described above.
- Conducting meetings and interviews with National Grid management and appropriate staff to obtain a thorough understanding of the Company's historical and current procedures and practices regarding its overall operations. The Department's staff will be part of these interactions.
- Meeting periodically, as required, with Staff, Commissioners and National Grid management.

- Developing and presenting draft and final reports covering our findings, conclusions and recommendations.
- We will be prepared to participate in hearings, development of testimony and cross-examination; however, this is not included in the work effort or costs contained in this proposal.

Our approach to project management and preparing an audit trail is an essential component of WCI's quality assurance process. The WCI quality review process is designed to assure adherence to Generally Accepted Auditing Standards in accordance with "Government Auditing Standards" (1994 Revision).

3.2. Methodology

Our methodology is designed to produce a documented and in-depth review of all specified operational areas of National Grid. The initial document review is the starting point for our audit. This review provides us with the necessary background on National Grid's operating philosophy and studies that have been performed previously, and provides insight into designing specific interview topic and discussion areas. The interview process illuminates issues and forms the focus for further review. Our policy is not to report on findings directly extracted from the interviews, as these may be limited and subjective. Rather, we use the interview results to steer probing into factual verification of issues that may arising during the interviews. There will be additional data and document requests emanating from the interview process and as we conduct our audit process.

We understand that one area of focus in this effort is to gain a complete understanding of the full project cycle, from needs identification through project definition and execution. In this regard, we will develop a sample of transmission and distribution construction projects to examine in detail. This sample will be statistically derived from two groups of projects: those that are approved and in the budget, and those that were proposed but were not included in the budget for a variety of reasons, including prioritization, project timeline requirements, staffing limitations and financial limitations.

For each of the following focus areas, we have summarized the investigative subjects we will address and we have indicated those where our experience has shown that improvements are likely or possible.

- ***Corporate Mission, Objectives, Goals and Planning*** – a comprehensive review of National Grid's management organization, including the Board of Directors, a review of governance, corporate objectives, corporate planning, communications and administration.
- ***Load Forecasting*** – a review of the methodologies and models applied in developing the load forecast(s). We will review the input assumptions and key drivers employed in the forecast(s). We will evaluate the load forecasting organization and the extent forecasting is integrated into other operational functions. This will include a review of the New York Independent System Operator's (NISO) role in state-wide forecasting as that may impact National Grid's forecasting.

- ***Supply Procurement*** – a review of supply portfolio principles, goals and objectives for mass market customers. This will include a review of risk management and hedging philosophies and performance benchmarking.
- ***System Planning*** – a review of National Grid's infrastructure planning and engineering functions. This will include consideration of project and planning priorities, asset condition assessment, maintenance practices, repair/replace criteria and the use of benefit/cost analyses. This will include a review of National Grid's focus on energy efficiency, alternate resources and conservation/load management. Based on our experience, we believe that this area may produce opportunities for improvement.
- ***Capital and O&M Budgeting*** – a detailed and thorough review of the capital budget process, including Board and senior management roles and influence, internal and external budget constraints, line item prioritization, budget execution and management/control. Based on our experience, we believe that this area may produce opportunities for improvement.
- ***Program and Project Planning and Management*** – a review of the program and project management process, including prioritization processes, project support such as materials, equipment, transportation, quality assurance for both in-house and contractor executed projects, cost tracking and budget vs. actual variances. Based on our experience, we believe that this area may produce opportunities for improvement.
- ***Work Management*** – a review of the procedures, polices and systems employed to specify and control projects. This will include an evaluation of the work management computerized systems employed as well as project assignment, the roles of project managers, supervisors and inspectors. We will examine how workforce and work management systems feed back into performance improvement opportunities. Based on our experience, we believe that this area may produce opportunities for improvement.
- ***Performance and Results Management*** – a review of the processes for feedback of performance to the corporate mission, objectives and goals to improve processes, optimizing resource use and accommodating changing priorities. We will examine the Board's role and assess management's accountability. We understand that National Grid participates in the PA Consulting Group's annual benchmarking studies and we will utilize this information to assess which other measures and indicators, if any, which could be employed to improve performance. Based on our experience, we believe that this area may produce opportunities for improvement.

To facilitate the presentation of the results of our analysis we have developed a "scorecard" with which to summarize our findings according to the evaluation criterion you have specified. More specifically, this scorecard, of which there will be one for each of the eight elements, would look like the one depicted below:

NATIONAL GRID REPORT CARD

		Efficiency		Effectiveness		Improvement Opportunities
Study Element	Evaluation Issues	Meets	Potential Improvement Exists	Meets	Potential Improvement Exists	
	Purpose					
	Mission					
	Planning					
	Goals and Objectives					
	Strategies					
	Functions					
	Processes					
	Practices					
	Systems					
	Organizational Design					
	Staffing Responsibilities					
	Staffing Accountabiliies					
	Cost Control					
	Cost Oversight					
	Performance Goals					
	Performance Results					

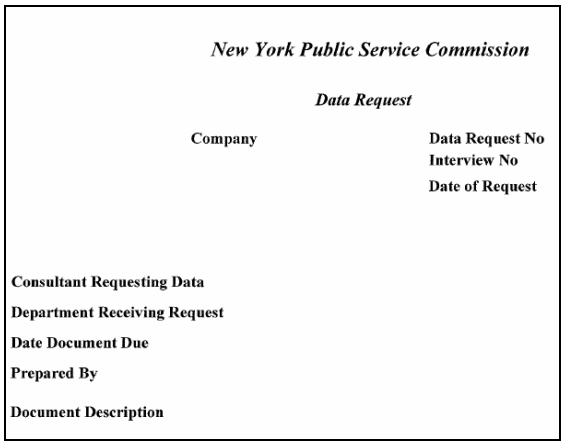
3.3. Audit Management

3.3.1 Project Management Tools

Appropriate use and application of project control and management tools is essential for successful projects. In light of the importance and sensitivity of the subject material in this engagement, the complexity and potential interdependence of analyses among tasks, and the relatively compressed time frame, Williams Consulting, Inc. intends to actively utilize Microsoft Project™, a computerized project management tool to control, schedule and report progress during project execution. As described in the Project Initiation task below, we will revise the Proposed Project Schedule as needed to meet the expectations of the Commission, and we will use this baseline to control the project and incorporate its output into our monthly progress reports to the Commission.

3.3.2 Document Management

We find it beneficial to utilize a computerized database system to manage, schedule and control document and interview requests. Williams Consulting, Inc. plans to use such a database during this engagement. We anticipate that a significant number of documents will be requested as part of our data requests, and proper document management is essential. Similarly, we expect to request a number of interviews with National Grid staff, and such requests and schedules are best managed in a database. Williams Consulting, Inc. has developed a database that will serve as the foundation for this communication and tracking tool. We will adapt the database to meet the specific needs of this engagement. This tool will also provide information to be included in our weekly and monthly progress reports to the Commission. We have provided samples of our standard document request and interview request forms below:



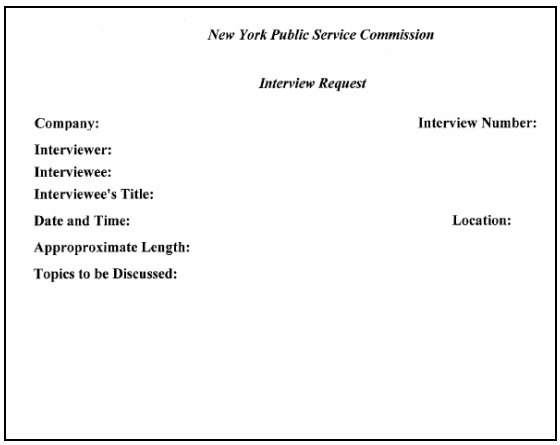
New York Public Service Commission

Data Request

Company

Data Request No
Interview No
Date of Request

Consultant Requesting Data
Department Receiving Request
Date Document Due
Prepared By
Document Description



New York Public Service Commission

Interview Request

Company: Interview Number:
Interviewer:
Interviewee:
Interviewee's Title:
Date and Time: Location:
Approproximate Length:
Topics to be Discussed:

Williams Consulting, Inc. maintains an Internet-based, on-line document storage and retrieval system, linked to its web site and accessible via the Internet. We will upload non-confidential discovery documents and provide the Commission with access to these documents.

3.3.3 Reporting

Reporting is the key element in this work effort to keep the Commission advised on project progress, issues, barriers encountered, and to document our process, findings, and recommendations.

Interview Schedules
We will provide a report of interviews scheduled weekly for the following week, as applicable. This report will show the name of the interviewee, topics and area of focus, date time and location.

Weekly Document Log
On a weekly basis we will provide an updated document log that will show dates for documents requested and when received. This log will be a part of our on-line document storage access system.

Monthly Reporting
We will provide monthly written reports of our progress on the project. These reports will present a general narrative intended to provide information regarding the status of the audit, with an explanation of any discrepancies between the approved work plan and actual progress. We will include listings of data requests submitted, and data received, and a record of all interviews scheduled, held, re-scheduled or cancelled. We will use our Interview and Document Tracking database to provide this information. As stated earlier, we intend to use MS Project to track actual vs. planned progress, and this tool will provide a current Gantt chart that will be submitted with each monthly report.

Interview Summaries
We will provide summaries of the interviews held. These summaries will include the interviewer, the interviewee's name, title and organization as well as a list of the topics discussed and documents requested.

Mid-Point Status Meeting
Should there be a need for a mid-point status meeting, we will prepare a status report for discussion. We prefer a teleconference, but will travel to Albany as necessary.

Draft Report
Based on the results of our investigations, we will prepare a draft report that will contain all of the information that will be ultimately contained in the final report, subject to that which may be corrected, modified, redacted or added based on the Commission's review and the factual review by the Company. The report will contain an executive summary stating our approach, assessment, a description of the objectives, scope of work, findings and recommendations.

Final Report
Williams Consulting, Inc. will submit its final report to the Commission, along with one master copy suitable for photocopying. In addition, we will provide one electronic copy in Adobe Acrobat format to facilitate further printing or dissemination by the Commission.

Hearings and Testimony
As requested by the Commission, we will participate in hearings and develop testimony and participate in cross-examination as an optional work assignment beyond the scope and cost of this proposal.

3.4. High-Level Work Plan

We have prepared a high-level work plan for this important project, recognizing the required timeframe for completion. Our approach, based on prior experience in numerous operational audits, our understanding of reliability and operational issues present in Connecticut and those related to National Grid in particular, coupled with the expertise of our team, will permit the work plan to be executed in a comprehensive and timely manner. The following sets forth the details.

3.4.1 Orientation

Following contract award, we plan to hold a project orientation (kick-off) meeting with the Commission and National Grid representatives, as appropriate. During this meeting we plan to accomplish the following activities:

1 Provide team introductions; our project team and the Commission's staff members.
2 Finalize contracting formalities, and project arrangements.
3 High level discussion of the work plan with the Commission Staff.

3.4.2 Work Plans

We will refine the project detailed work plan in accordance with guidance received from the Commission during Orientation. We will submit the detailed work plan to the Commission for review and approval. Once approved by the Commission, the detailed

work plan will be utilized for audit control and reporting. We will then proceed with the following project activities

3.4.3 Initial Data Request

Given the time frame for this project, we will, upon approval of the work plan, immediately submit our initial data request to National Grid to facilitate early response. As we engage in document analysis and the interview process, we will submit additional data requests as appropriate. For informational purposes, we have developed the following typical listing of documents, data and information that we anticipate will be needed for this engagement.

Initial Data Request
1. Administrative and operating procedure documents.
2. Affirmative Action goals and results.
3. Analyses and documents comparing executives with peer groups.
4. Analysis of all construction contracts since 2000 including engineering estimates, justifications, and internal presentations.
5. Annual goals and results, past five years.
6. Annual reports, current prospectus, 10K Forms or equivalent.
7. Any applicant tracking documents, including number of applications received for each employee group (executive, exempt, non-exempt, union) for the last 5 years.
8. Benchmark comparisons for performance and service levels and staffing requirements performed by client.
9. Biographies of executive management, including education, training, prior positions.
10. Budget or expenditures on conservation/demand-side programs for last five years.
11. Budget variance reports (last five years).
12. Capital and O&M project approval procedures.
13. Capital and operating and maintenance (O&M) budgets for the past five years and current budget forecast.
14. Client's Mission statements, current and for the past five years.
15. Conservation policies and procedures.
16. Construction plans and "specific estimates" for construction of major projects.
17. Consulting studies performed (last five years).
18. Current and past strategic and business plans and performance measures.
19. Demand and energy forecast.
20. Description of any "benchmarking" performed against industry standards (or similar organizations) on key financial and statistical information.
21. Description of conservation/demand-side management or other related programs.
22. Description of forecasting and planning methodologies, models and techniques used.
23. Description of inspection and maintenance programs for construction projects and plant additions.
24. Description of Internal Audit project assignment methodology.
25. Description of maintenance management practices.
26. Description of performance appraisal program.
27. Description of preventative maintenance management practices.
28. Description of project management methodologies.
29. Description of short- and long-range planning processes.
30. Description of the current methodology used to forecast: M&S Materiel Requirements, Non-M&S Materiel Requirements, and Capital projects manual.
31. Description of the overall planning and design system and the interrelationships between the forecasting system and other major planning models.
32. Descriptions of all existing conservation programs.
33. Descriptions of marketing/DSM training programs and budgets.
34. Detailed analyses of repair versus maintenance decisions.

Initial Data Request
35. Engineering studies for projects over $25,000 in the last 5 years. 36. Examples of reports on work force management and productivity programs 37. Flow charts depicting Company processes for budgeting capital expenditures and expenses. 38. Flowchart describing information flow of planning processes. 39. Integrated resource plan. 40. Internally or externally conducted studies over the past five years (or in process) that address the planning or performance measurement process or parts thereof. 41. Latest marketing plan. 42. List of Executive Management members and brief biographies. 43. Listing of all administrative and operating procedures in place. 44. Listing of who prepares and who receives budget variance reports. 45. Organization charts and position descriptions. 46. Planning process description. 47. Reports on inspections of contractor-performed work. 48. Results of DSM research. 49. Short and long-run time-differentiated marginal costs of electricity supply. 50. System map(s). 51. System operating summary statistics and trends for the last five year's. 52. Use and control of contractors. 53. Variance reports on budgets and schedules. 54. Work assignment procedures and practices. 55. Work productivity measurement procedures.

3.4.4 Initial Interview Request

Based on the requirements expressed in the RFP and our prior industry and operational audit experience, we have identified a number of functional areas where we believe one-on-one or group interviews will be necessary. As we review documents and conduct these interviews, we will request any additional, rescheduled and follow-up interviews, as appropriate. We anticipate that the Commission's staff members may wish accompany us on the interviews and other meetings. We expect to conduct approximately 40-50 interviews. We understand the Board and senior executives may be located in the United Kingdom. As noted in the RFP, the Commission expects that these individuals will be available for interviews in the US. We have not budgeted for overseas travel in this proposal and any such costs, should travel to the UK be required will be invoiced separately at our cost.

The following table illustrates typical initial interviews that we will request.

Functional Area	Level	Interview Topics
Executive Management	Board, National Grid President, Executive Officers	Organization structure, Corporate objectives, Corporate communications, administration.
System Planning	VPs, Directors, Managers, Staff	Load Forecasting, Transmission Planning, Distribution Planning, Maintenance Planning, Budgeting
System Operations/Construction	VPs, Directors, Managers, Staff	T&D Assets, Electric Supply, Design, O&M, Reliability, Construction, Workforce Management.

Functional Area	Level	Interview Topics
Performance Measurement	VPs, Directors, Managers, Staff	Corporate performance metrics, scorecards, benchmarking, feedback mechanisms to performance incentives.
Financial Operations	VPs, Directors, Managers Staff	Capital structure, financial performance, financial planning, capital budgeting, cost control.
Supply Procurement	VPs, Directors, Managers, Staff	Marketing organization structure, departments, functions, energy efficiency programs and conservation and load management initiatives.

3.4.5 Initial Data Review

Upon receipt of the requested materials, our team will perform a preliminary review of the documents to develop a more thorough understanding of the present level of operational performance of National Grid. We will prepare additional data requests, as needed to fill in any observed gaps in the data. Data requests will be submitted throughout the project as new information is learned or areas marked for further investigation are discovered.

3.4.6 Focused Interviews

Once we have had an opportunity to thoroughly review the information received from National Grid, we will return to Connecticut to conduct interviews with selected representative functional areas. The purpose of these interviews is to confirm preliminary findings emanating from our initial data review and to explore clarifications and more details as required to completely understand the operating philosophy and performance of National Grid. We anticipate a number of individual interviews and several group interviews. We assume that National Grid will provide conference room space to conduct the interviews. We anticipate that two or more interviews may be in process simultaneously and will require separate meeting spaces. We employ a structured interview process using an interview guideline tailored for each functional area. We will provide the interviewees with advance indication of the interview focus areas to aid them in preparing for the interview.

3.4.7 Analysis

Following the interviews we will continue with the detailed analysis of the documents and findings evolving from the information gained. We will provide additional data requests as needed during this process, and we will plan to hold telephone conferences as needed to obtain clarification. During this analysis activity, we will begin developing findings, conclusions and recommendations for each of the focus areas.

3.4.8 Audit Documentation

As we progress on the audit, we will provide the Commission with Interview and Site Visit schedules, a weekly document log, monthly progress reports and interview summaries. These documents will be submitted electronically and will be stored on our web-based document system.

3.4.9 Report Submission and Review

As we complete our findings and conclusions, we will develop a draft report for submission to National Grid for factual verification. Once we receive any factual corrections, we will prepare a revised draft report for submission to the Commission for review and comment. We anticipate that the Commission and National Grid will provide their comments within three weeks and we will proceed to finalize the report. During this final preparation stage, we will maintain contact with the Commission to assure the factual correctness of our report content.

3.4.10 Workshops

As requested in the RFP, we will develop and conduct focused workshops on topics that arise during the audit. As noted in the RFP, topics may include "best" practices, risk assessment, project prioritization, and budget management. The purpose of these workshops is to assist the Staff in gaining knowledge, awareness, and skill development to allow the Department to analyze these practices and processes as part of their regulatory oversight responsibilities. The cost for these workshops is identified separately, but included in the overall not-to-exceed price.

3.4.11 Testimony

Should testimony be required, we will be available to develop and file testimony as needed. The cost for this effort, if required, is not part of the not-to-exceed price and will be billed at our standard hourly rates for professional services and expenses will be billed at our cost.

4. Areas and Issues for Review

Within each of the areas for review we will specifically address: (1) purpose, mission, planning, goals and objectives, and strategies, (2) functions processes, practices, and systems, (3) organizational design, (4) staffing, responsibilities and accountabilities, (5) cost control/cost oversight, (6) efficiency and effectiveness, (7) results and performance, (8) opportunities for improvements, including "best practices" that are appropriate to National Grid's operating environment.

We will quantify and apply cost/benefit analysis, where appropriate, for each of our recommendations. For example, in prior audits/assessments, we identified the corresponding level of system reliability improvement for an increase in expenditure for system inspections and vegetation management.

4.1. Corporate Mission, Objectives, Goals and Planning

This task consists of a review of the Corporate Mission, Objectives, Goals and Planning aspects from the perspective of the Company's Board of Directors, officers, divisional management, the organizational structure, corporate communications, and administration. More specifically, as per your Request for Proposal we will address:

- *Governance, organizational structure, missions and relationships within National Grid as they relate to the electric construction program planning process*
- *Organizational responsibilities for planning priorities and budgeting allocations for the electric business*
- *Role of the Board of Directors and executive and senior management in the development of budgeting guidelines and periodic budget reviews and approvals*
- *National Grid's financial position and the level of its rates that are factored into the budgeting process*
- *National Grid's use of measurable goals, metrics, key performance indicators, etc. to achieve the corporate mission and objectives, and the performance improvement process at successive levels of management*
- *Performance and compliance with procedures and practices related to the scope of this audit, e.g., internal controls, internal audit function and Sarbanes Oxley Act*
- *Management performance and compensation programs and alignment with the corporate mission, objectives and goals at all organizational levels*
- *National Grid's goals for modernization of its electricity transmission and distribution system in response* to *the Energy Independence and Security Act of 2007*

As discussed earlier, effective utility operations require clear and concise expectations, directives and support from the board and senior management driven down through the organization. This top-down dissemination must be followed by measurement of operational performance that should be tied to incentives and compensation throughout the organization.

We have often found that financial operations and budgets for both O&M and capital projects may be constrained by corporate financing limitations or constrained by competition among various operating entities. As part of our evaluation of the budgeting process and project prioritization, we will probe to discover any such barriers or limiting factors.

In previous audits/assessments we have found the following issues:

Findings in Similar Audits/Assessments:

- Haphazard provision of information to the Board,
- Interaction with senior management,
- Inadequate Board involvement
- Executive positions remaining vacant for long periods,
- Gaps in necessary experience not being addressed,

4.2. Load Forecasting

This task consists of a review of the methodologies and models applied in developing the load forecast(s). We will review the input assumptions and key drivers employed in the forecast(s). We will evaluate the load forecasting organization and the extent forecasting is integrated into other operational functions. This will include a review of the New York Independent System Operator's (NYISO) role in state-wide forecasting as that may impact National Grid's forecasting. More specifically, as per your Request for Proposal we will address:

- *Models, assumptions and key drivers, and other inputs used to forecast local and system-wide load requirements*
- *Inputs, including demand side management (demand response, etc.), energy efficiency, and other initiatives that are factors in the forecasting process*
- *Organization and staffing of forecasting functions*
- *Extent to which the planning for electric load, as well region-specific factors, is integrated into the overall business processes and strategies*
- *The New York Independent System Operator's (NYISO) role in the State's electric forecasting, as it affects National Grid's forecasting*

The load forecasting function is central to determining resource requirements for system expansion, remedial reinforcements and supply procurement decisions. The modeling and forecast development process must be accurate and representative of current and expected market conditions and must provide bandwidths of forecast accuracy to serve in risk analysis. Forecasts often are done in isolation for operating areas and functionally and may not be consistently rolled up or coordinated from local distribution level forecasts to area, region and corporate level requirements.

In previous audits/assessments we have found the following issues:

Findings From Similar Audits / Assessments:

- Lack of proper balance of centralization/decentralization in the forecast structure.
- Lack of market analysis to support forecast parameters.
- Little follow-up tracking of forecast accuracy.
- Forecasts performed too infrequently.
- Input assumptions questionable
- Forecast methodology inadequate
- Lack of demand side management consideration
- Lack of consideration of external requirements

4.3. Supply Procurement

This task consists of a review of supply portfolio principles, goals and objectives for mass market customers. This will include a review of risk management and hedging philosophies and performance benchmarking. More specifically, as per your Request for Proposal we will:

- *Identify and evaluate supply portfolio principles, goals and objectives for mass market default customers*
- *Identify and evaluate risk management strategies and practices*
- *Review supply procurement strategies, policies, processes, and methods*
- *Review National Grid's financial and physical hedging practices*
- *Examine National Grid's use of performance benchmarking with other utilities*
- *Review portfolio performance goals*
- *Evaluate portfolio oversight and controls*
- *Examine the role of demand management/response, energy efficiency, and migration of retail customers to competitive suppliers in the portfolio and procurement processes*

In a de-regulated environment, a wires-only utility must provide for cost effective energy supply for its customers, particularly its mass market customers. It cannot depend on making up short-falls through internal energy sources, but must depend on the external market. How the utility contracts and hedges against price fluctuations is critical to this supply.

In previous audits/assessments we have found the following issues:

Findings From Similar Audits / Assessments:

- Lack of market analysis to define supply opportunities or constraints.
- Little follow-up tracking of performance.
- Gaps in risk management strategies
- Hedging practices too limited
- Lack of demand side management consideration
- Lack of consideration of external influences

4.4. System Planning

This task consists of a review of National Grid's infrastructure planning and engineering functions. This will include consideration of project and planning priorities, asset condition assessment, maintenance practices, repair/replace criteria and the use of benefit/cost analyses. This will include a review of National Grid's focus on energy efficiency, alternate resources and conservation/load management. More specifically, as per your Request for Proposal we will address:

- *Infrastructure planning and engineering functions*
- *Priorities, guidance and other instructions for evaluations, tradeoffs and decision making, including (1) an asset condition and management process (2) using input from the asset health review process, and (3) linking asset management decisions (e.g., predictive failure analyses) to improved reliability and performance*
- *Development of electric system forecasts and infrastructure requirements*
- *Consideration of alternative resources such as distributed generation and demand response initiatives in the planning process*
- *Consideration of other load and infrastructure factors, such as advanced metering, smart grid, and energy efficiency initiatives, in the planning process*

- *Processes for identifying, developing, and justifying the need for major projects (e.g., substations, breakers, switches, transmission feeders, secondary system, etc.)*
- *Process and criteria for making decisions regarding replace versus repair, including how the overall construction program planning process is affected*
- *Planning processes for: (a) network versus radial systems, (b) underground versus overhead systems, (c) reliability versus new business tradeoffs, and (d) regional versus central planning dynamics*
- *Extent to which benefit/cost analyses and risk analyses are considered in the decision-making process; and an assessment of the specific types of benefit/cost and risk analysis methodologies*
- *Optimization of trade-offs with respect to the replacement of older technology with newer technology and the resulting impact on the useful lives and depreciation assumptions of the existing infrastructure, cash flow and system reliability*

System planning is the crucial second step in developing asset strategies to maintain reliable system operation through remediation and replacement of aging or poorly-performing assets and to provide to system reinforcement and expansion through development of new assets.

In previous audits/assessments we have found the following issues:

Findings From Similar Audits / Assessments:

- Lack of proper balance of centralization/decentralization in the planning structure.
- Lack of market analysis to support planning.
- Little follow-up tracking of goals achievement
- Inadequate development of performance measures.
- Run to failure philosophy too widely adopted
- Lack of reliability based maintenance programs
- Inadequate asset condition/inspection programs
- Lack of demand side management consideration
- No alternatives analysis
- Unclear cost/benefit analyses for projects.

4.5. Capital and O&M Budgeting

This task consists of a detailed and thorough review of the capital budget process, including Board and senior management roles and influence, internal and external budget constraints, line item prioritization, budget execution and management/control. More specifically, as per your Request for Proposal we will address:

- *Roles of the Board of Directors, and executive and senior management*
- *Processes by which the Board gets involved in the capital and O&M budgets. Identify the level of budget detail the Board sees and what their responsibilities are with regard to the budgets*
- *Construction/capital priority setting process*
- *Incremental O&M expenses associated with new construction that are factored into the budgeting process*
- *The effects of allowed revenues/rates and financing opportunities or constraints on budget levels and priorities*
- *Relationships among planned/budgeted expenditures, rate case proposed expenditures, and actual expenditures*
- *Capital budgeting process, including project authorization, project appropriation, increase/decrease of authorization/appropriation, capital budget status reporting, validation in advance of appropriation, funding controls, and other elements of the capital budgeting process..*
- *Budgeting guidelines, practices and procedures, including "zero–based" and other alternative methods*
- *Roles of and relationships between regional and centralized planning and budgeting functions*

- *Methodology for prioritizing and determining which capital projects get approved, including an examination of modeling software for capital and O&M budgeting*
- *Management and control of capital budgeting. Include the methodologies used to control and manage program and project capital costs in the near and long term; the annual process for reviewing and determining whether total capital and O&M planned expenditures are adequate; cost control systems and processes from both a top-down and bottom-up perspective; controls to ensure that increases and decreases to the construction budget/expenditures are justified and appropriately approved*
- *Bottom-up and top-down processes for developing the budgets for capital/construction classifications and categories*

Once projects are defined and their needs established, the budgeting process becomes the crucial link in continued system reliable operation. Budget development guidelines and project prioritization are important elements of the overall process as are flexibility to address changing program needs over time. Budgets must be properly developed, monitored and controlled to provide effective asset management.

In previous audits/assessments we have found the following issues:

Findings from Similar Audits/Assessments:

- Budgeting and financial reporting function, as separate systems, are insufficiently integrated.
- Extensive manual re-input of data from budgeting system into financial and management reporting system necessary to generate budget variance reports and/or management accounting reports.
- Budgeting system and financial reporting system run on different incompatible computer systems.
- Actual capital spending infrequently compared to budget/authorizations.
- Large and/or unexplained variances between actual capital expenditures and those budgeted/authorized,
- Lack of integration between planning, resource planning, construction program planning and performance measurement,
- Lack of proper balance of centralization/decentralization,
- Potential constraints (capital and/or labor are not sufficiently recognized),
- Inadequate Board involvement

4.6. Program and Project Planning and Management

This task consists of a review of the program and project management process, including prioritization processes, project support such as materials, equipment, transportation, quality assurance for both in-house and contractor executed projects, cost tracking and budget vs. actual variances. More specifically, as per your Request for Proposal we will address:

- *Conversion of capital and O&M plans and budgets into specific programs and projects*
- *Process for prioritization and approvals over various time horizons*
- *Program and project planning, design, estimating, engineering, costing, scheduling and execution*
- *Planning and management of materials, equipment, transportation and other logistical support for programs and projects*
- *Analysis and decision-making for tradeoffs to optimize the use of in-house workforce versus contractor labor*
- *Contractor and engineering bidding practices*
- *Planning and management of construction contractor projects*
- *Quality assurance and quality control at the program and project level*
- *Contractor management, project/program management, including accountability, goals, objectives, and performance measurement*
- *Methodology for tracking costs, work units and work quality for specific programs and projects. Identify the typical variances between original budgeted and actual capital expenditures and work units. Determine how variances are tracked and minimized in order to improve the cost control, efficiency/productivity and work quality*

As in the budgeting process, project and program management is an important element of being able to accommodate competing project requirements within the fiscal and resource capabilities of the organization in a cost effective manner.

In previous audits/assessments we have found the following issues:

Findings from Similar Audits/Assessments:

- Lack of integration between planning, resource planning, construction program planning and performance measurement,
- Insufficient documentation of the planning process procedures and organization,
- Proper balance of centralization/decentralization in the planning structure,
- Little follow-up tracking of goal achievement
- Inadequate development of performance measures,
- Inadequate internal resources dedicated to planning
- Inadequate support systems to facilitate development and implementation of strategic plans,
- Some contracting out decisions are found to be biased one way or another, because of predilections of management, or misapprehensions about available resources.
- Some contracts (or even internal projects) are incorrectly structured, raising costs unnecessarily by requiring excessive overtime, Inefficient use of equipment, etc.
- Some contracting agencies overestimate costs of contracts, and do not use audits or other controls to keep contractors from expanding work (or costs) unduly.
- Lack of coordinated project management
- Poor cost/schedule performance.

4.7. Work Force Management

This task consists of a review of the procedures, polices and systems employed to specify and control projects. This will include an evaluation of the work management computerized systems employed as well as project assignment, the roles of project managers, supervisors and inspectors. We will examine how workforce and work management systems feed back into performance improvement opportunities. More specifically, as per your Request for Proposal we will address:

- *Planning, conversion and execution of programs and projects into short-term and day-to-day work*
- *Work management systems that are used to schedule and manage field crews, including transportation, equipment, and materials*
- *Roles and responsibilities of project managers, supervisors, inspectors.*
- *Quality assurance and quality control*
- *Management of employee availability, utilization, efficiency, productivity and effectiveness*
- *Management of program and project schedules on a day-to-day basis*
- *Translation of information about rework, failures, repair history, etc. into corrective actions, infrastructure aging analysis, and repair versus replace decisions*
- *Feedback of workforce and work management systems into performance improvement opportunities*

Work management and workforce management are complementary functions that together, if employed appropriately, assure the timely and proper completion of necessary projects. Utilities are increasingly turning to outside contract resources to undertake both capital expansion projects and some system reinforcement/repair projects as the in-house workforce continues to shrink. Quality assurance becomes a more critical function with a higher level of outsourced contract work.

In previous audits/assessments we have found the following issues:

Findings from Similar Audits/Assessments:

- Degree of automation.
- Utilization and productivity trends.
- Job standards review period.
- Usefulness of performance reporting.
- Accuracy of job estimating
- Amount of paperwork required.
- Lack of adequate coverage
- Need for a formal productivity improvement program.
- Manpower' forecasting as an integral budgeting component

4.8. Performance and Results Measurement

This task consists of a review of the processes for feedback of performance to the corporate mission, objectives and goals to improve processes, optimizing resource use and accommodating changing priorities. We will examine the Board's role and assess management's accountability. We understand that National Grid participates in the PA Consulting Group's annual benchmarking studies and we will utilize this information to assess which other measures and indicators, if any, which could be employed to improve performance. More specifically, as per your Request for Proposal we will address:

- *Processes for feedback of performance (reliability, productivity, etc.) to the corporate mission, objectives and goals for the purpose of improving processes, redirecting resources, and changing priorities*
- *Role and responsibility of the Board of Directors in this feedback loop*
- *Management accountability for performance improvements, e.g., cost savings and productivity gains anticipated from specific capital and O&M programs and projects, and specific corporate goals*
- *Goals, key performance indicators, metrics.*
- *Benchmarking, for identifying and developing performance targets*
- *Change management and continuous improvement processes, and any impediments that might constrain performance improvements and necessary changes*
- *Compensation and performance metrics*
- *Any additional performance measures or indicators that are needed to facilitate the corporate mission, objectives and goals, including leading indicators, metrics, key performance indicators and other measures that will help improve performance*

H. James Harrington stated "*Measurement is the first step that leads to control and eventually to improvement. If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it*." This statement forms the basis for performance and results management. However, we believe that this statement should be expanded and qualified that to be effective any measurement system must employ the proper measurements or metrics and the performance results must communicated back to ensure the corrective actions or improvement opportunities are captured.

In previous audits/assessments we have found the following issues:

Findings from Similar Audits/Assessments:

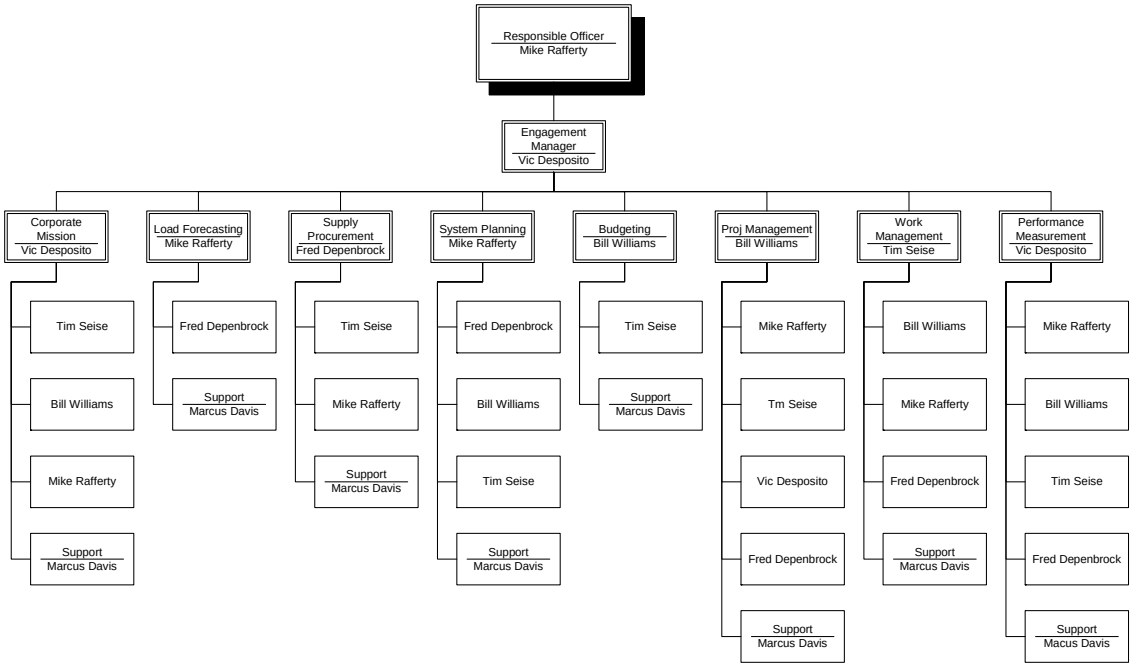
- Cost/benefit analysis are inconsistently applied,
- Performance metrics are not linked to performance incentives,
- Inadequate development of performance measures,
- Lack of integration between planning, resource planning, construction program planning and performance measurement,
- Little follow-up tracking of goal achievement,

4.9. DPS Staff Workshops

We have provided as part of this proposal, resources for workshop-type training for Department of Public Service Staff. As noted in the RFP, we have provided for up to five full-day workshops, most likely at the Department offices in Albany, to be scheduled after the audit begins, and these workshops will be distributed over the audit duration. We understand that the number of Staff participants in the workshops will range from ten to fifteen. We understand that the workshop subjects will be determined after the audit starts but, for example, one workshop may be focused on optimum (or "best") practices and processes that utilities use to assess operational risks associated with the delivery of the commodity, how risk assessment impacts the long-term corporate construction and O&M decisions, and how budgeting priorities are managed. We will focus these workshops to assist in developing in-house Staff knowledge and skills that will allow the Department to analyze these practices and processes as part of our regulatory oversight responsibilities.

5. Consulting Staff Organization

WCI believes that a key to success in project execution revolves around the core consulting team assembled for the project. The complementary roles of Responsible Officer and Engagement Manager assure that full and professional management coverage is given to the project and provides an escalation process for issue resolution. For this important engagement, we have assembled a very strong core team to guide and lead the project. This core team has led numerous operational audits for many utilities and is very familiar with client expectations in assignments of this type. Each team member knows their assigned, specific task requirements, and is well aware of potential overlap and interdependence among tasks. Therefore, team members actively collaborate and share findings to support and/or challenge each other's efforts in order to produce a comprehensive and cohesive result. The following project organization chart highlights the overall project management as well as the task leads and the consultants who will assist the leads in analyzing each functional area.



Mike Rafferty will serve as our corporate ***Responsible Officer***. As such he will have the ultimate responsibility to assure that that project is completed in a professional, comprehensive and timely fashion. In addition to this role, he will take active task leadership for the Load Forecasting and System Planning tasks He has directed and participated in numerous similar operational audits for other clients. Mr. Rafferty has over 30 years of utility consulting experience and has recently completed several assignments for regulatory agencies.

Vic Desposito will serve as our ***Engagement Manager***. As such he will have day-to-day responsibility for assuring that the audit progresses on schedule and he will resolve issues related to the conduct of the audit as they may arise. In addition, he will be our ***Task***

Leader for the Corporate Mission, Objectives, Goals and Planning and the Performance and Results Management tasks. Mr. Desposito has over 30 years of consulting experience and has led or performed numerous similar efforts involving these elements for other clients.

Bill Williams will serve as our ***Task Leader*** for the Capital and O&M Budgeting and Program and Project Planning and Management tasks. Mr. Williams has over 25 years of utility consulting experience. He has led or participated in numerous reviews both on behalf of the regulators and on behalf of utilities.

Tim Seise will serve as our ***Task Leader*** for the Work Force Management task. Mr. Seise has over 30 years of consulting experience and has led or participated in many management and focused audits.

Fred Depenbrock will serve as our ***Task Leader*** for the Supply Procurement task. Mr. Depenbrock has over 30 years of utility and consulting experience and has actively been involved in supply side energy studies for many years.

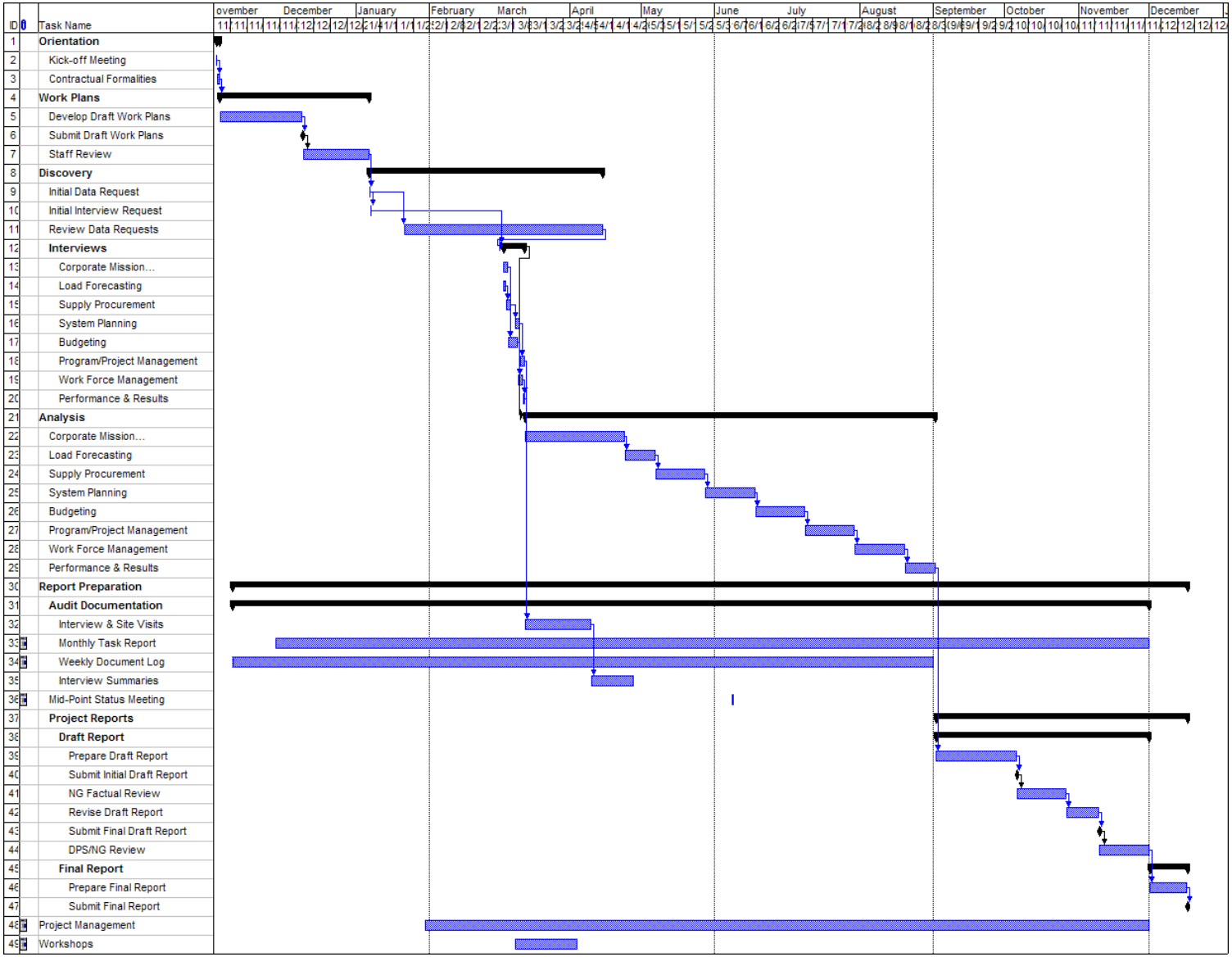
Marcus Davis will be responsible for data analysis and other support functions, such as web-based document management, interview and data request tracking and time accounting for the team. Mr. Davis will assist in the statistical determination of construction projects to examine as part of this assignment. He has extensive experience in data management and analysis and has participated in a number of prior assignments.

6. Schedules and Budgets

We have developed a detailed project schedule (shown in Section 6.1 below) in accordance with the expected project start dates and delivery dates expressed in the RFP. We believe that we can complete the work effort in the time frame shown. However, we believe that if the project is able to commence earlier, we will be able to deliver the final report by October 15, about two months earlier. In developing this accelerated schedule, we assumed that the detailed work plan development and Commission approval could be accomplished by the end of November 2008, rather than the end of December 2008, and initial project work could begin during December. Recognizing the difficulty in arranging interviews during the holidays, we would focus on data request reviews during December and initiating the interviews in early January.

We have developed a detailed project budget (shown in Section 6.2 below) by task and consultant as requested in the RFP. We have not shown a support services category, as we will utilize one of our junior consultants to handle these functions while not actively engaged in data analysis and document management. We have added our estimates of travel, accommodation, subsistence and other expenses below the estimates for professional fees and we have included a not-to-exceed amount of $651,015 for this project, exclusive of testimony, overseas travel, if required, and final report reproduction. In estimating the travel expenses, we considered airfares, hotel costs, meals and subsistence, rental cars and miscellaneous out-of-pocket costs (parking, etc,) based on current travel expenses and the anticipated number of trips and days on site.

6.1. Project Schedule



6.2. Project Budget

		Individual Personnel						Major Tasks									
Steps	**Task**	Bill Williams	Mike Rafferty	Vic Desposito	Tim Seise	Fred Depenbrock	Marcus Davis	Orientation	Work Plans	Discovery	Interviews	Analysis	Audit Documentation	Project Reports	Project Management	Workshops	**Total**
Orientation								3.5									3.5
	Kick-off Meeting	0.5	0.5	0.5													
	Contractual Formalities		1	1													
Work Plans									3								3
	Develop Draft Work Plans	1	1	1													
Discovery										57							57
	Initial Data Request	0.5	0.5	0.5	0.5	0.5											
	Initial Interview Request	0.5	0.5	0.5	0.5	0.5											
	Review Data Requests	10	10	10	10	10	2										
Interviews											32						32
	Corporate Mission…	2		2													
	Load Forecasting		1			1											
	Supply Procurement		2			2											
	System Planning	2	2			2											
	Budgeting	2			2												
	Program/Project Management	2	2														
	Work Force Management	2			2												
	Performance & Results	1	1	1	1												
Analysis												114.75					114.75
	Corporate Mission…	5	3	10	3		1.25										
	Load Forecasting		3			3	1										
	Supply Procurement		3		3	5	1.25										
	System Planning	3	5	2	3	3	1.25										
	Budgeting	5		2	3		1.25										
	Program/Project Management	5	3	2	3	2	1.25										
	Work Force Management	2	3		5	2	1.25										
	Performance & Results	3	3	3	3	2	1.25										
Audit Documentation													55.5				55.5
	Interview & Site Visits			3			5										
	Monthly Task Report		5	10			5										
	Weekly Document Log	5					12.5										
	Interview Summaries	1	1	1	1	1	3										
	Mid-Point Status Meeting		1	1													
	Sub Total	52.5	51.5	50.5	40	34	37.25										
Project Reports														60			60
	Draft Report	5	5	5	5	5	5										
	Revise Draft Report	2	2	2	2	2	2										
	Final Report	3	3	3	3	3	3										
Project Management				12.5			3.125								15.625		15.625
Workshops		10	10		10		10									40	40
Total Days		72.5	71.5	73	60	44	60.375										381.375
Bill Rate $/ Day		$1,600	$1,600	$1,600	$1,600	$1,600	$1,000										
Total Fees		$116,000	$114,400	$116,800	$96,000	$70,400	$60,375										
Expenses		$17,400	$17,160	$17,520	$14,400	$10,560	$0										
Total Costs		$133,400	$131,560	$134,320	$110,400	$80,960	$60,375										
Total Project Not-to-Exceed Price		**$651,015**															

7. Qualifications of the Firm

WCI's proposed team members have extensive experience in reliability-focused assessments, investigations and reviews. We have provided a summary of our relevant engagement experience, including reference contact information and brief biographies of the team members in the following. Please note that some of these engagements were undertaken by the consultant(s) noted while they were employed with other firms. When contacting the references, please mention the consultant(s) name.

Ref No.	Consultant	Dates	Client Name	Description of the Work Effort
1	Mike Rafferty Bill Williams	2008	Entergy-Vermont Yankee	Staffing review
2	Mike Rafferty Bill Williams Tim Seise Marcus Davis	2008	MPUC **Contacts:** *MPUC* Mitchell Tannenbaum (207) 287-1371 *CMP* Paul Dumais (207) 626-9598	Distribution Line Extension cost audit for Central Maine Power Co.)
3	Mike Rafferty Bill Williams Marcus Davis	2008	Illinois Commerce Commission **Contacts:** *ICC* Harry Stoller (217) 785-5278	Workforce adequacy review for the five electric utilities operating in Illinois (ComEd, Ameren, MEC). .
4	Mike Rafferty Bill Williams	2007	Utah DPU (Rocky Mountain Power) **Contacts:** *Utah DPU* Abdinasir Abdulle (801) 530-6687 *RMP* Jeff Richards (801) 220-4734	Conducted an update and recommendation tracking from our report issued in 2004 regarding a major winter storm response. This assignment included addressing expanded areas of interest to the DPU and providing assistance to the DPU in reviewing a consumer complaint filed against the utility.

Ref No.	Consultant	Dates	Client Name	Description of the Work Effort
5	Mike Rafferty Bill Williams Vic Desposito	2005/ 2006	Maine Public Utilities Commission (Central Maine Power) **Contacts:** *MPUC* Ralph Howe (207) 287-1371 *CMP* Paul Dumais (207) 626-9598	Conducted a comprehensive distribution system condition assessment on behalf of the MPUC for CMP. The assessment includes a review of operating and maintenance procedures, staff levels and an inspection of statistically valid physical sample of the company's electric distribution system.
6	Mike Rafferty Bill Williams	2005	PacifiCorp **Contact:** *Williams, Porter, Day & Neville, P.C.* Stuart Day (307) 265-0700	Litigation support in defense of a federal district case and a Wyoming regulatory case brought by a large industrial customer related to claimed business losses resulting from power outages. Our work included review of testimony, analysis of PacifiCorp's design, engineering, construction, and operations and development of direct filed testimony and rebuttal testimony.
7	Mike Rafferty Bill Williams Vic Desposito	2004	Utah DPU (PacifiCorp) **Contacts:** *Utah DPU* Ron Burrup (801) 530-6686 *PacifiCorp* Doug Bennion (801) 220-6734	Review of PacifiCorp's response to a major holiday storm in December 2003. Our review effort included analysis, comment and development of findings and additional recommendations in the following areas: The Storm, PacifiCorp's Response, Technology Issues, Vegetation Management, Investment Standards, Reliability and Maintenance, Organization and Resourcing, and Comparative Performance and Benchmarking.
8	Mike Rafferty Bill Williams Vic Desposito	2005/ 2006	NJBPU (Exelon/PSEG) **Contact:** Kent Papsun (973) 648-3117	Conducted a due diligence review of the customer service area on behalf of the NJBPU for the proposed Exelon/PSE&G merger. Our involvement covered all customer service function, including the call center and its ability to handle normal and emergency traffic.
	Mike Rafferty Tim Seise	2001/ 2002	UN Navy - Public Works Center, Pearl Harbor Naval Base and Marine Base Kaneohe Bay	As part of the DOD's Utility Privatization Program, this work effort centered on developing a series of diagnostics aimed at defining the gap that may exist between Navy utility operations and commercial utilities. In addition, a full process audit was

Ref No.	Consultant	Dates	Client Name	Description of the Work Effort
				conducted that included maintenance systems and practices, crew sizing and scheduling and outage restoration processes including materials staging and availability.
9	Bill Williams Tim Seise	1996/ 2001	JEA **Contact:** Jim Dickenson 904-665-7250	Performed a variety of assignments for the JEA including: Review of existing job specifications for persons in various positions, up to and inclusive of the supervisory level to determine the tasks, activities and functions involved, and identify commonalties between positions with an eye towards combining and consolidating work. Assessed power supply; service delivery and general administration support staff personnel and prepared new job class specifications. Analyzed the operations, processes and costs of the Duval County's Tax Collector's Offices for JEA. Recommended a number of changes that are now being implemented and overseen by us. Analyzed staffing levels and activities, and evaluated the performance of the water and sewerage personnel at support levels for JEA. This analysis involved conducting interviews and analyzing processes and activities, durations and staff skill requirements. Conducted a job specification review and audit of various positions at JEA, including engineering and distribution personnel
10	Bill Williams Tim Seise	1996/ 2001	Duval County Tax Collector **Contact:** Gerald Cates 904-630-1880	Analyzed the operations, processes and costs of the Duval County's Tax Collector's Offices for JEA. Recommended a number of changes. Conducted an operational assessment for the Duval County Tax Collector that included benchmarking productivity and pay ranges between tax collectors in the State of Florida.

Ref No.	Consultant	Dates	Client Name	Description of the Work Effort
11	Mike Rafferty Bill Williams Tim Seise Vic Desposito	1999/ 2000	NJBPU (PSEG, Conectiv, GPU Energy, Orange & Rockland Utilities) **Contact:** Tom Langbein (973) 648-4643	Review and investigation of New Jersey's electric utilities' system reliability subsequent to power outages experienced during July 1999. Our assessment focused on distribution and transmission O&M and staffing, engineering and construction practices, planning processes and design criteria, emergency response capabilities, and forensic investigation of major equipment failures.
12	Mike Rafferty Bill Williams Tim Seise Vic Desposito	1998/ 1999	Entergy Gulf States (Public Utilities Commission of Texas) **Contact:** Rod Griffith (936) 525-2088	In response to a severe ice storm in 1997, the PUCT ordered Entergy to submit to an audit intended to determine the causal factors for the many and extensive customer outages experienced during that storm. The study was intended to determine if Entergy was practicing adequate system capital, operations & maintenance activities.
	Vic Desposito Tim Seise Bill Williams	1997	PSC – US Virgin Islands - WAPA	Conducted a focused management audit of the Water and Power Authority on behalf of the Public Service Commission of the US Virgin Islands. Recommended changes designed to significantly reduce operating and maintenance costs, reduce overtime labor costs, and make the organization more efficient. Performed benchmarking against US and Caribbean counterparts.
13	Bill Williams Tim Seise	1997	Nevada PUC – Nevada Power **Contact:** Neil Dimmick (775) 687-6005	Conducted a mandated distribution operations audit of the Nevada Power Company on behalf of the PUC of Nevada. Audit spanned resulted in 87 recommendations relative to improving customer-oriented service delivery; major elements included the distribution dispatch management system and outage coordination system.
14	Mike Rafferty Bill Williams	1999	City of San Antonio **Contact:** Mr. David M. Griffith, CPA Email:Griffith@ci.sat.tx.us 210-207-2853	Independent risk assessment and qualitative analysis of the City's Year 2000 Project. This included a comprehensive review of the City's emergency preparedness plan, desktop simulations and conformance with best practices covering City management, information systems and electric service.

Ref No.	Consultant	Dates	Client Name	Description of the Work Effort
15	Mike Rafferty Bill Williams	1999	Miami-Dade Water and Sewer Department **Contact:** Ms. Debbie Viera-Rodriguez 305-461-7122	Year 2000 system contingency plan development. This included a review of the existing emergency plan at Miami Dade and the identification of potential external problems that could pose a threat to the operational readiness of the Department.

8. Exhibits

Exhibit 8.1 Objective Table Example – Strategic Planning
Exhibit 8.1 Detailed consulting team resumes

8.1. Objective Table Example – Strategic Planning

Objective:	To assess the process by which strategic planning initiatives and corporate goals are determined and subjected to reasonable scrutiny by the Board of Directors and approved following adequate review.

Best Practices Criteria:

- The mission and vision statements are written and were developed by a representative cross-section of management and are accurately expressed as the core values and performance aspirations.
- Overall objectives are clearly communicated to all employees.
- The strategic plan sufficiently assesses the present situation - i.e., strengths, weaknesses, opportunities, and threats.
- The specific basis, direction, and objectives of major programs are clearly defined and carefully stated.
- Functional and departmental level plans exist and are tied back to corporate level goals, strategies and support mechanisms.
- Performance of achievement is appropriately monitored and reported throughout the organization.

Key Questions:

- Are the goals and objectives understood by all involved in the planning process?
- Is top management involved appropriately in the planning process?
- Is the plan updated frequently enough?
- How are planning priorities set?
- Are objectives/goals measurable and do they cover an appropriate time period?
- Does the Company pursue a centralized or decentralized approach to planning and is the chosen method being effectively carried out?
- Does the Company have in place all necessary planning tools for the purpose of analyzing those issues that are most relevant to the Company's future?
- Are the currently available planning tools in conformance with industry standards, and are these tools used in an integrated and efficient manner?
- Does the Company regularly maintain, update, and enhance its planning tools and procedures?
- Is the overall planning process conducted in an efficient and timely manner?
- Has the Company considered the options it has with respect to meeting the requirements of its present and anticipated customers?
- Does the planning process appropriately address trends and expected developments in the industry?
- Are the planning responsibilities clearly and appropriately assigned?
- Is there a planning committee and, if so, how is it used?

Initial Data Requests:

- Documentation relating to the strategic and corporate planning processes
- Documentation relating to core business unit, marketing, financial, construction, and operations planning and budgeting processes
- Strategic and corporate planning process flowcharts
- Current and past strategic and business plans and performance measures.
- Status reports relating to any planning development projects.
- Planning and budgeting manuals.
- Actual business plans (short- and long-term), and documentation of the key assumptions and methodologies incorporated into these plans.
- Any internally or externally conducted studies over the past five years (or in process) that address the planning or performance measurement process.
- Forecasts of sales and number of access lines by customer group, most recent five years.

Typical Analysis:

- Flow chart the planning process.
- Plot and analyze sales forecasts and actual data for systemic errors.
- Evaluate goals for completeness, coverage, reasonableness, and measurability.
- Assess the status of significant changes in the planning process.
- Identify responsibility assignment and organization structure.
- Review operating assumptions used in plan development
- Review statements of Client goals and objectives: their form, when prepared, by whom; how frequently reviewed, changed, and updated; and how they are communicated to the employees.
- Review the nature and extent of involvement of individual senior managers and others in the strategic planning process.
- Assess the extent to which goals and objectives are translated into measurable tasks and the feedback from results of goals and objectives.
- Assess the integration of the strategic planning process with other company planning processes, including financial planning, construction program planning, marketing plans, and budgeting.

Findings From Similar Audits / Assessments:

- Lack of proper balance of centralization/decentralization in the planning structure.
- Lack of market analysis to support planning.
- Little follow-up tracking of goals achievement
- Inadequate development of performance measures.
- Timeliness of activities.
- Inadequate internal resources dedicated to planning.
- Inadequate support systems to facilitate development and implementation of strategic plans.
- Plans are not sufficient to address contingencies.

Deliverables:

- Interviews, Interview Summaries, Analysis Spreadsheets, Finding Statements, Conclusions, Recommendations

8.2. Detailed Resumes

Michael F. Rafferty

An experienced executive, manager and consultant with an international background in energy efficiency, disaster recovery, information systems, project management, utility planning, financing, and organizational management services. Qualifications include load forecasting, integrated resource planning, electric transmission and distribution planning; budget forecasts; benchmarking; staffing; economic studies; strategic planning studies; marketing studies; and professional training and development. Strong team-building skills and adept at managing and motivating diverse resources

Employment Record

2003 - present	Williams Consulting, Inc.
2000 – 2003:	PA Consulting Group, Inc.
1998 - 2000:	Stone & Webster Management Consultants, Inc.
1997 - 1998:	T&L Computer Systems, Inc.
1994 - 1997:	Advanced Systems Group International, Inc.
1978 - 1994:	Stone & Webster Management Consultants, Inc.
1973 - 1977:	American Electric Power Service Corporation

Education

BSEE, 1974, The Ohio State University
MSEE (in progress) New Jersey Institute of Technology

Membership in Professional Societies:

I.E.E.E. – Institute of Electrical and Electronic Engineers
GITA - Geospatial Information and Technology Association

Career Highlights

Operations Reviews and Audits

2008 – Participated in a study to determine the workforce adequacy of the five Illinois investor owned utilities for the Illinois Commerce Commission. This effort included a review of work practices, labor resources both internal and external, work backlog, system design and condition and construction and maintenance practices.

2008 – Advising on a solar thermal project for Florida municipal utilities. This project is in the initial conceptual development stage.

2007 – Conducted and managed two engagements on behalf of the Utah DPU: first provided assistance to the DPU in studying and resolving a customer complaint action against Rocky Mountain Power (a unit of PacifiCorp) and second, a review of prior recommendation implementation for PacifiCorp (Rocky Mountain Power).

2005/2006 – Conducted and managed a distribution plant evaluation for Central Maine Power on behalf of the Maine Public Utilities Commission. This effort included a review of reliability performance, system design and planning, vegetation management and a physical condition assessment of the distribution system.

2005/2006 – Participated in a due diligence review of the proposed Exelon-PSE&G merger on behalf of the New Jersey Board of Public Utilities. This assignment covered a thorough review of the customer service functional area and resulted in preparation of direct filed testimony.

2005 – Provided litigation support for PacifiCorp for a federal district court case and a Wyoming Pubic Utilities Commission filing relative to claimed losses due to outages suffered over a period of five years.

2002 - Participated in a study for a major west coast utility to identify technology and business changes expected in the industry and to identify areas of opportunity where they could capitalize on these changes through internal innovation and external means, including acquisition, merger and/or venture activities.

2001 - Conducted and managed a market analysis for a Fortune 100 company for a prototype electric transmission line inspection robot.

2001/ 2002 - Participated in a privatization and best practice study for the Public Works Center at Pearl Harbor, the Pacific Missile Range Facility (PMRF) at Kauai, and MCBH Hawaii for the US Navy. The work effort included a diagnostic analysis, competitive gap analysis and formulation of implementation recommendations and objectives to close the competitive gap for electric, water and wastewater utility functions at the base. The work effort was expanded to include a detailed review of asset condition, capital, operations and maintenance practices and benchmarking against industry standards to help set performance standards.

2000 - Participated in a workforce utilization review for GPU Energy with focus on transmission and distribution maintenance activities.

2000 - Participated in a due diligence review for Orion Midwest Energy with focus on information resource adequacy to support the new operation.

2000 - Participated in a review of testimony relative to power plant re-powering project for a Midwestern utility.

2000 - Participated in a study to review and recommend institutional strengthening initiatives for a newly mandated public service commission in Guyana with focus on expanding and defining the regulatory relationships with the recently privatized national electric company.

1998/1999 - Participated in a work process and staffing change project for the Jacksonville Electric Authority covering support and customer service staff.

1995 - Participated in a study of internal practice management systems for Stone & Webster Engineering Corporation

1993 - Performed a vehicle fleet sizing and use optimization study for a major public utility authority, using a sophisticated database model covering survey and inventory analyses.

1992 - Responsible Officer for a confidential survey of utility perceptions of wind power in the US market for an investment bank.

1983/1992 - Reviewed and recommended changes in the annual construction budget for a major Mid-western electric utility for a period of ten years.

1991 - Managed and participated in organization and management studies for the Electricity Authority of Cyprus, Dubai Electricity Company and the Guyana Electricity Corporation.

1978/1983 - Developed comprehensive operations and financial forecasting models for electric utility sector analysis in Saudi Arabia, and specified and managed the implementation of a capital budget system for loan requirements tracking. Prepared long-term electric sector financial requirement forecasts. Developed standardized and uniform loan agreement and reporting procedures for electric utility borrowers including a monthly loan disbursement tracking system.

Reliability Reviews and Benchmarking

2004 – Managed and Conducted an engagement to provide an independent review and comments on a series of reports prepared by PacifiCorp in response to a winter storm outage that affected up to 190,000 customers over an 8 day period. The assignment included a comprehensive analysis of the report with focus on conclusions and recommendations and the level of completeness and conformance with the terms of reference. We prepared professional opinions regarding the conclusions and recommendations contained in the report, and offered additional conclusions and recommendations with supporting rationale, analysis, and/or industry comparisons as appropriate.

2003 - Managed and Conducted reliability review for Eskom in South Africa to determine causal factors and develop mitigating recommendations to improve their reliability performance. This included regional

workshops and focused interviews, a detailed document/report review and benchmarking Eskom against several comparable panels of electric utilities worldwide.

2002 - 2003. Participated in PA's annual utility Transmission and Distribution Benchmarking program as a special advisor.

2002 - Managed and Conducted Reliability Certification reviews for Southern California Edison, NorthWestern Energy and Orlando Utilities Commission. *2001. Managed* a Reliability Certification review for Texas Utilities Electric & Gas. *2000. Participated* in a reliability certification review for the Northwestern Corp. This involved a consistency and accuracy review of reliability data collection, development and reporting, both internally and to external entities.

2001/2002 - Conducted a review of the expected impact of implementing a new outage management system (OMS) on reliability indices for a major East Coast electric utility as part of a Service Guarantee study in connection with their merger with another east coast utility. This involved a detailed review of outage reporting processes and data analysis to identify areas where implementing the new OMS would improve data accuracy and measuring the impact on reliability indices to provide appropriate adjustment factors for future service level requirements and/or performance based rates

2001 - Participated in a technical cause analysis review for a major east-coast utility related to underground distribution system failures and manhole explosions in a large city.

2000 -. Marketed the 'RestorePower' web site to utility contractors, resulting in three founding subscriptions to the site. *1999-2000. Participated* in a multi-client audit of system failures experienced during a heat wave in the Northeast US. This study focused on reliability and consisted of forensic analysis of the failures and a detailed review of methods, procedures and systems covering planning, design, operations and maintenance, capital expenditures, and call center performance.

1999 - Participated in a Best Practices Study for BC Hydro to assess the operational efficiencies and commercial competitiveness of their engineering functions.

1998/1999 - Conducted benchmarking studies for several electric and gas utilities, including Entergy Gulf States and Trans Pipeline Australia to assess operational efficiency and service quality.

1998 - Participated in a major service quality assessment for Entergy Gulf States in the area of distribution. This included field inventory and inspection of over 8,000 distribution poles and ancillary pole mounted equipment, computer modeling to suggest potential reliability improvements and their costs and a review of capital, operations and maintenance budgets, methods and procedures.

Utility System Planning

1993 - Evaluated purchase power contract bids and developed an integrated resource plan for a full requirements utility. This included qualitative and quantitative analysis using computerized optimization software, including impacts of demand-side management programs.

1992 - Responsible Officer for a needs and timing assessment of proposed 765 kV and 500 kV transmission lines for the Virginia State Corporation Commission. This assessment included testimony at the certification hearings.

1985/1986 - Participated in a comprehensive power plant siting study for the Egyptian Electricity Authority in Cairo, Egypt. This assignment required developing a database of electric system information, including generation and transmission detailed engineering data, load, energy, customer, demographic and financial data for use in the load forecasting, system planning and financial and economic analysis portions of the project.

1983 - Evaluated the potential severance and condemnation costs associated with a municipal take-over of local transmission and distribution facilities.

1977/1985 - Conducted transmission expansion system planning studies for Fitchburg Gas and Electric Light Company, Newport Electric Corporation, for Edison Sault Electric Company, and the Egyptian Electricity Authority.

1977/1985 - Developed models to support load-forecasting efforts in the areas of demographics, survey analysis, and appliance end-use analysis, using both spreadsheet and database programming techniques. Prepared programs to forecast general ranges of river flow hydro generation, allocate and optimize a mix of local generating capacity and purchased power, and automate the calculation of fuel and purchased power adjustment clause revenues.

1977/1984 - Participated in forecasts of future energy sales and peak loads for a number of clients, employing both traditional and econometric forecasting methods.

1978/1983 - Developed comprehensive operations and financial forecasting models for electric utility sector analysis in Saudi Arabia. This included forecasts of electric sector long-term fuel and long-term fuel and resource requirements in the Kingdom.

1978/1983 - Defined generation, transmission and distribution requirements for utilities funded by the Saudi Industrial Development Fund. This included an overall review of a Kingdom-wide long-range master plan for development.

1973/1977 - As an *Associate Engineer at American Electric Power Service Corporation, was responsible* for planning of the future bulk power network including conceptual development and technical analysis of transmission systems configuration and operation for both inter-company and intra-company systems.

Training and Development

2000/2003 - Delivered a number of internal training courses at PA Consulting Group, Inc., including "Top Down Thinking", "Effective Presentations" and "Selling Professional Services." Participated in a development of a web-based training program for internal deployment covering the utility industry.

1994/1995 - Developed and presented a three-day training course on Geographic Information Systems fundamentals, project development and management to the Egyptian Electricity Authority under United Nations sponsorship. This course was repeated four times.

1994 - Developed and conducted a one-day seminar on electric transmission pricing.

1985/1990 - Responsible Officer and Program Director for Stone & Webster's Utility Management Development Program, held twice annually. Was responsible for day-to-day program direction as well as curriculum selection.

1984/1992 – *Lecturer* in Stone & Webster's Utility Management Development Program. This included developing and delivering numerous presentations covering Load Research, Load Forecasting, Decision Analysis, Productivity, Transmission Planning, Generation Planning, Information System Planning, Microcomputer Applications, Issues in Information Systems, and Executive Information Systems

1988/1990 - Developed a middle management training program for the Guyana Electricity Corporation. Served as Training Advisor and administered the overall program. Organized and participated, as a lecturer, in a two-week Management Development Program held on-site in Guyana.

1988 - Lectured at the "How To Think Like a Utility Executive" training program developed for General Electric. Topics included Decision Analysis, Load Forecasting, Capacity and Transmission Planning Principles and Issues.

1986 - Developed and administered a system planning concepts course for the Egyptian Electricity Authority, covering generation and transmission planning, load forecasting, economic evaluation, tariff studies and finance.

1978/1983 - Lending Team Leader for the Saudi Industrial Development Fund with responsibility for over US$1 Billion in loan commitments and disbursements for development in the electric sector in Saudi Arabia.

1978/1983 - Participated in the establishment of staffing and lending policies and procedures including staff training, utilization and organization at the Saudi Industrial Development Fund.

Business Continuity Audits and Assessments

1999 - Project Manager for Year 2000 Program Audits for the City of San Antonio, Texas and the San Antonio Water System.

1999 - Consultant on a Year 2000 review audit for a major Canadian electric utility.

1999 - Information Technology Consultant on a Year 2000 contingency planning study for a major water and sewer utility.

1999 - Contingency Planning Expert and project lead for a large metropolitan gas distribution utility.

1999 - Contingency Planning Expert and project lead for an international government-owned telecommunications utility.

1998 - Project Manager on Concord Management, Inc.'s Year 2000 audit.

Information Systems

2001 - Participated in development of a request for proposal for a major west coast gas utility for developing new and replacement applications for map and gas distribution facilities and conversion of existing CADD-based drawing files to a GIS platform.

1995 - Participated in a GIS feasibility study for Yankee Energy Corporation.

1993/1994 - Engaged as database integration specialist to the Egyptian Electricity Authority, under United Nations funding, for a comprehensive Geographical Information System development covering the EEA's high voltage transmission system working in an Intergraph MicroStation and Oracle environment.

1992/1994 - Developed specification and functional design, vendor pre-selection bid evaluation of an Executive Information System for the Jordan Electricity Authority.

1988/1991 - Directed and participated in strategic information system planning studies for El Paso Electric Company, the Egyptian Electricity Authority, Dubai Electricity Company, Stone & Webster Engineering Corporation, and the Jordan Electricity Authority using structured analysis techniques.

1989 - Developed a United Nations Project Document for the Jordan Electric Authority covering information system needs.

1985/1993 - Designed and assembled a power system technical database for the Egyptian Electricity Authority to support system-planning activities. This included functional design of the database elements, the logical and physical design of the database, its creation, and development of interface routines for planning applications and to support management information reporting needs.

1985/1992 - Responsible for managing two major information systems projects for the Egyptian Electricity Authority amounting to over US$1 Million.

Publications and Presentations

"Geographic Information Systems – Applications in System Planning," M.F. Rafferty, published in the United Nations Journal, 1998.

"UNDP/EEA GIS Training Program," M.F. Rafferty, presented several times at the United Nations, 1994-1998

"Issues in Transmission Pricing," F.E. Depenbrock and M.F. Rafferty, presented at the Stone & Webster Summer Seminar, 1993.

"A Field Report on EMF," M.F. Rafferty, presented at the Transmission & Wheeling Conference, Denver, November 1991.

"Transmission System Engineering Fundamentals," M.F. Rafferty and J.S. Baylor, presented at the Infocast Conference Transmission: Issues for Project Developers, Washington, October 1991

"Transmission; Can We Build It?," M.F. Rafferty, presented at the Transmission & Wheeling Conference, Denver, November 1990.

"Information Systems Planning, Concepts and Approaches," M.F. Rafferty and J.R. Wappner, presented at the 1990 APPA/TVPPA Accounting, Finance, Rates and Information Systems Workshop, Nashville, September 1990.

"Energy Planning Information System Requirements – A Case Study," M.F. Rafferty and Dr. Yehia Abu Alam, presented at the Training Course on Energy Data Bases for Energy Planning, The World Bank, Sophia Antipolis, France, March 1990.

"Issues in Transmission Access and Wheeling," F.E. Depenbrock and M.F. Rafferty, presented at the Stone & Webster Summer Seminar, 1988.

"Effects of Deregulation and Competition," M.F. Rafferty, presented at the Stone & Webster Plant Services Seminar, 1988.

VICTOR R. DESPOSITO, JR.

Consultant

1. Summary

A seasoned general management consultant to electric and gas utilities, with specialization in management and operational auditing, electric reliability assessments, organization and staffing analysis and design, compensation systems, performance measurement, and long-range operating forecasts. Adept at managing complex and sensitive projects involving potentially adversarial parties in environments open to public scrutiny. Possesses effective interpersonal and communication skills.

2. Accomplishments

- Performed an assessment of the overhead electric system of Central Maine Power, including vegetation management, maintenance and operating practices, for the Maine Public Service Commission.
- Assisted in the critical analysis of the proposed merger of PSE&G of New Jersey with the Excelon Corporation of Illinois. Identified potential merger risks to post-merger N.J. operations including electric reliability performance, staffing reductions, and changes to operating and engineering standards.
- Project manager for an assessment of dislodged manhole cover events on the underground systems of four electric distribution utilities for the Massachusetts Department of Telecommunications and Energy.
- Performed an independent assessment of PacifiCorp's emergency storm response and service restoration activities for the Utah Division of Public Utilities.
- Project manager for an assessment of the underground distribution system of the Potomac Electric Power Company performed for the Public Service Commission of the District of Columbia. Performed follow-up technical audit of implementation of DCPSC-ordered actions
- Performed an investigation of the reliability and outage causes of the four New Jersey electric utility companies for the NJ Board of Public Utilities.
- Assessed the reliability performance of the electric distribution and transmission systems for the Commonwealth Edison Company.
- Directed a study of distribution system reliability and customer service quality for Entergy Gulf States, Inc.
- Performed a best-in-class benchmarking and gap analysis study for BC Hydro's engineering and technical services organization.
- Directed a study of transmission and distribution functions and related O&M costs for the New Brunswick Power Corporation.
- Assessed the gas business unit organization of Consolidated Edison of New York and benchmarked it with those of other combination utilities in light of performance results achieved.
- Conducted an organization, staffing, and business process assessment for the Bahamas Telecommunications Corporation.
- Performed an organizational feasibility study including organization design and staffing for the development of a gas distribution system in the Emirate of Abu Dhabi.
- Facilitated process re-engineering teams for Niagara Mohawk's gas business unit.

- Performed management audits of the Chattanooga Gas Company, the Virgin Islands Water & Power Authority, Yankee Gas Company, Connecticut Natural Gas and Southern Connecticut Gas Company. Areas of focus include human resources, labor relations, external relations, legal, and corporate support services.
- Designed and facilitated implementation of the Corporate Performance Incentive and Stock Option Plans for Southern Indiana Gas & Electric Company.
- Facilitated the development of mission, vision, and customer focus for AT&T's Building Engineering organization.
- Established Board of Director compensation policies and practices for Southern Indiana Gas & Electric Co., Maine Public Service and Florida Public Utilities.

3. Employment History

WILLIAMS CONSULTING, INC. 2003-present

INDEPENDENT CONSULTANT September 2000-present

STONE & WEBSTER MANAGEMENT CONSULTANTS	**1975-2000**
Vice President & Manager - General Management Division	1993-2000
Vice President	1987-1993
Assistant Vice President	1985-1987
Consultant	1975-1985

Assignments:

Electric Reliability Assessments

Performed reliability assessments of overhead and underground electric systems for numerous distribution utilities in jurisdictions including the District of Columbia, New Jersey, Texas, Illinois, Massachusetts and New Brunswick, Canada. Projects entailed extensive communications with regulators and intervenors, including presentations and participation in public hearings.

Management and Operating Audits

Examined and benchmarked the organizations, staffing ratios, operations, practices and procedures, and management effectiveness for numerous utilities. Provided pre-audit counseling and post-audit implementation assistance for electric, gas, and combination companies.

Organization Studies

Designed and rationalized organizational structures at the corporate, divisional, and departmental levels for domestic and foreign gas and electric utilities. Developed missions and functions statements, measures of comparative organizational performance, and determined staffing and manpower needs using benchmarking, questionnaires, interviews, and time log methods. Developed and facilitated succession planning programs to assure continuity and talent pool availability for key positions.

Compensation, Benefits & Job Analysis

Performed numerous assignments at all organizational levels for dozens of companies throughout the United States. These studies have included job analysis, job evaluation, design of salary administration systems, salary structure development, preparation of job descriptions, wage and benefit surveys, design of incentive compensation and supplemental executive benefit plans, and Board of Director compensation programs.

Long-Range Forecasts

Performed five- and ten-year forecasts of customers and use factors, sales and revenues, operation and maintenance expenses, and construction requirements for various distribution utility companies.

Expert Testimony

Provided expert testimony before various Public Service Commissions regarding utility management and operating audits, executive compensation, utility management organization, and officers' duties and responsibilities.

Productivity and Staffing

Conducted studies to develop and track white-collar and clerical productivity measures; benchmarked and compared functional staffing patterns among various organizations, and established staffing criteria.

Performance Management

Assisted clients in developing performance appraisal systems for use in professional development and salary administration programs. Developed appropriate performance measures for use in evaluating and tracking employee, departmental, and corporate performance.

Board of Directors Services

Prepared and presented quarterly and annual comparative analyses of operational and financial results for review by boards of directors. Worked with various boards on confidential projects ranging from board policies and fee structures to incentive compensation plans for key executives. Designed restructuring plan for subsidiary boards of parent regional bank holding company.

Total Quality Management

Served as facilitator for corporate quality steering committees. Facilitated quality process design, employee quality assessment surveys, training design and presentation, and quality improvement team development.

GERICO, INC. **1969-1975**
President & Administrator

Responsibilities:

- Planned, negotiated and administered all pay and benefits programs; developed and implemented personnel policies and procedures; recruited and selected employees.
- Managed relations with regulatory agencies at state, county, and local levels.
- Full profit and loss responsibility; managed a staff of 36 exempt and nonexempt employees.

PUBLIC SERVICE ELECTRIC & GAS CO. **1966-1969**
Engineer - Industrial Relations

Responsibilities:

- Directly responsible for college recruitment program.
- Designed and presented management development and supervisory orientation programs.
- Developed safety training programs for presentation to field operating employees.
- Served as secretary to the management team during union contract negotiations.

EDUCATION

MBA Management and Organizational Behavior, *New York University* 1972
BS Industrial Engineering, *New Jersey Institute of Technology* 1966

HONORS

Tau Beta Pi - National Engineering Honor Society
Alpha Pi Mu - Industrial Engineering Honor Society

PROFESSIONAL AFFILIATIONS

Member - Society of Gas Lighting

SELECTED CLIENTS

Alabama Gas Company
Ameritech, Illinois
AT&T
Atlanta Gas Light Company
Bahamas Telecommunications Corporation
Barbados Light & Power Company
BC Gas (Vancouver, BC)
BC Hydro
Berkshire Gas Company
Bermuda Electric Light Co., Limited
Brooklyn Union Gas Company
Central Bank of the Bahamas
Central Hudson Gas & Electric Corporation
Central Louisiana Electric
Chattanooga Gas Company
Chelan County PUD
Chesapeake Utilities Corporation
Chilectra Metropolitana (Santiago, Chile)
Chilquinta (Santiago, Chile)
CNB Bancshares
Columbia Gas of Ohio
Commonwealth Edison Company
Connecticut DPUC
Connecticut Natural Gas
Consolidated Edison Company of New York, Inc.
Delta Natural Gas Company
District of Columbia PSC
Egyptian Electric Authority (Cairo, Egypt)
El Paso Electric Company
Electric Authority of Cyprus
Emirate of Abu Dhabi
Entergy Gulf States Utilities
Florida Public Utilities Company
Gas Delestado (Buenos Aires, Argentina)
GPU
Houston Lighting & Power Company
Illinois Commerce Commission
Illinois State Attorney General's Office
Indianapolis Power & Light Company
Jacksonville Electric Authority
Maine Public Service Company
Maine Public Service Commission
Massachusetts Dept. of Telecom & Energy
Mobile Gas Service Corp.
National Fuel Gas Company
New Brunswick Power Corporation
New Jersey BPU
Niagara Mohawk Power Corporation (NM Gas)
Northwestern Public Service Company
Ohio Gas Company
Orange & Rockland Utilities
Pennsylvania Power & Light Company
Philadelphia Gas Works
Potomac Electric Power Company
Roanoke Gas Company
Sierra Pacific Power Company
South Jersey Gas Company
Southern Connecticut Gas
Southern Indiana Gas & Electric Company
Texas PUC
Union Gas
United Illuminating Company
Upper Peninsula Power Company
Utah Division of Public Utilities
Vermont Gas Systems, Inc.
Virgin Islands Water & Power Authority
Washington Gas Light Company
Washington Natural Gas Company
Western Kentucky Gas Company
Yankee Gas Company

WILLIAM M. WILLIAMS

Mr. Williams is an experienced executive with a strong background in team building, process improvements and performance monitoring. He is heavily experienced with materials management, budgeting, corporate strategic planning, information systems planning, maintenance management, property records, organization and staffing assessments in the manufacturing, distribution and utility industries. Career focus on leadership positions in operations, logistics, materials management, changes management, and total quality.

PROFESSIONAL EXPERIENCE

2000 to Present:	**Williams Consulting, Inc.** Principal & Consultant
	Stone & Webster Management Consultants, Inc.
1999–2000:	Senior Consultant
1995-1999	Consultant
1984 - 1994:	**City of Lakeland, Electric and Water Department.** Assistant Plant Manager
1976 - 1984:	**Thatcher Glass Manufacturing Company** Corporate Materials Manager
1971 - 1976:	**Plant City Steel Corporation** Production Control Manager

Reliability, Management Audits and Operational Assessments

Participated in a study to determine the workforce adequacy of the five Illinois investor owned utilities for the Illinois Commerce Commission. This effort included a review of work practices, labor resources both internal and external, work backlog, workforce management and construction and maintenance practices.

Participated as a lead in a distribution plant evaluation for Central Maine Power on behalf of the Maine Public Utilities Commission. This effort included a review of reliability performance, system design and planning, vegetation management and a physical condition assessment of the distribution system.

Participated as a lead for an engagement to provide an independent review and comments on a series of reports prepared by PacifiCorp in response to a winter storm outage that affected up to 190,000 customers over an 8 day period. The assignment included a comprehensive analysis of the report with focus on conclusions and recommendations and the level of completeness and conformance with the terms of reference. We prepared professional opinions regarding the conclusions and recommendations contained in the report, and offered additional conclusions and recommendations with supporting rationale, analysis, and/or industry comparisons as appropriate. We were subsequently retained to review PacifiCorp's implementation progress for the 18 recommendations in our original report.

Participated in the NJBPU service reliability focused management audits of the four New Jersey-based electric utilities. To determine the effectiveness of their response and communications during a major outage.

Lead Consultant on a distribution system condition assessment and operations review of Central Maine Power on behalf of the Maine Public Utilities Commission.

Participated in a due diligence review of the proposed Exelon-PSE&G merger on behalf of the New Jersey Board of Public Utilities. This assignment covered a thorough review of the customer

service functional area, including the call center, customer service centers, the customer information system, street lighting, customer billing and complaint resolution.

Provided litigation support for PacifiCorp for a federal district court case and a Wyoming Pubic Utilities Commission filing relative to claimed losses due to outages suffered over a period of five years.

Project Manager on a gap analysis and benchmarking project involving plant operations at ALCOA's Rockdale, Texas facility.

Responsible for performing benchmarking study of various utilities including Transmission Pipeline Australia and Entergy Gulf States.

Consultant responsible for developing Table of Organization and Equipment as part of a fleet assessment for National Grid.

Maintenance and Materials Management

Managed all warehousing and inventory operations, responsible for overseeing the physical facility redesign and rearrangement planning, and executing the organizational modification at an operating municipal power plant.

Consultant responsible for conducting fleet materials management portions of focused management and operations assessment for the City of Las Cruces, City of Little Rock, Ocean County NJ, Dakota County MN and City of Seattle.

Consultant responsible for conducting materials management portions of focused management and operations audits for Chattanooga Gas Company, U.S. Virgin Islands PSC, and Nevada Power Company.

Managed a team of consultants and professional consulting engineers in establishing a comprehensive outage planning and work force management/productivity measurement and improvement program at an operating municipal power plant.

Provided logistical support for the preparation of 80 uniform plant maintenance procedures and associated, detailed standard time estimates.

Managed staff of plant maintenance planner for outage efforts of an operating municipal power plant reducing outage time from seven weeks to 3 and average saving $1.3 million a year.

Provided leadership and project management during the design of the maintenance and materials management system needed for computerization support of the plant's work force management program.

Responsible for integration of the material management and productions control department into a single business unit with a yearly saving of $300,000.

Lead the formation of "RAPID" parts delivery program for 216 participating utilities. Responsible for electronic data gathering, cataloging, and information integrity, which allowed utilities to lower inventories by 15%.

Organization/Feasibility Studies

Consultant involved in developing staffing requirements for new gas companies at the Abu Dhabi Natural Gas Distribution Company in the Emirate of Abu Dhabi and Chilquinta Gas Distribution Company in Santiago, Chile.

Project Manager on the Bahamas Telecommunications Corporation organization and staffing

study. Developed staffing requirements and organization structure, which reduced staff by 40 % and saving $62 million a year.

Re-engineering / Process Redesign

Responsible for a re-engineering study of the distribution department at Commonwealth Gas Company. A total of 37 paperwork and field processes were analyzed, flowed and recommendations delivered focusing on cost reduction and improving service.

Project Manager on multiple projects for JEA that resulted in approximately $2.25 million yearly saving, which included the following:

- Multi-phased cost analysis and work process improvement project involving Customer Service areas.
- Facilitating the implementation of process improvement for JEA and Duval County Tax Collector in areas of operations, facilities design, call center staffing and design, and training.
- Multi-phased work process improvement project involving staffing assessment of the Jacksonville Water and Sewer Department pre-merger.
- Cost benefit analysis project of the merger between the electric and water and sewer departments.
- Multi-phased work process improvements and staffing assessment and reassignment project involving the support staff.

Project Manager in charge of a multi-phased Cost Analysis and Work Process Improvements project involving JEA, the Jacksonville Public Utilities Department and Duval County Tax Collector's Office.

Operations Management

Responsible for daily power generation operation during manager absence and acted as intermediary between Division staff of 250 personnel and upper management.

Supervised a staff of 29 maintenance and outage planning, administrative and warehousing personnel, including four supervisory personnel for an electric production division.

Supervised a staff of 61 plant materials managers, administrative, production control and purchasing personnel in 7 states for a major glass manufacturer.

Facilitated and developed the strategic planning process for a municipal utility department.

Implemented best practice change management methodologies.

Directed the review and rewriting of department wide policies and procedures.

Developed performance indicators and management tracking system for glass and utility industry.

Directed training department for craft and operations personnel.

Budgeting

Develop 10-year forecast of O&M and Capital budgets and administered annual budget of over $74 million using business analysis of budget versus productivity.

Set and monitored performance indicators based on financial data.

Project Manager on a base line cost analysis project of a large southeastern utility materials management process. Recommended process improvements that resulted in a $1.5 million yearly saving and a one time saving of $2.3 million

Information Systems Technology

Responsible for plant information management system oversight involving LAN-based PCs integrated to a host UNISYS mainframe.

Developed tracking system for Management Audits projects that enabled clients and project managers to monitor audit progress.

Developed staffing model for the formulation of new business ventures for the gas utility industry. Developed and implemented consultant and division performance measurement software.

Fixed Assets/Continuing Property Records

Facilitated team of professional consulting engineers and plant personnel in the development of FERC based equipment property unitization methodology for a municipal electric and water utility.

Managed and participated in a project designed to develop capital units of property records.

Fleet Management

Responsible for the establishment, monitoring and control of plant vehicle maintenance scheduling, vehicle and heavy equipment replacement budgeting and procurement, including bid assessment and replacement/maintenance part inventory control.

Corporate Facilities and Space Planning

Responsible for overseeing the design, layout and execution of the warehouse rearrangement plan for the City of Lakeland, Florida's McIntosh and Larsen Power Plants and Northwest Public Service Company.

Year 2000 Audits and Assessments

Consultant responsible for certain portions of the analysis and reporting of the Year 2000 Compliance projects for JEA, Concord Management, Ontario-Hydro, Miami-Dade Water and Sewer and Westcoast Energy, Inc.

EDUCATION

Saint Leo College, BA, Business Administration
Saint Leo University, Graduate level Business courses.

Timothy D. Seise

Experienced business executive, management consultant, officer and manager, auditor and project manager holding an M.B.A. in accounting and taxation with a successful career history of overseeing successful projects ranging from $ 50,000 to $6.6 million, Advised the Chairman of the Board and Managing Director regarding the selection of the past two Managing Directors of the Barbados Light & Power Company, reorganized a 14,000 employee telecommunications company, developed and implemented various computerized work order and materials management software systems, redesigned and rearranged over 28 warehouses and introduced personnel changes including materials planning coordinators and job planners to support process changes, designed a 133,000 square foot multi-use utility headquarters building. Managed various administrative, management and operational reviews and audits including one involving the forensic investigation of catastrophic equipment failure, and conducted several management and operational audits.

Responsible for the creation and development of a Jacksonville, Florida management consulting firm office for Stone & Webster Management Consultants, Inc. in 1995 with an initial yearly revenue of $ 1.5 million. Accountable for all operational and administrative functions, profit and loss, day-to-day management, marketing and staff control while serving as the company's Organization and Benchmarking Practice leader. Oversaw management audits and operational assessments, performed organizational and staffing studies, planned facilities and conducted information technology assessments, and performed organization and staffing assignments here and internationally.

Served as a Managing Consultant/Vice President in the Energy Business Transformation practice of PA Consulting, (Formerly PHB Hagler Bailly), analyzed historical versus legacy distribution outage management and reliability reporting systems to determine collection and reporting results differences, developed a reliability awards program and conducted the first, and supported various other, reliability certification audit assignments, and served as a training instructor delivering various courses to internal and external consultants.

Served as Vice President, then President of a software company responsible for the development and marketing of a work order maintenance/materials management system and associated consulting services. Also served as an information technology manager at a gas distribution utility and held a variety of positions at New Jersey-based Public Service Electric and Gas Company at its electric distribution and fossil and nuclear power plants as well as in the headquarters production department. Possesses strong backgrounds in:

- Financial accounting, accounts payable, accounts receivable, general ledger, payroll, and financial reporting, including monthly, quarterly and annual federal taxes, 941, W-2, 1099, etc.

- Electric power production, distribution, and operations; gas distribution, and water and wastewater utilities, electric distribution system reliability and performance operational assessments and management audits including comparative measures (benchmarking), due diligence and forensic investigations.

- System reliability and work force utilization analysis; productivity analysis and business process change management involving workforce management and mobilization, organization and staffing analysis, forensic and due diligence investigations, facilities planning, and financial analysis,

- Competitive management practices using comparative measures as applied to operational and organizational performance, audits, budgeting, plant asset management, maintenance and materials planning,

- Computer information systems, telecommunications, strategic information technology planning, and system specification, design and development, selection and implementations involving customer information systems, outage management/reliability systems, and work order/maintenance and materials management/supply chain and warehousing, human resource (personnel and payroll), and asset management/continuing property records.

- Organizational structure, staffing, compensation evaluations, analysis and design, succession planning, and job analysis.

- Strategic planning, feasibility studies, facilities management, space planning & layouts

- Productivity analysis-process improvement and innovation reengineering

- Training and development programs.

PROFESSIONAL EXPERIENCE

2003 – Present	**Williams Consulting**	(Associate)
2002 – 2003	**Stone & Webster Management Consultants, Inc.**	(Assistant Vice President)
2000 – 2002	**PA Consulting Group, Washington, D.C.**	(Vice President/Managing Consultant)
1989 - 2000:	**Stone & Webster Management Consultants, Inc.**	(Vice President)
1986 - 1989:	**Southeast Information Systems Engineering, Inc.**	(Vice President, President)
1984 - 1986:	**Plantec Corporation**	(Manager - Systems Consulting)
1983 - 1984:	**Elizabethtown Gas Company**	(Manager - Systems Consulting)
1980 - 1983:	**Stone & Webster Management Consultants, Inc.**	(Consultant, Senior Consultant)
1973 - 1980:	**Public Service Electric & Gas Company**	(Maintenance Staff Specialist)
1972 - 1973:	**Marmac Oil & Supply Co., Inc. (Pennzoil)**	(Salesman, Sales Manager)

EDUCATION and TRAINING

MBA, Accounting and Taxation, Fairleigh Dickinson University, Teaneck, New Jersey, 1979
BA, Political Science/Business Administration, Hope College, Holland, Michigan, 1972.
State of Florida, Real Estate License #1213445, 2003 and 2004 (Active)
IRS-Registered Tax Preparer, Tax Preparer Course, 2003 and 2004
IRS-Registered Tax Preparer, Intermediate Tax Preparer Course, 2004
IRS-Registered Tax Preparer, Advanced Tax Preparer Course, 2004
IRS-Registered Tax Preparer, Professional Tax Preparer Course, 2004

COMPUTER SKILLS

Microsoft Word™, Excel™, Access™, PowerPoint™, MS Project™, Visio™

PUBLICATIONS

Author, *Utility Asset Management – Using Benchmarking Data to Identify Trends*, PA Consulting Group, September, 2001

Author, *Transmission and Distribution Reliability – Your Competitive Edge*, Florida Municipal Electric Association, October 25, 2000

Author, *Personal Computer Applications in Electric Utilities*, Florida Municipal Electric Association, 1988

Author, *Micro - To - Mainframe Links: Distributive Data Processing, Networking and Microcomputers*, American Public Power Association, 1985

Author, *Data Base Development Concepts*, Stone & Webster Management Consultants Inc., 1981

Author, *Integration of Information Systems Technology*, Stone & Webster Management Consultants, 1981

Owner/Developer, **TEAMMATE *Solutions*™** Maintenance/Work Order and Materials Management System©

SELECTED CLIENT LISTING

Municipal Clients

City of Colorado Springs, Colorado
City of Lakeland, Florida
City of Norwich, Connecticut
City of Palo Alto, California
City of Springfield, Missouri
JEA, Jacksonville, Florida

Corporate Clients

ALCOA Aluminum Company, Austin, Texas
Artesian Water Company, Wilmington, DE
Dominion Power, Richmond, VA
Mobile Gas Service Corporation, Mobile, AL
Northwestern Public Service Company, Huron, SD
Orion Power, Pittsburg, PA
Pepco/Conectiv, Washington, D.C.
Rochester Gas and Electric Company, Rochester, NY
United Illuminating Company, New Haven, CT

Governmental Agencies

New Jersey Board of Public Utilities, Newark, NJ
Nevada Utilities Commission, Reno, Nevada
Omaha Public Power District, Omaha, Nebraska
Texas Public Utilities Commission, Beaumont, Texas
U. S. Navy-Pearl Harbor, Oahu, Hawaii
United Nations, Electricity/Energy Database, NY
Virgin Islands Public Utilities Commission

International Clients

Australian Gas Transmission Pipeline Company, Melbourne, Australia
Barbados Light & Power Company, Limited
Bahamas Telecommunications Company
Bermuda Electric Company, Hamilton, Bermuda
Chilquinta, Santiago, Chile
Egyptian Electricity Authority, Cairo, Egypt
Electric Utilities of the Western Region, Jeddah, Saudi Arabia
Jordanian Electricity Company, Amman, Jordan
Hydro Mississauga, Mississauga, Canada
ICG Canadian Propane, Calgary, Canada
Irving Oil Company, St. Johns, Canada
Minister of Energy, United Arab Emirate of Abu Dhabi
New Brunswick Electric Power, Fredericton, New Brunswick, Canada
Office of the Prime Minister of the Bahamas, Nassau, Bahamas
Public Power of Greece, Athens, Greece

DETAILED EXPERIENCE

- Strategic Planning, Feasibility Studies, Facilities Management, Space Planning & Layouts

  - Responsible for the design and analysis of an FCC statistically valid sampling study of joint use pole attachments (electric utility, telephone and cable inter-company charging) in Virginia and North Carolina.
  - Designed the layout, and oversaw construction of a new $11 million 133,000 s.f. multi-purpose operations center facility which houses electric and gas vehicles, new computer center, call center, SCADA dispatching operations, relay, electric and gas meter testing shops, division operations, central engineering, planning, purchasing and warehouse.
  - Developed the organizational structure and staffing levels, defining the resource and facility requirements, including office site locations and space planning layouts, and associated cost estimates for a natural gas utility in South America.
  - Defined the resource and facility requirements, developing the organizational structure and staffing levels, position descriptions, and compensation and benefits plan for a new gas company in the United Arab Emirate of Abu Dhabi.
  - Prepared the facility layout redesign and rearrangement of a 15,000-sq. ft. warehouse for an oil refinery in Saint John, New Brunswick, Canada.
  - Prepared the corporate facilities plan and designed the facility layouts, including preliminary architectural sketches, for the operation and warehousing complexes at 13 fossil power plants.
  - Designed the layout and executed the warehouse rearrangement plan for a Florida utility.

- Productivity Analysis-Process Improvement and Innovation Reengineering

  - Served as Team Leader responsible for analyzing the Work Management and Inventory Control processes involved in the U.S. Navy Pearl Harbor Public Works Most Efficient Organization/Privatization initiative.
  - In charge of multi-phased cost analysis, work process improvement and staffing assessment/reassignment projects involving the support staffs, customer service areas, and materials requirements baseline cost for a local electric utility and tax collector office.
  - Oversaw a distribution/customer service field and office process documentation and improvement project a Massachusetts gas utility.
  - Reengineered the customer service representative field offices leading to the design and development of a new, centralized customer call center and consolidation of customer service and field office functions; prepared and made presentations of the report to senior management and the Board of Directors.

- Information Systems Technology, including Strategic Plans, System Specification, Development, Selection and Installations of Customer Information System, Outage Management Systems, and Work Order/Maintenance and Materials Management/Supply Chain/Warehousing Systems

  - Developed the Information Systems Strategy plan for an electric and gas utility.
  - Defined the systems information plan to support the reorganization of Connecticut utility.
  - Prepared the Generation Department Information Systems/Organization Study for Barbados.
  - Responsible for installation and implementation of general ledger, fixed assets, personnel, and portions of the 6,000,000 customer-based customer information systems in Greece.
  - Installed the MSA Materials Management System at an electric utility in Saudi Arabia
  - Defined, specified, installed and implemented an Executive Information System for the Jordanian Electricity Authority in Amman, Jordan under the auspices of the United Nations.

- Designed and developed the R.A.M.P.S. maintenance and materials management systems for fossil and nuclear power plants.
- Developed an equipment property unitization methodology.
- Led the software requirements definition, system specification and selection, and negotiation team for the purchasing, materials management, accounts payable and general ledger system, and prepared the company warehouse design and rearrangement plans for a Canadian utility.
- Defined, designed, developed, installed and implemented the Electricity and Energy Database for the Egyptian Electricity Authority, Cairo, Egypt under the auspices of the UN.
- Designed, developed, programmed and installed a Novell-local-area-network-personal-computer-based Work Order Maintenance and Materials Management System for power plants. Responsible for warehousing, inventory operations, physical facility redesign and rearrangement planning, and organizational modifications leading to the computerization of support for the work force management productivity measurement and improvement program.
- Responsible for managing energy and service sector projects and new business development and installation of a fixed assets/continuing property records system at a Missouri utility.
- Prepared the specifications and Request for Proposal, and evaluated the Materials Management System for a Midwest utility.
- Prepared the transportation and procurement reorganization plan for a Canadian propane utility.
- Responsible for auditing and preparing a revised organizational plan for the purchasing department of a Colorado utility.
- Audited and recommended new plant accounting software for a Connecticut utility.
- Led electric generation, electric and gas transmission and distribution, and water and wastewater treatment purchasing and materials management database system implementation at a Colorado utility.
- Responsible for customer information system specifications and modifications at a Canadian utility.
- Developed the conceptual organizational framework, business planning policies and procedures, reviewing and critiqued data processing integration plan and associated cost-benefit justifications, and prepared the long-range systems data processing plan, methodology, documentation standards, and customer accounting system for a Canadian utility.
- Defined the maintenance, financial purchasing and materials management, warehousing and inventory control systems for a California water treatment plant. Prepared the warehouse consolidation and rearrangement plan.
- Defined the financial systems requirements for a major Canadian teaching hospital.
- Prepared the plant asset accounting property record to tax record reconciliation system for a New York utility.

- <u>Organizational Structure, Staffing Evaluations, Compensation Analysis, and Job Analysis</u>

  - Project managed the design of the company's new organizational structure, developed the succession planning model and evaluated and recommended candidates for advancement to managerial positions, including the new Managing Director's replacement upon the incumbent's anticipated near-term retirement.
  - Served as project manager and conducted a comprehensive compensation study involving all levels of an independently-owned water utility. Conducted a cross industry survey augmented by proxy and SEC data.
  - Organization and staffing study in support of the privatization, reorganization and staffing assessment/outsourcing of non-core elements and the staff reduction of a major telecommunications utility.
  - Organization review brought about by the retirement of the Managing Director of a utility.

- Job specification review, positions audit and job class specifications/lines of promotion and position descriptions preparation for a local utility authority.
- Organizational structure and staffing levels evaluation of an island utility.
- Comprehensive Compensation analysis for an independent water company.

- Reliability, Operational Assessments and Management Audits

- Served as lead analyst involved with analyzing historical electric feeder outage management system reliability results reporting to determine anticipated differences between old and new system data collection and reporting results relative to service guarantees associated with a utility merger.
- Responsible for development of ***PA's Reliability Certification***[tm] and ***PA's ReliabilityOne***[tm] awards programs; conducted the first ***Reliability Certification***[tm] assignment and performed or assisted with various other reliability certification audits.
- Led the management and forensics audit of New Jersey utilities on behalf of the New Jersey Board of Public Utilities.
- Performed maintenance/asset management gap analysis assessment of a major aluminum company's power plants.
- Led the reliability and customer service assessment effort of a major utility.
- Led the Distribution Operations Audit of a major utility.
- Led the focused management audit of an island water and electric production /distribution utility
- Led portions of the management audit of a gas utility.
- Led portions of the operations and management audit of an island utility.
- Systems consultant responsible for auditing England's first PWR nuclear plant for the Generation Electricity Board.

- Comparative Measures and Due Diligence

- Led the information technology and back office processing due diligence review of a company acquiring another utility's power plants.
- Responsible for the organization, information systems, and transmission/distribution reliability due diligence effort involving the sale of a major utility.
- Benchmarking survey study of power generation engineering efficiency.
- Organizational and operational prudence review supported by a comparative gas transmission statistics benchmarking survey, leading to the privatization of an Australian gas transmission utility.

- Training and Development Programs
- Development and oversight of new and reassigned personnel Customer Service Representative training program.
- Developed and taught a course on Conducting Management Audits to United Nations Developing Nations Division personnel assigned to conduct privatization and investment prudence studies in developing countries.
- Served as an Instructor for the, "Delivering Effective Presentations" course presented to senior consulting staff and management participants.

FREDERICK E. DEPENBROCK
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(352) 256-4475

An established consultant bringing management-level skills in electric utility planning and operations, engineering analysis, economic and regulatory studies, and human dynamics. Wide-ranging experience with domestic and international utility, governmental, religious, and industrial bodies gives a broadly integrated viewpoint.

PROFESSIONAL EXPERIENCE

April 2007 – Present:	Independent Consultant
Dec. 2005 – April 2007:	Senior Business Development Specialist, Senior Staff Consultant, Siemens Power Technologies International (PTI)
May 2001 – Dec. 2005:	Independent Consultant
April 2000 – May 2001:	Organizer and Manager of Power Technologies Inc.'s Denver Office (staff of seven)
May, 1999 – April 2000:	Independent Consultant
1987 – April, 1999:	Stone & Webster Management Consultants, Inc. Vice president and manager of Denver Office (staff of 15) Assistant Vice president Executive Consultant
1980 - 1987:	Pastor, First Presbyterian Church of Hanover, East Hanover, New Jersey
1977 - 1980:	Assistant Pastor, Noroton Presbyterian Church, Darien, Connecticut
1967 - 1974:	Stone & Webster Management Consultants, Inc. Manager, Operating Systems Department (staff of 22) Consultant
1961 - 1967:	Philadelphia Electric Company, Philadelphia, Pennsylvania System Planning Engineer Engineer of Plant Tests

PROFESSIONAL ASSIGNMENTS

Generation and Transmission Planning

As transmission planning consultant to the Lake Elsinore Advanced Pumped Storage Project in California, prepared systems analyses to support the Project's ability to deliver power to and from the San Diego Gas & Electric system. Provided expert testimony to the California Public Utility Commission in support of the Project.

Represented Siemens PTI to the WECC Modeling and Validation Work Group.

As consultant to Siemens Power Technologies, Int'l. (PTI), served as a business develop executive for software sales and consulting services. This has also involved speaking, demonstrations and study assistance in Africa, Southeast Asia, and North America.

Project manager of an electric system blackout and correction study for an oil production facility in Indonesia. This involved significant machine testing, machine parameter derivation, and stability analysis.

Transmission planning consultant to major independent power producer over a two-year period for power project acquisitions and development, including extensive development work in WECC area.

Responsible for commercialization and future development of EPRI's EGEAS (Electric Generation Expansion Analysis System) integrated resource planning model and the Resource Planning Workstation (1994 to 1997). This included development of competitive market modeling, unit profitability analysis, and long-term open market optimization. Concluded strategic marketing alliance with Henwood Energy Services, Inc. for co-marketing of EGEAS and Henwood's chronological modeling product, PROSYM.

Project Manager for transmission planning study for development of major expansion of transmission system of Provincial Electricity Authority, Thailand. This study covers all transmission and substation development through 2011 for all parts of the country outside of metro Bangkok, involving over 300 substations.

Project Manager for economic due diligence study for European Bank for Reconstruction and Development in optimal replacement generation in Ukraine for Chernobyl Nuclear Station as part of USAID/G7 assessment of Chernobyl shutdown. Provided testimony to Austrian and Hungarian Parliaments as part of European Bank for Reconstruction and Development financing process.

Responsible for power market Due Diligence Assessment for the Bo Nok Project, a proposed 734 MW coal-fired power plant project in Thailand.

Project Manager for study of "Energy and Economic Modeling Issues Related to an Evaluation of the Regulatory Structure of the Retail Electric Industry in the State of Colorado," for the Electric Advisory Panel to the Colorado General Assembly

Provided advice to Philippines Department of Energy on energy sector modeling through USAID Greenhouse Gas Mitigation Project.

Conducted transmission portion of feasibility study for Kudu Gas Power Project, Namibia. Study involved load flow and stability analysis for 750 MW and 1,500 MW project developments.

Participated in joint planning of transmission for Peach Bottom, Salem, Hope Creek and Limerick power plants (total generation of over 6,000 MW). Developed initial plans to close 500 kV transmission loop around Philadelphia.

Conducted system modeling and economic analysis in due diligence for financing of the Ilijan Project, Philippines.

Extensive experience in load flow, transient stability, and short circuit studies. Carried out generation and transmission expansion studies for several individual companies and large-scale joint generation projects. Conducted transmission capability assessment for many independent power projects.

Conducted integrated resource planning studies for Cities of Gainesville, Tallahassee and Fayetteville. Evaluated fuel cost alternatives, interchange costs, and effects of power pool operation on operating costs and reliability for various clients.

Wrote and helped negotiate a long-term power pooling agreement between Canadian Utilities, Inc. and Calgary Power Co.

Evaluated effects of third-party wheeling, including capacity commitment, loss increase, and voltage drops for Northwestern Public Service and Otter Tail Power Co.

Evaluated types of new generating capacity most applicable, based on load shape, economic dispatch, forced outage experience, and maintenance requirements for Savannah Electric Co., Maine Public Service Co., Sierra Pacific Power Co., and others.

Developed transmission expansion plans for Egyptian Electricity Authority to incorporate proposed new 1200 MW power plant under auspices of U.S. AID 1988.

Reviewed system planning department methods and capabilities as independent audit for corporate management of Florida Power & Light Company 1988.

Participated in feasibility study for conversion of aluminum plant to utility generating site, including transmission, for the Office of the Governor of the U.S. Virgin Islands.

Clean Air Act Compliance Planning

Provided economic analysis, sensitivity analysis, risk assessment and general project review services for Illinois Power Company, Indianapolis Power & Light Company and Allegheny Power System. Prepared testimony and testified before Indiana Utility Regulatory Commission as expert witness on Clean Air Act Compliance Planning and Integrated Resource Planning Process in Indianapolis Power & Light's pre-approval case for scrubbing Petersburg 1 & 2.

System Operations

Analyzed Philadelphia Electric Company's system restoration procedure, conducted cold load pickup tests for sample customers, completely rewrote blackstart procedure, and trained system operators. After Philadelphia blackout in 1967, F.P.C. praised the speed of system restoration in its report of the event.

Conducted all aspects of engineering tests for steam-electric generating station, including heat rate, pulverizer loading and fineness, temperature and pressure controls. Maintained all instrumentation and controls, including turbine governors, boiler intake, and exhaust air and water purification systems. Worked on maintenance planning and repair plans for scheduled outage.

Conducted staffing and organization review of generation and system control staff for Guyana electricity Corporation under auspices of Inter-American Development Bank 1988.

Assisted in developing rehabilitation plan for generating equipment of Corporacion Dominicana Electricidad, Dominican Republic under auspices of the World Bank 1989.

Prepared pre-feasibility analysis of Energy Management System and System Control and Data Acquisition system requirements for national electric utility of Panama under auspices of U.S. State Department Trade Development Program 1990.

Managed power plant "best practices" analysis for Attaka Power Station of Egyptian Electricity Authority for improvement in availability and performance under auspices of United Nation Development Program 1992.

Data Processing

In early 1970's, set up and ran the data processing center for Stone & Webster Management Consultants, Inc. Staff consisted of ten systems analyst/programmers, six operators, and three data entry clerks. Converted department from IBM 1620 to NCR Century 200 (two machines) to D.E.C. PDP-10. Developed and operated full range of corporate accounting applications (A/R, A/P, general ledger, payroll, billing, etc.). Managed development of consulting-services-oriented applications. Trained company personnel in interactive computer use.

Managed development, sales, and installation of proprietary computer software. Prepared system as host processor on Tymshare nationwide computer network.

Developed system definition and database definition for Management Information System for Egyptian Electricity Authority under auspices of United Nations Development Program.

Prepared Project Document and Project Formulation Framework for Electricity/Energy Databank Project for national utility of Syria under auspices of United Nations Development Program 1992.

Load Forecasting

Developed detailed econometric and end-use forecasts of energy sales by customer class for several U.S. utilities. Set up and carried out customer survey programs for sample of industrial and commercial customers. Performed load coincidence studies between rate classes. Analyzed weather effects on energy sales and peak load.

Prepared demographic and end-use energy and peak load projections for long range expansion plans through 2011 for Egyptian Electricity Authority under auspices of U.S. AID 1988.

EDUCATION

Drexel University, MS, Electrical Engineering, 1967, Master's thesis subject "Application of Lyapunov Stability Principles to the Computer Solution of the Electric Transient Stability Problem"

Lafayette College, BS, Electrical Engineering, 1961

Princeton Theological Seminary, M. Div., Theological Studies, 1977

AFFILIATIONS

Institute of Electrical and Electronic Engineers
Eta Kappa Nu, Honorary Electrical Engineering Fraternity

TESTIMONY PREPARATION AND PRESENTATION

Prepared and presented testimony on aspects of Integrated Resource Planning before the public utility commissions (or equivalent) of the following states:

- Pennsylvania
- Indiana
- Alaska
- Oklahoma
- California

SELECTED ARTICLES/SPEECHES

"Acid Rain Legislation: Developing Utility Compliance tactics", Electric Power Research Institute Conference on Innovations in Pricing and Planning, May 1990

"System Planning in the 1990s", Stone & Webster Engineering Corporation Summer Seminar, 1990

"Why Inter-Area Electric Transmission?, American Power Conference, April 1991

"Supergrid - Negotiating Our Way To Success," Transmission and Wheeling Conference, November 1991

"Transmission Pricing: Challenges and Opportunities", Stone & Webster Engineering Corporation Summer Seminar, 1993

Organizer and Principal Speaker, "Transmission Pricing Workshop", Denver, March 1994

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